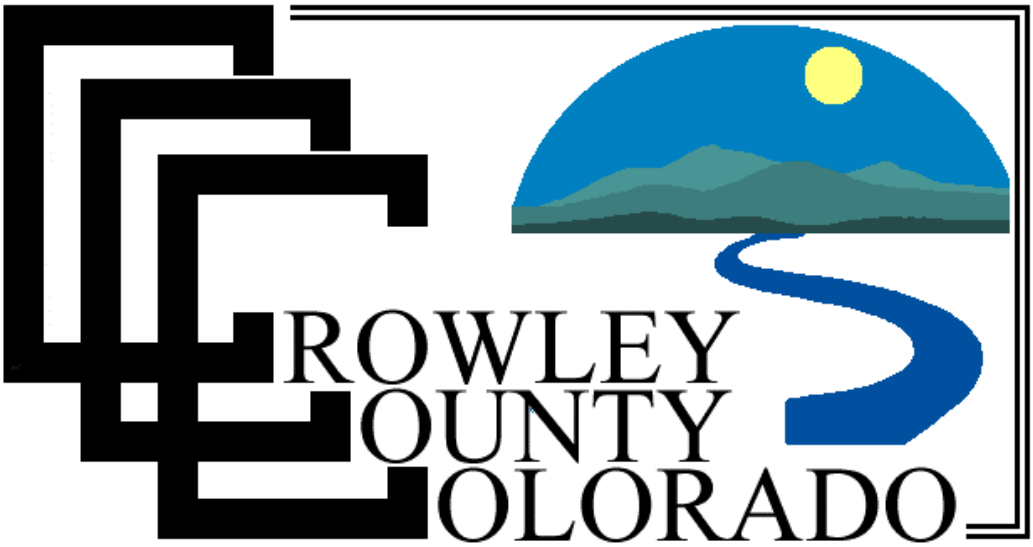
COMPREHENSIVE EMERGENCY MANAGEMENT PLAN (CEMP)

BASIC PLAN



2021

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CROWLEY COUNTY

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EMERGENCY MANAGEMENT PLAN

This Emergency Management Plan is hereby approved. This plan is effective immediately and supersedes previous additions.

Board of County Commissioners, Chair — Date 10/14/21

County Commissioner — Date 10/14/21

County Commissioner — Date 10-14-21

Emergency Manager — Date 10-14-21

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Number	Date	Posted By	Date Posted

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SPECIAL INSTRUCTIONS FOR USE

It is intended that this plan, when implemented, be used by Crowley County departments and organizations to obtain maximum use of existing resources, organizations, and systems in their response to emergencies and disasters that could and/or have occurred in the county. The format utilized is:

Basic Plan	The Basic Plan contains information pertaining to the planning process, trends in disaster, potential hazards to which Crowley County is vulnerable, vulnerable locations and populations, and the concept of operations for Emergency Management.
Preparedness / Prevention	This section details Crowley County's efforts to prepare for disasters. The Preparedness and Prevention Section coincide with efforts undertaken to mitigate the effects of disasters, as stated in the Mitigation Section.
Response	Details the policies, organization, concept of operations, and assignment of responsibilities, necessary for Crowley County response operations.
Recovery	Addresses the community's short and long-range recovery issues. The Recovery Section details the procedures for damage assessment, requests for Federal Disaster Assistance, Individual Assistance programs, and Public Assistance programs.
Mitigation	Our County through the Southeast Colorado All-Hazards Region has a State & FEMA-approved Mitigation Plan, which was updated in January 2021.
ORG CHARTS/ MAPS/FORMS	Organizational Charts, sample forms, and relevant maps have been included in the CEMP in order to provide the reader with a comprehensive understanding of Crowley County's emergency management program.
ESF ANNEXES	Each Emergency Support Function (ESF) has a plan, which specifies roles, responsibilities, and coordination necessary to accomplish each function. Although not technically a part of the CEMP, they have been included for easy reference.
SUPPLEMENTAL	(Separate Documents) Wildfire Operating Plans, Regional Tactical Communications Plan, Regional Debris Management Plan, Regional Cyber Security Plan, IT Disaster Recovery Plan, Crowley County Water System Contingency Plan For Emergency Response, Community Wildfire Protection Plan, Radio Emergency Associated Communications Team (REACT) Response Plan.

Questions or comments about this plan should be directed to the Crowley County Division of Emergency Management, 611 E. 9th Street, Ordway, CO 81063 or by phone 719-267-5230.

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Comprehensive Emergency Management Plan

Introduction

CRS §24-33.5-701, Colorado Revised Statutes (Colorado Disaster Emergency Act) requires each local and inter-jurisdictional emergency management agency shall prepare and keep current a locally defined or inter-jurisdictional emergency management plan for its area, including provisions for the preparation, prevention, mitigation, response and recovery from emergency and disasters.

The Crowley County CEMP establishes an integrated approach to the management of all emergency phases, prevention, mitigation, preparedness, response, and recovery, for all types of emergencies and disasters, manmade, natural, and acts of terrorism.

This operational plan outlines basic strategies, mechanisms, and the command structure, which the county and its departments may use to guide activities including prevention, preparedness, response, recovery, and mitigation.

To facilitate effective intergovernmental operations, the CEMP adopts an approach that follows the Incident Command System and groups' functional types of assistance to be provided by the Emergency Support Functions (ESFs). This system serves as the primary mechanism through which state assistance is requested and provided under the overall coordination authority of the State Coordinating Officer (SCO).

The Crowley County Comprehensive Emergency Management Plan (CEMP) satisfies the planning requirements of CPG 101v2 as well as the EOP Assessment tool as set forth by the State of Colorado and was written in alignment with the National Response Framework (NRF) and the National Incident Management System (NIMS) as required by Homeland Security Presidential Directive (HSPD)-5.

This document may be modified at any time by authority of the County Division of Emergency Management to achieve goals of the emergency management program.

Purpose

The purpose of the Crowley County Comprehensive Emergency Management Plan (CC CEMP) is to establish a comprehensive, coordinated approach to incident management in Crowley County to:

1. Reduce the vulnerability of the people and communities of Crowley County to damage, injury, and loss of life resulting from natural or man-made emergencies. Mitigation is covered in the County Local Mitigation Strategy (LMS) Plan of the Southeast Colorado All-Hazards Region Mitigation Plan.

2. Prepare for prompt and efficient response and recovery activities to protect lives and property affected by emergencies.

3. Respond to emergencies using all systems, plans, and resources necessary to preserve the health, safety, and welfare of persons affected by the emergency.

4. Recover from emergencies by providing for the rapid and orderly implementation of restoration and rehabilitation programs for persons and property affected by emergencies.

5. Assist in anticipation, recognition, appraisal, prevention, and mitigation of emergencies.

Scope

This plan establishes the coordinating structures, processes, and protocols required to integrate the specific statutory and policy authorities of various County Departments and agencies into a framework for action to include prevention, preparedness, response, recovery, and mitigation activities.

The CEMP is an all-hazards plan and applies to incidents regardless of size, cause, or complexity. This CEMP establishes direction and control and outlines interagency and multi-jurisdictional mechanisms necessary for the involvement of and coordination among the county, municipalities, non-governmental organizations, state and federal government. This CEMP also outlines processes for the recovery from disasters and efforts to mitigate the risk of such disasters.

The CC CEMP applies within the geographical limits of unincorporated Crowley County, the Town of Ordway, the Town of Sugar City, the Town of Olney Springs, and the Town of Crowley.

If an EOP or CEMP is developed for a specific municipality, special district or other agency it must be consistent and coordinated with this CEMP, and their emergency management efforts must be coordinated with those of Crowley County. Regional Planning efforts also must be coordinated and consistent with this plan.

This plan is not intended to alter or impede the ability of any department, agency, or jurisdiction to carry out their specific authorities or perform their responsibilities under applicable laws. At no time is adherence to this plan meant to impede activities meant to support life safety functions within Crowley County.

Authorities

The authority for Crowley County government to respond to situations and take actions necessary to safeguard the life and property of its citizens is set forth in the following regulations. The following Authorities are best practices and provide the legal basis and define the requirements for managing emergencies at the Federal, State and Local levels. Emergencies and disasters start and end at the local level. The state and the federal governments should support and augment the local response.

Crowley County

CROWLEY COUNTY ORDINANCES/ RESOLUTIONS

Resolution 2005-14
Adopts the National Incident Management System as the standard for incident management in Crowley County

Crowley County Policy Manual –
Records Retention
Procurement Policy

AUTHORITIES/REFERENCES

COLORADO REVISED STATUTES

Chapter 1, Definitions

Title 24, Government - State

Article 33.5 Public Safety

Part 7 – Emergency Management

701 - Short Title

702 - Purpose and Limitations

703 - Definitions

704 - The Governor and Disaster Emergencies – Response – Duties and Limitations

704.3 - Temporary prohibition on extraordinary collection actions – extension – definitions – repeal

704.5 - Governor's Expert emergency epidemiological response committee – creation

705 - Office of Emergency Management Creation

705.2 - Resiliency and community recovery program

705.3 - Statewide all-hazards resource database – creation – definitions

705.4 - All-hazards resource mobilization system – creation – plan – duties – reimbursement for expenses incurred by mobilized entities – eligibility – resource mobilization fund – creation – definitions – legislative declaration

705.5 - Auxiliary emergency communications unit – powers and duties of unit and office of emergency management regarding auxiliary communications – definitions

706 - Disaster Emergency Fund – establishing – financing – legislative intent – repeal

707 - Local and interjurisdictional emergency management agencies and services

708 - Establishment of interjurisdictional emergency management service area

709 - Local disaster emergencies

710 - Disaster prevention, mitigation, and recovery

711 - Compensation – Liability when combating grasshopper infestation

711.5 - Governor's expert emergency epidemic response committee – compensation – liability

712 - Telecommunications – intent

713 - Mutual Aid

714 - Weather Modification

715 - Merit System

716 - Interoperable radio communications among public safety radio systems – statewide plan – regional plans – governmental immunity – needs assessment – definitions

717 - Reporting of Federal Funds

1606.5 – Office of preparedness – creation - Duties

1608 – Building security and occupant Protection

1614 – Homeland Security and All-Hazards Senior Advisory Committee – Creation – Composition – Duties - Repeal

Title 30, Government - County

Article 5 County Boundaries

Article 7 County Seat Designations

Article 8 Location and Removal of County Seats

Article 10 County Officers

Article 11 County Powers and Functions

Article 15 Regulation under Police Power

Article 28 County Planning and Building Codes

Title 31, Government – Municipal

Article 4 Organizational Structure and Officers

Article 15 Exercise of Municipal Powers

Article 16 Ordinances – Penalties

Article 23 Planning and Zoning

Article 30 Fire – Police

Article 32 Utilities

Article 35 Water and Sewage

Title 32, Special Districts

Article 1 Special District Provisions

Article 2 Metropolitan Recreation Districts

Article 3 Metropolitan Districts (1947 Act)

Article 4 Water and Sanitation Districts

Article 5 Single Purpose Service Districts

Article 7 Regional Service Authorities

Article 28 County Planning and Building Codes

AUTHORITIES/REFERENCES

CONSTITUTION OF STATE OF COLORADO
Article I Boundaries
Article II Bill of Rights
Article III Distribution of Power
Article IV Executive Department
Article V Legislative Department
Article VI Judicial Department
Article VII Suffrage and Elections
Article VIII State Institutions
Article IX Education
Article X Revenue
Article XI Public Indebtedness
Article XII Officers
Article XIII Impeachments
Article XIV Counties
Article XV Corporations
Article XVI Mining and Irrigation
Article XVII Militia
Article XVIII Miscellaneous
Article XIX Amendments
Article XX Home Rule Cities and Towns
Article XXI Recall from Office
Article XXII Intoxicating Liquors
Article XXIII Publication of Legal Advertising
Article XXIV Old Age Pensions
Article XXV Public Utilities
Article XXVI Nuclear Detonations
Article XXVII Great Outdoors Colorado Program
Article XXVIII Campaign and Political Finance
Article XXIX Ethics in Government

Code of Colorado Regulations (CCR)

COLORADO EXECUTIVE ORDERS
State of Colorado, Governor's Executive Order D 013 03 and House Resolution 03-1018 Adoption of single regional planning and operations map;

Federal

FEDERAL PRESIDENTIAL DIRECTIVES/EXECUTIVE ORDERS

Homeland Security Presidential Directive-5
Assigned Sec. of DHS as FCO, Attn General as lead for terrorist incidents through FBI; made NIMS adoption requirement for receiving federal preparedness grants

Presidential Policy Directive / PPD – 8: National Preparedness
PPD-8 is aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk of the security of the nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters.

Presidential Decision Directive-39, United State Policy on Counter Terrorism

Presidential Decision Directive-62, United States Policy on Combating Terrorism

Presidential Decision Directive-63, United States Policy on Protecting America's Critical Infrastructures

Executive Order 11988, Flood Plain Management

Executive Order 11990, Protection of Wetlands

Executive Order 12241, Transferring Review and Concurrence Responsibility for State Plans from the NRC to FEMA

Executive Order 12656, Assignment of Emergency Preparedness Responsibilities

Executive Order 12657, Federal Emergency Management Assistance in Emergency Planning at Commercial Nuclear Power Plants

management planning requirements

Public Law 101-615, Hazardous Materials Transportation Uniform Safety Act (HMTUSA), which provides funding to improve capability to respond to hazardous materials incidents

Public Law 103-337 re-enacts the Federal Civil Defense Act of 1950 into the Stafford Act. It provides a system for joint capability building at the federal, state, and local levels for all hazards

Regional Community Development and Regulatory

FEDERAL STATUTES

Public Law 85-256, Price Anderson Act, 42 USC 2210 which provides for a system of compensating the public for harm caused by a nuclear accident

Public Law 89-665, National Historic Preservation Act, 16 USC 470 relating to preservation of historic resources damaged as a result of disasters

Public Law 91-671, Food Stamp Act of 1964, in conjunction with Section 412 of the Stafford Act, relating to food stamp distribution after a major disaster

Public Law 93-234, Flood Disaster Protection Act of 1973, as amended, provides insurance coverage for all types of buildings

Public Law 93-288, as amended 42 U.S.C. 5121, The Robert T. Stafford Disaster Relief and Emergency Assistance Act; authority for response and recovery assistance under the Federal Response Plan

Public Law 94-499, Superfund Amendments and Re-Authorization Act of 1986. Governs hazardous materials planning and community right-to-know

Public Law 95-510, Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended, which requires facilities to notify authorities of accidental releases of hazardous materials

Public Law 100-707, Federal Disaster Relief and Emergency Assistance Act of 1988, which is the authority for federal assistance to Local/State Government through Presidential Disaster Declaration

Public Law 101-549, Clean Air Act Amendments of 1990, which provides for reductions in hazardous air pollutants and risk

Improvement Act of 1994

Public Law 833-703, an Amendment to the Atomic Energy Act of 1954

Stewart B. McKinney Homeless Assistance Act, 42 USC 4001, as amended by the national Flood Insurance Reform Act of 1994 (Title V of Public Law 103-325) –related to the National Flood Insurance Program and other programs

OSHA 1910.120, Hazardous Materials Operations

Post-Katrina Emergency Management Reform Act of 2006.

Public Law 109-308, Pets Evacuation and Transportation Standards Act of 2006.

Public Law 111-274, Plain Writing Act of 2010 (PLAIN Language Act)

Public Law 107-296, Homeland Security act of 2002

FEDERAL ADMINISTRATIVE RULES

42 U.S.C. §1101 et seq. (1986) SARA Title III

42 U.S.C. Ch 126 §12101 et seq (1990) Americans with Disabilities Act (ADA)

44 CFR Title 10 of the Code of Federal Regulations
44 CFR Part 10 Environmental Considerations
44 CFR Part 13 (The Common Rule) Uniform Administrative Requirements for Grants and Cooperative Agreements

44 CFR Part 14, Audits of State and Local Governments
44 CFR 59-76, National Flood Insurance Program
44 CFR Part 206, Federal Disaster Assistance for Disasters Declared after November 23, 1988
44 CFR Part 350 of the Code of Federal Regulations

FEDERAL SUPPORTING PLANS

Robert T. Stafford Disaster Relief and Emergency Assistance Act**,** Public Law 93-288, as amended, 2006
Natural Oil and Hazardous Materials Pollution Contingency Plan
Nuclear Regulation 0654/FEMA-Rep-1, which provides federal guidance for development and review of radiological Emergency
The Federal Bureau of Investigation's Concept of Operations for WMD
The Federal Radiological Response Plan
Federal Response Plan Terrorism Incident Annex
Federal Response Plan, Terrorism Incident Overview
Chemical/Biological Incident Contingency Plan (FBI, Unclassified)
Nuclear Incident Contingency Plan (FBI, Unclassified)
Health and Medical Services Support Plan for the Federal Response to Acts of Chemical/Biological terrorism (Department of Health and Human Services)
National Emergency Repatriation Plan, as revised, Feb 1968

FEDERAL EXECUTIVE ORDERS

Executive Order 11988, Flood Plain Management
Executive Order 11990, Protection of Wetlands
Executive Order 12241, Transferring Review and Concurrence Responsibility for State Plans from NRC to FEMA
Executive Order 12866, Regulatory Planning and Review
Executive Order 12988, Civil Justice Reform
Executive Order 13563, Improving Regulation and Regulatory Review
Homeland Security Presidential Directive -5 Assigned Sec. of DHS as FCO, Attn. General as lead for terrorist incidents through FBI; made NIMS adoption requirements for receiving federal preparedness grants
Homeland Security Presidential Directive – 8 HSPD-8 enacted national preparedness goal, predicates the receipt of preparedness assistance on adoption of a statewide comprehensive all-hazards preparedness strategy consistent with goal.
Presidential Decision Directive-39, United States Policy on Counter Terrorism
Presidential Decision Directive-62, United States Policy on Combating Terrorism Presidential Decision Directive-63, United States Policy on Protecting America's Critical Infrastructures

AUTHORITIES/REFERENCES

REFERENCES

Santa Rosa County Florida Comprehensive Emergency Management Plan-2019
Crowley County Emergency Support Function Plans
Crowley County Dispatch Procedures
Crowley County COOP Plan
Crowley County Local Mitigation Strategy
Southeast Colorado Regional Mitigation Plan
Southeast Colorado Mass Casualty Plan
Southeast Colorado Cyber Security Plan
Southeast Colorado Regional Debris Management Plan
Southeast Colorado Regional Recovery Plan
Southeast Colorado Regional Alert & Warning Plan
Southeast Colorado REACT Plan
Southeast Colorado Regional Mutual Aid Agreement
State of Colorado Statewide Mutual Aid Agreement,
State of Colorado Emergency Operations Plan
State of Colorado EOP Evaluation Tool
National Planning Framework
Federal Response Frameworks -
- National Response Framework
- National Disaster Recovery Framework
- National Prevention Framework
- National Mitigation Framework
- National Protection Framework

National Incident Management System-2017
Integration of the National Incident Management System (NIMS) into the Comprehensive Emergency Management Plan: A Guide- 2005
National Fire Protection Association Standard 1600 Standard on Continuity, Emergency and Crisis Management – 2019
Comprehensive Preparedness Guide (CPG) 101 Version 2.0 – November 2010
ANSI/EMAP 5-2019 Emergency Management Standard
National Incident Management System: Principles and Practice
National Incident Management Capability Assessment Support Tool (NIMCAST)

Memorandums of Understanding/Agreement

Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery, 2017

Crowley County and LifeGuard Ambulance Service Agreement, 2007

Crowley County and Crowley County Firefighter's Association, July 1984, as amended annually

Crowley County DEM and Crowley County School District (Resources, Shelters, transportation, meals, etc), 2005 Emergency

Management Assistance Compact, 1996

Crowley EM and American Red Cross of Northwest Florida, (Funding for Preparedness), 2005

Crowley County and Crowley County School District (ESF 1) accepting responsibilities under ESF Plan, as amended annually

Crowley County and Department of Transportation (DOT), (ESF 1 Primary) accepting responsibilities under ESF Plan, as amended annually

Crowley County and Crowley County E-911 (ESF 2) accepting responsibilities under ESF Plan, as amended annually

Crowley County and Crowley County Public Works (ESF 3) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC Emergency Communications Center (ESF 4) accepting responsibilities under ESF Plan, as amended annually

Crowley County and American Red Cross of Northwest Florida (ESF 6) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC Office of Budget and Management (ESF 7) accepting responsibilities under ESF Plan Crowley

County and CC Dept of Health, (ESF 8) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC Search and Rescue (ESF 9) accepting responsibilities under ESF Plan, as amended annually

Crowley County and Crowley County Firefighter's Assoc (ESF 10) accepting responsibilities under ESF Plan, as amended annually

Crowley County and Division of Forestry (ESF 11) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC Public Information Office (ESF 14) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC RSVP/UW of Crowley (ESF 15) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC Sheriff's Office (ESF 16) accepting responsibilities under ESF Plan, as amended annually

Crowley County and CC Animal Services (ESF 17) accepting responsibilities under ESF Plan, as amended annually

Crowley County and local Chambers of Commerce (ESF 18) accepting responsibilities under ESF Plan, as amended annually

MEMORANDUMS OF AGREEMENT

CC BOCC and CES Team 1, (For communications maintenance, repair, and disaster support to the EOC, towers, and other county infrastructure), 2016, Annual Contract

CC EM and Cummins Mid-South (Vendor-Contract-Annual preventative, maintenance, and emergency repair during disasters of existing Generator s for EOC, towers, etc, 2009)

CC BOCC and Motorola (Services agreement for core and radio system), 2017-3 year contract CC

with IPAWS, 2012

Florida and FEMA Region IV, 1993

Florida and the American Red Cross, 1992

Florida and the Air Force Rescue Coordination Center (Inland Search and Rescue), as amended
Florida Division of Emergency Management and the Civil Air Patrol (Search and Rescue, Transport), 1992

Florida Division of Emergency Management and Florida Power Corporation; FDEM and Florida Power and Light Co; and FDEM and Southern Nuclear Operating Co. (Radiological Emergency Response Planning/Operations) Annual Agreements

Florida Division of Emergency Management and CC (AlertSantaRosa agreement for use of mass notification system (Everbridge)), 2017

MOU between the State of Florida, and the Florida Fire Chiefs Association for SAR

Building Officials Association of Florida and Division of Emergency Management, Oct 1994

National Weather Service and Division of Emergency Management, Sept 1994

Statement of Understanding between the Administration on Aging and the American Red Cross, ARC 5067, June 1995

Statement of Understanding between the Salvation Army and the American Red Cross, Aug 1994

Statement of Understanding between the Volunteer Organizations Active in Disaster (VOAD) agencies and other agencies

Statement of Understanding between FEMA and the American Red Cross, Jan 1982

MOU between the Centers for Disease Control, the US Public Health Service of the Dept of Health and Human Services and the American Red Cross, Dec 1988

State of Florida Agreement, American Red Cross and Department of Health for use of USDA donated foods, Sept 1989

MOU with the American Veterinary Medical Association -Emergency Preparedness and Response Guide

MOU between Strategic Metropolitan Assistance and Recovery Teams and Florida DEM, Feb 14, 1997

Interstate Agreement during a Hurricane Threat or Other Events, Florida DEM and Georgia DEM

Southern Mutual Radiological Assistance Plan, Southern States Emergency Response Council

Planning Assumptions

Several planning assumptions were made during the development of the Crowley County Comprehensive Emergency Management Plan (CEMP).

- Effective, coordinated incident management is essential to safeguarding lives and property.
- The citizens of Crowley County expect a coordinated effort with regards to community preparedness/prevention, response, recovery, and mitigation.
- While the government takes a key role in emergencies, the presence of the CEMP does not alter the responsibility of the citizenry to take personal measures to prepare for, mitigate, respond to, and recover from emergencies.
- Recovery from disasters is a community-wide responsibility involving actions by government and citizens, individually and through grass roots movements, and each is critical to accomplishing the range of actions necessary to recover from large-scale disasters.
- Crowley County may experience incidents which go beyond the local capacity and which overwhelm local resources. Assistance through the Statewide Mutual Aid Agreements, the Emergency Management Assistance Compact (EMAC), and federal resources may be necessary and will be available.
- The use of the Incident Command System for incident management will be used for day-to-day emergencies as well as for larger emergencies necessitating outside assistance.
- Due to the National Incident Management System, all local responders, as well as those coming into the impacted area from other jurisdictions and other states, will know the ICS system and utilize commonly established operational structures, terminology, policies, and procedures.
- The use of the Incident Command System will provide an effective organizational structure for on-scene incident response capable of expanding and contracting as needed to accommodate personnel, equipment and teams from both local and external sources.
- The Crowley County Board of County Commissioners maintains control through the County Administrator of county departments who are involved in emergency activities, as well as those that occur in preparation for emergencies.
- Additional local agencies with incident response activities exist, that are outside of the direct control of the Crowley Board of County Commissioners. Coordination with such entities is essential to effective incident management. These agencies include: Fire, HAZMAT, Search and Rescue, and others.
- Local Agencies not directed or controlled by the Crowley County Board of Commissioners will also adopt the Incident Command System and National Incident Management System and will agree to any responsibilities or coordination methods assigned within the CEMP.
- The CEMP does not alter the responsibility, ability, or authority under applicable laws of any local, state, federal, etc. department, agency or organization.

Plan Development Process

METHODOLOGY

The Crowley County Comprehensive Emergency Management Plan (CC CEMP) was developed using generally accepted management principles and practices for emergency management with input from preparedness organizations, such as the Crowley County Multi-Agency Coordination Group, and a number of individuals. This method helped to address the coordination of various preparedness activities among all appropriate agencies within the jurisdiction, across jurisdictions and with private organizations.

The CC CEMP was written in accordance with the CPG 101v2 criteria established by the Colorado Division of Homeland Security and Emergency Management as the standard used in Colorado. The plan considers lessons learned from most recent events, such as two December 2006 Blizzards, the Holly Tornado in March of 2007, The Ordway Fire 2008, Badger Hole Fire in Baca County 2018,and the flood events of 2013 and 2015 . Additionally, other recent disasters like Deepwater Horizon, the H1N1 pandemic, and Corona Virus (COVID-19) have guided development of this plan. The CEMP incorporates the concepts, assumptions, and terminology of the National Incident Management System (NIMS), as well as the National Response Framework (NRF) and institutionalizes the use of the Incident Command System for field response. The plan is also consistent with the national priorities as identified in Homeland Security Presidential Directive (PPD) 8.

Note: ESF variations exist between the Crowley County CEMP and those identified in the NRF.

Plan Development Contributors

The Crowley County Comprehensive Emergency Management Plan (CEMP) was developed thanks to the dedication and efforts of the following individuals, whose consultation and input helped to form the elements contained within:

Mr. John Reitan - Crowley County Emergency Management Director
Mr. Riley Frazee – State of Colorado; Department of Public Safety -Regional Field Manager
Crowley County Multi-Agency Coordination Group

In addition, input from the Crowley County Policy Group, the Multi-Agency Coordination Group, and the ESF Function leads contributed greatly to identifying issues to be addressed in the 2021 CEMP update. Information on hazards to which the community is vulnerable was due in part to the efforts of the Southeast Colorado All-Hazards Region Mitigation Plan.

There are several “disaster related organizations” that will coordinate preparedness/response/recovery activities among the appropriate county agencies, municipal agencies, and private organizations as well as across jurisdictional lines to ensure and enhance preparedness as required under the National Incident Management System (NIMS) through the use preparedness organizations. Emergency Management is the first organization to do the above tasks with the support of ESF primary agencies. ESF support agencies can also play a part depending on their specific functions. The Crowley County Division of Emergency Management (CC DEM) is the NIMS coordination point for the County. The Multi-Agency Coordination Group (MAC Group) is another organization that is made up of department heads of multiple organizations with response and preparedness roles. The MAC Group offers feedback on preparedness activities initiated by CC DEM and other organizations. The MAC Group is also a clearing house of information so all jurisdictions in the community are aware of preparedness activities.

PLANNING DEVELOPMENT AND MAINTENANCE

PLAN MAINTENANCE, DISTRIBUTION, AND LOCAL PARTICIPATION

The Crowley County Comprehensive Emergency Management Plan (CC CEMP) is a dynamic document that periodically needs revision. The Crowley County Emergency Management Agency is responsible for development, maintenance, revision, and distribution of the CEMP and will make plan changes when significant changes warrant, or every three years, whichever occurs first. A revision table is located in front of the plan to record such changes. Review of this plan will occur annually, or as the result of an exercise/event AAR, lessons-learned, or best practices.

Information used to update the CEMP comes from various sources including input from stakeholders, or as a direct result of issues that have arisen during training, exercises, or actual disaster operations. Additionally, revisions may be statutorily driven as in the case of Homeland Security Presidential Directive-5 and 8. Another example of when and why changes to the CC CEMP occur is from lessons learned. Lessons learned from major incidents can drive changes in actions, protocols, processes, and procedures.

The Crowley County Emergency Management Program, in order to maintain a comprehensive, community wide, all hazard approach to emergency management, utilizes numerous committees, groups, and teams as stakeholders. These stakeholder groups provide coordinated input on the Program's preparation, implementation, evaluation and revision of the five core areas of emergency management: prevention, preparedness, mitigation, response and recovery. These groups assist with Program strategy, community awareness/participation, coordination and facilitation, and implementation.

The plan development process follows the guidelines of the Plan Maintenance Standard Operating Procedure.

- Step 1 – Form a Collaborative Planning Team
- Step 2 – Understand the Situation
- Step 3 – Determine Goals and Objectives
- Step 4 – Plan Development
- Step 5 – Plan Preparation, Review, and Approval
- Step 6 – Plan Implementation and Maintenance

Plan maintenance is also described in the Plan Maintenance Standard Operating Procedure.

- Gather input from Stakeholders on plan revision
- Plan revision and review
- Plan approval and/or promulgation
- Plan implementation, evaluation, and ongoing maintenance.

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Trends Affecting Future Disasters

In the recent past, Colorado has experienced an upswing in Major and Catastrophic Disasters. More recently there have been a series of severe storms causing damaging straight-line winds, tornadoes, and flooding. The potential for similar catastrophes in the future shows no sign of decline. According to George Weber, Secretary General of the International Federation of Red Cross and Red Crescent Societies, "Climate change, urbanization, the reemergence of old diseases and the emergence of new ones all point to a ready supply of disaster triggers".

In addition to the increased potential for disasters, a number of other factors are also on the rise. These include property values, population growth, and population density within hazard vulnerable zones. This sets the stage for increased impact and economic ramifications of catastrophic events.

Another trend affecting future disasters is a growing reliance on government for disaster support. Particularly in major disasters, the public looks to government, at all levels, for assistance and to facilitate - through all available means - the continuity of community within Crowley County.

HAZARDS

There are many hazards that pose a potential threat to the citizens and visitors to Crowley County. The following sections provide an overview of each hazard, listed in alphabetical order. This overview is intended to help emergency officials and public policy makers identify hazards, estimate probability/severity, determine vulnerable populations, and understand potential consequences.

In 2020, in preparation of updating the Regional All-Hazards Mitigation Plan, the Local Multi-Agency Coordination Group reviewed the hazards section of the PDM and identified those hazards that do not pertain to Crowley County. By unanimous vote, the Local MAC Group agreed to remove those hazards from the plan update. The group also decided not to add any additional hazards other than the identified natural hazards, since the County's Emergency Management Plans sufficiently address the non-natural hazards in the Mitigation Section of the CEMP. The following information represents the best available data during the planning period. Hazard information was developed using the Hazard Identification Risk Assessment found in the CEMP, and then used in the development of the CC LMS plan. More detailed information on risk and vulnerability of the community to each natural hazard is contained in the 2021-2026 Southeast Colorado All-hazards Regional Mitigation Plan available on the regions website (www.secahr.com), as well as in hard copy in the Crowley County Emergency Management Office, located at 611 E 9th Street, Ordway, CO 81063.

AG INFESTATION

Crops and rangeland in Crowley County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Crowley County's economy. According to the 2017 USDA Census of Agriculture, Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agriculture products sold is $96,277,000. An agricultural infestation could impact the livelihood of residents in Crowley County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation. In recent years Crowley County has had to combat tumbleweeds mainly from a fire prevention perspective but these are a form of noxious weed and did cost the county money to combat and control.

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Crowley County has experienced $4,954 in crop indemnity payments due to insects from 1991 to 2018. This equates to $183 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost of control of the infestation.

DAM/LEVEE FAILURE

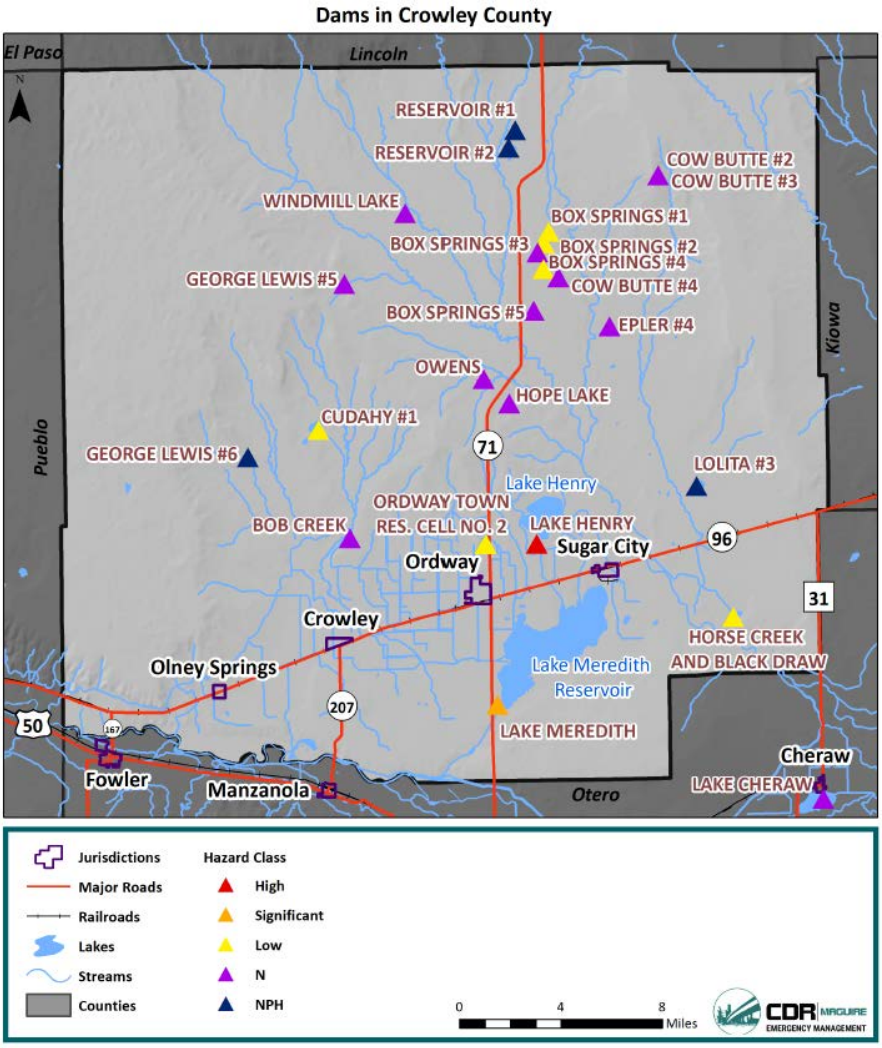
DAMS

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are 22 jurisdictional dams in Crowley County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam. Five of these dams are low hazard, one significant hazard, one high hazard (Lake Henry), four are considered No Public Hazard (NPH), and eleven are considered No Hazard. The high hazard dam has an Emergency Action Plan (EAP) dated 3/26/2018. These dams are listed in Table 1 and mapped in Figure 1. There are no non-jurisdictional dams in the County.

Table 1: Dams in Crowley County

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Box Springs #1	Horse Creek	Las Animas	Low	Not Required	
Box Springs #2	Horse Creek	Las Animas	Low	Not Required	
Box Springs #3	Horse Creek	Las Animas	N	Not Required	
Box Springs #4	Horse Creek	Las Animas	Low	Not Required	
Box Springs #5	Horse Creek	Las Animas	Low	Not Required	
Bob Creek	Bob Creek	Crowley	N	Not Required	
Cow Butte #2	Black Draw	Las Animas	N	Not Required	
Cow Butte #3	Black Draw	Las Animas	N	Not Required	
Cow Butte #4	Black Draw	Las Animas	N	Not Required	
Cudahy #1	Bob Creek	Rocky Ford	Low	Not Required	
Epler #4	Black Draw	Las Animas	N	Not Required	
George Lewis #5			N	Not Required	
George Lewis #6	Arkansas River	Olney Springs	NPH	Not Required	
Hope Lake	Breckenridge Creek	Las Animas	N	Not Required	
Lake Henry	Horse Creek	Ordway	High	Yes	3/26/2018
Lake Meredith	Bob Creek	Rocky Ford	Significant	Yes	12/26/2017
Lolita #3	Black Draw	Las Animas	NPH	Not Required	
Owens	Breckenridge Creek	Ordway	N	Not Required	
Reservoir #1	Pond Creek	Las Animas	NPH	Not Required	
Reservoir #2	Pond Creek	Las Animas	NPH	Not Required	
Windmill Lake	Lone Tree Creek	Las Animas	N	Not Required	
Ordway Town Res. Cell No. 2	Bob Creek	Ordway	Low	Not Required	

Figure 1: Dams In Crowley County Map



Lastly, there are 22 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses, which the state engineer has determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.

LEVEES

There are no documented levees in Crowley County. However, the levee inventory may not be complete, as the County has not been mapped by the NFIP. Additionally, smaller levees or embankments that do not provide 100-year flood protection would not be captured in this inventory.

PREVIOUS OCCURRENCES

There are no reports of significant dam or levee failures in Crowley County. However, there has been three incidents in the County (all involving the Lake Henry dam), reported by the National Performance of Dams Program (NPDP). The NPDP tracks dam incidents, described as events that affect the structural and functional integrity of dams, though not necessarily causing failure and not including ordinary maintenance and repair, vandalism, acts of war, recreational accidents, and sabotage. The events are described in the table below.

Table 2: Previous Dam Occurrences

Name	Date of Incident	Description of Incident	Nearest Town	County	Class	Waterway	Failure?
Lake Henry	6/9/1995	Seepage	Ordway	Crowley	Low	Horse Creek	No
Lake Henry	4/20/2001	Embankment Slide	Ordway	Crowley	Low	Horse Creek	No
Lake Henry	6/14/2001	Embankment Slide	Ordway	Crowley	Low	Horse Creek	No

PROBABILITY

Although there has not been any significant dam or levee failures in Crowley County, with 22 dams in the County, the risk of a failure remains. Based on this assessment, the probability is rated as occasional, or between 1% and 10% annual probability.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas. Inundation areas for high hazard dams are available through Colorado Dam Safety. These areas are mapped in Appendix F (FOUO) in the 2021 Southeast Colorado All-Hazards Regional Mitigation Plan. Based on this data, only a small portion of the southwest corner of the County is at risk to inundation from the Pueblo dam (located in Pueblo County). However, the Town of Ordway is listed as the first downstream community for Lake Henry dam, which is a high hazard dam, as well as Owens dam and Ordway Town Res. Cell No. 2, which is a low hazard dam.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

No Crowley County dams were included in the Colorado Dam Safety social vulnerability, population at risk, or Colorado high hazard dam release analyses.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries. The southwest corner of the County is at the highest risk to losses in the County from a dam failure event. Colorado law requires that high hazard dams have Emergency Action Plans (EAP), and that failure inundation maps be prepared as part of those plans. The LPC did confirm the existence of an EAP for Lake Henry and Lake Meredith dams, which can help reduce losses in the event of a failure.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

DROUGHT

All of Crowley County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

PREVIOUS OCCURANCES

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing: precipitation averages over time to identify periods with precipitation amounts below the long-term average, U.S. Drought Monitor records/current conditions, and drought disaster declarations.

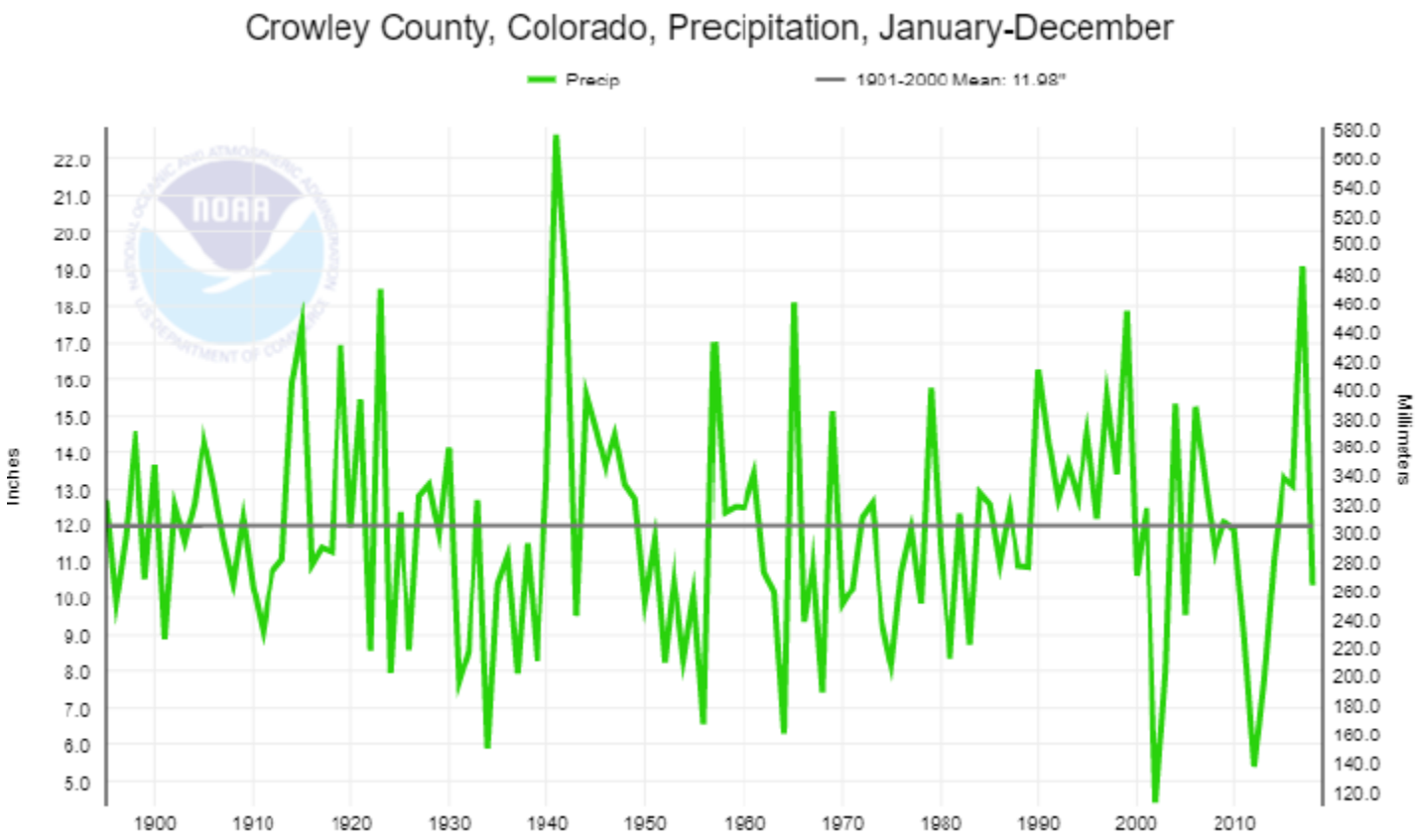
Drought conditions based on precipitation deficits are described in the table below, indicating the top five years of precipitation deficit departure from the long-term average of 11.98 inches. Precipitation deficits are also shown in Table 3. It is evident precipitation deficits have occurred throughout history in Crowley County, particularly in the 1930s and 2000s. Notably, 2002 was the top driest year since 1895, with only 4.43 inches of precipitation, equaling a 7.55-inch deficit. The year 2018, which was a notably dry year in much of Colorado, resulted in a 1.59-inch precipitation deficit in the County, ranking it the 36th driest year since 1895

Table 3: Precipitation Deficits 1895-2019

Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
11.98 in.	2002	4.43 in.	7.55 in.
11.98 in.	2012	5.39 in.	6.59 in.
11.98 in.	1934	5.87 in.	6.11 in.
11.98 in.	1964	6.32 in.	5.66 in.
11.98 in.	1956	6.57 in.	5.41 in.

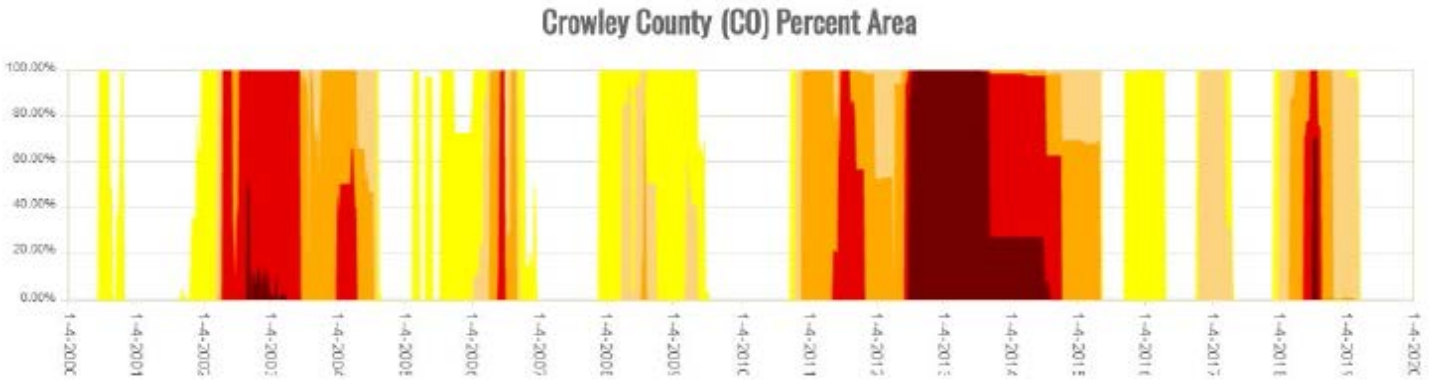
Figure 2: Crowley County Precipitation January-December



SITUATION

Drought conditions based on U.S. Drought Monitor records are shown in Table 4. Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2012 to 2015. For parts of 2012 and 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2004, 2006, 2011, and 2018 to 2019. There has been some level of drought in the County nearly every year since 2000.

Table 4: Crowley County Drought Monitor Records



Lastly, there have been 13 drought disaster declarations that have impacted Crowley County from 1977 to 2018.

Recent droughts are described below.

2018: Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Crowley County, was experiencing extreme (D3) drought conditions. These conditions impacted farmers as well as heightened wildfire concerns. In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the worst impacts of drought to the agricultural community in Bent County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought. The 2018 drought did lead to declaring Crowley County as a Primary county in a USDA Secretarial Natural Disaster designation for drought.

2012: After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres. During this time 100% of Crowley County was experiencing exceptional (D4) drought conditions. The 2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.
See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

PROBABILITY

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.
For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought conditions that negatively impact the Southeast Region. In Crowley County, there have been 13 drought disaster declarations from 1977 to 2018, equating to a 32% annual chance of drought occurrence, or a likely probability.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Additionally, drought conditions can increase the County's risk to wildfire. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Crowley County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. These assets are at risk to drought impacts. According to the Colorado Drought Plan – Visualization Story Map, the agriculture sector is the second-most vulnerable sector to drought in Crowley County (behind State assets), with a vulnerability score of 2.4. this is on par with the State average of 2.4. The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Crowley County, during this time period, there has been 92 reported impacts. The most impacts (32) were categorized as "agriculture," followed by plants and wildlife (18 impacts), and relief, response, and restrictions (15 impacts). Examples of recorded impacts from the 2018 drought include fire bans, wildlife approaching buildings looking for food, boat restrictions on lakes due to low water, and increased dust. For agriculture, hay prices increased, and producers fed cattle a mix of hay and kale.
Additionally, ranchers weened and sold cattle early.

Potential Losses

The largest potential losses in Crowley County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Crowley County, and droughts causing major economic impacts to crops and cattle could also trickle into the rest of the economy in the County. All jurisdictions and unincorporated County are impacted by drought events due to the connected nature of agriculture, water use, and the economy in the County.

Land Use and Development

An increase in population and development can put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions.

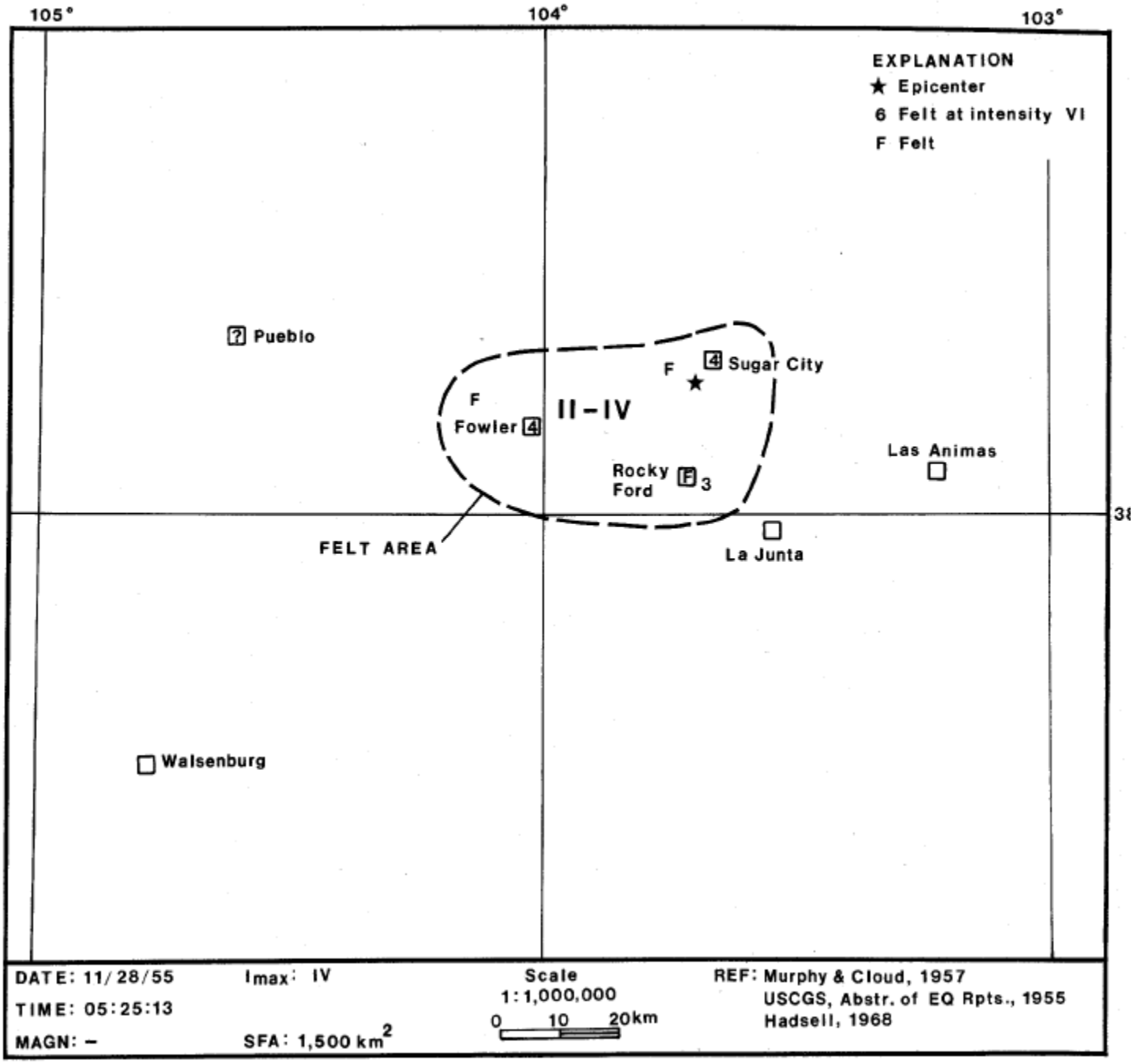
EARTHQUAKE

PREVIOUS OCCURRENCES

There are limited reports of earthquakes in Crowley County. Past occurrences in the County were reported in the Earthquake Evaluation Report released by the CGS. The CGS also released a publication, titled "Colorado Earthquake Information 1867-1996," that provides details on past earthquakes. Based on that report, information of specific occurrences that affected the County are as follows:

November 28, 1955 – During the late evening on November 27, 1955 (local time) a light earthquake shook a limited area in southeastern Colorado. Murphy and Cloud (1957) stated that intensity IV was reported at Fowler and Sugar City. The CGS rated the report for the Colorado Experiment Station at III. The earthquake was also felt at Nepesta, Ordway, and Rocky Ford. Figure 6-103 is an intensity map for this event. According to the USGS quarterly series "Abstracts of Earthquake Reports," Pueblo experienced intensity IV effects. Based on the intensity map, the felt area for this event is around 1,500 km2. Hadsell (1968) reported it at 1,000 km2.

Figure 3: 1955 Earthquake Intensity Map



August 16, 2009 - An earthquake hit Colorado's plains, setting off tremors across the southeastern part of the state and into western Kansas, but causing no reported damage. The National Earthquake Information Center in Golden confirmed that a magnitude 3.9 earthquake occurred at 6:22 p.m. in southeastern Colorado, about 180 miles southeast of Denver.
Additionally, the USGS Earthquake Catalog was searched for previous earthquakes in the County. According to this database, there has been no additional earthquakes in the County since 1900.

PROBABILITY

SITUATION

Based on previous occurrences and knowledge on seismic activity in Crowley County, the probability of an earthquake is possible.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

It can be assumed all existing and future buildings and populations are at risk to the earthquake hazard. However, building codes can help reduce the risk to structures during an earthquake. Previous damages from earthquakes in Crowley County have been minor (rattling of loose objects). However, it is possible for the Cheraw Fault, which passes through the southeastern portion of the County, to produce a strong earthquake. The 2008 and 2014 Southeast Region hazard mitigation plans utilized a 7.0 magnitude scenario as the maximum magnitude produced from the Cheraw Fault. A 7.0 magnitude earthquake is considered a major earthquake that can cause serious damage over larger areas. Older buildings that are not constructed to modern day building codes are more at risk to these damages throughout the County. Additionally, the southern portion of the County is at a closer proximity to the fault than the northern non-incorporated areas, putting communities there at a higher risk to damages.

Potential Losses

The most appropriate loss estimation methodology for seismic hazards involves scenario modeling using FEMA's Hazus loss estimation software. There are two levels of Hazus analysis, 'Standard,' which uses the default FEMA-derived datasets and damage functions, and 'Enhanced,' which uses independently compiled and accurately verified structure and infrastructure inventories and damage functions. The earthquake analysis conducted for this report includes a Standard level analysis using the latest version, Hazus-MH Earthquake Model V4.2. This risk assessment leveraged census tract data to conduct a Standard Hazus probabilistic scenario for Crowley County.

A 2,500-year return period probabilistic scenario was used for the analysis (probability of 2% of occurrence in 50 years). A 2,500-year return period was chosen because the new International Building Code uses a 2,500-year map as the basis for building design. Based on CGS data, the highest magnitude earthquake that could be expected to occur in Crowley County is a 7.0. This value was used in the probabilistic scenario in Hazus.

Hazus estimates that there are 1,000 buildings in the County which have an aggregate total replacement value of $313 million (excluding contents). Hazus estimates that about 53 buildings will be at least moderately damaged. This is under 1% of the buildings in the County. Residential homes will be the most impacted.

The total economic loss estimated for the earthquake is $4.37 million, which includes building and lifeline related losses based on the County's available inventory. The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total building-related losses were $2.19 million; business-related losses were estimated at $500 thousand. The largest loss was sustained by the residential occupancies which made up over 44% of the total loss. Due to the analysis performed by Census Tract (with only one located across the entire County), it is difficult to determine losses by jurisdiction. In general, it can be estimated that the highest losses will be associated with populated towns, which contain more buildings.

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake

The lone casualty estimated for Crowley County was a Level 1. This was modeled to be the same during any time of the day.

A number of variables are included in Hazus analyses in order to arrive at the estimated values of loss due to earthquake. For this reason, it is important to note that the Hazus loss estimates detailed above should not be used as a precise measure, but rather viewed from the perspective of the potential magnitudes of expected losses.

Land Use and Development

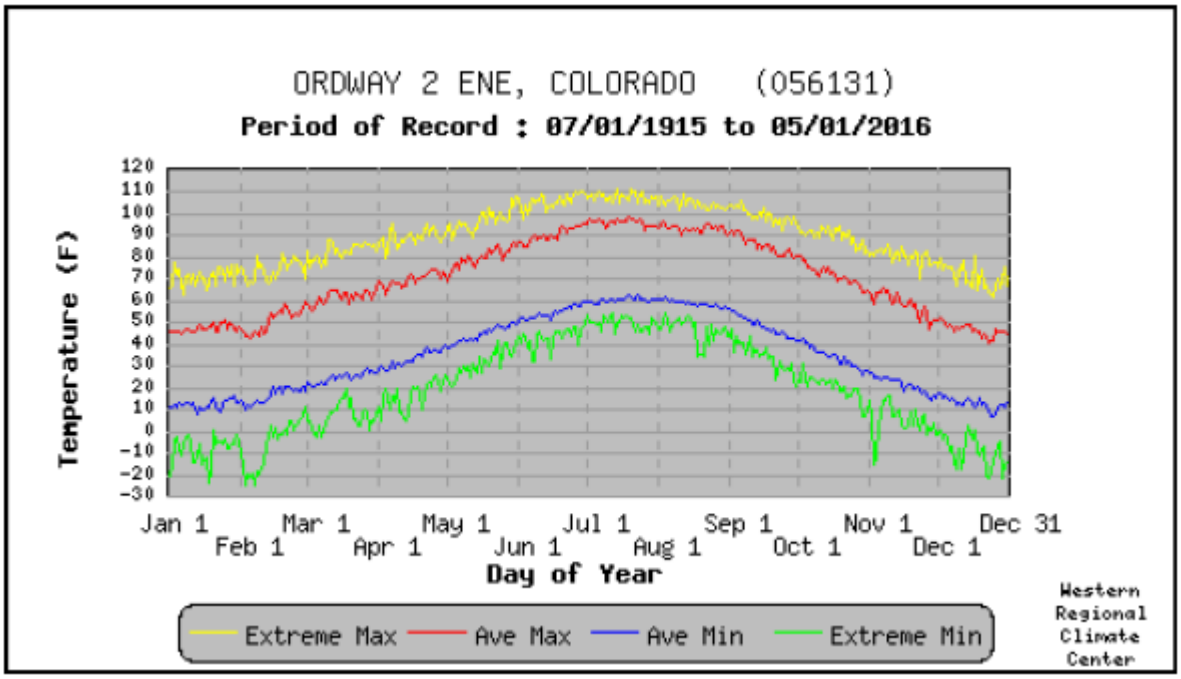
With the unpredictable nature of earthquake epicenter locations, it is not feasible to identify specific areas where development may exacerbate the risk to an earthquake. If population and development expand, enforcement of the unified construction code has great potential to mitigate increasing vulnerability and development pressure.

EXTREME TEMPERATURES: EXTREME COLD

Extreme cold temperatures can impact the entire County. Figure 5 shows the extreme temperature highs and lows for Ordway. The lowest recorded temperature from this data is -25 degrees

Table 5: Temperature Extremes in Ordway, Colorado - Cold

Temperature Extremes in Ordway, Colorado - Cold



PREVIOUS OCCURRENCES

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Crowley County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Crowley County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

PROBABILITY

Extreme cold temperatures occur yearly in Crowley County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Crowley County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the County is most vulnerable to temperature extremes. In Crowley County, 13% of the population is 65 and older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in the County are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Crowley County has experienced $122,395 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.85 This equates to $4,533 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

Land Use and Development

SITUATION

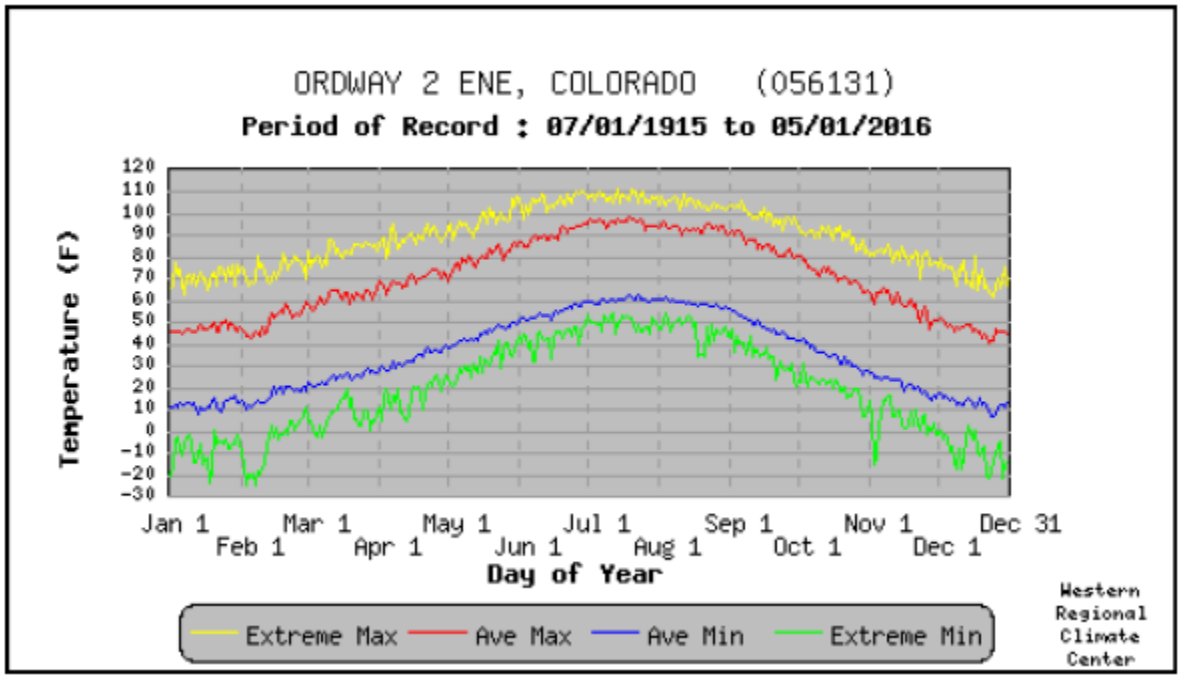
If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

EXTREME TEMPERATURES: EXTREME HEAT

Extreme heat can impact the entire County. Figure 6 shows the extreme temperature highs and lows for Ordway. The highest recorded temperature in this data is 111 degrees. Across the County, maximum temperatures routinely break 100 degrees during the summer months.

Table 6: Temperature Extremes in Ordway, Colorado - Heat

Temperature Extremes in Ordway, Colorado – Heat



PREVIOUS OCCURRENCES

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Crowley County has experienced 2,386, 1,221, and 305 days above 90, 95, and 100 degrees, respectively. Additionally, the County has experienced 266 heat waves during this time period. This places Crowley County fourth in the State for number of days above 90 degrees from 1981 to 2017, as well as third in the State for number of heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.

PROBABILITY

Based on the climate of Crowley County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

VULNERABILITY

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Crowley County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. In Crowley County, 13% of the population is 65 and older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during
times of extreme heat. Additionally, people who work, frequently recreate outside, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Potential Losses

There is no recorded damage information for extreme heat in Crowley County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat. Based on USDA Risk Management Agency Data, Crowley County has experienced $169,387 in insured indemnity amounts from 1991 through 2018 due to heat.88 This equates to $6,273 in annual losses.

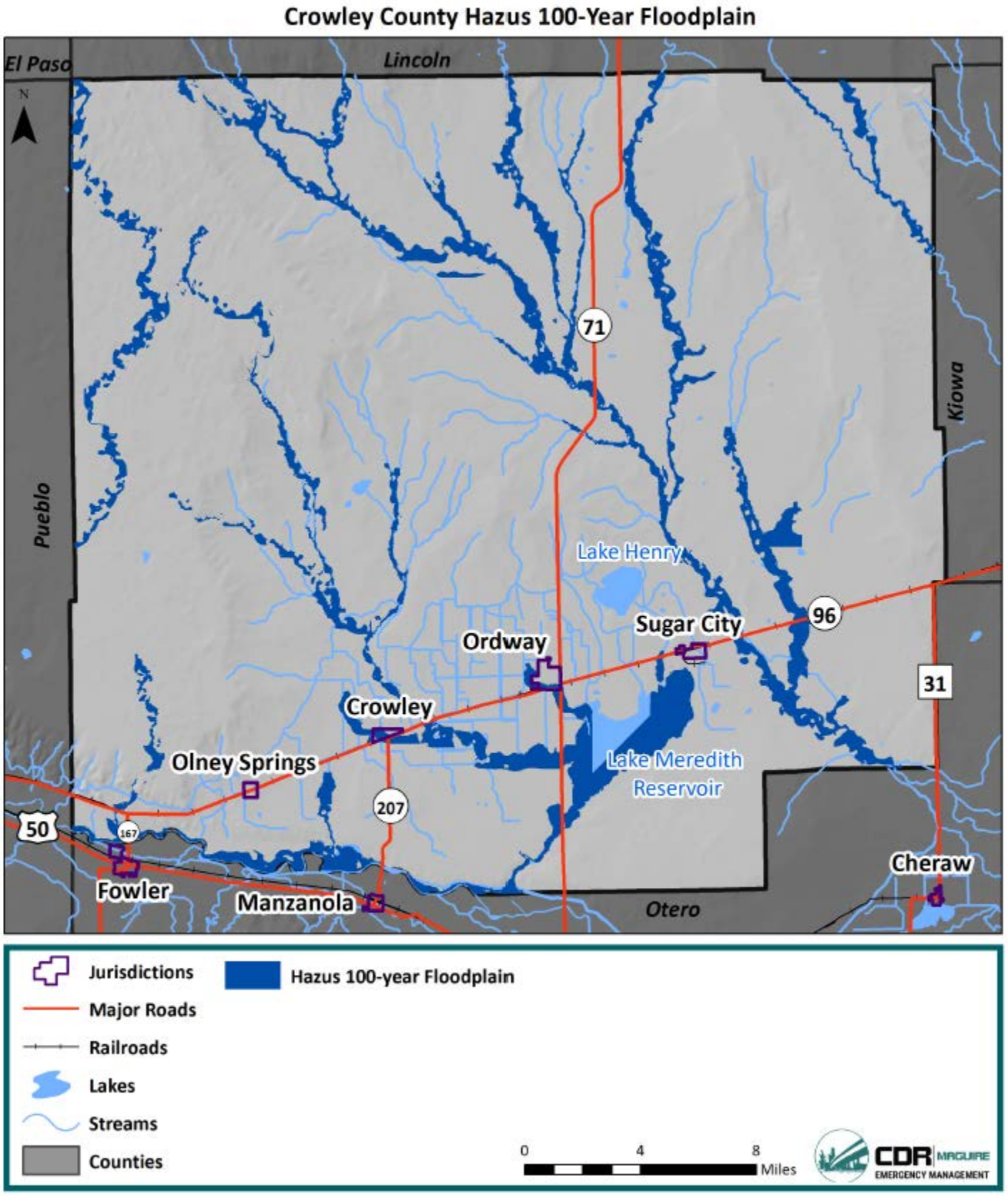
Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme heat.

FLOODING

The Crowley County floodplain is not digitally mapped by the NFIP. Therefore, the best available floodplain data was generated for the 2018 Colorado State Hazard Mitigation Plan. Using Hazus-MH 4.0, a standard Level 1 flood analysis was conducted. This resulted in the development of a stream network and hydrology for 10-square mile drainage areas. The 30-meter (one arc second) DEMs were used in this analysis as the terrain source. Hazus then ran hydraulics for and delineated the 100-year floodplain boundary. While not as accurate as an official FEMA floodplain, this boundary is available for use in GIS and is currently the best available data for the County. Figure 4 shows the floodplain for Crowley County. The floodplain impacts many areas of unincorporated County, as well as through several jurisdictions, including Crowley, Ordway, and parts of Sugar City.

Figure 4: Crowley County Hazus 100-Year Floodplain



SITUATION

Localized flooding also occurs throughout the County with several areas of primary concern. The County has determined a number of areas that incur repetitive local flooding. The Crowley County Emergency Manager maintains a map of locations of flooding. These areas are listed below.

- 26483 Highway 96, Sugar City
- Lane 21 North of Highway 96, where Pond Creek Crosses Lane 21
- Low Water Crossing on Road U at Lane 22 (approximately)
- Low Water Crossing on Road K where K is crossed by Horse Creek
- Lane 27 between CC & DD, approximately 1 mile south of the Lincoln County line
- Road K and Lane 10
- Road F.5 and Lane 11
- Road C and Lane 11
- Road D and Lane 13
- Road D between Lane 13 and 14

It was also noted that there has been repetitive flash flooding in Sugar City. An event in April of 2000 washed out a 12″ culvert. This affected the wells owned by Sugar City. As long as there continues to be a low water crossing at this area, flooding will continue.

PREVIOUS OCCURRENCES

In total, there have been six recorded flooding events in the County from 1950 to May 2019. One of these events were labeled as a flood and five as flash floods. One of these events occurred near Crowley, three in Ordway, one in Sugar City, and one in unincorporated County. None of these events have recorded injuries or deaths. One event, occurring on 8/19/2004 in Sugar City caused $30,000 in recorded damages, including water in basements, in some cases more than four feet deep, which damaged and destroyed personal property. Other recorded qualitative damages include, flooded highways, washed out bridges, and road closures.
Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below.

Table 7: Previous Flood Occurrences

Date	Location	Flood Type	Description
7/25/2016	Town of Crowley	Flash Flood	Heavy rain produced flash flooding with high water in the Crowley and Ordway areas.

NFIP Information

Crowley County has not been mapped by the NFIP nor does it participate in the program at this time. The Town of Ordway has no policies, and the Town of Crowley has no Special Flood Hazard Area (NSFHA) and no policies.

PROBABILITY

Based on six floods from 1950 to 2019, there is a 9% annual chance of flood occurrence in the County, equating to a possible probability.

VULNERABILITY ASSESSMENT

Inventory Expose/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County and the Towns of Crowley and Ordway, as well as near Sugar City. Damages in unincorporated areas can include (but are not limited to) rural structures, roads, and crops. As demonstrated in the previous occurrences, issues such as flooded basements, bridges, and roads can occur in/near the jurisdictions,

particularly in Ordway, Crowley, and Sugar City. The area around Olney Springs is largely not impacted by flooding. This indicates much of the County is vulnerable to this hazard. Flooding can also cause injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Crowley County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

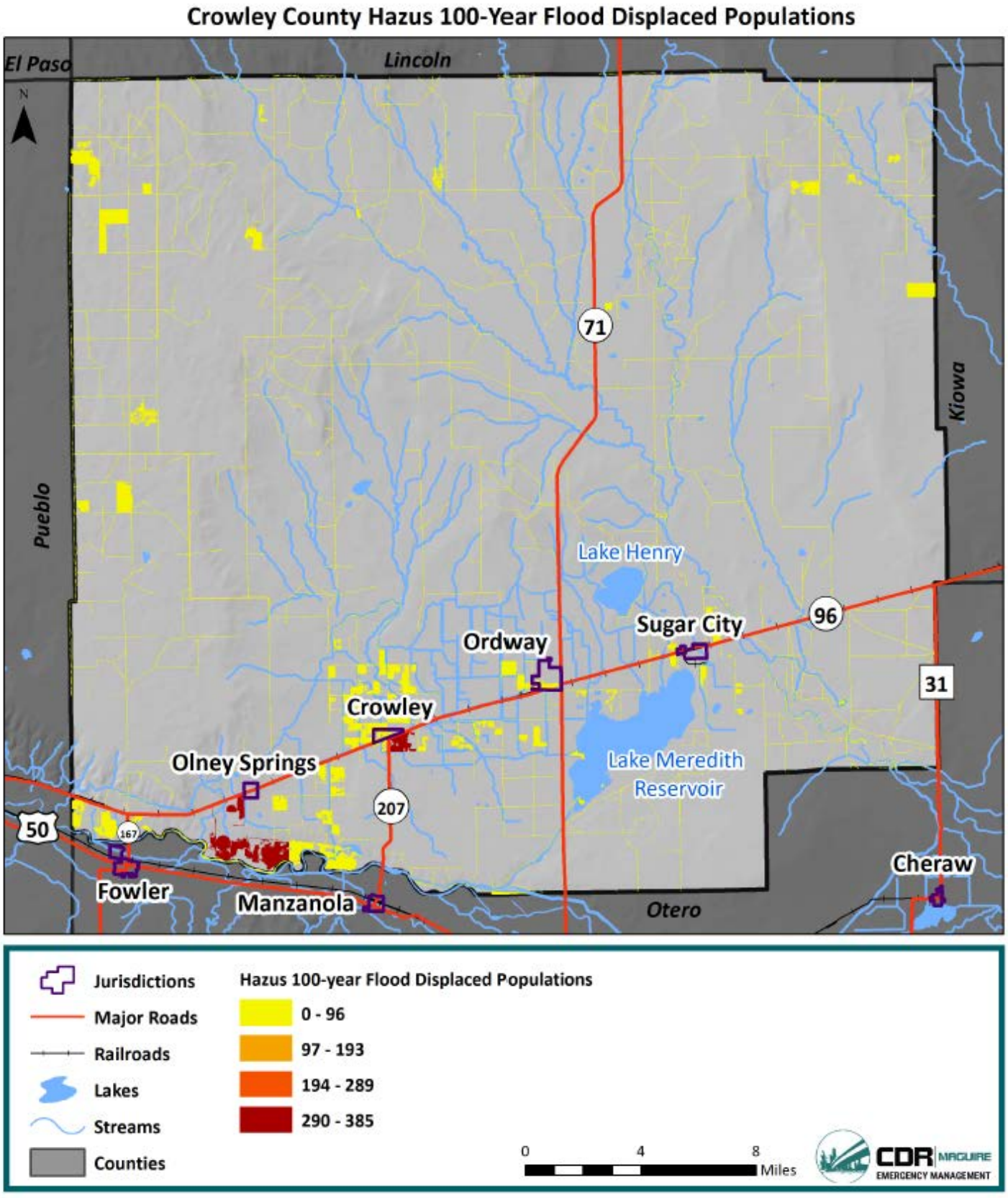
Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100- year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. While not as accurate as official flood maps, these floodplain boundaries are available for use in GIS and could be valuable to Crowley County, given it has not been mapped by the National Flood Insurance Program. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhance (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, about 14 buildings would be at least moderately damaged by a county-wide 100-year flood, which is over 60% of the buildings in the scenario. No buildings are estimated to be completely destroyed. The model estimates 365 households (or 1,096 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. The areas with the majority of displaced populations include along the Arkansas River in southern unincorporated County (356 people) and just south of the Town of Crowley (385 people). In Ordway, 190 people are estimated to be displaced. Of the total displaced populations, 622 people are estimated to seek temporary shelter in public shelters. Figure 5 shows locations of displaced populations.

Figure 5: Crowley County Hazus 100-Year Flood Displaced Populations



The total economic loss estimated for the flood event is $6.07 million, which represents 4.27% of the total replacement value of the County's building stock. Total economic losses are a combination of direct building losses and business interruption losses.

The economic losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood. The direct building-related losses for the County were $6.04 million. Residential occupancies made up 76.66% of the total loss. Business interruption losses were $30,000.

Additionally, the model estimates that a total of 619 tons of debris will be generated. Of the total amount, Finishes comprises 76% of the total, Structure comprises 7% of the total, and Foundation comprises 17%. If the debris tonnage is converted into an estimated number of truckloads, it will require 25 truckloads (25 tons/truck) to remove the debris generated by the flood. Figure 6 shows the Hazus generated flood depths for a 1% annual chance (100-year) flood event for the County.

Figure 6: Crowley County Hazus 100-Year Flood Depth

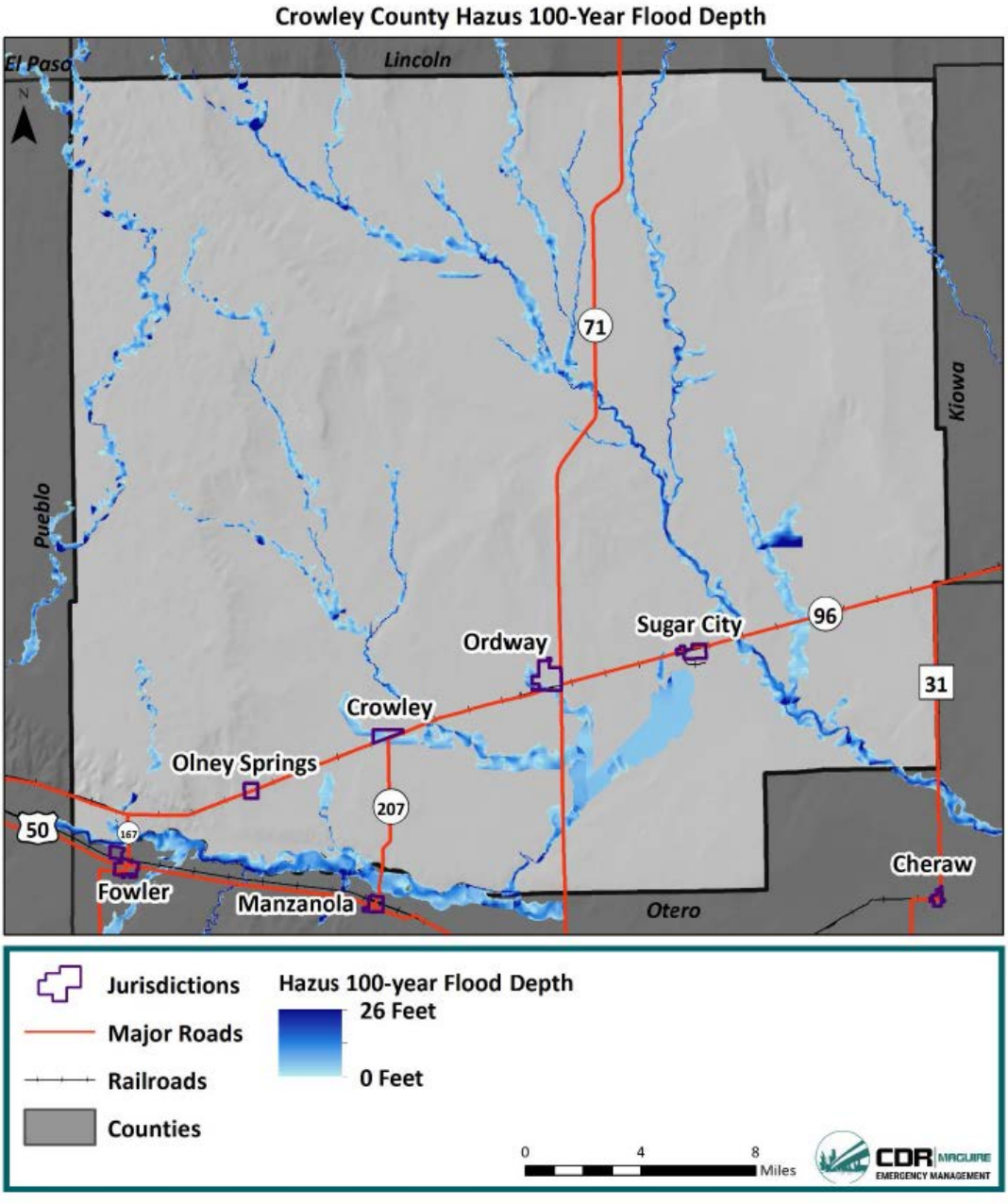


Table 8 shows total economic losses from this event for the County ($6.07 million). The highest flood losses are projected to occur in southern portions of unincorporated Crowley County along the Arkansas River, as well as just south of the Town of Crowley. GIS was used to estimate losses by jurisdiction, shown in the table below. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall magnitude of flood losses in and surrounding each jurisdiction. The highest amount of losses are projected for Ordway.

Table 8: Economic Loss Estimates 100-year Flood Losses

Jurisdiction	Estimated 100-year Flood Losses
Olney Springs	$936,000
Crowley	$363,000
Ordway	$2,899,000
Sugar City	$13,000
Unincorporated County	$1,859,000
TOTAL	**$6,070,000**

In addition to the potential losses estimated by Hazus, there have been $1,398,239 in recorded losses in Crowley County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $24,530 in annual losses to Crowley County from flooding.

Land Use and Development

Regulating new development can help reduce the risk to new structures from flooding. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

SEVERE WEATHER: THUNDERSTORMS/LIGHTNING/HAIL

THUNDERSTORMS

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 19 thunderstorm wind events have occurred in Crowley County from 1955 to 2019. Seven of these events were recorded in Ordway, three in Olney Springs, one in Sugar City, and eight with no location listed. The highest recorded wind gust was 70 mph, which occurred on several occasions. Overall, these storms caused $10,050 in property damages and five injuries. The highest amount of damages occurred during the 6/8/2002 thunderstorm near Sugar City, causing approximately $10,000 in damages and five injuries when a microburst knocked over several camping trailers at Lake Meredith southwest of Sugar City causing five minor injuries.

LIGHTNING

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in Colorado.90 Crowley County averages 3,500 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009- 2018) and fourth in the nation for number of lightning fatalities (years 1959-2017). The NCEI Storm Events Database reports on the number of damaging or significant lighting events. In Crowley County there has been one recorded damaging lightning event, on 4/29/2000 near Ordway. This event caused $1,000 in property damages where a tree was struck by lightning. A branch fell and broke a window in a residence.

HAIL

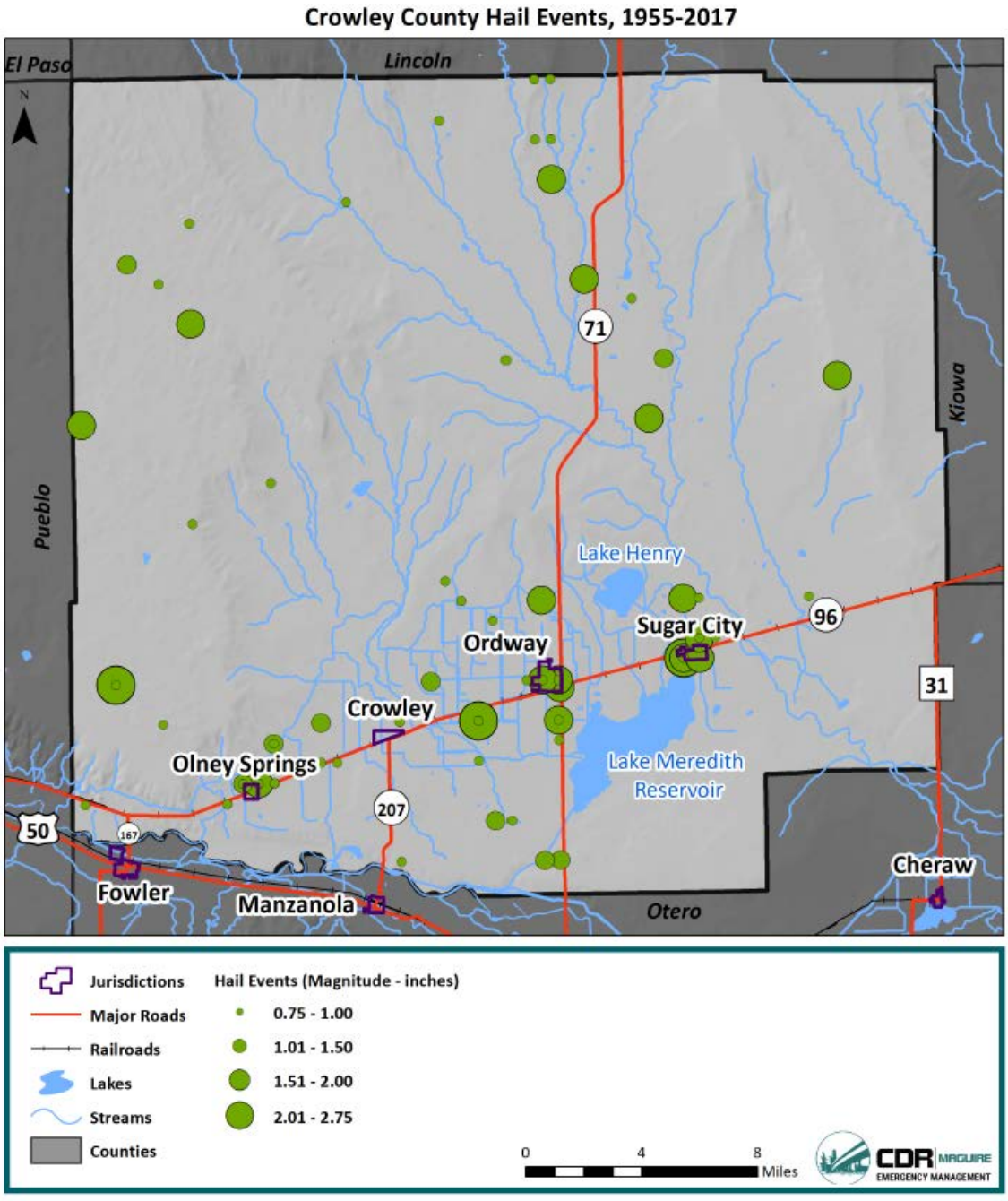
SITUATION

According to the NCEI Storm Events Database, there have been 89 recorded hail events in Crowley County from 1955 through 2017. These events are summarized in Table 9. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. The largest recorded magnitude hail was 2.75 inches, occurring on several occasions. No damages, injuries, or deaths were recorded with any of these events.

Table 9: NCEI Storm Events from 1955-2017

Jurisdiction	# Events	Max Magnitude	# Deaths	# Injuries	Damages
Ordway	29	2.0	0	0	$0
Olney Springs	16	1.75	0	0	$0
Sugar City	18	1.75	0	0	$0
Crowley	13	1.75	0	0	$0
Unincorporated County	13	2.75	0	0	$0
Totals	**Count:89**	**Max: 2.75**	**0**	**0**	**$0**

Figure 7: Crowley County Hail Events 1955-2017



VULNERABILITY

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences from thunderstorm events include infrastructure damage and building damage such as torn off roofs. Previous occurrences show events throughout the entire County. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County has similar vulnerabilities, as well as increased risk to crop losses from thunderstorms.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. Persons recreating or working outdoors during the months of April through September will be most at risk to lightning strikes. Fortunately, there have been no incidents of death of injury associated with lightning in the County. Additionally, property and infrastructure damage is possible.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail events. Ordway has experienced the most previous hail events, but as described in the Previous Occurrences section, the entire County has experienced hail events. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roof damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Potential Losses

According to SHELDUS, there have been $3,839,779 in damages from severe storms from 1960 to 2017 (2017 dollars) in the County. This equates to $67,364 in annual damages. No losses were associated with the recorded NCEI events, but most previous occurrences occurred in the jurisdictions, indicating likely losses. Overall, the most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

The only recorded damages from lightning in the County equate to $1,000 since 1996, occurring near Ordway. However, lightning occurs frequently every spring through fall in the County, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

According to SHELDUS, there have been $1,010,219 in damages from hail from 1960 to 2017 (2017 dollars). This equates to $17,723 in annual damages. Similar to other thunderstorm hazards, the entire County is vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

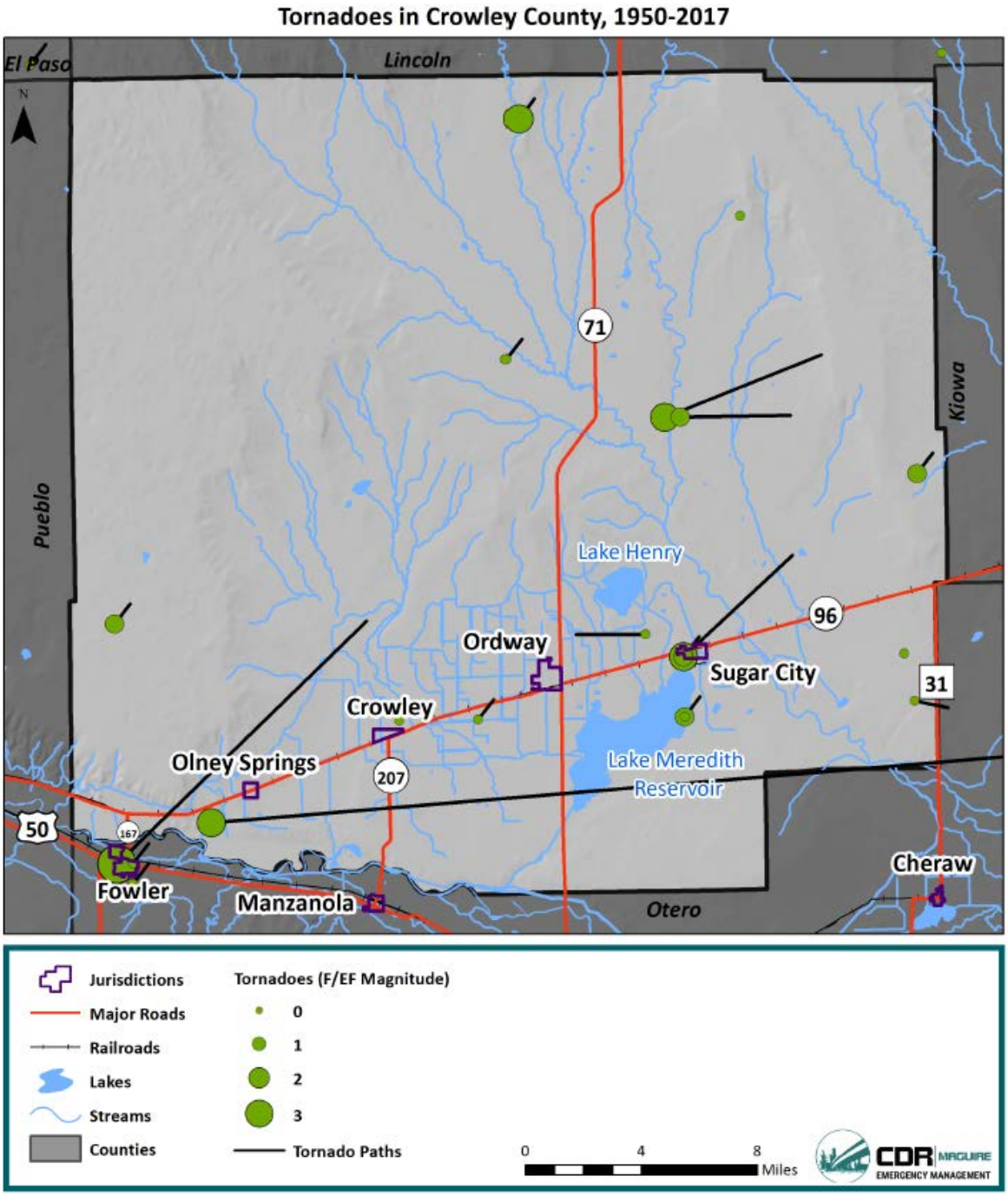
Land Use and Development

Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

TORNADOES

According to the NCEI, from 1950 through 2019, there have been 16 recorded tornadoes in Crowley County. These tornadoes resulted in $27,750 in recorded property damages. The strongest magnitude event was F2 events, happening on several occasions. The most damaging event was an F2 tornado on 5/23/1965, causing $25,000 in property damages. No further information was provided for this event. No events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Crowley County. Figure 8 shows tornadoes and tornado paths in the County as documented by the NOAA Storm Prediction Center. It is evident a tornado can occur throughout the County, however, the area around Sugar City has seen more tornadoes than other parts of the County.

Figure 8: Tornadoes in Crowley County 1950-2017



PROBABILITY

Based on previous occurrences in Crowley County, there is a 23% chance that a tornado will happen every year, equating to a likely probability.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Historical evidence shows that Crowley County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. It cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)
- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Crowley County, 18.1% of the housing units are mobile homes.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

NCEI historical loss information shows $27,750 in total losses. The most vulnerable areas in the County to high losses are jurisdictions that have more buildings and people, as well as agricultural land and mobile homes in unincorporated parts of the County.

SHEDLUS records $59,646 in County-wide losses from tornadoes from 1960 to 2017 (2017 dollars). This equates to $1,046 in annual losses from tornadoes. The vast majority of these damages are property damages ($58,729).

WILDFIRE

For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

SITUATION

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.

Burn probability for the County is mapped in Figure 9. Countywide, the burn probability is low to moderate.

Figure 9: Crowley County Burn Probability

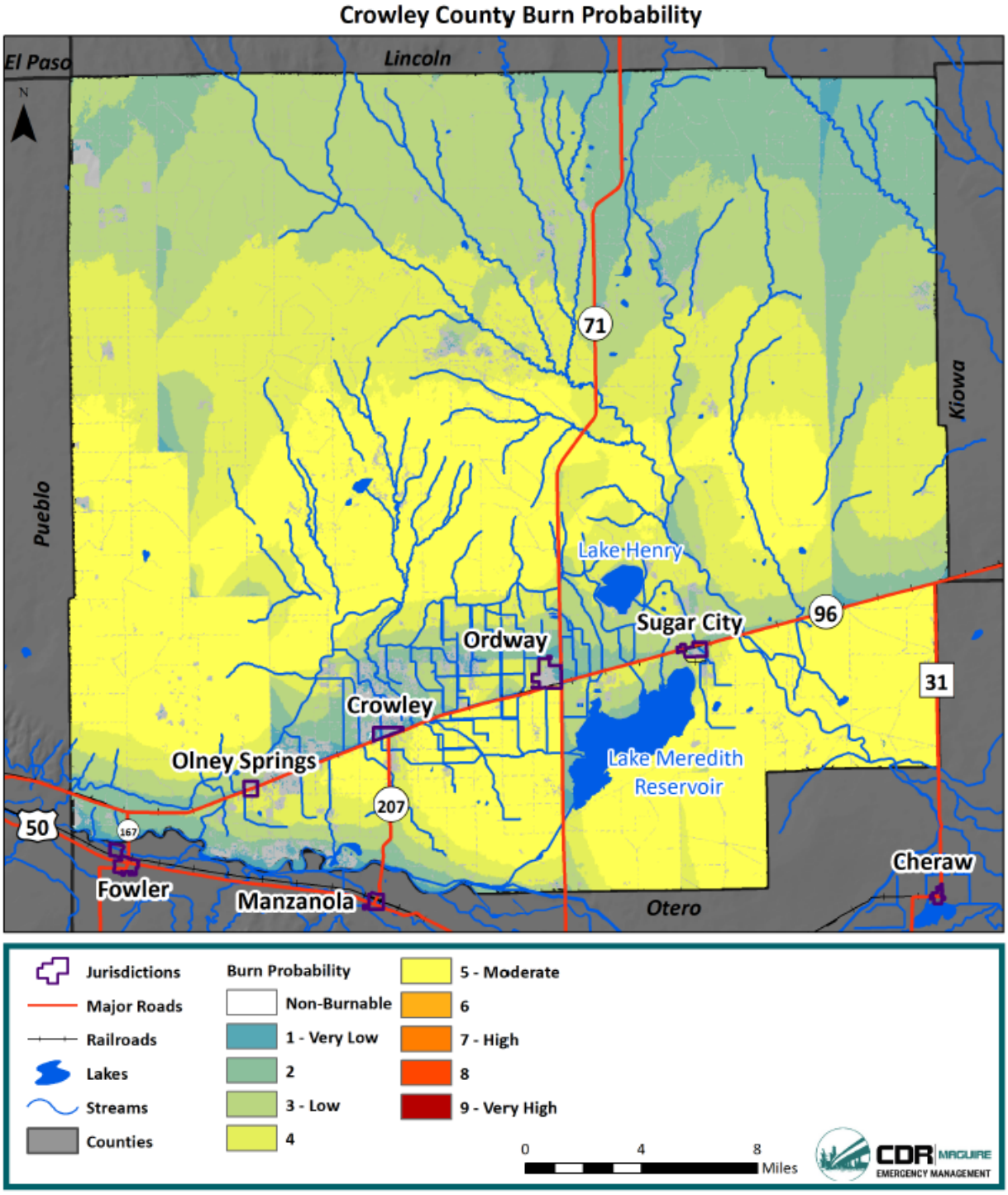
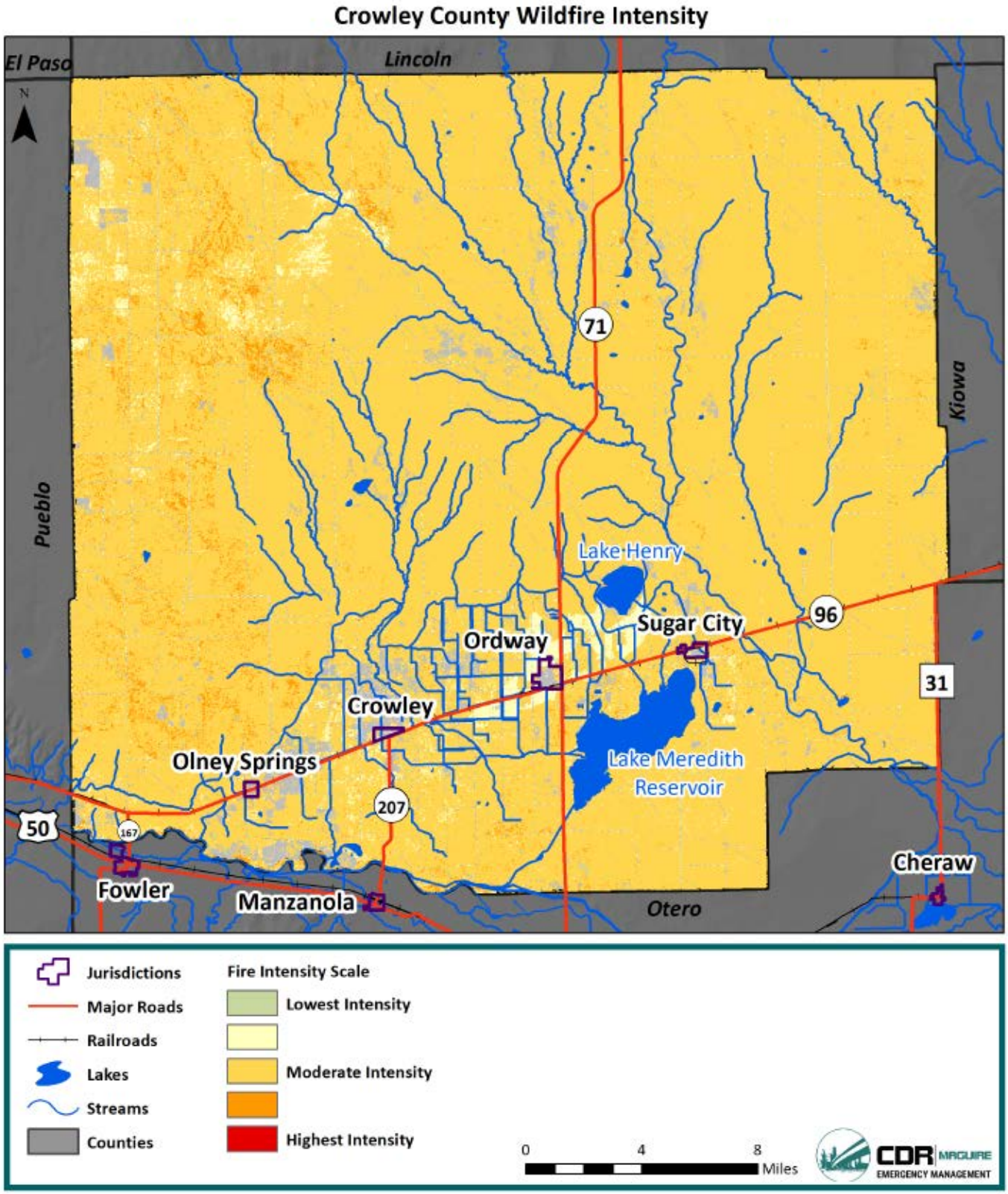


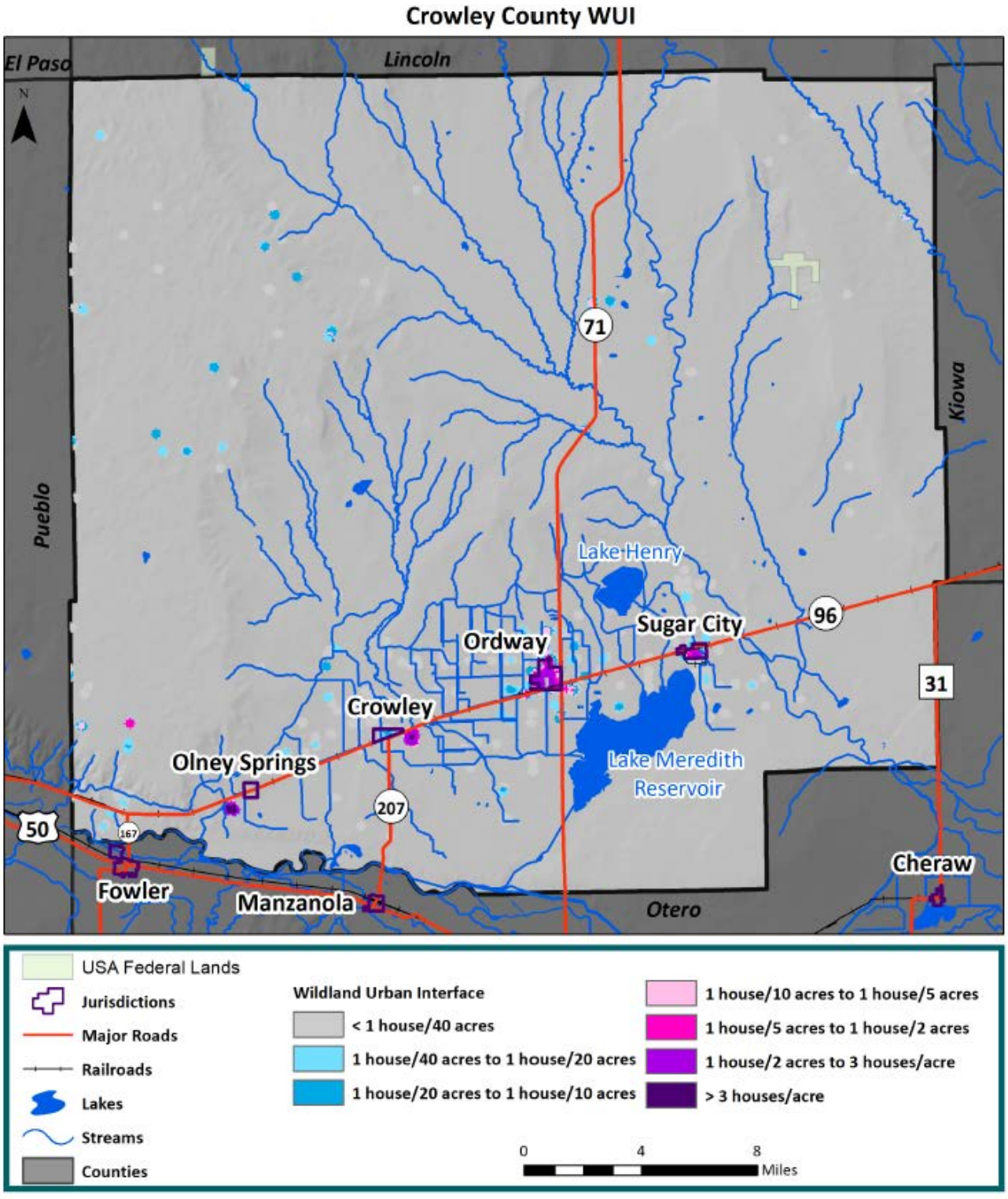
Figure 10 show the wildfire intensity for Crowley County. Much of the County has moderate wildfire intensity. The western portion of the County has areas with higher wildfire intensity.

Figure 10: Crowley County Wildfire Intensity Map



There are low density WUI locations throughout the entire County. Higher density WUI locations are located close to the jurisdictions, in particular Ordway and Sugar City. Figure 11 shows WUI locations throughout the County in addition to federal land ownership.

Figure 11: Crowley County WUI Map



PREVIOUS OCCURRENCES

According to the CO-WRA data, there have been 54 wildfires on federal lands from 1992 to 2015. Of these fires, 35 have been Class A (one-fourth acre or less), 15 Class B (1/4 to 10 acres), 2 Class C (10 to 100 acres), 1 Class D (100 to 300 acres), and 1 Class G (5,000 or more acres). Additionally, of these wildfires, 3 have been lightning-caused, 18 human-caused (including arson, campfire, debris burning, equipment use, and smoking), 12 miscellaneous, and 21 missing or unidentified.

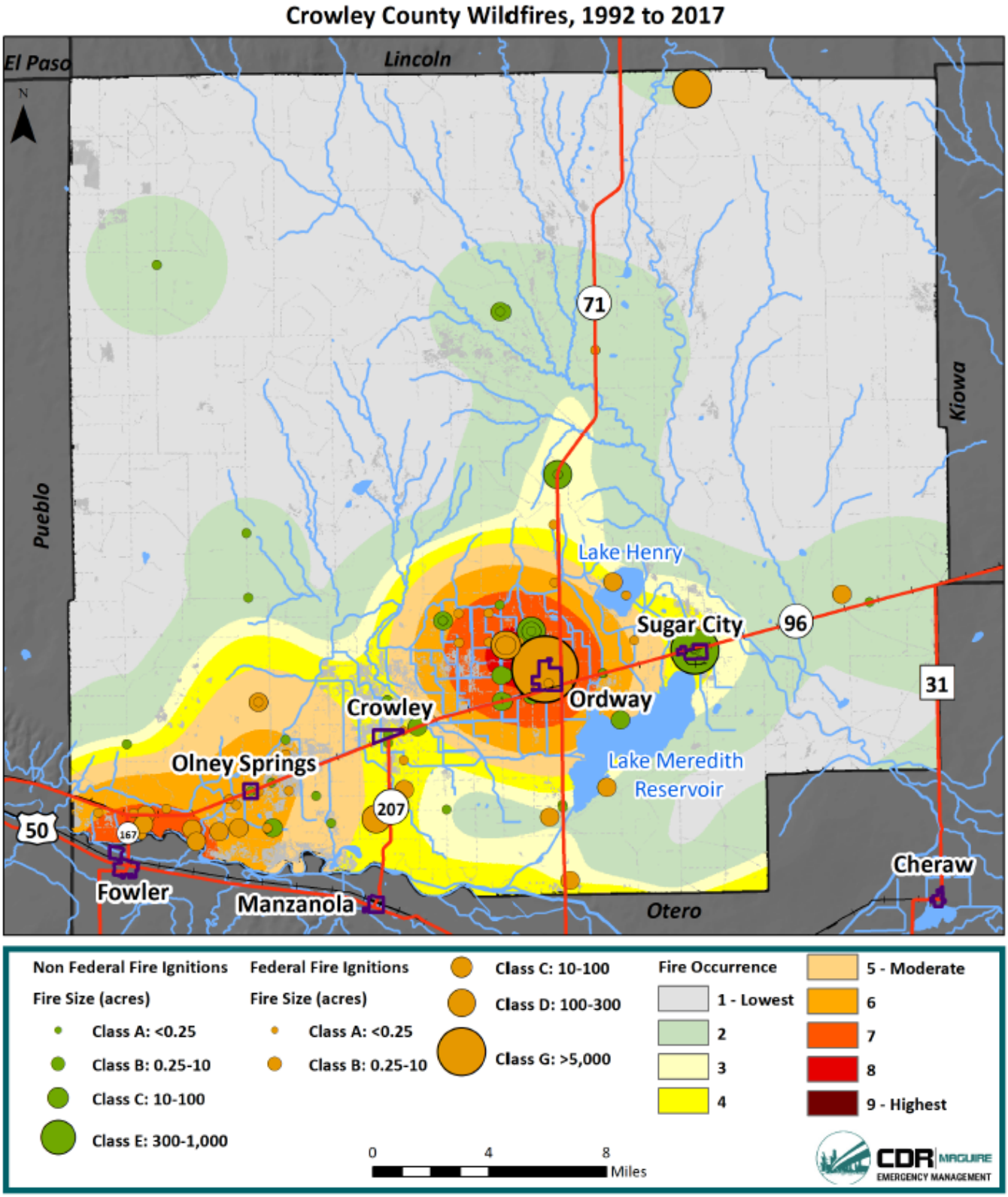
Additionally, there have been 102 non-federal wildfires from 2009 to 2017. Of these fires, 71 have been Class A, 26 Class B, 4 Class C, and 1 Class E. Information regarding the cause of the wildfire is not available for non-federal fires.

The 2008 Ordway fire caused significant impacts to the community, as described below.

> **April 15 and 16, 2008** - the Ordway Fire, which resulted in Fire Management Assistance Declaration FM-2760, was caused by an unpermitted prescribed burn south of the City of Ordway. Strong winds spread the blaze rapidly east northeastward. Highways 96 and 71 were shut down, as 8,900 acres of grassland was consumed. Firefighters from 35 agencies battled the blaze. Twenty-four structures were destroyed west and north of Ordway. Over 150 power poles were destroyed. The entire Town of Ordway was evacuated. Tragically, two firefighters perished when the truck they were in plummeted into a culvert, where a bridge had burned out. Over $5 million of property damage were attributed to this fire. In addition to the damages to property, there were other economic damages. According to members of the LPC, the location of the fires near large herds of cattle caused stress in herds. Many cattle lost three to five percent of their body weight, resulting in millions of dollars of lost income for area ranchers.

Figure 12 shows these previous wildfires within Crowley County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident the southern portions of the County have experienced the most wildfires, although they have occurred throughout the entire County. This data, overlayed with the fire occurrence layer, shows that areas around Ordway, Sugar City, and Olney Springs are at a higher risk of wildfire occurrence than other parts of the County.

Figure 12: Crowley County Wildfires 1992-2017



SITUATION

There have not been any notable wildfires in the County since the 2014 Southeast Region Hazard Mitigation Plan. However, the 2018 drought contributed to extremely dry conditions in the County and wildfire danger was high.

PROBABILITY

Based on all of the available previous occurrence data, there have been 125 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the Crowley County CWPP, the following are areas of highest wildfire concern for the County:

> Crowley County's highest concern areas are the communities and all development near the communities including but not limited to the Arkansas Valley Correctional Facility, the Crowley County Correctional facility, the Crowley County Heritage Center, the feed lots, a privately owned produce structure and the local community cemeteries; the recreational areas including Lake Meredith, Lake Henry, Ordway Reservoir, and the Colorado Division of Wildlife managed areas; the railroad/high-use travel corridors in the county; the Arkansas River watershed/tributaries and irrigation ditches/laterals for water quality, the abandoned irrigation ditches/laterals that run throughout the County with their high fuel load concern; and the Bureau of Land Management parcels in the County.

The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

Potential impacts are further assessed by utilizing the CO-WRA data to visualize different components of wildfire risk throughout the County.

The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.95 According to the CSFS, 99% of the population in Crowley County lives within the WUI. The majority of the County's WUI is in low negative impact areas. However, small portions, mostly around each jurisdiction, are in higher negative impact WUI areas.

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of "living" wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

WINDSTORMS

According to the NCEI database, there have been 35 recorded high wind events in Crowley County from 2003 to 2019. Within this database, wind events are reported at an NWS Zone level (Crowley County is one zone), so it is not possible to derive jurisdictional data. In Crowley County, many of the high wind events are associated with winter storms or

thunderstorms, but stand-alone high wind events are also common. The highest recorded magnitude event took place on 3/13/2019 with gusts up to 71mph. The event is described below:

> An extremely powerful low pressure system (setting records for lowest pressure measurements in Colorado) developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.

No damages, deaths, or injuries were recorded in the NCEI database, however, SHELDUS reports $4,016,645 in damages from wind events from 1960 to 2017 (2017 dollars).

PROBABILITY

Based on 35 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

There is little information to indicate damages from wind events. Mitigation measures, such as “Living Snow Fences” (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Potential Losses

SHELDUS reports $4,016,645 in damages from wind events from 1960 to 2017 (2017 dollars). This equates to $70,467 in annual damages. It is difficult to determine details on losses since the SHELDUS data does not provide loss or damage information. However, it is evident that losses can be expected in Crowley County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

WINTER STORMS

The entire County is subject to winter storm events. Crowley County averages approximately 20 inches of snow per year.

PREVIOUS OCCURRENCES

According to the NCEI database, there have been 15 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2005 to 2019. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information (Crowley Count is one zone). No damages, deaths, or injuries were reported with these events. However, SHELDUS reports $3,831,097 in damages from 29 events.

PROBABILITY

Utilizing the 15 reported NCEI events from 2005-2019, there is a 100% chance of a winter storm event occurring annually in Crowley County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County's elderly population is a potentially vulnerable demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes

grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $3,831,097 (2017 dollars) in total losses from winter weather events. This equates to $67,212 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code (for those areas with building codes) should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services. Areas without building codes should consider adopting and enforcing some type of building code.

CIVIL UNREST

The Crowley County Correctional Facility is located near Olney Springs, and the Arkansas Valley Correctional Facility is located near Crowley. Both correctional facilities are potential locations for civil unrest. Additionally, any event or gathering that takes place in the County could be a location of civil unrest.

PREVIOUS OCCURRENCES

There have been two documented events of civil unrest in Crowley County, detailed below.

> **March 1999 –** At the Crowley County Correctional Facility, inmates who had just been transferred from the State of Washington rioted when they refused to “lock down.” Inmates flooded floors, smashed doors and windows and tried to set fires, and prison staff responded with gas and rubber bullets. About 400 prisoners at the prison were involved in an uprising that left one inmate and one staff member with minor injuries.
>
> **July 2004 -** Several hundred prisoners rioted at the Crowley County Correctional Facility, setting fires and leaving more than a dozen people injured before the violence was quelled. No guards were hurt, but more than a dozen inmates were hurt, including one prisoner with multiple stab wounds. Another inmate was shot in the foot by guards using rubberized bullets to quell the five-hour riot at the medium security Crowley County Correctional Facility. The riot started in the recreation yard and grew to include several hundred prisoners. Four of the prison’s five living units for inmates were uninhabitable because of broken windows, fire, smoke and water damage, and a vocational greenhouse burned to the ground.

PROBABILITY

Although only two recorded previous occurrences, due to the location of correctional facilities in the County, the probability of civil unrest in Crowley County is possible, or between 1% and 10% annual probability.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Civil unrest could cause injuries or fatalities for those involved, bystanders, or first responders. Additionally, structures and infrastructure could be damaged through impacts such as fires and destruction of property by crowds or mobs.

Potential Losses

It is difficult to predict potential losses without any previous occurrence data. However, as mentioned above, losses could come in the form of injuries/fatalities, property damage, as well as any cleanup costs after the event.

Land Use and Development

With lack of significant population growth in the County, land use and development are not projected to be impacted by this hazard.

CYBER HAZARDS

Across the southeast region, there have been two reported events where counties paid ransomware.

PROBABILITY

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

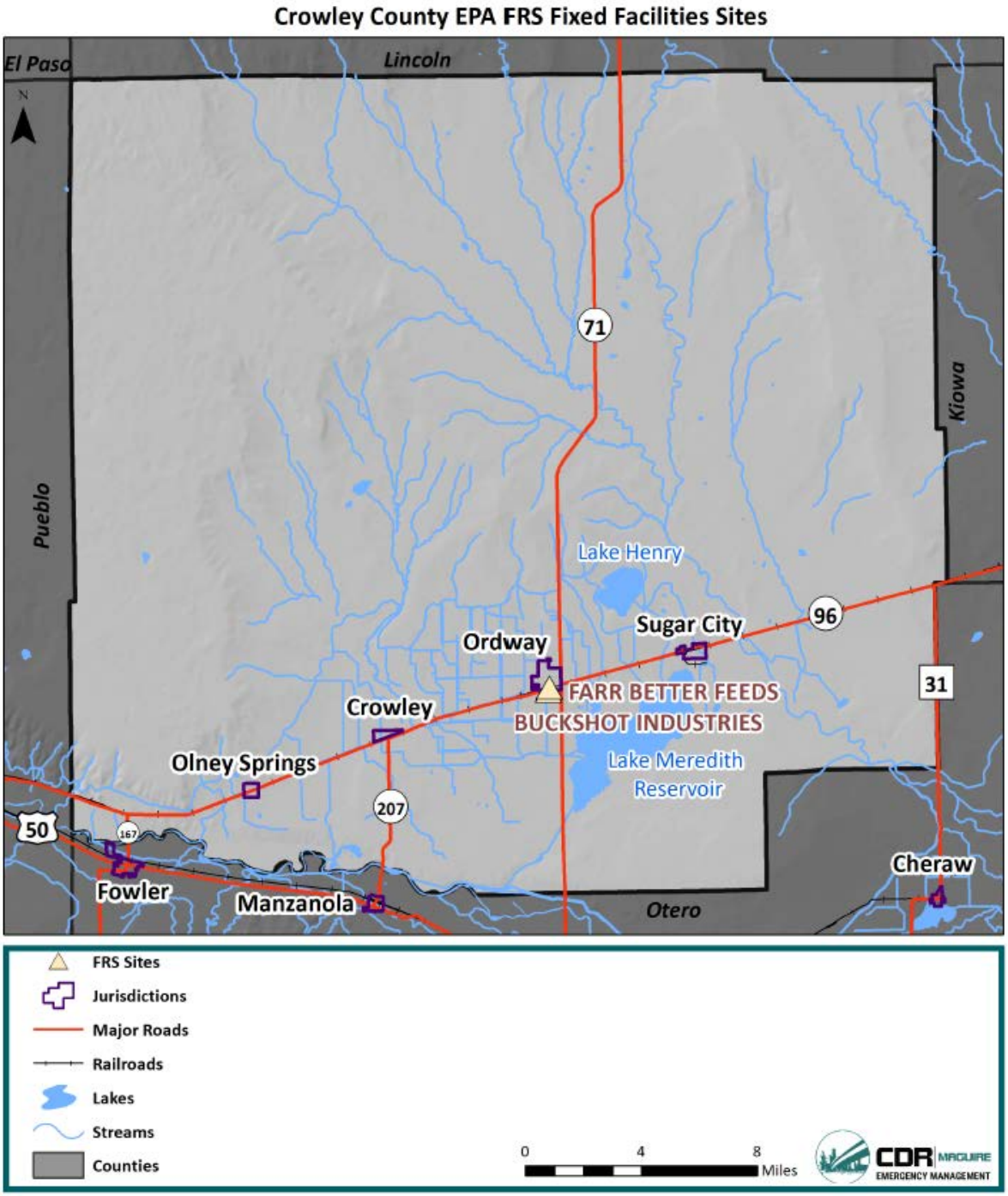
Land Use and Development

If population increases in the County, more people would be exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

HAZARDOUS MATERIALS RELEASE

Locations of fixed facilities in Crowley County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.97 Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Crowley County has two fixed facilities that could result in a hazmat release, as shown in Figure 13.

Figure 13: Crowley County EPA FRS Fixed Facility Sites Map



For transportation related incidents, in Crowley County Highway 71 is a designated Hazardous Materials Route by CDOT. Additionally, Highway 96, east of the intersection of Highway 71, is a designated Gasoline, Diesel Fuel, and Liquefied Petroleum Gas Route. The Victoria Southern & Towner Railroad runs through Crowley County. These areas could be more likely sources of transportation related hazmat incidents.

PREVIOUS OCCURRENCES

SITUATION

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 10 below. There has been a total of one incidents from 1971 to July 2019, totaling $0.00 in damages. One incident occurred near Sugar City.

Table 10: Hazardous Materials Incidents

Date	Incident Route	City	Injuries	Damages	Mode of Transportation	Description
11/22/1971		Sugar City	0	$0.00	Highway	
TOTAL: 2				**$0.00**		

There have not been any significant fixed facilities hazmat incidents in Crowley County.

PROBABILITY

Based on one previous occurrences from 1971 to 2019, there is a 2% chance of annual occurrence of a hazmat incident in Crowley County, equating to a possible probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Crowley County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a risk to accidents that may lead to releases. Populations near the highway are at a higher risk to transportation related hazmat incidents. Highway 71 runs north/south through unincorporated County and Ordway, putting people near these areas at a higher risk. Additionally, parts of Highway 96 are designated as a Gasoline, Diesel Fuel, and Liquefied Petroleum Gas Route, which passes through Ordway and Sugar City. Fixed Facility releases are less common in the County, however, there is still potential for a release.

Fixed facilities are located in Ordway, increasing the risk of a release in the communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Crowley County has experienced $630,175 in damages from hazmat incidents from 1971 to July 2019, equating to $13,128 in annual losses. It should be noted that all of these damages were from one incident in 2016, demonstrating that one event can cause high amounts of damages.

Land Use and Development

Future development in the County would increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

PANDEMIC AND ZOONOTIC DISEASES

There were four acknowledged pandemics in the twentieth century and one in the twenty-first century.

It is likely these pandemics impacted Crowley County.

• **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.

• **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.

• **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.

• **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.

HANTAVIRUS

From 1993 (when the disease was first reported by CDPHE) and December 2018, there have not been any cases of hantavirus in Crowley County. However, hantavirus is typically found in rural areas like Crowley County, so the County is still vulnerable to the virus. Statewide during this timeframe, there have been 115 cases, with 41 of those ending in a fatality.

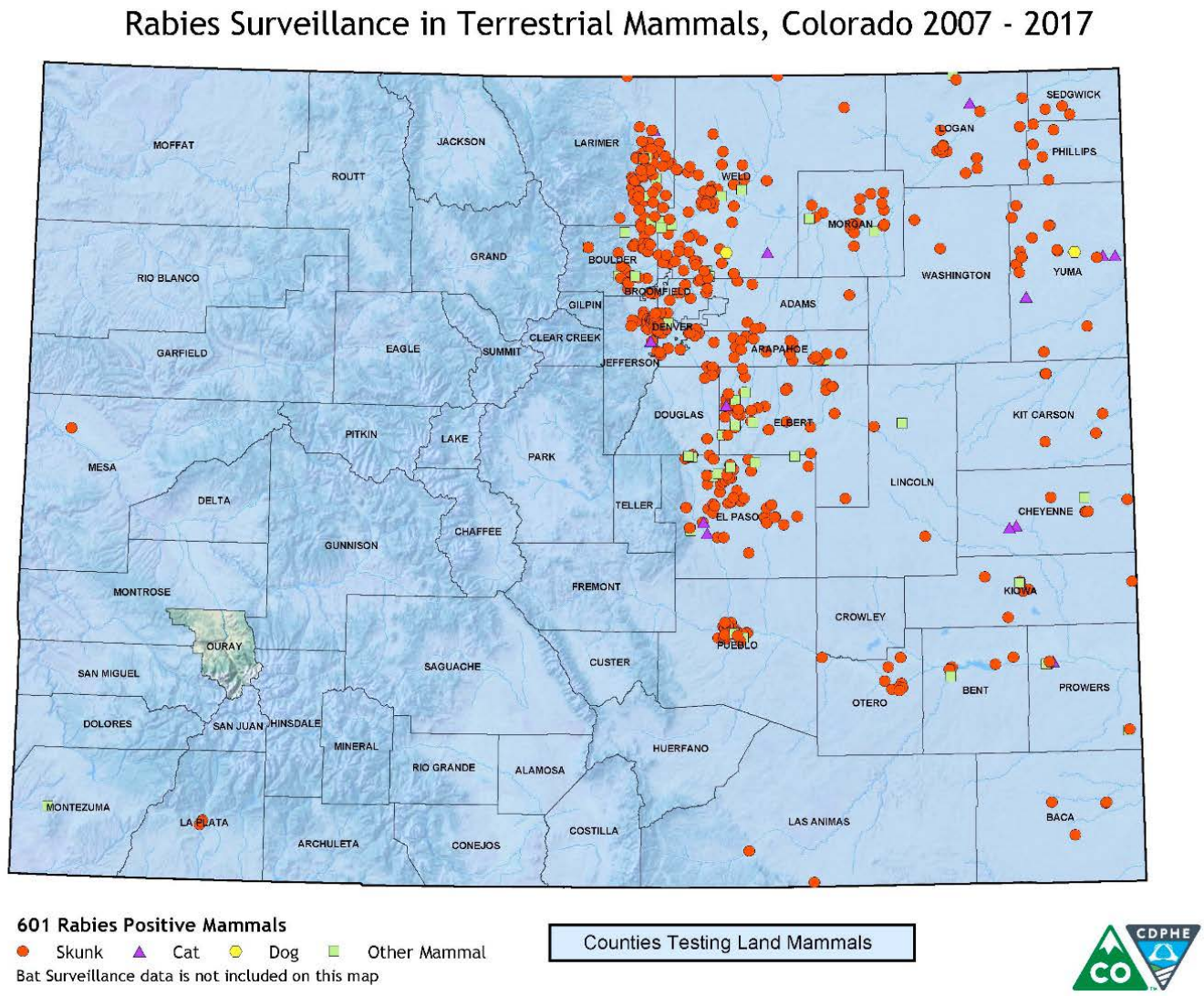
PLAGUE

The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Crowley County.

RABIES

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. Figure 14 shows rabies positive terrestrial mammals during this time period, with one report near the border of Otero and Crowley County.

Figure 14: Rabies Surveillance in Terrestrial Mammals, Colorado 2007-2017



TULAREMIA

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Crowley County.

WEST NILE VIRUS

According to the CDPHE, in Crowley County there have been 11 cases of West Nile virus from 2002- 2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.

PROBABILITY

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

VULNERABILITY ASSESSMENT

Inventory Exposed/Impacts

Pandemic Influenza

The total County population of 5,749 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Crowley County population, approximately 1,724 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Zoonotic Diseases

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock, which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Crowley County, 13.3% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to significantly impact this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease

to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

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GEOGRAPHIC PROFILE

GEOGRAPHIC LOCATION

Crowley County is located in Southeast Colorado. It is bordered to the West by Pueblo County, CO, the North by Lincoln County, CO., the East by Kiowa County, CO., and the South by Otero County, CO.

SQUARE MILES (WATER AND LAND)

Crowley County covers a total of 868 square miles. Crowley County is 31 miles long east and west, and 28 miles wide north and south. 787 square miles is land and 13 square miles is water. Lake Meredith, which lies South of Ordway and Sugar City, is the largest of several lakes in the county.

TOPOGRAPHY OF THE LAND

The surface is mostly level, with narrow valleys of numerous small streams.

JURISDICTIONS

There are four incorporated municipalities within Crowley County, including the towns of Sugar City, Ordway, Crowley and Olney Springs. Ordway is the County Seat.

POPULATIONS

In 2019 the Population in Crowley County is estimated to be 6,061 people with approximately 2500 incarcerated in the two adult correction facilities. There are approximately 1360 households and 960 families living in the county. The county is 82.95% White, 7.05% Black or African American, 2.59% Native American, 0.82% Asian, 0.02% Pacific Islander, 4.77% from other races and 1.81% from two or more races. 22.54% of the population were Hispanic or Latino of any race.

CLIMATE

Annual average precipitation ranges from 11.9 to 14.1 inches throughout the county. Average snowfall measurements vary between 20 and 29 inches per year.Also found along the Hwy 90 corridor are commercial, industrial and residential land uses.

DEMOGRAPHICS PROFILE

POPULATION

According to the 2019 population estimates released by the US Census Bureau, an estimated 6,061 persons live in Crowley County Colorado. This population is expected to remain the same in the next few years unless the closure of the private prison occurs or even the state prison. The 2500 inmates of Crowley County are included in the population of the county.

2019 Population: 6,061 Persons

POPULATION DENSITY

The average population density in Crowley County is 7.4 persons per square mile.

Average Density: 149.6 persons/ Sq. Mile

POPULATION DISTRIBUTION

The County's estimated population of approximately 6,061 — persons is distributed over 868 square miles. Of the total, an estimated 1,054 persons reside in the Town of Ordway (the County Seat); 253 reside in the Town of Sugar City, 175 reside in the Town of Crowley and 340 reside in the Town of Olney Springs.

Two prison facilities in Crowley County House 2,682 inmates when operating at capacity.

POPULATION DISTRIBUTION (cont.)

The remaining 1,557 or 26% of the population lives in unincorporated areas of the County.

Population distributed over 868 sq miles

DISTRIBUTION OF POPULATION BY AGE

Under 18	18.80%
18-24	9.90%
25-44	39.60%
45-64	20.80%
65+	10.80%

The median age is 37 Years.

DEMOGRAGHICS PROFILE

ECONOMICS

Using DATA USA Economic Analysis' 2018 estimates of employment was 1,820. The county has an estimated 2019 population of 6,061 with an estimated average per capita personal income of $37,586 (2018).
Source: https://datausa.io/profile/geo/crowley-county-co#:~:text=From%202017%20to%202018%2C%20employment,Retail%20Trade%20(280%20people).

Any significant decrease in per-capita income for a long period of time, (such as during the 2008-2009 recession) has an adverse effect on the county. This can be exacerbated by any disaster.

In February 2021, the average unemployment rate was 4.6%, or 278 individuals.
Source: https://fred.stlouisfed.org/series/COCROW5URN

The area has a diversified economy supporting over 21 different industry sectors.

EMPLOYEMENT BY INDUSTRY: 2018	
Sales & Related Occupations	12.1%
Healthcare Support Occupations	11.8%
Management Occupations	10.2%
Law Enforcement Workers	7.52%
Office & Administrative Support	7.47%
Food Preparation & Serving	6.81%
Education & Instruction	6.1%
Health Diagnosis & Treatment	5.99%
Production Occupations	5.66%
Community & Social Services	4.72%
Building & Grounds Maintenance	4.5%
Transpiration Occupations	2.58%
Art, Design, Entertainment	1.65%
Transportation Occupations	2.58%
Business Financial Operations	1.21%
Farming, Fishing, Forestry	0.99%
Health Technologies Technicians	0.77%
Computer & Mathematics	0.33%

FIVE LARGEST EMPLOYERS
Arkansas Valley Correctional -(300)
Crowley County Correctional -(250)
Local Government – (85)
Crowley County School Dist-(80)
Crowley County Feed yard -(80)

Any of the hazards listed that catastrophically affect the businesses in the box above would have a moderate impact on the economy of the county. Any two or more of these industries being adversely affected would have a major impact, and if all of them were affected, the economic impact could be severe. Mitigation through business continuity is pushed through local Chambers of Commerce and Economic Development to alleviate such potentially devastating economic impacts.

HOUSING
The average sales price for a single-family home was $71,700 in 2017. The median sales price (census 2011-2015) was $79,700, compared to a statewide median sales price of $286,100.
https://datausa.io/profile/geo/crowley-county-co#housing

VULNERABLE POPULATION

In any discussion of hazard impact and vulnerability, there are several specific populations and/or facilities that may be more vulnerable to the effects of a disaster than the general population.

Such populations include:

1. Special Needs
2. Elderly
3. Hearing-impaired populations
4. Farm Workers
5. Non-English-speaking populations
6. Transient populations
7. Populations in Mobile homes
8. Populations in Group facilities
9. Inmate populations
10. Tourists
11. Impoverished

SPECIAL NEEDS

Special Needs is a categorization given to that segment of the population for whom special arrangements are necessary during emergencies, particularly during shelter operations, due to medical issues, handicaps or other impairments.

Special Needs individuals compose a particularly vulnerable population set. Typically, they are vulnerable to those hazards that could compromise the electrical distribution system or render them without power for life-sustaining equipment or supplies.

Additionally, they are vulnerable to those events requiring mobility to escape or evacuate, or to those health hazards, which due to age or medical condition may be more likely to affect them.
According to the U.S. Census the population of persons under the age of 65 with a disability is 8.6%. "Individuals were classified as having a disability in accordance with the following:

"In an attempt to capture a variety of characteristics that encompass the definition of disability, the ACS identifies serious difficulty with four basic areas of functioning – hearing, vision, cognition, and ambulation. These functional limitations are supplemented by questions about difficulties with selected activities from the Katz Activities of Daily Living (ADL) and Lawton Instrumental Activities of Daily Living (IADL) scales, namely difficulty bathing and dressing, and difficulty performing errands such as shopping. Overall, the ACS attempts to capture six aspects of disability: (hearing, vision, cognitive, ambulatory, self-care, and independent living); which can be used together to create an overall disability measure, or independently to identify populations with specific disability types."
https://www.census.gov/quickfacts/fact/table/US/DIS010219

Crowley County Emergency Management maintains a year-round voluntary registration program for such individuals, in order to pre-plan, identify needs and determine potential sheltering options for these individuals.

During a major disaster, these individuals may be sheltered in the county's Special Need Shelter (Crowley County High School), which is staffed by the Crowley and Otero County Health Department personnel and maybe assisted by the American Red Cross. Other options include local Hospitals, or general public shelters, depending on the individual's needs.

The list of individuals who have registered with the County as having "Special Needs" is maintained as a separate document at the Crowley County Emergency Management office.

ELDERLY

Crowley County has approximately 848 citizens classified as elderly, ages 65 or older. https://www.census.gov/quickfacts/fact/table/crowleycountycolorado,US/DIS010219 The majority of the elderly population resides in the community, as opposed to nursing home or assisted living facilities.

One Nursing Home/Assisted Living facility is located in Crowley County. This facility serves a small segment of the elderly population in Crowley County.

ELDERLY (cont.)

Medical Facility Beds	
Nursing Homes/Assisted Living Facilities	35
Hospitals	0
TOTAL BEDS	35

Elderly populations, particularly handicapped or medically needy, are vulnerable to Tornadoes, wind events, thunderstorms, lightning, floods, and critical infrastructure disruption that could compromise the electrical distribution system or render them without power for life-sustaining equipment or supplies. Additionally, they are vulnerable to those events requiring mobility to escape or evacuate, such as occurs with floods, hazardous materials spills, brushfires, wildfires, forest fires, tornadoes, sinkholes, major transportation incidents, and critical infrastructure disruption. They are also more vulnerable due to age or medical condition to health hazards, such as hazardous materials spills, extreme temperatures, wildfires, diseases, and pandemic outbreaks.

PERSONS WITH HEARING IMPAIRMENTS OR HEARING LOSS

These individuals are located throughout Crowley County in no particular geographic areas of concentration.

Hearing-impaired populations may be more vulnerable to those hazards where recognition of the threat may be impeded by not hearing the sounds. Situational awareness may be delayed in getting to these populations due to the nature of their disability. TV crawlers, website updates, and closed-caption television are methods used to inform this population about an impending disaster.

NON-ENGLISH SPEAKING & ENGLISH AS A SECOND LANGUAGE

Crowley County has a low percentage of individuals over 5 years old that speak a language other than English at home. For the majority of the county, the 2000 census blocks indicate a range of 6.8%.

Due to the language barrier, Non-English speaking populations are more vulnerable to the hazards facing the community than the general population. Messages, such as public protective actions, television scrolls, and other situational awareness are primarily disseminated in English, therefore a time delay may exist in initial recognition of the event. Additionally, the language barrier may also impede the ability to seek out additional information, such as street closures, shelter locations, and assistance locations, etc.

In order to address this vulnerability, Crowley County contracts with a foreign language service called "Can Talk" that can be used, if necessary, to translate public safety messages or to directly call residents known to be in need. The presence of family members or neighbors who can translate in such situations may serve to mitigate this vulnerability.

TRANSIENT POPULATIONS

Crowley County is known to have homeless or transient populations from time to time.

In general, such populations can be located near town centers, cars, vacant properties, railroads, parks, or other locations. Public protective measures relayed through the traditional media outlets may be delayed in reaching these populations, and without transportation, these populations may find it difficult to travel to public shelters set up for a specific disaster.

VULNERABLE POPULATION

POPULATIONS IN MOBILE HOMES

Mobile homes are used as an affordable form of housing in Crowley County. They are distributed throughout the county, in the rural as well as urban areas.

Areas of particularly high concentrations can be found in the mobile home parks in the county. There is only one (1) mobile home park in the county.

Mobile Home populations are particularly vulnerable to structural damage due to severe wind events, such as, Tornadoes, and severe thunderstorms. In addition, they offer less protection to their occupants during extreme temperatures and hazardous materials spills than other types of residences.

FARM WORKERS

Farm workers are dependent on production of crops or livestock for their livelihood. Natural and manmade hazards can jeopardize that production and therefore the economic viability of the operation.

Hazards, such strong winds and floods can damage crops, erode nutrient layers, and result in an increase in disease-spreading pests. Other threats, such as drought, wildfires, and ice storms could potentially affect the health of the crop, or render it unsuitable for distribution.

With total production market value for Crowley County farms estimated at $96,277,000, widespread damage to this industry can also have far-reaching implications into Crowley County's economy.

CROWLEY COUNTY FARM STATISTICS:

484,328 Acres Farmland:

Farms: 246

Farm Operators: 98

Avg. Farm Size: 1,969 acres

Avg. Per Farm Production Value $391,371

(2017 Census of Agriculture County Profile)

https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Colorado/cp08025.pdf

VULNERABLE POPULATION

INMATE POPULATION

Crowley County is home to the Crowley County Jail, the Crowley Correctional Facility, and the Arkansas Valley Correctional Facility. Inmates in these facilities are protected in accordance with respective institution emergency plans.

1. The Crowley County Correctional Facility houses an average of 1200 inmates.

2. The Crowley County Jail houses a maximum of 15.

3. The Arkansas Valley Correctional Facility house approximately 1000 inmates.

AREAS OF LARGE TOURIST POPULATIONS

In the summer months, thousands tourists can be present at any given time at local attractions. Lake Henry, Lake Meredith and special activities such as boating and seaplanes are among the largest sites to attract tourists in Crowley

AREAS OF LARGE TOURIST POPULATIONS (cont.)

County. Tourist populations can also be found in motels, hotels, bed and breakfasts, RV parks, and campgrounds.

Visitors to Crowley County are often unaware of, or complacent about, the potential for severe disasters in the area.

This population is vulnerable to all of the hazards facing the community. Their vulnerability stems from potential lack of situational awareness and unfamiliarity with local roadways, evacuation routes, hospitals, and resources. Additional vulnerability exists if the individual is a tourist in combination with special needs qualifiers.

IMPOVERISHED

As per the 2020 Census, approximately 40% of the population in Crowley County lives below the poverty line. Their vulnerability lies in the increased likelihood that mitigation actions may not have been conducted due to lack of resources.
https://www.census.gov/quickfacts/fact/table/crowleycountycolorado,US/IPE120219

This population may also be more likely to reside in areas built to earlier building codes, and therefore be more vulnerable in that regard. Impact of disasters on this population can add further strain to an already limited amount of personal resources.

GENERAL CONCEPTS

The following sections describe Crowley County's organization, authority, direction and control, and Incident Command Structure for field operations. This section is the preface for each element contained within the CEMP, specifically the Response, Recovery, Preparedness and Mitigation Elements, which contain additional operational information.

- Crowley County will incorporate the concepts of the National Incident Management System into the management and activities of Preparedness, Prevention, Response, Recovery, and Mitigation.
- Crowley County will strive to be consistent with the national priorities according to HSPD-8.
- Most incidents will be managed locally, being handled by emergency responders within a single jurisdiction and Crowley County Emergency Management's communications staff.
- In some cases, incidents that begin under one jurisdiction/discipline may rapidly expand to incidents that cross discipline and jurisdictional boundaries, requiring additional resources and support.
- Certain situations may warrant activation of the Emergency Operations Center, as deemed necessary by the Crowley County Division of Emergency Management.
- Crowley County will utilize the resources available within its jurisdiction, and request assistance if needed, through existing mutual aid agreements, as well as through the statewide mutual aid agreement.
- Crowley County will conduct field operations in accordance with a Standard Set of NIMS-Compliant Incident Command System (ICS) Organizations, Concepts, and Procedures.

County Government Organization

Crowley County operates under the authority of the three members of the Crowley Board of County Commissioners, as well as the Sheriff, Clerk and Recorder, County Assessor and County Treasurer.

Each is directly accountable to the citizens of Crowley County, independent of each other, and responsible for the administration of their respective departments/agencies.

AUTHORITY TO COORDINATE EMERGENCY MANAGEMENT

The Crowley County Board of County Commissioners bears the legal authority for establishing and maintaining the county's emergency management agency.

AUTHORITY TO COORDINATE EMERGENCY MANAGEMENT (cont.)

In keeping with the legal responsibility, and in order to respect the authority of the remaining units of government, Crowley County Emergency Management closely coordinates efforts with municipalities, local, state, and federal government, private sector, and nongovernmental organizations.

In order to bridge the gap among governmental, non-governmental, and private agencies with respect to emergency planning, all governmental entities, as well as those non-governmental or private agencies with responsibilities under the CEMP are required to coordinate their actions, pertaining to preparedness, prevention, response, recovery, and mitigation with Crowley County Emergency Management.
Generally, this is accomplished via preparedness organizations in the course of non-emergency county tasks. *Additionally, their plans and procedures must be consistent with the Crowley County Comprehensive Emergency Management Plan (CC CEMP).*

COUNTY MANAGEMENT STRUCTURE AND INDEPENDENT AUTHORITY

The Crowley County Board of County Commissioners has legal authority to coordinate, control, and direct the actions and programs of the county departments directly under its organizational structure.

Each of the remaining governmental authorities (School Board, Sheriff, Clerk & Recorder, Assessor, and Treasurer) retains the independent authority and legal responsibilities vested in them as Government entities or Constitutional Officers of Crowley County.

Additionally, Municipalities, Special Districts and Response Organizations, do not fall under the direct control of the Crowley Board of County Commissioners. These entities also retain their independent authority and decision-making consistent with their legal responsibilities. As stated above, however, they are required to coordinate their emergency management actions and plans with that of Crowley County Emergency Management.

ESTABLISHMENT AND OVERSIGHT OF CROWLEY COUNTY EMERGENCY MANAGEMENT

CC Board of County Commissioners (BOCC) established the CC Division of Emergency Management (DEM) in accordance with their legal responsibility. The County Commissioners maintain general oversight of the CC DEM, with operational oversight delegated to the Crowley County Administrator, who oversees all county departments.

The Division of Emergency Management reports to the Board of County Commissioners.

NO DIFFERENCES IN INCIDENT MANAGEMENT STRUCTURE

As detailed in the following sections, Crowley County has aligned its policies, procedures, and structures with that of the National Incident Management System. NIMS outlines a consistent management structure, called the Incident Command System (ICS), to be used by all agencies engaged in field operations. The adoption of this management structure is a federal requirement with implementation completed in FY 2006, and updated in 2017.

There should be no differences in the management structure based on who is in charge, the type of disaster, or level of disaster.

For all field operations, Crowley County will use the Incident Command System, which can be converted to a Unified Command, if the incident crosses agency, or jurisdictional boundaries. Additionally, area commands, or unified area commands, may also be established in keeping with the Incident Command System.

KEY GOVERNMENTAL OFFICIALS - LINES OF SUCCESSION

The following details the key government officials who will ensure leadership authority and responsibility during emergency situations for issues within the county's scope of authority:

1. Board of County Commissioners (BOCC)
2. BOCC Chairman
3. Any BOCC member
4. Crowley County Director of Emergency Management

PRESERVATION OF VITAL RECORDS

The Continuity of Government Plan assigns the responsibility for the preservation of vital record/documents to the Crowley County Clerk and Recorder, and county financial documents to the County Treasurer. Additionally, computer backups are made of staff files by the Crowley County IT Department and stored offsite.

THE FIVE PHASES OF EMERGENCY MANAGEMENT

There are five overall phases, which are used to categorize activities and actions in emergency management. The following are the definitions of each phase according to the National Incident Management Systems (2004):

PREVENTION
Prevention is any action that can be taken to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and may include such countermeasures as: deterrence operations, heightened inspections, improved surveillance and security operations, investigations to determine the full nature and source of the threat, public health and agricultural surveillance/testing processes; immunizations, isolation, or quarantine, specific law enforcement operations aimed at deterring, preempting, interdicting or disrupting illegal activity, apprehending potential perpetrators, and bringing them to justice

PREPAREDNESS
The range of deliberate critical tasks and activities necessary to build, sustain, and improve the operational capability to prevent, protect against, respond to, and recover from domestic incidents. Preparedness is a continuous process and involves efforts at all levels of government along with private sector and non-governmental organizations in order to identify threats, determine vulnerabilities, and identify required resources. Preparedness is operationally focused on establishing guidelines, protocols, and standards for planning, training and exercises, personnel qualification and certification, equipment certification, and publication management.

RESPONSE
The activities that address the short-term and direct, effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations Plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into the nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice

RECOVERY
The development, coordination, and execution of service and site restoration plans; the reconstitution of government operations and services; individual, private sector, nongovernmental, and public assistance programs to provide housing and to promote restoration; long term treatment of affected persons; additional measures for social, political; environmental, and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents

MITIGATION
Those activities designed to reduce or eliminate risk to persons or property or to lessen the actual or potential effects or consequences of an incident. Mitigation measures may be implemented prior to, during, or after an incident. Mitigation measures are often informed by lessons learned from prior incidents. Mitigation involves ongoing actions to reduce exposure to, probability of, or potential loss from hazards. Measures may include zoning and building codes, floodplain buyouts, and analysis of hazard-related data to determine where it is safe to build or locate temporary facilities. Mitigation can include efforts to educate governments, businesses, and the public on measures they can take to reduce loss and injury. The EM Coordinator will be responsible for coordinating mitigation activities with the Local Mitigation Strategy (LMS).

The emergency management organization system that will be used during an emergency or disaster situation involving response, recovery, and mitigation is the organizational chart called CC EOC Organizational Structure found in Appendix 3.

ABOUT CROWLEY COUNTY DIVISION OF EMERGENCY MANAGEMENT

Crowley County Division of Emergency Management is a full-time dedicated support element that advises various community organizations and agencies with responsibilities in disaster. The Crowley County Division of Emergency Management (DEM) falls under the direction of the Crowley County Board of County Commissioners. Crowley County DEM is composed of one full time staff which and utilizes other agencies for personnel in times of disaster, to conduct exercises, help in writing and reviewing plans.

Crowley County Division of Emergency Management operates the Emergency Operations Center. This facility is maintained by Emergency Management personnel and utilized towards the accomplishment of the Division's mission.

For all activations, the organizational chart called CC EOC Organizational Structure found in Appendix 3 is used. The only difference is that depending on the incident, the EOC might not activate every ESF. This is dictated by the level of activation which is dictated by the incident.

The Incident Commander may be from an outside agency such as the Department of Health during a pandemic. This, however does not change the organizational structure utilized in the EOC.

Roles and Responsibilities

The following section outlines the general roles and responsibilities of the various levels of government (County, Municipality, State, and Federal) in Emergency Management.

CROWLEY COUNTY GOVERNMENT

As Stated in HB 12-1283, each political subdivision shall be responsible for disaster preparedness and coordination of response, and that if a municipality within a political subdivision does not have a disaster plan then the responsibility falls to the County to provide such service. The Board of County Commissioners can delegate authority to the Emergency Management Director to Act on their behalf in regards to emergency management:

1. Developing a comprehensive emergency management plan subject to state and federal criteria

2. Maintaining an emergency management program at the county level involving all organizations which have responsibilities under the comprehensive emergency management system within the county

3. Implementing a broad-based public awareness, education and information program designed to reach all citizens of the county, including those needing special media formats, who are non-English speaking (including persons who do not use English as their first language), and those with hearing impairment or loss.

4. Developing and maintaining procedures to receive and shelter persons evacuating within their political jurisdiction and those persons evacuating from outside into their jurisdiction with assistance from the State

5. Ensuring the county's ability to maintain and operate a 24-hour warning point with the capability of warning the public.

6. Executing mutual aid agreements within the State for reciprocal emergency aid and assistance in the event a situation is beyond the county's capability.

7. Coordinating local resources to address actions to prepare for, respond to, recover from and mitigate the effects of incidents

8. Coordinating public information activities during an emergency

9. Requesting State and, if necessary, Federal assistance through the State of Florida when the county's capabilities have been exceeded or exhausted

10. Serving as liaison for and coordinator of municipalities' request for state and federal assistance during post disaster emergency operations

11. Maintaining cost and expenditure reports associated with disasters, including resources mobilized as a result of mutual aid agreements.

12. Crowley County departments also have roles and responsibilities, which can be further identified in the Emergency Support Functions (ESFs) that they lead or support. Those agencies include the Sheriffs Office, Clerk and Recorders Office, Fire Department, Emergency Medical Services, Office of Information Technology, Geospatial Information Systems and the County Attorney'.

MUNICIPALITIES

Municipalities (The Towns of Sugar City, Ordway, Crowley and Olney Springs) are responsible for the following as relates to events that could involve Crowley County:

1. Coordinating resources within their jurisdiction to prepare for, respond to, recover from, and mitigate the effects of incidents

2. Executing mutual aid agreements with Crowley County for reciprocal emergency aid and assistance in the event a situation is beyond either the municipality's or county's capability

3. Establishing liaisons with Crowley County and State organizations to support emergency management capabilities

4. Coordinating requests for state and federal emergency response assistance with Crowley

County, who serves as liaison

5. Maintaining municipality's cost and expenditure reports associated with disasters, including resources mobilized as a result of mutual aid agreements

HOSPITALS

1. While Crowley County does not have any hospitals physically located within, the boundaries of the County there are three hospitals with primary roles and responsibilities in Crowley County.
    a. Arkansas Valley Regional Medical Center – La Junta
    b. Parkview Medical Center – Pueblo
    c. St. Mary Corwin Medical Center - Pueblo

The hospitals have a responsibility to coordinate with Emergency Medical Services, ESF-8, Public Health and Emergency Management during a disaster or emergency. Hospitals are responsible for treating and caring for trauma and medical patients that are brought to their facility by EMS or private car. They are also responsible for coordinating with partners their ability and level of care and any deviation from that such as divert or when certain medical diagnostic equipment is not functioning properly.

OFFICE OF INFORMATION TECHNOLOGY

OIT at every agency has a responsibility to protect data and the technology equipment that the data lives on or is used by. Each agency may have its on OIT person or person(s) that carry out the OIT Functions. OIT in each agency has a responsibility to coordinate with other OIT professionals in the County and the region as well as the State of Colorado when a breach or incident occurs. Depending on the severity and type of data that was compromised will determine the appropriate course of action as defined in the Southeast Colorado All-Hazards Region Cybersecurity Response Plan. OIT has a responsibility to not restrict systems so much as they are not usable but still protect them from intrusion.

SPECIAL DISTRICTS

Special districts, such as Soil and Water Conservation, Water Management, and Crowley School District are responsible for establishing liaisons with Crowley County and for supporting emergency management capabilities.

Special districts that involve inter-jurisdictional authority provide resources and services to support other functionally related systems in time of disaster.

STATE OF COLORADO

The State of Colorado is responsible for:

1. Maintaining an emergency management organization at the State level that involves all government agencies, businesses, and volunteer organizations with responsibilities in emergency management within Colorado

2. Maintaining a broad-based public awareness, education, and preparedness program designed to reach a majority of the citizens of Colorado, including citizens needing special media formats, such as non-English speaking individuals.

3. Supporting the emergency management needs of all counties by developing reciprocal intra- and inter-state mutual aid agreements; when requests for assistance exceed state resources, the state will contact other states for assistance, as well as the Federal Emergency Management Agency.

4. Directing and controlling a State response and recovery organization based on emergency support functions, involving broad participation from State, private and voluntary relief organizations that is compatible with the federal response and recovery organization

5. Developing and implementing programs or initiatives designed to avoid reduce and mitigate the effects of hazards through the development and enforcement of policies, standards, and regulations

6. Coordinating State activities with those Colorado volunteer organizations active in disasters; Ensuring that these organizations are identified and organized under Emergency Support Function 15 (Volunteers and Donations) of the State Emergency Response Team Coordinating State activities with Colorado's business community and its organizations to ensure a broad and comprehensive coverage of assistance and relief during a disaster

7. Promoting mitigation efforts in the business community with emphasis on the State's infrastructure

8. Identifying critical industry and infrastructures that may be impacted by disaster or are required for emergency response efforts

9. Reviewing and analyzing the CEMP against national criteria to ensure compliance with goals, procedures, and benchmarks that guide emergency management

FEDERAL GOVERNMENT

The federal government is responsible for:

1. Providing emergency response on federally owned or controlled property, such as military installations and federal prisons

2. Providing federal assistance as directed by the President of the United States under the coordination of the Department of Homeland Security and the Federal Emergency Management Agency in accordance with federal emergency plans

3. Identifying and coordinating provision of assistance under other federal statutory authorities

4. Providing assistance to the State and local governments for response to and recovery from a commercial radiological incident as established in the current Federal Radiological Emergency Response Plan and the Federal Response Plan.

5. Managing and resolving all issues pertaining to a mass influx of illegal aliens.

6. Providing repatriation assistance to U.S. citizens evacuated from overseas areas. The U.S. Department of Health and Human Services (DHHS), in coordination with other designated federal departments and agencies, is responsible for providing such assistance.

THE ROLE OF THE CITIZENS OF CROWLEY COUNTY

Each level of government conducts effort on behalf of the citizens of Crowley County to prevent emergencies, and to prepare for, mitigate, respond to and recover from those incidents that happen to occur. However, each member of the community is a stakeholder in the process, and as such, has certain personal responsibilities that contribute to the community's ability to handle emergencies. Some of these responsibilities are detailed below.

Prevention:

1. Maintaining situational awareness
2. Reporting suspicious activities, or potentially hazardous conditions to local authorities
3. Following local and State laws enacted to avoid emergencies (traffic laws, hazardous waste disposal, safe burning practices, etc)
4. Removing and properly disposing of hazards that may exist on personal property (flammable materials or debris, household chemicals, dangerous animals, unsafe structures, etc)

Preparedness:

1. Participating in community training in such activities as First Aid and CPR, in order to sustain life until help arrives
2. Taking steps to educate each member of the family on the hazards faced in Crowley County and the actions to help prepare for each hazard
3. Creating a family plan in case of emergency or disaster
4. Preparing emergency kits able to sustain each member of the family for at least 3 days, minimum
5. Taking actions to plan/save for additional personal expenses that may occur as a result of extended evacuations or dislocations
6. Being familiar with local evacuation routes, emergency numbers, fire escape plans, shelter-in- place plans, etc
7. Monitoring local media, including local television channels, and radio used to disseminate emergency information
8. Facilitating the preparedness of friends and neighbors
9. Providing constructive input into the emergency management process, either individually or though involvement in various local preparedness organizations
10. Joining volunteer response organizations, if able, such as local fire departments, Search and Rescue, the Community Emergency Response Teams, Neighborhood Watch, or any of the other numerous volunteer organizations in Crowley County

Response

1. Helping (to the level trained), or obtaining help, for those in need
2. Taking action to mitigate an emergency, if able, or calling for assistance
3. Following threat-specific recommendations or mandates (Evacuation orders, curfews, shelter-in-place orders, etc) issued in order to facilitate emergency response
4. Participating, to the extent possible, in community action groups, such as Community Emergency Response Teams, etc
5. Taking actions necessary to ensure personal safety

Recovery

1. Taking actions necessary to facilitate personal recovery (such as making repairs, cleaning up debris, determining a personal plan of action for individual recovery)
2. Reporting needs, or available resources to the Crowley County Division of Emergency Management, or Emergency Operations Center, if activated.
3. Reaching out to those in need through individual action, church groups, or volunteer organizations

Mitigation

1. Removing potentially hazardous conditions before an emergency develops
2. Determining and implementing actions that can be taken to reduce the potential for personal loss due to hazards (smoke detectors, homeowner's insurance, flood insurance, crop insurance, removing debris from clogged ditches on personal property, factoring mitigation into new construction, landscaping with fire resistant, drought resistant plants, or cold-resistant species of plants, etc)

THE ROLE OF CROWLEY COUNTY EMERGENCY MANAGEMENT

The Crowley County Division of Emergency Management (CC DEM) brings key players together in a concerted effort to prevent, prepare for, mitigate, respond to, and recover from major emergencies. It accomplishes this task by acting as a facilitator to the multitude of departments, independent agencies, and non-governmental organizations who have legal responsibility for certain elements.

Crowley County Emergency Management provides the means for command, control, and communications, primarily through the procurement of resources (equipment, teams, personnel, expertise) and the operation of facilities such as the Emergency Operations Center and mobile command vehicle. During an incident, the Division typically provides advice, technical or logistical support to the on-scene Incident Commander and to other local agencies, organizations and facility operators that may have resource needs as a result of an emergency. CC DEM may also activate the County's Emergency Operations Center in a joint effort with local agencies to provide coordinated resource support, if warranted.
Additionally, the Department performs a number of other activities. These include:

- Notifying the State Warning Point of incidents within the county
- Participating in hazards analysis within the County
- Participating in various Preparedness Organizations, i.e. SAFER, Fusion Center etc…
- Establishing liaisons with Cities/Towns, State, Federal and emergency planning, response and relief agencies
- Ensuring proper operations of the County's public notification system
- Reviewing plans of nursing homes and hospitals, as required by State Statute
- Implementing and updating the Comprehensive Emergency Management Plan
- Coordinating the development of Emergency Support Function Plans in conjunction with each lead agency
- Disseminating information, through the Public Information Office, on emergency preparedness to the public
- Participating in State and Regional Emergency Management efforts
- Arranging for state-level training to be brought to the area
- Monitoring the County's compliance with applicable State and Federal Statutes
- Coordinating the development and execution of county-wide exercises
- Providing emergency management staff, when requested for Mutual Aid
- Conducting exercise evaluation and monitoring of the implementation of recommendations
- Coordinating with the County Public Information Office for news releases
- Monitoring severe weather and other hazardous conditions
- Maintaining and activating the Emergency Operations Center in coordination with County Administration
- Facilitating the response effort by virtue of requesting resources through mutual aid channels
- Making recommendations to the County Commissioners for declarations of a Local State of Emergency
- Supporting the Incident Command Post by:
  - ✓ Activating the EOC, if necessary
    Providing technical information
  - ✓ Coordinating with appropriate agencies for opening of emergency shelters Directing
    Local Evacuations/Reentry in coordination with the Incident Commander
    Disseminating emergency information to the public
  - ✓ Notifying State EOC of Local State of Emergency Declarations
  - ✓ Activating mutual aid agreements with neighboring municipalities and counties
    Requesting outside assistance when needed through State EOC
  - ✓ Coordinating municipalities' requests for disaster resources to the State EOC
  - ✓ Facilitating requests for resources made by local facilities to the EOC during area-wide disasters
- Identifying facilities for use as Points of Distribution, Comfort Stations and County Staging Areas
- Facilitating information distribution to area relief and response agencies
- Serving as liaison to State and Federal Agencies in response/recovery
- Maintaining incident records and communications logs

THE ROLE OF MUNICIPALITIES

There are four municipalities within Crowley County, the Town of Sugar City, Town of Ordway, Town of Crowley, and Town of Olney Springs. Each is an independent jurisdictional government responsible for prevention, preparedness, response, recovery, and mitigation within the city or town limits. Each Municipal jurisdiction has a volunteer fire department that responds to fires in town and to the unincorporated area around the town. All towns depend on the Crowley County Sheriff's Office to provide law enforcement. Additionally, each maintains an array of critical infrastructures, such as water treatment facilities, government buildings, etc.

Each municipality is an independent jurisdictional government and the actions pertaining to each are not directed, controlled, or financed by Crowley County. With that said, Crowley County's Division of Emergency Management is the community's recognized, established Emergency Management Agency. In that capacity, Crowley County Emergency Management maintains a close working relationship with all municipalities and helps to coordinate efforts pertaining to emergency management, while respecting the individual authority of each unit of government. This is accomplished in joint coordination through such means as information sharing, exercising, and training opportunities, participation in local preparedness organizations, specific meetings, or workshops.

During a disaster, Crowley County Emergency Management serves as the liaison between each municipality and the Colorado Division of Emergency Management. Each municipality, therefore, must provide situational awareness and updates to Crowley County Emergency Management, or the EOC, if operational, in order to be consolidated into a community-wide situation report. Additionally, this means once the resources of a municipality are either expended or overwhelmed, the local mutual aid assistance is also overwhelmed or expended, any requests to the State for resources (Teams, Personnel, equipment, etc.) must be channeled through the Crowley County Emergency Management to the State of Colorado. Any expenses incurred from resource requests made by the municipalities, remains the responsibility of the municipality. Additionally, all fiscal management, data tracking, personnel time, expenses, and the request for reimbursement from State or Federal programs, etc. is also the responsibility of each municipality.

Responsibilities of the municipalities include, but are not limited to the following:

1. Each municipality is responsible for the provision and execution of all jurisdictional authority and responsibilities, including dispatching of emergency services, or contracting for such through the County.

2. Each municipality is responsible for providing a liaison within 1 hour to the Crowley County Emergency Operations Center (EOC), once activated.

3. Each municipality is responsible for providing situational updates through the liaison at the EOC.

4. Each municipality is responsible for requesting resources from the State through Crowley County Emergency Management.

5. Municipalities will staff, direct, and control initial and preliminary damage assessment operations for infrastructure within their jurisdictions. Crowley County will provide structural damage assessments for the municipalities through the Crowley County Assessor's Office.

6. Each municipality is responsible for debris removal and disposal within their jurisdiction. If the County secures a debris removal contractor, the municipalities may opt to use the same. If so, the municipality must coordinate all efforts pertaining to the disposal site and must coordinate with Crowley County if the use of county disposal sites is needed.

THE ROLE OF MUNICIPALITIES (cont.)

7. Each municipality will handle the restoration of infrastructure within its jurisdiction. Any requests for assistance are to be forwarded to the Crowley County Emergency Operations Center, as stated in the above paragraphs.

8. Each municipality is expected to provide prime locations with adequate space, personnel, and supplies as needed to establish Disaster Recovery Centers in their jurisdiction. Crowley County will provide assistance, as needed.

9. Establishment, staffing and operations of Points of Distribution (PODS) within a community is typically the function of Crowley County, however, the Crowley County Logistics Chief will accommodate requests by communities that would like to staff and/or operate a POD in their jurisdiction.

10. Municipalities are expected to keep Crowley County abreast of all evacuation and re-entry efforts within their jurisdiction and to coordinate efforts with the Crowley County Emergency Operations Center.

11. Municipalities are responsible for identifying and coordinating the provision of public property to be used as temporary housing during short and long-term recovery.

12. Municipalities are responsible for identifying present and future transportation needs pertaining to mass transportation for evacuation.

13. Municipalities are responsible for coordinating all media activities, pertaining to the emergency or disaster, through the Joint Information Center (JIC).

14. Municipalities are responsible for coordinating with local fuel entities within their jurisdiction to evaluate present storage capacity and plans to address fuel disruption or shortfalls.

15. Municipalities are expected to handle all funding and payments for expenditures that may arise related to the disaster response and recovery in their jurisdiction, including equipment leases, purchases, or resources requested for which costs are incurred.

16. Municipalities are responsible for all financial management, including tracking of expenses, personnel time, etc and for submitting requests for reimbursement to State and Federal programs, if applicable.

THE ROLE OF THE EMERGENCY OPERATIONS CENTER (EOC)

The Crowley County Emergency Operations Center (EOC) is a facility designed to serve as a local or regional incident support center. EOCs represent the physical location at which the coordination of information and resources to support incident management activities normally takes place.

For complex incidents, personnel representing multiple jurisdictions, disciplines, and resources staff EOCs.

The primary functions of the Emergency Operations Center are resource support for various incident sites and the management of information and data. Most of the information that flows through an EOC deals with resource requests, resource tracking, resource allocation, and demobilization. There is also heavy message traffic relating to situation status, weather, damage assessment, and public information.

The EOC serves as a facility to assist in the:

- Coordination
- Communications
- Resource management, dispatching and tracking
- Information collection, analysis, and dissemination

The EOC has multiple uses during non-emergency operations. An EOC is effective for supporting major planned events, where resource support, coordination, and public information is required. The EOC is also available for use during exercises, meetings, or classes.

The Crowley County EOC is 450 square-foot facility with a range of surveillance and security measures. Construction on the facility was completed in June of 2007. The facility is equipped with redundant communications, internet and network servers, municipal water, and natural gas systems.

The primary EOC is located at 611 E 9th St. Ordway, CO 81063. It is adjoined to Crowley County Emergency Management's administrative offices, as well as the Crowley County Fire and Ambulance Station and Offices. In the event the EOC is threatened, an alternate EOC is activated.

The alternate EOC is equipped with redundant power, communications, internet and network servers, municipal water, and natural gas systems. Once relocation has occurred, activity is generally the same.

THE ROLE OF EMERGENCY COMMUNICATIONS CENTER (ECC)

Crowley County's Sheriff's Office has responsibility for emergency communications. Emergency communicators dispatch all emergency services in Crowley County. Emergency Communications employees staff the operation 24 hours a day, 7 days a week.

In many cases, the emergency dispatchers are the first responders with whom many citizens have contact via the E-911 system. The communications specialists facilitate emergency operations and serve to support the incident commander and field units through communications and resource dispatching.

Emergency Communications Center uses state of the art technology combined with a priority dispatching software system and established protocols to prompt response from numerous local agencies.

Day-To-Day Operations

CROWLEY COUNTY EMERGENCY MANAGEMENT

The Crowley County Division of Emergency Management is responsible for coordinating efforts to address all phases of emergency management. Therefore, on a daily basis the Division of Emergency Management is engaged in a wide range of activities to facilitate processes, procedures, training, resource acquisition, coordination, public awareness, planning, communications, and other related tasks.

Communications staff from Crowley County Emergency Communications Center serves as the County's Warning Point 24 hours a day, seven days a week. Staff dispatch law enforcement, fire and emergency medical calls and monitor for situations and developing events. This is accomplished through the use of a fully implemented priority dispatch system that structures caller interrogations, provides pre-arrival instructions, enhances customer service, and matches the appropriate protocols for emergency response, mode, and configuration to the incident type and severity.

Emergency Management staff ***are managed the same, inclusive of NIMS, regardless of emergency or non-emergency conditions.***

OTHER AGENCIES / ORGANIZATIONS

During non-emergency activities, other response agencies, organizations, facilities, departments, etc., operate under their respective organizational structures and are managed according to the individual agency's policies and Standard Operating Guides. Federal law (HSPD-5) required the management to be NIMS-compliant by FY 2007. CC DEM continues to promote the use of NIMS when and where required.

Their emergency management activities will be coordinated with those of Crowley County, either through the various emergency preparedness organizations, or through Crowley County Emergency Management.

Emergency Management Operations

CROWLEY COUNTY EMERGENCY MANAGEMENT

Emergency Operations are those actions taken by Emergency Management staff to support the Incident Commander (possibly through the Emergency Operations Center) and area responders in the field.
Emergency Management staff ***are managed the same regardless of emergency or non-emergency conditions.***

Not all emergencies necessarily involve or warrant notification of the Division of Emergency Management or activation of the Emergency Operations Center (EOC).

EOC OPERATIONS

When conditions warrant, and the Emergency Operations Center (EOC) is activated, those that will staff the EOC, including representatives of municipalities, county departments, and key organizations are organized as shown in the EOC Organizational Chart. (*See Appendix 3 for the "Crowley County Emergency Operations Center Structure" and "EOC Command Structure".)*

According to NIMS, the County is not required to use the Incident Command System for organization of EOC operations; nevertheless, the county has found it useful to use a similarly constructed system in order to create consistency with the response entities in the field.

The Crowley County Emergency Operations (EO) Manager manages all aspects of the Emergency Operations Center & Alternate EOC (not necessarily of the incident) and mobilizes the Command Staff for resource and information support to incidents.

FIELD OPERATIONS

At any particular time, county agencies, special districts, response organizations, and municipalities may be conducting incident operations in communication with Crowley County Sheriff's Office Communications staff. The field operations portions of emergency actions are required not only to follow the management concepts in NIMS, but also to be structured according to the Incident Command System (ICS).

Resource Management Processes

Field Resources may need additional resources that are not available in Crowley County. The established process

for this includes mutual aid early on in the emergency or disaster. Mutual aid is the provision of providing quick assistance. During a large scale event Mutual Aid with whom we normally depend on may not be available. If this occurs Crowley County will attempt to procure the resources needed locally from private contractors. If private contractors are not available Crowley County will request resources through the State. The process for this is to submit a 213-RR on WebEOC. The State can then source the resources needed through the State of Colorado or an EMAC request can be sent to other States for the resources. This resource management process is in alignment with the State of Colorado Resource Management Plan.

Crowley currently does not have any disaster spending, procurement or contracting provisions in the County Financial policies. Any item or personal service in excess of $5,000 shall us a formal advertising and bidding process to provide open and free competition. Items or services in excess of $25,000 requires a minimum of three bids. Any exception to this policy requires formal written approval of the Board of County Commissioners, including during disasters.

Homeland Security Presidential Directive-8

Homeland Security Presidential Directive 8: National Preparedness (HSPD-8) calls for an all-hazards National Preparedness Goal that establishes measurable priorities, targets, and a common approach to developing needed capabilities.

CAPABILITIES-BASED PLANNING

The Goal utilizes a capabilities-based planning approach: Planning, under uncertainty, to provide capabilities suitable for a wide range of threats and hazards, within an economic framework that necessitates prioritization and choice. Capabilities-based planning addresses uncertainty by analyzing a wide range of potential scenarios to identify required capabilities. The Capabilities-based planning tools and products are:

- **National Planning Scenarios:** Planning documents that provide parameters for 15 terrorist attacks and natural disasters, providing the basis to define prevention, protection, response and recovery tasks and the capabilities required to perform them.
- **Universal Task List**: A reference tool that provides a comprehensive menu of tasks to be performed by different disciplines at all levels of government to address major events.
- **Target Capabilities List**: A list and description of the capabilities needed to perform critical homeland security tasks found in the Universal Task List.

NATIONAL PRIORITIES

The National Preparedness Goal also includes seven national priorities. Efforts to achieve these seven priorities will not only address essential needs in the near-term; they will also reinforce national efforts to achieve the target capabilities that are imperative to national preparedness for the longer-term. The national priorities are:

Overarching Priorities

1. Implement the National Incident Management System (NIMS) and the National Response Framework (NRF)
2. Expanded Regional Collaboration
3. Implement the Interim National Infrastructure Protection Plan

Capability-Specific Priorities

1. Strengthen Information Sharing and Collaboration Capabilities
2. Strengthen Interoperable Communications Capabilities
3. Strengthen Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Detection, Response and Decontamination Capabilities
4. Strengthen Medical Surge and Mass Prophylaxis Capabilities

CONSISTENCY STATEMENT

Crowley County will make all appropriate efforts within the constraints of budget to be consistent with the National Preparedness Goal as stated in HSPD-8. Crowley County participates through the State of Colorado as a recipient of Colorado's State Homeland Security Grant Program (SHSGP). The process for developing and receipt of the SHSGP requires the state's homeland security program to undergo a collaborative, multidisciplinary, multi-jurisdictional Capability Review in order to evaluate strengths and weaknesses relative to the national priorities and capabilities. The Capability Review is used to prioritize investment initiatives and leads into the development of the State Preparedness Plan. The Preparedness Plan works in conjunction with the State Homeland Security Strategy and helps to direct the homeland security program within Colorado, in which Crowley County participates.

Specific activities consistent with the National Preparedness Goal:

NATIONAL PRIORITIES - HOMELAND SECURITY PRESIDENTIAL DIRECTIVE-8

- Adoption of NIMS by the Crowley County BOCC in 2004 through resolution #4064 Dec 20, 2004.
- NIMS-specific training in 2005-2008
- ICS system identified for field operations in the Crowley County CEMP
- CEMP consistent with the National Response Framework
- Regional collaboration utilized as evidenced by participation in the Southeast Colorado All-Hazards Regional ESF-5 Meeting and Collaboration Group, the Southeast Emergency Preparedness Alliance (SEEPA), the Southeast Colorado Radio Emergency Associated Communications Team (REACT).
- Efforts to increase interoperable communications capabilities through the use of the 800Mhz Trunked Radio System and a redundant VHF radio system implemented by Crowley County. Interoperable communications can also be achieved through linking radio systems through the Incident Command Radio Interface (ICRI) or through the Crowley County Sheriff's Office dispatch console.
- Regional approach to strengthening Chemical, Biological, Radiological, Nuclear, Explosive (CBRNE) response and detection through the Southeast Colorado All-Hazards Region initiatives.
- Increasing capability for Hazardous Materials Response and Decontamination through training, and local Fire Department HAZMAT initiatives.
- Initiatives to strengthen medical surge and mass prophylaxis capabilities, such as through coordination and planning conducted by the Southeast Healthcare Coalition initiatives, and exercises.
- Initiatives to strengthen and improve Emergency Medical Services and Trauma Services by participation in the Southeastern Colorado Regional Emergency Trauma Advisory Council (RETAC).

National Incident Management System

Homeland Security Presidential Directive-5 established the nations' standardized incident management system. It is composed of standardized doctrine, concepts, principles, terminology, and organizational processes. This system called the National Incident Management System or NIMS, was initiated, and subsequently made a requirement for all entities engaged in preventing, preparing for, responding to, recovering from, and mitigating emergencies.

NIMS creates a command structure to coordinate operations, planning, logistics, and finance/administration for all field operations using the Incident Command System (ICS). The NIMS uses a core set of management concepts and establishes standards for planning, training, and exercising. Additionally, NIMS sets standards for equipment acquisition and certification, provides a means for interoperable communications, and ensures consistent organizational processes and structures.

The NIMS management concepts apply to all phases of emergency management and to all entities involved in the phases of emergency management. The implementation of this system, as required by HSPD-5, will be utilized to create nationwide consistency and to facilitate coordination amongst agencies, jurisdictions, and resources that may be utilized to support an incident.

As mandated by Homeland Security Presidential Directive-5, beginning in FY 2005, adoption of NIMS by state and local governments will be a condition for the receipt of federal preparedness funds, including grants, contracts and other activities. The deadline for full NIMS compliance was Sept. 30, 2006, the end of FY 2006.

Through Resolution #4064 December 20, 2004, Crowley County officially adopted the National Incident Management System (NIMS) and began its transition towards compliance with NIMS. That transition is currently underway, with efforts to restructure organizational processes, obtain training in the NIMS and the Incident Command System, and to type locally available resources according to their capabilities using the NIMS standard definitions. Once the transition to NIMS is complete, Crowley County will have an identical foundation for coordinating incidents to manage all hazards. The full NIMS document is available for download from http://www.dhs.gov/interweb/assetlibrary/NIMS-90-web.pdf.

KEY FEATURES OF NIMS

INCIDENT COMMAND SYSTEM (ICS)

NIMS establishes ICS as a standard incident management organization with five functional areas -- command, operations, planning, logistics, and finance/administration -- for management of all major incidents. To ensure further coordination, and during incidents involving multiple jurisdictions or agencies, the principle of unified command has been universally incorporated into NIMS. This unified command not only coordinates the efforts of many jurisdictions, but also provides for and assures joint decisions on objectives, strategies, plans, priorities, and public communications.

COMMUNICATIONS AND INFORMATION MANAGEMENT

NIMS prescribes interoperable communications systems for both incident and information management in order to address inadequate or incompatible communications equipment or procedures. This component is currently under development by the NIMS Integration Center. Crowley County will continue to monitor developments made in this area and to incorporate the standards, once finalized.

PREPAREDNESS

Under NIMS, preparedness is based on national standards for qualification and certification of emergency response personnel. It also includes planning, training, exercises, qualification and certification, equipment acquisition and certification, publication management and pre-disaster mitigation.

JOINT INFORMATION SYSTEM (JIS)

NIMS organizational measures enhance the public communication effort. The Joint Information System provides the public with timely and accurate incident information and unified public messages. This system employs Joint Information Centers (JIC) and brings incident communicators together during an incident to develop, coordinate, and deliver a unified message. This will ensure that Federal, state, and local levels of government are releasing the same information during an incident.

MANAGEMENT CONCEPTS FOR FIELD OPERATIONS

The following concepts and incident command system are applicable to all entities that conduct field operations within the jurisdictional limits of unincorporated Crowley County and the municipalities. This remains, regardless of whether the response is due to a daily incident, such as a vehicle accident, structural fire, EMS call, etc, or to a catastrophic disaster requiring extensive coordination of resources, personnel, and outside assistance.

Common Terminology and Plain English

Field operations will utilize the common set of terminology, consisting of the vocabulary associated with the Incident Command System for organizational functions, resource descriptions and incident facilities (Ex. Command, Operations, Logistics, Groups, Divisions, Leaders, Supervisors) (See Glossary of Key Terms, Appendix 2) in order to operate with other organizations involved in the management of an incident.

Additionally, field operations will use clear language, (Plain English), and will NOT use 10 codes or any other code system for radio or any other communications in order to alleviate the impact of geographical differences, or language and cultural issues that adversely affect communication.

Chain of Command/ Unity of Command

Field Operations will adhere to the Chain of Command. Every individual on scene will have a designated supervisor to which they report and from which they receive instructions.

Establishment and Transfer of Command

The first responder to arrive on scene is responsible for establishing command. This individual serves as the "Incident Commander" and continues in that role until replaced by a more senior responder. When command is transferred, the outgoing Incident Commander must give a briefing that captures all essential information to the incoming Incident Commander and notifies all responders that command has been transferred.

Span of Control

Individuals with Incident Management supervisory responsibility should have no less than three (3) and no more than seven (7) subordinates in order to maintain effective span of control. The Incident Command Structure should be expanded, when necessary to maintain span of control.

Management by Objectives

Operations in Crowley County are required to be "Managed by Objectives". Objective setting begins at the top and is communicated throughout the entire organization. The Incident Commander or Unified Commander is required to:

1. Establish overarching objectives for the incident
2. To develop and issue assignments, plans, procedures, and protocols
3. To establish specific, measurable objectives for various incident management functional activities and direct efforts to attain them
4. Document results to measure performance and facilitate corrective action

Incident Action Plan

The Incident Commander or Unified Command will develop an Incident Action Plan, which can either be written or oral, for field operations in order to convey the objectives from command for both operational and support activities.

Deployment

Personnel and equipment should respond only when requested or when dispatched by an appropriate authority.

Accountability

1. All responders, regardless of agency affiliation, must check-in to receive an assignment at a location established by command at the onset of the incident.
2. Response Operations must be directed and coordinated as outlined in the Incident Action Plan
3. Each individual involved in incident operations will be assigned to only one supervisor
4. Supervisors must be able to adequately supervise and control their subordinates, as well as communicate with and manage all resources under their supervision
5. Supervisors must record and report resource status changes as they occur.

Resource Management

The NIMS defines standardized mechanisms to describe, inventory, track, and dispatch resources before, during, and after an incident.

Resources are classified by 'Category', which refers to function and 'Kind,' to include teams, personnel, equipment, and supplies. Information about the level of capability is referred to as the 'Type,' which is a measure of minimum capabilities to perform the function. Type I implies a higher capability than Type II.

Resources to be typed include personnel, teams, facilities, equipment, and special capability assets. Examples of some of these include law enforcement teams, Urban Search and Rescue (USAR), fire engines, ambulances, police cars, electric utility restoration equipment, public works resources, etc. This typing will help ensure that the requested resource is properly matched to the needs of the situation.

Resource typing efforts are underway at the NIMS Integration Center and will subsequently be undertaken in Crowley County by each agency having such resources, as definitions for each type are disseminated.

Resource types and definitions will be kept by Crowley County under separate cover, as the definitions and types are continuously being refined at the Federal level.

Additionally, it is necessary to maintain an accurate picture of resource utilization; therefore, resource management of the operation must follow established process for categorizing, ordering, dispatching, tracking, recovering, and reimbursement for resources.

Crowley County will maintain processes consistent with the State of Colorado, as the next higher level of government and its compliance with NIMS.

Integrated Communications

NIMS prescribes interoperable communications systems for both incident and information management in order to address inadequate or incompatible communications equipment or procedures. This component is currently under development by the NIMS Integration Center. Crowley County will continue to monitor developments made in this area and to incorporate the standards, once finalized.

Pre-Designated Facilities

Designation of facilities may be dependent upon the incident scope and intensity. The Incident Commander or EO Manager will determine which facilities need to be established based on the availability of facilities, geographical need, population served. Typical facilities include the Incident Command Post (ICP), incident base, staging areas, camps, mass casualty triage areas, points-of-distribution, and emergency shelters. Identification of these facilities can be found in the EOC Handbook.

Incident Command Post

The ICP is the location of the tactical-level, on-scene incident command organization. This location typically houses the Incident Commander or Unified Command and the Command and General Staffs, but may include other designated incident personnel. Typically, the ICP is located near the incident site and is where on-scene tactical command functions are performed. Personnel conduct incident planning at the ICP, and the Incident Commander or Unified Command may establish an incident communications center at this location.

Staging Areas

The Operations Section Chief may establish staging areas to position and track for resources. A staging area can be any location in which personnel, supplies, and equipment await assignment. Staging areas may include temporary feeding, fueling, and sanitation services. The Operations Section Chief assigns a manager for each staging area who logs in all incoming resources, dispatches resources at a section chief's request, and requests Logistics Section support, as necessary, for resources at the staging area.

Incident Base

An incident base is the site that accommodates primary support activities. An Incident Commander or Unified Command establishes an incident base to house equipment and personnel support operations. An incident base may be co-located with the ICP.

Camps

Camps are satellites to an incident base, established where they can best support incident operations. Camps provide support, such as food, sleeping areas, and sanitation, and may also provide minor maintenance and servicing of equipment. Camps are relocated as necessary to meet changing operational needs.

FIELD OPERATIONS

Field operations in Crowley County are to be conducted in accordance with the Incident Command System as outlined in NIMS. Field operations include any on-scene activities that address the short-term direct effects and short-term recovery actions of an incident. This includes immediate actions to save lives, protect property, and meet basic human needs as well as the execution of emergency operations plans to limit the loss of life, personal injury, property damage, and other unfavorable outcomes.

As indicated by the situation, activities may also include applying intelligence and other information to lessen the effects of consequences of an incident; security operations; continuing investigations into the nature and source of the threat; ongoing public health and agricultural surveillance/testing processes, immunizations; isolation, or quarantine. It also includes any specific law enforcement operations aimed at preempting or disrupting illegal activity and apprehending the perpetrators.

The following incident command system is applicable to all entities that conduct field operations within the jurisdictional limits of unincorporated Crowley County and the municipalities. This remains, regardless of whether the response is due to a daily incident, such as a vehicle accident, structural fire, EMS call, etc, or to a catastrophic disaster requiring extensive coordination of resources, personnel, and outside assistance.

Determining Who Is in Charge

Establishing who is in charge of a field operation in Crowley County depends on the type of Incident, though management of the incident will remain consistent, regardless of who is in charge. The following are general examples of how the Lead Agency will be determined by the Type of Incident. The Lead Agency will assume Command and will subsequently be responsible for directing all aspects of the response, within their legal authority, to the incident site.

Table 11: Lead Discipline by Incident Table

INCIDENT	LEAD DISCIPLINE
Terrorism/Civil Disturbance/ Explosives/Mass Fatalities	Law Enforcement
Rescue (Non-Criminal)/HAZMAT Release/ Structural Collapse	FIRE
Mass Casualties	EMS / ESF-8
Utility Outage	Utility or Public Works

Types of Command

There are two types of command used - single and unified. In each, the command staff is responsible for overall management of the incident, including command staff assignments necessary to support the command function. The primary difference between a Single and Unified Command is that in a Single Command, the Incident Commander is solely responsible for establishing objectives and strategies and for ensuring that all activities are directed towards accomplishment of the strategy. In a Unified Command, the individuals designated by the jurisdictional authorities must co-locate and jointly determine objectives, strategies, plans, priorities, and use of assigned resources. Crowley County will utilize the most efficient ICS structure based on the needs of the incident, and will consider expanding the ICS organizational structure, as the situation warrants.

In addition, an Area Command may also be established to set priorities resulting from multiple incident sites with multiple Incident Commanders. If there are multiple incident sites, involving multiple agencies or jurisdictions, a Unified Area Command may be established.

SINGLE COMMAND
Established when the incident occurs within one jurisdiction and no other agency has jurisdictional authority. If the incident does involve other agencies or jurisdictions, the single command can still be used if all parties agree to forego the option to establish unified command. The Incident Commander identifies resource needs and reports them to the Crowley County Emergency Operations Center.

UNIFIED COMMAND
A Unified Command is used to enable agencies with different legal, geographic, and functional responsibilities to coordinate, plan and interact effectively. Agencies retain their independent authority and responsibilities; however, they use a collaborative decision-making process to establish a single set of objectives, perform under a single Incident Action Plan, and designate incident priorities. Additionally, all members of the unified command utilize a single incident command post and participate in unified planning and resource management. The composition of the Unified Command will depend on the location of the incident and the type of incident as to which public safety organization has jurisdiction or legal authority. Other agencies that are involved, but lack jurisdictional responsibility are defined as “Supporting Agencies” and are represented in the Command Structure through interaction with the Liaison Officer. The Unified Command identifies resource needs and reports them to the Crowley County Emergency Operations Center.

AREA COMMAND
An Area Command is activated only if necessary, based on the complexity of the incident and to address span of control issues. An area command is established either to oversee the management of multiple incidents that are being handled by separate ICS organizations or to oversee the management of a very large incident that involves multiple ICS organizations. Area Command does not have operational responsibilities. The Area Command sets overall priorities, allocates resources, ensures effective communications, and ensures incident objectives are met. The Area Command identifies resource needs and reports them to the Crowley County Emergency Operations Center. Area Command may be established at an emergency operations center facility or at some location other than an incident command post.

UNIFIED AREA COMMAND
Area Command becomes Unified Area Command when incidents are multi-jurisdictional.

MULTI-AGENCY COORDINATION SYSTEMS (MACS)
Multi-agency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration, and information coordination. The components of multiagency coordination systems include facilities, equipment; emergency operation centers (EOCs), specific multiagency coordination entities, personnel, procedures, and communications. These systems assist agencies and organizations to fully integrate the subsystems of the NIMS.

Incident Command System	Unified Command	Area Command (Unified Area Command)	Multiagency Coordination Systems (MACS)	Emergency Operations Centers (EOCs)
The management system used to direct all operations at the incident scene. The Incident Commander (IC) is located at an Incident Command Post (ICP) at the incident scene.	An application of ICS used when there is more than one agency with incident jurisdiction. Agencies work together through their designated Incident Commanders at a single ICP to establish a common set of objectives and strategies, and a single Incident Action Plan.	Established as necessary to provide **command authority** and coordination for two or more incidents in close proximity. Area Command works directly with Incident Commanders. Area Command becomes Unified Area Command when incidents are multijurisdictional. Area Command may be established at an EOC facility or at some other location other than an ICP.	An activity or a formal system used to **coordinate resources and support between agencies or jurisdictions**. A MAC Group functions within the MACS. MACS interact with agencies or jurisdictions not with incidents. MACS are useful for regional situations. A MACS can be established at a jurisdictional EOC or at a separate facility.	Also called Expanded Dispatch, Emergency Command and Control Centers, etc. EOCs are used in varying ways at all levels of government and within private industry to provide coordination, direction, and control during emergencies. EOC facilities can be used to house Area Command and MACS activities as determined by agency or jurisdiction policy.

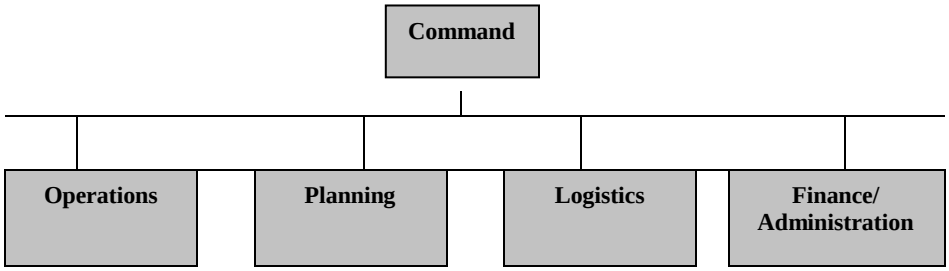
Source: National Incident Management System, 2004

Use of the Incident Command System (ICS)

The Incident Command System is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organized structure, designed to aid in domestic incident management activities. It is used for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade, to include acts of catastrophic terrorism. It is the system to be used for field operations and is not applicable to the conduct of the Crowley County Emergency Operations Center, though its management is similarly, but not identically, constructed.

The ICS organizational structure is modular, extending to incorporate all elements necessary for the type, size, scope, and complexity of a given incident. The ICS structural organization builds from the top down; responsibility and performance begin with the Incident Command element and the Incident Commander (IC). When the need arises, four separate sections can be used to organize the staff. Each of these may have several subordinate units, or branches, depending on the management requirements of the incident. If one individual can simultaneously manage all functional areas, no further organization is required. If one or more of the functions requires independent management, an individual is assigned responsibility for that function.

The Crowley County ICS for field operations is organized into five major functional areas: Command, Operations, Planning, Logistics, and Finance/Administration.



THE OPERATIONS SECTION
The Operations Section is responsible for developing the tactical operations in support of Command's objectives and for all activities associated with providing emergency response services. The Operations Chief is the Key tactical decision-maker in large operations.

THE PLANNING SECTION
The Planning Section is responsible for collecting, evaluating, and disseminating tactical information pertaining to the incident. This section maintains information and intelligence on the current and forecasted situation, as well as the status of resources assigned to the incident. The Planning Section prepares and documents Incident Action Plans (IAP's) and incident maps and gathers and disseminates information and intelligence critical to the incident. The Planning Section has four primary units and may include a number of technical specialists to assist in evaluating the situation and forecasting requirements for additional personnel and equipment.

THE LOGISTICS SECTION
The Logistics Section meets all support needs for the incident (Except aircraft), including ordering resources through appropriate procurement authorities from off-incident locations. It also provides facilities, transportation, supplies, equipment maintenance and fueling, food service, communications, and medical services for incident personnel.

THE FINANCE/ADMINISTRATION SECTION
When there is a specific need for financial, reimbursement (individual or agency/department), and/or administrative services to support incident management activities, a Finance/Administration Section is established. Not all agencies will require such assistance, however in large, complex scenarios involving significant funding, the Finance/ Administrative Section is an essential part of the ICS. In addition to monitoring multiple sources of funds, the Section Chief must track and report to the Incident Commander (IC) the financial "burn rate" as the incident progresses. This allows the Incident Commander to forecast the need for additional funds before operations are negatively affected.

COMMAND AND GENERAL STAFF

COMMAND
Command comprises the **Incident Commander and the Command Staff**. The first responder to arrive on scene is responsible for establishing command.

1) This first responder on scene assumes the position of "Incident Commander" and continues in that role until command is transferred to another more qualified individual, terminated, or converted to Unified Command. Appropriate notification must be given to all responders of Changes in Command.
2) It is at the discretion of the Incident Commander (IC), or Unified Command (UC), to appoint a Command Staff. If these positions are not filled, their responsibilities fall to the IC/UC. The Command Staff generally consists of a Public Information Officer (PIO), Safety Officer (SO), and Liaison Officer (LO). The Command Staff has responsibility for key activities not specifically identified in the General Staff Functional Elements.

GENERAL STAFF
The General Staff represent the major functional elements (Operations, Planning, Logistics, Finance/Administration, and Information and Intelligence) of the Incident Command System. They are given specific titles consistent with the common terminology concept.

Organizational Element	Leadership Position
Incident Command	Incident Commander (IC)
Command Staff	Officer
Section	Section Chief
Branch	Branch Director
Divisions and Groups*	Supervisors
Unit**	Unit Leader

*The hierarchical term *supervisor* is only used in the Operations Section.

**Unit leader designations apply to the subunits of the Planning, Logistics, and Finance/Administration Sections.

Source: National Incident Management System, 2004

ROLES AND RESPONSIBILITIES IN ICS

INCIDENT COMMANDER/UNIFIED COMMAND

1) First on scene assumes incident command, until command is transferred to another, converted to unified command, or incident is terminated
2) Responsible for all functions of incident management
3) Appoints and supervises Command Staff, or assumes responsibilities of those positions
4) Expands ICS organization as necessary, or assumed responsibilities of those functions
5) Determines Incident Objectives and strategy
6) Identifies Incident Command Post location and locates there

COMMAND STAFF

PUBLIC INFORMATION OFFICER

1) Incident Command will assign a PIO
2) Interfaces with the public and media and/or other agencies
3) Monitors Information
4) Serves as the single PIO for the incident, whether single or unified command is established
5) Secures the approval of the Incident Commander/Unified Command for all information released
6) Responsible for organizing any assistants assigned from other agencies for maximum efficiency

SAFETY OFFICER

1) Incident Command will assign a SO
2) Monitors incident operations
3) Single Safety Officer regardless of single or unified command structure
4) Advises the IC/UC on all matters relating to operational safety, and health and safety of responders
5) Responsible to the IC for systems, procedures to assess hazardous environments, coordinate multi agency safety efforts, implement safety measures, and ensure safety
6) Has emergency authority to stop and prevent unsafe acts
7) Coordinates closely with the Operations Section Chief and planning Section Chief regarding operational safety
8) Responsible for organizing any assistants assigned from other agencies for maximum efficiency
9) NOTE: EACH AGENCY STILL RESPONSIBLE FOR THEIR OWN PROGRAMS AND PERSONNEL SAFETY

LIAISON OFFICER

1) Incident Command will assign a LOFR or LNO
2) Coordinates with representatives from assisting agencies at the Command Post
3) Responsible for organizing any assistants assigned from other agencies for maximum efficiency

ASSISTANTS

1) May serve Command Staff Members to help manage workload

ADDITIONAL COMMAND STAFF

Other Command Staff Positions may be necessary depending on the nature and location of the incident. For example, legal counsel, or a Medical Advisor may be necessary.

1) Provide the IC with advice and recommendations pertaining to their area of expertise

GENERAL STAFF

The General Staff represent the Major functional elements (Operations, Logistics, Planning, and Finance/Administration) of the Incident Command System. They are given specific titles consistent with the common terminology concept.

OPERATIONS SECTION CHIEF

1) Only one Operations Section Chief for each operational period
2) Responsible to the IC/UC for direct management of all incident-related operational activities
3) Establishes Tactical Objectives for Each Operational Period, which sets the pace for the establishment actions of the other Section Chiefs
4) Assists in developing the Operational Portion of the Incident Action Plan (IAP) for that particular period of responsibility
5) Expands the Operations Section into Branches, as necessary to maintain span of control
6) Supervises the Operations Section
7) May have one or more Deputies Assigned from other agencies
8) Briefs personnel
9) Determines needs and requests additional resources
10) Assembles/disassembles Strike Teams assigned to Operations Sections
11) Reports information to the Incident Commander
12) Maintains a unit/activity log

LOGISTICS SECTION CHIEF

1) Responsible for all support requirements needed
2) Orders resources from off-incident locations
3) Responsible for providing facilities, transport, supplies, equipment, maintenance, fuel, food services, communications and information technology support, emergency responder medical services, inoculations
4) As needed, expands the Logistics Section into: Supply, Ground Support, Facilities, Food, Communications, and Medical Unit

PLANNING SECTION CHIEF

1) Only one Planning Section Chief for each operational period
2) Reports to the IC/UC
3) Oversees all incident-related data gathering and analysis regarding operations and resources
4) Develops alternatives for tactical operations
5) Conducts planning meetings
6) Prepare the Incident Action Plan (IAP) for each operational period
7) Generally, comes from the jurisdiction with primary incident responsibility
8) May have one or more deputies from other participating organizations
9) Expands the Operations Section into Branches, as necessary to maintain span of control such as Resources Unit, Situation Unit, Documentation Unit, (Technical Specialists Unit)

FINANCE/ADMINISTRATION SECTION CHIEF

1) Monitoring multiple sources of funds
2) Tracks the financial “burn rate” and reports to the Incident Commander (IC)
3) Monitors cost expenditures to ensure that statutory rules that apply are met
4) Maintains close coordination with the Planning Section and the Logistics Section
5) As needed, expands the Finance/Administration Section into the Time Unit, the Procurement Unit, the Compensation and Claims Unit and the Cost Unit

EMERGENCY SUPPORT FUNCTIONS (ESFs)

During a disaster, Crowley County Emergency Management may activate the Emergency Operations Center to support the responding agencies through the Incident Commander. The Emergency Operations Center is staffed and operated by the employees of Crowley County, representatives of municipalities and other key response and recovery organizations.

The agencies and department representatives are organized according to the function that they are tasked to support, such as energy, food and water, firefighting, etc. These functions are called *"Emergency Support Functions (ESF)"*.

Emergency Support Functions represent functional groupings of types of assistance that jurisdictions are likely to need. A single agency is charged with responsibility for ESF operations. Many other agencies support the primary agency, (see Figure 6 - Emergency Support Function Matrix/Primary and Support). An agency may be designated as primary for an ESF for a number of reasons. The agency may have a statutory responsibility to perform that function; or through its programmatic or regulatory responsibilities, the agency may have developed the necessary expertise to lead the ESF. In some agencies, a portion of the agency's mission is similar to the mission of the ESF; therefore, the skills to respond in a disaster can be immediately translated from the daily business of that agency. For whatever the reason an agency is designated as the Primary Agency, that agency will have the necessary contacts and expertise to coordinate the activities of that support function. Further, a single agency may be involved in more than one ESF.

When the EOC/Alternate EOC is activated, the designated ESF lead agencies send a representative to the EOC to coordinate that ESF. The Primary Agency has discretion as to how many, if any, support agencies they will require to support them or represent that ESF in the EOC. Due to the limited space available in the EOC, the attendance of support agencies should be closely coordinated.

The Primary Agency for the ESF will be responsible for obtaining all information relating to ESF activities and requirements caused by the disaster and disaster response. This information gathering will frequently require the Primary Agency to step outside traditional information gathering protocols. Within the CC EOC, requests for assistance will be tasked to the corresponding ESF for completion. The Primary Agency will be responsible for coordinating the delivery of that assistance to the disaster area.

The Crowley County ESF system is distinctly different from the one used by FEMA (See ESF Comparison Chart on the following page). Each ESF at the County EOC interfaces with the corresponding ESF Agency at the State Level. This ESF process is also used by the State of Colorado to respond to local requests for assistance. Therefore, if the State of Colorado makes the determination to adopt the system currently used by FEMA, Crowley County is fully prepared to transition as well. Until such time, however, Crowley County will continue to use the existing system and has included the ESF Comparison Chart to illustrate the differences that may be encountered between the FEMA ESF system and the Crowley County/State of Colorado ESF system.

There are eighteen ESFs in Crowley County, each with its own ESF Plan, which has been included as an Appendix 7 to this CEMP for easy reference. The eighteen ESFs are as follows:

Table 12: Crowley County Emergency Support Function List

CROWLEY COUNTY EMERGENCY SUPPORT FUNCTION LIST

ESF 1	TRANSPORTATION	ESF 10	HAZARDOUS MATERIALS
ESF 2	COMMUNICATIONS	ESF 11	FOOD AND WATER
ESF 3	PUBLIC WORKS AND ENGINEERING	ESF 12	ENERGY
ESF 4	FIREFIGHTING	ESF 13	MILITARY
ESF 5	INFORMATION AND PLANNING	ESF 14	PUBLIC INFORMATION
ESF 6	MASS CARE	ESF 15	VOLUNTEERS AND DONATIONS
ESF 7	RESOURCE SUPPORT	ESF 16	LAW ENFORCEMENT AND SECURITY
ESF 8	HEALTH AND MEDICAL	ESF 17	ANIMAL PROTECTION/AGRICULTURE
ESF 9	SEARCH AND RESCUE	ESF 18	BUSINESS AND INFRASTRUCTURE

EMERGENCY SUPPORT FUNCTION COMPARISON CHART

EMERGENCY SUPPORT FUNCTIONS (ESFs)

NOTE: There are distinct variations in the Emergency Support System of Crowley County and the one outlined in the National Response Framework and adopted by FEMA. These differences are shown below in order to facilitate understanding and interaction with the appropriate ESFs at the Federal Level.

In order to maximize communication and ensure consistency Crowley County has modified the standard ESF List adopted by FEMA and the State of Colorado.

Table 13: FEMA and State of Colorado Emergency Support Function List

Florida's Emergency Support Functions System	CROWLEY COUNTY ESFS		NATIONAL RESPONSE FRAMEWORK/FEMA	
	ESF 1	TRANSPORTATION	ESF 1	TRANSPORTATION
	ESF 2	COMMUNICATIONS	ESF 2	COMMUNICATIONS
	ESF 3	PUBLIC WORKS AND ENGINEERING	ESF 3	PUBLIC WORKS AND ENGINEERING
	ESF 4	FIREFIGHTING	ESF 4	FIREFIGHTING
	ESF 5	INFORMATION AND PLANNING	ESF 5	EMERGENCY MANAGEMENT
	ESF 6	MASS CARE	ESF 6	MASS CARE, HOUSING, AND HUMAN SERVICES
	ESF 7	RESOURCE SUPPORT	ESF 7	RESOURCE SUPPORT
	ESF 8	HEALTH AND MEDICAL SERVICES	ESF 8	PUBLIC HEALTH AND MEDICAL SERVICES
	ESF 9	SEARCH AND RESCUE	ESF 9	URBAN SEARCH AND RESCUE
	ESF 10	HAZARDOUS MATERIALS	ESF 10	OIL AND HAZARDOUS MATERIALS RESPONSE
	ESF 11	FOOD AND WATER	ESF 11	AGRICULTURE AND NATURAL RESOURCES
	ESF 12	ENERGY	ESF 12	ENERGY
	ESF 13	MILITARY	ESF 13	PUBLIC SAFETY AND SECURITY
	ESF 14	PUBLIC INFORMATION	ESF 14	LONG TERM COMMUNITY RECOVERY AND MITIGATION
	ESF 15	VOLUNTEERS AND DONATIONS	ESF 15	EXTERNAL AFFAIRS
	ESF 16	LAW ENFORCEMENT AND SECURITY		
	ESF 17	ANIMAL PROTECTION/ AGRICULTU RE		
	ESF 18	BUSINESS AND INFRASTRUCTURE		

PRIMARY AND SUPPORT AGENCIES FOR EACH EMERGENCY SUPPORT FUNCTION

EMERGENCY SUPPORT FUNCTIONS (ESFs)

Table 14: ESF Primary and Support Agency Table

State/Local Coordinating Agencies	ESF 1	ESF 2	ESF 3	ESF 4	ESF 5	ESF 6	ESF 7	ESF 8	ESF 9	ESF 10	ESF 11	ESF 12	ESF 13	ESF 14	ESF 15	ESF 16	ESF 17	ESF 18
Crowley County School District	P					S		S			S							
Crowley County Nursing Center	S							S			S							
Crowley County Administration	S				S	S	P				S	S		P				
Crowley County Dispatch Communications Center		P					S		S	S			S	S		S		
Crowley County Emergency Management		S		S	P	P	S	S	S		P	P	P	S	P	S		S
Colorado State Patrol – Pueblo Communications Center		S					S			S			S	S		S		
Colorado Department of Transportation	S		S											S		S		
Crowley County Emergency Operations Center		S			S	S	S			S	S	S	S	S	S	S	S	S
Colorado State Emergency Operations Center		S			S	S	S			S	S	S	S	S	S	S	S	S
Colorado Division of Fire Prevention and Control				S						S								
Crowley County Board of County Commissioners			S		S	S	S						S	S	S		S	S
Town of Ordway	S		S		S					S	S							
Town of Sugar City	S		S		S					S	S							
Town of Olney Springs	S		S		S					S	S							
Town of Crowley	S		S		S					S	S							
Crowley County Volunteer Fire Department				P				S	S	S	S			S				
Crowley County Sheriff's Office	S			S	S	S		S	P	P	S		S	S		P	S	
Crowley County Road & Bridge	S		P	S	S			S	S	S		S						
American Red Cross					S	S		S			S				S			S
Salvation Army						S					S				S			
Crowley County Treasurers Office							S											
Crowley County Clerk & Recorders Office							S											
Crowley County Assessor's Office			S		S													
Crowley County Court Clerk's Office							S											
Crowley/Otero County Health Department			S	S	S	S		P		S	S	S		S			S	
Crowley County Ambulance Service						S		S	S	S								
Flight for Life Colorado								S	S	S								
Southeast Colorado Care Connect								S	S	S								
Crowley County Coroner's Office								S										
Colorado State Patrol Hazmat Section										S						S		
Colorado State Patrol																S		
Colorado State Patrol – Motor Carrier Safety																S		
Colorado State University Extension Office											S			S			P	S
Black Hills Energy												S						
Southeast Colorado Power Association												S						
Colorado Public Utilities Commission												S						
Colorado National Guard													S			S		
Crowley County Department of Human Services											S			S				
Southeast Colorado Emergency Preparedness Alliance															S			S
Colorado Catholic Charities											S				S			
Seventh Day Adventists															S			
Southern Baptist Disaster Relief											S							
Crowley County Economic Development																		P
Crowley County Chamber of						S								S	S			S

EMERGENCY SUPPORT FUNCTIONS (ESFs)																		
Commerce																		
Colorado Civil Air Patrol	S																	
Southeast Colorado REACT Team		S				S		S	S					S				
Colorado AUXCOM		S												S				
Amateur Radio Emergency Services Region 4 District 1		S												S				
Viaero Wireless		S																
Verizon Wireless		S																
AT&T		S																
SECOM		S																
State/Local Coordinating Agencies	**ESF 1**	**ESF 2**	**ESF 3**	**ESF 4**	**ESF 5**	**ESF 6**	**ESF 7**	**ESF 8**	**ESF 9**	**ESF 10**	**ESF 11**	**ESF 12**	**ESF 13**	**ESF 14**	**ESF 15**	**ESF 16**	**ESF 17**	**ESF 18**
CenturyLink		S																
Triple C Communications		S																
DigitCom Electronics		S																
National Weather Service – Pueblo					S									S				
American Medical Response – MedTrans Ambulance Service						S												
Volunteer Agencies & Faith based Organizations						S					S				S			
Valley Wide Health Systems								S										
Arkansas Valley Regional Medical Center AVRMC								S										
Parkview Medical Center								S										
St. Mary Corwin Medical Center								S										
Home Healthcare Agencies								S										
Crowley County Local Emergency Planning Committee										S								
Colorado Department of Public Health & Environment										S								
Colorado Department of Human Services											S							
Retail Fuel Outlets												S						
Colorado Broadcasters Association														S				
2-1-1 for Southeast Colorado SRDA															S			
Colorado State Parks and Wildlife																S	S	
United States Forest Service																S		
United States Bureau of Land Management																S		
Colorado Department of Corrections											S					S		
CoreCivic											S					S		
Colorado Bureau of Investigations																S		
Colorado Information Analysis Center (CIAC) Fusion Center																S		
Crowley County USDA Natural Resources Conservation Services																	S	
USDA Farm Service Agency																	S	
Colorado Veterinarian Association																	S	
Humane Society of the United States																	S	
Colorado Department of Agriculture																	S	
Colorado Office of Economic Development and International Trade																		S
Southern Colorado Economic Development District																		S
Southeast Colorado Enterprise Development																		S
Southeast Colorado Small Business Development Center																		S

BRIEF DESCRIPTION OF EMERGENCY SUPPORT FUNCTIONS

ESF 1 Transportation

Purpose: The purpose of ESF 1 is to provide, in a coordinated manner, the resources (human, technical, equipment, facility, materials and supplies) of member agencies to support emergency transportation needs during an emergency or disaster in Crowley County. ESF 1 can provide personnel and resources to support prevention, preparedness, protection, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 1 Emergency Coordination Officer (ECO) is appointed by and located in the Crowley County School District and directs all aspects of emergency management transportation subsequent to requests for additional transportation services by individual agencies and/or County Emergency Response Teams.

Primary Agency:	Crowley County School District
Support Agencies:	Colorado Department of Transportation Crowley County Nursing Center Crowley County Administration Crowley County Road & Bridge Crowley County Sheriff's Office Colorado Civil Air Patrol Town of Ordway Public Works Town of Sugar City Public Works Town of Olney Springs Public Works Town of Crowley Public Works

ESF 2 Communications

Purpose: The purpose of ESF 2 is to provide Communications coordination and support services in support of emergency events in Crowley County. ESF 2 can provide personnel and resources to support prevention, preparedness, protection, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 2 Emergency Coordination Officer (ECO) is appointed by and located in the Communications Division and directs all aspects of emergency management. ESF 2 resources are used when individual agencies are overwhelmed and the County Emergency Response Team requests additional communications services.

The Enhanced 9-1-1 Division will coordinate ESF 2 assets (both equipment and services) that may be available from a variety of sources before and after the activation of the County EOC. The Emergency Communications Center (ECC) houses the communications system in the EOC.

Primary Agency:	Crowley County Enhanced 9-1-1 Division
Support Agencies:	Crowley County Emergency Communications Center Crowley County Sheriff's Office Crowley County Emergency Management Colorado State Patrol Communications Center - Pueblo Radio Emergency Associated Communications Team (REACT) Colorado AUXCOM Amateur Radio Emergency Services Region 4 District 1 Digitcom Electronics Triple C Communications CenturyLink SECOM AT&T (FirstNet)

Viaero Wireless
Verizon Wireless

ESF 3 Public Works and Engineering

Purpose: The purpose of ESF 3 is to provide Public Works coordination and support services in support of emergency events in Crowley County. ESF 3 can provide personnel and resources to support prevention, preparedness, protection, response, recovery and mitigation in support of the primary emergency management objectives. ESF 3 will evaluate infrastructure damage and coordinate emergency debris clearing of essential roads within Crowley County. ESF-3 will also coordinate emergency contracting, building inspections, engineering services and demolitions. ESF-3 will allocate debris clearing and Public Works equipment and process all requests for needs and donations of Public Works and debris clearing equipment. ESF 3 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional public works and engineering service assistance.

Primary Agency:	Crowley County Road and Bridge
Support Agencies:	Crowley County Assessors Office Town of Ordway Public Works Department Town of Sugar City Public Works Department Town of Crowley Public Works Department Town of Olney Springs Public Works Department Otero/Crowley County Health Department, Environmental Division Colorado Department of Transportation

ESF 4 Firefighting

Purpose: The purpose of ESF 4 is to provide fire service coordination and support services in support of emergency events in Crowley County. Emergency Support Function 4 can provide personnel and resources to support prevention, preparedness, response, recovery and mitigation in support of the primary emergency management objectives. ESF 4 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional fire service assistance. ESF 4 will coordinate with the Volunteer Personnel Center to provide adequate relief for fire services personnel. ESF 4 will process all requests for needs and donations of fire suppression and rescue equipment.

It has been generally accepted that a basic role of government is to provide services, which are not available and cannot be provided by the private sector or an individual acting on his behalf. For the most part, local governments cannot feasibly finance special services to operate only in times of a disaster, but which are unused at other times. Instead, the County must rely largely on regular emergency response service agencies augmented by citizen volunteers to meet wide scale disaster situations. It is this voluntary aspect carried to a fine degree upon which the County must rely for fire suppression beyond the municipal boundaries of the principal cities. By its very nature, firefighting requires fire companies and equipment to be decentralized. Although the decentralized nature of firefighting is clearly recognized, a large wide area disaster dictates coordination on an inter-jurisdictional basis. The County fire services are the largest manpower resource - trained and ready - for use during a disaster. A fire disaster covering a large area and affecting a large segment of the public would be similar to the types of emergencies the fire service responds to routinely. It is expected that fire services available to a local community would be the first to respond to and contain a fire. When local resources have been expended, and the fire has not been contained, it will be necessary to summon aid from other areas where fire-fighting capability has not been committed.

Included could be the U.S. Forest Service as well as fire companies from adjacent military installations. The purpose of this plan therefore, is to provide a mechanism by which fire services capability would be utilized for fire suppression on an inter-jurisdictional basis.

Primary Agency:	Crowley County Fire Department

Support Agencies:
Crowley Division of Emergency Management
Crowley County Sheriff's Office
Colorado Division of Fire Prevention and Control
Crowley County Road and Bridge
Otero/Crowley County Health Department

ESF 5 Information and Planning

Purpose: The purpose of ESF 5 is to: 1) collect, analyze, and disseminate tactical information on the nature, scope and potential impacts of an incident or major disaster; 2) use this intelligence to support the Command Group, Logistics, and Operations in their impact assessment and response missions; and 3) identify and anticipate future needs and resource requirements, and incorporate this analysis into Incident Action Plans.

The concise and accurate reporting and planning is continuous, beginning well before impact of approaching natural disasters and immediately upon those not forecasted. The response is progressive in nature beginning with the activation of the EOC at its lowest level. First actions will be taken at the local level with state and federal involvement as necessary to supplement local capabilities including to adoption a local declaration of emergency. Initial reports are the necessary basis for the Governor's decision to declare a state of emergency and to request a Presidential Emergency or Disaster Declaration. Additionally, these reports form the basis for determining specific types and extent of assistance needed in the affected area.

Primary Agency:
Crowley County Division of Emergency Management

Support Agencies:
Crowley County Emergency Operations Center
Colorado State Emergency Operations Center
Crowley County Board of County Commissioners
Crowley County Administrator's Office
Crowley County Assessor's Office
Crowley County Sheriff's Office
Crowley/Otero County Health Department
Town of Ordway
Town of Olney Springs
Town of Sugar City
Town of Crowley
American Red Cross
National Weather Service (Pueblo Office)
Road and Bridge Department

ESF 6 Mass Care

Purpose: Coordinate the emergency provision of temporary shelters, emergency mass feeding, and the bulk distribution of coordinated relief supplies for victims of a disaster and disaster workers and long-term temporary housing after closure of temporary shelters post disaster. Other responsibilities include documentation and reporting of shelter residents, shelter injuries and casualties; determination of needs, and the processing of all requests to meet those needs and securing donations of life supporting supplies. ESF 6 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional mass care, mass feed assistance, and bulk distribution of coordinated relief supplies.

Primary Agency:
Crowley County Emergency Management

Support Agencies:
Crowley County Emergency Operations Center
Colorado State Emergency Operations Center
Crowley County Board of County Commissioners
American Red Cross
Crowley/Otero County Health Department

Crowley County District School
Crowley County Sheriff's Office
Salvation Army
Southeast Colorado Radio Associated Communications Team (REACT)
Crowley County Ambulance Service
MedTrans Ambulance Service
Chambers of Commerce (Ordway)
Volunteer Agencies –, local churches, United Way, RSVP, Ameri-Corp, and others available.

ESF 7 Resource Support

Purpose: The purpose of ESF 7 is to acquire the necessary resources to support disaster operations; provide fiscal and logistical managerial support through timely and efficient acquisition and distribution of resources, purchasing, contracting, renting and leasing of supplies and equipment; and provide coordination of the documentation of reimbursable expenditures as determined by the Federal Emergency Management Agency (FEMA) and the State of Florida.

Primary Agency: Crowley County Administration

Support Agencies:
Crowley County Emergency Management
Crowley County Dispatch Communications Center
Colorado State Patrol – Pueblo Communications Center
Crowley County Emergency Operations Center
Colorado State Emergency Operations Center
Crowley County Board of County Commissioners
Crowley County Treasures Office
Crowley County Clerk and Recorders Office
Crowley County Court Clerks Office

ESF 8 Health and Medical Services

Purpose: The purpose of Emergency Support Function 8 is to identify health and medical needs of the entire county before, during, and after a disaster. Coordinate the health and medical resources needed in responding to public health and medical care needs following a significant natural disaster or manmade event. Develop policy guidelines for sheltering people with special needs; develop strategies to ensure adequate staffing for the Special Needs Shelter and the registration of people with special needs. ESF 8 can provide personnel and resources to support prevention, preparedness, protection, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 8 Emergency Coordination Officer (ECO) is appointed by and located in the Crowley/Otero County Health Department Office and directs all aspects of emergency management. ESF 8 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional Health and Medical assistance.

Primary Agency: Crowley/Otero County Department of Health

Support Agencies:
Crowley County Emergency Management
Crowley County Ambulance Service
MedTrans Ambulance Service
CareConnect of Southern Colorado
Flight for Life Colorado
Crowley County Fire Department
American Red Cross
Valley Wide Health System
Arkansas Valley Regional Medical Center
St. Mary Corwin Medical Center
Parkview Medical Center
Crowley County District School

Southeast Colorado Radio Emergency Associated Communications Team
Crowley County Sheriff's Office
Crowley County Coroner's Office
Home Health Care Agencies
Local Funeral Homes
Crowley County Nursing Center
Country Plains Home Health
Maxim Healthcare Services
Sangre De Cristo Hospice and Palliative Care
Ark Valley Home Health
Crowley County Road and Bridge
Ford-Ustick Funeral Home
Peacock –Larsen Funeral Home

ESF 9 Search and Rescue

Purpose: The purpose of ESF 9 is to provide search and rescue coordination and support services in support of emergency events in Crowley County. ESF 9 can provide personnel and resources to support prevention, preparedness, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 9 Emergency Coordination Officer (ECO) directs all aspects of Search and Rescue. Each municipality will be responsible for search and rescue operations within their respective jurisdictions. CC may provide mutual aid assistance upon request.

Primary Agency:	Crowley County Sheriff's Office
Support Agencies:	Crowley County Dispatch Communications Center Crowley County Fire Departments Crowley County Road and Bridge Crowley County Emergency Management Southeast Colorado Radio Emergency Associated Communications Team (REACT) CareConnect of Southern Colorado Flight for Life Colorado Crowley County Ambulance Service

ESF 10 Hazardous Materials

Purpose: The purpose of ESF 10 is to provide hazardous materials coordination and support services in support of emergency events in Crowley County. ESF 10 can provide personnel and resources to support prevention, preparedness, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 10 Emergency Coordination Officer (ECO) is appointed by the Crowley County Firefighters' Association office and directs all aspects of emergency management. ESF 10 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional hazardous materials assistance.

Primary Agency:	Crowley County Sheriff's Office
Support Agencies:	Crowley County Fire Department Crowley County Emergency Management Crowley County Emergency Operations Center Colorado State Patrol – Hazmat Division Colorado State Patrol – Pueblo Communications Center Colorado Division of Fire Prevention and Control Crowley County LEPC Crowley County Road and Bridge Town of Ordway Public Works Department Town of Olney Springs Public Works Department Town of Sugar City Public Works Department

Town of Crowley Public Works Department
Colorado Department of Public Health and Environment
Crowley County Ambulance Service
CareConnect of Southern Colorado
American Red Cross
Crowley/Otero County Health Department

ESF 11 Food and Water

Purpose: The purpose of Emergency Support Function 11 is to plan for and provide the distribution of food, water and ice to local victims following a disaster. Process all requests for needs and donations of food and water supplies in coordination with ESF-5. Coordinate with the volunteer personnel center to provide adequate relief for volunteers. Preparedness education campaigns teach the public to be prepared to be self-sufficient for 72 hours. However other potential hazards may create the need for distribution of these basic necessities.

In the wake of a major disaster requiring the need for distribution of food, water and ice to the public, pre-identified locations for distribution will be prepared and the commodities transported to each location.

Primary Agency: Crowley County Division of Emergency Management

Support Agencies:
Colorado Division of Homeland Security and Emergency Management
Crowley/Otero County Health Department
Crowley County District School
Crowley County Sheriff's Office
American Red Cross
Salvation Army
Colorado Department of Human Services
Crowley County Department of Human Services
Faith Based Organizations
Crowley County Emergency Operations Center
Colorado State Emergency Operations Center
Crowley County Administration
Town of Ordway
Town of Sugar City
Town of Olney Springs
Town of Crowley
Crowley County Fire Department
Colorado State University Extension Office
Colorado Catholic Charities
Southern Baptist Disaster Releif

ESF 12 Energy

Purpose: The purpose of ESF 12 is to establish response activities of the energy organizations and utilities in responding to and recovering from fuel shortages, power outages and capacity shortages which impact or threaten to impact Crowley County citizens and visitors during and after a disaster situation. Expedient recovery is dependent upon the restoration of power to homes and businesses. Power outages are usually caused by major disasters such as hurricanes, tornadoes or other severe weather. However, other events such as fuel shortages, civil disturbances, disruption of transmission and distribution systems or power generating plant failure may also cause temporary disruption of power.

ESF 12 can provide personnel and resources to support prevention, preparedness, protection, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 12 Emergency Coordination Officer (ECO) is appointed by and located in the Crowley County Emergency Management Division and directs all aspects of emergency management. ESF 12 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional energy services assistance.

Primary Agency:	Crowley County Division of Emergency Management
Support Agencies:	Black Hills Energy Southeast Colorado Power Association Crowley County Public Works Department Crowley/Otero County Health Department Retail Fuel Outlets Colorado Public Utilities Commission Crowley County Emergency Operations Center

ESF 13 Military Support

Purpose: The purpose of ESF 13 is to provide military support coordination and support services in support of emergency events in Crowley County. ESF 13 can provide personnel and resources to support prevention, preparedness, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 13 Emergency Coordination Officer (ECO) is appointed by and located in the Colorado National Guard and directs all aspects of emergency management. ESF 13 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional military support assistance.

Primary Agency:	Crowley County Division of Emergency Management
Support Agencies:	Colorado National Guard Crowley County Sheriff's Office Colorado Division of Homeland Security and Emergency Management Colorado State Patrol – Pueblo Communications center Crowley County Board of County Commissioners Crowley County Dispatch Communications Center

ESF 14 Public Information

Purpose: The purpose of ESF 14 is to disseminate information on emergencies to county officials, emergency services staff, media outlets, municipal officials and the public through the news media. Additionally, ESF 14 will maintain liaison with municipalities, special districts, contiguous political jurisdictions and state and federal level authorities.

Primary Agency:	Crowley County Administration
Support Agencies:	Crowley County Board of County Commissioners Crowley County Administrator Crowley County Division of Emergency Management Crowley County Emergency Operations Center Colorado State Emergency Operations Center Crowley County Sheriff's Office Crowley County Fire Department Radio Emergency Associated Communications Team (REACT) Colorado Department of Transportation Chambers of Commerce Colorado Association of Broadcasters Crowley County Dispatch Communications Center Colorado State Patrol – Pueblo Communications Center Otero/Crowley County Health Department Colorado State University Extension Crowley County Department of Human Services

National Weather Service – Pueblo
Amateur Radio Emergency Services Region 4 District 1
Colorado AuxCom
Crowley County School District

ESF 15 Volunteers and Donations

Purpose: The purpose of ESF 15 to coordinate the efficient and effective utilization of unaffiliated volunteers and donated resources to meet the needs of the impacted area(s) of Crowley County following a disaster or other incident of significance.

The scope of this ESF is two-fold: To coordinate response /recovery efforts as related to volunteers (pre-assigned and convergent) and to assure the expeditious response/recovery delivery of donated goods to the affected area.

Overall management, coordination and prioritization of volunteer support and distribution of donated resources to meet the needs of the impacted area(s) following a disaster or other incident of significance.

Primary Agency: Crowley County Division of Emergency Management

Support Agencies:
2-1-1 for Southeast Colorado SRDA
American Red Cross
Department of Human Services
Salvation Army
Voluntary Organizations Active in Disaster (VOAD/ES)
Faith based organizations
Colorado Catholic Charities
Colorado State Emergency Operations Center
Crowley County Emergency Operations Center
Crowley County Board of County Commissioners
Southeast Emergency Preparedness Alliance
Seventh Day Adventists
Crowley County Chamber of Commerce

ESF 16 Law Enforcement and Security

Purpose: The purpose of ESF 16 is to provide law enforcement coordination and support services in support of emergency events in Crowley County. ESF 16 can provide personnel and resources to support prevention, preparedness, protection, response, recovery and mitigation in support of the primary emergency management objectives. The ESF 16 Emergency Coordination Officer (ECO) is appointed by and located in the Crowley County Sheriff's Office and directs all aspects of emergency management. ESF 16 resources are used when individual agencies are overwhelmed and County Emergency Response Team requests additional law enforcement assistance. The scope of ESF 16 is to coordinate the overall activities of the county's law enforcement agencies with state/federal governments as well as the county's Emergency Operations Center (EOC).

Primary Agency: Crowley County Sheriff's Office

Support Agencies:
Crowley County Division of Emergency Management
Colorado State Patrol
Colorado State Patrol Motor Carrier Safety
Colorado State Patrol Hazmat Division
Colorado Department of Transportation
Colorado Parks and Wildlife
Colorado National Guard
Colorado State Emergency Operations Center
United States Forest Service
United States Bureau of Land Management

Colorado Department of Corrections
CoreCivic
Crowley County Emergency Operations Center
Crowley County Dispatch Communications Center
Colorado State Patrol – Pueblo Communications Center
Colorado Information Analysis Center (CIAC)
Colorado Bureau of Investigations

ESF 17 Animal Protection/Agriculture

Purpose: The purpose of ESF 17 is to provide for the coordination of local resources in response to small pet, livestock, and exotic animal care needs before, during, and following a significant natural or technological disaster. Animal issues are often overlooked in the planning process for disasters. This lack of planning, caused by the belief that animals can fend for themselves, leads to serious problems when these animals are forced from their habitats due to injury or hunger. By developing operational procedures to care for these animals prior to such an event, this ESF will help reduce animal-related problems in emergencies.

ESF 17 will provide overall management, coordination and prioritization of county-wide Animal Control services and assets to support pet and livestock animal needs in the event of a major emergency or disaster.

Primary Agency: Crowley County Cooperative Extension Office

Support Agencies:
Crowley/Otero County Health Department
US Department of Agriculture: (County Office)
Natural Resources
Conservation Services
Farm Services Agency
Colorado Veterinarian Association
Humane Society of the United States (H.S.U.S.)
Colorado Department of Agriculture
Crowley County Sheriff's Office
Colorado Parks and Wildlife

ESF 18 Business and Industry

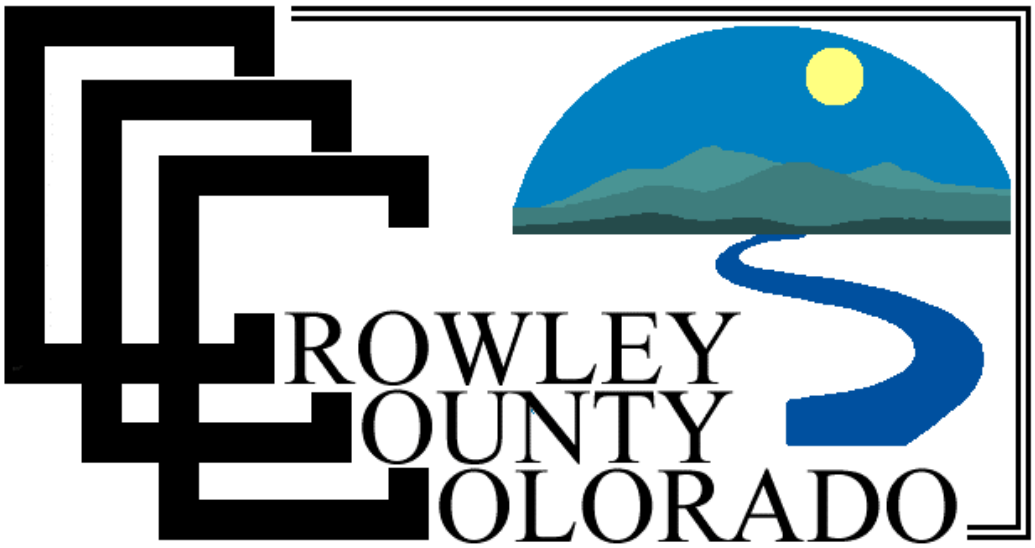
Purpose: The purpose of ESF 18 is to provide guidance and coordinate issues with Crowley County's business community in all phases of emergency management – preparedness, response, recovery and mitigation – in a sustained effort to reduce the vulnerability of this key sector to the effects of disasters, to more economically and efficiently utilize local resources, and to expedite response and recovery when a major disaster does occur.

Primary Agency: Crowley County Economic Development

Support Agencies:
Crowley County Chamber of Commerce
Crowley County Emergency Management
Colorado State Emergency Operations Center – Business EOC
Crowley County EOC
Crowley County Board of County Commissioners
Southeast Emergency Preparedness Alliance
American Red Cross
Colorado Office of Economic Development and International Trade
Southeast Colorado Enterprise Development
Southeast Colorado Small Business Development Center

COMPREHENSIVE EMERGENCY MANAGEMENT PLAN (CEMP)

PREPAREDNESS ELEMENT



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PREPAREDNESS ELEMENT

GENERAL

This element of the Crowley County Comprehensive Emergency Management Plan addresses the Preparedness activities that are conducted in Crowley County. During the preparedness phase of emergency management, Crowley County undertakes a range of deliberate, critical tasks and activities necessary to build, sustain, and improve operational capability. Such preparedness activities may include establishing guidelines, protocols, and standards for planning, training and exercises, pursuing personnel and equipment qualification and certification, and publication management.

PREPAREDNESS ACTIVITIES

The Preparedness Activities discussed below are organized in to six categories:

1. Planning
2. Preparedness Organizations
3. Public Awareness and Education
4. Exercise
5. Training
6. Mutual Aid Agreements

PLANNING

Planning efforts are ongoing through the preparedness phase. The Emergency Management Coordinator, or designee, oversees the development of documents, such as standard operating guidelines (SOGs) and emergency plans, which establish operational concepts and processes that will facilitate the coordination of emergency actions.

Examples of some of the local plans include:

1. **The Crowley County Comprehensive Emergency Management Plan (CCCEMP)**
   This plan outlines the operational processes for all phases of emergency management.

PLANNING (Cont)

2. **The Continuity of Operations plan (COOP)**
   This establishes how each county department may continue operations following a disaster.

3. **The Continuity of Government (COG) plan**
   This plan establishes how government is to be maintained following a disaster.

4. **The Emergency Support Function (ESF) plans**
   These plans outline the responsibilities of the primary and support agencies for each functional element of response. (Included in SRC CEMP)

5. **School Violence Prevention Plan**
   School District plan to deter school violence and outlines multi-agency response.

6. **Crowley County Firefighter's Association Communications Plan**
   This plan outlines interoperability, common terminology and ICS structure regarding communications.

7. **Crowley County Emergency Communications Center Standard Operating Guidelines**
   These documents provide guidelines that can be used by Emergency Communications Center staff for a wide variety of circumstances. (Sections 5, 6, and 10 of these SOG's have been attached to the CEMP as Appendix 6.)

PLAN REVIEWS

Crowley County Emergency Management conducts statutorily driven plan reviews, using ACHA criteria, for area hospitals and nursing homes in order to maintain a working knowledge of the processes and procedures developed by such entities for protecting their clients.

Crowley County Emergency Management is also asked to review response plans from partner agencies within the community to confirm compliance with the CC CEMP.

PREPAREDNESS ORGANIZATIONS

Preparedness Organizations are groups and forums that provide interagency coordination for domestic incident management activities in a non-emergency context. They can include all agencies with a role in incident management, for prevention, preparedness, response, or recovery activities. They represent a wide variety of committees, planning groups and other organizations that meet and coordinate to ensure a proper level of planning, training, equipping, and other preparedness requirements within a jurisdiction or area. Within Crowley County there are several Preparedness Organizations:

THE MULTI-AGENCY COORDINATION GROUP

The Multi-Agency Coordination (MAC) Group is composed of the Crowley County Commissioners, Administrator, Department and Division Heads, County staff, law enforcement representatives and state agency partners. The MAC Group holds regularly scheduled meetings to identify ways to provide better service during disaster and to determine where the emergency facilities should be.

THE CROWLEY COUNTY LOCAL MITIGATION STRATEGY TASK FORCE

Crowley County LMS Task Force meets to coordinate mitigation activities throughout Crowley County and the municipalities. They maintain a prioritized listing of approved mitigation efforts within the County. The Steering Committee meets periodically to modify the list to accommodate additions and other changes.

THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC)

The Crowley County LEPC holds quarterly meetings to discuss preparedness, response, training, and public awareness regarding hazardous materials within the County. The Committee also conducts and participates in exercises at least every two years.

CROWLEY COUNTY'S COMMUNITY EMERGENCY RESPONSE TEAM (CERT)

CERT is a program that trains citizens to be better prepared to respond to emergencies in their communities. It is not intended to supplant the local emergency response community; however, the CERT participants are an important component to it. If needed following a disaster, these community responders use their training as part of a neighborhood team to help others when professional responders are overwhelmed or are not immediately available. Their planning and training efforts help to mitigate the effects of disaster on the community.

SOUTHEAST EMERGENCY PREPAREDNESS ALLIANCE (SEEPA)

SEEPA meets at least twice a year as an organization. The goal of SEEPA is to provide assistance to local and regional response agency in planning and preapreadness activities. SEEPA is a 501(c)(3) covers the six county all-hazards region.

PREPAREDNESS ELEMENT

PUBLIC AWARENESS AND EDUCATION

The Crowley County Public Awareness Program is a year-round effort designed to raise awareness of the hazards faced in the community, and methods that can be taken to reduce risk. Emergency Management conducts periodic community workshops, briefings, and meetings designed to increase awareness and facilitate community preparedness. Citizens can also specifically request presentations on a variety of topics such as emergency preparedness, hazardous materials and sheltering-in-place, terrorism preparedness, etc. Other public awareness efforts include publicly noticed preparedness organization meetings, press releases, website postings, television interviews, and publications such as the Crowley County Disaster Guide. In addition, pamphlets from authorities such as FEMA, READY Colorado and the American Red Cross are also made available throughout the communities and public access buildings. Citizen Corps is another avenue of educating and preparing the public through the promotion of all of the Citizen Corps programs.

The Community Emergency Response Team (CERT) program is another method used to educate and raise public awareness. This program maintained by Crowley County educates citizens about the hazards faced in the community and provides training to them in life saving skills that can be used following a disaster. These citizen responders use their training as part of a neighborhood or workplace team to help others when professional responders are overwhelmed or not immediately available. CERT members provide immediate assistance to victims in their area, organize spontaneous volunteers, and collect disaster intelligence that will assist professional responders with prioritization and allocations of resources upon arrival. This program provides an exceptional public-citizen interface and encourages citizen participation in preparedness and response. *(See the CEMP Response element for more information on CERT)*

The Public Awareness Program intensifies immediately prior to or following a disaster, when dissemination of public information is even more critical. Crowley County disseminates information, via many of the previously stated methods, and uses frequent status reports, press briefings, and the use of a public information officer to convey information to the public, these are usually also posted on the EM and/or county web page. Information disseminated includes status reports on the progress of response and recovery, hazards and vulnerability information, evacuation routes/maps, mitigation opportunities, locations of Disaster Assistance Centers and other related information. Additionally, Crowley has access to programmable road signs that can help to communicate information to the public.

EXERCISES

Crowley County participates in and encourages the use of exercises as coordination and plan-validation tools for the preparedness actions already undertaken. Exercises also help to identify deficiencies in a non-threatening environment. Those agencies with responsibilities under the County's Comprehensive Emergency Management Plan, both government and private, participate in various levels of exercises. Other entities, including the LEPC, HAZMAT Teams, REACT, Other local Emergency Response agencies, or State entities may also participate depending on the scope of the exercise. Whenever possible, Crowley County seeks to also either include or participate in the exercises of private industries such as energy suppliers.

PREPAREDNESS ELEMENT

SCHEDULED EXERCISES

Crowley County participates in at least three exercises per year and may participate in additional exercises scheduled by other entities. All exercises are multi-agency, and two cross-jurisdictional boundaries and exercises should be used to evaluate and improve Crowley County's capabilities.

EVALUATION OF EXERCISES

Persons or individuals who have direct knowledge of the tasks under evaluation and are not "players" in the exercise may conduct the exercise evaluation. For all exercises funded by the Department of Homeland Security, evaluators are required to follow the analytical method outlined in the Homeland Security Exercise Evaluation Program (HSEEP).

IDENTIFICATION OF IMPROVEMENTS/DEFICIENCIES

A "hotwash" held immediately after each exercise, allows the participants the opportunity to discuss what went right and what needed improvement. This self-evaluation process, combined with the results of the formal evaluation, is compiled together, along with recommendations, to form the "After-Action Report". This report is shared among participating agencies and with Department Heads in order for key officials to make improvements, conduct additional training, or to revise plans. The After-Action Report is also forwarded to the State of Colorado Department of Emergency Management.

SUBSTITUTION OF REAL EVENTS

Crowley County reserves the right to substitute response to actual incidents for exercises in order to avoid overly extending the paid and volunteer staff. The Crowley County Division of Emergency Management makes such substitutions as needed and in accordance with any contractual obligations to exercise from the State of Colorado's Division of Emergency Management.

TRAINING PROGRAM

Advance training is the key to any successful preparedness program. It is the integral component, which allows agencies involved in each aspect of an operation to be fully aware of their roles, responsibilities, procedures, and authority prior to the onset of an actual event. Plans Section Chief is responsible for the planning, execution and evaluation of most planned exercises, to include MYTEP development.

Crowley County has an ongoing training program. Each County Department/Division conducts its own training, in accordance with the rules, statutes, and levels of training governing their particular function. Wherever possible, individuals from other agencies, municipalities and volunteer groups, are encouraged to participate in county training, such as CEMP, ICS, NIMS, and ESF training.

CC DEM also participates in all Crowley exercises to include POD exercises.

PREPAREDNESS ELEMENT

COORDINATION OF THE LOCAL TRAINING PROGRAM

Ultimately, the Director of Emergency Management is responsible for coordination of the local training program including training on the command structure and implementation of the County's emergency plans. In addition, the Director is responsible for training those individuals, including volunteer and municipal entities, assigned to the County Emergency Operations Center (EOC) in protocols and procedures necessary to function as a component of the Emergency Support Function (ESF) system. This training is offered annually and provides an opportunity for liaisons and county employees to become familiar with their roles in the EOC prior to an event.

The Crowley County Division of Emergency Management distributes educational materials and arranges for specialized emergency-related training, within the constraints of budget. The Division of Emergency Management also monitors training opportunities available through State of Colorado and maintains responsibility for authorizing personnel from county agencies to participate in State Training offerings. A list of State training opportunities is available on the State Division of Homeland Security and Emergency Management training website: https://www.colorado.gov/pacific/dhsem/training-and-exercise-program

REQUIRED TRAINING (INCLUDING LOCAL PERSONNEL STAFFING FUNDING PROGRAMS)

All staff with disaster-related duties must take the Incident Command System (ICS -100 series and 200 series) Introduction to NIMS (IS-700) and the Introduction to the NRP (IS-800). All personnel, whose positions are funded through the Emergency Management Performance Grant (EMPG) are required to take at a minimum the Professional Development Series-Independent Study courses, and the Advanced Professional Development Series through FEMA. All required training is to be reported to Regional Field Manager for the State of Colorado Division of Homeland Security and Emergency Management.

ADDITIONAL RECOMMENDED TRAINING REQUIREMENTS FOR LOCAL PERSONNEL

Figure 15:Recommended Training Requirements for Local Personnel

PREPAREDNESS:	RESPONSE	RECOVERY	MITIGATION
Prepare Colorado (Hazmat awareness)	CPR/First Aid	Emergency Support Function training	Emergency Support Function training
Emergency Support Function training	Emergency Support Function training	Recovery correspondence courses (FEMAs EMI)	Mitigation correspondence courses (FEMAs EMI)
Correspondence courses (FEMA's EMI)	HAZMAT Awareness		
CERT Training	Agency-specific training, i.e. Firefighter 1		

TRAINING PROGRAM FOR MITIGATION ACTIVITIES

Several entities conduct mitigation training locally. For instance, the Crowley County Building Department provides training to residents and contractors, by request, on methods to harden structures, select appropriate building sites, and flood-proof homes. The local Fire Departments conduct fire safety briefings, inspections, and smoke detector distribution/training to inform residents, reduce risk, and mitigate potentially hazardous situations.

Additionally, Crowley County's Community Emergency Response Team (CERT) program trains participants to respond to emergency situations in their communities. These actions help to mitigate the effects of disaster on the community. Crowley County also has a Teen CERT program currently at the Crowley County High School, which is instructed in partnership with the CSU Extension Office.

Other activities are often conducted by or through other entities, such as the Crowley County School District. Efforts include teaching First Aid and CPR to seventh graders in order to mitigate medical emergencies and presentations by Emergency Communications Center on how to call for help using 911.

TRAINING PROGRAM FOR EMERGENCY RESPONSE AND RECOVERY TEAMS

The training program for emergency response and recovery teams in Crowley County consists primarily of CERT and CPR training. Additionally, these teams participate in exercises as a component of their training program. CC DEM also conducts damage assessment training for county staff and volunteers.

MUTUAL AID AGREEMENTS

Another key element in the preparedness phase is the development of agreements for outside assistance. Crowley County is a signatory to the Statewide Mutual Aid Agreement. This agreement establishes procedures for counties to support and obtain reimbursement while operating in support of another county. The agreement is on file at the Division of Homeland Security and Emergency Management. Crowley County personnel, teams and resources can deploy to other locations under this agreement.

Additionally, a Regional Mutual Aid Agreement exists between Emergency Response agencies in Crowley County and other response agencies within the six county Southeast Colorado All-Hazards Region.

Requesting mutual aid during disaster situations is usually performed through IamResponding at the Regional level.

Requesting resources from outside the region or through the state is usually conducted through WebEOC.

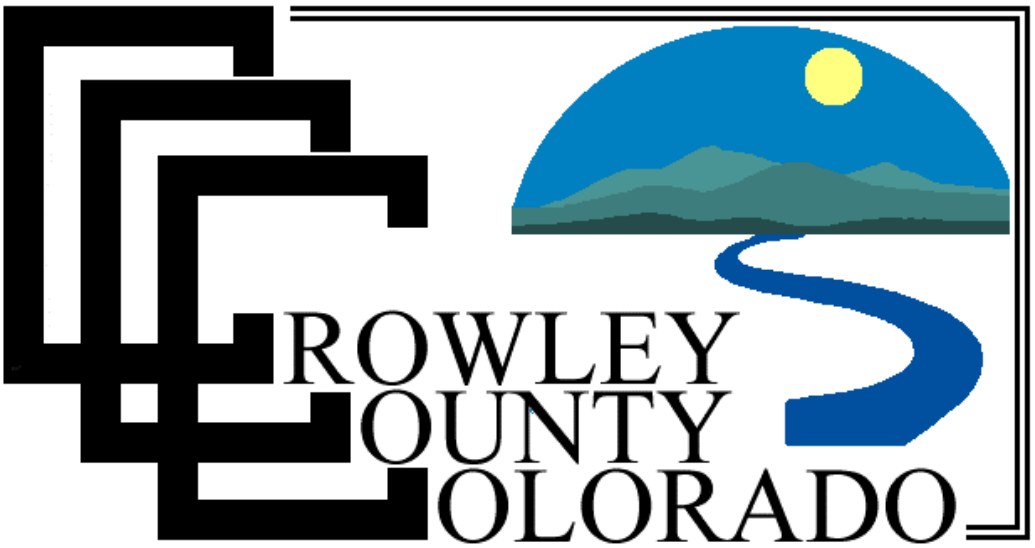
Other agreements exist for each Emergency Support Function, in which the lead agencies accept their responsibilities under the CEMP.

COOP activities are the responsibility of every staff member and are exercised annually. The Emergency Management Director is responsible for maintaining the COOP plan.

MAA/MOUs are also in place with neighboring counties to provide public safety and resource assistance when Crowley County is low on resources. Crowley County also reciprocates. This type of mutual aid request is handled through Emergency Management Director by telephone with the appropriate agency, advising what resource is needed, how much or what size, where it is needed, and when it is needed.

COMPREHENSIVE EMERGENCY MANAGEMENT PLAN (CEMP)

RESPONSE ELEMENT



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RESPONSE ELEMENT

TRANSITION FROM PREPAREDNESS TO RESPONSE

The transition from the preparedness phase to the response phase occurs upon notification that an incident has occurred. Where advanced warning of a threat is known, certain aspects of the response phase may actually begin during the preparedness phase, such as activation of emergency plans, disaster declarations, and certain inter-agency or multi-jurisdictional coordination efforts.

INTRODUCTION

This Response Element will provide the reader with an understanding of the Disaster Magnitude Classifications, planning assumptions for response, roles, and responsibilities under the plan, and key resources available for response operations. Please refer to the Concepts of Operations Section of the CEMP, pgs 57-96, for organizational structures and management of incidents for field and EOC operations.

As defined in the National Incident Management System, the response phase of emergency management includes:

1) Immediate actions to save lives, protect property, and meet basic human needs

2) The execution of emergency operations plans

3) The execution of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes

4) As indicated by the situation, response activities can also include such activities as:

   - Applying intelligence and other information to lessen the effects or consequences of an incident
   - Increased security operations
   - Continuing investigations into the nature and source of the threat
   - Ongoing public health and agricultural surveillance and testing processes
   - Immunizations, isolation, or quarantine
   - Specific law enforcement operations aimed at pre-empting, interdicting, or disrupting illegal activity
   - Apprehending actual perpetrators and bringing them to justice

RESPONSE PLANNING ASSUMPTIONS AND GUIDELINES

1. County and municipal governments have primary responsibility for response in emergency/disaster situations. They will commit all available resources to save lives, minimize injury to persons, and damage to property.

2. Local government (county and municipalities) departments/agencies have designated representatives of their organization to act as Emergency Coordinators. The Emergency Coordinators are responsible for assisting in developing their department/agency contingency plan and reporting to the Crowley County Emergency Operations Center, upon request and if appropriate, during emergencies.

3. As appropriate, state and federal departments/agencies, plus adjacent jurisdictions, will assist in emergencies/disasters response and recovery, if called upon.

4. The proper use of this plan may reduce or prevent the loss of lives and damage to property.

5. Many emergency/disaster situations can occur with little or no warning, allowing little time for preparedness measures.

6. Officials of all jurisdictions within Crowley County are aware of the possible occurrence of emergencies/disasters. They are also aware of their responsibilities under this plan and will fulfill their duties as needed.

7. Disaster relief operations are conducted by Crowley County and other agencies within the authority and responsibilities designated in Chapter 24, Colorado Revised Statutes.

8. Municipalities within the county may exercise independent direction and control of their own resources, outside resources assigned to the municipality by the County EOC, and resources secured through existing mutual aid agreements with other municipalities. Requests for state/federal government assistance will be directed to the County EOC.

9. The Mayors (or designee) of all incorporated communities are assigned the leadership role in their community in preparing for natural and manmade disasters. Each city is encouraged to adopt, through municipal planning and organization, in coordination with the County, their own means of controlling and handling the threats and effects of natural and technological disasters within their community. These plans may not be in conflict with county functions.

10. All municipality and county departments and agencies emergency preparedness planning and coordination will be compatible with the policies and procedures of this plan.

11. In support of this plan, the primary and support agencies of each emergency support function have developed emergency operations procedures.

12. It is assumed that many local emergency response personnel will experience casualties and damage to their homes and personal property and will themselves be victims of the disaster.

13. It is assumed that citizens and response organizations from other counties and states will send massive amounts of food, clothing, and other supplies in response to what they perceive to be Crowley County's needs.

14. It is assumed that competition among Crowley County citizens and communities for scarce resources will occur.

RESPONSE ELEMENT

GENERAL

Emergency operations span two separate but contiguous phases: emergency response and recovery. This concept of operations will focus on emergency response and measures to be taken for a smooth transition into intermediate and long-term recovery from a major or catastrophic emergency. The scope of these operational concepts and response actions will include:

1. Providing emergency notification and warning
2. Describing emergency mobilization procedures
3. Conducting rapid assessments of emergency impacts and immediate emergency resource needs
4. Delineating emergency decision-making processes
5. Describing types of emergency protective actions
6. Communicating information and instructions to the public
7. Requesting external assistance

MAGNITUDE CLASSIFICATION

Crowley County encounters many different emergencies on a daily basis that require response from at least one agency. The magnitude of each incident varies but is typically a function of its impact on people or property.

Not all incidents will be considered disasters however; a single incident or a series of high severity incidents can result in disaster. Among disasters, there are also distinctions, based on magnitude and involvement of outside assistance.

INCIDENTS	DISASTERS
Alpha	Minor
Bravo	Major
Charlie	Catastrophic
Delta	
Echo	

INCIDENT MAGNITUDE CLASSIFICATION

The following categories are used by Crowley County Emergency Management's dispatching system to classify emergencies by incident type and magnitude in order to prioritize response efforts. These incidents are typically handled within the local response capability; some may require notification to the State Warning Point and may or may not result in county EOC activation.

ALPHA

Category given to a non-life-threatening incident with relatively minor property damage that can be successfully handled within a single response entity; usually employs a single Incident Command structure

BRAVO

Category given to an incident when the nature of the incident is unknown, or is slightly above Alpha; Single or Unified command is generally utilized

CHARLIE

Category given to a high priority (potentially life-threatening/ increased potential for property damage) incident involving response from multiple agencies; Unified Command is generally utilized; only subtle differences exist between the Charlie classification and the higher Delta category

DELTA

Category given to a high priority (potentially life threatening/ increased potential for property damage) incident involving response from multiple agencies; Unified Command is generally utilized; Subtle differences exist between the Delta classification and the lower Charlie category and are necessary for resource prioritization

ECHO

Category given to the highest priority (imminently life threatening or imminent major property damage) incident involving response from multiple agencies; Unified Command is generally utilized

DISASTER MAGNITUDE CLASSIFICATION

Crowley County has designated three classification of disasters.

1. MINOR DISASTER

   Any disaster that is likely to be within the response capabilities of local government and results in only minimal need for State or Federal assistance.

2. MAJOR DISASTER

   Any disaster that will likely exceed local capabilities and require a broad range of State and Federal assistance

3. CATASTROPHIC DISASTER

   Any disaster that will require massive State and Federal assistance, including immediate military involvement

ORDER OF RESPONSE PRIORITIES

For all incidents, regardless of cause, response actions in Crowley County will focus on those actions that can be taken to save lives, sustain life, and protect infrastructure.

ORDER OF RESPONSE PRIORITIES:

LIFE SAVING

LIFE SUSTAINING

INFRASTRUCTURE

DEPARTMENTAL/AGENCY RESPONSIBILITIES

All departments/agencies during the response phase of an incident are responsible for:

- Responding to incidents when dispatched, and providing status updates to emergency management
- Adhering to the NIMS-Compliant Incident Command Structure for Field Operations
- Adhering to the principles and management concepts within the National Incident Management System
- Activating any internal emergency plans and notifying the EOC when such plans are activated
- Reviewing security procedures and implementing enhancements as needed based on criminal or terrorist threats or incidents
- Sending a representative to the EOC within 1 hour when requested by Emergency Management, to coordinate responsibilities under the ESF plan
- Providing regular status reports to the EOC on department/agency resources, activities, and emergency conditions about which the department/agency has information
- In order to adequately address the needs of the community, it is imperative that those having identified a need relay that information to the Crowley County Director Emergency Management or the Emergency Operations Center (EOC), if activated
- Coordinating with the EOC in establishing priorities for restoring service after a power outage
- Coordinating through the ESF system to request resources and provide information
- Coordinating all public information activities with the County's Public Information Officer and the Information and Planning Section at the EOC
- Keeping accurate and complete records of costs of responding to the emergency, such as personnel costs (regular and overtime), equipment costs, cost of supplies, and costs of services; these records will be used for reporting the Board of County Commissioners and may be required to apply for Federal assistance
- Maintaining lists and descriptions during the emergency of facilities and equipment damaged by the disaster
- Advising the Division of Emergency Management when the Department/Agency cannot carry out its roles or responsibilities described in this plan or its annexes

RESPONSE ELEMENT

KEY STEPS IN LOCAL REPONSE:

1) Emergency Communications Center, serving as the county's 24-Hr Warning Point, dispatches all appropriate local response organizations according to established dispatching procedures.

2) Local response organizations utilizing Incident Command System (ICS) respond to calls as dispatched.

3) Emergency Management Director evaluates situation based on input from response agencies to determine if, or what, additional county actions may be necessary (potential EOC activation, recommendation for Local State of Emergency).

4) If the Emergency Management Director determines no additional county actions are necessary, county Emergency Management staff may simply provide advice/ technical support /existing resources to Incident Commander, if requested.

5) If additional Emergency Management action is necessary to support the Incident Command Post, the Emergency Management Director or designee:

- Ensures operational readiness of the Emergency Operations Center
- Determines if EOC should be activated and Level of Activation (Monitoring, Partial, Full)
- Notifies County Administrator of situation and intended action
- Activates EOC, if so determined
- Notifies State of Colorado Division of Homeland Security and Emergency Management of EOC activation
- Initiates any public protective measures in accordance with the Incident Commander
- Determines whether or not to recommend Local State of Emergency to Board of County Commissioners or Mayors
- Activates the most appropriate ESF agencies based on level of activation to provide the means for supporting:

Lifesaving measures such as search and rescue
Transportation resources for evacuation and response
Emergency information dissemination
Emergency Responder Communications
Sheltering and feeding of evacuees
Evaluation of infrastructure needs and emergency debris clearing of essential roads
Firefighting efforts
Assessment of personal and property losses
Logistical support to the county facilities/departments
Health and medical resources needed
Field response for hazardous materials releases
Identification of food and water for eventual distribution
Allocation and restoration of water, sewer, electrical power, phone service and fuel supplies
Military resources, as appropriate
Information needed for up-to-date situation analysis
Unmet needs and delivery of voluntary goods /services
Law enforcement operations
Local resources for Animal Issues
Needs of critical facilities
Documentation needed for reimbursement

6) Coordinate local assets and request assistance if needed through the Regional Field Manager

7) Coordinate municipalities' requests for assistance through the EOC

8) Disseminate ongoing public information

9) Prepare for transition to short-term recovery, to include environmental protection, restoration of essential utilities, and restoration of essential functions as listed above.

DETERMINATION OF EXISTING/IMPENDING DISASTER

Many emergencies occur on a daily basis that requires response from agencies, such as fire, EMS, and law enforcement. Most are handled within the existing capability of the response agencies and are not considered "Disasters". These emergencies do not necessarily require extraordinary support from Crowley County Emergency Management.

Through monitoring and established dispatch notification procedures utilized by Emergency Communications Center (ECC), the Public Safety Director is notified of any unusual emergencies or of those that may affect a significant number of people. This is based on the information received from field response agencies in the course of normal duties.

It is the responsibility of the Emergency Managmeent Director to grasp the magnitude of an incident, recognize that possible disaster conditions exist and initiate action.

LOCAL "STATE OF EMERGENCY" (LSE)

he Board of County Commissioners is empowered to issue proclamations or resolutions with the force of law. This includes a Local State of Emergency (LSE).

A Local State of Emergency may be declared whenever normal community functions are severely disrupted, Crowley County Government requires outside assistance, or as deemed necessary by the Crowley County Emergency Management Director.

The Local State of Emergency allows the County to forego certain financial processes necessary to expedite urgently needed resources, and its issuance increases the likelihood of future reimbursement of expenses. It is also necessary for requesting outside assistance through the State of Colorado.

The Emergency Management Director, or designee, notifies the Crowley County Administrator who seeks to call a quorum of the Board of County Commissioners. If a quorum is not possible, succession falls to the Chairman, any available Commissioner, or absent a Commissioner, the County Administrator, who may decide to issue a Local State of Emergency.

LOCAL "STATE OF EMERGENCY" (LSE) (Cont)

The Local State of Emergency is signed and remains as part of the incident documentation kept on file at Crowley County Emergency Management.

Upon issuance of a Local State of Emergency, Crowley County Emergency Management notifies the State Warning Point that a Local State of Emergency is in effect.

The Local State of Emergency **is valid for seven days, at which point it must be extended for an additional seven days, and cannot exceed 60 days total,** without specific approval from the Governor of the State of Colorado.

The Governor of the State of Colorado may also declare a state of emergency on behalf of Crowley County, in the absence of a county declaration.

A Sample Copy of the Local State of Emergency is included in the Forms Section of the CEMP.

DIRECTION AND CONTROL FOR RESPONSE

FIELD OPERATIONS

The on-scene commander, or Incident Commander, in an emergency response is a local official, usually an emergency services officer from police, fire, or Emergency Medical Service (EMS). This individual, or individuals in the case of Unified Command, maintains direction and control of field operations. (See Concept of Operations for Field Operations, pp. 68-75)

EOC OPERATIONS

If the emergency warrants a disaster response resulting in EOC activation, the Emergency Management Director is responsible for the overall coordination of disaster relief activities and efforts on behalf of Crowley County, and if warranted may participate in a Unified Command.

THE CROWLEY COUNTY EMERGENCY OPERATIONS CENTER (EOC)

Crowley County's EOC is located at 611 E. 9th Street, Ordway, CO 81063. It is collocated with the Crowley County Ambulance service, Ordway Fire Department and the Crowley County Division of Emergency Management. In the event the EOC is threatened, an alternate EOC is activated.

The county's Emergency Operations Center (EOC) serves as a support element to the Incident Command structure in the field. It is a location where multiple levels of government, agencies, and organizations coordinate decisions, resources, and public information on a strategic level. It provides the capability for the leadership to direct and control operations from a centralized facility in the event of an emergency.

The Crowley County Division of Emergency Management is responsible for the outfitting and maintenance of the county's Emergency Operations Center (EOC). The Emergency Management Director, or designee, the County Administrator, and the Crowley Board of County Commissioners, may activate this facility based on the needs of the incident.

The Crowley County Policy Group, composed of the Chairman of the BOCC, or designee, the County Administrator, and the Emergency Management Director, serves as an advisory structure for the Crowley County Emergency Operations Center and may interface with or participate in Unified Command.

The area command or other Incident Command Structures may or may not collocate in the EOC.

The Crowley County Emergency Operations Manager (EO Manager) operates the EOC and facilitates the overall coordinated effort, however the operation of the EOC does not eliminate the tactical level coordination of manpower and resources within each individual agency.

The EOC is a support element to the Incident Command structure. The EOC serves as a central coordination point to support the Incident Command Post, which directs the on-scene operations. To do this, liaisons from Municipal, County, State, and Response/Relief agencies congregate in a concerted effort to monitor the situation, exchange information about response/recovery actions taken/needed, and support resource requests from the field.

Upon activation of the EOC, these liaisons, are organized into what is known as the Emergency Support Function System (ESF) and are tasked to find and secure resources as requested by the Incident Commander that pertain to their particular function (Firefighting, Energy, Food and Water, etc). There are eighteen functional groupings, each with a different responsible agency. Calls in the EOC are directed to the most relevant ESF to be addressed. The Emergency Support Function (ESF) System is discussed in more detail in the CEMP Concept of Operations Section and again in the ESF plans attached as an appendix to this CEMP.

FIVE FUNCTIONS OF THE EOC:

1. BROAD DIRECTION AND CONTROL (not Tactical)
2. SITUATION AND ASSESSMENT
3. COORDINATION
4. PRIORITY ESTABLISHMENT
5. RESOURCE MANAGEMENT

DETERMINATION TO ACTIVATE THE EOC

The Crowley County Director of Emergency Management, or designee, will make the determination as to whether or not a situation warrants activation of the Emergency Operations Center facility. This is generally based on whether or not incident support can be provided within the current capacity in the course of daily duties.

If the determination is made, that the EOC should be activated, the Emergency Management Director, or designee, will subsequently determine the appropriate level of activation necessary (Monitoring, Partial, Full), depending on the size, scale, scope, and magnitude of the incident.

LEVELS OF EOC ACTIVATION

For consistency, Crowley County EOC Levels of Activation are identical to those used in the State of Colorado's State EOC.

LEVELS OF EOC ACTIVATION

LEVEL III – MONITORING PHASE

LEVEL II - PARTIAL ACTIVATION

LEVEL I - FULL-SCALE ACTIVATION

LEVEL III: MONITORING PHASE

The point at which the Emergency Operations Center enters the Level III monitoring stage is defined as:

---the point at which Crowley County Emergency Communications Center (ECC) staff notifies the Director of Emergency Management, or designee, of an actual or potentially threatening situation which subsequently results in the Director, or designee, monitoring the progress of the situation or following up with the Incident Commander

The Crowley County Director of Emergency Management, or designee, will make the determination as to whether or not a situation warrants activation of the Emergency Operations Center facility.

Level III (Monitoring) activation does not necessarily require opening of the EOC facility as ongoing actions to monitor and follow-up may be simply conducted via phone or radio communications.

The Emergency Operations Manager determines appropriate staffing needs during the Level III activation.

At this stage of Activation, no notifications are necessary other than to those agencies dispatched by Emergency Communications Center (ECC) that would normally respond as part of daily duties. However, the Emergency Management Director, or designee, may notify the County Administrator and board of County Commissioners that a situation is being closely monitored.

No official notification to the State Division of Emergency Management (State DEM) is required at this point.

LEVEL II: PARTIAL ACTIVATION

This level involves limited agency activation and is used primarily for situations requiring coordination from only a selection of Emergency Support Functions. This level is typically selected based on the anticipated number of functional areas required to support the particular incident or as a downgraded condition from full-scale EOC activation.

The Director of Emergency Management or designee initiates partial activation of the EOC.

At this stage of activation, notification of Partial EOC Activation is given to all Emergency Support Function primary agencies. Though all primary agencies are notified, only those necessary to support the incident through the EOC are activated.

The Emergency Management Director, or designee, will notify the Board of County Commissioners and County Administrator that the EOC has been partially activated and notification will be provided to the Regional Field Manager for the Colorado Division of Homeland Security and Emergency Management.

The EOC facility is subsequently opened, with assistance from the Crowley County Policy Group and is staffed by County personnel and selected Emergency Support Function (ESF) representatives to facilitate the rapid deployment of resources necessary to support the Incident Commander or Unified Command.

LEVEL I: FULL-SCALE ACTIVATION

This activation level is typically used for those incidents, such as community-wide threats, requiring high levels of resource support across a broad range of functional areas.

The Director of Emergency Management or designee initiates full activation of the EOC.

At this stage of activation, notification of full-scale activation is given to all primary and support agencies under the Emergency Support Function system as listed in the Crowley County CEMP.

The Emergency Management Director, or designee, will notify the County Administrator that the EOC has been fully activated and notification will be provided to the Board of County Commissioners.

Notification to the Regional Field Manager for the Colorado Division of Homeland Security and Emergency Management is required.

The EOC facility is subsequently opened, with assistance from the Crowley County Policy Group. The facility is staffed by County personnel and Emergency Support Function (ESF) representatives, typically 24 hours a day in order to support the Incident Commander or Unified Command and remains open until the EOC is either downgraded to a lesser activation level or closed.

EMERGENCY SUPPORT FUNCTIONS (ESF)

The EOC will be organized around the Emergency Support Function (ESF) system. Emergency Support Functions represent functional groupings of types of assistance that jurisdictions are likely to need, such as firefighting, energy, public information, etc. There are 18 separate functions within the Crowley County ESF system, numbered appropriately ESF 1-18. Each ESF has a corresponding ESF Desk at the EOC, manned by either county staff or liaisons from the primary agency responsible for that particular ESF. Requests for assistance will be tasked to the corresponding ESF for completion.

Each Emergency Support Function (ESF) has a Primary Agency that is responsible for supporting field operations, information, and delivery of assistance related to its ESF function. An agency may be designated as primary for an ESF based on a statutory responsibility to perform that function, necessary expertise or because the agency's mission is similar to the mission of the particular ESF. The primary agency for each ESF may be assisted by numerous "Support" agencies. *(See ESF Chart for Primary and Support Agencies for each ESF, pg 84-86)*

Agencies that assume responsibility as Primary Agencies for each ESF are required to formally acknowledge that responsibility which is subsequently kept on file with the Division of Emergency Management as part of the "ESF plan". (See ESF Plans attached in Appendix 7)

Both the State of Colorado and FEMA use an emergency support function system for their operations. There are slight variations among each, particularly in the numbers of categories or the naming of each category. For ease of translation, this CEMP includes a cross-reference chart to easily compare each set of ESF's used. *(See ESF Listing and ESF Comparison Chart in the Concepts of Operations Section, pg 83)*

EMERGENCY OPERATIONS CENTER–ACTIONS

1. Notifies all county agencies to prepare to support inter-county mutual aid agreements
2. Coordinates each aspect of the incident through the ESF structure (See ESF Function List, pg 82)
3. Receives information and requests for assistance from the Incident Commander and assigns to the appropriate Emergency Support Function (ESF)
4. Coordinates Public Information
5. Coordinates the provision of resources
6. Submits resource requests to the State EOC through WebEOC, once local resources are exhausted
7. Coordinates the mechanics of evacuation
8. Coordinates the provisions for sheltering operations
9. Coordinates requests for assistance with the State on behalf of the Municipalities
10. Coordinates with the Chamber of Commerce on Business activities
11. Coordinates with Municipalities to issue Situation Reports

WARNING AND NOTIFICATION TO RESPONSE PERSONNEL (EMERGENCY MOBILIZATION)

Crowley County may receive initial warning of an emergency, disaster, or impending disaster from calls to the E-911 system, the National Weather Service, the State Warning Point, the FEMA National Warning Center, county or municipal government, interested citizenry, or the news media.

Upon receipt of a call indicating an emergency has occurred, Crowley County Emergency Management staff dispatch appropriate response personnel using dispatching protocols established for each agency.

Upon notification of a disaster or impending disaster, the Emergency Management Director is responsible for disseminating warnings to the following:

1. County Administrator/Deputy Administrator
2. Each County Commissioner
3. Mayors of each municipality
4. Constitutional Officers (Sheriff, Clerk & Recorder, Assessor, Treasurer)
5. County Department Directors
6. ESF Primary Agencies
7. Crowley County School District Superintendent

The State EOC must be notified when the EOC is activated or when incidents occur which may require a state response.

WARNING AND NOTIFICATION SYSTEMS

There are specific resources available to Crowley County to facilitate warning and communication with emergency responders. These include the following:

Crowley County Emergency Communications Center (ECC):

Crowley County Emergency Communications Center is the 24-Hour Warning Point. It is staffed continually and provides communications support for the County. If a determination is made that a disaster or emergency has occurred or is imminent, the Emergency Communications Center staff will notify key emergency management personnel and response entities via 700/800 P25 trunked radio system and IamResponding notifications.

Crowley County Emergency Management

Maintains the capability to notify agencies and/or receive warnings through phone, text messages, push notifications, two-way radios and group or individual email and fax.

Communications Blackout Contingency

Crowley County Emergency Management is located at 611 E. 9th Street, Ordway, CO 81063

In the event of a sustained communications blackout that results in the inability of a response agency to receive calls for emergency assistance, such as from Crowley County Emergency Communications Center, or its alternate, the impacted response agencies are to automatically send liaison with any necessary job aids to Crowley County Emergency Management within 30 minutes of recognizing that an unresolved communications blackout exists for their agency. This would include REACT operators, which would be dispatched to specific locations and the EOC.

In the event of a sustained, countywide communications blackout in combination with the occurrence of a hazard (i.e. explosion, terrorist incident, etc,) all ESF Leads, county department heads, municipal liaisons, etc are to muster at Crowley Emergency Management within 30 minutes of recognition of the situation.

This contingency should be enacted without prompting, as it is assumed that there will be no communications available to notify liaisons to report to Crowley County Emergency Management.

If an incident directly impacts the physical structure of the building which houses Crowley County Emergency Management, all persons as stated, not involved in immediate life safety issues at the impacted site should report to the alternate EOC location to coordinate efforts.

Upon arrival, representatives will coordinate efforts, determine status, and initiate alternative means for bridging the communications gap and for coordination of response. The MAC Group may be able to assist in bringing in portable communications systems.

Alternate communications may need to be established with the following entities:

1. Emergency responders
2. Responders and the Incident Commander (IC)
3. The IC and the Emergency Operations Center
4. The EOC and outside response organizations
5. The EOC and neighboring businesses
6. The EOC and employees' families
7. The EOC and media

Potential options for communications among first responders, Incident Command, and the Emergency Operations Center include the use of the Emergency Deployable Interoperability Communications System (EDICs) packages or other portable systems available through Mutual Aid, satellite phones, walkie-talkie communication devices (for teams in close proximity), text only messages (If available), amateur radio operators, live or delayed video, Incident Action Plan, human couriers, liaisons, status boards, hand signals, flags, etc. There is also a back up radio system in place that is not telephone line driven.

Emergency Management maintains a Communications Blackout Resource List, which is a separate document that complements this Communications Blackout Contingency.

For public information, it is extremely unlikely that all FM stations will be disabled, however those with generators, (i.e. KBLJ, KSEC, KLMR, KVAY) would become the primary source for public information.

Communications with the public, media, and/or businesses could also be accomplished using portable roadway signs, disaster newsletters distributed to POD locations, signage, flyers, word of mouth, human couriers, media (if operational), bull horns, roping/barricades/tape, etc.

In order to communicate needs or requests for assistance to the State Emergency Operations Center, Crowley County may be able to relay needs and situation reports through a neighboring county, if not also affected, for transmission to SEOC. Other possibilities include satellite telephone, amateur radio /Ham operators, or in wide-scale disaster- through media outlets. Human couriers can also be used among response entities, counties, or the State.

Communications failure will increase the importance of gaining accurate, timely situational awareness-such as the name of the person in charge of each incident site, resources requested or committed, key decisions made, etc.

Adequate copies of all relevant contact lists, SOG's, CEMP, Press Release forms, Incident Command forms, SMAA, maps, etc., critical to the operation should be readily available in paper format in case the communications blackout impacts computer-based storage, or occurs in combination with failure of power/backup power systems.

PUBLIC WARNING SYSTEMS

When disasters occur, emergency management uses many different means to communicate warnings and instructions to the public through any combination of the following:

1. Commercial radio/television broadcasts
2. Automated Telephone notification system
3. Cable TV Interrupt
4. Weather radio, through National Weather Service
5. Public Warning Statements
6. Emergency Alert System

Commercial radio/television broadcasts

Crowley County communicates emergency information to residents primarily through local radio and television outlets. Depending on the situation, press releases, interviews, or regularly scheduled press briefings may be indicated throughout the duration of the disaster.

Automated Telephone Notification System (CodeRed):

In time sensitive situations, the automated telephone notification system operated by Crowley County Emergency Communications Center may be utilized to reach a population with critical life-saving information. This system allows Emergency Management staff to record a message and disseminate the warning to the home telephone numbers of residents throughout Crowley County. The operator can designate which areas within Crowley County to call both cellular and landlines, text, and email.

PUBLIC WARNING SYSTEMS (Cont)

Cable TV Interrupt

Crowley County through agreement with Federal IPAWS has the capability to interrupt Cable and Satellite television with emergency information. This is used primarily to disseminate critical warnings and life-saving public protective actions.

Limitation: This capability only extends to local channels for those who utilize satellite television.

Weather Radio

Weather radio is a means of communicating emergency information to the public. The National Weather Service in Pueblo facilitates the activation of this system at the request of Crowley County.

Public Warning Statements

Public Warnings Statements may be issued from the following authorized individuals: Any member of the Board of County Commissioners, the County Administrator, Sheriff, Public Information Officer or Authorized Agency representatives.

Emergency Alert System (EAS):

The Emergency Alert System (EAS) provides the President with emergency communications with the American people during grave national emergencies. During a national security emergency, the Emergency Alert System is activated through both television and radio. It also provides for localized announcements of pending or actual emergencies and is activated in Crowley County via Local Radio Station agreement.

PUBLIC PROTECTIVE ACTIONS

The primary public protective actions include the following:

Shelter-In-Place

Primarily used for Hazardous materials incidents and radiological emergencies to isolate a room from contaminated air outside.

Steps to be issued to public:

1. Go Inside
2. Shut Doors/Windows
3. Turn off AC/Heat
4. Tape windows/doors of interior room shut with plastic and duct tape (Not for long-term radiological events)
5. Tune into Local Media for further instructions

Shelter-In-Place All Clear

Every shelter-in-place issued must have a corresponding "All-Clear" message provided to the public when conditions warrant, the Incident Commander, usually from the Fire Service, advises when the situation has been resolved and the "All Clear" message can be given.

Evacuations-General

One key life-saving protective measure available for use by Crowley County is the ability to order evacuations of an impacted area in conjunction with or in advance of a pending threat.

Evacuations can be local or can encompass areas beyond the county's borders. In each, Crowley County's responsibilities remain the same. However, in the event of a multi-county, regional or interregional evacuation, evacuations will be coordinated by the Governor according to procedures developed at the State level.

Please refer to the Evacuation Section of the CEMP on the next page for more information, including hazard specific evacuations for threats such as hurricanes.

Public Information

If circumstances warrant, a public information release, separate from the evacuation or warning instructions, should be considered. ESF 14 or the senior official in charge can provide a Public Announcements to include information about the Citizen Information Lines, other applicable numbers, the location of the Special Needs and general population shelters, as well as any actions to be taken by the public.

LOCATIONS OF SHELTERS

Below are the locations of the main shelters used in Crowley County, additional Shelters may also be available. *For more information on sheltering, please refer to the Response Element (Shelter Section), pg 30.*

CROWLEY COUNTY SHELTERS
River of Life Fellowship
208 Colorado Street
Ordway, CO 81063

Ordway Jr/Sr High School
602 Main Street
Ordway, CO 81063

Community Baptist Church
319 First Street
Ordway, CO 81063

Sugar City
Town Hall
205 Colorado Ave
Sugar City, CO 81076

PET FRIENDLY SHELTER

SPECIAL NEEDS SHELTER

EVACUATION

GENERAL

Evacuation is the orderly removal of people from an area threatened by disaster to a place of safety. Evacuation may be necessary for several reasons, such as flooding, hazardous material incident, fire, or other disaster.

Evacuations may be necessary to protect public safety, to secure perimeters or to contain potentially hazardous situations. Evacuations may involve specific areas within Crowley County or may involve the entire county. Additionally, some evacuations may be regional in scope and involve coordination with the State of Colorado and/or other counties.

PRIMARY RESPONSIBLE AGENCY

Crowley County Division of Emergency Management is the primary agency with overall responsibility for coordinating the evacuation or shelter in place process in Crowley County and for the issuance of evacuation orders for community-wide events such as hurricanes and tropical storms.

However, responsibility for issuing evacuation or shelter in place orders to protect public safety as a result of a localized incident, such as a threatening wildland fire, hazardous materials incident, hostage situation, bomb threat, etc., is the responsibility of the Incident Commander for that particular scene.

In that situation, Crowley County Division of Emergency Management will take a support role, facilitating emergency notifications to public and government entities through the Emergency Communications Center, directing the activation of shelters, if necessary, and communicating with the State Warning Point.

DETERMINATION OF TYPE OF EVACUATION

The Incident Commander, Crowley County Emergency Management Director, or other authorized government official will decide on the type and level of evacuation or shelter needed, based on the situation. Consideration must be given to evacuation routes, affected areas, evacuation clearance times, time of day, special populations, etc.

EVACUATION ORDERS

Evacuation Orders will be issued based on the hazard, amount of time available, and the length of time for anticipated completion of the evacuation. (See Evacuation Order Template in Appendix 5: Forms, pg 6)

The Governor or the Governor's Appointed Representative (GAR) may also issue an evacuation order in support of a local evacuation order. All state assistance and support will be coordinated from the State Emergency Operations Center (SEOC) under the direction and control of the State Emergency Management Field Manager.

TWO TYPES OF EVACUATIONS

MANDATORY EVACUATION

A mandatory evacuation is an organized, official evacuation, ordering residents to leave an area of danger. Crowley County Emergency Management coordinates shelter openings, if necessary, in conjunction with mandatory evacuations. Additionally, traffic control measures are implemented in order to expedite and direct traffic flow.

RECOMMENDED EVACUATION

A recommended evacuation is a requested evacuation, not mandatory, because an impending disaster may occur. The residents in the affected area are encouraged to seek refuge on their own initiative and independently obtain safe area and accommodations.

EVACUATION CESSATION

The evacuations facilitated by emergency personnel will be stopped either when the hazard is abated or when conditions become unsafe for emergency responders.

LOCAL AGENCY EVACUATION ROLES AND RESPONSIBILITIES

Crowley County Emergency Management

1. Issues Evacuation Orders for community-wide threats (non-law enforcement in nature); NOTE: In the case of localized incidents requiring evacuation, the Incident Commander will make the evacuation determination
2. Initiates public and agency notification (including neighboring counties) through Emergency Communications Center, telephone notification system, press releases or other means
3. Notifies State Warning Point, Colorado State Patrol, Department of Transportation, if necessary
4. Directs opening of shelters, if necessary
5. Requests Mutual Aid or State Assistance, if necessary
6. Crowley County Division of Emergency Management, will notify those individuals on the special needs roster located in the affected area and ensure transportation requirements are met
7. Activates Citizen Information Line for all evacuations

Crowley County Fire Departments

1. Provides manpower for evacuation notification, if needed
2. Provides manpower for special needs evacuation
3. Communicates with Crowley County Emergency Management regarding status and additional resource needs
4. May serve as Incident Commander on scene, and subsequently issue evacuation orders for incident-specific threats (hazardous materials incidents, pipeline rupture, fires, etc)
5. If initiating evacuation, also initiates public and agency notification (including neighboring counties, the State and possibly Alabama) through Emergency Communications Center, telephone notification system, press releases or other means
6. If initiating evacuation, also communicates with Crowley County Emergency Management regarding sheltering needs, recommendations and additional support needed

Law Enforcement Agencies (Crowley County Sheriff's Office, Parks & Wildlife, State Patrol)

Augments County's warning and communications capability during evacuations

1. Monitors traffic and provides traffic control, protection and security for evacuation process on roads
2. Provides manpower for evacuation notifications, as needed
3. May assist Colorado State Patrol in monitoring and directing the movement of traffic on state highways within their geographical boundaries if the situation warrants
4. Integrate special emergency functions into normal functions of their respective departments
5. Communicates with Crowley County Emergency Management or ESF 16 at the EOC, if activated, regarding status and additional resource needs
6. May serve as Incident Commander on scene, and subsequently issue evacuation orders for incident-specific threats of a law enforcement nature (bombings, law terrorism, riots, etc)
7. If initiating evacuation, also initiates public and agency notification (including neighboring counties, and the State through Emergency Communications Center, telephone notification system, press releases or other means
8. If initiating evacuation, also coordinates with Crowley County Emergency Management regarding sheltering needs

Note: For large-scale evacuations, there is currently no provision for reverse-laning local thoroughfares. This is due to the large amount of manpower that would be required to block every side road and driveway necessary to prevent wrong turns and subsequent accidents from blocking the evacuation route.

EVACUATION

American Red Cross, Salvation Army, Etc -Mass Care (ESF 6)

1. American Red Cross in coordination with the Salvation Army and other agencies as appropriate will provide shelter operations and food for evacuees

Crowley County Road and Bridge

1. Provides services necessary to keep routes open for evacuation

Crowley County School District

1. Provides school buses and drivers to assist in the evacuation effort (Refer to Appendix 7 -ESF 1 Transportation Plan)

Otero/Crowley County Health Department

1. Provides special needs sheltering operations, if necessary

Crowley County Ambulance

1. Provides emergency medical care/transportation, associated with evacuations

Hospitals (Parkview Medical Center, St. Mary Corwin Medical Center, Arkansas Valley Regional Medical Center AVRMC)

1. Provides emergency medical care associated with evacuations

Colorado Department of Transportation

1. Initiates traffic monitoring (video counters, etc) and provides support for evacuations

2. May provide escorts for supplies/resources

Colorado State Patrol

1. Monitoring and patrolling state highways and regulating, controlling and directing the movement of traffic. Due to limited CSP staffing, they may be assisted by local law enforcement such as the Crowley County Sheriff's Office.

2. Assisting other constituted law enforcement agencies in the quelling of mobs and riots, the guarding of prisoners and the policing of disaster areas.

3. Investigating traffic crashes on state highways

EVACUATION

KEY LOCAL STEPS IN EVACUATION PROCESS
Note*:* *For immediate time-sensitive evacuation orders (such as hazardous materials releases) some steps may be conducted out of order with notification to the public being one of the first considerations.*
Determine the "effective" date and time of evacuation order
Determine evacuation type and affected areas
Notify local and/or state law enforcement for traffic support and security
Notify appropriate road department for local or state roads for coordination and support (including reverse-laning decisions)
Determine notification needs for Special Needs Registry and transportation coordination
Notify State of Colorado and neighboring counties to prepare for influx of people
Evacuation Orders signed by the Chairman of the Board of County Commissioners, or successor *(See Evacuation Template in "FORMS" Section of CEMP, Appendix 5, pg 6)*
Enact any necessary local Mutual Aid Agreements
Coordinate resources and actions necessary to deal with directing evacuees caught on evacuation routes to safer surroundings
Issue an evacuation notice to the public
Activate citizen information line for all evacuations
Activate shelters, if required
Enact MOU with Crowley County School District for provision of school buses and drivers **Note**: *Crowley County is not dependent on mass transit systems; however, CC DEM has made arrangements with the SRC School District for school bus transportation, if necessary*. (Appendix 7, ESF 1 Plan)
Request state assistance, if necessary

SUPPORTING EVACUATIONS FROM OTHER COUNTIES	
The Governor of Colorado	Will direct all major evacuations through the State Emergency Operations Center If Crowley County opens a host shelter in support of evacuations elsewhere, the Governor will include Crowley County in any Governor's Executive Order declaring a State of Emergency and in all requests for Federal Emergency Declaration or Major Presidential Disaster Declaration Assistance
The Field incident Coordinating Officer	Will direct the Crowley County Emergency Operations Center to support major evacuations elsewhere, when directed to do so by the State Filed Incident Coordinator Will direct Crowley County (and others) to open and operate host shelters to
Crowley County Emergency Management (and other counties)	Will direct American Red Cross to open and operate host shelters as directed by the State Coordinating Officer to support evacuations elsewhere In opening a host shelter, Crowley County will be covered under the Governor's Executive Order declaring a State of Emergency and will be included in all requests for Federal Emergency Declaration or Major Presidential Disaster Declaration Assistance Will coordinate most appropriate actions normally taken during a local evacuation to meet needs of situation, with relevant local organizations, to support evacuations into or through Crowley County

HAZARD-SPECIFIC EVACUATIONS

FLOODING

Flooding in the county can result from Areal Flooding, overflowing of rivers and creeks or ponding. Any time a substantial amount of rainfall occurs locally, the river and creek conditions will be closely monitored.

Notification of evacuation will be given to residences that may be affected by rising waters.

FIRES

When structures are threatened by fire, the situation is monitored by selected agencies in support of the Incident Commander. These agencies will respond if needed to support local evacuation. The Incident Commander will implement the decision to evacuate in coordination with other agencies involved

.HAZARDOUS MATERIALS INCIDENT

Whenever a hazardous materials incident occurs, regardless of size, it will be monitored closely. The Incident Commander will make the determination and direct the evacuation, if required. The Crowley County Hazardous Materials Plan, most current hazards analysis, and the Emergency Response Guide (ERG) will be used in evacuation decisions for incidents affecting Crowley County.

HAZMAT incidents and subsequent evacuation actions can occur anywhere, but specifically near Highway 71, and the miles of railways.

Additionally, companies such as Co-ops, Farm and Ag Stores present continuous risks for hazardous materials incidents, as do water treatment plants, and sewage treatment plants.

BOMB THREAT

Evacuations may be used for bomb threats and will be determined by the jurisdictions' law enforcement agency.

SHELTERS

INTRODUCTION

Certain situations may result in the need to provide emergency shelter or shelter-in-place for citizens. The provision for such emergency sheltering is a local community responsibility. Therefore, Crowley County Emergency Management coordinates closely with local entities and volunteer organizations to address this need.

The Emergency Support Function (ESF) Plans for Mass Care (ESF 6), and Health and Medical Services (ESF 8) contain additional information regarding the roles and responsibilities of the primary and support agencies in sheltering operations.

DIRECTION AND CONTROL

Crowley County Emergency Management maintains direction and control of all sheltering operations and directs entities to open or close shelters.

The American Red Cross is the Primary Support Agency for Mass Care Emergency Support Function (ESF 6). They operate the American Red Cross shelters when available in Crowley County, and provide a liaison to the EOC, to coordinate all aspects of sheltering operations.

The operation and establishment of the special needs shelter is the responsibility of the Crowley County Emergency Management. Efforts are coordinated with the American Red Cross as primary Support agency for Mass Care (EFS 6) and Otero/Crowley County Health Department (ESF 8).

The Public Information Emergency Support Function (ESF 14) continues to advise the media so they can inform residents and traveling evacuees of the status of shelters in the County.

OPENING OF SHELTERS

In Crowley County, shelters will be opened as needed when evacuation orders are issued and may be opened prior to an anticipated threat such as a Winter Storm.

OPENING OF SHELTERS (Cont)

The Director of Emergency Management, or designee, directs the American Red Cross to open or close shelters and the Otero/Crowley Health Department to support the Special Needs Shelter.

They might not all be opened at the same time, or at all; therefore, attention must be given to the current shelter status.

Shelter openings will be announced through all means possible including local media outlets, press conferences.

Depending on the type of shelter necessary, the following entities may be involved in the actual opening and operation of shelters in Crowley County: the American Red Cross, the Crowley County Health Department, Crowley County School District, and local churches/ community facilities.

There are four types of shelters

1. Risk Shelters - American Red Cross operated shelters; structurally evaluated to provide best opportunity for withstanding direct threat; ability to withstand threat cannot be guaranteed; generally located at schools or other hardened structures. There are three risk shelters.
2. Host Shelters - Used when no direct threat to structure exists; generally located at churches/other facilities. There are fifteen host shelters in Crowley County.
3. Special Needs Shelters - Shelter operated by the Crowley County Health Department for handling special needs individuals; generally located at a school or other sufficiently hardened structure. There is one special needs shelter in Crowley County.
4. Refuges of Last Resort - locations used as a last resort to provide refuge for evacuees that may have otherwise been stranded along evacuation routes within hazard impact areas; There are five potential refuges of last resorts in Crowley County.

SHELTERS

RISK SHELTERS

Risk shelters are facilities that have been structurally evaluated to withstand certain forces, as evaluated using the Crowley County and American Red Cross' shelter criteria. Contrary to the name, risk shelters are not located within areas subject to high risk, particularly those subject to storm surge or flooding. Risk shelters, including the Special Needs Evacuation Shelter, are public buildings (usually schools) that are safer than mobile homes. There is no guarantee that an evacuation shelter is totally safe in severe storms.

As the lead for Mass Care (ESF 6), The American Red Cross of Northwest Colorado is responsible for opening and staffing risk shelters in Crowley County. Risk shelters are considered American Red Cross shelters once open and have gone through a rigorous inspection in order to be utilized as a risk shelter, during events such as hurricanes. These locations consist of selected facilities that meet minimum criteria for shelter, feeding, and structural safety.

Not all shelters may be activated at the same time, and some might not be opened at all, therefore, attention must be given to the current shelter status. This is typically announced through all means possible including local media outlets, press conferences..

In order to increase the sheltering capacity within Crowley County, American Red Cross in conjunction with and the State of Colorado's Shelter Coordinator, inspect potential facilities during the preparedness/prevention phase. They seek to add additional facilities as new buildings in the community are constructed or as opportunities for mitigation of existing structures occur.

HOST SHELTERS

There are currently four sites that serve as host shelters in Crowley County. These host shelters are typically local churches, whose clergy has agreed to allow the American Red Cross, municipalities, or other special districts to operate a shelter out of their facility. These facilities are not operated during direct hazardous conditions because they have not been sufficiently hardened to operate in risk areas.

Host shelters are the preferred means for sheltering evacuees fleeing hazards affecting an isolated geographic region within Crowley County or for hazards that may have occurred in another county or state. Additionally, host shelters can be opened once a community wide threat has passed to provide shelter for dislocated citizens.

Care must be taken to ensure local hotels and motels have been utilized to the maximum extent possible prior to opening host shelters. For example, for small demand incidents, such as a structure fire, the American Red Cross may choose to place victims in commercial facilities, such as hotels and motels, as opposed to opening a host shelter.

One primary benefit of opening a host shelter is that it expands the capability for sheltering citizens once the threat has passed, and it reduces or eliminates the need to close schools solely for the purpose of opening a shelter.

Locations of host shelters to be activated are typically announced at the time of opening. Crowley County Emergency Management maintains the list of potential facilities for use as host shelters.

SPECIAL NEEDS SHELTERS

The Special Needs Shelter accommodates those citizens who require certain medical assistance or special care due to disability, old age, acute or chronic illnesses, or other special challenges.

A special needs shelter is different from a regular evacuation shelter. The special needs shelter is not a mini-hospital or nursing home. It is a refuge for people who have specific needs that can be met in this setting. If an individual requires more, or fewer, services than can be provided, they should be referred to an alternate site, such as a general shelter or hospital.

The Crowley County Health Department is responsible for the establishment and operation of this facility. Each person with special needs must be accompanied by a caregiver and must bring sufficient supplies, including medicines, equipment, food, and water to meet their personal needs for the duration (minimum - 72 hours).

Crowley County Special Needs Program
Crowley County's Special Needs Program was developed to support the identification of individuals and resources necessary to meet the evacuation and sheltering needs of those who require certain medical assistance or special care due to disability, old age, acute or chronic illnesses, or other special challenges.

The Division of Emergency Management through its special needs registration process maintains a computerized database of registration applications. The Division continually updates the registry and reviews/revises the list annually. Each fire department is provided the list of registered participants within their district, in case assistance is necessary. The primary source for information on eligible participants comes from area home healthcare providers and other agencies that serve the special needs populations.

Once registered, the Crowley County Health Department provides the medical expertise necessary to identify the level of care required by each individual applicant. Once the level of care is determined for each registered individual, clients are pre-assigned to the most appropriate facility for their needs. Those that have needs beyond the capability of the special needs shelter are directed to local hospitals, while others may be directed to a general population shelter.

During an evacuation, the Crowley County Division of Emergency Management will call those registered special needs residents within the hazard area that may need assistance either with transportation or lodging at the special needs shelter. Calling registered individuals requires a significant time and resource commitment. Early evacuation decisions should be attempted whenever possible, in order to disseminate the information to registered residents, arrange transportation and accommodate the emergent requests for services. As of 2019, there were almost 75 individuals registered in the Special Needs Program. Transportation for this program is provided through the agreement with Crowley County School District.

REFUGES OF LAST RESORT

Being caught in traffic along evacuation routes during conditions such as hurricanes or tropical storms is of great concern for those attempting evacuation and those tasked with protecting their safety. Therefore, Crowley County Emergency Management in consultation with the American Red Cross will determine whether conditions warrant the opening of refuges of last resort.

A refuge of last resort is a building that can be considered safer than being stranded during hazardous conditions in a vehicle along an evacuation route. Refuges of last resort are operated by the facility owners or their staff who are responsible for taking care of all necessities, such as food, water etc.

Crowley County Emergency Management will announce the locations of refuges of last resort to motorists by all available means including news media, programmable road signs, etc. Locations will be announced only after contact has been made with those facilities to verify their ability to accept stranded motorists.

As soon as it is safe to do so, the county will seek to transfer those evacuees to the more established public shelters.

REQUESTING OUTSIDE ASSISTANCE

Resources from Crowley County are the first line of defense in response to a Disaster. The County will handle the situation within the confines of its resources and begin anticipating future needs, as well as the sustainability of current equipment, staffing, resources, etc. If the County's resources become overwhelmed or will be in the near future, the Crowley County Emergency Management Director, or staff designee, will make specific requests for outside resources, either through local Mutual Aid Agreements, Voluntary Relief Organizations or from the State of Colorado. If warranted, the State can interface with other states and/or the Federal Government for assistance.

MUTUAL AID ASSISTANCE

Crowley County has entered into a number of mutual aid agreements with local response agencies that have agreed to lend or receive assistance during times of disaster. The complete list can be found in the beginning of the CEMP under the Memorandums of Agreement/Understanding Section on page 16.

One of the most notable mutual aid agreements exist among all of the counties and most of the municipalities in the State of Colorado, called the Statewide Intergovernmental Agreement. This agreement provides a method for counties to assist one another during times of disaster and establishes procedures for supporting another county, such as operating under the terms of the receiving-county's CEMP and obtaining reimbursement for expenses while assisting in another county. Crowley County and all of its municipalities are signatories to this agreement.

When local resources are overwhelmed, Crowley County will request Mutual Aid assistance in compliance with the terms of the agreement. This and other Mutual Aid Agreements can be found at the offices of the Crowley County Division of Emergency Management.

PRIVATE RELIEF AGENCIES

Voluntary response agencies, such as the American Red Cross and others, are key response organizations within Crowley County. These agencies, along with their counterparts from chapters all over the nation are able to mobilize volunteers necessary to support sheltering operations, distribute food, water, or other essential items, and potentially assist with emergency funding to individuals.

COMMUNITY EMERGENCY RESPONSE TEAM (CERT)

Crowley County recognizes the need to be able to incorporate and utilize volunteer help when available and has committed resources to training citizens to be part of a Community Emergency Response Team (CERT).

The Crowley County CERT Program emphasizes a neighbor-helping-neighbor approach with training and program maintenance directed through the Crowley County Division of Emergency Management.

CERT is a volunteer resource that is part of the community's operational capability following a disaster. CERT is not intended to replace Crowley County's response capability, but rather, to serve as an important supplement to it.

CERT Self Activation

In the event that emergency services are overwhelmed, CERT Teams are designed to self-activate, take immediate action, and work as a team until emergency services can gain access to, and stabilize, the situation. A debriefing with the CERT Coordinator must occur following self-activation.

Activation of CERT by DEM

DEM may need to activate CERT to assist in emergency or non-emergency situations. If DEM activates CERT, members must act within the limitations of their training, and use the buddy system.

- CERT volunteers must keep their safety in mind as their first priority.
- CERT volunteers must know their capabilities and the limitations of their training and equipment and work within those limitations.
- CERT volunteers are not firefighters, paramedics, or law enforcement officers.
- CERT volunteers are not allowed to carry guns, knives, or other weapons.
- CERT volunteers have a responsibility to themselves and their family first.
- CERT volunteers must work in a team concept (i.e. the buddy system).

- CERT volunteers are limited to performing to the standard of their CERT training and should not exceed that standard of care.

CERT Capabilities

CERT volunteers are trained to perform the following operations

- Light search and rescue
- Fire extinguishment on small or controllable fires
- Basic triage of trauma victims
- Establishing safe evacuation areas

CERT Communications

During any activation (Self-activation or activation by DEM) communications should be done within each team according to their communications plan. They should communicate their findings to the Incident Commander as soon as the responding agency is able to access the area. In the event of delayed access and the CERT Team Leader has compiled an assessment of the area, they may contact the 911 center with the life safety issues they have found in order to coordinate emergency response efforts.

CERT Notifications

CERT volunteers will be notified of developing situations in their communities that may require their services or activation. The communication media may include, but are not limited to:

- Radio communications (AM/FM, weather band, short wave/amateur radio)
- Television
- Telephone
- Email/Internet

CERT Liability

CERT participants are deemed to be “volunteers” and not employees of Crowley County Division of Emergency Management. As such, volunteers are not entitled to any of the privileges, immunities, or insurance coverage afforded of Crowley County DEM. That is, volunteers are not covered by or under the County’s Worker’s Compensation, Unemployment Compensation, hospital/medical, or liability coverage.

However, volunteers have certain immunity from civil liability under the Colorado Good Samaritan Act (Colorado Revised Statute 13-21-108) if they graciously and under good faith render emergency care or treatment.

REQUESTING OUTSIDE ASSISTANCE

County commits all available local resources (fire, law enforcement, EMS, medical, etc)

County implements local mutual aid agreements with neighboring municipalities, counties, etc

County utilizes private relief agencies as needed

If County resources are overwhelmed, declares Local State of Emergency (if not already done) and seeks state assistance via Colorado Division of Homeland Security and Emergency Management

If state resources are inadequate, State of Colorado seeks federal assistance and possibly presidentially-declared Major Disaster Area via FEMA Regional Office

STATE ASSISTANCE

Crowley County may request resources (supplies, response teams, staffing, equipment, etc) from the State of Colorado, when local resources have been exhausted or are insufficient.

In minor emergencies, where assets are needed from only one state agency, and the Crowley County EOC is not activated, Emergency Communications Center (ECC) may initiate the request for state assistance through the State Warning Point.

In major emergencies Crowley County Emergency Management via the Emergency Operations Center, will contact the State EOC through WebEOC in order to request the necessary equipment, supplies, teams, personnel, etc.

Such requests of the state may be fulfilled via state assets, Statewide Mutual Aid Agreement, as a result of agreements between the State of Colorado and other States (Emergency Mutual Aid Compact) or as a result of the State's request for federal assistance. In other cases, the state may simply direct the county to available vendors where the necessary supplies can be purchased.

The State of Colorado can provide the following personnel/teams, as necessary:

1. **Regional Field Manager or Field Incident Coordinating Officer**

   Provides advice to local emergency management, facilitates information and resources.

2. **Rapid Needs Assessment Team**

   Assesses immediate impacts to health and safety, homes and critical infrastructures within the most heavily damaged and densely developed areas; reports assessments to both the State and County EOCs

3. **Initial Damage Assessment Team**

   Team to assess damage more in depth to determine if community meets requirements for a presidential disaster declaration.

4. **Mitigation Assessment Team**

   State, federal, and possibly local emergency management or LMS coordinators to assess damage and determine causes

5. **Recovery Liaison (ARL)**

   Pre-deployed recovery personnel coordinate with Crowley County Emergency Management to assist in the deployment of all State recovery teams.

DISASTER FINANCIAL MANAGEMENT

A Presidential disaster declaration will permit funding from the Federal Disaster Relief Fund under the provisions of the Stafford Act. In addition, the Federal Office of Management and Budget (OMB) and Congress may give rapid approval to a FEMA – prepared emergency budget request at a level sufficient to sustain a local community's response operation for at least three weeks, with the opportunity to extend, if the situation warrants.
Therefore, it is critical that an ongoing running total be kept of all costs associated with the response and that the costs be closely monitored in order to anticipate and estimate the time period within which the Department/Agency or organization can operate self-sufficiently and to predict operating needs.

For any emergency, it is the responsibility of each department/agency/organization to track and monitor all costs associated with their agency's response. Accurate documentation of expenses is critical to the application for public assistance programs as well as for any future reimbursement.

On behalf of the Departments of Crowley County, The County Administrator serves to coordinate the capture of expenses related to Financial Management. Each organization/department should maintain communication through the Finance Section at the EOC in order to gain/provide accurate estimates of the ongoing response costs.

Disaster funding is paid out of general budget and then reimbursed by FEMA if a declared incident. Mutual aid is handled in the same manner. The requesting party shall be responsible for reimbursement of all authorized expenses to the assisting parties. The assisting party shall bill requesting parties for all expenses as soon as practical after they have occurred, but no later than 60 days following the period of assistance, unless the deadline for identifying damage is extended. The requesting party shall pay the bill or advise of any disputed items.

During activations, ESF 7 and the Finance Section Chief handle all tracking of expenditures.

Municipalities are responsible for their own financial tracking; however, the county will order external supplies as requested through WebEOC.

EXPENDITURE OF FUNDS

While innovative and expeditious means of procurement are called for during times of disaster, it is still mandatory that good accounting principles and practices be employed in order to safeguard the use of public funds from the potential of fraud, waste, and abuse.
In accordance with Federal guidelines, and the State of Colorado Resource and Financial Management Policies and Procedures, officials of the primary and support agencies will give approval for expenditures of funds for response operations. Each agency is responsible for establishing effective administrative control of funds and segregation of duties for proper internal controls.

Extreme care and attention to detail must be taken throughout the emergency response period to maintain logs, formal records, and copies of all expenditures (including personnel time sheets) in order to provide clear, reasonable accountability and justification for future reimbursement requests. Reimbursement is NOT an automatic authorization, but a deliberate process of justifying each expense.

All records relating to the allocation and disbursement of funds must be maintained, in compliance with:

- The Code of Federal Register-Title 44 Emergency Management and Assistance (CFR 44); relevant circulars and Federal Statutes, in a manner consistent with the provisions of the Stafford Act

State funding relationship includes the Base Grant, which funds the Emergency Management program, multiple mitigation projects which have allowed for the LMS to accomplish tasks, Citizen Corps/CERT which allow for preparedness training for citizens, and ODP, which strengthens anti-terror initiatives.

The only training provided in relation to financial management during a disaster is that provided to those county personnel from the County Office of Management and Budget that operate the WebEOC request system. WebEOC is a major part of the tracking process, however ESF 7 keeps records of expenditures as well.
All fund expenditures must be approved by the County Administrator who is the Finance/Administration Chief.

Emergency Support Facilities

Crowley County has facilities, termed "Emergency Support Facilities" which support the mission of emergency management, particularly during response and recovery, and facilitate continuity of government. These facilities, and their alternate sites, have been established and outfitted with the infrastructure necessary to function as the emergency management hub of activity for field support including communications with field personnel and with the public. These locations provide either a permanent or mobile location through which emergency management decision making and coordination can be accomplished.

The Emergency Support Facilities within Crowley County are as follows:

1. Emergency Operations Center (EOC)

The physical location at which the coordination of information and resources necessary to support domestic incident management activities takes place.

An EOC may be a temporary facility such as Crowley's Mobile Operations Center or may be located in a more permanent facility.

The EOC is organized around major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, county, municipality) or some combination thereof.

When activated, representatives from many organizations meet to coordinate disaster efforts. Once activated, the EOC is self-sufficient for extended periods of time. The EOC can begin activation immediately and achieve maximum readiness in approximately four to eight hours.

Crowley County's EOC is located at 611 E.9th Street Ordway, Colorado.

2. Alternate Emergency Operations Center (AEOC)

The Alternate Emergency Operations Center is the secondary facility for use if the primary Emergency Operations Center facility becomes inoperable during emergencies.

Crowley County has several locations that can support such an operation. Crowley County Emergency Management maintains the list of these facilities.

3. Department Operations Center (DOC)

Department Operations Centers normally focus on internal agency incident management and response. The DOCs are linked to the Operations Section of an Incident Command Structure. They are also linked to the Emergency Operations Center through agency representatives in order to ensure effective and efficient incident management. During periods of disaster, l entities may operate DOCs from which to coordinate their internal agency operations.

4. Emergency Communications Center (ECC) Alternate Site

The alternate operating sites for Emergency Communications Center (ECC) is Rocky Ford Emergency Communications Center. This location has limited ability to dispatch EMS/Fire or law enforcement assets for Crowley County. The alternate site rely on telephone switching routed through the telephone system.

5. Citizen Information Center

During times of crisis, not necessarily EOC activation, volunteers in the Emergency Operations Center staff the Citizen Information Center. The public can obtain the status of all county facilities as well as other vital information, e.g. weather or numbers to call for specific information. The public is encouraged to call the Citizen Information Center, thus reducing telephone load in the EOC proper.

Colorado - Southeast Region Pre-Disaster Recovery Plan

OCTOBER 2020 V1.0

This plan covers the following Counties: Baca, Bent, Crowley, Kiowa, Otero, & Prowers

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

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Southeast Colorado All-Hazards Region Pre-Disaster Recovery Plan Signature Page

Approved by:

Name/Title/Agency: Emergency Manager Crowley County OEM	Date: 6-10-2020
Name/Title/Agency:	Date: 6/15/20
Name/Title/Agency: Commission Kiowa Co.	Date: 7-30-2020
Name/Title/Agency: Emergency Manager Bent County	Date: 11-2-2020
Name/Title/Agency: Commissioner Bent County	Date: 11-5-20
Name/Title/Agency: chair B.O.C.C.	Date: 11-12-2020
Name/Title/Agency: BOCC Chair/Prowers County	Date: 12-22-2020
Name/Title/Agency: Director Prowers OEM	Date: 12-22-2020

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i. Record of Distribution

In order to maintain transparency of the plan each person and agency below has received a copy of the plan via email and if requested a hard copy. The plan is also available online at http://www.secahr.com/documents.html

Number	Name	Agency	Date
1	Riley Frazee	DHSEM-OEM-Field Services	
2	Jennifer Leathers	Baca County OEM	
3	Jerry Casebolt	SER Grant Coordntr	
4	Troy Abdulla	Bent County OEM	
5	John Reitan	Crowley County OEM	
6	Shellie Engelhardt	Kiowa County OEM	
7	Danny Chavez	Otero County OEM	
8	Brad Davidson	La Junta City OEM & Fire Chief	
9	Staffon Warn	Prowers OEM & Fire Chief	
10	Jeremy Burkhart	Lamar City OEM & Fire Chief	
11	Larry Sitts	Holly Town OEM	
12	Natalie Musick	Granada Town OEM	
13	Don Moore	DHSEM-OEM-Plans	
14	D'Wayne Gaymon	Colo Dept of Transportation	
15	Robert Madrid	Colo Dept of Transportation	
16	Cary Mount	Colo Dept of Transportation	
17	Wayne Gumke	Colo Dept of Transportation	
18	Neil Mauch	Colo Dept of Transportation	
19	Roy Darnell	Colo Dept of Transportation	
20	Raymond Eccher	Colo State Patrol – Pueblo Dispatch	
21		Town of Springfield – Public Works	
22	Dennis Carlson	Town of Walsh – Public Works	
23	Kenny Wagner	Las Animas Town – Public Works	
24	Robert Darnell	Bent County Road and Bridge	
25	Cutis Sniff	Bent County Road and Bridge	
26	Lex Nichols	Otero County Public Works	
27	Mark Dorenkamp	Prowers County Road and Bridge	
28	Pat Mason	City of Lamar Public Works	
29	Thomas Eikenberry	United States Forest Service	
30	Dennis Hoyt	American Red Cross	
31	Sally Broomfield	American Red Cross	
32	Janell Maier	Southeast Colorado Regional Epi	
33	Kris Stokke	Southeast Colorado Health Planner	

Number	Name	Agency	Date
34	Aaron Oliveri	Southeast Regional Health Trainer	
35		Baca County Public Health	
36		Bent County Public Health	
37	Richard Ritter	Otero/Crowley Public Health	
38	Meagan Hillman	Prowers/Kiowa Public Health	
39	JoLynn Idler	Prowers/Kiowa Public Health	
40	Chris Pryor	Colorado State Patrol – Hazmat	
41	TJ Steinbrunn	Colorado State Patrol – Hazmat	
42	Jason Kosola	Colorado Oil & Gas Commission SE Environmental Protection Specialist	
43	Rebecca Broussard	EPA Region 8 Environmental Protection Specialist	
44	Michael Haney	Recovery Grants Section Supervisor	
45	Dr. Maggie Baldwin	Colo Dept of Ag – State Veterinarians Office	
46	Donna Davis	Colorado State Forest Service	
47	Bruce Fickenscher	CSU Extension – Southeast Response Team Coordinator	
48	Travis Black	Colorado State Parks & Wildlife	
49	Dan Kirmer	Colorado State Parks & Wildlife	
50	Brad Henley	Colorado State Parks & Wildlife	
51	Bill McCormick	Dam Safety – Colo Div of Water Resources	
52	Mark Perry	Dam Safety – Colo Div of Water Resources	
53	Chuck Goin	Colorado Rural Water Association	
54	Bret Smith	Colorado Humane Society – SPCA Field Investigator	
55	Greg Chavez	United States Dept of Ag – APHIS	
56		United States Army Corp of Engineers	
57	Jeffrey Daniels	United States Army Corp of Engineers	
58	Shelly Dragomir	United States Army Corp of Engineers	
59		National Weather Service	
60	Greg Heavener	National Weather Service	
61	Telly Stanger	Southeast Colorado Power Association	
62	Mark Hall	Southeast Colorado Power Association	
63	Houssin Hourieh	Lamar Light and Power	
64	Christa Mayhew	ATMOS Engergy	
65	Scott Copley	Colorado State Patrol – Major	
66	Tim Knabenshue	Colorado State Patrol – 2C Captain	
67	Denney Owens	Colorado Dept of Corrections	
68	Shawn Foster	Colorado Dept of Corrections	
69	Tracy Nelson	Colorado Dept of Corrections	
70	Aaron Shiplett	Baca County Sheriff	

Number	Name	Agency	Date
71	Jake Six	Bent County Sheriff	
72	John Kurtz	Crowley County Sheriff	
73	Casey Sheridan	Kiowa County Sheriff	
74	Shawn Mobley	Otero County Sheriff	
75	Sam Zordell	Prowers County Sheriff	
76	Tara Marshall	Colo Dept of Local Affairs – DLG	
77	Randi Snead	Colo Dept of Local Affairs – DLG	
78	Jim Raymond	DHSEM-OEM-State Recovery Officer	
79	Spike Ausmus	Baca County Commissioner	
80	Shiloh Freed	Baca County Commissioner	
81	Rick Butler	Baca County Commissioner	
82	Cindi Parsons	Baca County Administrator	
83	Kim MacDonnell	Bent County Commissioner	
84	Jean Sykes	Bent County Commissioner	
85	Chuck Netherton	Bent County Commissioner	
86	Clavin Feik	Bent County Administrator	
87	Roy Elliott	Crowley County Commissioner	
88		Crowley County Commissioner	
89	Blain Arbuthnot	Crowley County Commissioner	
90		Crowley County Administrative Assistant	
91	Richard Scott	Kiowa County Commissioner	
92	Howard “Butch” Robertson	Kiowa County Commissioner	
93	Donald Oswald	Kiowa County Commissioner	
94	Tina Adamson	Kiowa County Administrator	
95	John Hostetler	Otero County Commissioner	
96	Keith Goodwin	Otero County Commissioner	
97	Jim Baldwin	Otero County Commissioner	
98	Amy White-Tanabe	Otero County Administrator	
99	Ron Cook	Prowers County Commissioner	
100	Wendy Buxton-Andrade	Prowers County Commissioner	
101	Tom Grasmick	Prowers County Commissioner	
102	Janet Lundy	Prowers County Admin/Finance	
103	Ethan Williams	DHSEM-OEM-Plans	
104	Mark Boley	DHSEM-OEM-Field Services	
105	Trevor Denney	DHSEM-OEM-Field Services	
106	Steve Sanchez	Southeast Colorado Hospital District	
107	Rita Hetrick	Walsh Hospital District	
108	Char Korrell	Weisbrod Memorial County Hospital	
109	Leroy Fierro	Arkansas Valley Regional Medical Center	
110	Leslie Day	Prowers Medical Center	
111	Karen Bryant	Prowers Medical Center	

Number	Name	Agency	Date
112	Sadie Martinez	DHSEM – AFN Coordinator	
113	Dave Engel	Southeast Colorado Hospital District	
114			

ii. List of Abbreviations and Acronyms

AAR	After Action Reports
ADA	Americans with Disabilities Act
AFN	Access and Functional Needs
APCD	Colorado Department of Public Health and Environment Air Pollution Control Division
AI	Colorado Department of Agriculture Animal Industry
ARC	American Red Cross
AS	Assistance for Individuals, Households, and Small Businesses
BBB	Better Business Bureau
BH	Behavioral Health
BOCC	Board of County Commissioners
CDA	Colorado Department of Agriculture
CDE	Colorado Department of Education
CDHE	Colorado Department of Higher Education
CDHSE	Colorado Department of Human Services
CDL	Colorado Department of Law
CDLE	Colorado Department of Labor and Employment
CDMP	County Debris Management Plan
CDMVA	Colorado Department of Military and Veterans Affairs
CDNR	Colorado Department of Natural Resources
CDOC	Colorado Department of Corrections
CDOLA	Colorado Department of Local Affairs
CDORA	Colorado Department of Regulatory Agencies
CDOT	Colorado Department of Transportation
CDPA	Colorado Department of Personnel and Administration
CDPHE	Colorado Department of Public Health and Environment
CDPS	Colorado Department of Public Safety
CDS	Colorado Department of State
CDT	Colorado Department of Treasury
CFR	Code of Federal Regulations
CEO	Colorado Energy Office
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CIRSA	Colorado Intergovernmental Risk Sharing Agency
CP	Consumer Protection
CPS	Colorado Department of Law Consumer Protection Section
CREA	Colorado Rural Electric Association
CRO	Colorado Recovery Office(r)
CRS	Colorado Revised Statutes
CSM	Colorado School of Mines
CSU	Colorado State University

CTSI	County Technical Services, Inc.
DA	Damage Assessment
DDA	Detailed Damage Assessment
DE	Debris Management
DHS	Department of Homeland Security
DHSEM	Division of Homeland Security and Emergency Management
DLG	Colorado Department of Local Affairs Division of Local Government
DO	Donations Management
DOH	Colorado Department of Local Affairs Division of Housing
DOI	Colorado Department of Regulatory Agencies Division of Insurance
DOR	Colorado Department of Regulatory Agencies Division of Registrations
DPT	Colorado Department of Local Affairs Division of Property Tax
DSHMO	Deputy State Hazard Mitigation Officer
DSIAO	Deputy State Individual Assistance Officer
DSPAO	Deputy State Public Assistance Officer
DWR	Colorado Department of Natural Resources Division of Water Resources
DMP	Debris Management Plan
EC	Economic and Community Recovery
ECC	Emergency Coordination Center
ECP	Emergency Conservation Program
EDA	United States Department of Commerce Economic Development Agency
EM	Emergency Management
EMD	Emergency Management Director
EMP	Emergency Management Plans
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ER	Environmental Recovery
ERC	Emergency Response Coordinator
ESF	Emergency Support Function
EWPP	USDA NRCES Emergency Watershed Protection Program
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FSA	Farms Service Agency
GAR	Governor's Authorized Representative
GOEDIT	Governor's Office of Economic Development and International Trade
GS	Colorado Geological Survey
H	Housing
HC	Historical and Cultural Resources
HM	Hazard Mitigation
HMGP	Federal Emergency Management Agency Hazard Mitigation Program
HAZUS-HM	Hazards United States Multi-hazard
IA(P)	Federal Emergency Management Agency Individual Assistance
ICC-CCI BDAT	International Code Council – Colorado Chapter, Inc. Building Damage Assessment Team
IDA	Initial Damage Assessment

IS	Infrastructure Systems
JIC	Joint Information Center
JIS	Joint Information System
NCP	National Contingency Plan
NRC	National Response Center
NRCS	Natural Resources Conservation Service
NRF	National Response Framework
OEM	Office of Emergency Management
OEPR	Colorado Department of Public Health and Environment Office of Emergency Preparedness and Response
ORM	Colorado Department of Personnel and Administration Office of Risk Management
PA(P)	Federal Emergency Management Agency Public Assistance
PDA	Preliminary Damage Assessment
PI	Colorado Department of Agriculture Plant Industry
PIO	Public Information Officer
PH	Public Health
PRT	Planning Response Team
RCRA	Resource Conservation and Recovery Act
RD	United States Department of Agriculture Rural Development
RDMP	Regional Debris Management Plan
RMIIIA	Rocky Mountain Insurance Information Association
RP	Recovery Plan
RSF	Recovery Support Function
The Region	Southeast Colorado All-Hazards Region
SBA	United States Small Business Administration
SCO	State Coordinating Officer
SDACO	Special Districts Association of Colorado
SDRC	State Disaster Recovery Coordinator
SDRM	State Disaster Recovery Manager
SEOC	State Emergency Operations Center
SEOP	State Emergency Operations Plan
SHMO	State Hazard Mitigation Officer
SIAO	State Individual Assistance Officer
SPAO	State Public Assistance Officer
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
TSA	The Salvation Army
UI	Colorado Department of Labor and Employment Unemployment Insurance
U.S.	United States
U.S. DOT	United States Department of Transportation
U.S. FHWA	United States Federal Highway Administration
USACE	Unites States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDC	United States Department of Commerce
USDHS	United States Department of Homeland Security

USDOD	United States Department of Defense
USDT	United States Department of Treasury
US EPA	United States Environmental Protection Agency
US SBA	United States Small Business Administration
VC	Volunteer Coordination
WCB	Colorado Department of Natural Resources Water Conservation Board
WQCD	Colorado Department of Public Health and Environment Water Quality Control Division

iii. Glossary of Terms

Activation
Refers to the transition from pre-disaster to response phase by making ESFs and/or RSFs operational

Activities
Specific actions related to achieving the milestone

Build Back Better
Signifies the concept that localities will build back better, stronger, and more resilient after a disaster.

Capabilities
Policies, funding, authorities, staff, and technical abilities that help agencies contribute to response and recovery

Community Health
Refers to community social, political, economic, psychological, and physical well-being.

Critical Facilities
Critical Facilities include facilities such as fire stations, police stations, hospitals, and other critical infrastructure as identified by the counties in their respective Emergency Operations Plans.

Critical Infrastructure
Those assets, systems, networks, and functions – physical or virtual – so vital to the community that their incapacitation or destruction would have a debilitating impact on security, economic security, public health or safety, or any combination of those matters.

Damage Assessment
Process used to determine what happened, what the effects are, which areas were hardest hit, what situations must be given priority and what types of assistance are needed.

Debris
Items and materials broken, destroyed, or displaced by a natural or man-made federally declared disaster. Examples of debris include, but are not limited to, trees, construction and demolition material, and personal property.

Debris Management Task Force (DMTF)
Temporary unit formed for each county and staffed by county personnel to respond to issues regarding debris management.

Debris Manager (DM)
The debris manager has overall responsibility for the operations, planning, logistics, and finance of the debris management activities.

Debris Planning and Response Team (PRT)
Teams maintained by the Army Corps of Engineers which are pre-rostered, fully trained, and ready to deploy within 6 hours to begin operationally planning a Direct Federal Assistance mission.

Direct Disaster Impacts
Impacts that represent the partial or complete physical destruction caused by the natural disaster to human beings, buildings, infrastructure, vehicles, capital, and on stock. Direct impacts will occur over different periods of time depending on the type and magnitude of the disaster.

Disaster Assistance Center
The central location for delivering assistance to disaster survivors. It is a readily accessible facility where disaster survivors can meet face-to-face with representatives of Federal, State, county, local, and volunteer agencies.

Emergency Declaration
The President can declare an emergency for any occasion or instance when the President determines federal assistance is needed. Emergency declarations supplement State and local or Indian tribal government efforts in providing emergency services, such as the protection of lives, property, public health, and safety, or to lessen or avert the threat of a catastrophe in any part of the United States. The total amount of assistance provided for in a single emergency may not exceed $5 million

Emergency Operations Center
Central facility from which government at any level can provide interagency coordination and decision making in support of incident response.

Emergency Support Functions
Grouping of governmental and certain private sector capabilities into an organizational structure to provide support, resources, program implementation, and services that are most likely needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal following domestic incidents

Essential Elements of Information
EEIs make up a comprehensive list of information requirements that are needed to promote informed decision-making. EEIs provide context, inform decision-making and contribute to analysis. EEIs are required to plan and execute an operation and to support timely, logical decisions

Essential Facilities

Essential facilities include schools, municipal buildings, water treatment plants, wastewater treatment plants, power generation units, airports, temporary shelters for disaster victims, etc.

Incident Command System
A management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure.

Initial Damage Assessment
Generally, the IDA is performed first and examines the damages and costs related to a disaster, the impact of the disaster on the community, and which State or Federal programs are the most appropriate possibilities for providing needed assistance.

Intangible Disaster Impacts
Impacts that are not physically present, but exist within social, economic, and political constructs within communities. Examples include human suffering, cultural artefacts, losses of memorabilia, environmental impacts, and psychological effects. Intangible impacts can also be positive such as development of community and solidarity.

Intermediate Recovery
Phase of recovery that involves returning individuals, families, critical infrastructure, and essential government or commercial services to a functional, if not pre-disaster, state. Such activities are often characterized by temporary actions that provide a bridge to permanent measures.

Joint Preliminary Damage Assessment
The Joint PDA provides the Governor with the information necessary to determine whether to request a presidential major disaster declaration.

Long-Term Recovery
Phase of recovery that may continue for months or years and addresses complete redevelopment and revitalization of the impacted area; rebuilding or relocating damaged or destroyed social, economic, natural, and built environments; and a move to self-sufficiency, sustainability, and resilience.

Magnitude
Magnitude is a number that characterizes the relative size of an earthquake. It is based on measurement of the maximum motion recorded by a seismograph.

Major Disaster Declaration
The President can declare a major disaster for any natural event that the President determines has caused damage of such severity that it is beyond the combined capabilities of state and local governments to respond. A major disaster declaration provides a wide range of federal assistance programs for individuals and public infrastructure, including funds for both emergency and permanent work.

Milestones
Major progress points in the recovery of a support function and/or movement toward a goal in that specific RSF.

Mitigation
Capabilities necessary to reduce loss of life and property by lessening the impact of disasters. Mitigation capabilities include, but are not limited to, community-wide risk reduction projects; efforts to improve the resilience of critical infrastructure and key resource lifelines; risk reduction for specific vulnerabilities from natural hazards or acts of terrorism; and initiatives to reduce future risk after a disaster has occurred.

Personal Protective Equipment (PPE)
Specialized clothing or equipment worn by response workers for protection against health and safety hazards. PPE may include clothing, helmets, goggles, or other garment designed to protect the wearer's body.

Preliminary Damage Assessment
The PDA or "windshield survey" is conducted by the American Red Cross and often occurs prior to or simultaneous with the local IDA It is a quick look determining the boundaries of areas affected by the disaster, the general needs and characteristics of the disaster areas, the condition of roads, transportation systems, and utilities, the approximate number dwelling unites affected, and whether disaster conditions are improving or worsening.

Public Assistance Grant Program
Program operated by FEMA to provide assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

Public Assistance Pilot Program
A FEMA program that provides an additional five percent Federal cost share, to applicants that have a FEMA-approved debris management plan and at least two prequalified debris and wreckage removal contractors identified prior to a disaster. Note that currently in order to qualify for funds under this program the disaster must have occurred prior to December 31, 2008; unless the Federal government decides to re-appropriate funds.

Rapid Needs Assessment
These assessments are conducted by teams of two or more registered building inspectors to quickly inspect and evaluate the safety of each applicable structure within affected areas.

Recovery
Restoration and strengthening of key systems and resource assets post- disaster that are critical to the economic stability, vitality, and long-term sustainability of the community.

Recovery Support Functions
A coordinating structure for key functional areas of assistance in the National Disaster Recovery Framework that supports local governments by facilitating problem solving, improving access to

resources and by fostering coordination among State and Federal agencies, nongovernmental partners, and stakeholders.

Redevelopment
Rebuilding degraded, damaged, or destroyed social, economic, and physical infrastructure in a community, state, or tribal government to create the foundation for long-term development.

Resilience
A community's ability to resist, withstand, recover from, and/or advance despite acute shocks and long-term stressors. Resilience is achieved by imagining success 50 to 100 years in the future and working toward that vision through daily activities.

Response
Immediate actions taken during and after a disaster to save lives, protect property, and restore basic human needs.

Restoration
The process of returning a structure, building, or resource back to a pre- disaster state and function(s).

Right of entry agreement
An agreement that would give the jurisdiction the right to enter private property for debris clearance purposes.

Short-Term Recovery
Phase of recovery that addresses the health and safety needs beyond rescue, the assessment of the scope of damages and needs, the restoration of basic infrastructure, and the mobilization of recovery organizations and resources, including restarting and/or restoring essential services (e.g., gas, water, electricity) for recovery decision making.

Special Districts
A local community creates special districts to meet a specific need or needs(s) of a community that may cross-jurisdictional boundaries and have certain legal duties and responsibilities.

Steady State Operations
Agency roles, responsibilities, and activities that are ongoing pre-disaster.

Sustainability
Conditions under which [humans] and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

Tangible Disaster Impacts
Impacts that can be measured in monetary terms as there is market for them, such as destruction of vehicles, buildings or infrastructure, the changes in income or increasing of costs. Tangible impacts can also be positive such as income increase in non-affected industries.

Temporary Debris Storage and Reduction Site (TDSR)
A location to temporarily store, segregate, transfer, and reduce debris prior to off-site reuse, recycling, or final disposal.

Whole Community

The whole community includes individuals and communities, the private and nonprofit sectors, faith-based organizations, and all levels of government (local, regional/metropolitan, State, tribal, territorial, insular area, and Federal). Whole community is defined in the National Preparedness Goal as "a focus on enabling the participation in national preparedness activities of a wider range of players from the private and nonprofit sectors, including nongovernmental organizations and the general public, in conjunction with the participation of all levels of government in order to foster better coordination and working relationships.

1 Introduction

1.1 Authority

Baca, Bent, Crowley, Kiowa, Otero and Prowers Counties constitute the Southeast Colorado All-Hazards Emergency Management Planning Region, hereafter referred to as the Region. A range of statutes, regulations, executive orders, plans and policies govern the Region's emergency management programs.

At the Federal level, The *Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974* (the Stafford Act) (P.L. 93-288, 100-107), *The Homeland Security Act of 2002*, *Post-Katrina Emergency Management Reform Act of 2006*, *The Sandy Recovery Improvement Act of 2013* (SRIA) (P.L. 113-2), *The National Disaster Recovery Framework, May 24, 2011* and *The Federal Civil Defense Act of 1950* (P.L. 81-920) establish assistance and guidance to State and local governments for disaster preparedness, response, recovery, and mitigation.

The National Response Framework (NRF), the National Contingency Plan (NCP), The National Disaster Recovery Framework (NDRF), the State of Colorado Emergency Operations Plan and Colorado Recovery Plan provide planning and policy guidance to counties and local entities. Collectively, these documents support the foundation for the County and Municipal EOPs including local recovery plans.

At the Regional level, Executive Order D 013 03 and House Resolution 03-1018 and the following organizations agreed prior to the House Resolution and Executive order to adopt a single regional planning and operations map: Colorado Counties Incorporated, the Colorado Municipal League, the Colorado State Fire Chief's Association, the Colorado Association of Chiefs of Police, the County Sheriffs of Colorado, the Emergency Medical Services Association of Colorado, and the Colorado Emergency Management Association. The Executive Order says "Through this Executive Order, I set forth the single regional planning and operations map and direct all state departments to recognize and adopt this map. To ensure a congruent system, I urge local agencies to adopt this map for emergency management and response purposes." The Southeast Region has a long history of utilizing the planning and response map to coordinate their activities and responses to disasters and emergencies.

The Colorado Revised Statutes (CRS) and associated Administrative Rules add state direction and guidance to local emergency management programs during a disaster.

The Colorado Disaster Emergency Act (24-33.5-701 et. seq., Colorado Revised Statutes (CRS)); and Article IV, Constitution of the State of Colorado: entitled the Executive Department.

The purpose of Part 7 is to:

(a) Reduce Vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural catastrophes or catastrophes or human origin, civil disturbance, or hostile military or paramilitary action;
(b) Prepare for prompt and efficient search, rescue, recovery, care, and treatment of persons lost, entrapped, victimized, or threatened by disasters or emergencies;
(c) Provide a setting conductive to rapid and orderly start of restoration and rehabilitation of persons and property affected by disasters;
(d) Clarify and strengthen the roles of the governor, state agencies, and local governments in prevention of, preparation for, response to, and recovery from disasters.
(e) Authorize and provide for cooperation in disaster prevention, preparedness, response and recovery;
(f) Authorize and provide for coordination of activities relating to disaster prevention, preparedness, response, and recovery by agencies and officers of this state and similar state-local, interstate, federal-state, and foreign activities in which the state and its political subdivisions may participate;
(g) Provide a disaster and emergency management system embodying all aspects of pre-disaster and pre-emergency preparedness and post disaster and post emergency response; and
(h) Assist in prevention of disasters caused or aggravated by inadequate planning for regulation of public and private facilities and land use.

The principle executive officer of the affected jurisdiction has the authority to declare a disaster and delegate authority or responsibilities to effectively manage disaster response under C.R.S. 24-33.7-709(1). A local disaster may be declared only by the principal executive officer of a political subdivision. It shall not be continued or renewed for a period in excess of seven days except by or with the consent of the governing board of the political subdivision. Any order or proclamation declaring, continuing, or terminating a local disaster emergency shall be given prompt and general publicity and shall be filed promptly with the county clerk and recorder, city clerk, or other authorized record-keeping agency and with the office of emergency management.

The emergency declaration may extend to all or any part of the geographical area under the jurisdiction of the municipality, county, tribe or special district. When a wide area disaster occurs the principle executive officers must determine how decisions will be coordinated if separate disaster declarations are declared.

If the emergency or disaster is beyond the capability of the affected jurisdiction to respond, the governor through an executive order or proclamation can declare a state of emergency. The Counties affected by the disaster or emergency shall have their EOC accumulate and prepare supporting documentation for the declaration through damage assessment and emergency support function information. In many cases, implementation of the State Emergency Operations Plan and access to State and Federal programs or funding are contingent on correctly following the declaration process in a timely manner.
During a disaster the operational response will end and a recovery response will clearly be all that remains. As the operational response transitions into recovery the principle executive

officers of the affected jurisdictions retain authority, but the environment under which their authority exists changes. In recovery additional authorities are introduced into the process from State and Federal agencies creating a need for joint policy decision making. As the recovery process moves forward the local authority assumes a primary role and State and Federal authorities assume a supportive role.

During recovery the local principle executive officer determines the recovery structure that best serves the recovery process and delegates responsibility to the department or organization with the capability to manage the recovery process. The authorities having jurisdiction for recovery are the Chief Elected Officials of jurisdictions affected by the disaster. These Chief Elected Officials, their agencies and departments shall coordinate and cooperate with other affected jurisdictions to ensure consistency for the public.

A state of emergency should not be prematurely lifted until a complete assessment and implementation of the recovery system is working. In addition, recovery may require modifications to codes and regulations to facilitate recovery for residents and businesses. A disaster declaration allows for the modifications without having to follow normal legislative procedures or established charters related to specific unmet needs of the community.

The policy group and legal advisors determine when actions can be executed, how the process can legally permit action and what actions are allowed during a disaster under the provisions of the law.

The Region’s Emergency Managers and agencies having jurisdiction for recovery have agreed to participate in the preparation of a Regional Recovery Plan (RRP) to be used during a disaster that requires recovery, such as winter storm, tornadoes, earthquakes, etc.

1.2 General

The region is susceptible to many natural and man-made hazards which can potentially overwhelm localities and the Region.

Following a disaster, many critical post-disaster concerns will have to be addressed such as assessing the damage, restoring essential public services, providing emergency food, water and shelter, cleaning up the debris, identifying ways to address unmet needs, restoring essential services and beginning the process of long-term recovery. Resolution of these issues will require a coordinated local, state, and federal effort.

Normally, recovery from isolated incidents is within the capability of County and municipal governments. Outside assistance, if required, is requested from the next higher level of government only after the jurisdiction fully commits its own resources to the recovery process.

The National Response Framework and State of Colorado Emergency Operations Plan detail the federal and state efforts to aid counties when disaster strikes. Refer to these plans for an explanation of state and federal post-disaster response and recovery efforts.

Following this RRP are Annexes for each county within the Region that contain county-specific details. The RRP, coupled with a County-Specific Annex, constitutes a County Recovery Plan (CRP) for each county within the Region. Throughout the RRP, information found in the County-Specific Annexes is referenced. A table summarizing information found in a County-Specific Annex is provided at the beginning of any CRP section for which additional information can be found in a County-Specific Annex. Each County-Specific Annex contains appendices for specific documents.

Each county has prepared an EOP that has been formatted to follow the structure used in the NRF, including the Emergency Support Function (ESF) Annexes identified in the NRF.

1.3 Purpose

This Plan is intended to develop an all-hazards approach for coordination among recovery partners to include local, state, county, regional, federal, tribal, non-profit, private sector and community organizations within the SECAHR. Guidance within the Plan establishes a pathway to robust post-disaster coordination and empowers recovery partners to establish resilient and equitable local and regional recovery operations. The plan builds upon existing state, regional and local plans and is not intended to replace these plans.

The key goals of this Plan are to:

- Protect life, property, and the environment to the greatest extent possible.
- Shorten the recovery timeline as much as possible.
- Restore the impacted area to pre-disaster conditions and a state of normalcy, often called a “new normal.”
- To coordinate relationships, interoperable communications and pre-planning with local, State, and Federal agencies involved with recovery responsibilities.

The Plan will achieve its purpose by offering guidance and tools that will support the region and its recovery partners as they build stronger recovery capabilities and more resilient, sustainable and equitable communities.

1.4 Scope

The scope of this plan includes the recovery actions for incidents that may occur in the Southeast Colorado All-Hazards Region (SECAHR), which is a geographically diverse region organized around six counties; 25 municipalities; and a population of nearly 50,000 people over 9,548 square miles. This plan applies to the citizens, counties, municipalities and special districts within the planning area.

1.5 Relationship to Other Plans

In the SECAHR, most jurisdictions have an emergency operations plan that outlines the actions that will be taken during the response phase of any emergency. Additionally, emergency responders work together on a regular basis to create response protocols, procedures and agreements to ensure adequate response. What recent incidents and exercises have shown, however, is that recovery will be much longer in duration, will involve key stakeholders outside of the typical emergency responder community, and will include complexities not seen in any other part of emergency management.

Recovery planning is in its infancy in the SECAHR and in the nation, but coordinating with other emergency disaster plans within the SECAHR will be necessary for effective recovery. The Following plans directly relate to concepts within the framework and are referenced throughout the report where applicable.

Regional Plans
Colorado-Southeast Region Tactical Interoperable Communications Plan (TICP)
Colorado-Southeast Region Alert & Warning Plan (RAWP)
Colorado-Southeast Region Debris Management Plan (RDMP)
Southeastern Colorado Mass Casualty Plan (SECMCP)

State Plans
Department of Housing Disaster Housing Plan
State of Colorado Natural Hazards Mitigation Plan
State of Colorado Emergency Operations Plan (SEOP)
State of Colorado Disaster Recovery Plan
State of Colorado Multi-Agency Feeding Plan (MAFP)

2 Situation and Assumptions

This section outlines the current environment within which this RRP is being prepared and the assumptions that were made during its preparation. If any of the situations or assumptions change, and that change affects the accuracy of this RRP, the Region's Emergency Managers will update the RRP. Plan maintenance is discussed in Section 11.

2.1 Situation

- The Region is subject to a number of disaster circumstances that could create a need for recovery. These circumstances include earthquakes, severe weather/wind storms, floods, tornadic activity, and other natural or terrorist/technologic events that could cripple communities. Each county maintains and regularly updates a specific Hazard Analysis, which prioritizes the most likely events for each community. In addition to county specific hazard analysis the six counties in the region also participate and

adopt a regional Pre-Disaster Hazard Mitigation Plan which details region wide hazards in addition to county specific hazards.

- Baca, Bent, Crowley, Kiowa, Otero and Prowers counties constitute the Southeast Colorado All-Hazards Planning Region; Figure 1 shows the location of these counties in relationship to each other and the remainder of the State.

- Each county within the Region has an EOP that covers additional aspects related to emergency response and recovery.

- In a major or catastrophic disaster, the Region and its associated counties may have difficulty in locating staff, equipment, and funds to devote to recovery, in the short-term as well as long-term and may require mutual aid from surrounding areas including additional states.

- Beyond the individual, family, and household, local and tribal governments have primary responsibility for managing community recovery efforts and preparing strategies to facilitate recovery. State, local, and tribal government officials need to clearly articulate recovery priorities to optimize effectiveness of supplemental assistance, overcome the impacts of the disaster, reestablish economic viability, and implement hazard mitigation measures.

- Within the Colorado Revised Statues (CRS) there are several chapters that could pertain to recovery.

- Factors which help support a successful recovery include organizational flexibility, interagency cooperation, informed decision-making, and coordinated public communication that is clear, consistent, and ongoing.

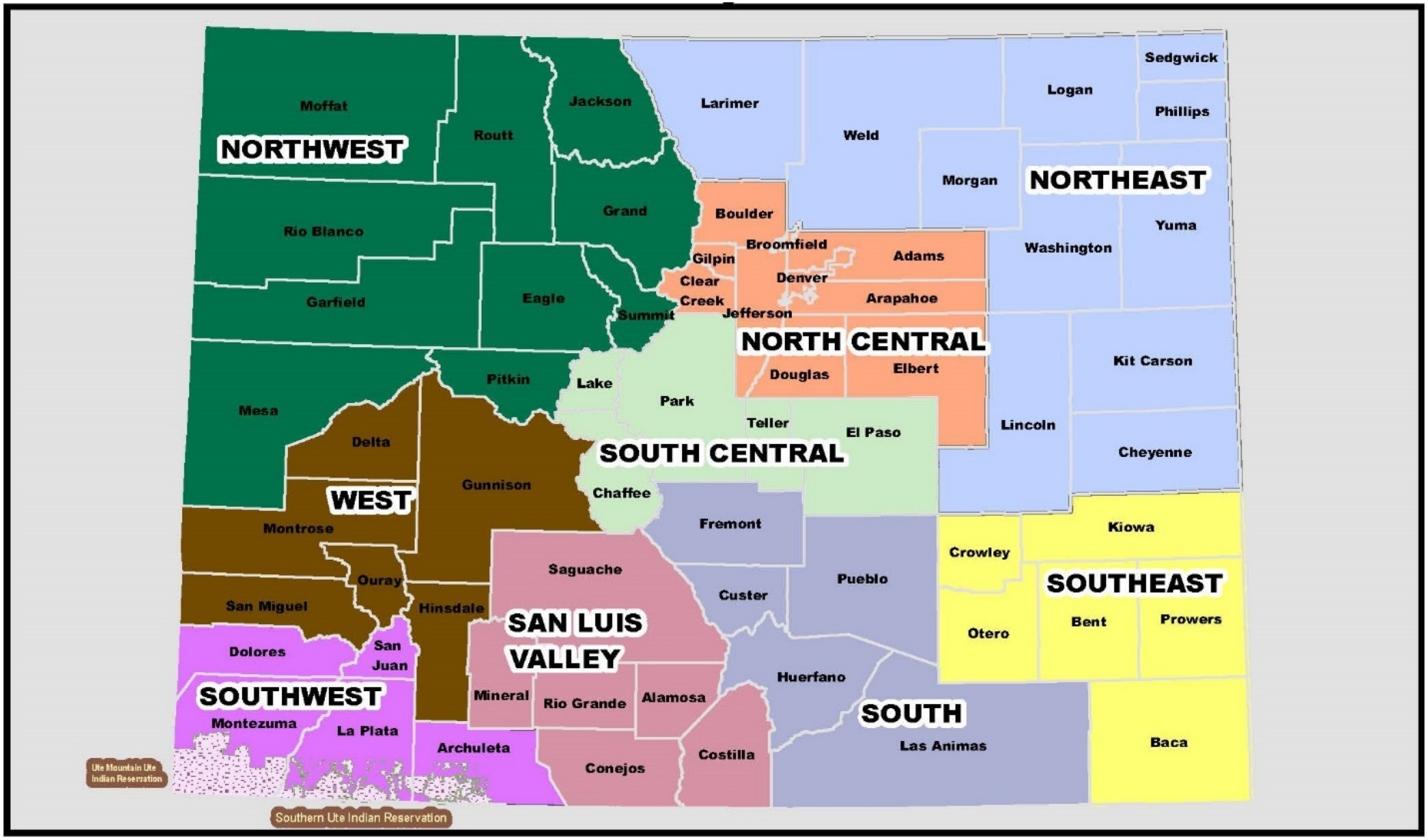


Figure 1: Colorado All-Hazard Regional Planning Areas

2.2 Assumptions

- A natural disaster that requires recovery efforts could occur at any time. A major earthquake likely presents the worst-case scenario for a disaster in the Region. The probability of a major disaster or emergency occurring and causing damage (resulting in large amounts of debris needing disposal) is high.

- A disaster can occur at any time and in any location, creating varying degrees of human suffering, property damage, environmental damage, and economic hardship.

- Large-scale events may overwhelm the capabilities of state, tribal, and local governments and result in the destruction of homes, businesses, education facilities, transportation infrastructure, utilities, health and medical facilities, and telecommunications systems.

- No Recovery Plans are currently found at the county or municipal level.

- For events that result in a federal emergency or disaster declaration, the duration and extent of federal support will be commensurate with the scope and enduring impacts of the disaster.

- Recovery activities begin in the early stages of response operations and may last for many years.

- Recovery operations described in this plan are designed to assist survivors and their families, restore institutions that sustain economic growth and confidence, rebuild destroyed property, reconstitute government operations and services, and mitigate against future disasters

- The overarching goal of recovery is to restore communities to a pre-disaster or better condition, unless restoration is not reasonable, feasible, or possible.

- The goal underlying long-term redevelopment is for the impacted community to become safer and stronger by rebuilding to be more resilient from future disasters.

- A request to the President to declare a major disaster or emergency may be made if the Governor finds that effective response and recovery from an event is beyond the combined response and recovery capabilities of the State and affected local or tribal governments.

- Based on the findings of a joint federal-state-tribal/local Preliminary Damage Assessment (PDA) indicating that damages are of sufficient severity and magnitude to warrant assistance under the Stafford Act, the President may grant an expedited major disaster or emergency declaration. (Note: in a particularly fast-moving or clearly devastating disaster, the PDA process may be deferred until safe to do so.)

- In addition to local mutual aid statewide assistance maybe required through the State Resource Mobilization Plan.

- In addition to the utilizing the State Resource Mobilization Plan, Assistance maybe requested from other states through the Emergency Management Assistance Compact (EMAC).

- For State-declared disasters that resulted from local needs for significant outside support, the Governor will convene the Colorado Recovery Task Force (unified coordinating group) to coordinate support for community recovery goals, priorities, resources, and capabilities.

3 Concept of Operations

The key concepts of recovery operations for this plan are based on the premise that the capabilities and resources (including mutual aid) of the affected local jurisdictions are exceeded by an emergency or disaster event and that government has requested state government assistance. Such assistance, when authorized, will be provided by the State or other designated agencies operating as part of an effort coordinated by the Division of Homeland Security and Emergency Management (DHSEM), operating on behalf of the Governor. The Governor may request assistance from the Federal government if the capabilities and resources of local, tribal, and state governments are exceeded or if the Federal government has unique capabilities not available at another level.

A coordinated effort of municipal, county, state, federal and private resources will be needed to recovery from a disaster or emergency.

Direction and control is accomplished using the Incident Command System (ICS) for field operations and management principles in accordance with the National Incident Management System (NIMS). The primary agencies for each Emergency Support Function (ESF) closely coordinate resource requests and information gathered from the field operations, under the overall direction of the Emergency Operations Center Manager. Local priorities for recovery should be:

A. Lifesaving
B. Life Sustaining
C. Infrastructure Protection and Restoration

The recovery process requires the coordination of many different entities servicing a city or county. This includes local, state, tribal, and federal governments, as well as non-profit, non-governmental, and community organizations. Beyond formal recovery roles, the inclusion of the whole community within the recovery process is essential. The whole community, as outlined in the National Disaster Recovery Framework (NDRF), provides guidance on how communities “collaborate and coordinate to more effectively utilize existing resources to promote resilience and support the recovery of those affected by an incident.”

The whole community concept lays the foundation for inclusive recovery, which is further bolstered by ESJ concepts. ESJ principles state that all impacted communities, including underserved populations, should have access to recovery services, resources, and programs. Recovery leadership should integrate the whole community and ESJ concepts throughout operations and maintain awareness of their significance in order to achieve an effective recovery. 34 Figure 3 below showcases the diversity of stakeholders involved throughout recovery operations.

Figure 2: Recovery Stakeholder Coordination and Whole Community Concept



During the recovery process, recovery leadership engages these stakeholders and recovery partners to identify community priorities and facilitate recovery strategies where appropriate and needed. **Table 1** outlines key recovery partners and stakeholders and their responsibilities.

Table 1: Recovery Stakeholders Roles and Responsibilities

Role	Suggested Responsibilities
Local Government Agencies, Tribal and First Nations, and Elected Officials	▪ Integrate state and federal recovery resources, oversee RSF operations, and manage financial aspects of mitigation, resilience, and recovery activities. ▪ Activate RSFs and coordinate with other RSF agencies to implement identified recovery strategies. Refer to **RSF Activation Checklist** for guidance on activation. ▪ Identify unmet needs and community priorities. ▪ Identify and provide services to support a Disaster Assistance Center (DAC). Refer to **Disaster Assistance Centers** and **Disaster Assistance Center Manager Checklist**. ▪ Support restoration of utilities and services (e.g., transportation, gas, water). ▪ Continue to coordinate implementation of Continuity of Operations (COOP) plans and COOP activities. ▪ Engage with the community to develop and implement recovery action plans (RAP) that are inclusive of community driven recovery priorities. Create engagement events that seek to obtain the input from underserved populations. Refer to **Recovery Action Plan Outline**. ▪ Identify personnel specialized in developing equitable engagement strategies and include personnel in planning processes. ▪ Incorporate resilience into the repair and rebuilding of public services. ▪ Communicate with the public about the progress and restoration of government services and recovery progress.

Role	Suggested Responsibilities
	▪ Integrate state and federal recovery resources and oversee RSF operations. ▪ Support engagement efforts by conducting outreach and providing resources to populations with access and functional needs (AFN) and underserved communities and populations.
Individuals and Communities	▪ Provide input on needs and priorities for recovery. ▪ Participate, and host where possible, in engagement events focused on developing recovery strategies. ▪ Identify available resources to assist with individual and community recovery. ▪ Promote and participate in preparedness activities pre-disaster.
Faith-Based Organizations	▪ Provide volunteers to assist with recovery operations. ▪ Collect and provide donations for recovery operations. ▪ Coordinate services and/or events to improve social cohesion and emotional well-being.
Private Sector	▪ Implement internal Business Continuity Plans (BCPs) to reestablish business' functionality. ▪ In coordination with insurance and other support agencies (e.g., Small Business Association [SBA]), identify needs to effectively restore business function and vitality. ▪ Support economic revitalization and recovery efforts. ▪ Coordinate with RSFs to identify areas for private sector engagement. ▪ Initiate restoration and repairs of privately-owned properties and infrastructure. ▪ Establish private public partnerships to support restoration and recovery of public property as agreed upon in established contracts and agreements, if applicable.
Non-Profits and Community Organizations	▪ Support engagement efforts by conducting outreach and providing resources to populations with AFN and underserved communities and populations. ▪ Provide insight to recovery partners on community needs. ▪ Conduct and support recovery operations. ▪ Provide resources and volunteers, as needed.

3.1 Recovery Phases

Recovery spans a continuum that starts with activities to restore vital life-support systems to at least minimum operating standards and extends through the rebuilding and redevelopment process, which can take years. Longer-term activities focus on efforts to return communities to normal, or pre-disaster, conditions or to a new and improved condition that incorporates principles of hazard mitigation, energy efficiency, smart growth, or other design concepts adopted by affected communities to guide redevelopment. Recovery occurs over an extended period of time that can be divided into phases of activity. The National Disaster Recovery Framework (NDRF) identifies three phases of recovery: short-term, intermediate, and long-term.

Figure 3: Recovery Phases Timeline



1. **Short-Term Recovery (Initial 14 Days following the Disaster Event)**

   Short-term recovery activities are initiated as the response phase winds down and the major impacts of the event are managed and stabilized. This phase is characterized by more detailed assessments of incident consequences, formulation of recovery strategies, and a gradual return to normal as services are restored and re-entry into the impacted area is allowed. Examples of short-term recovery activities include:

   - Providing mass care, including sheltering, food, water and other essential commodities for those displaced by the incident.
   - Providing disability related assistance/functional needs support services.
   - Conducting initial damage assessment of homes, businesses, critical infrastructure and services.
   - Clearance of debris from emergency transportation routes, debris removal and general cleanup.
   - Repairing major transportation systems and restoring interrupted utilities, communication systems, and other essential services.
   - Dissemination of emergency instructions and information to the public.
   - Provision of case management and behavioral health services to address individual needs of disaster survivors.
   - Implementation of a process for coordinating spontaneous, unaffiliated volunteers.
   - Implementation of a process for managing undesignated donations, possibly including collection and distribution facilities and a multi-agency warehouse.
   - Rescue and emergency care for pets and companion animals.
   - Staffing and management of disaster assistance centers (DACs) to provide information and assistance to survivors.

- In cases of federally-declared disasters, establishing a Joint Field Office with FEMA.

2. Intermediate Recovery (14 Days – 6 Months)

Intermediate recovery activities involve returning individuals and families, critical infrastructure, and essential government or commercial services back to a functional, if not pre-disaster state, including temporary actions that provide a bridge to permanent measures. Examples of Intermediate recovery activities include:

- Establishing a recovery prioritization and planning process, including formation of a long-term recovery task force and preparation of a recovery strategy.
- Continuing to provide case management and behavioral health services to survivors; in cases of federally-declared disasters completing applications for federal disaster recovery programs.
- Providing accessible interim housing and planning for long-term housing solutions.
- Ensuring critical infrastructure priorities are identified and incorporated into planning.
- Restoration of critical infrastructure and utilities, hospitals, care facilities, schools should continue to be evaluated.
- Certain industries will have their own continuity plans, but the ability to follow those plans may depend local resources.
- Private sector dependencies should be considered to help support economic recovery.
- Reconnecting displaced persons with essential health and social services.
- Developing a hazard mitigation strategy responsive to needs created by the disaster.
- Completing assessments of natural and cultural resources and developing plans for long-term environmental and cultural resource recovery.

3. Long-Term Recovery (6 Months and Beyond)

Long-term recovery follows intermediate recovery and may continue for months to years before redevelopment and revitalization of the damaged area is complete. It is the process of rebuilding or relocating damaged or destroyed social, economic, natural, and built

environments in a community to conditions set in a long-term recovery plan or strategy. Examples of long-term recovery activities include:

- Developing and implementing recovery processes and strategies and reflecting recovery planning and mitigation measures not already in place in a community's land use planning and management (comprehensive plans, master plans, zoning regulations).
- Addressing recovery needs across all sectors of the economy and community and addressing individual and family recovery activities and unmet needs.
- Educating the public regarding rebuilding, recovery, and returning to normal timelines, including educating around social recovery and the impacts of long-term work on health and psycho-social functioning.
- Rebuilding to appropriate resilience standards in recognition of hazards and threats.
- Rebuilding educational, social, and other human services and facilities according to standards for accessible design.
- Reestablishing medical, public health, behavioral health, and human services systems.
- Implementing mitigation strategies, plans and projects.
- Implementing permanent housing strategies
- Implementing economic and business revitalization strategies.

3.2 Government Roles

In most cases, recovery actions can be accomplished quickly, using municipal and, potentially, State resources. In other cases, however, the damage and resulting devastation in a region is so extensive that it can only be successfully managed through adequate pre-planning and the coordinated efforts of Federal, State, and local governments. Leveraging contracts with private resources may also be necessary. The roles of government and the private sector in managing recovery are discussed below.

3.2.1 Municipalities

The Emergency Manager of each jurisdiction is responsible for coordinating recovery activates with municipalities through the Emergency Support Function System. Each municipality will have a liaison at the County Emergency Operations Center (EOC). On behalf of each municipality the County's ESF-7 lead makes requests for assets to the State through the WebEOC database system. In addition, the ESF-5 Lead reports information on the recovery status of the

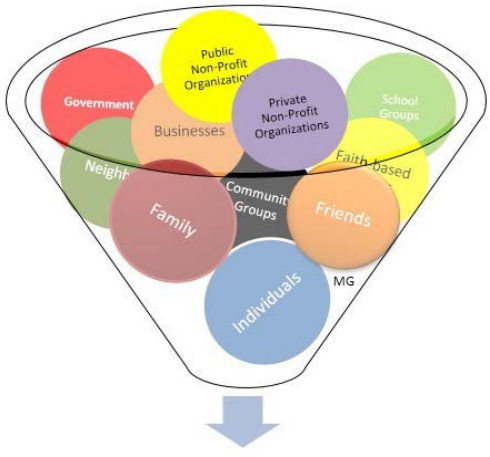
municipalities in joint situation reports furnished to the State. In this manner, each is aware of the recovery status and needs of each other and activities can be coordinated.

3.2.2 Counties

Elected officials of each political subdivision are responsible for developing and implementing recovery strategies that address the effects of emergencies and disasters within their jurisdictions, and for ensuring that local emergency operations, recovery operations, and hazard mitigation plans are updated and based on valid hazard identification and risk analyses. While many local emergency managers are knowledgeable in recovery operations and have training and experience with identifying goals and implementing strategies, local governments can request assistance with recovery from the State. If requesting assistance, local government and state government staff work together and emergency management or other local personnel are encouraged to participate on committees and multiagency recovery coordination calls. If a Presidential disaster declaration is granted, either the State or a Tribal government is the grantee depending on the request; local governments, including municipalities, counties, authorities and special districts, are sub grantees subject to eligibility determinations.

County Emergency Management Agencies (EMA) maintains the responsibility for overall coordination of recovery efforts on behalf of the County unless a Recovery Manager is appointed or hired by the local government. This does not eliminate the tactical level operations and responsibilities for recovery of each responsible agency. The Emergency Manager (EM) coordinates recovery efforts at the Emergency Operations Center (EOC) through the Emergency Support Function (ESF) system. Each Emergency Support Function Lead Agency is responsible for duties outlined in the corresponding ESF plan. Information is subsequently compiled and shared, appropriate resources and personnel are requested and recovery information disseminated to all key stakeholders, including the public via ongoing press releases.

Recovery is complicated and it takes participation from multiple sources to ease the burden; no one person or agency can accomplish all recovery related tasks alone. As a result, different aspects of recovery are led by different groups or individuals with expertise in that recovery area. Recovery resources and expertise come from a variety of places, including individuals and groups, the private sector, and the public sector. Sorting through all the different sources of assistance can easily overwhelm affected persons and communities. Not all recoveries need multiple resources, but when they do, coordinating and working together can (theoretically) solve more problems faster and more efficiently than each entity working alone.



Finding the right combination of assistance

3.2.2.1 ESF-1 Transportation

Movement of people, materials, goods, and services to the impacted area; re-entry assistance into the affected area. ESF-1 also pertains to Aviation/Airspace management

and control, transportation Safety, Restoration and Recovery of transportation infrastructure, Movement restrictions, Damage and impact assessments of the disaster.

3.2.2.2 ESF-2 Communications

Equipment, personnel, and resources to establish communications capabilities to support recovery efforts, coordination with telecommunications and information technology industries, restoration and repair of telecommunications infrastructure, protection, restoration, and sustainment of cyber and information technology resources, oversight of communications within the NIMS and response structures.

3.2.2.3 ESF-3 Public Works and Engineering

Clearing roadways from the county's thoroughfares, opening access roads to hospitals, utilities, and emergency response agencies necessary for Damage Assessment Teams (DAT) to pursue their surveys and search and rescue to continue their life-saving mission; flood control measures, closing dangerous roadways, damming hazardous materials spills.

3.2.2.4 ESF-4 Firefighting

Firefighting resources maybe requested to conduct damage assessments and provide assistance for recovery efforts in addition to support wildland, rural, and urban firefighting operations.

3.2.2.5 ESF-5 Information and Planning/Emergency Management

Collection and compilation of recovery–related information; development of Situation Reports, dissemination of recovery information, plans, and reports. ESF-5 will coordinate incident management and response efforts, issue mission assignments, financial management of the incident and recovery.

3.2.2.6 ESF-6 Mass Care

Food distribution, providing for extended sheltering needs; coordinating long-term placement of displaced disaster victims; providing updates on the status and population of shelters, providing information to shelter residents regarding how to access disaster assistance program information and services

3.2.2.7 ESF-7 Resource Management/Support

Logistical and resource allocation; procurement of supplies from existing resources, donations, and from commercial sources, if necessary; responsible for providing fiscal and managerial support as well as documentation of reimbursable expenditures

3.2.2.8 ESF-8 Public Health

Provision of health and medical resources for public health and medical care needs following a significant natural disaster or manmade event; assists in the operation of special needs sheltering, and other actions to protect public health, and to stabilize health and medical systems affected by the incident.

3.2.2.9 ESF-9 Search and Rescue

Conducting initial damage assessments while locating subjects, rendering emergency life support and transporting survivors to shelters or hospitals; providing information to EOC, and coordinating with State Search and Rescue Task Forces for effective recovery operations

3.2.2.10 ESF-10 Oil and Hazmat

Securing, removing and disposing of hazardous materials from the disaster area

3.2.2.11 ESF-11 Agriculture and Natural Resources

Capture, sheltering, medical care, feeding, relocation and reunification of injured and displaced animals with owners; acquisition of animal food /supplies from vendors; disposal of carcasses; relocation of sick and injured animals to permanent facilities, nutrition assistance, animal and plant disease and pest response, food safety and security, Natural and cultural resources and historic properties protection and restoration

3.2.2.12 ESF-12 Energy

Provision of resources to assist local agencies in restoring emergency power and fuel needs to normalize community functioning

3.2.2.13 ESF-13 Public Safety and Security

Facility and resource security, security planning and technical resource assistance, public safety and security support, support to access traffic, and crowd control

3.2.2.14 ESF-14 Private Sector Coordination

Organizations and individuals that are not part of any governmental structure, including for-profit and not-for-profit organization, commerce and industry who will obtain current information to make decisions, gain information related to operations, customers and promote increased information sharing through their networks. Private sector organizations can access more resources in many instances that may not be available to government agencies.

3.2.2.15 ESF-15 External Affairs

Dissemination of informational releases including disaster assistance information, descriptions of recovery efforts, actions being taken to alleviate problems, and information regarding available public assistance programs

3.2.3 State

Many State agencies, departments, and Governor's offices lead ESFs and RSFs, but even if not the designated lead, other state departments and agencies are also tasked with locating and securing resources and providing financial and technical assistance to local jurisdictions when local capabilities are overwhelmed by a disaster extending beyond mutual aid. Upon implementation of this implementation of the State Recovery Plan, all State departments, agencies, and Governor's Offices are responsible for participating in their assigned ESF and RSFs and coordinating with outside sources (governments, nongovernmental organizations etc.) to identify and leverage technical and financial support for recovery and/or support activities of the CRTF.

3.2.3.1 The Governor

The governor, as the executive head of State, has the constitutional and statutory authority to commit State and local resources (personnel, equipment, and finances) for the purposes of protecting citizens and facilitating recovery. This responsibility is exercised through the Division of Homeland Security and Emergency Management (DHSEM) as stated in executive orders, memorandums, and state plans. The Governor has the authority to request a disaster or emergency declaration from the President should the event warrant Federal assistance. The Governor's staff coordinates executive orders, external affairs, disaster request, and joint information efforts.

3.2.3.2 Governor's Authorized Representatives (GARs)

When a situation is of such severity and magnitude as to warrant a Presidential disaster or emergency declaration, the Governor appoints an Authorized Representative (GAR). The GAR serves as the State's representative for the execution of all necessary documents for disaster assistance following a Presidential declaration. A deputy or alternate GAR may also be designated. These positions can work out of the SEOC or, if applicable, an incident command post or JFO.

3.2.3.3 Colorado Division of Homeland Security and Emergency Management

In accordance with C.R.S. 24-33.5-701 et. seq., the Governor can delegate responsibility for the management and coordination of State response and recovery operations to the director of DHSEM. DHSEM is responsible for coordinating recovery efforts with State departments and others, providing assistance to local governments, and preparing, maintaining, and updating the state recovery plan. In emergency or disaster situations, DHSEM and/or Division of Fire Prevention and Control Directors provide recommendations to the Governor on State declarations of disaster or emergency,

requests for federal assistance, and provide situation reports on ongoing activities. DHSEM personnel administer the FEMA Public Assistance and Hazard Mitigation Grant Programs; DFPC personnel administer the FEMA Fire Management Assistance Grant Program. DHSEM also has responsibility for coordinating the following RSFs: damage assessment and hazard mitigation.

3.2.3.4 State Coordinating Officers (SCOs)

When a situation is of such severity and magnitude as to warrant a Presidential disaster or emergency declaration, the Governor appoints a State Coordinating Officer. The SCO serves as the Governor's principal assistant in the coordination and supervision of State response activities. The SCO acts in cooperation with the Federal Coordinating Officer. A deputy or alternate SCO may also be designated. These positions participate in daily briefings. These positions work in the SEOC and, if applicable, a JFO.

3.2.3.5 State Disaster Recovery Coordinator (SDRC)

When a Presidential disaster or emergency is declared, the Governor appoints a State Disaster Recovery Coordinator. The SDRC serves as the Governor's principal assistant in the coordination and supervision of recovery activities. The SDRC acts in cooperation with the Federal Disaster Recovery Coordinator.

This position participates in daily briefings. These positions work in the SEOC and, if applicable, a JFO.

3.2.3.6 Chief Recovery Officers (CROs)

Chief and Deputy Chief Recovery Officers are new positions created in Fall 2013 as a result of the major disaster declared in September. These positions are housed in the Colorado Recovery Office. CROs work with those affected and with providers to identify unmet needs and achieve goals outside those provided through traditional means. These positions provide input for daily briefings. These positions coordinate with the SEOC and, if applicable, a JFO.

3.2.3.7 Recovery Branch Chief (RBC)

The Recovery Branch Chief coordinates and tracks recovery activities both in the State emergency operations center and those operations occurring in the field. This position provides input to the Plans Chief and plans team for incident action plans for future operational periods. This position compiles damage information in anticipation of damage assessments. This position inputs entries into WebEOC. This position participates in daily briefings. This position works in the SEOC and, if applicable, a JFO.

3.2.3.8 Human Services Branch Chief (HSBC)

The Human Services Branch Chief coordinates and tracks Human Services ESF and RSF activities in the State emergency operations center and field operations and coordinates with the RBC. This position provides input for daily briefings and to the Plans Chief and plans team for future operational period incident action plans. This position compiles damage information in anticipation of damage assessments. This position inputs entries into WebEOC. This position works in the SEOC and, if applicable, a JFO.

3.2.3.9 Infrastructure Branch Chief

The Infrastructure Branch Chief coordinates and tracks infrastructure ESF and RSF activities in the State emergency operations center and field operations and coordinates with the RBC. This position provides input to the Plans Chief and plans team for future operational period incident action plans. This position compiles damage information in anticipation of damage assessments. This position inputs entries into WebEOC. This position provides input for daily briefings. This position works in the SEOC and, if applicable, a JFO.

3.2.3.10 Logistics – Resource Mobilization Officers (RMOs)

Resource Mobilization Officers work with response, recovery, and mitigation staff to process and secure necessary resources. Besides securing local resources, these positions coordinate resources through emergency management assistance compacts with other agencies across the country through a mutual aid agreement. These positions participate in daily briefings.

3.2.3.11 Operations Chief (OC)

The Operations Chief performs many functions including supervising the operations team, overseeing management of emergency communications and the emergency operations center, and reviewing and approving response, recovery, and mitigation resource requests.

3.2.3.12 State Disaster Recovery Manager (SDRM)

Colorado DHSEM has a designated State Disaster Recovery Manager charged with coordinating various aspects of recovery efforts, including oversight of certain grant programs and staff, oversight of state recovery liaison staff, and oversight of local recovery planning technical assistance. The SDRM works with the Plans Chief and team to determine actions and needs for future operational periods. This position provides input for the incident action plan and inputs entries into WebEOC. This position works in the SEOC and, if applicable, a JFO.

3.2.3.13 State Hazard Mitigation Officers (SHMOs)

DHSEM has designated a SHMO and Deputy. These positions serve as the State's representatives for mitigation activities, lead the Hazard Mitigation Recovery Support Function, and implement FEMA annual grant programs and the Hazard Mitigation Grant Program after a Presidential disaster declaration. These positions input entries into WebEOC and put in mitigation resource orders through Logistics. These positions work in the SEOC and, if applicable, a JFO.

3.2.3.14 State Individual Assistance Officers (SIAOs)

DHSEM has a designated SIAO. The SIAO serves as the State's representative to FEMA as FEMA delivers Individual Assistance programs after a Presidential disaster declaration. The SIAO coordinates with COVOAD member agencies, state agencies, and others providing human services. In cases of large disasters, a deputy SIAO may be designated. The SIAO provides recommendations on selections for the FEMA programs and represents DHSEM on work groups and committees. This position inputs entries into WebEOC. This position work in the SEOC and, if applicable, a JFO.

3.2.3.15 State Public Assistance Officers (SPAOs)

DHSEM has designated a SPAO and Deputy. These positions are involved with infrastructure preliminary damage assessments (PDAs); maintain documents when a Presidential declaration includes the Public Assistance Program, coordinate project worksheets with FEMA staff; oversee project billing and disbursement of federal and State funds; and coordinate construction project closeouts. These positions input entries into WebEOC and put in public assistance resource requests through Logistics. These positions work in the SEOC and, if applicable, a JFO.

3.2.3.16 State Voluntary Agency Liaison (SVAL)

DHSEM has a designated SVAL. This position coordinates with Human Services ESFs and RSFs and serves as a representative for DHSEM on unmet needs and voluntary agency committees and work groups. This position coordinates with partners to find ways to meet needs, provides input for daily briefings and for incident action plans, inputs entries into WebEOC, and provides recommendations on human services related issues. This position primarily works in the SEOC and field.

3.2.3.17 Regional Managers (CDOLA)

CDOLA has eight full-time regional managers and additional field staff located throughout the State. Regional managers and field staff assist local governments and community agencies before, during, and after events with defining issues, evaluating options, identifying solutions, and achieving results.

3.2.3.18 Regional Field Managers (DHSEM)

DHSEM has nine full-time regional field managers located throughout the State. Regional field managers assist local governments before, during, and after events with grant, preparedness, planning, training, exercise, and operations activities. Regional field managers generally collocate with tribal, county, and municipal emergency managers during local emergency operations center activations.

3.2.3.19 Division of Fire Prevention and Control (DFPC)

With respect to recovery, DFPC is the agency that compiles the request for the FEMA Fire Management Assistance Grant Program (FMAGP). When Colorado is granted a declaration for the FEMA FMAGP (Public Assistance Categories B and H), the Division Director of DFPC is designated the GAR and DFPC is responsible for administering the FMAGP program. DFPC works with potential sub grantees on all aspects of reimbursement for expenses deemed eligible under the program. DFPC also administers the Emergency Fire Fund.

3.2.3.20 Public Information Officers (PIOs)

DHSEM and the Governor's Office will coordinate the States Public Information aspects during response and recovery.

3.2.4 Principle State Departments That Lead Specific Recovery Efforts

State agencies, governor's offices, and departments are responsible for providing assistance to local jurisdictions when local capabilities are overwhelmed by an emergency or disaster or when subject matter expertise is requested. Upon implementation of the State Recovery Plan, State agencies are responsible for their assigned ESF and RSFs and supporting the efforts and requests of the CRTF. In recovery, the roles, responsibilities, and duties may differ depending on the magnitude of the disaster and the need for longer-term recovery actions. Each state department and Governor's office has a designated Emergency Response Coordinator (ERC) and alternate(s).

3.2.4.1 Colorado Recovery Officer (CRO)

New to the State of Colorado with the disaster of September 2013, the CRO works to resolve issues, provide messaging, and take on nontraditional State roles and responsibilities that other agencies, offices, departments, and partners do not normally perform.

3.2.4.2 Department of Higher Education (CDHE)

Through History Colorado, CDHE has responsibility for facilitating the Historic and Cultural Resources RSF. CDHE coordinates with external sources (governments, private sector, faith- and community-based organizations, nongovernmental

organizations etc.) to identify and leverage technical and financial support for recovery and participates on and supports the CRTF. Several other divisions, including but not limited to the Geological Survey, State Forest Service, and Cooperative Extension, have strong support roles and mission assignments in other RSFs.

3.2.4.3 Department of Human Services (CHDS)

Through ESF 6-Mass Care, Emergency Assistance, Temporary Housing, and Human Services, CDHS has responsibility for initiating and then monitoring the progress for the following RSFs: Donations Management, Housing, and Volunteer Coordination. CDHS coordinates with external sources (federal government, private sector, community-based organizations, etc.) to identify and leverage technical and financial support for recovery and participates on and supports the CRTF. Personnel are trained on and can provide assistance with the FEMA Individual Assistance Program. Once the Housing RSF is triggered, CDOLA Division of Housing takes over as the Housing lead. Donations Management and Volunteer Coordination are executed in cooperation with DHSEM.

3.2.4.4 Department of Local Affairs (CDOLA)

CDOLA has responsibility for the following RSFs: Assistance for Individuals, Households, and Small Businesses, Economic and Community Recovery, and Housing. Divisions of Local Government (DLG) and Housing (DOH) field representatives provide technical assistance to local elected officials and administrators and assist communities in identifying recovery goals and priorities. They also locate potential sources of financial assistance to support local recovery efforts. DLG field managers are trained in and can assist in administering the FEMA Public Assistance Program. CDOLA coordinates with external sources (governments, private sector, faith- and community-based organizations, nongovernmental organizations etc.) to identify and leverage support for recovery and participates on and supports the CRTF with respect to Assistance for Individuals, Households, and Small Businesses, Economic and Community Recovery, and Housing.

3.2.4.5 Department of Natural Resources (CDNR)

CDNR is responsible for coordinating the Environmental RSF. CDNR divisions of Water Resources and Water Conservation Board provide critical subject matter expertise in support of this and other RSFs. The Division of Water Resources is the lead for dam infrastructure and Water Conservation Board is the lead for levee and storm water and floodplain management structures under the Infrastructure RSF. CDNR coordinates with internal and external sources (governments, private sector, faith- and community-based organizations, nongovernmental organizations, etc.) to identify and leverage technical and financial support for recovery and participates on and supports the CRTF.

3.2.4.6 Department of Public Health and Environment (CDPHE)

CDPHE has responsibility for implementing the following RSFs: Behavioral Health Services, Debris Management, and Public Health. The Department also is the lead for water and wastewater treatment plants and medical systems under the Infrastructure RSF. CDPHE coordinates with external sources (governments, non-governmental organizations, private sector etc.) to identify and leverage technical and financial support for recovery and participates on and supports the CRTF.

3.2.4.7 Department of Regulatory Agencies (CDORA)

CDORA is charged with facilitating the Consumer Protection RSF and the Public Utilities Commission is the lead for energy systems under the Infrastructure RSF. CDORA coordinates with external sources (private sector, governments, nonprofit organizations etc.) to identify and leverage support for recovery and participate on and support the CRTF.

3.2.4.8 Department of Transportation (CDOT)

CDOT is the lead for transportation systems under the Infrastructure RSF and is also the lead for Rapid Needs Assessments (see the State Emergency Operations Plan, ESF 3). CDOT also supports several other RSFs. CDOT will coordinate with external sources (federal government, private sector, community- based organizations, etc.) to identify and leverage technical assistance and financial resources for recovery and will participate on and support the CRTF.

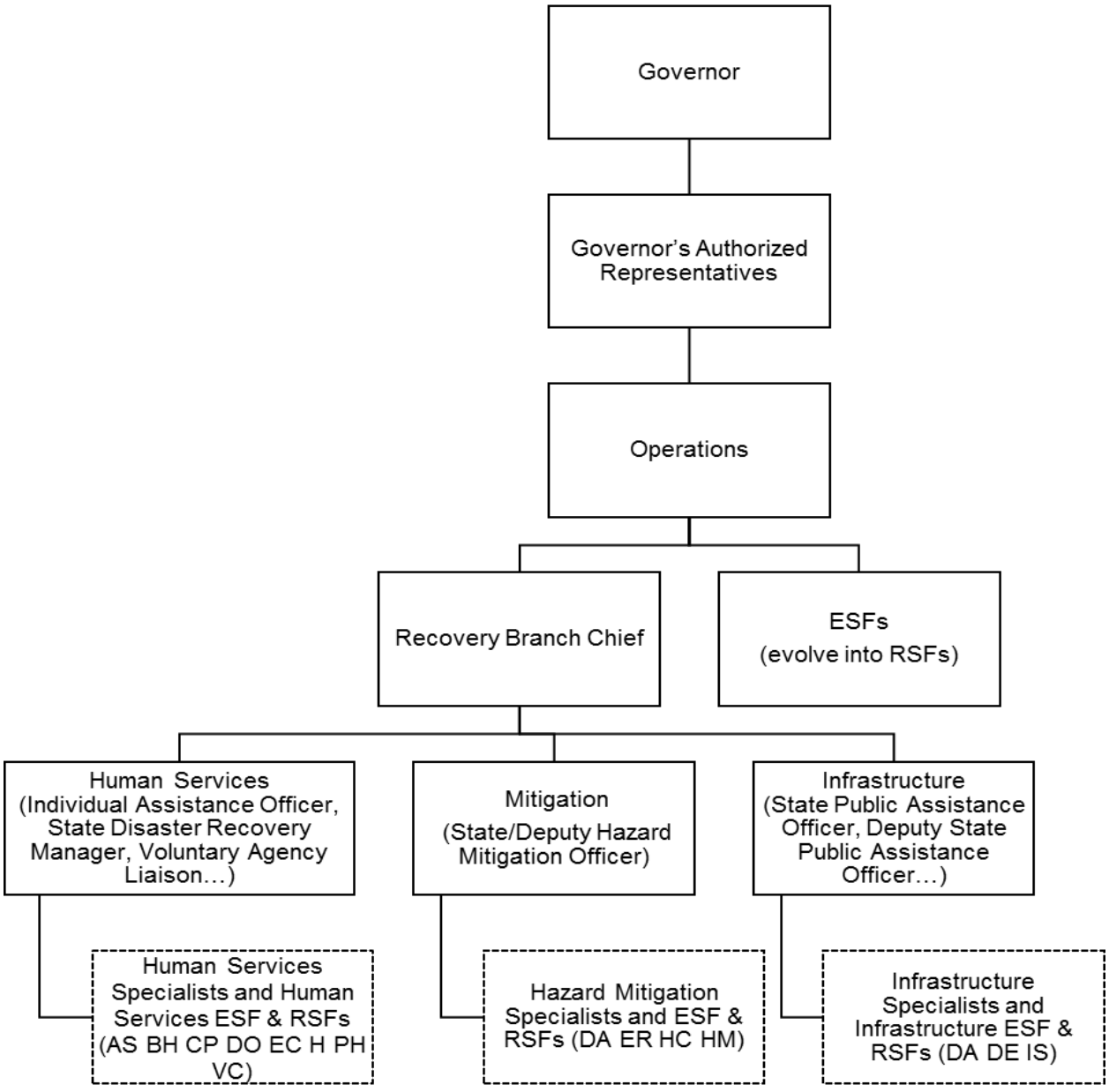


Figure 4: State Activation - State Declaration Structure

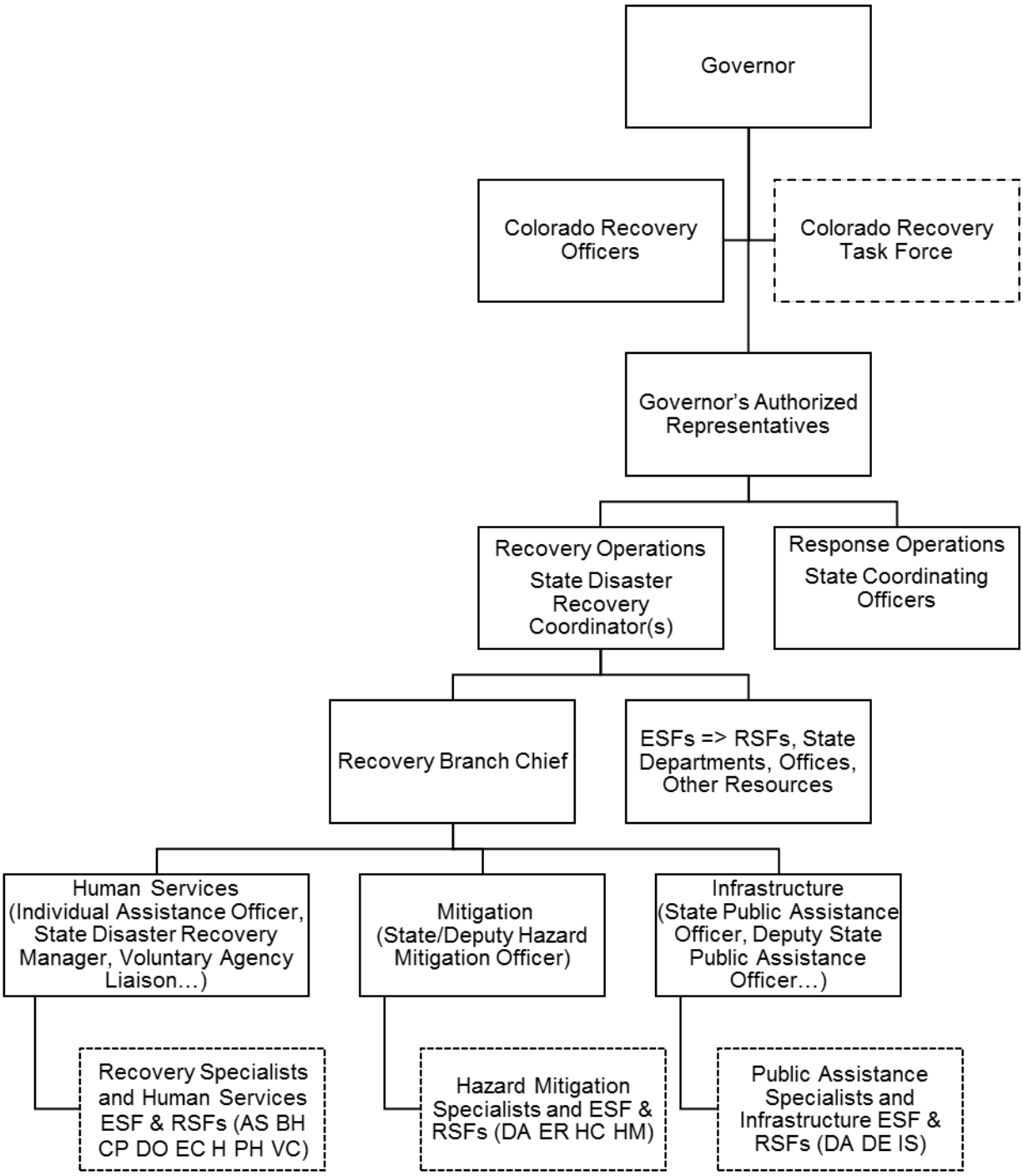


Figure 5: State Activation - State Declaration - Presidential Declaration

3.2.5 Federal

Pre-disaster, Federal departments and agencies work to build capacity for all Recovery core capabilities across the Federal RSFs (see Federal Coordinating Structures) through joint planning, training, and exercises. Guidance, training, and tools are developed for local, regional/metropolitan, state, tribal, territorial, insular area, and Federal governments and NGOs on pre-disaster recovery and mitigation planning and coordination activities. The Federal Government promotes resilience through guidance and grants to reduce the impacts of disaster across the Nation in addition to encouraging, coordinating, and developing continuity plans to ensure the uninterrupted continuation of essential services and functions by governmental and private sector entities. Government agencies also play roles as employers and need to have their own plans to protect and assist their employees after emergencies. In order to leverage the lessons learned and best practices of local communities and state, tribal, and territorial governments, the Federal Government may facilitate and coordinate peer-to-peer engagement to connect those who have navigated the recovery process.

The Federal Government uses the NDRF and its coordinating structures to engage necessary and available department and agency capabilities to provide enhanced coordination and support state, territorial, tribal, and local recovery efforts when necessary. Primarily, enhanced coordination of resources and support is needed when one or more incidents occur that exceed the capacity of state, tribal, or territorial resources that are exceptionally complex, involve multiple states, or impact Federal property, other areas of primary Federal jurisdiction, or national security interests. Addressing the unique recovery need of each affected community requires a national, collaborative effort of the whole community, including Federal agencies, local, regional/metropolitan, state, tribal, territorial, insular area, and Federal governments, community members, NGOs, and the private sector.

The Federal Government’s supporting role is especially important during the early weeks after a major disaster or catastrophic incident, when many local, regional/metropolitan, state, tribal, territorial, and insular area governments are overwhelmed with response and short-term recovery efforts. Federal agencies participate in and support recovery planning, capacity building, and mitigation efforts through technical assistance, expertise, or other assistance as requested and needed. The Federal Government encourages adopting recovery actions that reduce future risk from hazards and increase resilience while remaining consistent with national laws and policies. Many Federal agencies may directly or indirectly contribute to meeting recovery needs of affected communities by delivering assistance provided under their normal authorities. The duration and extent of Federal support is determined in part by the scale and enduring impacts of the incident and on the ability of the community to sustain recovery efforts on its own. The Federal Government’s disaster recovery management and support systems must be scalable and adaptable so changes can be made quickly and effectively to meet the needs of each specific incident. Progress towards recovery objectives is continually evaluated and support efforts adjusted as needed to meet the needs of affected communities, states, tribes, and territories.

The Federal Government also plays an important role in providing accessible information to the public and all stakeholders involved in recovery, including information about Federal grants and loans with potential applications to recovery. In coordination with local, regional/metropolitan, state, tribal, territorial, and insular area communicators, the Federal Government is responsible for ensuring that information is distributed in an accessible manner and is well understood, so that the public, Congress, the private sector, and all stakeholders are informed and aware of the process and have realistic expectations for recovery. The Federal Government also requires that all recipients of

Federal assistance comply with civil rights obligations under Section 504 of the Rehabilitation Act and Title VI of the Civil Rights Act of 1964. Federal agencies may also facilitate provision of geospatial and data analysis support to augment local, regional/metropolitan, state, tribal, territorial, and insular area data collection and analysis efforts.

Incidents and localities vary so widely that most recovery planning must be done at and focus on the local level. Nonetheless, some regional planning, coupled with Federal guidance or standards, can ensure the most effective application of outside resources and assistance. Major disasters and catastrophic incidents often cross municipal, county, state, and tribal jurisdictions. State or national coordination encourages unity of effort among government agencies and NGOs to achieve the optimal benefit for those affected.

3.2.5.1 Federal Disaster Recovery Coordinator

As needed, an FDRC is activated and deployed to implement a recovery operational coordination structure in close collaboration with local, regional/metropolitan, state, tribal, territorial, and insular area recovery leadership. The FDRC is a focal point for incorporating whole community inclusive recovery and mitigation considerations into the early decision-making processes, monitoring the impacts and results of such decisions, and evaluating the need for additional assistance and adjustments where necessary and feasible throughout the recovery. In accordance with national doctrine, the Federal agency or department that leads the recovery effort of the incident type appoints an FDRC. Depending on the situation, an FDRC may be appointed to support one state or tribe, or multiple states or tribes, to facilitate regional, or even national coordination.

The responsibilities of the FDRC are best met if the individual has an understanding of pre-disaster recovery planning as well as post-disaster recovery leadership and coordination. For example, FEMA maintains a cadre of credentialed FDRCs supporting the 10 FEMA Regions. These standing FDRCs have pre-established relationships with partners at the local, regional/metropolitan, state, tribal, territorial, insular area, and Federal levels in their region, including the private and nonprofit sectors. These standing FDRCs participate in and contribute to recovery training and exercises in their respective Regions to educate recovery partners and stakeholders about recovery planning and to ensure recovery management capacity is developed and maintained.

For emergencies and major disaster declarations under the Stafford Act, a Federal Coordinating Officer (FCO) is appointed. The FCO has primary responsibility for coordinating Federal response and recovery support to the whole community in accordance with the National Response Framework and NDRF. An FDRC may be appointed following a disaster in which enhanced recovery coordination support is needed. Once the FDRC is deployed, they work as a deputy to the FCO for all matters concerning disaster recovery. The FCO is responsible for the overall management of the Federal response to the incident. The FDRC is responsible for facilitating recovery coordination and collaboration between the Federal interagency and local, regional/metropolitan, state, tribal, territorial, and insular area governments; the private sector; and voluntary, faith-based, and community organizations. The FDRC partners with and supports the LDRM, SDRC, and TDRC to facilitate recovery. The FDRC works with Federal recovery partners to develop a strategic approach for coordinating Federal

assistance and policies based on input from local, regional/metropolitan, state, tribal, territorial, and insular area government recovery partners. Throughout the recovery support process, the FDRC will ensure that progress towards strategic objectives is tracked in order to ensure Federal resources are being applied efficiently and effectively. The FDRC will collaborate with the SDRC/TDRC to communicate a clear, consistent message in multiple formats to ensure an accessible, comprehensive, and culturally and linguistically appropriate communication outreach strategy.

The FDRC will ensure that recovery support involves the whole community, promotes inclusiveness and includes recovery communications and outreach to engage all stakeholders including individuals with disabilities, people with limited English proficiency, and others with access and functional needs. In most cases when an FDRC is appointed, he or she will engage advisors to assist with coordination of key issues such as disability integration, mitigation, and Unified Federal Review.

The FDRC is the lead for the operational core capability and actively coordinates Federal RSF (see Coordinating Structures) operations and activities to focus Federal resources on the most pertinent recovery needs and to promote partnerships between the Federal Government and stakeholders at the local, regional/metropolitan, state, tribal, territorial, and insular levels. The FDRC also actively seeks to incorporate mitigation measures into recovery support efforts through partnership with internal and external partners.

FDRC authority to facilitate recovery coordination and collaboration is derived from the appropriate authorities that apply to the incident. Other Federal departments and agencies carry out their authorities and responsibilities within the overarching construct of the NDRF. Nothing in the NDRF is intended to impede the ability of any Federal department or agency to take an issue of concern directly to the President or any member of the President’s staff.

3.2.5.2 Department of Homeland Security/FEMA

FEMA is the coordinating agency for Community Planning and Capacity Building RSF which unifies and coordinates expertise and assistance programs from across the Federal Government as well as nongovernmental partners to aid local and tribal governments in building their local capabilities to effectively plan for and manager recovery and engage the whole community in the recovery planning process.

3.2.5.3 Department of Commerce

The Department of Commerce coordinates Economic Recovery which is the ability to return economic and business activities (including agricultural) to a state of health and develop new economic opportunities that result in a sustainable and economically viable community. The Economic Recovery RSF integrates the expertise of the Federal Government to help local, regional/metropolitan, state, tribal, territorial, and insular area governments and the private sector sustain and/or rebuild businesses and employment and develop economic opportunities that result in sustainable and economically resilient communities after an incident.

3.2.5.4 Department of Health and Human Services

The Department of Health and Human Services coordinates the Health and Social Services RSF. Healthcare is an economic driver in many communities, which if damaged make this sector critical to most communities' disaster recovery. Social Services have a major impact on the ability of a community to recover. The support of social services programs for at-risk and vulnerable children, individuals, and families affected by a disaster can promote a more effective and rapid recovery. The Health and Social Services RSF outlines the Federal framework to support locally led recovery efforts to address public health, health care facilities and coalitions, and essential social service's needs. Displaced individuals in need of housing will also need health and social services support.

3.2.5.5 Department of Housing and Urban Development

The Department of Housing and Urban Development coordinates The Housing RSF which coordinates and facilitates the delivery of Federal resources to implement housing solutions that effectively support the needs of the whole community and contribute to its sustainability and resilience. Housing is a critical and often challenging component of disaster recovery, but must be adequate, affordable, and accessible to make a difference for the whole community.

3.2.5.6 U.S. Army Corps of Engineers

The USACE is the coordinating agency for The Infrastructure Systems RSF which works to efficiently facilitate the restoration of infrastructure systems and services to support a viable, sustainable community and improves resilience to and protection from future hazards.

3.2.5.7 Department of the Interior

The Department of the Interior coordinates The Natural and Cultural Resources (NCR) RSF which facilitates the integration of capabilities of the Federal Government to support the protection of natural and cultural resources and historic properties through appropriate response and recovery actions to preserve, conserve, rehabilitate, and restore them consistent with post-disaster community priorities and in compliance with applicable environmental and historical preservation laws and Executive orders.

3.2.6 Non Profit Organizations

Most direct disaster relief to individuals and families is provided by non-governmental sources, principally volunteer, faith, and/or community-based organizations with a recovery mission. Some organizations with existing Memorandums of Understanding (MOU) or Agreements (MOA) with Local, State and Federal agencies are assigned strong supporting or lead roles in both the Emergency Operations Plans and recovery plans.

Delivery of services under a local or state disaster declaration, MOU, or MOA go through the mission assignment process at the appropriate level. Under a presidential disaster declaration certain nonprofit organizations may, if eligible, apply for recovery

reimbursement funds under FEMA's Public Assistance Program or loans from SBA disaster programs.

3.2.7 For-Profit Organizations

Residents rely heavily on businesses supplying goods and services to meet their needs before, during and after disasters. The private sector contributes to community recovery in a variety of ways, including providing much needed goods and services, participating in a local and state recovery planning effort and coordinating with local, tribal, and state emergency managers when restoring private utilities and critical infrastructure. In order to minimize post-disaster revenue losses, organizations should have pre-disaster business continuity and restoration plans. If there is an SBA Agency or Presidential disaster declaration, depending on eligibility, some for-profit businesses may apply for SBA disaster loans for physical or economic injury.

3.3 Colorado Recovery Task Force (CRTF)

The intent of the Task Force is to bring together diverse resources to identify issues and collaboratively solve problems. Members serve as specialists in their areas of expertise and as conduits to resources and programs in their functional areas.

Staff brief the director of DHSEM, the director considers the circumstances, consults with other directors as necessary, and determines if a unified coordinating group is appropriate at the state level. If the determination is yes, the director works with the executive director to invite other office and department directors and convenes the Colorado Recovery Task Force. Task Force members are at the highest level unless an executive director officially identifies and authorizes a proxy, possibly a division director, to speak for and obligate resources on behalf of the department. For departments with more than one significant area of expertise or more than one assigned RSF, multiple division directors may be assigned. Agencies other than state are invited to participate as needed.

The division director chairs the Task Force and DHSEM supports the director by coordinating the CRTF process and coordinating and facilitating the reporting working group.

A unified working group at the staff program level is utilized to support the goals, decisions, and directions of the CRTF. This group coordinates actions regularly through conference calls. Subgroups, such as the Disaster Housing Task Force, are critical to the process and utilized as needed. Partner agencies, including local and tribal governments, nonprofit organizations, federal partners, and others are all encouraged to participate.

The CRTF and working group guide and coordinate State-level actions. These include:
- Establishing communications between recovery officials from affected jurisdictions and the Task Force to ensure members remain informed;
- Identifying community impacts for State and other assistance and determining unmet needs;
- Identifying potential actions and resources, directing resources, and reporting on actions taken;
- Preparing communications and messaging for leadership and stakeholders;
- Establishing priorities, milestones, and performance measures;

- Preparing a State-level strategy for technical and financial assistance to support local/tribal recovery goals and priorities, using a collaborative process; and
- Coordinating federal and other funding streams for recovery efforts and facilitating solutions to identified gaps and overlaps in assistance.

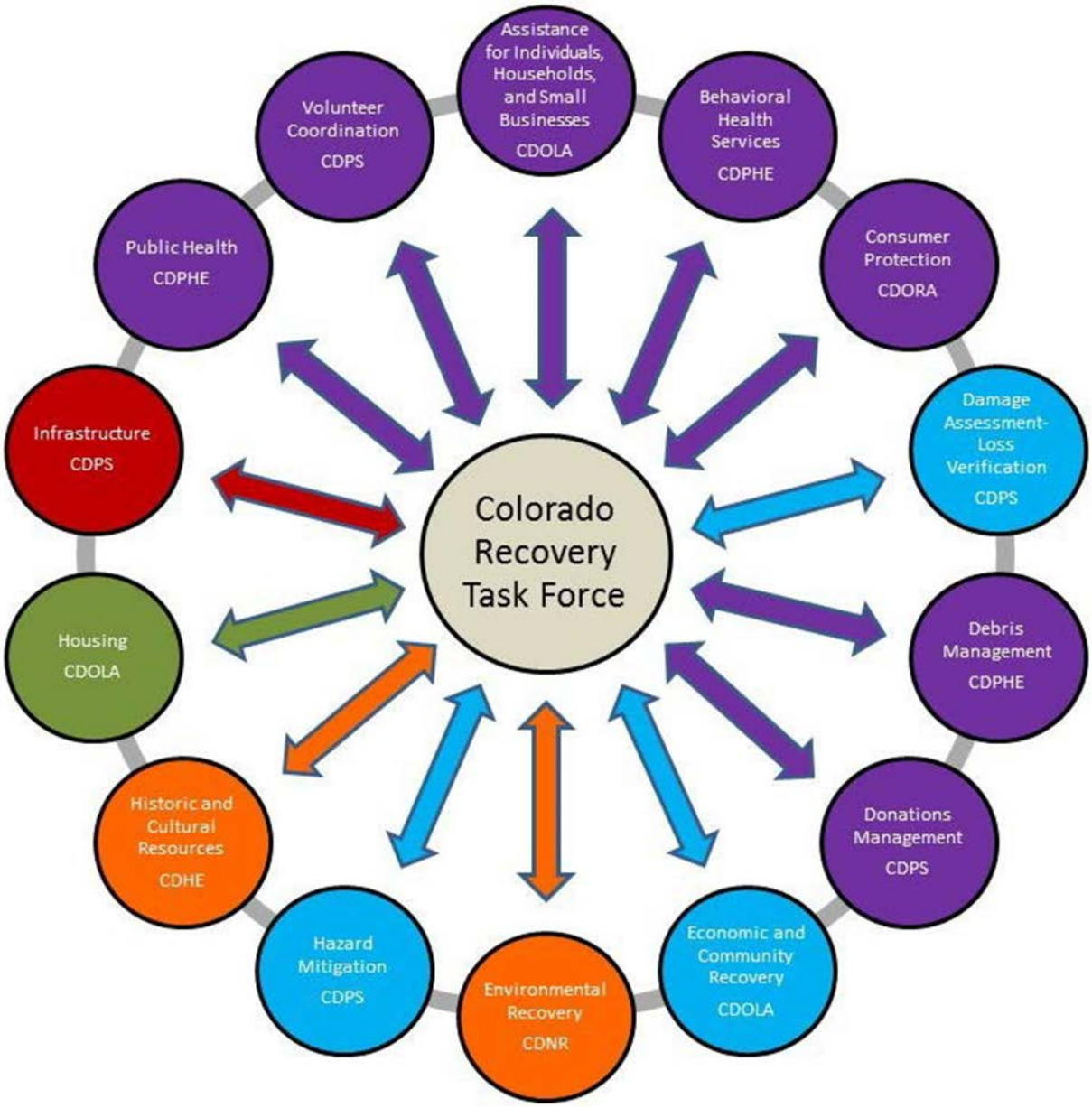


Figure 6: Relationship of RSFs and the Colorado Recovery Task Force

3.4 Public Information

Informing the public about debris management before an event strikes will make dealing with the aftermath easier. The PIO will coordinate with other public information agencies, through a Joint Information System (JIS) or Joint Information Center (JIC) to keep the public informed of all debris removal activities and schedules. Public notifications will be arranged immediately after a disaster and continually throughout the removal and disposal operation.

Notifications could include:

- Information bulletins
- Hotline responses
- Public service announcements for radio and television,
- Handbills (a loose printed sheet to be distributed by hand)
- Door hangers
- Newspaper notices
- Community Meetings
- Social Media postings/information
- The Ability to communicate in different languages for those who do not speak English
- American Sign Language Interpreters should be used

Notices will emphasis the actions the public can perform to expedite the clean-up process, including separating flammable and nonflammable debris, segregating household hazardous waste, placing debris at the curbside, keeping debris piles away from fire hydrants and valves, reporting locations of illegal dump sites or incidents of illegal dumping, and segregating recyclable materials. The public will also be kept informed of important debris removal activities such as debris pick-up schedules, disposal methods, and ongoing actions to comply with State and EPA regulations, disposal procedures for self-help and independent contractors, and restrictions and penalties for creating illegal dumps.

The PIO will be equipped to answer questions from the press and residents. In past disasters problems arose when people did not understand the clean-up process and therefore became impatient with the process and resorted to illegal burning, dumping, and other improper management methods. Public information will be disseminated following the guidance and procedures outline in ESF #15 in each county's EOP.

Counties may also consider advertising to encourage private citizens to submit their name and contact information if they are interest in using any by-products of debris removal, recycling, and reductions. The advertising would include the types of products that may be available and who to contact for more information regarding the program.

4 Operations

4.1 Process used by the Localities to Obtain State and Federal Disaster Assistance

When a major incident occurs, all available county assets will be utilized, and local mutual aid agreements implemented. If initial damage assessments indicate that county assets are or will be

tasked beyond their capabilities, the County Emergency Management Director notifies the State of Colorado Division of Homeland Security and Emergency Management of the situation through the Regional Field Manager (RFM) or the State EOC, if already operational.

Any assistance needed from the State or Federal government must be specifically requested by the local jurisdiction through WebEOC.

Emergency Management, through the ESF system, is responsible for making such requests to the State on behalf of the County and for placing requests into the system on behalf of the municipalities. At their discretion, the State and Federal government may anticipate needed assistance, and subsequently push advance resources related specifically to the life-safety mission to the County in advance of the request. However, they will not push any supplies into an at-risk area prior to an incident. The counties will not assume that supplies will be pushed, and therefore will request all forms of assistance, not otherwise known for a fact to be enroute, via WebEOC. In the event of failure of the established methods for requesting resources, innovation must be used to relay the appropriate requests for service, such as physical messengers, amateur radio operators, (if available) in order to facilitate and submit requests for resources.

4.2 Mobilizing State Resources

24-33.5-705.4. *All-hazards resource mobilization system - creation - plan - duties …*

…

(g) "Mobilization" means the process of providing, upon request and subject to availability, emergency resources beyond those available through existing interjurisdictional or mutual aid agreements in response to a request from a jurisdiction in which an emergency or disaster situation or local emergency incident that has exceeded or will exceed the capabilities of available local resources. The term includes the nonhost jurisdiction's authorization and approval for redistribution of resources either to direct emergency incident assignments or to assignment in communities where resources are needed to provide coverage when those communities' resources have been mobilized to assist other jurisdictions.

(h) "Mobilization plan" means the statewide all-hazards resource mobilization plan developed and utilized pursuant to this section.

There are three main ways State recovery resources are mobilized:

- ✓ An agency has a statutory or regulatory obligation to engage.
- ✓ An authorized agent of a state agency or a local government has requested RSF assistance and the assistance request is approved and filled.
- ✓ An RSF has identified gaps, offered assistance, and the assistance offer has been accepted by an authorized agent.



Figure 7: Recovery Support Functions

The State Resource Mobilization Plan is incorporated into this document by reference. All agencies eligible to order resources through the system, processing requests for resources through the system, or using the system in any way must become familiar with the plan.

24-33.5-705.4. All-hazards resource mobilization system – creation – plan – duties …

(1) (a) The general assembly hereby finds, determines, and declares that the statewide all-hazards resource mobilization system, which provides for efficient mobilizing, tracking, allocating, and demobilizing emergency resources and ensures that a requesting unit of government receives proper equipment and qualified personnel, is necessary to provide resources to any emergency incident beyond local capabilities and thus necessary to protect life, property, the environment, and cultural and economic resources. The general assembly further finds and declares that the need to ensure that the state is adequately prepared and able to address large-scale emergencies and disasters requires a mechanism to reimburse state agencies, tribal governments, and local

jurisdictions that respond to requests for help from other jurisdictions in times of need. It is therefore necessary to:

(I) Formulate the policy and organizational structure for large-scale mobilization of emergency resources in the state through creation of a statewide all-hazards resource mobilization system;
(II) Establish the means by which state agencies and tribal and local jurisdictions may be reimbursed for expenses they incur when mobilized by the executive director pursuant to the mobilization plan; and
(III) Provide a procedure to reimburse a host jurisdiction when it has exhausted or will exhaust all of its own resources and the resources of its local mutual aid network available under a mutual aid or interjurisdictional agreement.

(b) In accordance with section 24-33.5-713, it is the intent of the legislature to encourage political subdivisions to enter into mutual aid and other interjurisdictional agreements. Such agreements produce enhanced emergency response and are thus essential to protecting the public peace, safety, health, and welfare, including the lives and property, of the people of the state of Colorado.

For recovery there is an inherent assumption that if resources are ordered and mobilized through the State system, that the ordering agency is paying for that resource unless an executive order clearly states state disaster emergency funds may be used for recovery purposes *and* funds are designated for that type of activity ***or*** another agreement has been made and is stated clearly and signed off on in the system. Any verbal agreement that takes place should be memorialized in writing by both parties as soon as possible to ensure no funding misunderstandings occur. Only authorized representatives (agents) of DHSEM *and* the other party may negotiate such an agreement.

Strengths

Using the resource mobilization system and WebEOC to order response and recovery resources ensures several important things occur: a record of the order is maintained; once in the system the order can be assigned to the appropriate ESF, RSF, branch chief, or the logistics team; the status of the resource order can be tracked; and a trail of necessary documentation is created for both the ordering agency and DHSEM for any potential State or Federal reimbursement or audit that might occur later on.

Challenges

Unauthorized agents: All agencies should ensure all employees working emergencies and disasters are aware of their status as not all employees of an agency are authorized to order resources. There are several iterations of this: unauthorized staff requesting resources from 'outside' the SEOC (eg. unauthorized staff from a local emergency operations center hands in a request without getting it approved first from the authorized agent). It is assumed if an agency has its own staff working in the SEOC, that staff person is allowed to order resources from her/his own agency.

Duplication: During events, many entities order resources through different structures. Systems through which resources may be ordered include, but are not limited to, incident commands, local emergency operations centers, the state emergency operations center, other state operations centers, federal systems, volunteer agency systems, independent ordering systems, and direct requests to particular agencies. Coordinating all efforts is almost never 100 percent achievable, however, the more coordination there is, the less likely the chance of over ordering and having to pay for duplicate services or resources.

WebEOC access: WebEOC is internet-based, however, not all locations are internet accessible. Also, WebEOC is not user friendly on small personal devices for those persons out in the field. This may be overcome by having another authorized staff in the requesting agency type in the request.

Timing: If ordering resources late in a very long recovery, it might be prudent, if using WebEOC, to let DHSEM recovery staff know a resource request has been submitted. While DHSEM operations and field services staff monitor the system on a daily basis, DHSEM recovery staff do not. Operations staff will certainly let recovery staff know if a resource request is generated, however, if timing is critical and rapid deployment of resources is essential to the mission, a heads up is always preferred.

Mutual Aid

The State encourages mutual aid and other interjurisdictional agreements.

24-33.5-705.4. All-hazards resource mobilization system - creation - plan - duties -

…

(b) In accordance with section 24-33.5-713, it is the intent of the legislature to encourage political subdivisions to enter into mutual aid and other interjurisdictional agreements. Such agreements produce enhanced emergency response and are thus essential to protecting the public peace, safety, health, and welfare, including the lives and property, of the people of the state of Colorado. …

Strengths

Mutual aid is one way to surge resource without going through an extensive procurement process. Agreements fully thought out ahead of time save much needed time and energy during an event. Some resources might be capable of mobilizing immediately.

Challenges

Multiple jurisdictions might need the same resources at the same time. It's prudent to cast a wider net so as to allow for resources beyond neighboring jurisdictions.

Recovery Requests: Many existing mutual aid agreements between entities don't take into account recovery resource requests. It is prudent to review existing mutual aid agreements and revise as necessary.

Funding: Many mutual aid agreements are fuzzy on details relating to funding requested resource assets. This can lead to confusion and misunderstandings as to which entity is covering potential costs when trying to close out requests.

Asset management: Not all jurisdictions can gracefully manage additional assets during an event. Asset management must be a part of the consideration when ordering recovery resources. Presuming all assets will be self-sufficient is not a safe assumption.

Demobilizing: Demobilizing at the appropriate time is key; keeping assets longer than necessary incurs additional costs.

Emergency Management Assistance Compact (EMAC)

One of the deepest pockets of resources for the State to tap into that is both trained and experienced in recovery planning and operations is other States and their local governments, particularly those States

with a plethora of events. A mechanism for state to state mutual aid developed years ago and implemented in Colorado very successfully is the Emergency Management Assistance Compact. To add to the strength of this program in Colorado, the Resource Mobilization Program Manager for the State regularly attends national and regional EMAC forums. The DHSEM Mitigation and Recovery Team has used EMAC extensively to bring in other state staff to fill in gaps. While not State of Colorado staff, DHSEM has always requested those sent from other States be knowledgeable and experienced. EMAC resource requests are input into WebEOC. ESF7 Resources Support (Logistics) will work with the requesting entity on filling the request.

Financial Management

The SEOP Financial Management Support Annex is incorporated into this document by reference. The annex provides basic financial management guidance to state departments and political subdivisions responding to and recovering from disasters. Each entity is responsible for ensuring their financial management systems meet all applicable requirements. For any agency it is critical to engage the finance staff as early as possible in the response and recovery process.

Agencies using force account labor in times of emergency or disaster must review all relevant personnel policies beforehand to ensure they are in order. Depending on the agency's structure, agencies must take into account potential use of both exempt and nonexempt employees. Also to consider, if an agency is staffing the SEOC, shifts may be as long as fourteen hours a day; twelve hours per shift plus joint briefings on both ends. Overtime and compensation might be factors in determining which staff to use when. Agencies looking for reimbursement if the FEMA Public Assistance Program is triggered should review FEMA program policies and guidance and keep excellent and detailed records.

If considering requesting reimbursement for state or federal funds, the general rule is – the more documentation and the higher the quality the better. Lack of documentation or documentation that doesn't adequately substantiate the expenses will be returned. Ensure request forms are filled out properly and authorized persons have signed the forms.

Strengths

A critical asset to any recovery operation is fully informed finance staff. There are periodic trainings on disasters finance; ensure those responsible for finance are well educated on and in full understanding of the requirements. Not bringing in finance people on the front end can be a costly mistake (finance staff should be in the first wave of people coming through the door to work a disaster or emergency).

Challenges

A general sense that all procurement rules, including federal rules, can be bypassed in times of emergency: This is not the case. It is important to understand the rules for each program so an entity can remain eligible for reimbursement or simply to pass an audit.

24-33.5-704. *The governor and disaster emergencies …*

…

(7) In addition to any other powers conferred upon the governor by law, the governor may:
(a) Suspend the provisions of any regulatory statute prescribing the procedures for conduct of state business or the orders, rules, or regulations of any state agency, if strict compliance with the provisions of any statute, order, rule, or regulation would in any way prevent, hinder, or delay necessary action in coping with the emergency;

! Challenge: Do not presume this statement in the CRS or in any executive order is automatically interpreted by everyone to mean any and all State statutes are suspended during times of disaster emergency or that all actions are exempt. This is especially concerning if federal laws are involved. For agencies procuring in times of emergency or disaster, ensure procurement takes into account proper and lawful procedures, especially if expecting any type of federal or State reimbursement.

A somewhat extreme but illuminating example of the above: There is a Governor's EO allowing for emergency procurement during the first 30 days of an event. The SEOC is activated, it is day two, there is an influenza going around, and consumable supplies such as toilet paper and sanitizer are needed immediately to address the staff's health and sanitation needs. This could be considered an emergency procurement.

Procurement: All agencies must ensure procurement meets all applicable requirements if and when requesting reimbursement from DHSEM. When mixing and matching funds and then requesting reimbursement, it is imperative to know and understand the requirements of each funding source. A general rule to follow is to meet the most restrictive of requirements. *If expecting to request federal fund reimbursement, ensure familiarity with federal requirements before starting the procurement process!*

Using contracts that don't allow for reimbursement down the line: If anticipating any federal reimbursement, ensure contracts used are acceptable. Example: FEMA does not allow cost plus percentage of cost contracts or time and material contracts with no caps, especially beyond the period for emergency work.

Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

Title 2, Subtitle A, Chapter II, Part 200 (Note: Also commonly known as the 'supercircular'.)

Federal Register/Vol. 78, No. 248/Thursday, December 26, 2013/Rules and Regulations

…This final guidance supersedes and streamlines requirements from OMB Circulars A-21, A-87, A-110, and A-122 (which have been placed in OMB guidances); Circulars A-89, A-102, and A-133; and the guidance in Circular A-50 on Single Audit Act follow up.

For Federal reimbursement:
- Per Federal Register Volume 78 Number 248 §200.305, "The non-Federal entity must maintain advance payments of Federal awards in interest-bearing accounts and interest earned on Federal advance payments deposited in interest-bearing accounts must be remitted annually."

- Per Federal Register Volume 78 Number 248 §200.319, "The non-Federal entity must use its own documented procurement procedures which reflect applicable State and local laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in this section." While these regulations apply to federal funds, entities must comply with state procurement guidelines for construction projects, as outlined in 1 CCR 101-9, that receive state funding.

Per Federal Register Volume 78 Number 248 §200.319 (and the prior governing CFRs), "All procurement transactions must be conducted in a manner providing full and open competition consistent with the standards of this section." While these regulations apply to federal funds, it is recommended that open and competitive procurement be practiced on all projects, including those only receiving state funds. All entities are encouraged to be familiar with open and competitive procurement practices.

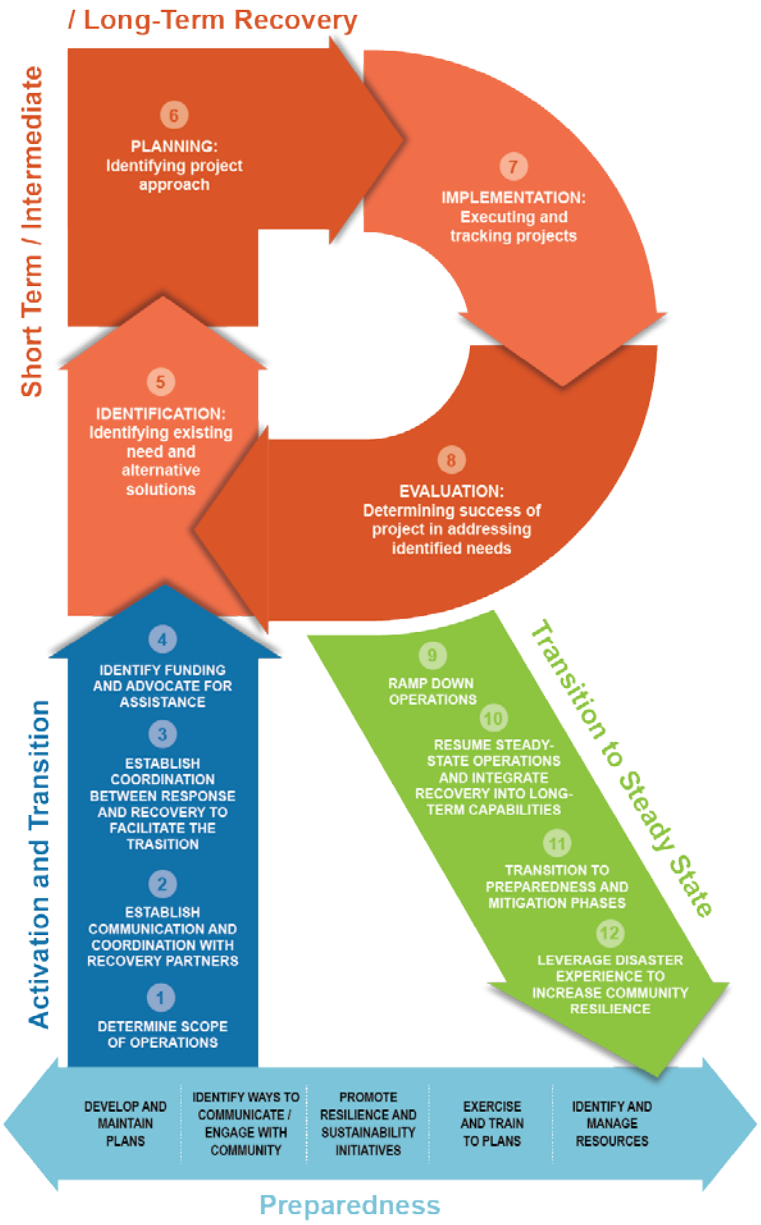
- To expedite repayment, entities are encouraged to maintain detailed documentation of their labor and equipment use. Detailed documentation may include: hourly time sheets including hourly wages and fringe benefits split out by day, site, and employee; activity and equipment summary sheets that include specific equipment name, equipment codes, rates, and operator; inventory that includes material description, date bought, and date used.

- Per the Federal Register Volume 78 Number 248 (and the prior governing CFRs), entities reaching designated thresholds of expended federal funds must have single audits or program specific audits conducted. The threshold is dependent upon the disaster declaration and award date.

4.3 Recovery Coordination

As previously stated, successful disaster recovery requires a joint effort among all recovery stakeholders within the county or city, and across all levels of government. While the DRM provides overall leadership for disaster recovery, a well-coordinated recovery effort can accelerate the recovery process; address community needs; and limit the burden of recovery across all entities. The following sections outline county and city operations throughout the recovery process from pre- to post-disaster. Figure 7 provides an overview of the continuum of recovery operations, which will be expanded upon throughout this section.

Figure 8: Overview of Recovery Operations



4.3.1 Preparedness

Pre-disaster recovery planning activities will streamline recovery operations. Having plans in place and agreements in hand will make coordination of recovery operations run smoothly and more efficiently. These activities and associated roles and responsibilities are provided in Table 2, and should be carried out by stakeholders that play a role in recovery (e.g., local government agencies, elected officials, nonprofit organizations, private sector).

Figure 9: Preparedness Operations

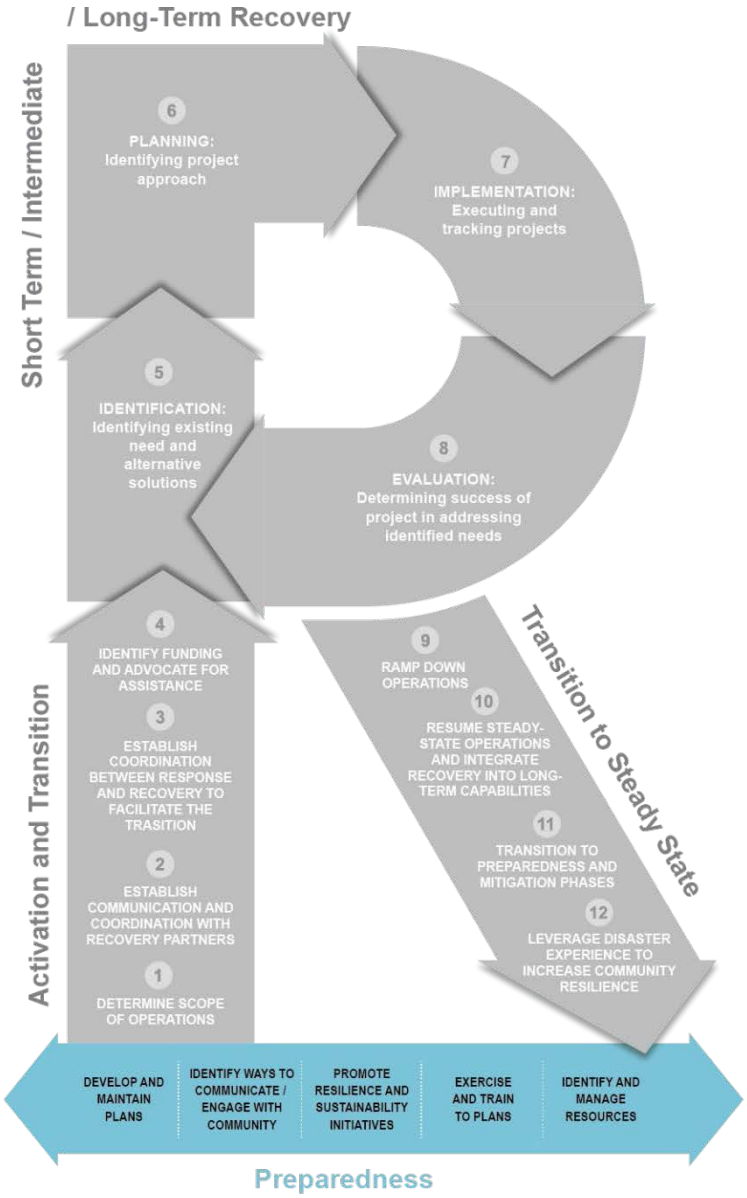


Table 2: Recovery Preparedness Activities

Preparedness Activities	Tasks
Develop and maintain plans	▪ Develop, update, and maintain local and regional recovery plans. ▪ Identify and incorporate best practices and lessons learned from real-world events, training, and exercises into plans to increase resilience. ▪ Develop and maintain local and recovery plans and associated tools. ▪ Establish primary, alternate, and tertiary means of communicating between jurisdictions during recovery when normal communications systems may remain compromised. ▪ Develop local recovery governance structure. Establish and implement regular convening of recovery body to identify next preparedness activities, identify gaps in capability, and coordinate mitigating and adapting to future risk. ▪ Identify and validate agency roles and responsibilities to create continued buy-in for recovery plans and inclusion of newly identified stakeholders. ▪ Identify the need for and develop additional plans to increase resilience and mitigation actions. Other plans include but are not limited to: o BCPs, o Fuel Plans, o Donations and Volunteer Management Plans, o Cost Recovery and Recovery Financing Plans, o Redevelopment Plans, and o COOP Plans. ▪ Develop strategies and procedures for addressing structures and land use issues after a disaster. ▪ Create a mechanism of prioritizing projects during recovery. ▪ Identify areas where existing plans can address underserved populations.
Identify ways to communicate and engage with the community using *whole community* principles	▪ Develop, maintain, and update a phased short-term, intermediate, and long-term recovery public information and communication plan. Check internal and external communication processes are clear and efficient before and after a disaster. The plan should address various disaster situations (e.g., loss of power or internet) to create adaptability. ▪ Include processes for communicating priorities to senior leadership and critical stakeholders; as well as priorities and expectations to the community. ▪ Establish notification processes for when plans are activated or partially activated. ▪ Facilitate network and relationship building. This includes facilitating regular communication among local recovery partners (e.g., through forums); and participate in any regional communication efforts to strengthen relationships and identify shortfalls and needs. ▪ Create events to educate members on recovery and resilience-related activities.

Preparedness Activities	Tasks
	▪ Promote individual disaster preparedness, in alignment with Regional and Colorado State recommendations, to empower individuals and communities to drive their own recovery (e.g., be prepared to be self-sufficient for two weeks). ▪ Maintain a directory of recovery stakeholders at the local level. ▪ Conduct outreach to tribes, AFN, and underserved populations to support equitable and inclusive engagement.
Promote resilience and sustainability initiatives	▪ Drive the development of regional community assessments (e.g., economic, housing, community health, land use, environmental and cultural resources) to serve as the baseline against which future impacts can be measured. Assessments should also identify capabilities and capacity to facilitate recovery with existing staff. ▪ Develop technology, online platforms, and mobile apps to support ongoing needs assessments during a disaster by collecting data. ▪ Incentivize community and private sector preparedness and mitigation. ▪ Identify where resilience can be improved to assist AFN and underserved communities. ▪ Facilitate COOP planning across *the whole community*, including within the private sector (e.g., small businesses, private healthcare institutions), and underserved individuals and communities. ▪ Establish disaster information sharing networks within and between each RSF. ▪ Consider the mitigation of significant housing, economic, infrastructure, natural and cultural resources, and health and social services loss in emergency response planning. ▪ Integrate mitigation, recovery, and other pre-disaster plans and activities into region wide community planning and development activities. ▪ Create incentive programs to encourage the implementation of resilience measures. ▪ Identify potential inhibitors to stabilizing affected communities and/or industries within the region. ▪ Identify statutory, regulatory, and policy issues that contribute to gaps, inconsistencies, and unmet needs in regional recovery. These can include zoning regulations, building codes, and permitting processes.
Exercise and train to plans	▪ Exercise and train to local and regional recovery and response plans, communications plans, and SOPs. ▪ Develop after-action reports (AARs) and improvement plans (IPs) with appropriate corrective actions to effectively train to plans. o Identify areas where actions may not lead to the most equitable or inclusive results. ▪ Incorporate the *whole community* in training and exercises to foster relationships; establish awareness and understanding of recovery roles and responsibilities

Preparedness Activities	Tasks
	(especially for non-emergency management personnel); and create organizational buy-in to recovery plans. o Specifically, promote inclusion of the private sector and non-governmental organizations into local and regional exercises.
Identify and manage local resources	▪ Collect and compile Geographic Information System (GIS) data and data sources. Examples include, but are not limited to: o Number of impacted residents; o Existing and proposed and use and zoning; o Building footprints (residential and commercial); and o Public, environmental, and cultural assets. ▪ Develop data-sharing agreements within and between local governments and community organizations. ▪ Train staff for critical recovery positions (i.e., DRM, Recovery Officers, RSF Coordinators). o Conduct equity and social justice training so that staff are aware of ESJ considerations. ▪ Create and maintain a database of local resources to support recovery operations. ▪ Identify current resources and capabilities that can be used post-disaster to, for example, provide housing solutions to those impacted by the disaster (e.g., policies and ordinances, housing databases, available housing stock, areas of land suitable for use or development). ▪ Identify funding opportunities that can be accessed pre- and post-disaster. ▪ Allocate available county or city funds to support disaster recovery. ▪ Regularly assess local capabilities and gaps to evaluate the readiness and capacity of personnel, resources, and logistics support systems to respond to recovery needs. ▪ Help pre-identify staff from emergency officials, building inspectors, and non-emergency management office staff or personnel who do not have responsibilities immediately following a disaster to help surge recovery support. ▪ Establish agreements (e.g., mutual aid agreements, stand-by contracts) to address assessed gaps, as appropriate. ▪ Pre-establish funds for redevelopment through non-profit organizations. ▪ Work with nonprofit organizations and necessary private sector affiliates (e.g., bank holding company) to identify the need for and establish a Community Development Bank (CDB) CBDs are banks that assist the underserved by providing small-dollar loans to low- and moderate-income populations, as well as small businesses, schools, and hospitals[45]

4.3.2 Activation and Transition

Recovery begins at the time of response immediately after a disaster. The information and intelligence gathered during response will directly inform decision makers about the recovery resources needed to address the continuing and emerging recovery needs of the impacted communities. Response operations will end shortly after an incident, therefore, close coordination between response and recovery is key to a seamless transition of operations.

Activities performed during response are equally as important as pre-disaster planning to support the efficiency and effectiveness of recovery operations post-disaster. The foundation for early recovery processes and decision-making, as well as short-term operations, are established and carried out upon activation of recovery plans and recovery support functions (RSFs) throughout the transition.

Disaster Assistance Centers

The Disaster Assistance Centers (DACs) provide a single facility where individuals, families, and businesses can access available disaster assistance programs and services. Refer to **Disaster Assistance Centers** for detail guidance on establishing and managing a DAC, including a *DAC Coordinator Job Aid*. DACs will provide local recovery managers with valuable insights about recovery needs that will guide operations.

RSFs provide an organizational structure to organize recovery operations from short-term to long-term. RSFs are activated at the discretion of the DRM in coordination with the county or city emergency management director, depending on the needs and scope of the disaster. RSFs can be activated immediately during response operations or can be activated months after the initial disaster depending on additional communities needs that are identified during recovery. Additional information about RSFs can be found in Recovery Support Functions. Refer to the RSF Activation Checklist for activation thresholds for each RSF.

The transition from response to recovery is gradual and requires continuous coordination and information sharing between response and recovery leadership. Recovery operations depend on the work completed in response (e.g., damage assessments, community engagement, stabilization measures) to streamline recovery efforts. Leadership positions within the response structure can facilitate this transition. This position can be filled by the jurisdiction depending on the need. Examples for recovery positions in response operations can be seen in Table 3 below. Recovery structures build off these foundations to continue recovery measures.

Figure 10: Activation and Transition Operations

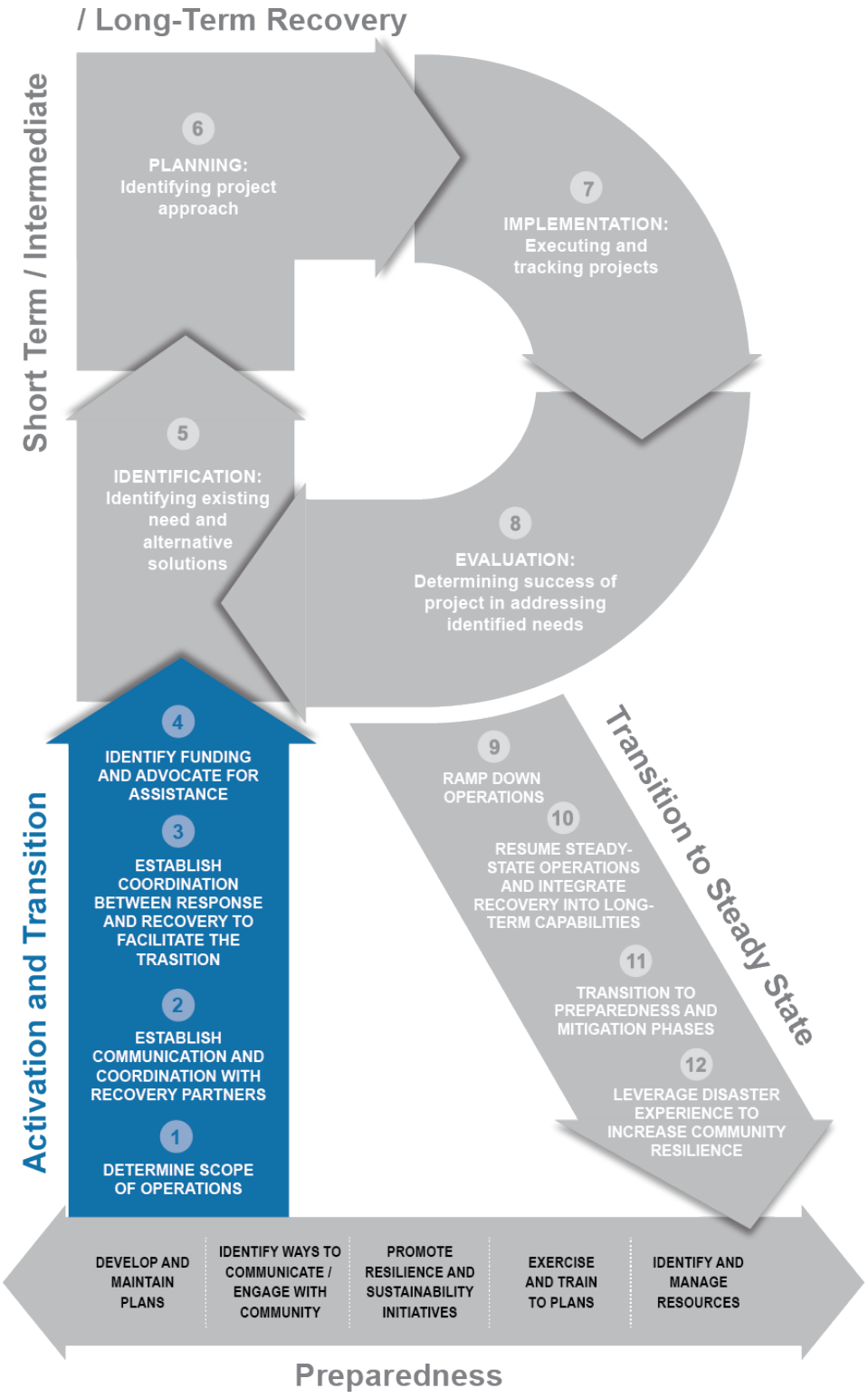


Table 3: Recovery Structures in Operations

Organizational Structure Option	Role in Transition
ESF-14 (Long Term Recovery)	Counties that have established and activated ESF-14 facilitate coordination through this organizational construct by collecting response information related to recovery and sharing this information with key recovery leadership, agencies, and stakeholders. This option is best for local jurisdictions that have adopted or plan to adopt ESFs and utilize this structure to define recovery operations.
Recovery Officer	The Recovery Officer is a position that can be stood up within the Incident Command System (ICS) for communities without ESFs. Similar to ESF-14, this role oversees coordination and information sharing during response to better position communities for recovery. This option is best for local jurisdictions that do not have activated ESFs and wish to align the transition to recovery closely to response structures through an Officer position.
Recovery Coordination Group	Counties can choose to create a Recovery Coordination Group that is established in the EOC/ECC. This group would be comprised of recovery leaders (e.g., stakeholders, state agency representatives, private sector) that are active in response operations. Similar to ESF-14 and a Recovery Officer, the Recovery Coordination Group can be used in traditional response structures, but also has the flexibility to exist outside of these structures in the transition to long-term recovery.
Recovery Section	Counties may choose to not have an ESF-14, but instead stand up a Recovery Section within the EOC. The Section Chief would lead this section with supporting positions that would help facilitate the decision-making process for standing up and creating a recovery structure. This option is best for jurisdictions that may be transitioning away from ESF-14 or have yet to adopt the ESF structure and would prefer a dedicated organization to operate within the response structure.

Activation and transition activities and tasks for the region's counties and cities, are provided in **Table 4** below, which should be carried out by RSF Coordinators and Officers at the direction of the DRM, with support from other recovery staff.

Table 4: Activation and Recovery Tasks

#	Activation and Transition Activities	Tasks
1	**Determine a scope of operations**	▪ Conduct initial damage assessments in conjunction with response and assess initial damage assessments to understand recovery priorities and needs. Utilize data collected during preparedness phase to carry out damage assessments and understand impact and vulnerability. ▪ Consider partial or full activation of recovery plans. ▪ Identify the need for Officer positions. ▪ Identify the facility where the disaster recovery office will reside. ▪ Activate RSFs according to incident-specific recovery needs. ▪ Utilize DACs (if applicable) to identify community needs and priorities. Refer to **Disaster Assistance Centers**. ▪ Utilize pre-disaster assessments on capabilities and determine need for additional support and/or resources.
#	Activation and Transition Activities	Tasks
2	**Establish initial communication and coordination among recovery partners**	▪ Determine critical stakeholders that need to be involved in the transition from response to recovery based on activated RSFs and immediate incident recovery needs. ▪ Follow pre-identified notification processes, inform stakeholders of partial or full plan activation. ▪ Activate stand-by contracts with vendors as needed to support initial recovery operations. ▪ Establish incident-specific communication and coordination procedures (e.g., communication frequency and protocol, situation updates, in-person meetings) utilizing tools developed pre-disaster. ▪ Identify communication logistics information to share (e.g., recovery office location, phone or contact methods, activated information sharing networks). ▪ Coordinate with the private and non-profit sectors performing initial recovery work (e.g., nongovernmental organizations [NGOs], community-based organizations, corporations, private foundations) to support information sharing, efficiently assess community needs, and prevent duplication of efforts. ▪ Coordinate transition activities between RSFs and response, as appropriate (e.g., Infrastructure and Housing regarding utilities restoration).

3	**Establish coordination between response and recovery to facilitate the transition**	▪ Coordinate overlapping and interdependent activities (e.g., debris management) and maintain situational awareness between RSFs and ESFs, if applicable, or EOCs/ECCs (e.g., participation in response task forces). ▪ Identify activities and/or services during the transition from response to recovery that require early RSF support and input (e.g., disaster cost recovery). o Identify activities that may disproportionally impact AFN and underserved populations. ▪ Capture EEIs (e.g., insurance coverage) pertinent to recovery early in response (e.g., in congregate shelters, throughout damage assessments, at DACs) to help accelerate operations.
4	**Identify funding sources and advocate for assistance**	▪ Based on initial damage assessments, identify potential state and federal programs to request for cost recovery. ▪ Utilize pre-disaster research that identified funding opportunities and programs. ▪ Identify program requirements and mechanisms to support cost recovery compliance. ▪ Implement systematic decision making to make sure recovery operations are taking consideration of resilient recovery practices, as specific immediate actions have the potential to negate the ability to use specific recovery funds. ▪ As a responsibility of the DRM (or activated officer), support adequate data collection to accelerate decision-making process on eligibility for funds.

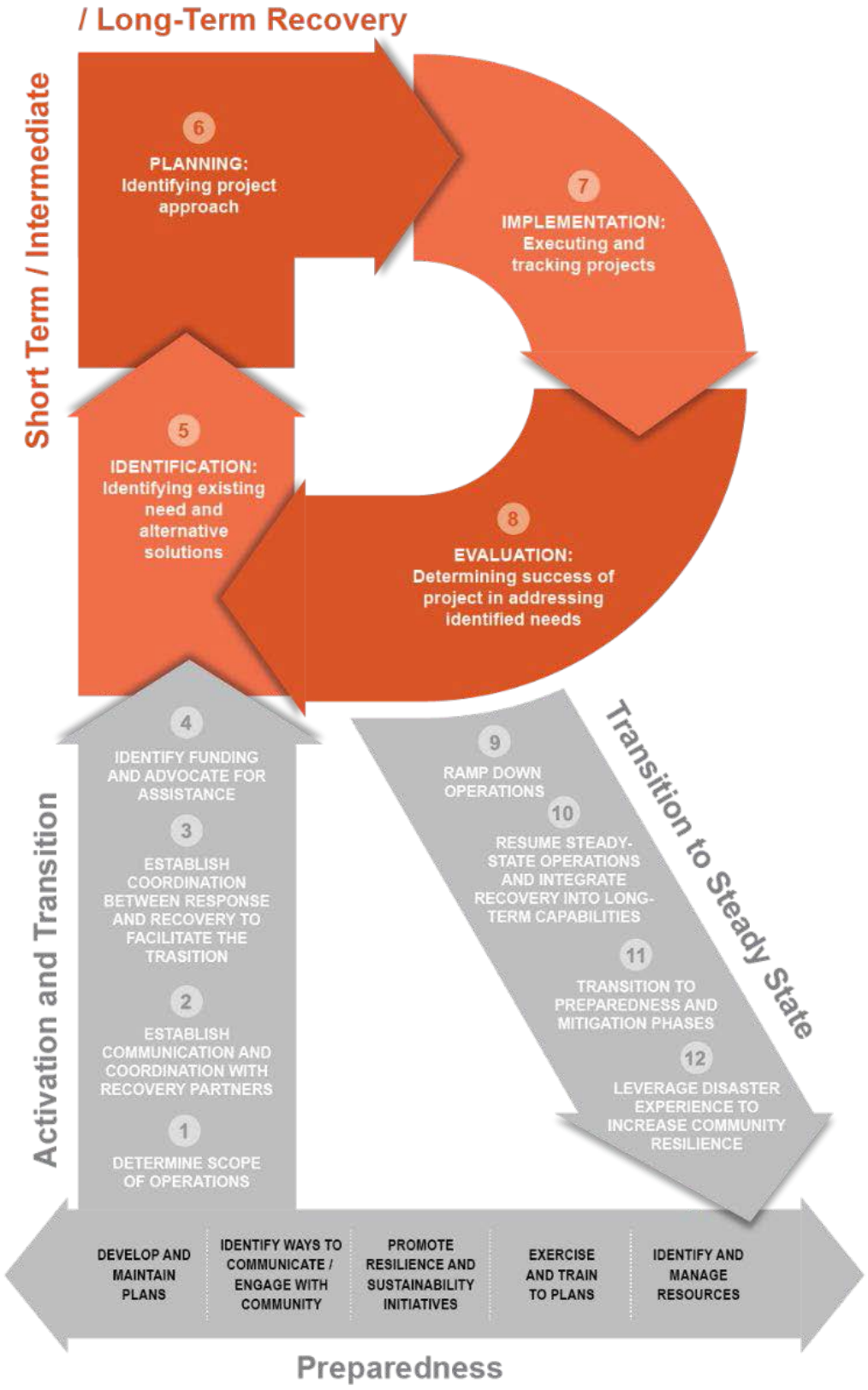
#	Activation and Transition Activities	Tasks
		▪ Leverage pre-disaster conditions, impacts and assistance, and unmet needs data to advocate for additional assistance (e.g., disaster declarations). Existing tools (and their web links) that can help identify impact and need are included in **Supporting Plans, Resources, and Documents.** These include: o United States (US) Housing and Urban Development (HUD)'s Disaster Impact and Unmet Needs Assessment Kit; and o Federal Emergency Management Agency (FEMA) Public Assistance Program and Policy Guide (PAPPG).

4.3.3 Recovery Operations

While recovery operations occur across the short-, intermediate-, and long-term phases of recovery, recovery planning is a cyclical process repeated across the recovery continuum. The cyclical nature is particularly important in providing an overall strategy for recovery that addresses all recovery core capabilities and integrates socioeconomic, demographic, accessibility, and risk assessment considerations into planning.

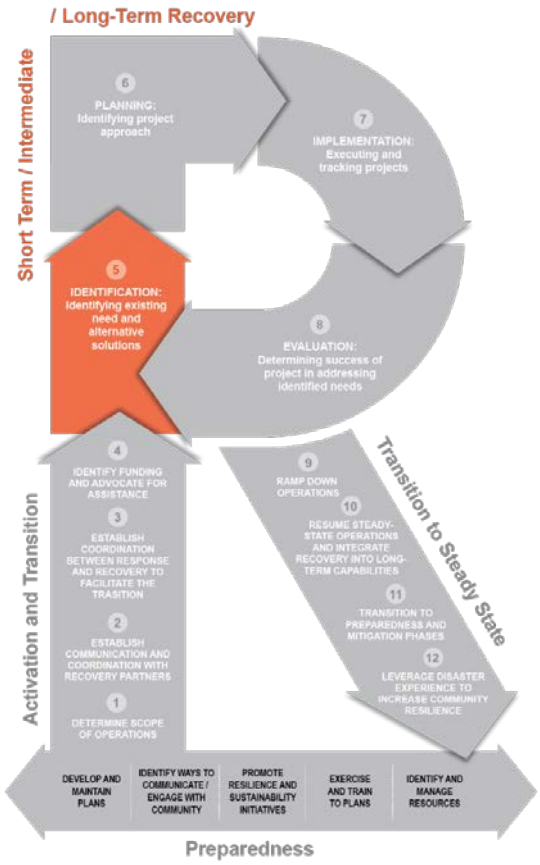
Consisting of four operational elements (i.e., identification, planning, implementation, evaluation), each element plays a distinctive role in defining the operational steps for the whole community to support recovery and provide direction for the development of Recovery Action Plans (RAPs) and recovery priorities. Ultimately, these steps build on the work completed during pre-disaster and through activation and transition to form a recurring process to assess current conditions, address unmet needs, and reevaluate priorities and RAPs. This aspect of the recovery planning cycle is crucial to not just restore a community back to pre-disaster conditions but also rebuild for resilience.

Figure 11: Recovery Operations



4.3.3.1 Identification

Identification refers to determining recovery priorities based on collected data and the results of damage and/or needs assessments. To develop a complete picture of post-disaster conditions and fully capture community needs, it is essential that the *whole community* participates in the identification process. Previously developed communications plans and strategies will help impacted communities receive timely and consistent information and facilitate their involvement in recovery planning. Additional information and data identified through preparedness and into activation and transition will provide a foundation to continue identification throughout short-, intermediate-, and long-term recovery phases.



As the planning cycle is replicated throughout recovery, stakeholders should continuously identify anticipated and unmet needs, as well as alternative solutions if initial plans are not effective. This will involve incorporating the whole community to gather new information and develop a new path forward. See Table 5 below for identification core activities that should be carried out by RSF Coordinators and Officers at the direction of the DRM, with support from other recovery staff, throughout short-, intermediate- and long-term phases of recovery.

Table 5: Core Identification Activities

#	Identification Core Activities	Tasks
5a	**Convene a group of planners inclusive of the whole community**	▪ Develop a core group including various community members to receive and aggregate input from many different groups. ▪ Identify additional group stakeholders needed throughout the recovery cycle depending on current needs in operations.
5b	**Coordinate with response partners to help determine recovery priorities**	▪ Implement data collection and information sharing systems to check that EEIs are captured and made available to stakeholders and impacted communities to keep up an informed community. ▪ Leverage response activities (e.g., congregate sheltering) and transition activities (e.g., initial damage assessments, DACs) to understand immediate and anticipated needs. ▪ Utilize needs assessments to coordinate initial recovery operations. o Identify AFN and underserved community needs and facilitate appropriate coordination with recovery partners to meet needs.

#	Identification Core Activities	Tasks
5c	**Identify achievable, tangible community-based recovery actions and activities**	▪ Identify projects that are feasible and achieve a common goal for the community and identify mechanisms to execute these projects. ▪ Identify activities that do not preclude impacted communities from receiving disaster funding and are compliant with potential funding requirements, as certain activities can cause long-term projects to be ineligible for reimbursement (e.g., for PA projects). ▪ Align actions and activities to the community's identified recovery priorities and goals. ▪ Reassess needs throughout the recovery cycle and short-, intermediate-, and long-term phases as needs evolve over time. o Monitor needs from AFN and underserved communities. ▪ Identify additional projects and actions based on evolving community priorities.
5d	**Identify and collect information necessary to initiate and determine eligibility for federal recovery programs**	▪ Begin tracking disaster-related expenses and aggregate damage data and information. More information Public Assistance expenses can be found in **Public Assistance Program Process and Responsibilities** and additional information regarding funding sources can be found in **Funding Opportunities**. ▪ Coordinate with state and federal partners to request Joint Preliminary Assessments and organize logistics for assessments. Joint Preliminary Assessments survey the disaster impact and damage to provide to state leadership. Results of the assessment will determine whether the state will apply for federal assistance. ▪ Identify factors for the provision of Individual Assistance (IA) to advocate for assistance (e.g., number and concentration of destroyed and damaged housing, number of injuries and deaths, disruption to normal community functions and services, emergency needs such as extended or widespread losses of power or water, impact on special populations). ▪ Identify information to initiate the Community Development Block Grants Disaster Recovery (CDBG-DR) eligibility process. ▪ Continually assess and reassess unmet low- and moderate-income households, housing, infrastructure, and economic revitalization needs and community impacts. ▪ For housing, collect data on interim and permanent housing needs; needs of renters and homeowners; multifamily and single-family housing needs; affordable housing needs and market-rate housing needs; and needs of people who were homeless before the disaster. ▪ Identify potential projects to address needs. ▪ Identify funding opportunities that can be utilized to implemented prioritized projects.

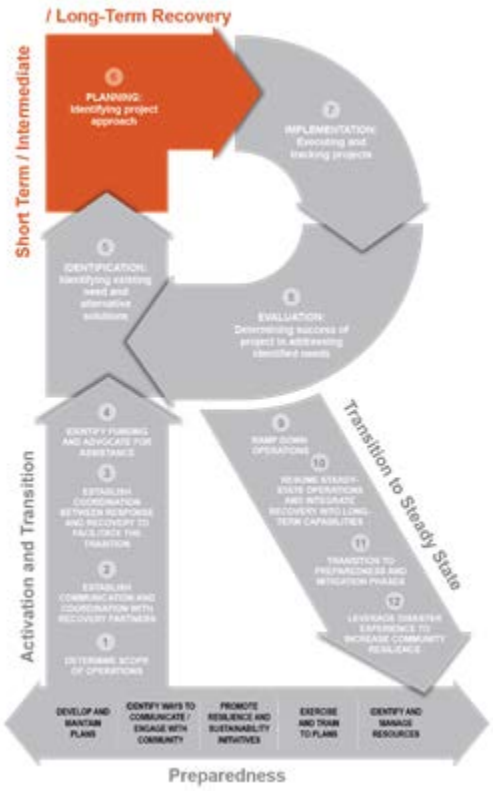
Equity and Community Resilience:

Post-Disaster Damage and Needs Assessments

To understand how equity relates to long-term recovery, communities should conduct damage and needs assessments prior to developing RAPs. Identifying unmet and anticipated needs will help the region understand disaster impacts to underserved and AFN communities. The assessment process will also identify the potential barriers to recovery. These identified needs and barriers should inform the development of the RAP. Assessments may require regular and direct communication with community leaders and other identified stakeholders. Furthermore, communities should identify how recovery operations may negatively impact underserved and AFN communities and consider actions to mitigate those impacts. For example, communities may be further marginalized after a disaster if the debris removal haul routes use roads in low-income neighborhoods that are adjacent to landfills and dump sites.

4.3.3.2 Planning

During planning, locally activated RSFs and associated stakeholders begin to develop RAPs based on immediate needs and priorities. A RAP should align with the impacted community's vision for long-term recovery to establish an approach to defining short-term, intermediate, and long-term recovery objectives and activities. While a Local Recovery Framework provides guidance on strategic planning to identify recovery priorities and projects, the RAP is disaster specific plan that outlines operational steps and projects to address disaster impacts. Further guidance on RAPs can be found in Recovery Action Plan Outline. Depending on the severity of the events and the activated RSFs, there can be multiple RAPs developed for one disaster.



Throughout the duration of recovery, RAPs should be amended and revised to reflect new needs and priorities that are identified. Additionally, as new project approaches emerge, counties and cities may need to coordinate with internal and external partners to identify local capacity and available funding to implement projects. This may require the identification of new partners or funding sources.
See Table 6 below for planning core activities, which should be carried out by RSF Coordinators and Officers at the direction of the DRM, with support from other recovery staff, throughout short-, intermediate- and long-term phases of recovery.

Table 6: Core Planning Activities

#	Planning Core Activities	Tasks
6a	**Engage the *whole community* including local organizations, departments, and businesses to develop RAPs**	▪ Maintain the group of core planners involved in identification, including additional stakeholders as recovery progresses. ▪ Coordinate planning efforts across jurisdictional boundaries using available regional guidance. ▪ Identify specific measurable milestones that can be tracked and reported on. Ensure these milestones address evolving needs throughout the recovery planning cycle. ▪ Identify and implement interim solutions while long-term recovery solutions are in progress. ▪ Reassess long-term community needs and priorities. ▪ Validate that solutions, plans, and projects are currently or will meet identified needs. ▪ Identify additional long-term solutions to meet community needs if current plans do not address them. ▪ Identify and delegate responsibilities to implement new and existing plans and projects. ▪ Identify responsibilities for project completion. Consider the need for surge support to carry out responsibilities over the short-, intermediate-, and long-term. ▪ Implement corrective actions based on previous project evaluations.
6b	**Develop a process and criteria for prioritizing projects**	▪ Consider the needs of impacted communities (e.g., how dependent is the neighborhood on completion of the project). ▪ Utilize guidance and best practices to implement projects that address community priorities. ▪ Consider combining projects in the same geographic area to address common needs and minimize costs (e.g., underground power and cable repairs may be accomplished through a coordinated effort to excavate the street). ▪ Consider co-benefits and cascading impacts of work on potential projects (e.g., repairing multiple wings of a hospital may displace patients entirely for several years). ▪ Review eligibility requirements for funding opportunities (additional funding sources found in **Funding Opportunities**). ▪ Prioritize projects that match funding source requirements as well as community vision. ▪ Maintain public records that describe the decision-making process of project prioritization to increase government transparency.
6c	**Identify and apply for potential funding sources for identified projects outline in the RAPs**	▪ Include potential cost-share opportunities for projects that cross jurisdictional boundaries. ▪ Review and apply for funding sources that align with identified pre-disaster mitigation, adaptation, and resilience projects that will improve the disaster resilience of the region. ▪ Continue identification of funding sources throughout the recovery planning cycle as new programs become available. Refer to **Funding Opportunities** for a list of federal funding sources.

#	Planning Core Activities	Tasks
		▪ Submit application(s) for funding sources where identified projects meet eligibility requirements.

Equity and Community Resilience:

Community Engagement

Post-disaster community engagement in the reconstruction planning process is critical. Successful recovery planning is dependent upon support from elected officials, local community stakeholders, businesses, faith-based organizations, NGOs, and other influential groups. Involvement from a diverse range of stakeholders will help to support an equitable process and criteria for prioritizing projects. Moreover, to strengthen community resilience, counties and cities should consider developing a unified approach to making investments in resilient infrastructure and integrating mitigation work into all identified projects. This includes projects that may not address critical services or infrastructure, but contribute to community cohesion and connection, and increase overall well-being, including but not limited to parks and recreational opportunities, or culturally significant landmarks, businesses, and traditions.

4.3.3.3 Implementation

Implementation is the execution of the RAP and associated projects. Localities should work with the *whole community* to establish realistic measurements, milestones, and activities that align with pre-identified community needs. Depending on the severity of the incident, it may be possible to utilize technical assistance, resources, and support from the region and/or state and federal governments. See Table 7 below for core implementation activities, which should be carried out by RSF Coordinators and Officers at the direction of the DRM, with support from other recovery staff, throughout short-, intermediate- and long-term phases of recovery.

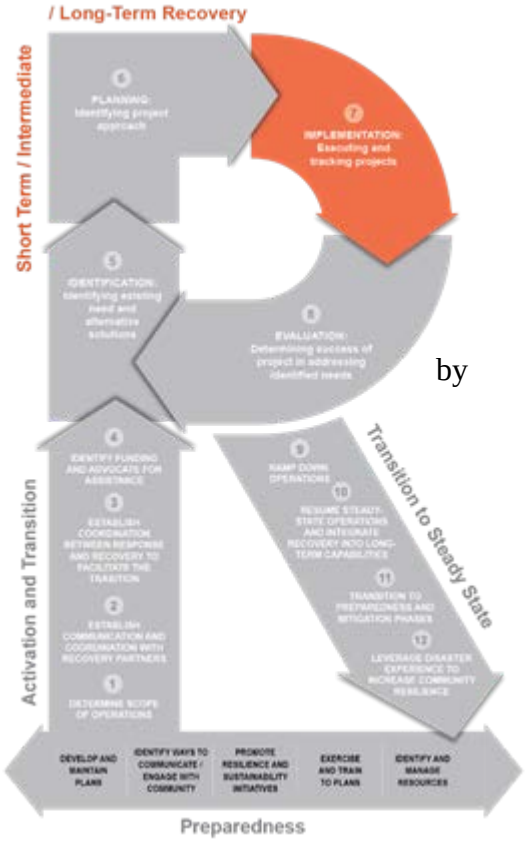


Table 7: Core Implementation Activities

#	Implementation Core Activities	Tasks
7a	**Identify project managers and associated project roles and responsibilities**	▪ Identify project managers to oversee the implementation of recovery actions and plans. ▪ Ensure project managers report to the RSF Coordinator and coordinate with other members of the RSFs to meet goals. ▪ In coordination with the RSF Coordinator, determine project budget, scheduling, and timelines to include delays or challenges that may occur, considering that there will be competition for limited resources. A project completed on time and within budget is the goal. ▪ Work with FEMA and other relevant federal and state agencies to implement public assistance and other relevant funding programs. (See **Public Assistance Program Overview** for more information on implementing PA.)
7b	**Determine measures and develop methods to track project success and costs**	▪ Identify strategies, benchmarks, indicators, metrics, and systems to measure the recovery's progress for each recovery phase. ▪ Add additional metrics of success depending on the addition of projects and plans as recovery continues. ▪ Identify and validate quantitative and qualitative measurements of success. ▪ Develop and utilize available technology systems for tracking progress and costs. ▪ Ensure tracking mechanisms are readily accessible and available to all project stakeholders.
7c	**Ensure transparency and accountability in project expectations and progress**	▪ Communicate milestones and recovery expectations throughout the short-, intermediate-, and long-term phases of recovery. Updating stakeholders and the public is key to maintaining community trust. ▪ Include multiple audiences in communications (e.g., elected officials, community stakeholders, the public at large, media). ▪ Provide regular recovery updates and informational materials for dissemination through a variety of communications media, public meetings, and events throughout the recovery planning cycle. ▪ Make information accessible to populations with access and functional needs and others with limited access to information.

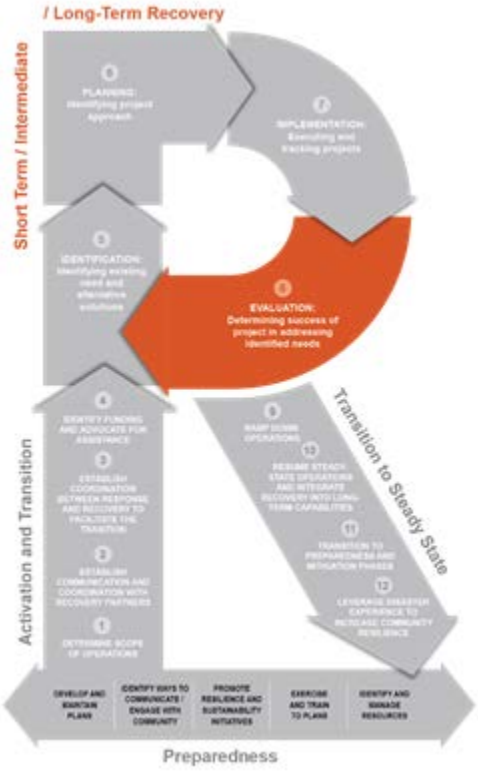
Equity and Community Resilience:

Project Implementation Success

How well a community is able to recover post-disaster is dependent upon the success of project implementation. However, what a community deems as project success, and by extension recovery success, is very specific to a community's population, priorities, and pre-disaster living conditions. It is essential that representatives from each segment of the impacted population have an opportunity to voice what success looks like for their community over the short-term, intermediate-, and long-term phases. Project Managers and RSF staff should also identify quantitative and qualitative measurements of success. In addition, the project tracking aspect of implementation allows local cities and counties to understand barriers to project success, especially in underserved populations, and develop new approaches for execution as needed. Tracking progress also helps to monitor accountability and reinforce realistic expectations among all community stakeholders.

4.3.3.4 Evaluation

While implementation phase activities of the recovery planning cycle identify and establish project tracking mechanisms, the evaluation phase utilizes these mechanisms to assess project execution. During evaluation, RSF coordinators and stakeholders coordinate to understand project progress, reevaluate priorities, and assess whether recovery projects have met or are meeting recovery needs.



As part of this effort, local entities should identify missing information based on stakeholder input and current project execution. As the recovery process continues, evaluation is increasingly important to understand the success and effectiveness of project implementation and completion. See Table 8 for core evaluation activities, which should be carried out by RSF Coordinators and Officers at the direction of the DRM, with support from other recovery staff, throughout short-, intermediate- and long-term phases of recovery.

Table 8: Core Evaluation Activities

#	Evaluation Core Activities	Tasks
8a	**Engage the whole community in evaluating project success**	▪ Solicit community input via electronic media, surveys, community meetings, webinars, and other appropriate mediums to identify project successes and opportunities for improvement. ▪ Consider creating an unmet needs group with the recovery organizational structure (may be different than the core planning group) to objectively assess project progress. ▪ Discuss project outcomes with key community stakeholders to reach consensus on the effectiveness in meeting community needs. ▪ Document immediate lessons learned and best practices to modify project approaches and underscore areas that are working well. ▪ Coordinate after-action review meetings among local stakeholders, including the private sector, to share information; avoid duplication of improvement efforts; and identify gaps and issues affecting multiple stakeholders.
8b	**Assess project progress leveraging tracking mechanisms established in the implementation phase**	▪ Aggregate and analyze data collected during implementation. ▪ Assess quantitative and qualitative data through needs assessments, data collection reports, community interviews, townhall meetings, and other appropriate assessments. ▪ Utilize pre-established indicators of success identified in the implementation phase (e.g., number of schools reopened, number of individuals placed in temporary housing solutions, number of individuals registered for FEMA IA) to measure against goals and priorities outlined in the RAPs. ▪ Identify where projects and plans are not meeting community needs. ▪ Understand why (if relevant) existing recovery and planning processes may not be meeting community recovery needs. ▪ Identify corrective actions and adjust planning processes to carry out effective recovery operations. ▪ Identify corrective actions for future project planning sessions to better engage communities and develop strategies to address their needs.

Equity and Community Resilience:

Evaluating Projects and Equity

Evaluation is an important step in ensuring the project approach is effective, productive, and inclusive. Key considerations during project evaluation include whether recovery work was just, equitable, and comprehensive in rebuilding communities hardest hit or most vulnerable to long-term loss. Important questions to consider during evaluation include: Was work performed with the same level of effort across low, middle-, and high-income communities? Were quantitative and qualitative measurements accurately able to capture these considerations? Has project success helped to rebuild resilient communities and reduce future disaster risk? To help address these considerations, cities and counties should support participation in evaluating success that includes persons with disabilities and others with access and functional needs, members of underserved populations, individuals with limited English proficiency, seniors, and advocates representing the unique needs of minors. In addition, understanding and leveraging pre-disaster baseline community assessments (e.g., economic, housing, community health, land use, environmental and cultural resources) will help to evaluate whether efforts are in fact building community resilience and reducing the risk of impact of future disasters.

4.3.4 Transition to Steady State

Transition to steady state marks the transition and return to daily operations. This transition, however, does not necessarily signify the end of recovery. Ideally, communities can integrate recovery planning and capacity building into internal structures that existed prior to the disaster, including daily roles and responsibilities, as well as integrate and/or transition recovery efforts into ongoing or future mitigation and resilience projects.

The core focus of the recovery operation shifts towards mitigation, preparations for future disaster impacts, and building more resilient communities. During this transition, local agencies and organizations will integrate recovery planning into the internal structures that existed prior to the disaster. Staff will transition into routine roles and responsibilities to help ensure long-term resilience and sustainability.

The demobilization of the recovery organization and transition to steady state is a gradual process that is not easily determined by concrete thresholds. As a community's capacity increases, it can execute recovery activities with less outside support. Any ongoing RSF functions and activities can progressively transition to the corresponding regional, local, or tribal officials.

Transition to steady state activities, as well as roles and responsibilities for the region's counties and cities, are provided in Table 9. These activities should be carried out by RSF Coordinators and Officers at the direction of the DRM, with support from other recovery staff.

Figure 12: Transition to Steady State

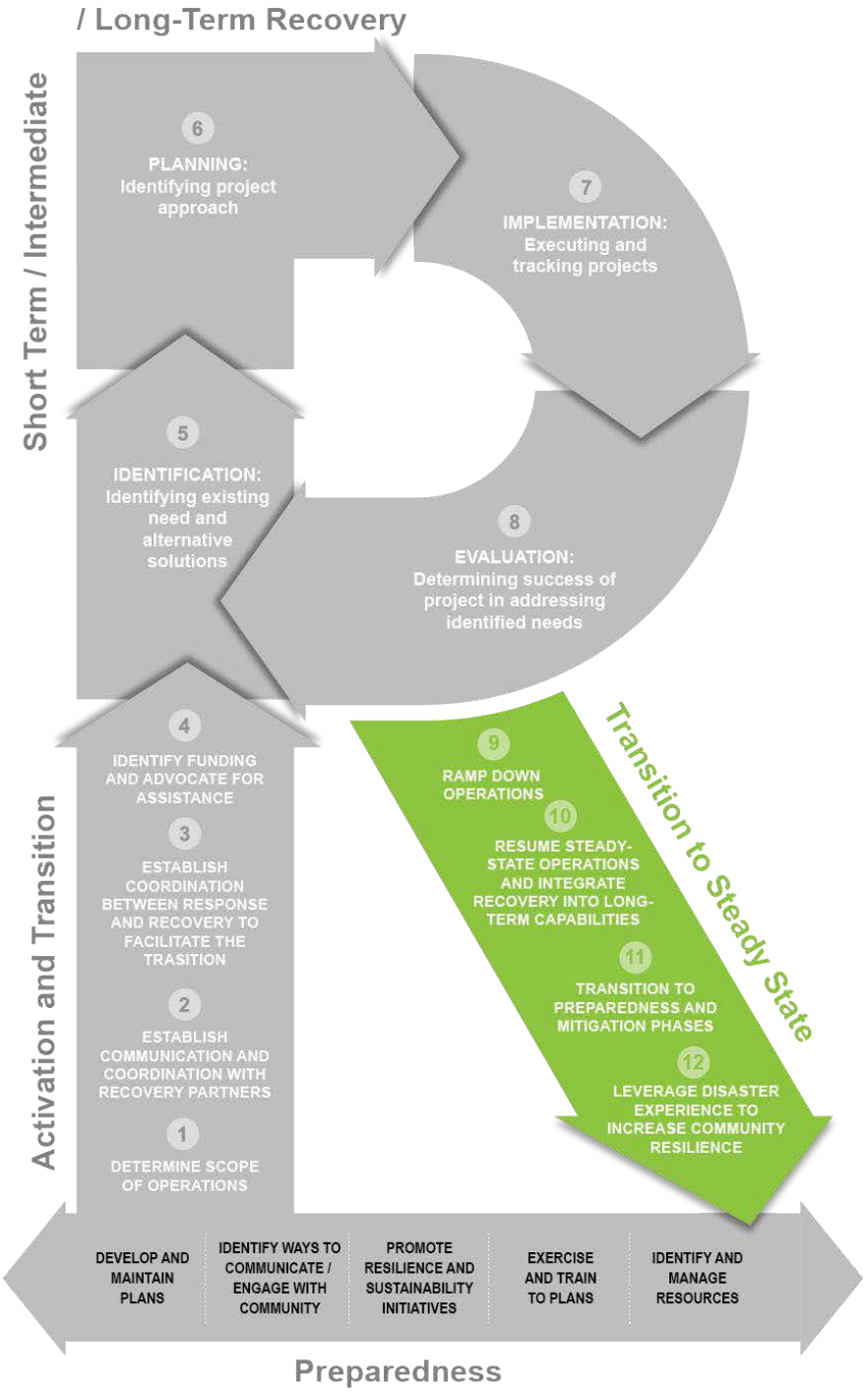


Table 9: Transition to Steady State Activities

#	Transition to Steady State Activities	Roles and Responsibilities
9	**Ramp down operations**	▪ Demobilize the recovery structure as the event deescalates by returning staff to their "day-to-day" positions with additional recovery responsibilities, as appropriate. ▪ Communicate timing with local stakeholders. ▪ Finalize disaster-related recovery costs and complete the required federal documentation for reimbursement.
10	**Resume steady-state operations, integrating recovery into long-term capabilities**	▪ Resume steady-state operations, supporting the continued recovery through existing programs and integrating recovery into the "new norm." ▪ Incorporate recovery planning and capacity building into daily roles and responsibilities, ensuring recovery becomes the "new norm." ▪ Maintain partnerships and communications pathways that were established during recovery. ▪ Maintain partnerships and connections with underserved communities to continue equitable engagement in steady-state operations.
11	**Transition to preparedness and mitigation phases**	▪ Transition into agency/organization mitigation and preparedness activities. ▪ Build accessibility, resilience, sustainability, and mitigation measures into identified pre-disaster recovery strategies. ▪ Identify possible mitigation strategies to be included for future implementation. ▪ Launch new public-private partnerships tailored to disaster recovery needs. ▪ Promote the integration of long-term recovery projects into privately owned and operated critical infrastructure resilience strategies.
12	**Leverage disaster recovery experience to increase community resilience**	▪ Ensure SOPs, recovery implementation guidance, and community engagement tools have been developed, based on lessons learned and best practices captured during project evaluation, and are circulated among staff for use in pre-disaster trainings and future operations. ▪ Develop additional recovery tools and templates as needed. ▪ Update all recovery and communications plans based on long-term lessons learned and best practices. ▪ Develop after-action reports (AARs) and improvement plans (IPs) with appropriate corrective actions to effectively train to address vulnerabilities identified during the disaster.

4.3.5 State of Colorado

The County Emergency Management Director coordinates recovery efforts with the State of Colorado. The Regional Field Manager are often co- located at the County Emergency Operations Center (EOC) and gain situational awareness necessary to bring the required assets of the State to bear, following a major disaster.

Coordination is also accomplished by working in close communication with the State Coordinating Officer (SCO) or the State Disaster Recovery Coordinator (SDRC). The State Recovery team on the ground will advises the County Emergency Management Director (EMD) of the information and logistical needs of incoming recovery teams. The SCO is also in communication with the State Emergency Operations Center (SEOC), the Preliminary Damage Assessment (PDA) Teams and the Regional Field Manager.

In addition, the Information and Planning function lead at the County Emergency Operations Center compiles available information at the county level and prepares a Situation Report (SITREP). Field Managers are required to share this information with the State of Colorado Emergency Operations Center (SEOC) twice daily (10:00am and 4:00pm MST) in order to facilitate situational awareness and coordination.

4.3.6 Joint Field Office

The Joint Field Office (JFO) is established by FEMA and the State Coordinating Officer (SCO) within 72 hours of receiving a Presidential Disaster Declaration and is fully functional within 7 days of being established. The Joint Field Office serves as the central location for state and federal agencies to coordinate all recovery issues. The facility is usually located within or near the impacted area.

The Counties, Municipalities, Region and State supports the activation of the Joint Field Office (JFO) by providing potential JFO site locations dependent on staff size and anticipated length of occupancy. In addition, the County Emergency Management Director is responsible for coordinating efforts with the Joint Field Office and state recovery operations. The County Emergency Management Director provides all situation reports and information on long-term recovery needs to the Joint Field Office.

4.4 Damage Assessments

Damage Assessment is the process of identifying and quantifying damages that occur as a result of a disaster. It is one of the first actions taken during the recovery

phase and facilitates situational awareness in order to appropriately direct resources and teams. Additionally, the damage assessment results are used as the initial basis to justify or determine federal assistance, including the need for a Presidential Disaster Declaration.

Damage Assessment is conducted in two-phases, the first is the called the Initial Damage Assessment, which is primarily a local agency assessment. The second is called the Preliminary Damage Assessment, which is a joint assessment involving the County, the State of Colorado and FEMA.

4.4.1 Initial Damage Assessment

The Initial Damage Assessment is a compilation of information secured by various agencies to determine the extent of damages. The Initial Assessment begins immediately after the incident occurs and helps to determine life safety issues, identify the hardest hit areas and to estimate the number and types of damaged structures. The Initial Damage Assessment determines whether more detailed damage assessments are necessary and identifies those areas where further efforts should be concentrated.

4.4.1.1 IDA Lead Agency

The County Emergency Management Agency (EMA) is the lead agency responsible for coordinating the Initial Damage Assessment process through the Emergency Operations Center (EOC) and for providing resource support to those conducting damage assessments.

If required, an Incident Command Post will be established near the impacted area with periodic updates being relayed to the EOC. If the Incident Command Post is needed, the Emergency Operations Manager, will appoint a person to act as Incident Commander.

4.4.1.2 Support Agencies

Representatives from the following organizations are responsible for conducting damage assessment immediately following a disaster. They are:
County Roads and Bridges
County Assessor’s Offices
American Red Cross
Colorado State University Cooperative Extension Service
County Fire Districts/Departments/Agencies
Emergency Medical Services (EMS)
County Building Inspections Department

Municipalities impacted by the disasters are responsible for coordinating and providing personnel to support IDAs in their jurisdictions.

4.4.1.3 Responsibilities

Each department/agency/municipality is responsible for:

1) Maintaining current roster of trained damage assessment personnel and resources
2) Conducting damage assessments within their assigned area
3) Reporting information on life safety issues encountered, types and quantities of damaged/destroyed structures, and other elements included on the State's Damage Assessment form
4) Providing verbal and/or written report on conditions observed through their appropriate ESF lead at the County EOC, or to the Incident Command Post if established, to be relayed to Information and Planning (ESF 5)

4.4.1.4 Assessing Damages (Initial)

The initial damage assessment survey is used to determine within a specific area, the:

1) Number of buildings damaged

2) Number of buildings destroyed

3) Damage done to major streets, roads, bridges, and other critical facilities

Assessing the damages is one of the first steps in understanding the extent and magnitude of the situation at hand. A formal and informal process can be used to conduct the initial damage assessments. Information will be received from multiple agencies on conditions observed, and must be captured and consolidated into a damage assessment report. All agencies have the responsibility to report observed conditions to the Emergency Operations Center.

4.4.1.4.1 Mobilization Procedures

1) The local emergency management agency should initiate the Initial Damage Assessment (IDA) process and notify the DHSEM Regional Field Manager (RFM) that the jurisdiction will be conducting an IDA.

After the Incident occurs the County Emergency Management Agency will notify all support agencies via radio, pager, email, phone, or other methods to begin initial damage assessments within their jurisdictions.

For incidents with advanced warning, Damage Assistance Teams may be told in advance where and when to report. If the incident does not allow for pre-notification agencies/individuals will be notified by radio, pager, email, phone or other means.

2) In the event that the local jurisdiction does not report or initiate the IDA process the Regional Field Manager (RFM) will send out a request for IDA assessment data. The request will include the following:

    a. Request for initial damage assessment with cover letter on agency letterhead
    b. Request written verification of no damages on agency letterhead
    c. Request for written verification the jurisdiction will not be submitting an initial damage assessment on agency letterhead.

NOTE: The RFM is only responsible to send one request with one reminder.

The RFM will then notify leadership that an IDA is being requested and conducted.

Upon the RFM receiving the IDA data it will be saved and made available to the following positions within DHSEM:
1) Field Services Manager
2) Field Services Supervisor
3) Recovery Section Damage Assessment Coordinator

4.4.1.5 IDA Assignments

As individuals report to the mobilization site and Damage Assessment Teams are formed, they are thoroughly briefed and given specific locations to be assessed. (See “Resources Available to Support Damage Assessment Operations” on the following page.)

4.4.1.5.1 County Emergency Management Agencies

The County Emergency Management Agency may conduct damage assessment, depending on operational tempo, and the availability of staff. The Director, or designee, may utilize specialty resources such as aircraft or watercraft for widespread

disasters in order to obtain an overview of the situation. Information is collected using the State Damage Assessment Form.

4.4.1.5.2 Other County Departments

Available employees from other County Departments are also utilized to conduct Initial Damage Assessment. Information is collected using the State Damage Assessment Form.

4.4.1.5.3 County Road and Bridge Departments

The County Road and Bridge Department is responsible for assessing damage to the county's roads, bridges, and critical infrastructure.
Information is generally captured verbally or through notes or other written means.

4.4.1.5.4 American Red Cross

The American Red Cross, through its network of volunteers, can be utilized to conduct damage assessment operations. Their damage assessment information is collected on a specific form used by Red Cross chapters nationally. Efforts to coordinate with the Red Cross to reduce duplication of effort should be made. Red Cross maybe invited to attend IDA assessments with local government agencies and personnel.

4.4.1.5.5 County Assessor's Office

The County Assessor's office is responsible for assessing damage to individual properties and determining the financial/economic loss to the tax base of the county. Following a disaster involving property damage, the Director of Emergency Management, or designee, may request assistance from the County Property Assessor's office. The Emergency Management Director will direct the County Assessor's office regarding priorities, based on reports received at the EOC.

4.4.1.5.6 Colorado State University Cooperative Extension Services

The CSU Cooperative Extension Service conducts initial damage assessments related to agriculture. The Agriculture and Natural Resources (ESF 11) lead at the EOC prompts the dispatching of

the Extension Service workers, with direction and information provided by Emergency Management. Extension Service personnel capture findings on a USDA standard damage assessment form and pass the information onto the Emergency Operations Center.

4.4.1.5.7 CERT Teams & Other Volunteer Agencies

CERT Teams and other volunteer agencies with the required training may do initial damage assessments and forward this information to the EOC for the communities and areas they service.

4.4.1.5.8 County Building Inspectors (Not All Counties Have a Building Inspector or Building Inspector Department)

Building Inspectors, from the County Building Inspections Department, assess physical damage to individual properties through two assessments, a Post-Disaster Habitability Inspection and a Substantial Damage Assessment.

Post-Disaster Habitability Inspections (Initial Assessment or First Sweep)
The Habitability Inspection, otherwise known as the First Sweep or Initial Damage Assessment, is conducted by the County Building Inspections Department. As soon as it is safe to do so, the Building Inspectors report to the Building Inspections' Office, as per established procedures.

The Building Inspections Department divides the county into sections, or grids. On the first sweep, each Building Inspector teams up with a Clerk, for documentation purposes. Each pair is assigned specific grids for the habitability inspection. A structure-by-structure inspection of damaged buildings is subsequently conducted within the assigned grids.

The Building Inspectors make the determination as to the habitability of individual structures, which determines which structures can be re-energized.
The Inspectors work in close coordination with the power companies in order to pull electrical meters of those structures deemed unsafe to accept utilities.

During this time, the Building Inspectors take the opportunity to complete the mitigation assessment form to be used later in determining potential mitigation projects. Once the Inspection is complete, habitability information is provided to the EOC.

Substantial Damage Assessment
Following the Habitability Inspection (Initial Damage Assessment), the Building Inspectors conduct a second assessment called a Substantial Damage Assessment.
In this assessment, the percentage of damage to the structure is determined using the Residential Substantial Damage Estimator software, approved by the Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program (NFIP).

Structures in the hardest hit areas are inspected, as are those that appear substantially damaged, or those for which the Inspectors have received specific calls.

The Building Inspectors subsequently send a report to the owner. If the homeowners disagree with the Inspectors' determination, an appeal process can be initiated through the Building Official or Assistant Building Official.

As owners rebuild and pull permits to make necessary repairs, the same inspections are required for repairs as indicated by the applicable code, such as electrical inspection, roof inspections, etc. Additionally, once the owners start rebuilding, County or Municipal Code Enforcement ensures that the process adheres to the most current standards.

For incidents of widespread or severe damage, the County Building Inspections Department may contract with the Building Inspections Departments of other jurisdictions to assist with damage assessment.

4.4.1.5.9 Fire Districts/Departments/Agencies and Emergency Medical Services (EMS)

Information regarding life safety issues is captured by the Fire Districts/Departments and Emergency Medical Services, who report damages observed during the course of normal duties. These two agencies are not mobilized as specific damage assessment teams, however each goes throughout their area or district to evaluate life safety issues, particularly in residential areas. In doing

so, they also provide verbal reports to the EOC on road obstructions, and damages observed to critical facilities.

4.4.1.5.10 Municipalities

The municipalities are expected to conduct and coordinate damage assessments within their own jurisdiction. Available county assets may be provided upon request through The County Emergency Management Agency or the EOC, if activated.

Coordination among the damage assessment operations of the County and the municipalities will occur through the municipality's Liaison at the County EOC or vice versa. Upon conducting an initial damage assessment within a municipality, the information gathered shall be forwarded to the municipality's liaison at the County EOC, who will forward it to Information and Planning (ESF 5) for inclusion into the Situation reports.

During countywide disasters, such as snow events, County Emergency Management Agency notifies the municipalities through their EOC liaison to begin damage assessment operations. Each of the municipalities, however, retains their independent jurisdictional authority and is responsible for the conduct of assessment within their own jurisdictions.

In addition, certain agencies, such as The County Building Inspections Department, and County Assessor's Office may conduct countywide damage assessment operations, inclusive of the municipalities. This enhances the coordination effort by linking the processes and mechanisms through which information is collected and shared.

4.4.2 Preliminary Damage Assessment

The preliminary damage assessment is used to:

1) Verify the Number of buildings damaged
2) Verify the Number of buildings destroyed
3) Damage done to major streets, roads, bridges, and other critical facilities
4) Determine whether the situation warrants Federal Assistance
5) Determine the need for Presidential Disaster Declaration or to support one already issued

The Preliminary Damage Assessment is a joint county/state/FEMA operation. The purpose is to verify the initial damage assessment already compiled by

county and municipal teams. The PDA is used by the Governor of the State of Florida to validate a request for Presidential Disaster Declaration, and is used by FEMA to verify that Local and State resources have been exhausted or overwhelmed.

4.4.2.1 Responsibilities

4.4.2.1.1 FEMA

FEMA follows its established processes to observe first-hand and verify or determine the presence of conditions that exceeds county and State resources.

4.4.2.1.2 State of Colorado

The PDA Team from the State of Colorado is responsible for initiating and accompanying FEMA and the County for PDA Operations and for sending teams of trained individuals to assist in the process.

4.4.2.1.3 County Assessor's Office

On behalf of the County, a representative from the County Assessor's Office participates in the joint PDA. The County Assessor's Office has teams of appraisers trained at different levels as well as Commercial Appraisers that are assigned to the joint Preliminary Damage Assessment effort.

As damage information is received, the County Property Assessor's Office uses computer analysis to determine initial dollar cost damage for the "structure by structure" damage assessment. If additional staff is necessary surrounding County Assessor's Offices maybe requested or additional county staff from other offices may be able to assist.

4.4.2.2 PDA Mobilization Procedures

FEMA and the State contact the Emergency Management Director to schedule a time to meet and begin and possible conduct Just in time training for assessors. The County Emergency Management will notify both the Property Assessor and the Building Inspection Department or other county agencies to accompany FEMA and the State PDA Teams.

Preliminary Damage Assessment assignments are geographic assignments by community. The Preliminary Damage Assessment Team is composed of one FEMA representative, one State Representative and one County Assessor, Building Inspector or other local government official.

4.4.3 Other Resources & Assistance

The Southeast Colorado All-Hazards Region (SECAHR) has numerous resources available to support the damage assessment mission including vehicles, laptops, licensed Building Inspectors, and volunteers. The County can also provide map books, property appraiser software programs, office equipment, and supplies. Additional personnel, as needed, may be requested via the statewide resource mobilization process.

In addition, if the County has a Geographic Information System (GIS) program, as well as Information and Planning (ESF 5) can assist in the analysis of damage assessment information and can develop maps of the affected areas or other visual representations. They can provide database support, predicated on the survival of the GIS system located in the Administrative Complex. If GIS cannot support damage assessment, out of county support using back-up tapes is possible, but not timely. If computer support is lost, Information and Planning (ESF 5) and the County Assessor's Office will manually determine figures using existing map resources.

4.4.3.1 Requesting Outside Assistance

Resources from the County are the first line of defense in response to and recovery from a disaster. The County will handle the situation within the confines of its resources and begin anticipating future needs, as well as the sustainability of current equipment, staffing, resources, etc. If the County's resources become overwhelmed or will be in the near future, the County Emergency Management Director, or staff designee, will make specific requests for outside resources, either through local Mutual Aid Agreements, Voluntary Relief Organizations or from the State of Colorado. If warranted, the State can interface with other States and/or the Federal Government for assistance.

Requesting Outside Assistance

1. County Commits all available local resources (fire, law enforcement, EMS, medical, Search and Rescue, etc.)

2. County implements local mutual aid agreements with neighboring municipalities, counties, etc.

3. County utilizes private relief agencies as needed

4. If county resources are overwhelmed, declares Local State of Emergency (if not already done) and seeks State assistance via the Division of Homeland Security and Emergency Management.

5. If state resources are inadequate, State of Colorado seeks federal assistance and possibly presidentially-declared Major Disaster Area via FEMA Regional Office

Figure 13: Requesting Outside Assistance

4.4.3.1.1 Mutual Aid

Each County has entered into a number of mutual aid agreements with local response agencies that have agreed to lend or receive assistance during times of disaster.

One of the most notable mutual aid agreements exist among all of the counties and most of the municipalities in the State of Colorado, called the Statewide Mutual Aid Agreement. This agreement provides a method for counties and municipalities to assist one another during times of disaster and establishes procedures for supporting another county. Each County in the SECAHR are signatories to this agreement.

When local resources are overwhelmed, the County will request Mutual Aid assistance in compliance with the terms of the agreement.

4.4.3.1.2 Private Relief Agencies

Voluntary response agencies, such as the American Red Cross and others, are key response organizations within the Southeast Colorado All-Hazards Region (SECAHR). These agencies, along with their counterparts from chapters all over the nation are able to mobilize volunteers necessary to support sheltering operations, distribution of food, water, or other essential items, and potentially assist with emergency funding to individuals. A registry of these local volunteer organizations is kept on file with the

4.4.3.1.3 State Assistance

1) Local agencies respond to the incident, supplemented by neighboring communities and volunteer agencies. If overwhelmed, Local Organizations/Facilities/Response Agencies notify County EM or EOC of resource deficiencies and specific needs through the Emergency Support Function System (ESF)

2) The County conducts an Initial Damage Assessment to determine if additional resources from the State are needed

3) The County Emergency Management Agency notifies the County Administrator and/or Board of County Commissioners that State assistance is necessary

4) Local State of Emergency is declared, if not already done. The State of Colorado Division of Homeland Security and Emergency Management is notified, who notifies the Governor that a local declaration has been issued

5) The County Emergency Management Agency contacts the State of Colorado of Division of Homeland Security and Emergency Management or State Emergency Operations Center by phone, WebEOC, or the RFM to request necessary resources

6) The Colorado DHSEM or State EOC, contacts the Governor's Office, which authorizes State assistance and requests Federal assistance, as needed

7) The State responds with State resources, such as the National Guard and State agencies

8) The County EOC, through its Joint Information Center, releases the local emergency declaration to print and broadcast media

9) State (PDA Team), Local (Building Inspectors, Emergency Management Staff, etc), Federal officials (as contacted through FEMA) conduct a Preliminary Damage Assessment (PDA) to estimate the extent of the disaster and its impact on individuals and public facilities

The County may request resources (supplies, response teams, staffing, equipment, etc) from the State of Colorado, when local resources have been exhausted or are insufficient.

In minor emergencies, where assets are needed from only one State agency, and the County EOC is not activated, the Emergency Management Communications staff may initiate the request for state assistance through the Regional Field Manager.

In major emergencies the County Emergency Management Agency via the Emergency Operations Center, will contact the State EOC through WebEOC in order to request the necessary equipment, supplies, teams, personnel, etc.

Such requests of the State may be fulfilled via state assets, Statewide Mutual Aid Agreement, as a result of agreements between the State of Colorado and other states (Emergency Mutual

Aid Compact), or as a result of the State's request for federal assistance. In other cases, the State may simply direct the county to available vendors where the necessary supplies can be purchased.

The EOC will not only have to assist and support county agencies in administering the disaster efforts, but many teams will arrive from out-of-county to assist.

STATE-OPERATED RECOVERY FACILITIES

Base Camp

Site to support emergency personnel or teams working in the disaster area; includes sleeping, feeding, showers, bathrooms, etc; may be collocated with the State's Logistical Staging Area.

Regional Distribution Center (RDC)

Serves as a managed site to receive and organize unsolicited donated resources from various providers and mobilize those resources to address victim needs.

Joint Field Office (JFO)

Established by FEMA and the State Coordinating Officer; serves as a central location for state and federal agencies to coordinate long-term response issues and all recovery activities; established within 72 hours of Presidential Disaster Declaration; fully functional within 7 days.

Disaster Assistance Center (DAC)

Joint operation between the State, the County and FEMA; provides disaster victims with convenient means of obtaining recovery assistance information from all levels of government; established one or more days after a Presidential Disaster is declared.

4.4.3.1.4 Federal Assistance

The Federal Emergency Management Agency (FEMA), under the direction of the Department of Homeland Security (DHS) coordinates the provision of federal assistance. Federal assistance can come either in the form of resources (manpower and equipment) or money for either the affected governments, citizens, or both, depending on the level of community damage.

1) Resource requests, including those on behalf of municipalities, must be channeled from the County Emergency Operations Center to the State Emergency Operations Center, who requests federal assistance

2) If response to the situation is beyond the State's capability, the Governor of the State of Colorado will request through FEMA that the President of the United States formally declare the County a major disaster area. Included in the Governor's request are the results of the Preliminary Damage Assessment (PDA) in order to verify the need

3) FEMA evaluates the request and recommends action to the White House based on the disaster and the community and state's ability to recover

4) The President approves the request or FEMA informs the Governor that it has been denied. This decision could take a few hours or several weeks, depending on the nature of the disaster

4.4.3.1.4.1 Factors That Determine Extent of Federal Assistance

Not all programs are activated for every disaster. The determination is based on needs found during the Preliminary Damage Assessment (PDA) and any subsequent information discovered. The type and amount of Federal assistance, if any, will be provided based on the following factors:

- Total geographic area affected
- Approximate number of missing, injured or deceased individuals
- Extent of damages to public buildings, utilities and facilities, including parks and recreational areas
- Extent and nature of damages to private, non- profit, educational, and medical facilities
- Extent and nature of damages to private property, private residences and businesses
- Extent and nature of damages to streets, traffic signs, bridges and other related areas
- Number of families requiring temporary shelter and housing

- Number of persons unemployed as a result of the disaster
- Extent of loss of communications, transportation facilities and other essential public services
- Capacity of county government's resources and efforts to meet its own recovery needs
- Overall impact on the local economy
- Estimated amount of uninsured losses

5 Types of Federal Disaster Assistance

Federal disaster assistance available under a major disaster declaration is from one of three categories.

CATEGORIES:

1) **Individual Assistance**: aid to families, individuals and business owners
2) **Public Assistance**: aid to public and non- profit entities for certain emergency services and the repair or replacement of disaster-damaged public facilities
3) **Hazard Mitigation Assistance**: funding for measures designed to reduce future losses to public and private property.

5.1 Individual Assistance

The Individual Assistance program, managed by FEMA, provides money and services to people in the declared disaster area whose property has been damaged or destroyed and whose losses are not covered by insurance.

There are two primary types of disaster assistance collectively referred to as "Individual Assistance", Housing Assistance, and Other Needs Assistance. The total assistance an individual can receive from FEMA from any combination of these programs is $33,000 for any disaster.

Once a Presidential Disaster Declaration is made, individuals must apply for assistance from the various programs for which they qualify. This is usually done through tele-registration by calling FEMA at 1-800-621 FEMA (or TTY 1-800-462-7585 for the hearing impaired) or in person through the Disaster Assistance Centers that are established in affected communities.

After the application is taken, a FEMA representative inspects the damaged property to verify the loss and determine the funds for which the individual qualifies. These funds are available only to homeowners and renters who are United States citizens, non-citizen nationals, or qualified aliens affected by the disaster.

5.1.1 Housing Assistance

Housing Assistance grants are provided with no cost share to individual recipients. The cost of this assistance is funded 100 percent by FEMA.

Lodging reimbursement is available to homeowners and renters whose permanent homes are rendered uninhabitable.

Minimal home repair grants are available to homeowners who could quickly return to their homes by making repairs, but are without insurance or cannot qualify for an SBA loan. These grants cannot exceed $5,100.

Homeowners without insurance or that cannot qualify for an SBA loan may qualify for up to $10,200 to apply toward the replacement of a destroyed primary residence.

5.1.2 Other Needs Assistance (ONA)

The ONA grants are available to meet serious disaster related needs and necessary expenses not covered by insurance and other Federal, State, or voluntary agencies. This includes medical, dental, funeral, personal property, transportation, moving and storage, and other expenses authorized by law.

5.1.3 Other Federal Agency Programs

5.1.3.1 Small Business Administration (SBA) Disaster Loans

The U.S. Small Business Administration (SBA) can make federally subsidized loans to repair or replace homes, personal property, or businesses that sustained damages not covered by insurance. For many individuals the SBA disaster loan program is the primary form of disaster assistance.

5.1.3.2 Disaster Unemployment Assistance (DUA)

Individuals unemployed because of a major disaster, and not covered by regular state or private unemployment insurance programs, may be eligible for unemployment benefits. The weekly compensation

5.1.3.3 Legal Services

The Legal Services Program provides free legal assistance to disaster victims; legal advice is limited to cases that will not produce a fee (i.e., these attorneys work without payment). Cases that may generate a fee are turned over to the local lawyer referral service. The Legal Service Program is typically for assistance with insurance claims (life, medical, property, etc.), counseling on landlord/tenant problems, assisting in consumer protection matters, replacement of wills and other important legal documents, or for low-income individuals unable to secure legal services adequate to meet their needs

5.1.3.4 Special Tax Considerations

Taxpayers who have sustained a casualty loss from a declared disaster may deduct that loss on the federal income tax return for the year in which the casualty actually occurred, or elect to deduct the loss on the tax return for the preceding tax year. In order to deduct a casualty loss, the amount of the loss must exceed 10 percent of the adjusted gross income for the tax year by at least $100. Additionally, the IRS can expedite refunds (quick source of cash) due to taxpayers in a federally declared disaster area. It is available to any taxpayer in a federally declared disaster area.

5.1.3.5 Crisis Counseling

The Crisis Counseling Program is designed to provide supplemental funding to States for short-term crisis counseling services to people affected in presidentially- declared disasters.

5.2 Public Assistance

Public Assistance, oriented to public entities, can fund the repair, restoration, reconstruction, or replacement of a public facility or infrastructure, which is damaged or destroyed by a disaster. The County and eligible entities can also apply for reimbursement for the cost of debris removal and to recoup the costs of materials and manpower directly related to the disaster for which aid is being sought. All costs must be clearly documented by each entity.

The Public Assistance process begins as soon as practicable after the Presidential Major Disaster Declaration. The State, assisted by FEMA, conducts the “applicant briefings” for state, local and private non- profit officials to inform them of assistance available and the process for application. A Request for Public Assistance

must be filed with the State within 30 days after the area is designated eligible for assistance.

Following the "applicant's briefing", a "kickoff meeting" is conducted where damages will be discussed, needs assessed, and a plan of action put in place.

A combined federal/state/local team proceeds with project formulation, which is the process of documenting the eligible facility, the eligible work, and the eligible cost for fixing the damages to every public or private non-profit facility identified by state or local representatives. The team prepares a Project Worksheet (PW) for each project. Projects fall into the following categories:

Table 10: FEMA PA Emergency Work Table

Type of Work	Relevant FEMA PA Categories [29]	Information to be Collected
Emergency Work	A – B	▪ Category of work performed (Debris Removal [A], or Emergency Protective Measures [B]) ▪ Description of services or goods ▪ Start and end date of work performed, and/or date purchased and used ▪ Purchase order numbers ▪ Quantity and rate ▪ Names of people performing the work and operating equipment and applicable labor rates ▪ Locations of work performed
Eligible expenses for Emergency Work may include, but are not limited to: straight time, overtime labor (overhead and fringe), equipment costs (rental costs, in-house, fuel, operation), material/supply costs (expendable resources, contract costs, lease costs, or other related costs.		

Table 11: FEMA PA Permanent Work Table

Type of Work	Relevant FEMA PA Categories [29]	Information to be Collected
Permanent Work	C – G	▪ Precise location of damages (e.g., Global Position System [GPS] coordinates, road segments) ▪ Category of damages: o Category C: Roads and Bridges o Category D: Water Control Facilities o Category E: Buildings and Equipment o Category F: Utilities o Category G: Parks, Recreation, and Other o Estimated cost of damages ▪ Extent of damage (scale of one to three) ▪ Insurance status ▪ Post-disaster photos of damages and identify corresponding pre-disaster photos when applicable ▪ Name and contact information of damage reporter
Eligible damages for Permanent Work may fall under one of the following categories: road systems and bridges; water control facilities; buildings, content, and equipment; utilities; or parks, recreational, or other.		

FEMA reviews and approves the Project Worksheets (PW) and obligates the Federal share of the costs (which cannot be less than 75 percent) to the State. The State of Colorado Division of Homeland Security and Emergency Management then disburses funds to local applicants.

5.2.1 Local Role in PA

The concept used for the Public Assistance process is one of cooperation amongst the many organizations and levels of government involved in the process.

The County administrators in the SECAHR has primary responsibility for coordinating activities required by the Public Assistance program. The Administrator serves as the County's local Public Assistance Coordinator. Other supporting entities include the County Emergency Management Agency and County Road and Bridge Departments.

The County Emergency Management Director is responsible for setting up the Public Assistance Applicant Briefing to be conducted by the State and FEMA. Potential applicants are identified based on repetitive loss reports and, due to

the magnitude of possibilities and are not pre-designated. The County Emergency Management Director invites, through a memo or other communication, the departmental/agency directors of the following entities likely to be impacted: (Additional agencies may be added as necessary)

Municipalities, County Departments/Divisions, Fire Districts, EMS, Volunteer Agencies, Law Enforcement, private non-profits, and critical industry

The County Administrator, as the local PA Coordinator, is responsible for setting up the "kickoff meeting" and inviting the appropriate agencies, generally the same entities listed above. Additionally, the Administrator will prepare correspondence, maintain, and update records associated with the Public Assistance Program.

Projects are identified based on the highest impacts and may use the Benefit-Cost ratio prioritization process particularly, if the project pertains to mitigation.

Project Worksheets are created by each individual department's staff and are reviewed by Department Heads. These are forwarded to the Administrator for final compilation.

The Administrator facilitates the development of necessary paperwork on behalf of county department projects and provides local. Depending on the type of project, other county departments may be involved in project development.

5.3 Hazard Mitigation Assistance

The amount of funding available under the Hazard Mitigation Grant Program (HMGP) for a disaster declaration is usually 7.5 percent of FEMA's estimated total costs for the disaster less administrative costs.

The Federal government funds 75 percent of the cost, with some restrictions, of eligible mitigation projects under HMGP. Eligible projects can include acquisition or relocation of property located in high hazard areas; elevation of flood prone structures; seismic rehabilitation of existing structures; strengthening of existing structures against wildfire; dry flood proofing activities that bring a structure into compliance with NFIP requirements and State or local code. Up to seven percent of the HMGP funds may be used to develop state and/or local mitigation plans.

The State of Colorado serves as grantee and is responsible for notifying potential applicants of the availability of funding, defining a project selection process, ranking and prioritizing projects, and forwarding projects to FEMA for

funding. The applicant, or sub grantee (the County or other eligible entity), carries out the approved projects.

Notification of the availability of HMGP funding typically comes from the State of Colorado to the County Emergency Management Agencies and others via email or direct correspondence. This information is subsequently shared during Regional ESF-5 (Emergency Management) meetings.

States that develop an Enhanced State Mitigation Plan may receive an increased amount of 20 percent for Hazard Mitigation Grant Program funding.

The HMGP program requires a 25 percent cash or in- kind match and Federal funding from other sources cannot be used as the match. (Note: Funding from Community Development Block Grant program can be used as match.)
The County has facilities, termed "Emergency Support Facilities" which support the mission of emergency management, particularly during response and recovery, and facilitate continuity of government. These facilities, and their alternate sites, have been established, and outfitted with the infrastructure necessary to function as the emergency management hub of activity for field support including communications with field personnel and with the public. These locations provide either a permanent or mobile location through which emergency management decision making and coordination can be accomplished.

6 Facilities

6.1 Emergency Operations Center (EOC)

The physical location at which the coordination of information and resources necessary to support domestic incident management activities takes place.

An EOC may be a temporary facility or may be located in a more permanent facility.

The EOC is organized around major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, county, municipality) or some combination thereof.

When activated, representatives from many organizations meet to coordinate disaster efforts. Once activated, the EOC is self-sufficient for extended periods of time. The EOC can begin activation immediately and achieve maximum readiness in approximately four to eight hours.
Each of the six counties in the SECAHR have an EOC designated for primary use and an alternate EOC if the primary is inoperable. In the event both the primary and alternate EOC is damaged one of the three mobile command units in the region could be used temporarily or until a more suitable location is found.

Table 12: County EOC Locations

County Emergency Operations Centers	Physical Location	City, Zip	Latitude /Longitude	USNG
Baca County EOC	29400 US Hwy 287	Springfield, CO 81073	37.419352 -102.615137	13SGB1104144064
Bent County EOC	725 Bent Avenue	Las Animas, CO 81054	38.064247 -103.220694	13SFC5608814438
Crowley County EOC	611 E. 9th Street	Ordway, CO 81063	38.225015 -103.748894	13SFC0950931521
Kiowa County EOC	1305 N Goff Street	Eads, CO 81036	38.479394 -102.779994	13SFC9364661342
Otero County EOC	601 Colorado Ave	La Junta, CO 81050	37.982787 -103.542068	13SFC2803604908
Prowers County EOC	2504 S. Main Street	Lamar, CO 81052	38.064801 -102.618361	13SGC0893215683

6.2 Alternate Emergency Operations Center (AEOC)

The Alternate Emergency Operations Center is the secondary facility for use if the primary Emergency Operations Center facility becomes inoperable during emergencies. Due to the sensitivity of these facilities they are not listed in this plan or available to the public.

6.3 Department Operations Centers (DOC)

Department Operations Centers normally focus on internal agency incident management and response. The DOCs are linked to the Operations Section of an Incident Command Structure. They are also linked to the Emergency Operations Center through agency representatives in order to ensure effective and efficient incident management.

6.4 County Staging Areas (CSA)

Each County is required to survey and identify at least one County Staging Area (CSA) for the purpose of receiving and re-distributing bulk emergency relief

supplies such as water and ice within the first 72 hours after an event to the County Points of Distribution (POD).

Each County will make every effort to establish and manage a county staging area capable of receiving resources within 72 hours post-event. For each disaster the county must specifically request that the State of Colorado directly push supplies from its Logistical Section.

Once the County Staging Area is open, resources will be delivered to the County Staging Area. The county will assume responsibility for forward movement of resources to the Points of Distribution.

The CSA and PODS will be under the direction of the Logistics Chief. Authorization by either the Emergency Management Director or Logistics Chief is required prior to removing any supplies from the County Staging Area.

Table 13: County Staging Areas

County Staging Area	Physical Location	City, Zip	Latitude /Longitude	USNG
Baca – Industrial Park & Emergency Operations Center	29400 US Hwy 287	Springfield, CO 81073	37.418832 -102.616291	13SGB1094044004
Bent – Bent County Community Center	1214 Ambassador Thompson Blvd.	Las Animas, CO 81054	38.065483 -103.231626	13SFC5512614557
Crowley – Ordway Fire Hall	611 E. 9th	Ordway, CO 81063	38.225035 -103.748952	13SFC09523154
Kiowa – Kiowa County Fair Grounds Community Building.	15103 US Hwy 287	Eads, CO 81036	38.484695 -102.788122	13SFC9292061915
Otero County District 1 Shop	100 Dalton Avenue	La Junta, CO 81050	37.987999 -103.565729	13SFC2594905454
Prowers – Lamar Municipal Airport	3652 CR GG.2	Lamar, CO 81052	38.069644 -102.688500	13SGC0233316838
Prowers – Sand and Sage Fairgrounds	2206 Saddle Club Drive	Lamar, CO 81052	38.066547 -102.622863	13SGC0867515763
Prowers – Lamar Community College	2401 South Main Street	Lamar, CO 81052	38.068650 -102.616978	13SGC0906816021

Prowers – Lamar High School	1900 South 11th Street	Lamar, CO 81052	38.070694 -102.628254	13SGC0810916337
Prowers – Holly Airport	27500 US Hwy 89	Holly, CO 81047	38.037714 -102.117216	13SGC5297113919
Prowers – Wiley High School	501 South Ward Street	Wiley, CO 81092	38.156421 -102.721393	13SFC9960725555
Prowers – Granada High Schools	201 South Hoisington	Granada, CO 81041	38.059798 -102.306143	13SGC3634415813
Prowers – Holly High School	206 North 3rd Street	Holly, CO 81047	38.054577 -102.121116	13SGC5266015734
Prowers – Bristol Fire Station	200 South Frederick	Bristol, CO 81041	38.120281 -102.309980	13SGC3581322573

6.5 Points of Distribution (POD)

During the preparedness phase, each County Emergency Management Agency should pre-selects multiple potential locations throughout the County for use as Points of Distribution. These locations are typically parking lots of schools, parks, sports complexes. See "Potential Points of Distribution Locations" table below.

Table 14: Points of Distribution Locations

POTENTIAL POINTS OF DISTRIBUTION (POD) LOCATIONS			
Schools		**Church Parking Lots**	**County Parks/Sports Complexes**
Walsh Elementary School	Springfield High School	First Baptist Church - Springfield	Minick Buliding – Fairgrounds
Walsh High School*	Springfield Elementary School	Baptist Chapel - Springfield	Blue Building – Fairgrounds*
Vilas School*	Campo School	United Methodist Church – Walsh	Road and Bridge Dist 1 – Two Buttes*
Pritchett School		Wesleyan Church - Campo	Baca County Resource Center – Springfield*
		Wesleyan Church - Walsh	Road and Bridge Dist 2 – Campo*

			Road and Bridge Dist 3 – Pritchett*
			Baca County Industrial Park – Springfield*
			Baca County Resource Center - Springfield
Las Animas Elementary School	McClave School	Church of Christ	Bent County Courthouse Warehouse/Garage
Las Animas High School		First Baptist Church	Bent County Community Center
		First Presbyterian Church	Bent County Sheriff's Office Parking Lot – Las Animas*
			Bent County Public Health Offices – Las Animas*
Ward Middle School*	Crowley County high School	River of Life Fellowship	Crowley County Fair Grounds
		St. Peters Catholic Church	Ordway Sports Complex
Kiowa County Courthouse Parking Lot		First Baptist Church	Kiowa County Community Building – Eads*
		First Christian Church	
		United Methodist Church	
		Praise Community Church	
La Junta Middle School*			Otero County Courthouse*
Lamar High School	Lamar Middle School	First Christian Church	Sand and Sage Fairgrounds*
Washington Elementary School	Parkview Elementary School	First Baptist Church	Lamar Community Building
Lincoln Elementary School	Granada High School	Lamar 4 Square Church	Wiley Community Center
Wiley High School	Holly High School	Church of Latterday Saints	Granada Community Center
Lamar Community College		Missionary Baptism Church	Wiley Football Field
		St. Francis De Sales Catholic Church	Granada Football Field
		Wiley Methodist Church	Holly Gateway Park
		Wiley Community Church	Holly Fairgrounds
		Granada Methodist Church	
		Church of Nazarene	
		St. Francis of Rome Catholic Church	

*-Identifies Public Health POD Location.

Additionally, each County or municipality must provide security and traffic control for each Point of Distribution, including adequate personnel to manage inbound and outbound traffic, traffic cones, barricades, etc. If the County is unable to handle the security mission, the County may request mutual aid, or additional state assistance.

Points of Distribution (PODs) are where the general public will obtain life sustaining emergency relief supplies until such time as power is restored and traditional facilities such as comfort stations, fixed and mobile feeding sites, and social service programs are in place. Even though it is the goal of local and state government to obtain supplies within the timeframes described below, it is important to stress to the public the importance of being self-sufficient with food, water, and medicines for a minimum of 3-5 days, as the timeframes below are not guaranteed.

Standard Model

1 Gallon of Water per person per day

2 MRE's of equivalent per person per day

The County must assume full staffing of the POD. If needed additional resources could be requested of the State of Colorado through WebEOC.

The allocation of emergency resources to individuals is based on an agreed upon standard state/federal model. The model assumes the following is necessary:

6.6 Comfort Stations

Comfort Stations may be established by each County Emergency Management Agency in a community several days' post event as needed. Comfort Stations may be opened to provide comfort-type items (non-food) such as bug spray, hand sanitizer, portable showers, portable phone service or internet connections and are typically opened in areas where utilities and stores would be expected to be out of service for an extended period of time.

The Emergency Management Director will determine whether or not to open comfort stations based on the expected length of the situation. Comfort Stations are operated by the County and organized by Emergency using volunteers and county staff.

Resources and supplies disseminated at the Comfort Stations would be purchased by the County through vendors or sought through state assistance.

Table 15: Comfort Station Locations

Comfort Stations	Address	Town	Latitude	Longitude	USNG
Minnick Building – Fair Grounds	28500 Co. Rd 24.6	Springfield	37.405566	-102.629049	13SGB0984842503
Resource Center	1260 Main Street	Springfield	37.400857	-102.615961	13SGB1102042010
Baca County Industrial Park	29400 US Hwy 287	Springfield	37.419324	-102.615011	13SGB1105244061
Senior Center	321 N Colorado St	Walsh	37.386851	-102.278601	13SGB4093141264
Gem Theater	400 N Colorado St	Walsh	37.387303	-102.277943	13SGB4098841316
Two Buttes Gym	5th & C Street	Two Buttes	37.560110	-102.398952	13SGB2974360190
Campo Community Center	627 Walnut Street	Campo	37.102758	-102.578363	13SGB1519509016
Pritchett Community Building	300 Randolph Street	Pritchett	37.370018	-102.859771	13SFB8951438070
Vilas Community Center	101 W Maple Street	Vilas	37.372941	-102.447209	13SGB2604339303
Bent County Community Center	1214 Ambassador Thompson Blvd	Las Animas	38.065602	-103.232254	13SFC5507114569
Hasty Fire Station	1209 S. Main Street	Hasty	38.102922	-102.957348	13SFC7909819205
McClave Fire Station	Co. Rd LL and Lincoln	McClave	38.136179	-102.850140	13SFC8841323108
Ordway Sports Complex	Hwy 71 & 9th Street	Ordway	38.227178	-103.751876	13SFC0924531758
St. Peters Catholic Church	N. Main & 9th Street	Ordway	38.225930	-103.756339	13SFC0885531603
River of Life Fellowship	411 9th Street	Ordway	38.224827	-103.752333	13SFC0920531501
Crowley County Fair Grounds	Lane 17 and Rd. H	Ordway	38.230715	-103.764636	13SFC0811132047
Eads Elementary School	900 Maine Street	Eads	38.483473	-102.782078	13SFC9345361790
Kiowa County Public Health Office	1309 Maine Street	Eads	38.479614	-102.781603	13SFC9350561363
Otero					

Lamar High School	1900 South 11th	Lamar	38.070694	-102.628254	13SGC0802016302
Lamar Middle School	104 West Park	Lamar	38.083270	-102.619523	13SGC0878417725
Lamar Community Center	600 South 6th	Lamar	38.083321	-102.621680	13SGC0857617735
Washington Elementary School	510 South 9th	Lamar	38.084136	-102.626336	13SGC0817417810
Lincoln Elementary School	200 North 10th	Lamar	38.091467	-102.627250	13SGC0807818619
Parkview Elementary School	1105 Parkview	Lamar	38.079508	-102.614969	13SGC0918417317
Lamar City Complex	500 South Main	Lamar	38.084858	-102.618547	13SGC0886917906
Prowers County Annex	1001 South Main	Lamar	38.079432	-102.618161	13SGC0892617308
Melvin Hendrickson Development Cntr.	510 Savage Avenue	Lamar	38.070912	-102.622230	13SGC0858216364
Welcome Home Child Care Center	607 Savage Avenue	Lamar	38.070224	-102.623357	13SGC0848416272
DOW Service Center	2502 South Main	Lamar	38.064603	-102.617912	13SGC0897515658
Lamar Eagles Lodge	1406 South Main	Lamar	38.076302	-102.618754	13SGC0887116954
Lamar Elks Lodge	28157 US Hwy 287	Lamar	38.044592	-102.614221	13SGC0934213448
Lamar Community College	2401 South Main	Lamar	38.068650	-102.616978	13SGC0908116129
Wiley Community Center	203 Pheasant Run	Wiley	38.153354	-102.715714	13SGC0014325293
Wiley High School	501 South Ward	Wiley	38.156421	-102.721393	13SFC9966225614
Granada Community Center	103 South Main	Granada	38.062226	-102.310069	13SGC3599716118
Granada High School	201 South Hoisington	Granada	38.059798	-102.306143	13SGC3637315863
Bristol Church	201 US Hwy 385	Bristol	38.124373	-102.311035	13SGC3570223010
Holly High School	206 North 3rd	Holly	38.054577	-102.12116	13SGC5260015794
Hartman Gym	CR 29.5	Hartman	38.117554	-102.219486	13SGC4375022505

6.7 Volunteer Staging Areas

Volunteer Staging Areas are locations where large volunteer groups set up temporary offices and sleeping, feeding, and shower areas for their volunteers. Typically, large organizations approach the County requesting potential locations that could be used. The SECAHR has pre-identified several potential locations for Volunteer Staging Areas to be used if needed.

Table 16: Volunteer Staging Areas

Volunteer Staging Areas	Address	Town	Latitude	Longitude	USNG
Baca County Fair Grounds	28500 Co Rd 24.6	Springfield	37.404377	-102.630543	13SGB0971942368
Las Animas Fire Department	435 W 5th Street	Las Animas	38.067289	-103.222159	13SFC5595314773
Hasty Fire Department	1209 S. Main Street	Hasty	38.102922	-102.957348	13SFC7909819205
McClave Fire Department	County Road LL and Lincoln	McClave	38.136179	-102.850140	13SFC8841323108
Crowley County Fairgrounds	Lane 17 & Road H	Ordway	38.230715	-103.764636	13SFC0811132047
Kiowa County American Legion Hall	15001 US Hwy 287	Eads	38.485173	-102.788712	13SFC9287061965
Otero Road & Bridge La Junta Shop	100 Dalton	La Junta	37.988158	-103.565042	13SFC2600905472
Savage Stadium	600 South 7th	Lamar	38.083480	-102.623046	13SGC0847117739
Lamar Community Building	606 South 6th	Lamar	38.083265	-102.621737	13SGC0857717712
Lamar Community College Wellness	2505 S Main Street	Lamar	38.065142	-102.616378	13SGC0911115713
Lamar High School	1900 South 11th	Lamar	38.070694	-102.628254	13SGC0803516309
Lamar Wrestling Gym	501 South 6th	Lamar	38.084734	-102.621383	13SGC0860917881
Granada High School	201 S. Hoisington	Granada	38.059798	-102.306143	13SGC3636415866
Holly High School	206 N 3rd Street	Holly	38.054577	-102.121116	13SGC5259715814
Wiley High School	501 S Ward Street	Wiley	38.156421	-102.721393	13SFC9966925621

6.8 Landing Zones

GPS Zones are in the Decimal Degrees and USNG.
The following Landing Zones are available for use by incoming support coordinated through SEOC.

Table 17: Landing Zones

Landing Zones	Location	Latitude/longitude	USNG	Coordinator
Southeast Colorado Hospital Helipad	373 E. 10th Ave Springfield, CO 81073	37.404797 -102.613604	13SGB1121742452	Cecelia Deen 719-523-4501
Springfield Municipal Airport	32506 US Hwy 287 Springfield, CO 81073	37.460649 -102.618922	13SGB1059048638	Brett Figgins 719-529-9791 122.9
Baca County EOC	29400 US Hwy 287 Springfield, CO	37.418596 -102.615865	13SGB1097843978	Jennifer Leathers 719-529-0471
Walsh Elementary LZ	301 W Poplar St Walsh, CO 81073	37.385420 -102.281873	13SGB4064641097	Stephanie Hund 719-691-5338
Walsh HS Football LZ	301 N California St Walsh, CO 81073	37.384482 -102.284188	13SGB4044440987	Stephanie Hund 719-691-5338
Campo School Track	Campo, CO 81073	37.103533 -102.577056	13SGB1530909105	
Vilas School Field	Vilas, CO 81073	37.373327 -102.450835	13SGB2572139337	
Pritchett School Track	Pritchett, CO	37.372389 -102.863274	13SFB8919838326	
Two Buttes LZ	Two Buttes, CO	37.561163 -102.396708	13SGB2993860313	
Las Animas Airport	SW of Las Animas, CO	38.054473 -103.232660	13SFC5505913333	John Dombaugh 719-469-5252
Ordway Sports Complex	9th St. Ordway, CO	38.227924164 -103.7510000	13SFC0931031848	
CCHS Football Field	Colorado Street Ordway, CO	38.223597200 -103.7586046	13SFC0866031365	
Heritage Center	Main St, Crowley, CO	38.195116416 -103.8536953	13SFC0037728069	
Track	Sugar City, CO	38.229883356 -103.6577305	13SFC1749332165	
Vacant Lot	Olney Springs, CO	38.165307785 -103.9457809	13SEC9234924674	
Eads High School Football Field	210 W 10th Street Eads, CO 81036	38.485065 -102.782502	13SFC9341261966	
Eads Airport	1 M West of Eads, CO 81036	38.479282 -102.808331	13SFC9117461270	Van Brown Jr. 719-688-7294 122.90
Prairie Pines LZ	101 E Lowell Street, Eads, CO 81036	38.475542 -102.782921	13SFC9340160908	
La Junta Municipal Airport	30267 1st Avenue, La Junta, CO 81050	38.045822 -103.50509	13SFC3087111949	Bill Jackson 719-384-8407
Rattler Football Field	1401 Santa Fe Ave La Junta, CO 81050	37.972653 -103.544660	13SFC2782603780	
Fowler Airfield Association	30491 County Road 2 Fowler, CO 81039	38.075387 -104.042456	13SEC8398514612	Gary Rogge 719-251-4269
Manzanola Football Field	301 S Catalpa Street Manzanola, CO 81058	38.103450 -103.867194	13SEC9931917899	719-462-5528
Rocky Ford Football Field	100 W Washington Ave Rocky Ford, CO 81067	38.041886 -103.737299	13SFC1080111215	719-254-7431
Swink Football Field	610 Columbine Avenue Swink, CO 81077	38.009536 -103.624300	13SFC2077007766	Kyle Hebberd 719-384-8103
Savage Stadium	1900 South 11th Street, Lamar, CO	38.083402 -102.624252	13SGC0836217734	
Lamar Middle School	606 South 6th Street Lamar, CO	38.083411 -102.621082	13SGC0865317735	

McCorkles Field	900 West Oak Street Lamar, CO	38.086143 -102.630362	13SGC0782518019	
Escondido Field	700 North 13th Street Lamar, CO	38.09699 -102.628754	13SGC0793919239	
Lamar Swimming Pool	1107 Parkview Avenue Lamar, CO	38.078270 -102.614868	13SGC0919917190	
Lamar Community College North	2500 South Main Lamar, CO	38.069532 -102.616782	13SGC0906316211	
Lamar Community College Wellness	2505 South Main Lamar, CO	38.064260 -102.616326	13SGC0909715624	
Sand and Sage Fairgrounds	2206 Saddle Club Drive Lamar, CO	38.065626 -102.623337	13SGC0849615756	
Lamar High School 1	1900 Savage Avenue Lamar, CO	38.070053 -102.627312	13SGC0812916233	
Lamar High School 2	1900 Savage Avenue Lamar, CO	38.071525 -102.630195	13SGC0787116408	
Wiley Football Field	501 South Ward Wiley, CO	38.156988 -102.722375	13SFC9955625677	
Wiley Baseball Field	100 3rd Street Wiley, CO	38.154457 -102.722622	13SFC9953325404	
Granada Football Field	201 S. Hoisington Granada, CO	38.060326 -102.303743	13SGC3656515937	
Town of Granada	300 W Cottonwood Granada, CO	38.064913 -102.313270	13SGC3570316422	
Holly Football Field	206 N 3rd Street Holly, CO	38.054750 -102.119831	13SGC5270615803	
Holly Road and Bridge Shop	505 N 8th Street Holly, CO	38.058742 -102.127073	13SGC5206416223	
Holly Fairgrounds	33000 US Hwy 50 Holly, CO	38.053368 -102.146729	13SGC5038215567	
Granada CDOT Shop	200 Amache Road Granada, CO	38.057139 -102.312474	13SGC3581615604	
Hartman Old Gym	31000 CR 29.5 Hartman, CO	38.117528 -102.219627	13SGC4384222549	

6.9 Disaster Assistance Center

Disaster Assistance Centers (DACs) are utilized to facilitate the dissemination of the various types of FEMA disaster assistance, as well as qualification criteria to the impacted communities. Disaster Assistance Centers (DACs) are established by the State of Colorado as a joint effort by the State, County, and FEMA. This site is focused on providing disaster victims with a convenient means of obtaining recovery assistance information from all levels of government. The DAC is established in the days following a Presidential Disaster Declaration and remains operational until the informational needs of the disaster victims are met.

6.9.1 Virtual DAC

During an event such as a pandemic or an event that would devastate a large area and many of the residents are required to leave the area a Virtual Disaster Assistance Center maybe set up via a webpage or other means to create the same sort of assistance only in a self-help format from a remote location.

6.9.2 Local Support to the DAC

The County Emergency Management Director serves as the liaison for coordinating with the State, pre and post event, on establishment of a Disaster Assistance Center. The County Emergency Management Agency will submit a request through WebEOC in establishment of a DAC.

The State DAC Manager maintains administrative and operational control over all personnel in the DAC and coordinates with the County if increased security is necessary, though DAC security is normally a FEMA function.

The County Emergency Management has pre- identified several potential DAC locations throughout the county for potential use as a DAC. These facilities were selected with priority consideration going to public buildings to reduce the operational expenses of the DAC. In addition, close proximity to population centers was factored into the selection during the pre-identification phase. If an incident occurs, that renders the pre-identified locations unsuitable, the County Emergency Management Agency will facilitate the identification of alternate publicly owned facilities, or potential lease situations with private entities as a last resort.

Public Works may be utilized to clear access to the facility, the Procurement Department contracts or purchases supplies, and the Maintenance Department delivers and sets up furniture, tables and janitorial services if needed.
The County will coordinate with the State DAC Manager for the provision of the facility, basic furniture, maintenance, and janitorial services. Electronic and technological equipment will be the responsibility of the user.

The Emergency Management Director will notify County Department Supervisors (Maintenance Dept. of Public Works, and Procurement Department) as to the need for county support at the DAC. The Supervisors of the Department involved will direct their department staff with further instructions to report for support of the DAC.

Requests for additional state participation related to the establishment of a Disaster Assistance Center will be submitted to the State of Colorado via WebEOC. Verbal requests (directly to the source) are acceptable in the interest of time; however, the user should consistently use the established database methods.

6.9.3 Other Agencies at the DAC

Several entities including the American Red Cross, the Salvation Army, the Department of Agriculture, Community Services, and insurance companies may also co-locate in the DAC in order to provide pertinent local information

such as local relief programs, permitting locations, insurance information, mitigation information, and referrals.

Table 18: Potential Disaster Assistance Center Locations

Potential Disaster Assistance Center Locations – Subject to Change and May Not Be Simultaneously Operational						
Description	Common Name	Address	Town	Latitude	Longitude	USNG
DAC	Baca County EOC	29400 US Hwy 287	Springfield	37.419218	-102.615105	13SGB1104444049
DAC	Springfield School Gym	475 W 5th Ave	Springfield	37.409712	-102.621872	13SGB1047242979
DAC	Walsh High School Gym	301 N California Street	Walsh	37.386273	-102.284858	13SGB4037941184
DAC	Vilas School Gym	202 Collingwood Ave	Vilas	37.372946	-102.449404	13SGB2584939298
DAC	Pritchett School Gym	533 Irving Street	Pritchett	37.372560	-102.862219	13SFB8929138347
DAC	Campo School Gym	480 Maple Street	Campo	37.104657	-102.576075	13SGB1539309232
DAC	Las Animas Fire Department	435 W 5th Street	Las Animas	38.067289	-103.222159	13SFC5595314773
DAC	Hasty Fire Department	1209 S. Main Street	Hasty	38.102922	-102.957348	13SFC7909819205
DAC	Ordway Community Library	1100 Main Street	Ordway	38.228200	-103.756117	13SFC0887231866
DAC	Annex Building – Commissioners	603 Main Street	Ordway	38.222209	-103.756366	13SFC0885431193
DAC	Eads High School	210 W 10th St	Eads	38.483210	-102.783725	13SFC9331061758
DAC	CSU Extension office	311 N. 10th	Rocky Ford	38.05469	-103.71738	13SFC1252912658
DAC	Prowers County Annex	1001 S. Main	Lamar	38.079432	-102.618161	13SGC0892617308
DAC	Lincoln Elementary School / Hope Center	200 N 10th	Lamar	38.091467	-102.627250	13SGC0807818619
DAC	Lamar Community College	2401 South Main	Lamar	38.068650	-102.616978	13SGC0908116129
DAC	Wiley Community Center	500 Pheasant Run	Wiley	38.153354	-102.715714	13SGC0014325293
DAC	Granada Community Center	103 S Main	Granada	38.062226	-102.310069	13SGC3637315863
DAC	Holly Road and Bridge	505 N 8th	Holly	38.058432	-102.127365	13SGC5203516195
DAC	Holly Fire Department	200 S 3rd	Holly	38.051822	-102.121661	13SGC5255815477
DAC	Holly School District Ag Shop	200 East Park	Holly	38.056858	-102.120487	13SGC5264416039
DAC	Hartman Gym	3100 CR 29.5	Hartman	38.117544	-102.219495	13SGC4375422509
DAC	Bristol Community Church	100 E 2nd St North	Bristol	38.124385	-102.311062	13SGC3570323032

7 Critical Facilities

Critical facilities include those facilities, including emergency management support facilities, on which communities depend and which are essential to the county's ability to recover from a disaster. Due to the criticality to the community, the population density or the needs of the special population served, these facilities may require special consideration given during each phase of emergency management.

Each County Emergency Management Agency identifies and evaluates these locations for their potential contribution to disaster relief, and submits the Critical Facilities Inventory List to Colorado Division of Homeland Security and Emergency Management Regional Field manager for entry in the Geographic Information System. This information helps to build a Priority Damage Assessment Listing.

Critical Facilities are generally from the following Critical Facility Categories

7.1 Power

facilities for generation, transmission and distribution of electric power including Electrical Power Generating Plants, Substations, Major Electrical Distribution Systems/Routes

7.2 Water

facilities for the treatment, transmission and distribution of water for drinking, fire protection or electricity generation purposes including public and private potable water distribution systems, deep wells, tanks, treatment plants, and lift stations

7.3 Sewer and Wastewater Treatment

facilities for collection, transmission and treatment of wastewater

7.4 Communications

facilities for transmission, switching and distribution of telephone, radio, television and cable, including government communications towers and repeaters, Emergency Alerting System (EAS) stations, telephone system points of distribution and towers, land line, cellular, microwave

7.5 Emergency Medical Care

facilities which provide direct patient care to include hospitals, clinics, outpatient services and nursing homes

7.6 Fire Protection/Emergency

fire and Rescue companies including buildings and vehicles essential to providing emergency services, and ambulance companies

7.7 Law Enforcement

facilities including police/sheriff stations, jails, correctional facilities

7.8 Government

facilities necessary for continuity of government including emergency operations centers, administration, roads and bridges facilities, engineering, other public service offices

7.9 Shelters

facilities that serve as risk/host shelters, Special Needs shelters, Refuges of Last Resort, animal shelters

7.10 Vital Private/Commercial Facilities/Services

high hazard dams/dikes, hazardous materials facilities, food processing plants, fuel pipelines, terminals, storage tank farms, flood control prevention stations and devices

7.11 Commercial Distribution Centers

supply sources of building/construction materials, potable water and ice, food, power generators, light equipment (chain saws, shovels, barricades, etc.), heavy equipment (bulldozers, forklifts, etc.), medical supplies, fuels (gasoline, diesel, propane, natural gas, etc.)

7.12 Special Population Centers

facilities or areas with populations that require special considerations (nursing/convalescent/group homes, etc.)

7.13 Education

public and private schools, community colleges, universities

7.14 Emergency Response and Recovery Support

Facilities such as Disaster Assistance Centers, Joint Field Offices, Comfort Stations, Distribution Sites, Response Operations Staging Areas, Debris Removal Staging Areas

7.15 Transportation

facilities/routes such as airports/heliports, public transportation, railroad lines, commercial ports and waterways, critical links/bridges, evacuation routes/major transportation arteries

7.16 Other Community Facilities

including churches/synagogues, motels/hotels, civic centers

8 Recovery Actions

8.1 Community Relations Program

FEMA/State Community Relations Teams are deployed to disseminate information and collect data to assist disaster affected communities and individuals in receiving the assistance to which they are entitled. The primary functions of these teams are to identify and report unmet human needs and to inform disaster victims of the disaster assistance programs and the tele-registration process.

Each County Emergency Management Agency will support the efforts of the FEMA/State Community Relations Programs. The County Emergency Management Director will function as the Community Relations Coordinator and will serve as a liaison between the County and the FEMA/State Community Relations Teams.

In this capacity, the Emergency Management Director will receive information about the activities of the teams, provide suggestions as applicable, and support the mission of the community relations program by relaying information to the Public Information Officer for distribution in situation reports and press releases, as requested by the Community Relations Teams. The Director will also maintain a list of key community leaders to be contacted after an emergency regarding community needs.

The criteria for determining the priorities within the County for Community Relations Action will be based on:

1) Most Impacted areas

2) Most geographically isolated

3) Vulnerable populations (special need, low-income, elderly, transportation disadvantaged, etc.)

Special populations and geographic areas which may require special outreach include the elderly, non-English speakers, and those with cognitive or mobility

issues. Each County should utilize social outlets such as the home health agencies and other church and nonprofit groups to reach these populations.

8.2 Debris Removal

Debris consists of all disaster related debris located within public right-of-ways, public school grounds, and developed areas of public parks. Debris includes damaged and disturbed trees, bushes, shrubs, broken/partially broken or severed tree limbs, uprooted stumps, and brush. Debris also may include construction and demolition debris related specifically to the disaster, including glass, plastics, non-salvageable metal, sheet rock, and other building materials.

The SECAHR has a regional Debris Management Plan that has been accepted by FEMA and each county in the region is eligible for the FEMA Debris Removal Pilot Program. For more information on Debris Management Please refer to this plan.

8.3 Feeding Operations

American Red Cross, churches, and other volunteer organizations may establish feeding and distribution sites based upon community need and resource availability.

It will be expected that these organizations will coordinate their activities through the County Emergency Management Agency. During EOC activations, such coordination will occur in conjunction with the liaisons from ESF 6 (Mass Care) and ESF 15 (Volunteers and Donations).

8.4 Re-Entry

To establish guidelines to allow residential and business owners back as soon as conditions permit after an incident or disaster requiring evacuation. For more information, please Appendix A of this plan.

8.5 Housing

Housing is one of the key issues in long-term recovery. The ability of citizens to resume normal functioning is dependent largely on the ability to repair and rebuild in a reasonable amount of time.

Homeowner’s insurance and flood insurance policies help to mitigate the probability of experiencing extreme financial hardship due to catastrophic loss; not all citizens engage in or have the means to engage in such mitigation actions.

8.5.1 Temporary Living Areas

The American Red Cross has the primary responsibility for the sheltering of individuals on short-term basis.

Once a presidential disaster declaration is made, federal housing assistance is anticipated for long-term displacements. Payment vouchers through the Individual Assistance Program (IA) may be made available to qualified individuals in order to make rental payments while housing is being reconstructed. Travel trailers are sometimes provided by FEMA to serve as temporary living quarters while reconstruction is occurring. Additionally, the private sector housing markets play an important role in providing temporary housing.

8.6 Insurance Coordination

The County Administrator is responsible for insurance management and county claims and maintains all insurance documents for departments in the county.

Each Municipality should have an administrator or manager that is responsible for insurance management and claims and maintains all insurance documents for the municipality

8.7 Unmet Needs

During the recovery and long-term recovery phase, immediate life safety needs have already been addressed. Volunteer organizations and other private sector groups continue to augment or extend the abilities of government to assist disaster victims by providing donated goods and volunteer services. Personnel will be identified through these volunteer groups or by contacting the county.

During disaster recovery, the contact numbers for assistance through 2-1-1 are publicized. 2-1-1 volunteers prioritize the requests for assistance, with higher priority being given to vulnerable populations (elderly, impoverished, etc.). Volunteers are subsequently matched to the needs and services are conducted. Efforts to match volunteer programs with disaster victim’s needs is a coordinated effort involving the many volunteer organizations and social service programs present in the County. These include local Churches, non-profits, and local government organizations.

Municipalities have a seat in the EOC and work through the same ESFs to meet any identified unmet needs they encounter. Municipalities have their own EM sections which address local unmet needs. They work through the County ESF system for outside support.

Training is through church and nonprofits. It is opportunity based and open to all. Individual nonprofits and churches also provide training for their own teams assigned to donations, warehouse management, processing centers, and crisis counseling.

9 Administrative Procedures

Each department director is responsible for following Federal Office of Management and Budget rules and regulations concerning federal funds. The directors are also responsible for management of records and payrolls within their departments.

County Human Resources is responsible for any necessary review for consistency with state and federal guidelines. Additionally, County Human Resources may relocate to the EOC, if necessary to perform their functions during a disaster.

The Emergency Management Agency may assist in these processes or in the case of interruption to county government may replace these processes.

9.1 Expenditure of Funds

While innovative and expeditious means of procurement are called for during times of disaster, it is still mandatory that good accounting principles and practices be employed in order to safeguard the use of public funds from the potential of fraud, waste and abuse.

In accordance with the Federal guidelines, and the State of Colorado Financial Management Policies and Procedures, officials of the primary and support agencies will give approval for expenditures of funds for response operations.

Accurate documentation of expenses is critical to the application for public assistance programs as well as for any future reimbursement. For any emergency, it is the responsibility of each department or agency to track and monitor all costs associated with their agency's response. Each agency is also responsible for establishing effective administrative control of funds and segregation of duties for proper internal controls.

Extreme care and attention to detail must be taken throughout the emergency response period to maintain logs, formal records and copies of all expenditures (including personnel time sheets) in order to provide clear, reasonable accountability and justification for future reimbursement requests. Reimbursement is NOT an automatic authorization, but a deliberate process of justifying each expense.

All records relating to the allocation and disbursement of funds must be maintained, in compliance with:

1. The Code of Federal Register-Title 2 Part 200: Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

2. Colorado Revised Statutes (CRS)

3. The State of Colorado DHSEM Financial Management Policies and Procedures.

9.2 Accounting for Disaster Expenditures

A Presidential disaster declaration will permit funding from the Federal Disaster Relief Fund under the provisions of the Stafford Act. In addition, the Federal Office of Management and Budget (OMB) and Congress may give rapid approval to a FEMA – prepared emergency budget request at a level sufficient to sustain a local community's response operation for at least three weeks, with the opportunity to extend, if the situation warrants.

Therefore, it is critical that an ongoing running total be kept of all costs associated with the response and that the costs be closely monitored in order to anticipate and estimate the time period within which the department/agency or organization can operate self- sufficiently and to predict operating needs.

Additionally, all expenses incurred as a result of the disaster within 2 CFR 200 are reimbursable if they are documented. All departments/agencies must begin documenting personnel and supply expenses as soon as response begins. Specific record keeping procedures are further outlined in the State of Colorado Financial Management Policies and Procedures for Emergency Management.
On behalf of the Departments of the County, the County Administration Office serves to coordinate the capture of expenses related to financial management. Each organization/department should maintain communication through the finance section at the EOC in order to gain/provide accurate estimates of the ongoing response and recovery costs.

Additionally, the County, municipalities, and eligible private non-profit entities must maintain adequate disbursement and accounting records of the costs incurred on approved disaster work for reimbursement and so that the documentation required by state and federal audit can be made available.

The County Administrator is authorized to execute the funding agreements with other legal entities on behalf of the county.

10 Plan Maintenance

Coordinated Plan maintenance will be critical to the success of the Regional Recover Plan. This will include monitoring, evaluation, and updates to the plan as well as support to local plan maintenance.

The Regional Field Manager with assistance from each County Emergency Management Agency will lead plan monitoring. At a minimum the plan is reviewed every two years, and after each disaster event. Monitoring for changes in best practices, local and regional capabilities, and regional priorities will occur on an annual basis.

Evaluation of the plan will be made during and after an event or exercises using the after action report.

Plan updating will be led by the Regional Field Manager and will be based on revisions identified through monitoring and evaluation. The frame work will be updated as needed given the proposed monitoring schedule and evaluation. Updates can also be based on:

- The request of an elected official;
- When significant new risks or vulnerabilities are identified to appropriately plan for these risks;
- After a disaster to address lessons learned and vulnerabilities in pre-planning.

Anytime the plan is updated, the plan will be re-distributed to plan holders and placed on the Regional website at www.secahr.com.

For modifications, changes and updates please contact:

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DHSEM Regional Field Manager
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Appendix A: Re-Entry Plan Template

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

SOUTHEAST COLORADO ALL-HAZARDS REGION RE-ENTRY PLAN

The purpose of this plan is to provide guidance to local agencies for re-entry of residents that have been affected by the disaster that has caused evacuations within _____ County.

A. MISSION

To evaluate and assess the immediate human needs (food, water, health/medical, and housing) and the operational status of vital community infrastructure (transportation, communications, and utility systems). To assist impacted localities with the restoration of essential services, and to plan for and implement, when possible, the safe return of evacuees to their homes and neighborhoods on approved traffic routes.

B. SITUATION AND ASSUMPTIONS

All agencies named in this plan are responsible for conducting their own assessment to determine re-entry restrictions. This must be made in concert with the Incident Commander. This assessment will determine if the locality is safe to permit re-entry of residents and property/business owners. However, state and federal assistance may also be available to assist or to conduct such an assessment. State participation will be coordinated by DHSEM. This plan is designed for the return of residents following an evacuation prior to an expanding incident but may be modified to address other large evacuations. All agencies are responsible to be compliant to the communications plan presented by the EOC.

This plan may be partially or fully implemented depending on the scale, nature and duration of the incident. Re-Entry for short duration evacuations (less than 8 hours) with little or no damage or loss of power may be initiated by the Incident Commander without activation of this plan.

C. CONCEPT OF OPERATIONS

1. Return to the Risk Area:

    a) Once the threat has passed, activation of the _____ County Re-entry Plan may be based upon one of three (3) scenarios.

        1. Incident has passed and there is little or no damages that effect the communities.

        2. Effects are isolated to a localized area, operational area, or region of the county with minimal or isolated significant damages.

        3. Total devastation with significant infrastructure damages over a wide spread area.

2. Schools and correctional facilities, as well as residential and nursing homes are **NOT** to bring residents back to the community until all services have been restored to normal. To include power, water, sewer, communications and local suppliers of commodities used by the facilities. Transportation assistance needs shall be addressed by said facilities and communicated to the EOC.

3. The decision of when to permit residents to return to the affected area will be made cooperatively between the County EOC (which includes county and/or city staff), Incident Command, participating PSAP's, and any Municipality/Agency/Property Owners Associations Having Jurisdiction in the impacted areas based upon the three scenarios above.

    The decision to allow re-entry will be based on an overall evaluation of the situation by the IC, Sheriff and necessary county and city staff, including the following major factors:

a) Access - Following a major event a safety check (Phase S) of the impacted areas should be conducted as soon as possible to identify and prioritize the most seriously damaged areas of the locality. This can determine the level of damage to major/emergency routes, infrastructure, and affected area, and help to determine the time needed for debris clearance from routes, necessary repairs, and to begin Phase A.

b) Essential Emergency Services – Emergency services agencies that have been moved to a safe haven prior to an evacuation need to return back to their service areas.

c) Public Health – Water, air, and septic services are operating or available and disease prevention or mitigation is in effect.

d) Subsistence - Food is available or made available in the impacted area.

e) Utilities - Electricity, potable water, sewer services, and natural gas services are operating or are made available in the affected area.

f) Existing services can support the people already in the impacted area as well as an additional influx of people.

4. A ***Re-Entry Pass*** located in the windshield of non- emergency vehicles, or **RAPID TAG Identification** should be provided to anyone entering a controlled area. These passes may be superseded using a credentialing system such as 'Rapid Tag'. Rapid Tag may be provided at the scene, a Disaster Assistance Center, Shelter or another location provided by and through the EOC. An accompanying registration form should be filled out for each vehicle, and each adult resident with basic information, including physical address, temporary physical address, phone number, and zone (color) they are returning to.

   a) The ability to be credentialed should be made available prior to any re-entry step and is a best practice to begin the rapid tag process at the onset of the incident. It will be necessary to Rapid Tag 'support systems' for homeowners such as limited amounts of family members, etc.

   b) Credentials can be received after proving proof of identification (at least one form of Picture Id, and a utility, or registration document, etc.), as pre-determined by credentialing standards of the incident) this includes any and every adult entering the area (insurance adjusters, utility workers, victims' advocates, etc.)

5. Once the decision to permit re-entry has been established, law enforcement personnel should set up checkpoints and roadblocks as needed based upon the level of damage that has occurred. LE should be briefed on the TCP or checkpoints to include a sample credentialing pass.

6. It is the intent to utilize the local affected jurisdiction as the lead role in many of the operational aspects of this plan.

7. During the entirety of the evacuated area, Law Enforcement should remain on patrol within the affected area and at roadblocks until citizens have been repopulated.

8. Utilities such as power, gas, sewer, security should be working before Phase E repopulation

is permitted. During phase V and E of the reentry process, the following should be pre-positioned within the community to provide support and services:

a) Partner agencies such as the Red Cross, Mental Health, public health.
b) Dumpsters or agreement with trash providers for the removal of refrigerator and short term trash removal services.
c) Porta-Potties and wash stations should be provided in the area for residents, particularly areas with damaged homes.
d) Roving EMS, Fire and Law Enforcement resources

The following conditions will prohibit re-entry procedures: limited visibility, compromised air quality, leaking and burning propane tanks, heavy propane smell, burning, smoldering or falling trees, high heat, spot fires and thick ash.

9. Once the decision to permit re-entry has been established, Re-entry can proceed as recommended based upon a Phased Re-Entry called SAVER. SAVER is a systematic approach to re-entry that is based on two thresholds of safe re-entry. The first threshold is when it is safe enough to let Safety and Assessment teams into the evacuated area, and the second threshold is when the long term safety of residents is identified by the incident commander and Visits or Entry may occur.

SAVER is an acronym for the stages or phases in the reentry process:

Phase S – Safety

Phase A – Assessment

Phase V – Visit

Phase E – Enter

Phase R - Roadblocks

a) **Phase S – Safety**, begins the re-entry process. The entry of Electric Company, and Hazardous Material personnel must precede any other Phase to ensure the safety of all following personnel in all other Phases. This phase is not for the start of recovery and replacement, but only to clear hazards and create an environment that can sustain initial recovery efforts. Best practices would recommend local Road and Bridge personnel should be responsible for managing the operations of Phase S.
    - Necessary Road and Bridge Personnel to determine needs for road clearing and general safety of the area prior to reentry.
    - Local Electric Company for electrical line/pole issues.
    - Identified Hazardous Materials personnel to address gas/propane issues.
    - Media should not be part of this phase.

    The determination to move to Phase A is Determined by the Safety of the area.

b) **Phase A – Assessment**, allows the entry of agencies and groups that have key roles in restoring normal operations in the impacted area following a disaster, and agencies that will provide services toward the recovery of the area. Phase A agencies and groups may include, but are not limited to, the following:

    - Damage Assessment Teams (Windshield and Federal Assessments, Red Cross, etc.)
    - Law enforcement and security agencies (including private security for facilities and residential communities)
    - Fire and EMS crews

- Facility/Industry Emergency Response Teams (CERT, Septic inspectors, etc.)
- Debris Clearing and Removal Crews (Team Rubicon, Heavy Equipment, etc.)
- Infrastructure and Utilities Repair Personnel (Electric, phone, well inspectors, Propane, etc.)
- Other personnel at the direction of the County Sheriff or incident command that have a role in the restoration and recovery of the area (DOW, Trash services, etc.)
- Media should not be part of this phase.

Phase A will be complete when all partners are out of the area and approve the next phase of re-entry reentry. This is the last opportunity to provide services or check safety before the public enters the property. Damage Assessment findings may require the need for private notification group meetings for residents in specified areas.

c) **Phase V – Visit**, allows for the short-term limited re-entry of other critical groups as well as residents and business owners only if there is a need to assess severe damages to homes. The local County Sheriff in coordination with public safety personnel, county EOC, and other agencies should determine when it is safe, or if it is necessary in the given situation, to begin a Phase V entry. Phase V entry is a 2-hour window of opportunity to 'check in' credentialed residents of a specific area, allow unaltered or restricted (on a bus, etc.) entry into the area, and the 'check out' credentialing as they leave the area. It should be addressed that this limited re-entry is for the resident's opportunity to heal and understand the situation and resources needed moving forward. Phase V entry personnel may include, but are not limited to, the following:

- All agencies and personnel listed under Phase S and A
- Resident and Business Owners
- Insurance Adjusters and Contractors to conduct a visual insurance assessment.
- Relief Workers (Red Cross, Victims Advocates, Trash collectors, etc.)
- Commodities Points of Distribution (POD) Teams
- Health Agencies (Public Health, Air Monitoring Teams, CDC, etc.)
- It is not recommended that media be part of this phase.

The Determination to end phase V should be determined by a time frame restriction. For Example, "all persons must be out of the area by 6pm."

d) **Phase E – Entry**, allows for the re-entry of only those residents and business owners who can prove they live, own, rent, lease or otherwise have a need to be allowed into the affected areas. Once residents are back in their homes, it must be determined if the neighborhood must continue to be closed to outsiders. Considerations and necessary resources include:

- Residents residing within areas of severe damage should be credentialed into the area a minimum of 2 hours before areas without damage. This allows for time to adjust to damages without intrusion by media, neighbors, or the general public.
- Once re-entry is made the pre-plan for adjusting or removing roadblocks should be completed.
- A timeframe for the re-entry hours and details regarding temporary or permanent.
- Clear instructions provided as to where to send the people who show up with no pass.

e) **Phase R – Road Blocks**, the strategic location of roadblocks is an important part of the re-entry process. During the phases of re-entry, roadblock locations may change. Roadblocks will change depending upon the areas that are being re-entered or as needed. A plan for the new roadblock locations is necessary before re-entries are made. Roadblocks can be utilized to seal entry points into evacuated areas for two main reasons:

i. Roadblocks can be used to prevent entry of the civilian population, which can clog

rescue routes for people in the impacted areas who may require medical attention.

ii. Roadblocks are a method to help curtail acts of unlawfulness such as looting.

If the impacted areas cannot support the return of evacuated residents, temporary housing may be established in non-impacted areas near the disaster area. Federal, State and County authorities in accordance with the State Disaster Recovery Plan will make decisions on the location and operation of temporary housing facilities.

f) Curfews

Curfews may be initiated as a crime prevention measure depending on the intensity of the disaster and the level of damage sustained. The decision to implement a curfew and the duration rests with the local governing body, but said curfews should be coordinated between appropriate law enforcement agencies and governing bodies to insure continuity among jurisdictions. Curfews may be implemented county wide, regionally or within a municipality depending on the impact of the emergency. Notification of how curfew will be changed or lifted will also be coordinated between appropriate law enforcement agencies and the local governing bodies.

g) Re-Entry Public Information

i. The Public Information Officer(s) working with the EOC and Incident Command will provide information to assist business and industry within the affected area to plan for re-entry procedures.

ii. Re-entry procedures will be posted on the County website, as well as provided to businesses and residents upon request.

iii. The Public Information Officer will issue press releases to applicable media outlets to inform the public of the re-entry policy and where to pick up re-entry passes, when applicable, and the location of any activated Disaster Assistance Center.

h) Supporting Livestock Operations

Every effort will be made to accommodate livestock operations after evacuation. As operations and safety considerations allow, law enforcement personnel will escort ranchers into evacuated areas during pre-defined daily windows to permit feeding and watering or collection for transport to safe zones. Persons performing livestock operations will require Rapid Tags or Re-Entry Passes to pass access control points into evacuated areas. Authorized persons will assemble at designated locations at the designated times for escort. It is the responsibility of the rancher to:

- Determine purpose of access, i.e. feeding/watering in place or collection and transport, prior to re-entry
- Provide vehicles, equipment, materials, and workforce required to perform intended operations
- Identify prior to re-entry the safe-zone destination for livestock being evacuated from the area

Potential resources to support post-evacuation livestock operations planning and decisions include but are not limited to the Colorado Department of Agriculture, the CSU Cooperative Extension - The County, Colorado Cattlemen's Association, Colorado Livestock Association, and the Bent-Prowers Cattle and Horse Growers Association.

RESPONSIBILITIES

These roles and responsibilities have been utilized during many incidents across the state and provide a basis for the need and capability of each agency named.

A. EOC - Office of Emergency Management

1. Facilitate the creation of a Re-Entry Team will ALL partners named within, and provide daily meeting space.
2. Facilitate the creation of the supervisors of each phase. (Ex, Road and Bridge for Part S, County Assessor for part A, Public Health for Part V, and local Law Enforcement for part E, Local law enforcement and road and bridge for Part R)
3. In conjunction with agencies responsible for specific Phases, facilitate communications with Municipalities/Agencies Having Jurisdiction and the State EOC on all re- entry issues and resource needs
4. Organize damage assessments and assist with notification meetings
5. Provide Public information as needed during the phases of the re-entry process
6. Activate this Re-Entry Plan.
7. Deactivate the Re-Entry Plan.

B. Law Enforcement

1. Establish and monitor checkpoints and set up roadblocks within areas of impact in coordination with other Law Enforcement, Incident Commander, Emergency Management and Road and Bridge Departments.
2. Conduct search and rescue operations as needed.
3. Provide safety and security within their jurisdiction(s) and upon requests for support through Mutual Aid.
4. Enforce curfews within incorporated/unincorporated areas, if required.
5. Provide 24-hour roving security of evacuated areas
6. Assist with the credentialing, check in, check out process of necessary personnel.
7. Provide staff to the EOC.

C. Department of Transportation/Road and Bridge Department

1. Provide signage for re-entry, if needed.
2. Provide resources for debris removal for emergency and secondary routes on county and state roads only.
3. Work with Home Owners' Associations if requested to draft an agreement for debris removal on roads not maintained by the county or state.
4. Provide staff to the EOC, if requested.
5. Provide Roadblock support and assistance when requested.

D. Public Health

1. Provide guidance on possible health related issues such as, but not limited to:
   a) Asbestosis
   b) Household Hazardous Materials
   c) Water Quality Standards
   d) Potable Drinking Water
   e) Safe Clean-up
   f) Health Masks
   g) Tetanus and First Aid Guidance
   h) Food Safety Guidance
2. Provide staff to the EOC, if requested.

E. Colorado State Patrol

1. Monitor traffic conditions on their routes and report status to The County Sheriff's Office and Emergency Management or EOC as conditions warrant and where applicable.
2. Provide roadblock support assistance to The County.

F. Fire Departments

1. Monitor for hazards and safety issues.
2. Support Search and Rescue activities as required.
3. Provide staff to the EOC, if requested.

G. Public Information Officers / Joint Information Center

1. Ensure that the public is informed about the identification required for re-entry.
2. Ensure that the public is notified once re-entry begins.
3. Coordinate media releases with Incident Commander and EOC.
4. Provide a reference/contact sheet with local government agencies contact information available.

PLAN DEVELOPMENT AND MAINTENANCE

This plan is the principle source for guidance concerning re-entry within _____ County following the event or disaster that forced a significant evacuation of citizens. Overall coordination of this plan should be administrated in coordination with the County Emergency Management Agency and the primary affected law enforcement agency.

RESIDENTIAL ACCESS PASS REGISTRATION

Address: _____

Names of all household residents:

_____

_____

_____

_____

Cell Phone #: _____

Temporary Address: _____

Vehicle #1: Make:_____ Model:_____ Color: _____

Plate #:_____ State: _____

Vehicle #2: Make:_____ Model:_____ Color: _____

Plate #:_____ State: _____

Vehicle #3: Make:_____ Model:_____ Color: _____

Plate #:_____ State: _____

Emergency Contact Information:

_____

_____

_____

Pass#_____ Pass # _____

Pass#_____ Pass # _____

Pass#_____ Pass # _____

Cut out

SECAHR

RE-ENTRY ACCESS PASS

PASS #

Cut out

SECAHR

RE-ENTRY ACCESS PASS

PASS #

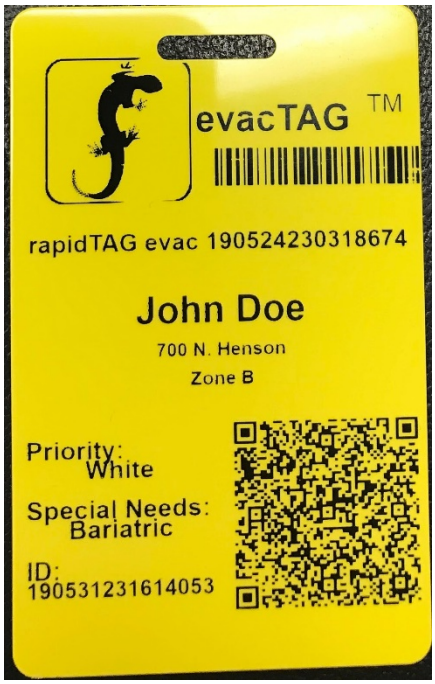
Cut out

SECAHR

RE-ENTRY ACCESS PASS

PASS #

Example of Evacuation & Re-Entry Tag



USING CARE WHEN RE-ENTERING DAMAGED STRUCTURES

BEFORE ENTERING A BUILDING

1) Check the outside. Call the utility company immediately if you find downed power lines or detect gas leaks. NOTE: Gas leaks will emit an odor of rotten eggs. DO NOT USE SPARKING DEVICES, i.e. cell phones, lighters etc. in the immediate area.

2) Look for external damage. Examine porch roofs and overhangs to be sure they are still well supported. Check for obvious gaps between the house and any steps.

3) If you see obvious damage, have a building inspector check the house before entering.

4) If foundation walls or supports are missing, or portions of the ground have washed away, the building may not be safe.

5) Enter the building carefully. A door that sticks at the top may be an indication that the ceiling is compromised and may collapse. If you force the door open, stand outside of the doorway, clear of falling debris.

AFTER ENTERING A BUILDING

6) Look before you step. Floors may be covered with debris including broken glass, nails, etc. Floors and stairs may be very slippery.

7) Be alert for gas leaks. Do not strike a match or use an open flame when entering the building, unless the gas has been turned off and the area is ventilated. Use a flashlight to inspect for damage. DO NOT USE SPARKING DEVICES, i.e. cell phones, lighters etc. in the immediate area.

8) Turn off the electricity. Even if the power company has turned off electricity to the area be sure to disconnect the power circuit. This is important because others using generators could electrify the power lines to your home. Do not use appliances or motors that have gotten wet unless they have been taken apart, cleaned and dried.

9) Replace exposed wires. Electrical wires that have been exposed to salt water must be replaced.

10) Watch for animals, especially snakes. Small animals that have been flooded out of their homes may seek shelter in yours. Use a stick to turn items over and to scare away small animals.

11) Charcoal fumes and carbon monoxide are potentially lethal and are serious concerns during re-entry. Always use generators, camping stoves, barbecue pits, or other fuel-

powered machines outdoors, and keep such equipment away from windows, intake vents, etc. following the manufacturer's instructions.

12) In homes that were flooded, shovel out as much mud as possible and hose the house down, inside, and out. Most of the health hazards brought by floodwaters are in the mud and silt that is left after the water recedes.

13) Be aware of health hazards. Floodwaters will have picked up sewage and chemicals from roads, farms, factories, and storage buildings. Many flooded items, such as wallboards and mattresses, will hold mud and contamination, and must be discarded. In addition, spoiled food, flooded cosmetics, and medicine also pose health hazards and should be discarded.

Appendix B: FFY 2020 State of Colorado Public Assistance Indicators



Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

State of Colorado
FFY 2020 Public Assistance Indicators Summary

Statewide Per Capita Impact Indicator[1] $ 1.53
Countywide Per Capita Impact Indicator[2] $ 3.84

	Population[3]	State PA Indicator Amount
State of Colorado	5,029,196	**$7,694,670**

The State total must be met for the State to be elgible for a Presidential Declaration. Additionally each County to be included in the declaration must also meet that County's threshold.

County	Population[3]	County PA Indicator Amount
Adams	441,603	$1,695,756
Alamosa	15,445	$59,309
Arapahoe	572,003	$2,196,492
Archuleta	12,084	$46,403
Baca	3,788	$14,546
Bent	6,499	$24,956
Boulder	294,567	$1,131,137
Broomfield	55,889	$214,614
Chaffee	17,809	$68,387
Cheyenne	1,836	$7,050
Clear Creek	9,088	$34,898
Conejos	8,256	$31,703
Costilla	3,524	$13,532
Crowley	5,823	$22,360
Custer	4,255	$16,339
Delta	30,952	$118,856
Denver	600,158	$2,304,607
Dolores	2,064	$7,926
Douglas	285,465	$1,096,186
Eagle	52,197	$200,436
Elbert	23,086	$88,650
El Paso	622,263	$2,389,490
Fremont	46,824	$179,804
Garfield	56,389	$216,534
Gilpin	5,441	$20,893
Grand	14,843	$56,997
Gunnison	15,324	$58,844
Hinsdale	843	$3,237
Huerfano	6,711	$25,770
Jackson	1,394	$5,353
Jefferson	534,542	$2,052,641
Kiowa	1,398	$5,368

County	Population[3]	County PA Indicator Amount
Kit Carson	8,270	$31,757
Lake	7,310	$28,070
La Plata	51,334	$197,123
Larimer	299,630	$1,150,579
Las Animas	15,507	$59,547
Lincoln	5,467	$20,993
Logan	22,709	$87,203
Mesa	146,723	$563,416
Mineral	712	$2,734
Moffat	13,795	$52,973
Montezuma	25,535	$98,054
Montrose	41,276	$158,500
Morgan	28,159	$108,131
Otero	18,831	$72,311
Ouray	4,436	$17,034
Park	16,206	$62,231
Phillips	4,442	$17,057
Pitkin	17,148	$65,848
Prowers	12,551	$48,196
Pueblo	159,063	$610,802
Rio Blanco	6,666	$25,597
Rio Grande	11,982	$46,011
Routt	23,509	$90,275
Saguache	6,108	$23,455
San Juan	699	$2,684
San Miguel	7,359	$28,259
Sedgwick	2,379	$9,135
Summit	27,994	$107,497
Teller	23,350	$89,664
Washington	4,814	$18,486
Weld	252,825	$970,848
Yuma	10,043	$38,565

1) Per FEMA Notice of Adjustment of Statewide Per Capita Impact Indicator (Effective date October 1, 2019)
2) Per FEMA Notice of Adjustment of Countywide Per Capita Impact Indicator (Effective date October 1, 2019)
3) 2010 Census Data per DOLA Demography Office website (Total Population Counts State and Counties excel file)

C:\Users\rfrazee\Downloads\PA Statewide and Countywide Impact Indicator Table_eff 10-1-2019

Appendix C: Lead and Support State Departments/Agencies by RSF

Colorado - Southeast Region Recovery Plan

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TABLE 9. LEAD AND SUPPORT STATE DEPARTMENTS/AGENCIES BY RSF	Assistance for Individuals, Households, and Small Businesses	Behavioral Health	Consumer Protection	Damage Assessment	Debris Management	Donations Management	Economic and Community Recovery	Environmental Recovery	Hazard Mitigation	Historic and Cultural Resources	Housing	Infrastructure Systems	Public Health	Volunteer Coordination
Governor's Office				S			S							
Emergency Management	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DHSEM Budget and Finance				S		S			S					S
DHSEM Human Services Branch Chief				S		L2								L2
DHSEM Infrastructure Branch Chief				S								L2		
ESF 2 Communications				S								L1		
ESF 5 Information and Planning	S	S	S	S	S	S	S	S	S	S	S	S	S	S
ESF 6 Mass Care, Emergency Assistance, Temp. Housing, & Human Services	L1	S	S	S		L1					L1		S	L1
ESF 7 Logistics/Resource Support	S	S	S	S	S	S	S	S	S	S	S	S	S	S
ESF 15 External Affairs	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DHSEM Mitigation and Recovery Section	S	S	S	L	S	S	S	S	L	S	S	S	S	S
Agriculture, Department of	S			S	S		S	L1			S		S	
ESF 11 Agriculture & Natural Resources				S	S		S	L1			S		S	
Corrections, Department of				S										
Colorado Correctional Industries								S						
Education, Department of				S										
Energy Office, Colorado	S			S			S					S		
Economic Development/International Trade	S			S			S							
Health Care/Policy/Finance, Department of													S	
Higher Education, Department of	S			S			S	S	S	L	S	S		
Cooperative Extension	S							S						
Geological Survey				S	S		S	S	S				S	
History Colorado				S						L				
State Forest Service	S			S				S	S					
Human Services, Department of	L1	S		S		L1	S				L1		S	L1
Information Technology, Office of				S								S		
Labor & Employment, Department of	S						S							
Unemployment Insurance	S													
Law, Department of			S											
Local Affairs, Department of	L2		S	S		S	L		S	S	L2	S	S	S
Housing	S		S	S			S			S	L2		S	
Local Government	L2			S			L		S		S	S		S
Property Taxation	S													
Lt. Governor's Office							S			S	S			
Military and Veteran Affairs, Department of				S								S	S	
Natural Resources, Department of				S	S		S	L2	S			S	S	
Parks and Wildlife				S	S		S	S		S		S	S	
Water Conservation Board				S	S		S	S	S			S	S	
Water Resources				S	S		S	S	S			S	S	

TABLE 9. LEAD AND SUPPORT STATE DEPARTMENTS/AGENCIES BY RSF	Assistance for Individuals, Households, and Small Businesses	Behavioral Health	Consumer Protection	Damage Assessment	Debris Management	Donations Management	Economic and Community Recovery	Environmental Recovery	Hazard Mitigation	Historic and Cultural Resources	Housing	Infrastructure Systems	Public Health	Volunteer Coordination
Personnel & Administration, Department of		S		S										
Risk Management				S					S					
State Buildings				S										
Public Health & Environment, Department of	S	L		S	L			S	S		S	L1	L	S
Air Pollution Control Division								S					S	
Behavioral Health Services	S	L2		S			S						S	
ESF 8a Behavioral Health Services		L1		S									S	
Emergency Preparedness and Response				S				S				L1	L	Medical
ESF 8 Health and Medical Services	S			S	L1							L1	L	
Hazardous Materials & Waste Management				S	L2		S	S			S	S	S	
Water Quality and Control Division				S			S	S	S		S	S	S	
Public Safety, Department of				S									S	
Colorado State Patrol														
ESF 13 Public Safety and Security														
Fire Prevention & Control	S			S									S	
ESF 4 Fire Suppression/Wildland Fire				S									S	
ESF 10 Oil and Hazardous Materials Response					S								S	
Regulatory Agencies, Department of	S		L	S			S					L1		
Banking			S											
Civil Rights			S											
Financial Services			S											
Insurance	S		S				S							
Real Estate			S											
Registrations			S				S							
Securities			S											
Public Utilities Commission	S		S	S			S		S			L1		
ESF 12 Energy-PUC				S								L1		
Revenue, Department of														
Motor Vehicle														
Transportation, Department of				S	S		S	S	S			L1	S	
ESF 1,3 Transportation/Public Works				S	S				S			L1	S	
Treasury, Department of														
Adventist Community Services Disaster Response						S								
American Red Cross	S	S		S										
COVOAD														
The Salvation Army	S	S												
United Way – 211	S													

Black letters, white background = divisions, agencies and/or organizations
White letters, black background = state departments or Governor's Offices

Appendix D: Federal Programs Administration and State Agency Responsibilities



Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Federal Programs Administration and State Agency Responsibilities



Many State departments and agencies have existing relationships with Federal departments, agencies, and administrations. The intent is to build on and/or maintain relationships before a disaster event occurs. *Designated state departments and agencies are expected to be familiar with post-disaster recovery programs that are designated their responsibility and that state department or agency will be called upon to provide recommendations to the Colorado Recovery Task Force and potentially the Governor's staff with respect to how to trigger and utilize those programs.*

The information below is a very brief and incomplete summary of information provided in *Disaster Assistance: A Guide to Recovery Programs. FEMA-229/September 2005 (Guide)* along with agencies "tagged" with responsibilities. It is advised all agencies reference the Guide, federal agency publications, and their federal agency contacts for more program details.

State Coordinating or Administrating Agency	National Resource
CDA	USDA Farm Service Agency
CDA	USDA Risk Management Agency
CDHE CHS SHPO, CDNR P&W	USDI National Park Service
CDHE CSU Extension	USDA Cooperative State Research Education and Extension Service
CDHE CSU SFS	USDHS FEMA Fire Management Assistance Grant Program
CDHE CSU SFS	USDI Interagency Burned Area Emergency Response Teams
CDHS	USDA Food and Nutrition Service
CDHS	Social Security Administration
CDHS and CDPHE	USDHHS Programs
CDHS or DMVA	DVA Veterans Benefits Administration
CDHS or DMVA	DVA Veterans Health Administration
CDL	*USDHS FEMA Disaster Legal Services
CDLE	*USDHS FEMA Disaster Unemployment Assistance Program
CDLE	USDOL Programs
CDNR DWR	US DHS FEMA National Dam Safety Program
CDNR DWR and WCB	USDC National Oceanic and Atmospheric Administration
CDNR P&W	USDI Fish & Wildlife Service
CDNR WCB	US DHS FEMA National Flood Insurance Program
CDNR, DHSEM, CDHE CSM GS	USDA Natural Resources Conservation Service
CDOLA DLG, DOH	US HUD Community Development Block Grants
CDOLA DOH	USDA RD Rural Housing Service
CDOLA DOH	*US HUD Community Planning and Development
CDOLA DOH, Lt. Governor's Office	US HUD Office of Public and Indian Housing
CDORA	US Federally Insured Financial Institutions
CDOT	USDOT FHWA Programs
CDPHE	USDA RD Rural Utilities Service
CDPHE	US EPA
CDPHE, DHSEM	*USDHS FEMA Crisis Counseling Assistance and Training Program (CCP)
CDT	*USDT Bureau of Alcohol, Tobacco & Firearms
CDT	*USDT Bureau of the Public Debt
CDT	*USDT Internal Revenue Service
GOEDIT	USDC Economic Development Administration
GOEDIT	USDA RD Rural Business-Cooperative Service
Lt. Governor's Office	USDI Bureau of Indian Affairs
DHSEM	American Red Cross Programs
DHSEM	*US DHS FEMA Community Disaster Loan Program, Cora C. Brown Fund, Hazard Mitigation Grant Programs, Individual Assistance Program, Public Assistance Program
DHSEM	NVOAD
DHSEM	US Small Business Administration Loans
DHSEM & CDHE CSM GS	USDI Geological Survey – Earthquake Hazards Reduction Program
DHSEM, CDNR WCB & DWR	USDOD US Army Corps of Engineers
TBD	USDJ Community Relations Service
TBD	General Services Administration Federal Supply Service

*Presidential disaster declarations only and strict conditions apply. Some programs require supplemental appropriations over and above a Presidential disaster declaration.

State departments and/or agencies will synchronize with the federal government and participation will range from conducting damage assessments to requesting federal agency program assistance to coordinating activities to actually delivering federal programs. For certain programs a Presidential disaster declaration is required, for others an administration declaration is required, for some no declaration is necessary. All state agencies are expected to be well versed in their recovery program areas prior to the occurrence of a disaster.



Extremely Relevant Reference!

Disaster Assistance: A Guide to Recovery Programs. FEMA-229, September 2005.

Grant Administration of Federal Disaster Programs

The following is a short list of Federal disaster programs and State Agency Grantees:
DOL Disaster Unemployment Assistance (DUA) is administered by CDLE.
FEMA Crisis Counseling Assistance and Training Program (CCP) – Grantee is DHSEM. FEMA Disaster Case Management Program (DCM) - Grantee is DHSEM.
FEMA Fire Management Assistance Grant Program (FMAGP) – Grantee is DFPC.
FEMA Hazard Mitigation Grant Program (HMGP) – Grantee is DHSEM.
FEMA Individual Assistance Program (IAP) is administered by FEMA. FEMA Public Assistance Program (PAP) – Grantee is DHSEM. FHWA Emergency Relief (ER) – Grantee is CDOT.
HUD Community Development Block Grant-Disaster Recovery (CDBG-DR) – Grantee is CDOLA.
FSA programs are administered by FSA.
SBA's Disaster Loan Programs are administered by SBA.
NRCS Emergency Watershed Protection Program is administered by NRCS. For 4145-Grantee is DHSEM.

Building Resilient Infrastructure and Communities (BRIC)

The BRIC program, formerly known as the Pre-Disaster Mitigation (PDM) Program, reduces overall risk to the population and structures from future hazard events by focusing on the development of resilient public infrastructure. The program is funded through the Disaster Relief Fund as a six percent set aside from disaster expenses from every major disaster declaration. State, local, territory, and tribal governments can apply. BRIC is a part of FEMA's Hazard Mitigation Assistance (HMA).

Program Reference

FEMA BRIC Program
https://www.fema.gov/drra-bric

Capacity Building for Sustainable Communities

Capacity Building for Sustainable Communities provides funding to organizations to work with grantees and establish capacity- building networks.

Program Reference

EPA and HUD Capacity Building for Sustainable Communities
https://www.hud.gov/program_offices/economic_development/capacity-building

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Community Compass Technical Assistance and Capacity Building Award
The Community Compass initiative funds technical assistance to sub-grantees to help provide the knowledge, skills, and expertise necessary to implement HUD's community development programs.

Program Reference
HUD
https://www.hud.gov/program_offices/comm_planning/about/cpdta/

Community Development Block Grant (CDBG)
The CDBG program is available through HUD and provides funding for projects that address community development needs.

Program Reference
HUD
https://www.hud.gov/program_offices/comm_planning/communitydevelopment/programs

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Community Development Block Grant – Disaster Recovery (CDBG-DR)
CDBG-DR is a disaster recovery grant program available through HUD for significant unmet needs for long-term recovery. CDBG funds must be appropriated to HUD through Congress, and can be used for measures such as housing, economic revitalization, and infrastructure restoration.

Program Reference
HUD
https://www.hud.gov/hudprograms/disaster-recovery

Community Services Block Grant (CSBG)
CSBG supports a broad range of locally determined services, including employment services, education, income support/management, housing, emergency services, health, and nutritional services, among others. CSBG funding is available to states, community action agencies, and state-designated organizations. The program supports the development of solutions to revitalize low-income communities, reduce poverty, and develop public/private partnerships.

Program Reference
US Department of Health and Human Services (HHS)
https://www.acf.hhs.gov/ocs/programs/csbg

Disaster Housing Assistance Program (DHAP)
DHAP was formed in response to Hurricanes Katrina and Hurricane Rita and offers rental assistance and other services to low-income disaster survivors. DHAP uses HUD's existing network of public housing agencies to administer assistance. The typical method of rental assistance through DHAP consists of pay-outs that fill the gap between household incomes and the rental cap, with households paying progressively larger portions of the rent cost the longer they are using DHAP assistance.

Program Reference
HUD
https://www.hud.gov/program_offices/public_indian_housing/publications/dhap

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Disaster Supplemental Nutrition Assistance Program (D-SNAP)

Through the Disaster Supplemental Nutrition Assistance Program (D-SNAP), FNS can quickly offer short-term food assistance benefits to families suffering in the wake of a disaster. Eligible households receive one month of benefits, equivalent to the maximum amount of benefits normally issued to a SNAP household of their size. Benefits are issued via an electronic benefits transfer (EBT) card, which can be used to purchase food at most grocery stores.

Program Reference

US Department of Agriculture (USDA) Food and Nutrition Services (FNS)
https://www.disasterassistance.gov/get-assistance/forms-of-assistance/5769

Disaster Unemployment Assistance

This benefit program is administered in Colorado by the CDLE and, under certain conditions, is available for those persons whose employment or self-employment was lost or interrupted by a disaster that was Presidentially-declared.

Program Reference

Disaster Unemployment Assistance
http://www.disasterassistance.gov/disaster-assistance/forms-of-assistance/4466/0/D05

Economic Development Administration Funds

The EDA supports the effective delivery of Federal economic development assistance to support long-term recovery through a variety of partner agencies. The EDA makes funds available (up to the hundreds of millions depending on the disaster's scale) to communities to rebuild and stimulate the economy.

Program Reference

US Economic Development Administration (EDA)
https://www.eda.gov/disaster-recovery/

Emergency Assistance for Livestock, Honeybees and Farm-Raised Fish Programs (ELAP)

ELAP provides payments to eligible producers of livestock, honeybees, and farm-raised fish to help compensate for losses due to disease (including cattle tick fever), adverse weather or other conditions, such as blizzards and wildfires.

Program Reference

USDA Farm Service Agency
https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/emergency-assist-for-livestock-honey-bees-fish/index

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Emergency Conservation Program (ECP)

ECP provides funding to rehabilitate farmland damaged by wind erosion, floods, hurricanes, or other natural disasters, and for carrying out emergency water conservation measures during periods of severe drought.

Program Reference

USDA Farm Service Agency
https://www.fsa.usda.gov/programs-and-services/conservation-programs/emergency-conservation/index

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Emergency Loan Program (EM)

EM provides loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters, or quarantine.

Program Reference
USDA Farm Service Agency
https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index

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Emergency Solutions Grants (ESG) Program
The ESG program provides funding to: (1) engage homeless individuals and families living on the street; (2) improve the number and quality of emergency shelters for homeless individuals and families; (3) help operate these shelters; (4) provide essential services to shelter residents; (5) rapidly rehouse homeless individuals and families; and (6) prevent families/individuals from becoming homeless.

Program Reference
HUD
https://www.hudexchange.info/programs/esg/

Emergency Supplemental Funding from the Historic Preservation Fund (ESHPF)
The ESHPR provides funding to allow State Historic Preservation Officers (SHPOs) and Tribal Historic Preservation Officers (THPOs) to facilitate recovery projects including compliance activities, surveys and inventory of historic resources in areas impacted by the disaster, recovery and repair of historic properties damaged during the disaster, and other disaster recovery related activities as approved by NPS. Funds are appropriated to this grant on occasion by Congress.

Program Reference
US National Park Service (NPS)
https://www.nps.gov/preservation-grants/disaster-recovery/index.html

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Emergency Watershed Protection Program
For the NRCS Emergency Watershed Protection Program, an event must be a single natural occurrence (floods, fires, windstorms, earthquakes, volcanic actions, drought…) or a short-term combination of occurrences that suddenly impairs a watershed, creating an imminent threat to life or property. After the USDA NRCS assessments and Damage Survey Reports are reviewed, an NRCS State Conservationist has the ability to declare a watershed emergency. If program eligibility requirements are met and funds are made available, USDA NRCS staff work directly with project sponsors (a public agency of state, local, or tribal government). Applications must be submitted within 10 days of the disaster for exigency situations and within 60 days of the disaster for non-exigency situations. For FSA programs, USDA FSA program staff work directly with those affected.

Program References
USDA NRCS EWP Questions and Answers

Environmental Justice Collaborative Problem Solving (CPS) Cooperative Agreement Program
CPS provides funding for communities for collaborative planning initiatives to implement environmental justice projects.

Program Reference
US EPA
https://www.epa.gov/environmental-justice/environmental-justice-collaborative-problem-solving-cooperative-agreement-0

Environmental Justice Small Grants Program
The Environmental Justice Small Grants Program supports efforts to address environmental justice in projects related to environmental and public health risk.

Program Reference
US EPA
https://www.epa.gov/environmentaljustice/environmental-justice-small-grants-program

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Flood Mitigation Assistance (FMA)
FMA provides funding to states, territories, federally-recognized tribes, and local communities for projects and planning that reduces or eliminates long-term risk of flood damage to structures insured under the NFIP.

Program Reference
FEMA
https://www.fema.gov/flood-mitigation-assistance-grant-program

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FTA Emergency Relief (ER)
The FTA ER Program provides funding for capital projects that seek to repair, protect, and/or replace public transportation equipment and facilities that may suffer or have suffered serious damage. This program also offers funding for operating cost of response (e.g., evacuation, temporary public transportation systems, rescue operations).

Program Reference
Federal Transit Authority (FTA)
https://www.transit.dot.gov/funding/grant-programs/emergency-relief-program

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FEMA Crisis Counseling Assistance and Training Program
This program may be triggered with a disaster declaration that includes Individual Assistance. This program is designed to support crisis counseling efforts. The FEMA application is prepared and submitted by CDPHE, CDPS DHSEM is the Grantee, CDPHE is the subgrantee.

Program Reference
Crisis Counseling Assistance and Training Program
https://www.fema.gov/recovery-directorate/crisis-counseling-assistance-training-program

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FEMA Disaster Case Management Program
This program may be triggered with a disaster declaration that includes Individual Assistance. DHSEM puts together the application, is the Grantee, and administers the program. The purpose of the program is to provide additional case management services for victims of disasters, including developing individual recovery plans.

Program Reference
Disaster Case Management Program Guidance March 2013
http://www.fema.gov/media-library-data/20130726-1908-25045-2403/dcm_pg_final_3_8_13.pdf

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FEMA Fire Management Assistance Grant Program (Categories H-Firefighting and parts of B-Emergency Protective Measures) under the FEMA Public Assistance Program)

The lead state agency for implementing this program is the CDPS Division of Fire Prevention and Control. It's possible for an FMAGP request to be granted and then a subsequent request for a major disaster declaration be granted for the same fire(s) such as in 2002 and 2012. FMAGP declarations are for single fires or fire complexes; disaster declarations may be for single fires or multiple fires. More recently than the 2002 fire season, in Colorado multiple fires has been determined by FEMA to mean fires managed by the same incident command.

Program References
44 CFR Part 204-Fire Management Assistance Grant Program
Federal Register FMAGP Final Rule Notice Wednesday November 14, 2001
Fire Management Assistance Grant Program
Fire Management Assistance Grant (FMAG) Program Guide-Draft (FEMA, September 2011)
FMAGP Federal Forms

FEMA's Hazard Mitigation Grant Program (HMGP)
The FEMA Hazard Mitigation Grant Program (HMGP) is triggered along with the Individual Assistance (IA) and/or Public Assistance (PA) programs and is calculated based on an estimated 15% of the eligible FEMA expenditures for those programs and any eligible mission assignments. A FEMA-State agreement is signed and the State Hazard Mitigation and Public Assistance Officer is tasked with implementing the programs in coordination with FEMA. Projects funded through HMGP do not have to explicitly relate to the disaster that triggered the declaration; those through PA do.

Property owners securing disaster loans through SBA might be able to utilize additional loan funds for mitigation actions, known as *Small Business Administration Mitigation Loans*. The borrower may be eligible for additional funds to cover the cost of improvements that will protect the property against future damage. If the FEMA Public Assistance and Hazard Mitigation Programs are triggered, OEM staff update and refer to the administrative plans for implementation.

Program References
44 CFR Subpart N-Hazard Mitigation Grant Program.
FEMA Hazard Mitigation Funding Under Section 406 (Stafford Act)
FEMA Hazard Mitigation Grant Program (HMGP)
SBA Fact Sheet About U.S. Small Business Administration (SBA) Disaster Loans
Small Business Administration Mitigation Loans

FEMA Individual Assistance Program (IAP)
A Presidential disaster declaration is required to trigger IAP. The State and then individual counties are declared if FEMA impact indicator criteria are met. The State of Colorado selects the option of having FEMA administer the Individual Assistance Program. The OEM Individual Assistance Officer coordinates program delivery with FEMA. FEMA Individual Assistance Officers locate in FEMA-State-Local Disaster Recovery Centers. With IAP, SBA Disaster Loan Programs, including Economic Injury Disaster Loans, are automatically triggered. SBA loan officers also locate in the Disaster Recovery Centers.

Program References
44 CFR Part 206 Subpart D-Federal Assistance to Individuals and Households
44 CFR Part 206 Subpart F-Other Individual Assistance
Individual Assistance Program Tools

FEMA Public Assistance Program (PAP)

Program execution is described in detail in the annually updated State of Colorado Public Assistance Program Administrative Plan. The OEM State Public Assistance and Deputy Public Assistance Officers (SPAO and DSPAO), and State Hazard Mitigation Officer (SHMO) coordinate with FEMA and potentially eligible state agencies, tribal governments, local governments, and non-profit organizations. Kickoff meetings are set up to review program criteria and cost documentation. Site visits to work locations are expected. Agencies expecting to receive reimbursements must work with FEMA disaster assistance employees on providing documentation and filling out project worksheets. State OEM is required to review a percentage of the documentation before reimbursements can be approved. This program may be selected for a federal audit.

To facilitate the processing of PA grants, FEMA has divided disaster-related work into two broad categories, emergency work and permanent work. Emergency Work is that which must be performed to reduce or eliminate an immediate threat to life, protect public health, and to protect improved property that is threatened in a significant way as a result of the disaster. Emergency Work includes Category A Debris Removal and Category B Emergency Protective Measures and approved work must be completed within six months with time extensions granted for extenuating circumstances up to an additional six months.

Permanent Work is that which is required to restore a damaged facility, through repair or restoration, to its pre-disaster design, function, and capacity in accordance with applicable codes or standards. Permanent Work must be completed within 18 months with time extensions granted for extenuating circumstances up to an additional 30 months. Permanent categories include:

Category C – Roads and Bridges
Category D – Water Control Facilities
Category F – Utilities
Category E – Buildings and Equipment
Category G – Parks, Recreational, and Other

Section 406 of the Stafford Act contains a provision for the consideration of funding additional measures that will enhance a facility's ability to resist similar damage in future events. It provides discretionary authority to fund mitigation measures in conjunction with the repair of the disaster-damage facilities that will provide protection from subsequent events. The mitigation work must be cost effective and be reasonably performed as part of the permanent work. They are different from mitigation measures that are considered for eligibility under the Hazard Mitigation Grant Program (HMGP) of Section 404 of the Stafford Act.

Program References
44 CFR Part 206 Subpart G-Public Assistance Project Administration
44 CFR Part 206 Subpart H-Public Assistance Eligibility
Public Assistance: Local, State, Tribal, and Non-Profit
State of Colorado Public Assistance Program Administrative Plan
FEMA Public Assistance Policy Digest (FEMA Publication 321)
FEMA Public Assistance Guide (FEMA Publication 322)
FEMA Public Assistance 9500 Series Policy Publications

FHWA Emergency Relief (ER)
CDOT has an agreement in place with FHWA stating CDOT is the Grantee and administrator of the USDOT FHWA Emergency Relief funds. This funding is for Federal-aid highways or roads on Federal lands suffering major or unusual damage by natural disasters or catastrophic failures from an external cause. These funds are not based on receipt of a Presidential disaster declaration.

Program References

Emergency Relief Manual (Federal-Aid Highways) Updated May 31, 2013
http://www.fhwa.dot.gov/reports/erm/er.pdf

MAP-21-Moving Ahead for Progress in the 21st Century Emergency Relief (ER) Questions and Answers
http://www.fhwa.dot.gov/map21/qandas/qaer.cfm

HOME Investment Partnerships Program

The HOME Investment Partnerships Program (HOME) provides formula grants to states and localities that communities use, often in partnership with local nonprofit groups, to fund a wide range of activities including building, buying, and/or rehabilitating affordable housing for rent or homeownership or providing direct rental assistance to low-income people. It is the largest federal block grant to state and local governments designed exclusively to create affordable housing for low-income households

Program References

HUD
https://www.hud.gov/program_offices/comm_planning/affordablehousing/programs/home/

Internal Revenue Service (IRS) Tax Relief

The IRS helps in the form of tax relief to individuals and businesses. For most forms of tax relief, a Federal declaration is required. Depending on the circumstances, the Internal Revenue Service may grant additional time to file returns and pay taxes. Survivors of a declared disaster may file an amended return to claim disaster-related losses on their tax return for the previous year and receive a faster refund. Disaster-related damages to a home may also be deducted when filing a tax return.

Program References

Internal Revenue Service (IRS)
https://www.irs.gov/businesses/small-businesses-self-employed/faqs-for-disaster-victims

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National Center for Preservation Technology and Training

The National Center for Preservation Technology and Training provides funding to projects that protect cultural resources against natural disasters.

Program References

US Department of Interior, National Center for Preservation Technology and Training
https://www.ncptt.nps.gov/grants/preservation-technology-and-training-grants/

National Flood Insurance Program (NFIP)

NFIP can offer up to $250,000 in financial assistance for repairing or replacing residential properties, and up to $500,00 for public buildings and businesses after a flood event. NFIP assistance is available regardless of whether the flood event is a Federally declared disaster and does not have a payback requirement like an SBA loan. NFIP assistance may also be used outside Special Flood Hazard Areas (SFHA). Note that property owners had to have taken out National Flood Insurance in advance of the disaster to qualify.

Program References

FEMA
https://www.disasterassistance.gov/get-assistance/forms-of-assistance/4465

National Historical Publication and Records Commission

Part of eligible activities includes funding for disaster preparedness and mitigation planning for cultural institution that hold archival information.

Program References
United States Archives
https://www.archives.gov/nhprc/announcement

Noninsured Crop Disaster Assistance Program (NAP)
NAP provides financial assistance for non-insurable crop losses due to drought, flood, hurricane, or other natural disasters.

Program References
USDA Farm Service Agency
https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/noninsured-crop-disaster-assistance/index

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Office of Land and Emergency Management Grants and Funding
The Office of Land and Emergency Management Grans and Funding provides funding for projects, including the following: brownfields; federal facilities restoration and reuse; solid waste management; resource conservation and recovery; and underground storage tanks. These can be particularly helpful during recovery of environmental health hazard.

Program References
US EPA
https://www.epa.gov/grants/office-land-and-emergency-management-grants-and-funding

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Other Needs Assistance (ONA)
ONA provides funds for serious disaster-related needs that are not covered by insurance. This includes medical, dental, funeral, group flood insurance policy (when applicable), transportation, and moving and storage fees.

Program References
FEMA
https://www.fema.gov/media-library/assets/documents/31206

Rehabilitation and Inspection Program (RIP)
This program is operated by USACE and provides funding to repair and restore flood management projects that are damaged by flood. Funding is only provided to structures that meet certain requirements.

Program References
US Army Corps of Engineers (USACE)
https://www.nws.usace.army.mil/Portals/27/docs/Levees/Levee%20Safety/6.%20Rehabilitation%20and%20Inspection%20Program.pdf

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Rural Home Loans (Direct Program)
Also known as the Section 502 Direct Loan Program, this program assists low- and very-low-income applicants obtain decent, safe, and sanitary housing in eligible rural areas by providing payment assistance to increase an applicant's repayment ability. Payment assistance is a type of subsidy that reduces the mortgage payment for a short time. The amount of assistance is determined by the adjusted family income.

Program References
USDA
https://www.rd.usda.gov/programs-services/single-family-housing-direct-home-loans

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Single Family Housing Repair Loans and Grants
The Single-Family Housing Repair Loans and Grants, also known as the Section 504 Home Repair program, provides loans to low- income homeowners to repair or modernize their homes. It can also provide grants to elderly low-income homeowners to remove health and safety hazards.

Program References
USDA
https://www.rd.usda.gov/programs-services/single-family-housing-direct-home-loans

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SBA Disaster Loan Programs (excluding Economic Injury Disaster Loans)
After the loss verification process, SBA informs the State as to whether or not the threshold was met to activate their programs. The DHSEM or OEM Director reports up to the Governor. The State immediately informs the local or tribal emergency manager or other designated representative of the results and, if so determined, the Governor submits a declaration request. If a declaration is granted and a County is declared, OEM MARS and/or the CDOLA DLG field managers coordinate with affected communities on siting of SBA loan officers and public information officers. SBA loan officers work directly with affected persons expressing interest in SBA loans. Over the years in Colorado, SBA loan officers have located in assistance centers, donations centers, town halls, and empty store and office spaces. SBA declarations can come with SBA, USDA, or Presidential disaster declarations.

Program References
13 CFR Part 123-Disaster Loan Program
13 CFR Part 123 Subpart A-Overview, §123.2 What are disaster loans and disaster declarations?
13 CFR Part 123 Subpart A-Overview, §123.3 How are disaster declarations made?
SBA Office of Disaster Assistance
SBA Disaster Loans
SBA Disaster Loans Programs

Tree Assistance Programs (TAP)
TAP provides financial assistance to qualifying orchardists and nursery tree growers to replant or, where applicable, rehabilitate eligible trees, bushes and vines lost by natural disasters. A qualifying mortality loss more than 15 percent (more than normal mortality) must be sustained to trigger assistance.

Program References
USDA Farm Service Agency
https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/tree-assistance-program/index

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Appendix E: DHSEM IDA Request Letter - Sample

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

Field Services
9195 E. Mineral Avenue, Suite 200
Centennial, CO 80112

Name
Title
Organization
Address
City, State, ZIP

Date:

Dear,

I am writing this letter in response to the storms and flooding that were experienced in the XXXX region beginning May 3rd through May 12th. This is an official request for damages that may have been incurred by Jurisdiction Name to public infrastructure, residences, as well as businesses. The purpose of this request is to determine the magnitude and scope of this event not only for Jurisdiction Name but also for the region and State as a whole, in the event there is an opportunity to qualify for State or Federal assistance. Although there is no guarantee that your jurisdiction will receive financial assistance, it is important to ensure that your impacts are documented and on file should assistance become available.

Please find attached along with this letter initial damage assessment forms and checklists for your convenience. It is understood that we are in the preliminary stages of determining damages so the intent of these forms is to attempt to gather a very preliminary high level view of the damages to public infrastructure, residents and businesses to include estimated costs. Once completed please complete the damage assessment summary form which is also attached and please return to me by Friday, May 22, 2015.

Please provide a written response to this letter on your jurisdictional letterhead with one of the following:

- My Jurisdiction sustained damages and will be completing an initial damage assessment
- My jurisdiction sustained damages and will not be completing an initial damage assessment
- My jurisdiction did not sustain damages

Please feel free to contact me with any questions and/or concerns,

Sincerely,

RFM Name
Title
Colorado Division of Homeland Security and Emergency Management

Enclosures:

700 Kipling Street Suite 1000, Lakewood, CO 80215 P 303.239.4398 F 303.239.4670 cdpsweb.state.co.us
John W. Hickenlooper, Governor | Stan Hilkey, Executive Director

Appendix F: IDA Forms

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Infrastructure: Initial Damage Assessment Site Estimate			Date

Part 1 - Applicant Information

County	Name Of Applicant	Name Of Local Contact	Contact Phone #

Part 2 - Site Information

Key For Damage Category (Use appropriate letters in the "category" blocks below)

a. Debris Removal
b. Protective Measures
c. Roads And Bridges
d. Water Control Facilities
e. Public Buildings
f. Public Utilities
g. Other Recreation

Site No.	Category	Location (Use map location, address, etc.):	GPS

Description Of Damage

Impact:		Cost Estimate

Site No.	Category	Location (Use map location, address, etc.):	GPS

Description Of Damage

Impact:	% Complete	Cost Estimate

Site No.	Category	Location (Use map location, address, etc.):	GPS

Description Of Damage

Impact:	% Complete	Cost Estimate

Site No.	Category	Location (Use map location, address, etc.):	GPS

Description Of Damage

Impact:	% Complete	Cost Estimate

Name Of Inspector	Agency	Phone No. Office	Phone No. CELL

FEMA Form 90-81, Jan 84	***GRAND TOTAL SHEET 1***	$0.00

INITIAL DAMAGE ASSESSMENT - HOUSING LOSSES

(1)COUNTY:_____

(2)MUNCIPALITY:_____

(3) INCIDENT (X)
( )FLOOD
( )HURRICANE
( )TORNADO
( )OTHER -
(Specify)

(4) ASSESSMENT TEAM
_____
_____
_____
_____

(5)INCIDENT PERIOD:_____

(6)DATE OF SURVEY:_____

(7)PAGE_____OF_____

REF NO. (8)	NAME OF OCCUPANT (9)	STREET/ROUTE/SR MOBILE HOME PK/ BLDG. NAME/ DEVELOPMENT/ETC (10)	HOME (X)		TYPE (X)			STATUS (X)		DAMAGES (UNIHABITABLE)			ISO (X)	WATER LEVEL IN STRUCTURE (In Feet)	REPLACEMENT COST OR MARKET VALUE	TOTAL BUILDING VALUE	INS. (X)		EST. INCOME(X)		
			PRI (11)	SEC (12)	SF (13)	MF (14)	MH (15)	OWN (16)	RENT (17)	MIN (18)	MAJ (19)	DEST (20)	(21)	(22)	(23)	(24)	HO (25)	NFIP (26)	LO (27)	MED (28)	HI (29)

INITIAL DAMAGE ASSESSMENT - BUSINESS LOSSES

(1) COUNTY:_____

(2) MUNICIPALITY:_____

(3) INCIDENT (X)
( )FLOOD
( )HURRICANE
( )TORNADO
( )OTHER _____
(Specify)

(4) ASSESSMENT TEAM
_____
_____
_____
_____
_____

(5)INCIDENT PERIOD:_____

(6)DATE OF SURVEY:_____

(7)PAGE_____OF_____

REF NO. (8)	NAME OF BUSINESS / SITE LOCATION / TELEPHONE NO. (9)	NAME OF TENANT OR OWNER & TYPE OF BUSINESS (10)	ESTIMATED DAYS OUT OF OPERATION (11)	EMPLOYEES NUMBER (12)	EMPLOYEES COVERED BY U.I. (13)	REPLACEMENT COST OR FAIR MARKET VALUE (14)	ESTIMATED DOLLAR LOSS (15)	DOLLAR AMOUNT OF INSURANCE COVERAGE (16)	% UNINSURED LOSS TO BUSINESS VALUE [(col. 15)-(col. 16) / (col. 14) X 100% (17)	IF COLUMN 17 IS: <40% (X) MIN. (18)	40-75% (X) MAJ. (19)	>75% (X) DEST. (20)
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		Tenant OR Owner (circle one)				LAND:$_____	$	$				
						STRUCTURE:$_____	$	$				
						CONTENTS:$_____	$	$				
						OTHER:$	$	$				
		TOTALS				$	$	$				

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Appendix G: RSF: Community Planning and Capacity Building

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Community Planning and Capacity Building (CPCB) RSF is to identify potential resources that support the development of executable recovery plans which promote sustainable, resilient, and inclusive community recovery. The CPCB RSF focuses on engaging with stakeholders, affected populations, and the other RSFs to identify needs and priorities. Key responsibilities and mission objectives include:

- Evaluating and sharing information on community conditions and CPCB RSF challenges throughout the disaster area;
- Leveraging all applicable federal and non-federal (e.g., state, non-governmental organization, private sector) assistance opportunities;
- Working with other RSFs to support redevelopment and recovery is equitable, timely, and cohesive;
- Developing engagement processes and plans; and
- Coordinating priority identification, goal setting, and community engagement.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen in the figure below.
Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The CPCB RSF Coordinator is typically from a planning department but can also be from emergency management or an office of diversity and equity. The RSF structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co-leads are assisted by supporting agencies and organizations. Please see **Table 19** for more information on these roles.

Figure 14: RSF Coordination Diagram

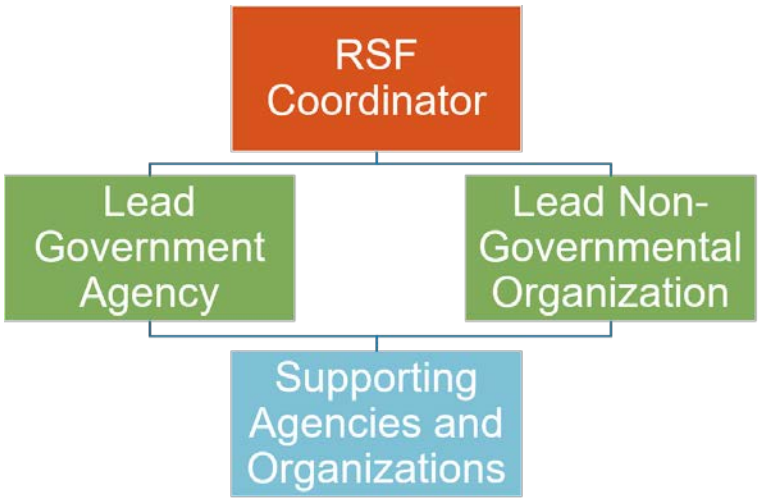


Table 19: RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 20**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 20: RSF – Community Planning and Capacity Building Stakeholder Group Participation

Stakeholder Group	Function/Contribution
Cities, Counties, Special districts	Inter-jurisdictional participation
Public Information Officers (PIOs)	Information dissemination and communications
Public Safety/Emergency Management Department	Emergency operations and long-term recovery
Finance/Legal/Administrative Departments	Technical and administrative support
Planning or Community Development/Development Authorities	Land use and comprehensive plan compatibility
GIS Departments	Vulnerability and redevelopment mapping
Voluntary Organizations Active in Disaster (VOAD)	Access and functional needs populations

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 21** below summarizes some of these key points of coordination between CPCB and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 21: CPCB Points of Coordination

Coordinating RSF	Points of Coordination
RSF 2: Economic Recovery	▪ Engaging local and regional planning commissions and economic development organizations. ▪ Developing economic recovery and development plans. ▪ Reestablishing community businesses that are important to community character and holistic well-being. ▪ Creating incentives to encourage businesses to return or open.
RSF 3: Health and Social Services	▪ Coordinating local planning when impacts of the disaster include loss to access to or infrastructure for health care or social services. ▪ Engaging with, communicating to, and providing services for diverse populations.
RSF 4: Housing	▪ Identifying potential programmatic solutions to meet local housing needs and requirements. This includes identifying and creating incentives for affordable housing. ▪ Identifying adequate interim, temporary, and permanent solutions are identified, including for those who resided in government-provided or affordable housing. ▪ Developing long-term community goals related to housing restoration and resiliency.
RSF 5: Infrastructure Systems	▪ Ensuring equitable access across all communities to critical services. ▪ Ensuring redevelopment, recovery plans, general plans, and resilience plans focus on resilient, green, and sustainable infrastructure. ▪ Developing long-term community goals related to infrastructure restoration and resiliency.
RSF 6: Natural and Cultural Resources	▪ Identifying community natural and cultural resources important to community character and holistic well-being. ▪ Ensuring redevelopment, recovery plans, general plans, and resilience plans protect and preserve natural and cultural resources. ▪ Developing long-term community goals related to environmental and cultural resilience. ▪ Identifying important community natural, cultural, and historical resources to be preserved.
RSF 7: Land Use and Redevelopment	▪ Developing redevelopment guidance related to resilience values and vision. ▪ Identifying and encouraging equitable redevelopment practices.

Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out CPCB recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

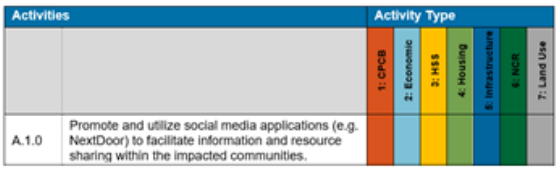
- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs:** Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The CPCB RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.

The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to Recovery Overview for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to

Key

Activities have been color coded to denote when more than one RSF, or all RSFs, will coordinate implementation. Where all RSFs are highlighted (below), this is a common milestone across all RSFs.



Activities		Activity Type						
		1: CPCB	2: Economic	3: H&S	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g. NextDoor) to facilitate information and resource sharing within the impacted communities.							

The primary RSF ("P") holds the lead responsibility for seeing an activity through to completion. The primary RSF will likely coordinate and consult with other RSFs denoted with the shaded boxes.



Activities		Activity Type						
		1: CPCB	2: Economic	3: H&S	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.	P						

cross reference common milestones and activities between RSFs. Activities were assigned a unique identifier based on the recovery phase ("A" for short-term, "B" for intermediate, and "C" for long-term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about emergency preparedness can be found in **Preparedness**. Initial preparedness activities for the CPCB RSF are listed below.

- Design a community engagement plan that supports agencies and organizations in effectively engaging and communicating with diverse populations.
- Identify a baseline recovery governance system.
- Encourage individual and community disaster preparedness.
- Develop strategies and guidance for meeting post-disaster goals.
- Foster relationship-building with communities.
- Encourage community organizations to identify local individuals, groups, and committees that can serve as representatives during disaster.
- Identify community centers with space available for local NGO organizing activities

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							
A.1.6	Coordinate to distribute information to businesses, healthcare providers, and homeowners regarding tax relief as a result of disaster-related property damage.	P						
A.1.10	Develop messaging and information campaigns related to public health and safety, including public safety guidelines (e.g., water purification, medicine disposal), health system accessibility, and potential altered standards of care. Coordinate between RSFs on technical content of messaging and distribution to the public.	P						

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assistance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.3	Create and implement a disaster recovery equity assessment tool to understand disproportionate impacts to underserved populations.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and inform the unmet needs assessment and recovery action plan development.			P				
A.3.1	Use understanding of community recovery needs and priorities to inform the development of a community engagement plan / strategy used during recovery.							
A.3.2	Work through community organizations and groups to conduct outreach and engagement processes.							
A.3.3	Identify and document in the community engagement tools and best practices for communicating with underserved populations (e.g., accessibility, interpretation services).							
A.3.4	Build off pre-disaster partnerships and outreach by continuing coordination with established volunteer networks, Joint Field Offices, and local liaisons to connect volunteers with communities in need.							
A.3.5	Coordinate with local organizations to facilitate volunteer registry.							
A.3.6	Use backup communications when necessary to coordinate public messaging with recovery stakeholders. Mobilize amateur (HAM) radio, Garmin™ InReach, and satellite phone owners as appropriate.							
A.3.7	Review needs assessment, as well as needs assessments from other RSFs, to assess volunteer need and placement.							
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						
A.3.10	Engage local and regional planning commissions and economic development organizations in the recovery process to identify redevelopment priorities. Maximize opportunity zones to rebuild for economic purposes. Coordinate amongst the CPCB, Economic, and Land Use RSFs to support this effort.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Analyze results from the impact and needs assessments to develop short-term recovery action plans (RAP).							
A.4.1	Implement initiatives and strategies that promote or support NGO and nonprofit recovery.							
A.4.24	Coordinate between RSFs to provide functional temporary transportation routes and alterative public transportation options to allow access to key institutions and functions (e.g., schools, daycare, jobs), including for those with Access and Functional Needs. Develop and distribute public messaging on the alternative transportation routes and options. Monitor that public transportation is functional, the specific people needing transportation services are identified, and public messaging is coordinated.					P		
A.4.37	Identify a map with priority locations and timelines for infrastructure needs, particularly to meet needs of underserved populations.					P		
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							
A.6.7	Work with volunteer organizations to fundraise, where possible.	P						

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.	P						
A.7.5	Conduct outreach outside of volunteer base (e.g., students in different states, Habitat for Humanity) to surge recovery personnel support. Help volunteers understand local leadership and communities still guide recovery process.							
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							
A.7.10	Advocate for equitable distribution of resources through COADs and VOADs.							
A.7.17	Manage volunteers and donations as they relate to health and social services restoration.	P						

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.		P					
B.2.9	Track progress on the community engagement plan.							
B.2.11	Identify and apply for federal funding sources for the repair and restoration of the community.							

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.3	Implement strategies that connect smaller communities to the greater community.							
B.4.4	Expand on community leader network to re-envision neighborhoods to spark inspiration and hope.							
B.4.5	For neighborhoods and communities where rebuilding cannot occur in the same location due to land use issues, repetitive losses, and/or the presence of natural hazards, coordinate a cohesive process to identify and procure new location(s) for development.							P
B.4.10	Identify areas of population concentration and future economic growth and prioritize infrastructure system and community reconstruction.		P					
B.4.12	Coordinate and monitor redevelopment strategies that are equitable and meet the needs of underserved communities.							P
B.4.22	Monitor post-disaster displacement and account for potential impacts (e.g., gentrification) in redevelopment plans.							P
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.							P

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g., hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessments.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.3	Strategize and implement a plan for encouraging people to return.							
B.5.4	Restore community services (e.g., education programs for teens, athletic, transportation programs for older adults and individuals with disabilities).							
B.5.5	Provide businesses with the information and resources needed to support the restoration of their services, which contribute to holistic community character and well-being.		P					
B.5.16	Identify long-term housing solutions in line with community needs and vision.				P			
B.5.28	Host community engagement events and identify community priorities to address in the Community Health Improvement Plans.			P				
B.5.29	Continue to ensure vulnerable and underserved populations have access to health and social services.			P				
B.5.30	Coordinate with academia to gather research and studies related to post-traumatic stress disorder (PTSD). Use this information to understand how PTSD will affect the ability of individuals, homeowners, and businesses (including owners and employees) to return to the impacted area. Establish programs to mitigate these impacts. The HSS, CPCB, and Economic RSFs will work collaboratively to address these impacts to the different sectors of the community.			P				
B.5.41	Provide access to critical infrastructure needs for vulnerable and underserved populations.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.42	Explore and encourage renewable energy sources in rebuilding projects. Consult existing plans and policies that can guide how to promote renewable energy (e.g., climate, sustainability, utility plans). Coordinate messaging and engagement between the Infrastructure, Housing, CPCB, and NCR RSFs.					P		
B.5.51	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.		P					
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.4	Hold an annual commemorative event in the impacted community.							
B.7.5	Develop and share locally informed approaches and best practices to engagement.							
B.7.6	Conduct public education on how to be more resilient.							
B.7.7	Begin memorial and/or monument planning to commemorate recovery and honor disaster survivors.							
B.7.8	Engage elected officials and local leadership to promote the concept of "building back better" in local communities.							
B.7.9	Help community healing through mural painting, garden planting, and other interactive and artistic events.	P						

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							
B.8.3	Communicate with the public about the potential for fraud and predatory lending.	P						
B.8.4	Provide guidance to consumers on how to verify a contractor's license and/or hire a licensed contractor.	P						
B.8.5	Inform developers, builders, and the public about new or adapted land use laws.	P						

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.3	Create initiatives and advise on policy change to prevent gentrification.							
B.9.4	Work with community members on land banking and community trusts to keep residential and ownership local.							P
B.9.5	Create policies that promote mixed-use development, accessibility, and tax incentives for low-income housing.							P
B.9.11	Revise and align housing policies to suit the needs of displaced populations, considering the need for rental, owned, single-family and multi-family properties.				P			
B.9.12	Reexamine permitting procedures to increase efficiency and promote resilient development.							P
B.9.13	Process and finalize changes to zoning and area classification.							
B.9.14	Identify properties for acquisition and demolition.							P
B.9.15	Review and revise land use policies to prohibit rebuilding in hazard areas.							
B.9.16	Review and revise building codes to require all new buildings to withstand future seismic events.							P
B.9.17	Implement policies related to land use moratoriums and the identification of red zones.							
B.9.18	Formulate long-range goals and policies for land use, population growth and distribution, urban expansion, land development, resource preservation, and other factors affecting development patterns.							P

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.1	Conduct repopulation campaigns, if necessary, to encourage community growth, including restoring identity or new identity for a community and incentivizing education.	P						
C.2.4	Develop and implement a regional marketing campaign that leverages a local public figure (e.g., professional athletes) to demonstrate recovery progress and a return to normalcy.	P						
C.2.10	Support decision-making surrounding repurposing land, especially land that has been cleared or vacated due to vulnerabilities or blight.							P
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							
C.3.7	Develop regulatory measures for new businesses that promote the equitable distribution of wealth and avoid the displacement of vulnerable populations.		P					
C.3.10	Focus on integrating areas that are traditionally economically disadvantaged into local economy.		P					
C.3.17	Promote the strategic redevelopment of priority sites that align with the long-term planning goals of the region.							P

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.4	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship.							
C.4.5	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							
C.4.6	Continue to host an annual commemorative event to memorialize the incident.							
C.4.7	Help community healing through mural painting, garden planning, and other interactive and artistic events.	P						

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.0	Promote sustainable living practices (e.g., vegetable gardens, solar panels).	P						
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better" in local communities by creating redevelopment incentives.							

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							
C.6.3	Integrate RSF duties into steady state roles.							
C.6.4	Conduct an assessment to analyze the equity of services provided during recovery. Implement corrective measures based on the findings of the assessment.							

Appendix H: RSF: Economic Recovery

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Economic Recovery RSF is to return economic and business activities to a healthy state and develop new business and employment opportunities that result in a sustainable and economically viable community. The Economic Recovery RSF focuses on the ability of the economy to return to a state of normalcy to support employment and economic development within the community by integrating the expertise of local governments, the private sector, and community businesses. Key responsibilities and mission objectives include:

- Coordinating with relevant stakeholders, including the public and private sector, to formulate policies for a resilient economy;
- Working with businesses and communities to identify and address employment needs; and
- Facilitating long-term, sustainable economic recovery.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen in **Figure 15.**

Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The Economic RSF Coordinator is typically from an economic development department or organization. The structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co- leads are assisted by supporting agencies and organizations. Please see **Table 22** for more information on these roles.

Figure 15: Recommended RSF Structure

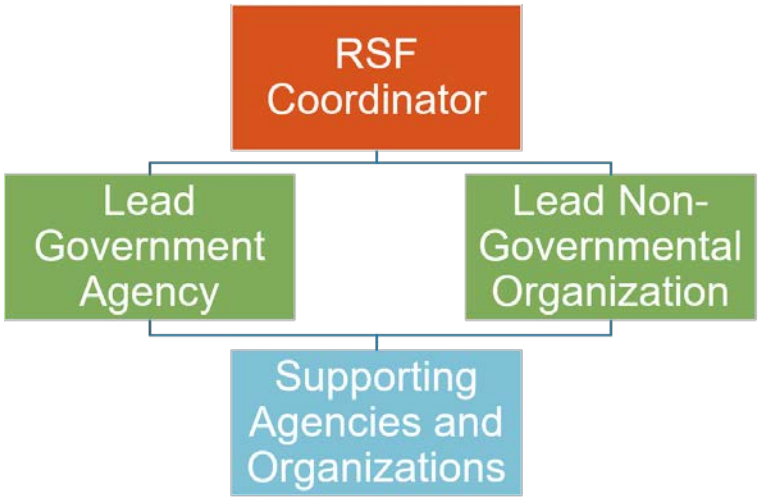


Table 22: RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 23**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 23: RSF - Economic Recovery Group Participation

Stakeholder Group	Function/Contribution
Economic Development Organizations/Chambers of Commerce	Economic development and workforce initiatives
Tourism or Visitors' Bureau	Economic recovery and repopulation strategies
Major Employers	Recovery and resilience of local businesses
Banking Organizations	Economic recovery and resilience

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 24** below summarizes some of these key points of coordination between Economic and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 24: Economic Recovery Points of Coordination

Coordinating RSF	Points of Coordination
RSF 1: Community Planning and Capacity Building	▪ Engaging local and regional planning commissions and economic development organizations. ▪ Developing economic recovery and development plans. ▪ Reestablishing community businesses that are important to community character and holistic well-being. ▪ Creating incentives to encourage businesses to return or open.
RSF 3: Health and Social Services	▪ Assisting with return of health and social service network employees. ▪ Supporting restoration and recovery of health and social services networks, facilities, child care, and/or providers that impact employment and support a customer base for local businesses. ▪ Promoting workforce development for the health and social services sector.
RSF 4: Housing	▪ Facilitating purchasing efforts to assist businesses with housing rehabilitation and development. ▪ Identifying training opportunities for local workforce to align with local housing developer employer needs. ▪ Coordinating with private sector businesses to help meet employee housing needs of major local and regional employers.
RSF 5: Infrastructure Systems	▪ Restoring “lifelines” to city centers and financial hubs. ▪ Sharing information related to infrastructure needs of businesses by geographic service area. ▪ Communicating project restoration status of sewer, roadway, electricity, communications, and other infrastructure needs to local employers and chambers of commerce. ▪ Coordinating with private sector utilities companies.
RSF 6: Natural and Cultural Resources	▪ Identifying and reestablishing private businesses, buildings, and public amenities related to cultural and historical resources (e.g., tourism, State Parks, historic districts, and buildings).
RSF 7: Land Use and Redevelopment	▪ Identifying land suitable for commercial redevelopment near population hubs.

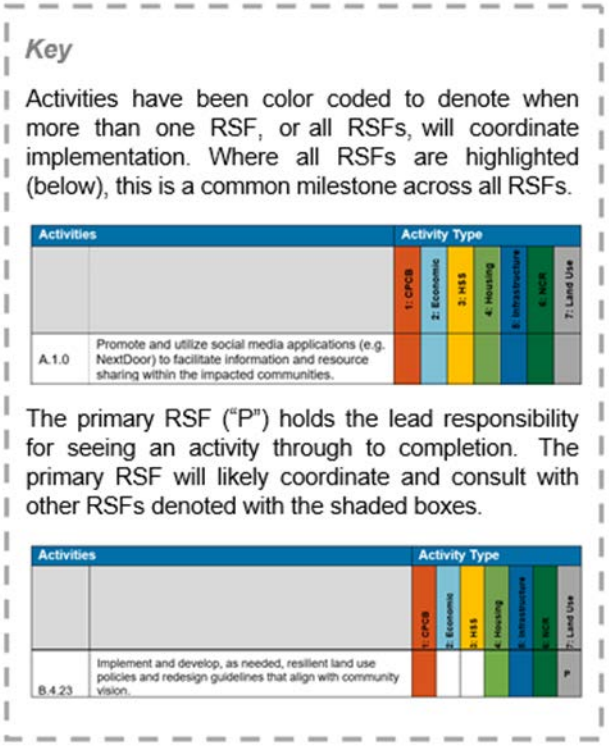
Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out economic recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs:** Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The Economic RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.

The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to **Recovery Overview** for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to cross reference common milestones and activities between RSFs. Activities were assigned a unique identifier based on the recovery phase ("A" for short- term, "B" for intermediate, and "C" for long



term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about emergency preparedness can be found in **Preparedness**. Initial preparedness activities for the Economic RSF are listed below.

- Develop stranded and displaced worker agreements among all types of employers to allow evacuated residents to resume working in non-impacted communities and businesses.
- Encourage businesses to secure insurance policies.
- Identify incentives to attract a diversity of industry and businesses before a disaster.
- Create workforce development and training programs for in demand skilled labor in the county or city.

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							
A.1.6	Coordinate to distribute information to businesses, healthcare providers, and homeowners regarding tax relief as a result of disaster-related property damage.	P						

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assistance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.4	Coordinate between the Economic and Infrastructure RSFs to identify and prioritize infrastructure needs for businesses.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and inform the unmet needs assessment and recovery action plan development.			P				
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						
A.3.10	Engage local and regional planning commissions and economic development organizations in the recovery process to identify redevelopment priorities. Maximize opportunity zones to rebuild for economic purposes. Coordinate amongst the CPCB, Economic, and Land Use RSFs to support this effort.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Analyze results from the impact and needs assessments to develop short-term recovery action plans (RAP).							
A.4.2	Reestablish the ability to use credit and debit cards (since many people no longer carry cash).		P					
A.4.3	Support the restoration of power and communications infrastructure systems so that key institutions and functions (e.g., banks and financial institutions, schools, grocery stores) and "lifelines" can operate.					P		
A.4.4	Coordinate with employers and chambers of commerce to identify economic infrastructure that needs to be repaired and rebuilt, prioritizing restoration in city centers and financial hubs.		P					
A.4.5	Provide "banking trucks" for people to access their bank accounts and withdraw money.							
A.4.6	Coordinate with marijuana dispensaries to establish a microcredit system – dispensaries typically have significant cash at their locations.							
A.4.7	Assess the fuel supply to the region, identify needs, identify potential local and regional sources, and prioritize distribution based on criticality of services. Repair fuel distribution sites to restore their operation and function. Determine if routes and supply lines can safely and efficiently transport fuel to the region and utilize alternative transportation methods, as needed, to deliver fuel to the region.					P		
A.4.29	Repair and restore transportation routes that lead to key institutions and functions (e.g., schools, healthcare facilities, fire stations).					P		
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							
A.5.3	Identify a liaison to work directly with the private sector entities to collect and disseminate information about economic recovery.							
A.5.5	Create centralized phone lines to provide technical assistance to small and mid-size businesses and distressed homeowners and renters.		P					
A.5.6	Liaise with legal counsel representing Federal and State governments, as well as private sector industries, on housing laws, policies, and regulations in disaster settings (e.g., finance). This includes policies that may prohibit redevelopment (e.g., natural resources protection policies).							

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							
A.6.7	Work with volunteer organizations to fundraise, where possible.	P						
A.6.8	Conduct outreach to the private sector to provide additional financial support.							

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.	P						
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							
A.7.11	Coordinate with local stores and businesses to identify potential resources and ensure stores are aware of emergency exemptions and opportunities for reimbursement (if available).							
A.7.12	In conjunction with the SBA, support establishment a "Business Recovery Center".							
A.7.13	In conjunction with the SBA, identify appropriate programs to assist local businesses in repairing and reopening.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.21	Coordinate with private sector utility companies to facilitate recovery efforts.					P		

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							
B.1.6	Assess the labor market pool of available workers by identifying the workers able to assist with recovery, coordinating with private/public sectors to assist with job placement, and identifying training opportunities for local workforce that align with needs post-disaster (housing development or utilities).							

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.		P					
B.2.10	Identify no or low interest loan options for small businesses.							
B.2.11	Identify and apply for federal funding sources for the repair and restoration of the community.							

	Intermediate Milestone 3 Continue to identify resources, staff, and equipment needed to establish and support initiatives to sustain and address deficiencies in surge capacity and capabilities.
EEI:	Recovery job needs, job training programs, available disaster assistance programs, staff capabilities, stand-by contracts, COAD/VOAD, contact lists for agencies and volunteers

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.3.0	Assess the labor market pool of available workers to support recovery and fill positions open as the result of the disaster.							
B.3.6	Identify and improve access to training/retraining programs for needed and projected jobs post-disaster in the essential industries (e.g., nurses, crisis counselors, construction, housing).							

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.6	Reignite the tourism economy by implementing new programs.							
B.4.7	Monitor the availability of affordable housing for the workforce; coordinate affordable housing programs as needed to provide additional housing.				P			
B.4.10	Identify areas of population concentration and future economic growth and prioritize infrastructure system and community reconstruction.		P					
B.4.17	Support recreational, tourism, and entertainment venues with reopening for business.							
B.4.19	Coordinate with the Environmental Protection Agency, and use spatial data, to identify brownfields and land unsuitable for development. Through a community planning process, identify and implement strategies to convert this space into green space. This project will require close coordination between NCR, Economic, Infrastructure, and Land Use RSFs.						P	

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g., hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessment.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.5	Provide businesses with the information and resources needed to support the restoration of their services, which contribute to holistic community character and well-being.		P					
B.5.6	Provide guidance and incentives to local businesses to develop business continuity of operations plans.							
B.5.7	Establish and implement economic development projects, workforce development initiatives, and entrepreneurial and business development initiatives based on impact and needs assessments.							
B.5.8	Implement plans to attract new businesses that will revitalize and grow the regional economy.							
B.5.9	Create a program that incentivizes the return of employers to the impacted area by offering tax incentives. Recommend employers affected by the disaster will get 90 days tax fee, which can be extended.							
B.5.10	Incentivize employers to offer health and social services to survivors, especially to provide affordable child care for working parents.							
B.5.11	Consider administering disaster unemployment benefits through banking institutions (e.g., Bank of America).							
B.5.12	Create income-based programs to facilitate access to transportation for people with little money and consider temporary cost relief for public transportation.			P				

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.13	Prioritize restoring critical transportation routes as they are essential to the economy. Ports, roads, airports, and rails help maintain movement of goods.					P		
B.5.29	Coordinate with academia to gather research and studies related to post-traumatic stress disorder (PTSD). Use this information to understand how PTSD will affect the ability of individuals, homeowners, and businesses (including owners and employees) to return to the impacted area. Establish programs to mitigate these impacts. The HSS, CPCB, and Economic RSFs will work collaboratively to address these impacts to the different sectors of the community.			P				
B.5.30	Coordinate access to health and social services for employees and workers assisting in restoration efforts.			P				
B.5.50	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							

	Intermediate Milestone 6 Establish and implement economic development projects; workforce development initiatives; and entrepreneurial and business development initiatives based on impact and needs assessments
EEI:	Points of contact for private sector businesses as well as public sector workforce training and education programs, employment needs in the jurisdiction

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.6.0	Organize job fairs.							
B.6.1	Identify regional-specific jobs and industries that offer the opportunity for growth in the future.							
B.6.2	Engage the workforce development system, including vocational rehabilitation programs, as a means of helping individuals injured by the event to return to work with the appropriate supports, accommodation, and retraining (if necessary).							
B.6.3	Coordinate with local businesses and community colleges to offer training/retraining programs to low-income populations for priority work force skills, especially related to the recovery needs after a disaster (e.g., construction, debris management).							
B.6.4	Conduct targeted outreach to the labor force to prevent "ghost cities".							
B.6.5	Collaborate with local colleges and trade schools based on community needs (e.g., targeted training/retraining, free/low cost schooling for those entering construction fields).							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.		P					
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.8	Engage elected officials and local leadership to promote the concept of "building back better" in local communities.							
B.7.10	Leverage pre-established relationships with local and regional business and economic coalitions to engage partners in the recovery process.							

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							
B.8.3	Communicate with the public about the potential for fraud and predatory lending.	P						

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.6	Reduce the cost of doing business in the impacted area by securing tax incentives to attract businesses, incentivizing investment in rebuilding through lowering fees and eliminating barriers (e.g., waive environmental fees, carbon tax), and providing tax credits to those creating and maintaining jobs for existing workforce in impacted areas.							
B.9.7	Create fiscal and tax policies that provide economic relief and assistance during recovery.							
B.9.9	The HSS and Economic RSFs will coordinate to offer tax incentives for the return of HSS industry employers to the impacted areas.							
B.9.10	Allow for flexibility in regulations for lending if possible, to support private sector healthcare institutions and expedite rebuilding or redevelopment processes.		P					

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures in order to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.1	Conduct repopulation campaigns, if necessary, to encourage community growth, including restoring identity or new identity for a community and incentivizing education.	P						
C.2.2	Promoting the education and training of youth to reinforce the regional workforce.							
C.2.3	Track the costs of recovery to the region to understand its economic impacts and the debt burdens place on residents and business owners. Use this information to inform policies and programs that help the community return to steady state.							
C.2.4	Develop and implement a regional marketing campaign that leverages a local public figure (e.g., professional athletes) to demonstrate recovery progress and a return to normalcy.	P						
C.2.5	Continue to reestablish the tourism sector.							
C.2.10	Support decision-making surrounding repurposing land, especially land that has been cleared or vacated due to vulnerabilities or blight.							P
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							
C.2.15	Rebuild cultural resources (e.g., sports teams, museums, theaters) to restore entertainment and recreational services to the community.							

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							
C.3.7	Develop regulatory measures for new businesses that promote the equitable distribution of wealth and avoid the displacement of vulnerable populations.		P					
C.3.8	Promote COOP planning for all private and public-sector entities.							
C.3.9	Restore the existing economic drivers of the region and identify and support new economic drivers and industry sectors to promote a thriving economy.							
C.3.10	Focus on integrating areas that are traditionally economically disadvantaged into local economy.		P					
C.3.19	Identify opportunities for the private sector to implement mitigation projects and policies.							

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.4	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship							
C.4.5	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better" in local communities by creating redevelopment incentives.							
C.5.2	Continue to conduct outreach for redeveloping and rebuilding of businesses.							
C.5.3	Prioritize and increase opportunities for small businesses through small business loans and promoting women-/minority-owned businesses.							
C.5.4	Provide incentives to businesses to grow in accordance with the regional goals.							
C.5.5	Restore taxes to normal levels while reassessing the tax structure for small businesses.							
C.5.6	Provide tax credits and other financial support to those rebuilding in alignment with sustainability and resiliency standards		P					

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs in order to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							
C.6.3	Integrate RSF duties into steady state roles.							
C.6.5	Track the progress of middle-class financial viability and debts as recovery progresses to identify any gaps and unmet needs.							

Appendix I: RSF: Health and Social Services

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Health and Social Services (HSS) RSF is to restore and improve the public health, healthcare, and social service networks to promote the recovery, resilience, health, and well-being of disaster-affected individuals and communities. The HSS RSF works with other RSFs to prioritize community health, safety, and social service needs in redevelopment and restoration. Key responsibilities and mission objectives include:

- Coordinate with relevant stakeholders to restore healthcare facilities and social services functions to meet ongoing and emerging post-disaster community needs;
- Encourage behavioral health systems to meet the behavioral health needs of affected individuals, response and recovery workers, and the community;
- Promote self-sufficiency and continuity of the health and well-being of affected individuals, particularly children, seniors, people living with disabilities, people with functional needs, people from diverse origins, people with limited English proficiency and underserved populations.
- Reconnect displaced populations with essential health and social services;
- Protect the health of the populations and response and recovery workers from the longer-term effects of a post-disaster environment;
- Improve the resilience and sustainability of the health care and social service systems; and
- Promote clear communications and public health messaging to provide accurate, appropriate, and accessible information, developing and disseminating information via multiple mediums, multi- lingual formats, alternative formats, is age-appropriate and user-friendly, and is accessible to underserved populations.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen in **Figure 16.**

Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The HSS RSF Coordinator is typically from a health and human services department or public health department. The structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co-leads are assisted by supporting agencies and organizations. Please see **Table 26** for more information on these roles.

Figure 16: Recommended RSF Structure

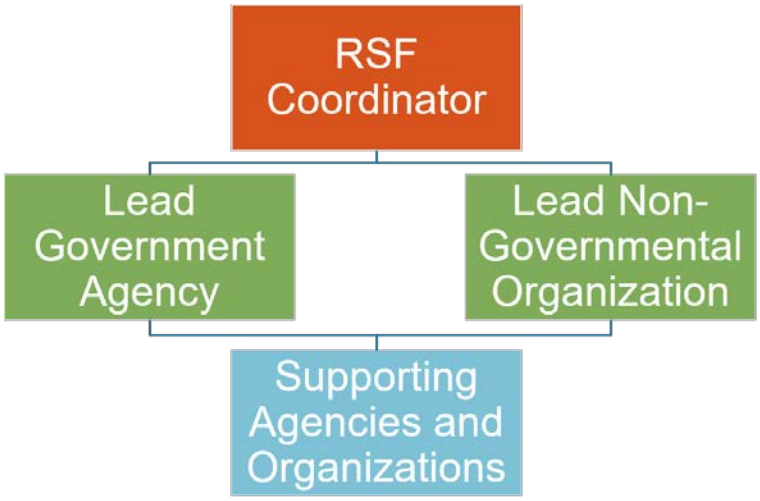


Table 25: RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 26**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 26: RSF - Health and Social Services Stakeholder Group Participation

Stakeholder Group	Function/Contribution
School District and Higher Education Facilities	Transition from sheltering to schools opening and population returning
Public Health Departments	Hospital and medical recovery
Healthcare Associations and Regional Healthcare Coalitions	Hospital and medical recovery
Behavioral Health Departments	Mental and behavioral health support and crisis counseling
Environmental Health Departments	Environmental health hazards
Human or Social Service Agencies	Access and functional needs populations
Animal Shelters	Accommodations for pets

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 27** below summarizes some of these key points of coordination between HSS and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 27: Health and Social Services Recovery Points Coordination

Coordinating RSF	Points of Coordination
RSF 1: Community Planning and Capacity Building	▪ Coordinating local planning when impacts of the disaster include loss to access to or infrastructure for health care or social services. ▪ Engaging with, communicating to, and providing services for diverse populations.
RSF 2: Economic Recovery	▪ Assisting with return of health and social service network employees. ▪ Supporting restoration and recovery of health and social services networks, facilities, child care, and/or providers that impact employment and support a customer base for local businesses. ▪ Promoting workforce development for the health and social services sector.
RSF 4: Housing	▪ Identifying and resolving any public and/or environmental health impacts/consequences with transitional, interim, and permanent housing solutions.
RSF 5: Infrastructure Systems	▪ Restoring critical healthcare and social service facilities and infrastructure. ▪ Addressing needs of AFN populations that are dependent on infrastructure (e.g., elevators, escalators, electricity-dependent medical equipment). ▪ Ensuring the health and social services workforce has access to their places of work (e.g., through clear roads, functioning railways).
RSF 6: Natural and Cultural Resources	▪ Coordinating resources to asses, monitor, and perform cleanup actions (e.g., for hazardous material) to minimize negative public and environmental health impacts. ▪ Addressing impacted health and social services programs that rely on natural and cultural resources impacted by the disaster (e.g., recreation programs).
RSF 7: Land Use and Redevelopment	▪ Creating redevelopment and resilience guidance for health and social service facilities.

Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out HSS recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs:** Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The HSS RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.

Key

Activities have been color coded to denote when more than one RSF, or all RSFs, will coordinate implementation. Where all RSFs are highlighted (below), this is a common milestone across all RSFs.

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NDR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g. NextDoor) to facilitate information and resource sharing within the impacted communities.							

The primary RSF ("P") holds the lead responsibility for seeing an activity through to completion. The primary RSF will likely coordinate and consult with other RSFs denoted with the shaded boxes.

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NDR	7: Land Use
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.							P

The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to **Recovery Overview** for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to cross reference common milestones and activities between RSFs. Activities were assigned a unique identifier based on the recovery phase ("A" for short-term, "B" for intermediate, and "C" for long-term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about emergency preparedness can be found in Preparedness. Initial preparedness activities for the HSS RSF are listed below.

- Facilitate sustainable efforts and funding to cache water and food in the event of a disaster.
- Utilize available tools and surveys to identify areas of underserved populations.
- Develop post disaster psycho-social programs for all ages, key cultural-language groups, and create training modules for health care professionals, including Just-In-Time (JIT) modules.
- Prepare and plan for animal welfare issues (e.g., pets, farms, wildlife).

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.2	Inform the public on the need for damage assessments to prevent people from inhabiting unsafe structures or rebuilding without permitting.				P			
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							
A.1.6	Coordinate to distribute information to businesses, healthcare providers, and homeowners regarding tax relief as a result of disaster-related property damage.	P						
A.1.10	Develop messaging and information campaigns related to public health and safety, including public safety guidelines (e.g., water purification, medicine disposal), health system accessibility, and potential altered standards of care. Coordinate between RSFs on technical content of messaging and distribution to the public.	P						
A.1.11	Communicate to the public a variety of different environmental health concerns related to failed sanitation and sewage infrastructure, including how to dispose of human waste and prevent sanitation and the spread of cholera and issuing "boil water" notices.			P				

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assistance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.9	Utilize the Center for Disease Control and Prevention's (CPC) Community Assessment for Public Health Emergency Response (CASPER) survey to assess health and social services need.							
A.2.10	Assess the number of individuals needing disability insurance.							
A.2.11	If staffing shortages are identified after a disaster, provide training to individuals on how to perform basic medical services.							
A.2.12	Assess and document the number of individuals using, and eligible for, public assistance programs (e.g., supplemental security income, supplemental nutrition assistance program).							
A.2.13	Assess and document the initial needs for support of elderly populations.							
A.2.14	Document hospital capacity and identify unmet needs; coordinate with regional partners to provide care and bridge unmet needs.							
A.2.29	Coordinate between NCR and HSS to identify impacted health and social services programs that rely on natural and cultural resources impacted by the disaster (e.g., recreational programs).							
A.2.30	Identify environmental health hazards that pose a risk to community health. This includes the identification of sensitive receptors (e.g., location of hazardous substances).							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.32	Assess water contamination and recovery needs. Coordinate assessments between NCR, HSS, and Infrastructure RSFs.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and also inform the unmet needs assessment and recovery action plan development.			P				
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Analyze results from the impact and needs assessments to develop short-term recovery action plans (RAP).							
A.4.3	Support the restoration of power and communications infrastructure systems so that key institutions and functions (e.g., banks and financial institutions, schools, grocery stores) and “lifelines” can operate.					P		
A.4.11	Assist all survivors in registering for Individual Assistance (IA) by providing information and advocacy services if the community is eligible.							
A.4.13	Identify homeless communities and provide recovery support and services.							
A.4.14	For an infectious disease emergency, implement existing mass prophylaxis plans.							
A.4.15	Work with law enforcement and public safety officials to implement initiatives that address safety of essential facilities and impacted communities.							
A.4.16	Create and utilize information hubs and shelters to distribute available information on mental health services and resources.							
A.4.18	Work with direct service health providers, including mental health professionals, to provide mobile or virtual services and emotional support.							
A.4.19	Work with stakeholders and department agencies to identify temporary solutions for child care, food service, and schooling. This can include connecting with local chefs and local organizations to get involved with community feeding efforts. Provide food to facilities that provide essential places (e.g., schools and churches).							
A.4.20	Reestablish environmental health monitoring services (e.g., food safety).							
A.4.21	Identify how to bring health and social services to vulnerable populations with limited mobility and underserved communities.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.22	Coordinate to determine the agriculture and livestock farms that can supply the region with food.							
A.4.23	Provide vulnerable and AFN populations with access to equipment that is needed for mobility (e.g., elevators, escalators, electricity-dependent medical equipment).							
A.4.24	Coordinate between RSFs to provide functional temporary transportation routes and alterative public transportation options to allow access to key institutions and functions (e.g., schools, daycare, jobs), including for those with Access and Functional Needs. Develop and distribute public messaging on the alternative transportation routes and options. Monitor that public transportation is functional, the specific people needing transportation services are identified, and public messaging is coordinated.					P		
A.4.29	Repair and restore transportation routes that lead to key institutions and functions (e.g., schools, healthcare facilities, fire stations).					P		
A.4.38	Restore energy/internet in critical HSS facilities (e.g., public, and private hospitals, government social services agencies).					P		
A.4.39	Contain hazardous material release, perform cleanup actions, and assess and monitor the risks to the public and/or environmental health.			P				
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							
A.5.5	Create centralized phone lines to provide technical assistance to small and mid-size businesses and distressed homeowners and renters.		P					

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.	P						
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							
A.7.14	Monitor cultural competency in distribution of medical and health supplies.							
A.7.15	Identify available public space that can be utilized for donations or equipment storage.							
A.7.16	Coordinate with nursing schools to provide additional staff.							

A.7.17	Manage volunteers and donations as they relate to health and social services restoration.	P						

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.22	Coordinate and procure the resources, equipment, and facilities needed to assess, monitor, and perform cleanup actions for hazardous material releases, to minimize negative public and environmental health impacts.					P		

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities.

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							
B.1.14	Coordinate resources to assess, monitor, and perform clean-up actions in support of minimizing negative public and environmental health impacts.			P				

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.		P					

	Intermediate Milestone 3 Continue to identify resources, staff, and equipment needed to establish and support initiatives to sustain and address deficiencies in surge capacity and capabilities.
EEI:	Recovery job needs, job training programs, available disaster assistance programs, staff capabilities, stand-by contracts, COAD/VOAD, contact lists for agencies and volunteers

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.3.1	Recruit new teachers and encourage existing employees to return to work to restore school systems.							
B.3.2	Recruit clinical staff from outside regions as needed.							
B.3.3	Host trainings and workshops for health professionals on the objectives of Trauma-Informed Care (TIC).							
B.3.4	Identify initiatives to address long-term healthcare staffing needs, ensuring that ancillary positions are considered (e.g., hospital food services, maintenance, cleaning).							
B.3.5	Allocate for increased amount of personnel and resources on trigger dates.							
B.3.6	Identify and improve access to training/retraining programs for needed and projected jobs post-disaster in the essential industries (e.g., nurses, crisis counselors, construction, housing).							
B.3.8	Continue assessment and mitigation of hazardous conditions, including hazardous/radiological materials, air, soil, water contamination; adequate sanitation and waste removal; vector control.							

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.8	Create initiatives that address the potential for small facilities and independent hospitals to shut down because they do not have the finances to build back or remain open.							
B.4.18	Repair and reopen public-owned community facilities, increasing access to these public amenities and the services they provide (e.g., schools, libraries, parks, post offices, community centers).					P		

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g., hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessment.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.4	Restore community services (e.g., education programs for teens, athletic, transportation programs for older adults and individuals with disabilities).							
B.5.10	Incentivize employers to offer health and social services to survivors, especially to provide affordable child care for working parents.							
B.5.11	Consider administering disaster unemployment benefits through banking institutions (e.g., Bank of America).							
B.5.12	Create income-based programs to facilitate access to transportation for people with little money and consider temporary cost relief for public transportation.			P				
B.5.19	Offer mental health support programs in schools.							
B.5.20	Identify critical HSS facilities (e.g., hospitals, health centers, nursing homes, child care providers) and prioritize the restoration of the facilities and their services.							
B.5.21	Explore options to increase capacity of mental health services, such as through group therapy and community-led mental health support groups.							
B.5.22	Establish programs (if needed) to provide individuals with access to life-saving medication.							
B.5.23	Coordinate and prepare for patients that were evacuated and sent to other hospitals out of the region to be brought back via patient repatriation programs.							
B.5.24	Continue to provide virtual health services.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.25	Connect displaced students with schools and educational opportunities (including transportation to these opportunities).							
B.5.26	Continue to restore private sector healthcare businesses damaged by disasters (e.g., through mutual aid agreements, and leveraging relationships with healthcare associations and coalitions).							
B.5.27	Host community engagement events and identify community priorities to address in the Community Health Improvement Plans.			P				
B.5.28	Continue to ensure vulnerable and underserved populations have access to health and social services.			P				
B.5.29	Coordinate with academia to gather research and studies related to post-traumatic stress disorder (PTSD). Use this information to understand how PTSD will affect the ability of individuals, homeowners, and businesses (including owners and employees) to return to the impacted area. Establish programs to mitigate these impacts. The HSS, CPCB, and Economic RSFs will work collaboratively to address these impacts to the different sectors of the community.			P				
B.5.30	Coordinate access to health and social services for employees and workers assisting in restoration efforts.			P				
B.5.31	Monitor the availability of public housing and provide services and resources to individuals in public housing.				P			
B.5.32	Monitor hazards that may further impact environmental or public health.			P				
B.5.41	Provide access to critical infrastructure needs for vulnerable and underserved populations.							
B.5.44	When rebuilding, consider the equitable colocation of important health and social service facilities (e.g., health clinics, schools, libraries, churches) to increase social cohesion.							
B.5.45	Contain hazardous material release, perform cleanup actions, and assess and monitor the risks to the public and/or environmental health.			P				
B.5.50	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.		P					
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.8	Engage elected officials and local leadership to promote the concept of "building back better" in local communities.							
B.7.9	Help community healing through mural painting, garden planting, and other interactive and artistic events.	P						
B.7.11	Collaborate with stakeholders to reach out to foundations and local organizations that may have interest in supporting mental health services.							

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.8	Monitor the compliance of hospitals and medical services with quality of care standards (e.g., regulatory oversight).							
B.9.9	The HSS and Economic RSFs will coordinate to offer tax incentives for the return of HSS industry employers to the impacted areas.							
B.9.10	Allow for flexibility in regulations for lending if possible, to support private sector healthcare institutions and expedite rebuilding or redevelopment processes.		P					
B.9.16	Review and revise building codes to require all new buildings and infrastructure to withstand future seismic events.							P

	Intermediate Milestone 10 Provide and coordinate wraparound services for those staying in interim housing.
EEI:	Community needs and data on those living in interim housing, points of contact for community organizations, NGOs, and non-profits

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.10.2	Continue to provide support services, including but not limited to housing assistance programs, access to schools and education opportunities, mental and behavioral health, employment, small-business support, transportation, and financial support.			P				

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures in order to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.6	Monitor long-term function of regional healthcare facilities to provide services; plan for new facilities and the expansion of existing facilities, as needed.							
C.2.7	Monitor long-term function of schools and school districts and their ability to support all students.							
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							
C.2.14	Establish policies that provide stable and affordable housing for the whole community, including vulnerable and underserved communities and homeless and houseless population.				P			

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.3	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship							
C.4.4	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							
C.4.6	Help community healing through mural painting, garden planning, and other interactive and artistic events.	P						

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better" in local communities							

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs in order to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							
C.6.3	Integrate RSF duties into steady state roles.							
C.6.6	Provide an annual review of achievements particular to HSS factors (e.g., number of individuals receiving public assistance benefits, healthcare sector job growth, investments, healthcare business creation/retention).							
C.6.7	Reassess needs to support the elderly population.							
C.6.8	Reassess the number of individuals utilizing, and eligible for, public assistance programs.							

Appendix J: RSF: Housing

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Housing RSF is to return housing to a stable state and develop new opportunities for housing and neighborhood growth within a sustainable, resilient, and economically viable community. The Housing RSF coordinates with other RSFs to implement interim (short-term solutions not suitable for permanent use), temporary (longer-term but temporary solutions for those awaiting repairs), and permanent (solutions suitable for long-term use as a full- time dwelling) housing recovery solutions that effectively support the needs of the whole community. The Housing RSF does not oversee operations for response sheltering. Key responsibilities and mission objectives include:

- Working with communities to identify housing needs and gaps;
- Coordinating with other RSFs to create sustainable and resilient housing; and
- Considering affordable and accessible housing solutions.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen in **Figure 17**.

Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The Housing RSF Coordinator is typically from a housing authority or department of housing services but can also be from a building department or health and human services department. The structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co-leads are assisted by supporting agencies and organizations. Please see **Table 28** for more information on these roles.

Figure 17: Recommended RSF Structure

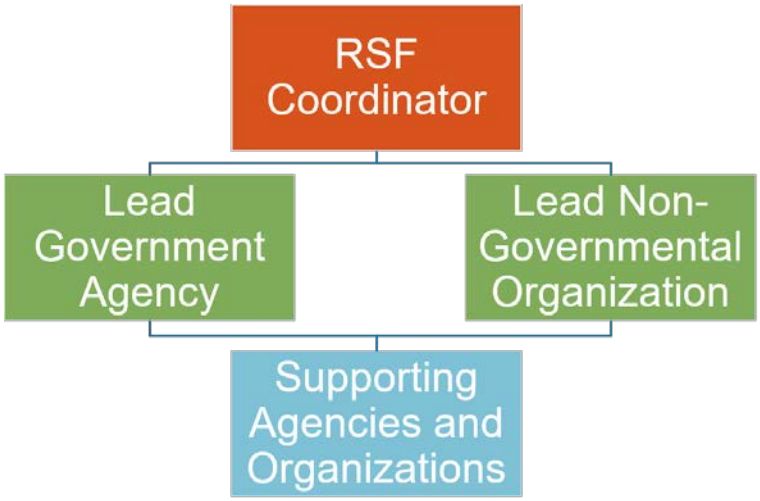


Table 28:RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 29**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 29: RSF - Housing Stakeholder Group Participation

Stakeholder Group	Function/Contribution
Building and/or Zoning Departments	Building moratoria, permitting procedures
Code Enforcement Departments	Damage assessment/enforcement of redevelopment
Housing Authorities	Housing solutions
Neighborhood or Home Owner's Associations	Community representation
Planning Councils or Commissions	Jurisdictional coordination and oversight

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 30** below summarizes some of these key points of coordination between Housing and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 30: Housing Points of Coordination

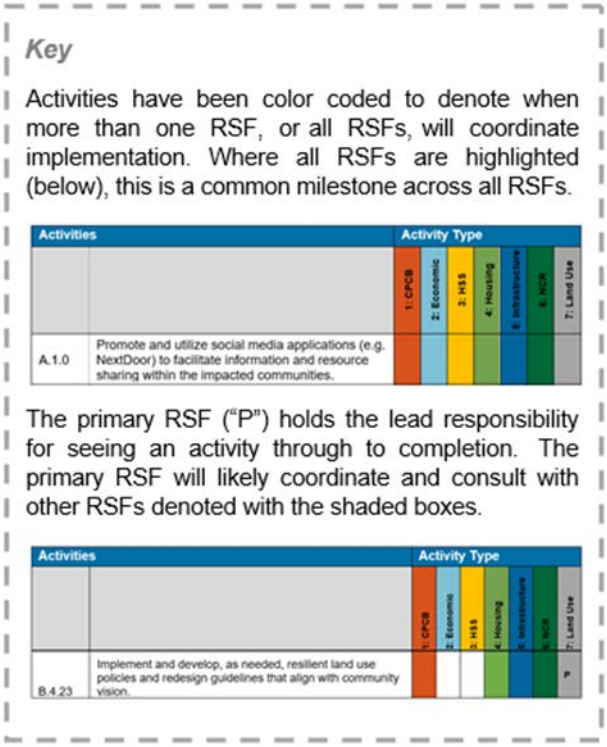
Coordinating RSF	Points of Coordination
RSF 1: Community Planning and Capacity Building	▪ Identifying potential programmatic solutions to meet local housing needs and requirements. This includes identifying and creating incentives for affordable housing. ▪ Identifying adequate interim, temporary, and permanent solutions are identified, including for those who resided in government-provided or affordable housing. ▪ Developing long-term community goals related to housing restoration and resiliency.
RSF 2: Economic Recovery	▪ Facilitating purchasing efforts to assist businesses with housing rehabilitation and development. ▪ Identifying training opportunities for local workforce to align with local housing developer employer needs. ▪ Coordinating with private sector businesses to help meet employee housing needs of major local and regional employers.
RSF 3: Health and Social Services	▪ Identifying and resolving any public and/or environmental health impacts/consequences with transitional, interim, and permanent housing solutions.
RSF 5: Infrastructure Systems	▪ Reestablishing utilities to impacted neighborhoods to shorten the timeframe to move residents into their permanent dwellings. ▪ Ensuring that those staying in short-term and interim housing have access (via road or railway) to critical services (e.g., police, fire).
RSF 6: Natural and Cultural Resources	▪ Ensuring redevelopment does not inhibit access to important community natural, cultural, and historical resources.
RSF 7: Land Use and Redevelopment	▪ Identifying land suitable for housing redevelopment near population hubs.

Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out housing recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs:** Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The Housing RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.



The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to **Recovery Overview** for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to cross reference common milestones and activities between RSFs. Activities were assigned a unique identifier based on the recovery phase ("A" for short-term, "B" for intermediate, and "C" for long-term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities

performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about emergency preparedness can be found in Preparedness. Initial preparedness activities for the Housing RSF are listed below.

- Pre-identify criteria for urban growth boundary expansion.
- Identify and plan for quick-to-construct housing that is safe for long term living.
- Plan for managed retreat from neighborhoods with multiple hazards (e.g., liquefaction, floodplain).
- Develop local seismic resilience plans.
- Enhance mitigation planning across all county or city plans to address the likely housing impacts.
- Develop emergency building permitting requirements (i.e., a letter or list of repairs that is signed and validated by a licensed contractor, engineer, or architect stating the repair is an emergency).
- This will allow streamlined processes for the reconstruction of homes or buildings with major or minor damages, that still comply with building codes and permitting procedures.
- Identify and compile building inspectors contacts and maintain list.
- Create post-disaster building assessment program that determines the safety and reconstruction needs of structures.
- Create stricter and more resilient building codes by creating energy efficiency standards, requiring higher elevation of structures, or establishing construction design and material policies.
- Participate in emergency preparedness campaigns.
- Develop regional agreement and certification criteria on sharing stranded building inspectors for damage assessments.
- Develop damage assessment procedures to inspect all housing in priority order (i.e., multi-family and underserved residents come first).

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.2	Inform the public on the need for damage assessments to prevent people from inhabiting unsafe structures or rebuilding without permitting.				P			
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							
A.1.6	Coordinate to distribute information to businesses, healthcare providers, and homeowners regarding tax relief as a result of disaster-related property damage.	P						
A.1.7	Provide informational resources to shelters and points-of-distribution (PODs) regarding recovery assistance programs.							
A.1.9	Disseminate information regarding the condition and safety of inspected structures. Coordinate between the Infrastructure and Housing RSFs to develop and disseminate this information.				P			

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assistance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.5	Assess damages to dwellings, including manufactured housing and mobile homes, and prioritize resources and assistance.							
A.2.6	Conduct environmental and health assessments prior to infrastructure and housing restoration, particularly in cases where infrastructure restoration impacts natural and cultural resources. Identify alternative projects, where possible. Coordinate assessments between HSS, Housing, Infrastructure, Land Use, and NCR RSFs.							
A.2.7	Utilize maps and geographic information systems (GIS) data, where available, to understand the condition of housing stock to inform recovery decisions.							
A.2.8	Identify damaged permanent and mobile structures to prioritize repairs and restoration in place and formulate a plan for the structures that can be moved or relocated.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and also inform the unmet needs assessment and recovery action plan development.			P				
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Analyze results from the impact and needs assessments to develop short-term recovery action plans (RAP).							
A.4.8	Assist disaster survivors in obtaining permanent housing by providing access to programs and services such as home repair assistance (e.g., Rapid Repair Assistance), loans (e.g., SBA Disaster Loans), housing choice vouchers, and any additional programs made available through state, federal, or NGO/private sector programs.							
A.4.9	Identify alternative housing solutions for individuals living in unofficial and makeshift housing.							
A.4.10	Implement and coordinate temporary cooperative housing with shared facilities that includes measures to provide individual privacy.							
A.4.11	Assist all survivors in registering for Individual Assistance (IA) by providing information and advocacy services if the community is eligible.							
A.4.12	Identify usable and appropriate buildings for temporary housing.							
A.4.13	Identify homeless communities and provide recovery support and services.							
A.4.22	Coordinate to determine the agriculture and livestock farms that can supply the region with food.							
A.4.24	Coordinate between RSFs to provide functional temporary transportation routes and alterative public transportation options to allow access to key institutions and functions (e.g., schools, daycare, jobs), including for those with Access and Functional Needs. Develop and distribute public messaging on the alternative transportation routes and options. Monitor that public transportation is functional, the specific people needing transportation services are identified, and public messaging is coordinated.					P		
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							
A.5.4	Coordinate regularly with housing entities to collect and disseminate housing-specific information, including internal/private damage assessments and response activities.							
A.5.5	Create centralized phone lines to provide technical assistance to small and mid-size businesses and distressed homeowners and renters.		P					
A.5.6	Liaise with legal counsel representing Federal and State governments, as well as private sector industries, on housing laws, policies, and regulations in disaster settings (e.g., finance). This includes policies that may prohibit redevelopment (e.g., natural resources protection policies).							

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							
A.6.9	Support the implementation of housing recovery programs to provide interim, temporary, and permanent housing solutions for displaced residents, including: Individual Assistance (IA), Sheltering and Temporary Essential Power (STEP), and Transitional Sheltering Assistance (TSA).							

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.							
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							
B.1.7	Finish assessing damages to dwellings, including manufactured housing and mobile homes, and prioritize resources and assistance.							

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.		P					
B.2.11	Identify and apply for federal funding sources for the repair and restoration of the community.							

	Intermediate Milestone 3 Continue to identify resources, staff, and equipment needed to establish and support initiatives to sustain and address deficiencies in surge capacity and capabilities.
EEI:	Recovery job needs, job training programs, available disaster assistance programs, staff capabilities, stand-by contracts, COAD/VOAD, contact lists for agencies and volunteers

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.3.6	Identify and improve access to training/retraining programs for needed and projected jobs post-disaster in the essential industries (e.g., nurses, crisis counselors, construction, housing).							

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.5	For neighborhoods and communities where rebuilding cannot occur in the same location due to land use issues, repetitive losses, and/or the presence of natural hazards, coordinate a cohesive process to identify and procure new location(s) for development.							P
B.4.7	Monitor the availability of affordable housing for the workforce; coordinate affordable housing programs as needed to provide additional housing.				P			
B.4.10	Identify areas of population concentration and future economic growth and prioritize infrastructure system and community reconstruction.		P					
B.4.11	Re-zone and amend building codes to make more stringent and resilient.							P
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.							P

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g. hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessment.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.14	Investing in transitional, temporary, or permanent housing to support the houseless population.							
B.5.15	Facilitate purchasing efforts and programs for restoring housing stock.							
B.5.16	Identify long-term housing solutions in line with community needs and vision.				P			
B.5.17	Connect utility services to housing to expedite the return of residents to permanent dwellings.					P		
B.5.18	Identify potential housing recovery projects and application processes that are not located in environmental hazardous areas. Coordinate with the state to review the project proposals to determine compliance with all environmental laws.						P	
B.5.31	Monitor the availability of public housing and provide services and resources to individuals in public housing.				P			
B.5.42	Explore and encourage renewable energy sources in rebuilding projects. Consult existing plans and policies that can guide how to promote renewable energy (e.g., climate, sustainability, utility plans). Coordinate messaging and engagement between the Infrastructure, CPCB, and NCR RSFs.							
B.5.43	Implement designs for long-term and permanent solutions for housing, water, and transportation, where needed. Prioritize restoration of main arterials.					P		

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.49	Based on the needs of the disaster, hire additional staff to perform permit reviews to account for the increased volume of permits that will be filed for infrastructure and building repair and reconstruction.							
B.5.50	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.		P					
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.8	Engage elected officials and local leadership to promote the concept of "building back better" in local communities.							

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							
B.8.4	Provide guidance to consumers on how to verify a contractor's license and/or hire a licensed contractor.	P						

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.5	Create policies that promote mixed-use development, accessibility, and tax incentives for low-income housing.							P
B.9.11	Revise and align housing policies to suit the needs of displaced populations, considering the need for rental, owned, single-family and multi-family properties.				P			
B.9.12	Reexamine permitting procedures to increase efficiency and promote resilient development.							P
B.9.14	Identify properties for acquisition and demolition.							P
B.9.15	Review and revise land use policies to prohibit rebuilding in hazard areas.							P
B.9.16	Review and revise building codes to require all new buildings and infrastructure to withstand future seismic events.							P
B.9.18	Formulate long-range goals and policies for land use, population growth and distribution, urban expansion, land development, resource preservation, and other factors affecting development patterns.							P
B.9.19	Implement and enforce clean energy policies and regulations for new development and substantial improvement.							P

	Intermediate Milestone 10 Provide and coordinate wraparound services for those staying in interim housing.
EEI:	Community needs and data on those living in interim housing, points of contact for community organizations, NGOs, and non-profits

Activities		**Activity Type**						
		1: CPCB	**2: Economic**	**3: HSS**	**4: Housing**	**5: Infrastructure**	**6: NCR**	**7: Land Use**
B.10.0	Engage with NGOs and non-profits to facilitate case management.							
B.10.1	Continue to provide transportation to residents in interim housing.							
B.10.2	Continue to provide support services, including but not limited to housing assistance programs, access to schools and education opportunities, mental and behavioral health, employment, small-business support, transportation, and financial support.			**P**				
B.10.3	Continue to expedite the resumption and/or establishment of utility services (e.g., water/sewer, gas, electricity, telephone/internet) to impacted areas and transitional housing.					**P**		

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures in order to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.10	Support decision-making surrounding repurposing land, especially land that has been cleared or vacated due to vulnerabilities or blight.							P
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							
C.2.14	Establish policies that provide stable and affordable housing for the whole community, including vulnerable and underserved communities and homeless and houseless population.				P			

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.3	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship							
C.4.4	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better" in local communities							

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs in order to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							

Appendix K: RSF: Infrastructure Systems

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Infrastructure Systems RSF is to assess, restore, and revitalize infrastructure systems and services to support a viable, sustainable community and improve resilience to and protection from future hazards and threats. The collaborative nature of this RSF involves public and private sector partners and coordinates with other RSFs so that community needs are met and restored efficiently and effectively. The scope of the Infrastructure Systems RSF includes the following sectors and sub-sectors: energy, water, dams, communications, transportation systems, agriculture (food production and delivery), government facilities, utilities, sanitation/wastewater, engineering, flood control, and other systems that support the physical infrastructure of communities as well as physical facilities that support essential services such as public safety, emergency services, and public recreation. Key responsibilities and mission objectives include:

- Identifying priorities and immediate needs to rebuild and restore infrastructure systems;
- Considering resilience and mitigation measures; and
- Coordinating between relevant stakeholders, including governments, infrastructure owners and operators, and utility companies to understand infrastructure system interdependencies.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen **Figure 18.**
Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The Infrastructure RSF Coordinator is typically from a transportation or public works department but can also be from the emergency management department. The structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co-leads are assisted by supporting agencies and organizations. Please see **Table 31** for more information on these roles.

Figure 18: Recommended RSF Structure

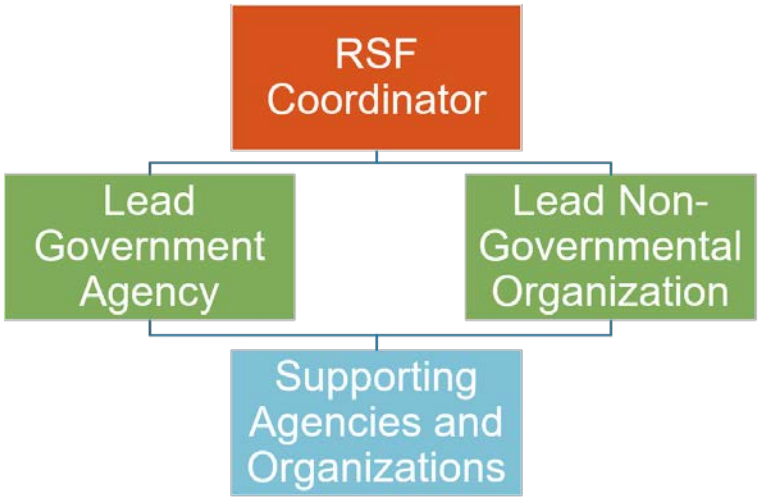


Table 31: RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 32**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 32: RSF Infrastructure Systems Stakeholder Group Participation

Stakeholder Group	Function/Contribution
Transportation Departments (Public and Private Organizations), Railroads, US Coast Guard	Regional transportation coordination/mitigation
Aviation and Port Authorities	Regional transportation coordination/resumption of service
Communications Companies	Private-sector engagement/communications
Waste Management	Debris removal and public safety

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 33** below summarizes some of these key points of coordination between Infrastructure Systems and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 33: Infrastructure Systems Points of Coordination

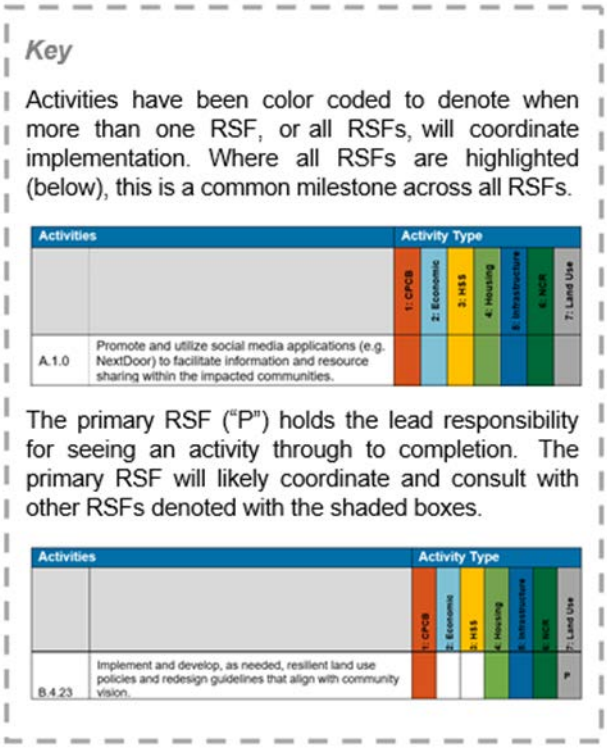
Coordinating RSF	Points of Coordination
RSF 1: Community Planning and Capacity Building	▪ Ensuring equitable access across all communities to critical services. ▪ Ensuring redevelopment, recovery plans, general plans, and resilience plans focus on resilient, green, and sustainable infrastructure. ▪ Developing long-term community goals related to infrastructure restoration and resiliency.
RSF 2: Economic Recovery	▪ Restoring "lifelines" to city centers and financial hubs. ▪ Sharing information related to infrastructure needs of businesses by geographic service area. ▪ Communicating project restoration status of sewer, roadway, electricity, communications, and other infrastructure needs to local employers and chambers of commerce. ▪ Coordinating with private sector utilities companies.
RSF 3: Health and Social Services	▪ Restoring critical healthcare and social service facilities and infrastructure. ▪ Addressing needs of AFN populations that are dependent on infrastructure (e.g., elevators, escalators, electricity-dependent medical equipment). ▪ Ensuring the health and social services workforce has access to their places of work (e.g., through clear roads, functioning railways).
RSF 4: Housing	▪ Reestablishing utilities to impacted neighborhoods to shorten the timeframe to move residents into their permanent dwellings. ▪ Ensuring that those staying in short-term and interim housing have access (via road or railway) to critical services (e.g., police, fire).
RSF 6: Natural and Cultural Resources	▪ Completing environmental and historical impact assessments anywhere infrastructure restoration and redevelopment is planned to take place and identify alternative projects when possible.
RSF 7: Land Use and Redevelopment Planning	▪ Identifying land suitable for infrastructure redevelopment near population hubs.

Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out infrastructure recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs:** Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The Infrastructure Systems RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.



The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to **Recovery Overview** for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to cross reference common milestones and activities between RSFs. Activities were assigned a unique identifier based on the recovery phase ("A" for short-term, "B" for intermediate, and "C" for long-term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities

performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about preparedness can be found in Preparedness. Initial preparedness activities for the Infrastructure System RSF are listed below.

- Conduct public education on water purification.
- Carry out individual preparedness initiatives and programs, such as the Twin Bucket Toilet initiative.
- Structure Capital Improvement Plan (CIP) priorities so critical links and connections are addressed first in disaster recovery.
- Revise building codes to be more resilient by creating energy efficiency standards, requiring higher elevation of structures (where possible), or establishing construction design and material policies.
- Develop stranded worker agreements to allow workers to return to work post-disaster and initiate the quick restoration of infrastructure systems.
- Retrofit infrastructure to be able to withstand natural and man-made disasters.

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.2	Inform the public on the need for damage assessments to prevent people from inhabiting unsafe structures or rebuilding without permitting.				P			
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							
A.1.8	Communicate the restoration status of critical infrastructure and information hubs.							
A.1.9	Disseminate information regarding the condition and safety of inspected structures. Coordinate between the Infrastructure and Housing RSFs to develop and disseminate this information.				P			
A.1.10	Develop messaging and information campaigns related to public health and safety, including public safety guidelines (e.g., water purification, medicine disposal), health system accessibility, and potential altered standards of care. Coordinate between RSFs on technical content of messaging and distribution to the public.	P						
A.1.11	Communicate to the public a variety of different environmental health concerns related to failed sanitation and sewage infrastructure, including how to dispose of human waste and prevent sanitation and the spread of cholera and issuing "boil water" notices.			P				

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assitance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.4	Coordinate between the Economic and Infrastructure RSFs to identify and prioritize infrastructure needs for businesses.							
A.2.6	Conduct environmental and health assessments prior to infrastructure and housing restoration, particularly in cases where infrastructure restoration impacts natural and cultural resources. Identify alternative projects, where possible. Coordinate assessments between HSS, Housing, Infrastructure, Land Use, and NCR RSFs.							
A.2.15	Assess and prioritize community infrastructure repair needs.							
A.2.16	Utilize maps and GIS data, where available, to understand the condition of infrastructure systems post-incident to inform recovery decisions.							
A.2.17	Prioritize the assessment and repair of transportation systems (e.g., bridge, air, rail, road, and river), especially those that connect to critical facilities (e.g., schools, healthcare facilities, fire stations).							
A.2.18	Complete residential and commercial infrastructure inspections.							
A.2.19	Identify and assess systems failures with sewer, water, and waste management.							
A.2.32	Assess water contamination and recovery needs. Coordinate assessments between NCR, HSS, and Infrastructure RSFs.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and also inform the unmet needs assessment and recovery action plan development.			P				
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Assist in analyzing results from the impact and needs assessments to develop short-term recovery action plans (RAP) and housing strategies.							
A.4.2	Reestablish the ability to use credit and debit cards (since many people no longer carry cash).		P					
A.4.3	Support the restoration of power and communications infrastructure systems so that key institutions and functions (e.g., banks and financial institutions, schools, grocery stores) and “lifelines” can operate.					P		
A.4.4	Coordinate with employers and chambers of commerce to identify economic infrastructure that needs to be repaired and rebuilt, prioritizing restoration in city centers and financial hubs.		P					
A.4.7	Assess the fuel supply to the region, identify needs, identify potential local and regional sources, and prioritize distribution based on criticality of services. Repair fuel distribution sites to restore their operation and function. Determine if routes and supply lines can safely and efficiently transport fuel to the region and utilize alternative transportation methods, as needed, to deliver fuel to the region.					P		
A.4.24	Coordinate between RSFs to provide functional temporary transportation routes and alterative public transportation options to allow access to key institutions and functions (e.g., schools, daycare, jobs), including for those with Access and Functional Needs. Develop and distribute public messaging on the alternative transportation routes and options. Monitor that public transportation is functional, the specific people needing transportation services are identified, and public messaging is coordinated.					P		
A.4.25	Provide safe and potable water to all citizens via distribution centers and restoration of systems. Restore water treatment facilities and plants and re-drill wells, where suitable.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.26	Procure and prioritize fuel for vehicles and equipment.							
A.4.27	Submit requests to open state roads, where possible.							
A.4.28	Prioritize the restoration and function of Portland International Airport, particularly to allow for military landings to resume in the short-term.							
A.4.29	Repair and restore transportation routes that lead to key institutions and functions (e.g., schools, healthcare facilities, fire stations).					P		
A.4.30	Identify needs and begin repair of public transit and shuttle systems.							
A.4.31	Work with communication companies to establish temporary cellular towers and repair and restore damaged towers.							
A.4.32	Communicate with power system industries to coordinate restoration and function of communication lines.							
A.4.33	Address high-density population locations with infrastructure connections (build longer-term decisions based on understanding of these population characteristics).							
A.4.34	Identify alternative routes over rivers for movement of people and resources; consider the use of boats.							
A.4.35	Consider and safeguard against the aftershock risk in the interim provision of infrastructure services.							
A.4.36	Coordinate to identify debris sorting locations.							
A.4.37	Identify a map with priority locations and timelines for infrastructure needs, particularly to meet needs of underserved populations.					P		
A.4.38	Restore energy/internet in critical HSS facilities (e.g., public and private hospitals, government social services agencies).					P		
A.4.39	Contain hazardous material release, perform cleanup actions, and assess and monitor the risks to the public and/or environmental health.			P				
A.4.40	Implement, and update as needed, a Debris Management Plan to coordinate the long-term clean-up and disposal of debris. Debris is disposed of according to the type of debris being handled, contamination factors, and environmental impacts. Where there is limited space, find alternate solutions for storage and disposal (e.g., transporting debris by rail).							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.41	Coordinate the removal of debris from river and repair waterfront depots to restore their function and use. Monitor for compliance with environmental laws and regulations.					P		
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.	P						
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							
A.7.18	Establish functional distribution sites.							
A.7.19	Activate stand-by contracts to begin infrastructure systems restoration.							
A.7.20	Identify suppliers to provide building materials and heavy equipment.							
A.7.21	Coordinate with private sector utility companies to facilitate recovery efforts.					P		

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.22	Coordinate and procure the resources, equipment, and facilities needed to assess, monitor, and perform cleanup actions for hazardous material releases, to minimize negative public and environmental health impacts.					P		

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							
B.1.8	Utilize an identification system to identify suitable zones for infrastructure construction and expansion, and ensure suitable zones align with designated areas for future growth.							
B.1.9	Set long-term targets for permanent infrastructure needs.							
B.1.10	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments. Update maps to illustrate availability of critical utilities (e.g., water, wastewater, electricity, cell service, gas.)							
B.1.11	Assess condition of Critical Energy Infrastructure (CEI) Hub and develop draft designs for power distribution grid, if needed.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B1.15	Conduct environmental impact assessments where infrastructure is planned to be constructed.					P		

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.							
B.2.11	Identify and apply for federal funding sources for the repair and restoration of the community.							

	Intermediate Milestone 3 Continue to identify resources, staff, and equipment needed to establish and support initiatives to sustain and address deficiencies in surge capacity and capabilities.
EEI:	Recovery job needs, job training programs, available disaster assistance programs, staff capabilities, stand-by contracts, COAD/VOAD, contact lists for agencies and volunteers

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.3.6	Identify and improve access to training/retraining programs for needed and projected jobs post-disaster in the essential industries (e.g., nurses, crisis counselors, construction, housing).							

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.5	For neighborhoods and communities where rebuilding cannot occur in the same location due to land use issues, repetitive losses, and/or the presence of natural hazards, coordinate a cohesive process to identify and procure new location(s) for development.							P
B.4.9	Prioritize restoring critical routes as they are essential to the economy. Ports, roads, and rails help maintain movement of goods.							
B.4.10	Identify areas of population concentration and future economic growth and prioritize infrastructure system and community reconstruction.		P					
B.4.11	Re-zone and amend building codes to make more stringent and resilient.							P
B.4.18	Repair and reopen public-owned community facilities, increasing access to these public amenities and the services they provide (e.g., schools, libraries, parks, post offices, community centers).					P		
B.4.19	Coordinate with the Environmental Protection Agency, and use spatial data, to identify brownfields and land unsuitable for development. Through a community planning process, identify and implement strategies to convert this space into green space. This project will require close coordination between NCR, Economic, Infrastructure, and Land Use RSFs.						P	
B.4.20	Reestablish public transit systems, incorporating clean energy policies in any repair or rebuilding. Reestablish walking and biking trails for recreation and non-motorized transportation purposes.					P		

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.							P

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g., hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessment.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.4	Restore community services (e.g., education programs for teens, athletic, transportation programs for older adults and individuals with disabilities).							
B.5.23	Create income-based programs to facilitate access to transportation for people with little money and consider temporary cost relief for public transportation.			P				
B.5.13	Prioritize restoring critical transportation routes as they are essential to the economy. Ports, roads, airports, and rails help maintain movement of goods.					P		
B.5.17	Connect utility services to housing to expedite the return of residents to permanent dwellings.					P		
B.5.33	Work with Port Authority to ensure marinas and river transport is fully functional and has resumed regular operations.							
B.5.34	Work with communities and local organizations, where possible, to establish utility rate structures that do not negatively impact low-income communities during recovery and beyond.							
B.5.35	Work with commercial airlines to ensure regular flight schedule has resumed at Portland International Airport.							
B.5.38	Restore infrastructure systems using the "build back better" principles.							
B.5.37	Rebuild water storage facilities and restore a functional sewer system.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.38	Finalize repair and restoration of water, power, and fiber under roads.							
B.5.39	Restore a sustainable waste management system.							
B.5.40	Cluster infrastructure systems during redevelopment/construction to maximize service delivery.							
B.5.41	Provide access to critical infrastructure needs for vulnerable and underserved populations.							
B.5.42	Explore and encourage renewable energy sources in rebuilding projects. Consult existing plans and policies that can guide how to promote renewable energy (e.g., climate, sustainability, utility plans). Coordinate messaging and engagement between the Infrastructure, CPCB, and NCR RSFs.							
B.5.43	Implement designs for long-term and permanent solutions for housing, water, and transportation, where needed. Prioritize restoration of main arterials.					P		
B.5.44	When rebuilding, consider the equitable colocation of important health and social service facilities (e.g., health clinics, schools, libraries, churches) to increase social cohesion.							
B.5.45	Contain hazardous material release, perform cleanup actions, and assess and monitor the risks to the public and/or environmental health.			P				
B.5.46	Retrofit essential public buildings, such as public works garages and law enforcement buildings, to harden the existing infrastructure and protect against future hazard impacts.					P		
B.5.47	Implement a Debris Management Plan to coordinate the long-term clean-up and disposal of debris. Debris is disposed of according to the type of debris being handled, contamination factors, and environmental impacts. Where there is limited space, find alternate solutions for storage and disposal (e.g., transporting debris by rail).							
B.5.48	Coordinate between the Land Use and Infrastructure RSFs to identify viable locations for temporary and permanent "cool storage" facilities. Construct new facilities as needed.							
B.5.49	Based on the needs of the disaster, hire additional staff to perform permit reviews to account for the increased volume of permits that will be filed for infrastructure and building repair and reconstruction.							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.50	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							
B.5.59	Prioritize the construction of seismically retrofitted bridges throughout the region.							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.							
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.8	Engage elected officials and local leadership to promote the concept of "building back better" in local communities.							

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.12	Reexamine permitting procedures to increase efficiency and promote resilient development.							P
B.9.14	Identify properties for acquisition and demolition.							P
B.9.15	Review and revise land use policies to prohibit rebuilding in hazard areas.							P
B.9.16	Review and revise building codes to require all new buildings and infrastructure to withstand future seismic events.							P
B.9.19	Implement and enforce clean energy policies and regulations for new development and substantial improvement.							P

	Intermediate Milestone 10 Provide and coordinate wraparound services for those staying in interim housing.
EEI:	Community needs and data on those living in interim housing, points of contact for community organizations, NGOs, and non-profits

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.10.3	Continue to expedite the resumption and/or establishment of utility services (e.g., water/sewer, gas, electricity, telephone/internet) to impacted areas and transitional housing.					P		

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures in order to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.8	Create a diverse transportation system to suit the needs of the region, focusing on vulnerable populations and sustainable alternatives.							
C.2.9	Improve transportation to address current bottlenecks, and lack of connectivity and sustainability.							
C.2.10	Support decision-making surrounding repurposing land, especially land that has been cleared or vacated due to vulnerabilities or blight.							P
C.2.11	Integrate green infrastructure projects into stormwater management systems by using a mixture of different soils and vegetation to allow for maximum absorption of water on properties.							
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							
C.2.15	Rebuild cultural resources (e.g., sports teams, museums, theaters) to restore entertainment and recreational services to the community.							

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							
C.3.11	Build stronger, active transportation with a focus on walkable/bikeable infrastructure, and strategic positioning of homes to work places.							
C.3.12	Improve and implement high-performance standards for infrastructure systems.							
C.3.14	Monitor current and future development for compliance with retrofit, hardening, and resilience standards.							

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.3	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship							
C.4.4	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better” in local communities							

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs in order to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							
C.6.3	Integrate RSF duties into steady state roles.							
C.6.9	Provide a review of achievements particular to infrastructure factors (e.g., redevelopment, resident retention, use of major roadways, use of public transportation, status of dams). Update maps to illustrate availability of critical utilities (e.g., water, wastewater, electricity, cell service, gas).							

Appendix L: Natural and Cultural Resources

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Natural and Cultural Resources (NCR) RSF is to protect natural, cultural, and historic resources through appropriate recovery actions to preserve, conserve, rehabilitate, and restore them. Specifically, natural resources refer to water, land, animals, and plants. Cultural resources refer to sites, artifacts, and locations with significance to the community. Historic resources include buildings, land, and places with notable history, including those on the National Register of Historic Places. The NCR RSF confirms that recovery actions are consistent with post- disaster community priorities and in compliance with appropriate natural and cultural resource laws, regulations, and policies. Key responsibilities and mission objectives include:

- Coordinating with relevant stakeholders, including nonprofit and community organizations, to formulate restoration, conservation, and preservation policies;
- Identifying and inventorying important community resources; and
- Working with other RSFs to align redevelopment and NCR restoration.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen in **Figure 19**.

Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The NCR RSF Coordinator is typically from a planning or public works department. The structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co-leads are assisted by supporting agencies and organizations. Please see **Table 34** for more information on these roles.

Figure 19: Recommended RSF Structure

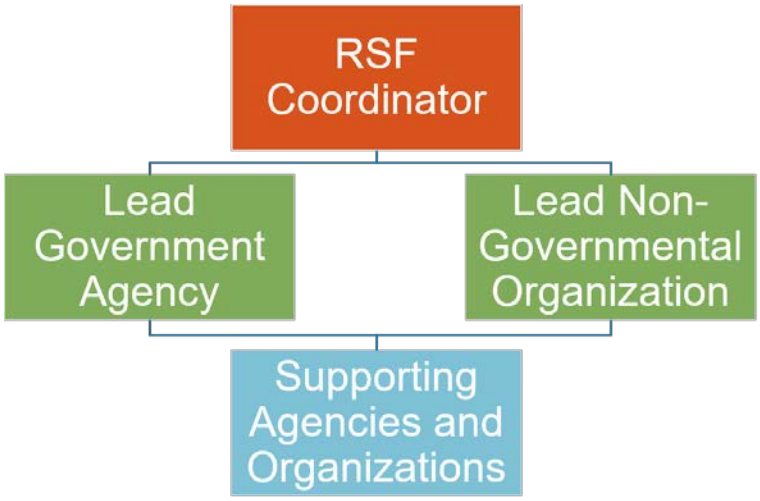


Table 34: RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 35**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 35: RSF - Natural and Cultural Resources Stakeholder Group Participation

Stakeholder Group	Function/Contribution
Water Management/Riverkeeper	Flood mitigation/environmental protection
Environmental Resources/Parks and Recreation Department	Land acquisition/environmental protection
State of Washington and Oregon Departments of Natural Resources	Environmental protection
Forestry Commissions	Environmental protection

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 36** below summarizes some of these key points of coordination between NCR and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 36: NCR Points of Coordination

Coordinating RSF	Points of Coordination
RSF 1: Community Planning and Capacity Building	▪ Identifying community natural, historical, and cultural resources important to community character and holistic well-being. ▪ Ensuring redevelopment, recovery plans, general plans, and resilience plans protect and preserve natural and cultural resources. ▪ Developing long-term community goals to increase the resilience of the natural environment and historic/cultural resources to future disasters.
RSF 2: Economic Recovery	▪ Identifying and reestablishing private businesses, buildings, and public amenities related to cultural and historical resources (e.g., tourism, State Parks, historic districts, and buildings).
RSF 3: Health and Social Services	▪ Coordinating resources to asses, monitor, and perform cleanup actions (e.g., for hazardous material) to minimize negative public and environmental health impacts. ▪ Addressing impacted health and social services programs that rely on natural and cultural resources impacted by the disaster (e.g., recreation programs).
RSF 4: Housing	▪ Monitoring that restoration and redevelopment of housing does not inhibit access to community natural, cultural, and historical resources by completing impact assessments.
RSF 5: Infrastructure Systems	▪ Monitoring that restoration and redevelopment of infrastructure does not inhibit access to community natural, cultural, and historical resources by completing impact assessments.
RSF 7: Land Use and Redevelopment	▪ Developing preservation and conversation policy for natural and cultural resources. ▪ Promoting land use practices that encourage sustainability and resiliency.

Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out NCR recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs**: Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The NCR RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.

Key

Activities have been color coded to denote when more than one RSF, or all RSFs, will coordinate implementation. Where all RSFs are highlighted (below), this is a common milestone across all RSFs.



The primary RSF ("P") holds the lead responsibility for seeing an activity through to completion. The primary RSF will likely coordinate and consult with other RSFs denoted with the shaded boxes.



The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to Recovery Overview for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to cross reference common milestones and activities between RSFs. Activities were assigned a unique identifier based on the recovery phase ("A" for short-term, "B" for intermediate, and "C" for long-term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities

performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about preparedness can be found in Preparedness. Initial preparedness activities for the NCR RSF are listed below.

- Develop inventories of natural and cultural resources data. For natural resources, this includes identifying the land, animals, and plants that are unique and sensitive and may or may not be recognized by the State or Federal Government as requiring protection. For cultural resources, this includes identifying properties, landmarks, and intangible assets that are culturally significant to each community but may not be recognized by the State or Federal Government.
- Establish partnerships between emergency management and cultural institutions to use spaces within these institutions as community hubs during recovery for services such as reunification or as disaster resource centers.
- Create forms and documentation for recovery to identify resources at risk.

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assistance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.6	Conduct environmental and health assessments prior to infrastructure and housing restoration, particularly in cases where infrastructure restoration impacts natural and cultural resources. Identify alternative projects, where possible. Coordinate assessments between HSS, Housing, Infrastructure, Land Use, and NCR RSFs.							
A.2.22	Assess damages to natural resource lands and conduct initial debris clearing activities.							
A.2.23	Identify immediate recovery needs for public and private entities that oversee natural and cultural resource conservation and protection services (e.g., libraries, archive museums, heritage sites).							
A.2.24	Review and evaluate historic districts, landmarks, and memorials. Prioritize restoration and share the approach with community members to determine whether they agree with the approach.							
A.2.25	Identify unstable hillsides, grounds, landscapes, and other environmental areas.							
A.2.26	Identify if it is necessary to modify natural resources to protect the larger watershed and ecosystem.							
A.2.27	Reassess natural waterways and routes and the realignment of facilities to restore services.							
A.2.28	Identify immediate needs for environmental assets, including habitat conservation areas or pocket parks in neighborhoods (e.g., community cultural areas).							

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.29	Coordinate between NCR and HSS to identify impacted health and social services programs that rely on natural and cultural resources impacted by the disaster (e.g., recreational programs).							
A.2.30	Identify environmental health hazards that pose a risk to community health. This includes the identification of sensitive receptors (e.g., location of hazardous substances).							
A.2.31	Assess environmental damage to ecosystem health, particularly from a severe toxic hazard.							
A.2.32	Assess water contamination and recovery needs. Coordinate assessments between NCR, HSS, and Infrastructure RSFs.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and also inform the unmet needs assessment and recovery action plan development.			P				
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Analyze results from the impact and needs assessments to develop short-term recovery action plans (RAP).							
A.4.22	Coordinate to determine the agriculture and livestock farms that can supply the region with food.							
A.4.39	Contain hazardous material release, perform cleanup actions, and assess and monitor the risks to the public and/or environmental health.			P				
A.4.41	Coordinate the removal of debris from river and repair waterfront depots to restore their function and use. Monitor for compliance with environmental laws and regulations.					P		
A.4.44	Enforce management procedures for natural resources, including floodplains, wetlands, and other resources critical to risk reduction.							
A.4.45	Evaluate the need to convert parks into gardens to reduce food insecurity.							
A.4.46	Provide training to community groups about restoring natural and cultural resources, (e.g., salvaging archives and records).							
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							
A.4.48	Update and share guidance on the preservation and restoration of damaged historic and cultural resources.							
A.4.49	Consider and account for the adverse impacts that land use and development can have on natural and cultural resources.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							
A.5.6	Liaise with legal counsel representing Federal and State governments, as well as private sector industries, on housing laws, policies, and regulations in disaster settings (e.g., finance). This includes policies that may prohibit redevelopment (e.g., natural resources protection policies).							

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							
A.6.10	Identify early sources of funding and experts for natural resource conservation and protection.							
A.6.11	Identify early sources of funding and experts for cultural and historic resource protection and restoration needs (e.g., artifact conservation, building rehabilitation, records recovery, cultural site preservation).							

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.							
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							
A.7.22	Coordinate and procure the resources, equipment, and facilities needed to assess, monitor, and perform cleanup actions for hazardous material releases, to minimize negative public and environmental health impacts.					P		

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							
B.1.13	Establish environmental quality monitoring and assessment procedures.							
B.1.14	Coordinate resources to assess, monitor, and perform clean-up actions in support of minimizing negative public and environmental health impacts.			P				
B.1.15	Conduct environmental impact assessments where infrastructure is planned to be constructed.						P	

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.		P					
B.2.11	Identify and apply for federal funding sources for the repair and restoration of the community.							
B.2.12	Reestablish a donor base for cultural institutions.							

B.2.13	Identify fundraising opportunities for small collection groups and museums.							

	Intermediate Milestone 3 Continue to identify resources, staff, and equipment needed to establish and support initiatives to sustain and address deficiencies in surge capacity and capabilities.
EEI:	Recovery job needs, job training programs, available disaster assistance programs, staff capabilities, stand-by contracts, COAD/VOAD, contact lists for agencies and volunteers

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.3.6	Identify and improve access to training/retraining programs for needed and projected jobs post-disaster in the essential industries (e.g., nurses, crisis counselors, construction, housing).							
B.3.7	Acquire subject matter experts (SMEs) as well as volunteers to assist with habitat clean-up and restoration.							
B.3.8	Continue assessment and mitigation of hazardous conditions, including hazardous/radiological materials, air, soil, water contamination; adequate sanitation and waste removal; and vector control.							

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.13	Monitor that recovery efforts are consistent with the principles of environmental justice to the extent feasible.							
B.4.14	Incentivize the establishment of the creative class to repopulate the community and ignite the cultural and artistic scene.							
B.4.15	Host a regional land use exercise to identify areas for rebuilding and preservation to guide redevelopment priorities after a disaster.							
B.4.16	Advise on the implementation of changes to state laws, policies, and regulations that directly and indirectly affect natural and cultural resource recovery.							
B.4.18	Repair and reopen public-owned community facilities, increasing access to these public amenities and the services they provide (e.g., schools, libraries, parks, post offices, community centers).					P		
B.4.19	Coordinate with the Environmental Protection Agency, and use spatial data, to identify brownfields and land unsuitable for development. Through a community planning process, identify and implement strategies to convert this space into green space. This project will require close coordination between NCR, Economic, Infrastructure, and Land Use RSFs.						P	

B.4.20	Reestablish public transit systems, incorporating clean energy policies in any repair or rebuilding. Reestablish walking and biking trails for recreation and non-motorized transportation purposes.					P		
B.4.21	Identify and implement opportunities to preserve land for environmental conservation; monitor the protection of natural resources during construction.							P

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.							P

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g., hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessment.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.4	Restore community services (e.g., education programs for teens, athletic, transportation programs for older adults and individuals with disabilities).							
B.5.18	Identify potential housing recovery projects and application processes that are not located in environmental hazardous areas. Coordinate with the state to review the project proposals to determine compliance with all environmental laws.						P	
B.5.32	Monitor hazards that may further impact environmental or public health.			P				
B.5.42	Explore and encourage renewable energy sources in rebuilding projects. Consult existing plans and policies that can guide how to promote renewable energy (e.g., climate, sustainability, utility plans). Coordinate messaging and engagement between the Infrastructure, CPCB, and NCR RSFs.							
B.5.45	Contain hazardous material release, perform cleanup actions, and assess and monitor the risks to the public and/or environmental health.			P				
B.5.47	Implement a Debris Management Plan to coordinate the long-term clean-up and disposal of debris. Debris is disposed of according to the type of debris being handled, contamination factors, and environmental impacts. Where there is limited space, find alternate solutions for storage and disposal (e.g., transporting debris by rail).							
Activities		**Activity Type**						

		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.50	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							
B.5.51	Identify natural and cultural resources preservation.							
B.5.52	Implement climate resilient guidelines and recommendations and establish environmental management procedures.							
B.5.53	Create new natural resource and open space inventory.							
B.5.54	Coordinate with State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officer (THPOs) to identify cultural and historic resource preservation strategies.							
B.5.55	Continue to monitor hazards as relevant to natural, cultural, and historic resources.							
B.5.58	Advocate and lobby for the prioritization of natural and cultural resource restoration and protection.							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.		P					
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.8	Engage elected officials and local leadership to promote the concept of “building back better” in local communities.							
B.7.9	Help community healing through mural painting, garden planting, and other interactive and artistic events.	P						

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							
B.8.6	Maximize use of libraries and cultural centers for information sharing.							

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.19	Implement and enforce clean energy policies and regulations for new development and substantial improvement.							

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures in order to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.11	Integrate green infrastructure projects into stormwater management systems by using a mixture of different soils and vegetation to allow for maximum absorption of water on properties.							
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							
C.2.14	Rebuild cultural resources (e.g., sports teams, museums, theaters) to restore entertainment and recreational services to the community.							
C.2.16	Create new parks and open spaces, particularly using land identified unsuitable for development.							P

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							
C.3.18	Improve and implement guidelines to preserve and conserve natural, cultural, and historic resources.							
C.3.20	Institute policies and programs that enforce resilience (e.g., fire-resistant native plants and facility retrofits).							

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.3	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship							
C.4.4	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							
C.4.6	Help community healing through mural painting, garden planning, and other interactive and artistic events.	P						

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.0	Promote sustainable living practices (e.g., vegetable gardens, solar panels).	P						
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better" in local communities							
C.5.7	Leverage incentive programs that encourage environmental protection and resilience.							
C.5.8	Leverage the Federal Historic Preservation Tax Incentives program and other incentive programs.							

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs in order to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							
C.6.3	Integrate RSF duties into steady state roles.							
C.6.10	Produce regular reports, based on needs assessment, on the maintenance of air, water, soil, and food quality related to environmental health and conservation of natural and cultural resources during redevelopment.							
C.6.11	Provide an annual review of achievements particular to natural resource factors (e.g., habitat restoration, vegetation growth).							

Appendix M: RSF: Land Use and Redevelopment Planning

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Mission

The purpose and mission of the Land Use and Redevelopment Planning RSF is to restore and strengthen local governments' ability to plan for recovery, while developing and leveraging land use policies for sustainable redevelopment. The Land Use and Redevelopment Planning RSF guides local restoration and physical redevelopment, and promotes resilience, mitigation, and equity. Key responsibilities and mission objectives include:

- Identifying land use and redevelopment priorities in a post-disaster environment;
- Coordinating with relevant stakeholders to formulate policies for future redevelopment; and
- Supporting land use efforts through coordination with other RSFs.

Organization

Each RSF will organize around a common structure that delivers a balance of coordination, leadership, and expertise to drive recovery efforts in that functional area. This recommended RSF organizational structure can be seen in **Figure 20**.

Each RSF will be led by an RSF Coordinator who is responsible for promoting coordination within the RSF to monitor project development and implementation. The RSF Coordinator is also responsible for coordinating with the DRM to identify priorities, determine funding, and work across RSFs to align priorities and milestones. The Land Use and Redevelopment Planning RSF Coordinator is typically from a planning, land use, or community development department. The structure is also comprised of two co-leads (one from the public sector, and another from a non-government organization). After a disaster, multiple agencies and/or organizations may fill each of the co-lead positions to cover the specific recovery needs. These co-leads are assisted by supporting agencies and organizations. Please see **Table 37** for more information on these roles.

Figure 20: Recommended RSF Structure

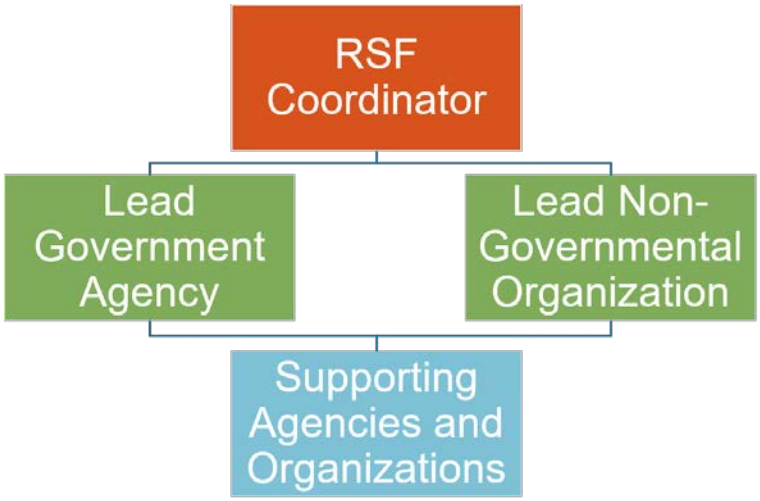


Table 37: RSF Roles and Responsibilities

Role	Responsibilities
RSF Coordinator	▪ Lead daily RSF operations by providing coordination and oversight. ▪ Lead development of a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Serve as the primary point of contact for all RSF-related matters.
Lead Government Agency	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Track project implementation and progress and identify additional needs (e.g., staff, resources, funding).
Lead Non-Governmental Organization	▪ Implement RSF milestones and activities (refer to **Implementation Milestones** for milestone tables). ▪ Support the RSF Coordinator in developing a post-disaster baseline assessment, identifying project opportunities, and collecting resources needed to complete projects. ▪ Support execution of projects, particularly when applicable to organization mission. ▪ Oversee engagement of other community organizations.
Supporting Agencies and Organizations	▪ Support lead agencies and RSF Coordinator. ▪ Provide special subject matter expertise and technical assistance to recovery leadership and staff. ▪ Assist in executing recovery projects.

RSFs may be comprised several stakeholder groups. A list of potential stakeholder groups for the RSF has been included as a reference in **Table 38**. This list can be used as a tool for the RSF to support comprehensive participation. Note: the list below is by no means comprehensive.

Table 38: Land Use and Redevelopment Planning Stakeholder Group Participation

Stakeholder Group	Function/Contribution
Planning or Community Development/Development Authorities	Land use and comprehensive plan compatibility
Chambers of Commerce	Economic development
Voluntary Organizations Active in Disaster (VOAD)	Access and functional needs populations
Environmental Protection Agencies and Organizations	Environmental Protections
Building and/or Zoning Departments	Building moratoria, permitting procedures, zoning for industrial, commercial, and housing areas
Code Enforcement Departments	Damage assessment/enforcement of redevelopment

Coordination

Coordination is the exchange of communication, information, and data between two or more partners that helps to align priorities and reach a common understanding on goals. Coordination can occur between RSFs, between RSFs and ESFs, and with state and federal partners. Effective coordination that occurs throughout the recovery operation will aid the progress of recovery projects by increasing awareness and cooperation across all recovery operations. Coordination can be done in the form of meetings, emails, and face-to-face conversations.

Each RSF should establish lines of communication and coordination with each of the other RSFs. Additionally, there are many recovery milestones and activities where a given RSF will need to coordinate more explicitly with one or more RSFs. **Table 39** below summarizes some of these key points of coordination between Land Use and Redevelopment Planning and other RSFs. The Implementation Milestones are organized to display this coordination using a color-coded key that displays the RSFs that will coordinate together to complete a certain activity.

Table 39: Land Use and Redevelopment Planning Points of Coordination

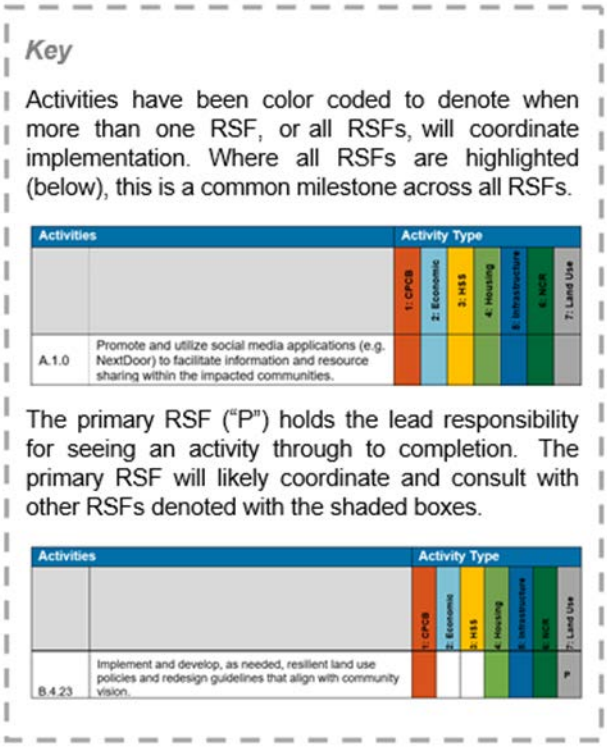
Coordinating RSF	Points of Coordination
RSF 1: Community Planning and Capacity Building	▪ Developing redevelopment guidance related to resilience values and vision. ▪ Identifying and encouraging equitable redevelopment practices.
RSF 2: Economic Recovery	▪ Identifying land suitable for commercial redevelopment near population hubs.
RSF 3: Health and Social Services	▪ Creating redevelopment and resilience guidance for health and social service facilities.
RSF 4: Housing	▪ Identifying land suitable for housing redevelopment near population hubs.
RSF 5: Infrastructure Systems	▪ Identifying land suitable for infrastructure redevelopment near population hubs.
RSF 6: Natural and Cultural Resources	▪ Developing preservation and conversation policy for natural and cultural resources. ▪ Promoting land use practices that encourage sustainability and resiliency.

Implementation Milestones

The RSF implementation milestones are the critical progress points that each RSF should aim to accomplish to achieve a successful recovery. These milestones capture the critical information and decision points needed to carry-out land use and redevelopment planning recovery operations. The tables below summarize this operational recovery guidance into milestones with associated activities and EEIs.

- **Milestones:** Major progress points in the recovery of a support function and support movement towards a mission objective in that specific RSF.
- **Activities**: Specific projects and actions that relate to achieving the milestone.
- **EEIs:** Information requirements and data that inform decision-making and contribute to analysis to complete the activities and milestones.

These tables should be used by the RSF to organize an efficient and effective recovery process from activation through transition to steady state. Recovery leadership can utilize this guidance to understand recovery progress and assign recovery responsibilities to complete these milestones and activities. The Land Use and Redevelopment Planning RSF can adapt, modify, or add to these milestones and activities, as necessary. **Section 3** contains additional guidance on methods and best practices to build out and customize the milestones and activities to suit the local needs of the community. For example, the **Section 3 Appendix** contains a summary of different community engagement activities for different audiences, which can inform implementation of the community engagement-related milestones and activities.



The milestones are organized by the short-, intermediate, and long-term phases of recovery (refer to the **Recovery Overview** for more information about recovery operations). For each recovery phase, the milestones and activities have been numbered to improve the ease of use and to make it easier to cross reference common milestones and activities between RSFs. Activities were

assigned a unique identifier based on the recovery phase ("A" for short-term, "B" for intermediate, and "C" for long-term), milestone number (e.g., "1") and activity number (e.g., A.1.1, A.1.2, A.1.3). Activity and milestone numbering do not denote any specific order, rather it provides a reference point to identify and track progress.

Prior to recovery, the RSF coordinator should identify preparedness activities and work with RSF agencies and stakeholders to implement and bolster community resilience. Preparedness refers to the steady state activities performed by local agencies and organizations that prepare the community for a disaster and have the potential to mitigate or reduce disaster impact. These activities support the development and maintenance of recovery capabilities to enable the locality to rapidly perform response and recovery. More information about preparedness can be found in **Preparedness**. Initial preparedness activities for the Land Use and Redevelopment Planning RSF are listed below.

- Incorporate planning for the transition from response and recovery to preparedness and operational planning, in close collaboration with other appropriate ESFs and RSFs;
- Incorporate planning for the transition from post-incident recovery operations back to steady-state into preparedness and operational plans;
- Promote the principles of sustainability, resilience, and mitigation into preparedness and operational plans;
- Utilize appropriate tools and surveys to identify areas of underserved populations and others with barriers to services, including children, seniors, people living with disabilities, people with functional needs, people from diverse cultural origins, and people with limited English proficiency.
- Develop strategies to identify and address recovery issues for health, behavioral health, and social services, particularly the needs of response and recovery workers, children, seniors, people living with disabilities, people with functional needs, people from diverse cultural origins, people with limited English proficiency, and underserved populations.
- Develop post-disaster psycho-social programs for all ages, including key cultural-language groups, and create training modules for health care professionals, including Just-In-Time (JIT) modules.
- Prepare and plan for animal health and welfare issues (e.g., pets, farms, wildlife).

SHORT-TERM MILESTONES

	Short Term Milestone 1 Implement a phased short-term, intermediate, and long-term public information and communication plan in collaboration with the other RSFs. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, location of distribution centers/DACs, equitable and accessible communication standards

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.1.0	Promote and utilize social media applications (e.g., NextDoor) to facilitate information and resource sharing within the impacted communities.							
A.1.1	Identify and communicate regularly with all communities.							
A.1.3	Utilize information hubs, community centers, and Local Assistance Centers/Disaster Assistance Centers to disseminate and collect information.							
A.1.4	Monitor misinformation (over traditional and social media) regarding the disaster and facilitate rumor control.							

	Short Term Milestone 2 Conduct an evaluation of the direct, indirect, tangible, and intangible RSF-specific impacts from the disaster to quickly prioritize the needs of relief and restoration for all populations, including AFN and underserved communities, and others who may face disproportionate impacts.
EEI:	Damage assessment data, pre-disaster conditions data, survey tools, FEMA assessment tools, resilience plans, mitigation plans, geographical information systems and software (e.g., ArcGIS)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.2.0	Communicate and liaise with Disaster Assistance Centers (DACs) to identify community needs and priorities.							
A.2.1	Identify areas of need and prioritize and allocate resources for recovery.							
A.2.2	Identify and maintain documentation regarding the damaged resources that need to be restored.							
A.2.6	Conduct environmental and health assessments prior to infrastructure and housing restoration, particularly in cases where infrastructure restoration impacts natural and cultural resources. Identify alternative projects, where possible. Coordinate assessments between HSS, Housing, Infrastructure, Land Use, and NCR RSFs.							
A.2.20	Identify land to be marked as unsuitable areas for development due to topographical changes, ongoing hazards, anticipated continued risks, or extent of damage.							
A.2.21	Utilize maps and GIS data, where available, to understand the condition of land use to inform recovery decisions.							

	Short Term Milestone 3 Formulate and implement an initial community engagement plan.
EEI:	Community engagement best practices, and points of contact for community groups and relevant agencies

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.3.0	Host community engagement activities, meetings, and events (e.g., community listening sessions, visioning workshops). These sessions will offer opportunities for crisis counseling and catharsis, and also inform the unmet needs assessment and recovery action plan development.			P				
A.3.8	Work through community networks (e.g., houses of worship, trusted agents) to engage vulnerable populations.	P						
A.3.9	Conduct community engagement initiatives to support the assessment of disaster impacts and identification of unmet needs.	P						
A.3.10	Engage local and regional planning commissions and economic development organizations in the recovery process to identify redevelopment priorities. Maximize opportunity zones to rebuild for economic purposes. Coordinate amongst the CPCB, Economic, and Land Use RSFs to support this effort.	P						

	Short Term Milestone 4 Implement short-term recovery strategies and solutions to meet immediate needs of the community.
EEI:	Damage and needs assessment data, community priorities, community plans, points of contact for public sector and private sector (e.g., utility contractors, businesses, medical practices), applicable policies and authorities review, location/concentration of population and community centers, land use and suitability assessments

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.4.0	Analyze results from the impact and needs assessments to develop short-term recovery action plans (RAP).							
A.4.36	Coordinate to identify debris sorting locations.							
A.4.41	Coordinate the removal of debris from river and repair waterfront depots to restore their function and use. Monitor for compliance with environmental laws and regulations.					P		
A.4.42	Prioritize the repair and redevelopment of residential and commercial areas. Identify land that can be rezoned to residential and/or commercial to accommodate the relocation and rebuild of damaged buildings.							
A.4.43	Provide incentives for property owners to rebuild away from unsuitable land while minimizing adverse impacts to low-income households and communities of color.							
A.4.47	Maintain recovery-related documentation and record keeping; provide historic records as requested.							
A.4.49	Consider and account for the adverse impacts that land use and development can have on natural and cultural resources.							

	Short Term Milestone 5 Establish and maintain data-sharing and coordination mechanisms between RSFs and relevant stakeholders.
EEI:	Data management and sharing procedures, software, or technology to share data and information, established communication protocols and procedures

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.5.0	Establish communication channels between Federal, State, and other local, and/or tribal governments, and private/public sector entities to promote ongoing dialogue and information sharing.							
A.5.1	Communicate and coordinate with Federal and State government partners to secure the resources and information needed to guide recovery.							
A.5.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Include updates in recovery operational reports.							

	Short Term Milestone 6 Identify all possible funding opportunities and establish cost recovery tracking mechanisms based on program requirements.
EEI:	Table 2-2 Funding Opportunities (Section 2 Appendix), Volunteer networks information, donations, community needs and priorities, jurisdictional budget information, funding opportunity requirements, cost tracking tools

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.6.0	Identify opportunities for, and participate in, just-in-time training about grant program requirements.							
A.6.1	Establish project approval and prioritization procedures and budgeting codes to track disaster related expenditures and decision-making.							
A.6.2	Review eligibility for federal funding programs (e.g., Public Assistance, Individual Assistance, Community Development Block Grants – Disaster Recovery) and gather data and materials required to apply. Submit applications based on specified timelines.							
A.6.3	Create mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This includes any important timelines as well as the recipient(s) and application(s) of funding.							
A.6.4	Identify and carefully document the use of volunteer labor and donations.	P						
A.6.5	Help create standards for project approval and budgeting to track disaster related expenditures in alignment with legal or programmatic requirements.							
A.6.6	Participate in just-in-time training and specialized outreach or support to help agencies and departments understand funding requirements.							

	Short Term Milestone 7 Identify resources, staff, and equipment needed to conduct recovery.
EEI:	Volunteer networks information, debris clean-up and removal equipment, damage assessment equipment, construction equipment and supplies, medical supplies, staff capabilities, stand-by contracts

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
A.7.0	Request state and federal resources and personnel, where available and needed.							
A.7.1	Identify gaps in local resources and capabilities and develop strategies to bridge gaps. Refer to **Section 3 (Preparedness and Identification)** for additional guidance on implementing a gap assessment.							
A.7.2	Allocate personnel with language abilities and cultural competencies to specific communities (e.g., communities of color, people with different abilities such as hard of hearing/blind, imprisoned communities).			P				
A.7.3	Prioritize staffing and resources for essential support services (e.g., transportation, education, emergency health services).							
A.7.4	Identify community members and volunteers to support recovery operations; provide volunteers with the training needed to perform tasks and document volunteer resources.	P						
A.7.6	Engage subject matter experts (SMEs) to develop short-term specific activities, project plans, and inform tasking.							
A.7.7	Activate and monitor mutual-aid agreements.							
A.7.8	Recommend community stakeholders to participate on a recovery task force at the local level to help facilitate all aspects of recovery. Refer the **County Annex Memos** for recommendations of stakeholders, by subject matter area.							
A.7.9	If a Local Disaster Recovery Manager has not yet been identified, coordinate with other RSFs to recommend one.							

INTERMEDIATE MILESTONES

	Intermediate Milestone 1 Conduct ongoing needs assessments to identify unmet and anticipated needs; adjust the recovery action plan as needed.
EEI:	Data assessments, digital/online surveys, community priorities, planning procedures and processes to amend plans, case studies to address community priorities

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.1.0	Use social media to compile and collect on-the-ground knowledge and inform priorities.							
B.1.1	Understand and communicate the status of critical community resources across all RSFs (e.g., fuel, generators, communications/IT, roads and transportation, social services, mass care services).							
B.1.2	Track daily and weekly accomplishments and any outstanding issues for the RSF. Include this information in recovery operational reports.							
B.1.3	Continue assessing impacts to housing, people, and businesses in collaboration with other RSFs. Identify gaps in available resources. Refocus attention and capabilities on areas of outstanding need based on assessment findings.							
B.1.4	Collaborate between RSFs to identify solutions to meet the recovery needs of low-income communities and communities of color.							
B.1.5	Create and implement technology tools, online platforms, and/or mobile apps to support ongoing needs assessments.							
B.1.12	Assess changes in land use to identify areas suitable for new development; areas to relocate buildings and infrastructure endangered by natural hazards; and areas that will be protected for environmental protection, natural resource conservation, and historic or cultural resource preservation.							

	Intermediate Milestone 2 Continue to identify all possible funding opportunities, establish cost recovery mechanisms based on program requirements, and develop project management plans to ensure the most effective use of federal, state, and local funds.
EEI:	Cost tracking mechanisms, community priorities, community plans, donations, reporting procedures, meeting schedules, jurisdictional and recovery budgets, engagement processes tracker, measurement tools, recovery action plan

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.2.0	Review and monitor that established project approval and budgeting procedures are adhered to.							
B.2.1	Monitor the allocation of external financial resources to low-income households and communities of color to make sure they are not adversely impacted as a result of program implementation.							
B.2.2	Monitor and track established mechanisms, tools, and systems for tracking and evaluating recovery plan effectiveness, as well as record keeping and documentation. This should include any important timelines as well as the recipient(s) and application(s) of funding.							
B.2.3	Identify funding that can be used to reimburse or pay for surge support and back-fill people in planning positions.							
B.2.4	Continue to participate in just-in-time training and specialized outreach or support to ensure agencies and departments understand funding requirements.							
B.2.5	Continue to identify and carefully document the use of volunteer labor and donations.	P						
B.2.6	Continue to coordinate the use of mutual aid.							
B.2.7	Continue to collect documentation for cost recovery and reimbursement from grant funds.							
B.2.8	Continue conducting outreach to the private sector to provide additional financial support.		P					

	Intermediate Milestone 4 Coordinate and implement community redevelopment and repopulation strategies.
EEI:	Land use policies and regulations, best practices for redevelopment, coordination mechanisms, community priorities, funding sources

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.4.0	Review local enforcements, permitting, and other legislation that may impact recovery time.							
B.4.1	Promote opportunities to mitigate future disaster impacts (e.g., COOP planning, hazard mitigation planning).							
B.4.2	Identify areas of vulnerability based on disaster and identify resilience and mitigation measures to address.							
B.4.5	For neighborhoods and communities where rebuilding cannot occur in the same location due to land use issues, repetitive losses, and/or the presence of natural hazards, coordinate a cohesive process to identify and procure new location(s) for development.							P
B.4.10	Identify areas of population concentration and future economic growth and prioritize infrastructure system and community reconstruction.		P					
B.4.11	Re-zone and amend building codes to make more stringent and resilient.							P
B.4.12	Coordinate and monitor redevelopment strategies that are equitable and meet the needs of underserved communities.							P
B.4.19	Coordinate with the Environmental Protection Agency, and use spatial data, to identify brownfields and land unsuitable for development. Through a community planning process, identify and implement strategies to convert this space into green space. This project will require close coordination between NCR, Economic, Infrastructure, and Land Use RSFs.						P	
B.4.21	Identify and implement opportunities to preserve land for environmental conservation; monitor the protection of natural resources during construction.							P
B.4.22	Monitor post-disaster displacement and account for potential impacts (e.g., gentrification) in redevelopment plans.							P
B.4.23	Implement and develop, as needed, resilient land use policies and redesign guidelines that align with community vision.							

	Intermediate Milestone 5 Establish and implement a recovery action plan that addresses interim and long-term impacts/needs and restores services, assets, and systems.
EEI:	Data and needs assessments, community needs and priorities, relevant data (e.g., hazard, demographics, land use), recovery best practices

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.5.0	Establish and stand-up long-term recovery committees (RSFs) that focus the recovery of different sectors of the impacted communities, particularly prioritizing assistance to the communities with the greatest need (determined through needs assessments).							
B.5.1	Establish a recovery needs prioritization based on completed assessment.							
B.5.2	Oversee and monitor that recovery and redevelopment plans align with community vision.							
B.5.16	Identify long-term housing solutions in line with community needs and vision.				P			
B.5.46	Retrofit essential public buildings, such as public works garages and law enforcement buildings, to harden the existing infrastructure and protect against future hazard impacts.					P		
B.5.48	Coordinate between the Land Use and Infrastructure RSFs to identify viable locations for temporary and permanent "cool storage" facilities. Construct new facilities as needed.							
B.5.49	Based on the needs of the disaster, hire additional staff to perform permit reviews to account for the increased volume of permits that will be filed for infrastructure and building repair and reconstruction.							
B.5.50	Provide incentives to rebuild and restore businesses, housing, and services (e.g., tax breaks for individuals and commercial businesses, incentives for affordable housing development).							

	Intermediate Milestone 7 Manage implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.7.0	Establish regular public meetings and townhalls to engage the public on recovery efforts.							
B.7.1	Identify and establish public-private partnerships and encourage partnerships at the local level to enhance the resilience of both sectors.		P					
B.7.2	Review case studies and communities that have experienced similar disasters to identify and implement community-based recovery efforts.							
B.7.3	Host regular engagement events (e.g., public hearings, community meetings, and tabling at community recovery centers) to educate the public about the recovery process and gather feedback.	P						
B.7.8	Engage elected officials and local leadership to promote the concept of "building back better" in local communities.							

	Intermediate Milestone 8 Manage implementation of public information and communications plans. Provide information that is in different languages and accommodates AFN populations.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, point of contact for community organizations, community needs and priorities, community centers and public meeting spaces

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.8.0	Publicize the assistance programs that are available and in place to assist recovery in this RSF's sector.							
B.8.1	Provide online information sharing in one centralized location.							
B.8.2	Continue to utilize information hubs, community centers, and LACs/DACs to disseminate and collect information.							
B.8.5	Inform developers, builders, and the general public about new or adapted land use laws.	P						

	Intermediate Milestone 9 Modify statutory, regulatory, policy, and administrative issues that contribute to gaps, inconsistencies, and unmet needs in community recovery.
EEI:	Policy amendment processes, land use policies and regulations, voting information and processes

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.0	Incentivize investment in rebuilding through lowering fees and eliminating barriers, while maintaining environmental and historic preservation standards.							
B.9.1	Identify and address policies that may restrict professionals from distributing services and resources equally.							
B.9.2	Assess inhibitors (i.e., “red tape”) of recovery of affected communities and/or industries.							
B.9.3	Create initiatives and advise on policy change to prevent gentrification.							P
B.9.4	Work with community members on land banking and community trusts to keep residential and ownership local.							P
B.9.5	Create policies that promote mixed-use development, accessibility, and tax incentives for low-income housing.							P
B.9.11	Revise and align housing policies to suit the needs of displaced populations, considering the need for rental, owned, single-family and multi-family properties.				P			
B.9.12	Reexamine permitting procedures to increase efficiency and promote resilient development.							P
B.9.13	Process and finalize changes to zoning and area classification.							
B.9.14	Identify properties for acquisition and demolition.							P
B.9.15	Review and revise land use policies to prohibit rebuilding in hazard areas.							
B.9.16	Review and revise building codes to require all new buildings and infrastructure to withstand future seismic events.							P
B.9.17	Implement policies related to land use moratoriums and the identification of red zones.							
B.9.18	Formulate long-range goals and policies for land use, population growth and distribution, urban expansion, land development, resource preservation, and other factors affecting development patterns.							P

Activities		Activity Type						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
B.9.19	Implement and enforce clean energy policies and regulations for new development and substantial improvement.							P

LONG-TERM MILESTONES

	Long Term Milestone 1 Continue to explore and apply funding opportunities while conducting project review, payment, and closeout activities for recovery financing received.
EEI:	Cost tracking mechanisms, community priorities, donations, **Table 2-2 Funding Opportunities (Section 2 Appendix)**

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.1.0	Consider, and request if appropriate, assistance extensions (e.g., extension of grant program timelines).							
C.1.1	Continue to track costs through processes required by grantors and other funding sources.							
C.1.2	Utilize after action reviews of short-term and intermediate cost recovery processes and procedures in order to create a more effective cost recovery system in future disasters.							

	Long Term Milestone 2 Continue to coordinate on community redevelopment and return strategies.
EEI:	Revised land use strategies and plans, identified areas of growth and development, community needs and priorities, best practices in sustainability and resilience, workforce and employment needs and trends, points of contact for local influencers, data on economic impact

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.2.0	Continue to identify and implement community-based planning and recovery strategies.	P						
C.2.10	Support decision-making surrounding repurposing land, especially land that has been cleared or vacated due to vulnerabilities or blight.							P
C.2.12	Continue to promote incentives and benefits where applicable for sustainable redevelopment (e.g., affordable housing, stormwater management and green space, small businesses).							
C.2.13	Engage with advocates, non-profits, and community leaders to identify long-term unmet needs among vulnerable and underserved communities.							
C.2.14	Establish policies that provide stable and affordable housing for the whole community, including vulnerable and underserved communities and homeless and houseless population.				P			
C.2.16	Create new parks and open spaces, particularly using land identified unsuitable for development.							P

	Long Term Milestone 3 Improve resilience of the impact zone and reduce the threat of repetitive losses by addressing weaknesses, threats, and vulnerabilities. Implement upgrades to the construction of infrastructure and assets and develop mitigation and resilience-focused policies and programs in coordination with other RSFs and the entire community.
EEI:	Recovery progress tracking, lessons documentation, best practices in resilience strategies, policy/regulation amendment procedures, vulnerability assessment data, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.3.0	Align recovery, redevelopment, comprehensive, hazard mitigation, and land use plans around a common vision of community resilience.							
C.3.1	Develop After-Action Reports (AARs) to assess recovery operations and amend recovery plans, if necessary.							
C.3.2	Coordinate with state and local grant program officials to identify disaster prevention and recovery fund opportunities that are state-specific.							
C.3.3	Identify best practices and relevant case studies to serve as future references; share learning outcomes with other communities and become stewards of disaster resilience and risk reduction.							
C.3.4	Update related policies and plans with hazard mitigation strategies developed to address vulnerabilities identified during recovery.							
C.3.5	Conduct an RSF-specific vulnerability assessment to understand how to mitigate the impacts of future disasters on the community/region.							
C.3.6	Develop evaluation processes for plans, projects, and policies that meet the community's vision.							
C.3.10	Focus on integrating areas that are traditionally economically disadvantaged into local economy.		P					
C.3.15	Consider and address needs for mitigation actions and permanent legislation related to rebuilding standards, building codes, and land use.							
C.3.16	Review and update land use laws, as needed, to promote safe and resilient development.							
C.3.17	Promote the strategic redevelopment of priority sites that align with the long-term planning goals of the region.							P
C.3.21	Strategically design communities to support sustainable lifestyles (e.g., distance between home and work, access to transit, walkable/bikeable infrastructure).							

	Long Term Milestone 4 Maintain the implementation of a long-term recovery community engagement plan.
EEI:	Social media, equitable and accessible communication standards, recovery guidance and resources, community needs and priorities, points of contact for community organizations

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.4.0	Re-energize political will and public interest in resilience and recovery efforts by coordinating with news networks and media to keep attention focused on continued recovery efforts and long-term impacts.							
C.4.1	Maintain regional coordination for cohesive recovery of communities and the region.							
C.4.2	Encourage continued interaction and engagement with NGOs and the private sector during recovery.							
C.4.3	Sustain community engagement by identifying new focus areas and highlighting emerging or outstanding need for community involvement and stewardship							
C.4.4	Utilize impact studies to increase civic engagement and lobby elected officials for continued or new funding and support.							

	Long Term Milestone 5 Provide incentives for long-term recovery efforts, sustainability, and resilience strategies.
EEI:	Regional growth goals and strategies, land use policies and regulations, tax breaks and incentive programs, elected official buy-in, public private partnerships

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.5.1	Continue to engage elected officials and local leadership to promote the concept of “building back better" in local communities							
C.5.6	Provide tax credits and other financial support to those rebuilding in alignment with sustainability and resiliency standards		P					

	Long Term Milestone 6 Reassess and evaluate recovery progress to identify gaps and unmet and/or anticipated needs in order to adjust recovery plans and implement new strategies and solutions.
EEI:	Recovery process tracking and metrics system, community needs and priorities, assessment results (vulnerability and equity)

Activities		**Activity Type**						
		1: CPCB	2: Economic	3: HSS	4: Housing	5: Infrastructure	6: NCR	7: Land Use
C.6.0	Continue to utilize previously developed technology tools, online platforms, and/or mobile apps to support ongoing needs assessment.							
C.6.1	Help determine success of the recovery action plan in addressing identified needs.							
C.6.2	Track the daily and weekly accomplishments and any outstanding issues for the RSF. Contribute this to recovery operational reports.							
C.6.3	Integrate RSF duties into steady state roles.							

Appendix N: RSF Activation Checklist

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This checklist will provide potential criteria for activation for each RSF. The activation criteria are broad conditions that a local jurisdiction can use to determine the need to activate one or more RSFs, but it is possible that even if these conditions are met, the locality can determine that there is no need to activate an RSF. Similarly, the locality may decide to activate one or more RSFs based on conditions not identified in this checklist. Cumulative and cascading impacts will affect this decision-making process; therefore, this checklist does not outline specific and/or quantitative thresholds for activation. Once the Local Recovery Framework has been activated, the DRM will need to coordinate with the county or city emergency management agency director to determine which RSFs should be activated to meet the needs of the disaster.

It is possible that the needs of the community will change as time progresses, making it necessary to activate and demobilize RSFs at different times during the recovery and redevelopment process. RSFs may be activated immediately following a disaster during response or months after the disaster based on new community needs. The DRM and the county or city emergency management agency director can use the checklist in **Table 40** to determine which RSFs to activate after a disaster. This tool should be used in coordination with any existing activation checklists available for the DRM. This resource is not intended to be comprehensive, but to help a county or city quickly evaluate the need for the activation of each RSF. Determining activation of RSFs will occur during the transition from response to recovery operations. See **Activation and Transition** for additional operational guidance.

Table 40: Potential Criteria for Activation by Recovery Support Function

	Potential Criteria for Activation:
RSF #1: Community Planning	A disaster has impacted more than five percent of the county or municipalities entire population
	The County or city has either (1) evacuated due to significant disaster or (2) received evacuees from neighboring counties or municipalities
	After a disaster, the county or municipalities' population has been reduced by five percent or more
	The county or city residents do not trust local government officials after a disaster.
	The county or city needs to finance recovery and redevelopment operations but is unsure of how the operations will be funded.
	The county or city officials would like to implement projects after a disaster that will increase the county's resilience to future events but are not sure how to fund the projects

	Potential Criteria for Activation:
RSF#2: Economic	Disaster has impacted more than 10% of businesses or employees in the county or city.
	The county or city witnesses an economic downturn as the result of a disaster
	Business owners fail to renew, or request, construction permits from the county or city after a disaster.
	Tourism rates does not return to pre-disaster rates even months after a disaster.
	Participation in local business organizations (e.g., chambers of commerce) has fallen since a disaster
	After a disaster, unethical business practices and predatory contractors are brought to light that make residents feel unsafe or disrespected.
RSF#3: Health and Social Services	A disaster impacted multiple healthcare providers in the county or city.
	A disaster has impacted the county or city and resulted in experiences that may cause trauma to residents' health or wellbeing.
	The county or city was impacted by a hazardous materials spill or incident
	A disaster impacted one or more underserved populations (e.g., those living in mobile homes, aging residents, or non-native English speakers).
RSF#4: Housing	A significant portion of the housing stock in the county or city was damaged or destroyed as a result of a disaster
	The county or city received evacuees from neighboring counties that need semi-permanent or permanent housing.
	Major employers in the county or city cannot re-open businesses due to inability or challenges finding housing for employees after a disaster.
	Resources to rebuild homes (e.g., permits, contracts, experts, lumber) are scarce after a disaster, making it difficult for homeowners to repair or rebuild their homes.
RSF#5: Infrastructure Systems	After a disaster, the county or city's critical infrastructure is damaged, presenting safety and quality of living challenges to residents, employees, businesses and/or visitors.
	Repairs or improvements are expected to take longer than six months and/or result in severe or complete disruptions or services for more than eight hours at a time.
	Critical Infrastructure that is in an area that is repeatedly impacted by disasters needs to be repaired or rebuilt.
	Infrastructure systems impacted by a disaster could be improved by adaptation or mitigation tactics.
	A disaster reveals a "single-point-of-failure," and the county's or city's entire infrastructure system cannot function when a single service area is impacted.

	Potential Criteria for Activation:
RSF#6: Natural and Cultural Resources	Ecotourism is impacted by a disaster and tourism rates do not return to pre-disaster rates.
	A disaster impacts native species of plan or animal, threatening to wipe out a unique aspect of the county's or city's government.
	A disaster impacts and damages community cultural assets.
	Historical homes, buildings, or other assets are damaged as a result of a disaster.
	Redevelopment after a disaster threatens natural environment or takes place in areas that are likely to be affected by future disasters.
	The lands, natural resources, and/or cultural assets of First Nations and/or tribal nations are damaged by a disaster.
RSF#7: Land Use and Redevelopment	Widespread damage to homes, buildings, and/or infrastructure as a result of a disaster will require review of land use plan to identify new building sites or rezoning of existing parcels.
	Disaster impacts to natural plant or animal species will require rezoning to create or increase protected areas.
	Historic homes, buildings, or other cultural assets damaged from a disaster require review or land use plan to identify new building sites or rezoning of existing parcels.

Appendix O: Disaster Assistance Center Manager Check List

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DISASTER ASSISTANCE CENTER MANAGER CHECKLIST

This checklist serves as a job aid to identify the high-level responsibilities and considerations for the DAC Manger, and may be reference to support DAC Managers in executing their role.

DISASTER ASSISTANCE CENTER MANAGER CHECKLIST

- Are all the needed coordinating partners in place for implementation?
- Has the need for Federal partners been evaluated?
- Has there been an evaluation of the appropriate number and location of the DACs?

OPERATIONAL ROLES AND RESPONSIBILITIES

- Has a DAC Manager been appointed for each DAC location?
- Has the SCO been made aware of their responsibilities related to the DAC?
- Have the DAC Manager(s) and SCO been put in contact?

OPERATING PROCEDURES

- Are the DAC(s) mission-focused?
- Are the DAC(s) scalable and scaled appropriately?
- Are the DAC(s) standardized throughout the state?
- Are the DAC(s) accountable to any rules and regulations as required to receive federal and/or state funding?
- Are the DAC(s) interoperable for the variety of agencies and partners in the center?

COMMAND

- Are command functional general activities being considered and implemented as required?
- Are command functional staffing activities being considered and implemented as required?
- Are command functional health and safety activities being considered and implemented as required?
- Are command functional security activities being considered and implemented as required?
- Are command functional media activities being considered and implemented as required?

PLANNING

- Are the planning general activities being considered and implemented as required?
- Are the planning deactivation activities being considered and implemented as required?
- Are the planning operational review activities being considered and implemented as required?

OPERATIONS

- Are operations functional outreach activities being considered and implemented as required?
- Is a client appointment system being utilized?
- Are operations functional data collection activities being considered and implemented as required?
- Was the exit interview form distributed to clients?
- Were DAC participants encouraged to provide a facility evaluation?

LOGISTICS

- Are general logistics functional activities being considered and implemented as required?
- Are site selection logistics being considered and implemented as required?
- Are facility equipment/supplies logistics being considered and implemented as required?
- Are identification and signs logistics being considered and implemented as required?
- Are logistics functional internal communications activities being considered and implemented as required?

Appendix P: Disaster Assistance Center Guidance

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PURPOSE

This guidance is meant to serve as a tool for local jurisdictions to establish one or more resource centers known as Disaster Assistance Centers (DACs). Local decision-makers can also incorporate this information into disaster recovery planning activities such as exercises, drills, and training. For consistency and clarity, this guidance is designed to reflect five functions of the National Incident Management System (NIMS) and Incident Command System (ICS). They are:

- Command,
- Planning,
- Operations,
- Logistics, and
- Finance/Administration.

This is a systems approach that provides common terminology, unity of command, and integrated communications. The guidance is structured into function-specific checklists for DAC activities.

DAC OVERVIEW

Description

The DAC is normally staffed and supported by local, tribal, state, and federal agencies, as well as non-profit and voluntary organizations. The DAC provides a single facility where individuals, families, and businesses can access available disaster assistance programs and services. DACs have proven to significantly contribute to a streamlined recovery process and have been field-tested in numerous disasters and emergency events.

Mission

To assist communities by providing a centralized location for services and resource referrals for unmet needs following a disaster or significant emergency.

DAC PARTICIPATION

An effective DAC requires the coordination, cooperation, and participation of local, state, and federal agencies, as well as non-profit and voluntary organizations. Although the private sector can be beneficial to a community's recovery, private vendor participation should be conducted outside of the DAC.

Local Government

Local government officials are responsible for assessing the need for and the establishment of a DAC. Implementation of a DAC should be in coordination with the state emergency management agency. The local government is also responsible for coordinating the

participation of local government agencies, volunteers, community-based organizations (CBOs), and private nonprofit (PNPs) organizations (PNPs).

State Agencies

The state emergency management agency is responsible for coordinating the participation of state and federal agencies in a DAC. The state emergency management agency will provide technical assistance and staff to support the set up and operations of DACs. This technical assistance can include assisting local governments with identifying the appropriate number and location(s) of DACs to be established based on disaster-specific criteria.

Federal Agencies

The state emergency management agency will also coordinate the participation of any federal agency at a DAC. Examples of federal agency participation may include the Federal Emergency Management Agency (FEMA) and U.S. Small Business Administration (SBA).

PNPS, CBOS, and Volunteer Organizations

PNPs, CBOs, and voluntary organizations provide a variety of services to individuals and families and often work together to help address the unmet needs of disaster survivors. The benefit of co-locating these organizations with governmental agencies is to provide individuals and families with as many resources as possible in a centralized location.

OPERATIONAL ROLES AND RESPONSIBILITIES

DAC Manager

The DAC Manager will be appointed by the local emergency management agency and is responsible for daily oversight (e.g., management, planning, operations, logistics, and finance/administration) of the DAC. Each DAC will have its own manager.

State Coordinating Officer

Appointed by the state emergency management agency, the State Coordinating Officer (SCO) (or designee) will be responsible for providing guidance and support to the DAC Manager to support the success of the DAC. Examples of the SCO's responsibilities include, but are not limited to:

- Providing recommendations regarding the layout of the DAC.
- Reporting needs to state agencies.
- Reporting state agency participation and daily client intake/services rendered to the DAC Manager.
- Assisting the DAC Manager with administrative tasks such as:
  - Estimating the number of required accommodations (e.g., telephones, extension cords, copy machines, printers).
  - Ensuring each station is identified with proper signage.

- Ensuring the DAC is easily identifiable by posting signage outside.
- Coordinating with the DAC Manager to communicate the location and hours of the DAC to the public.
- Coordinating with the DAC Manager to determine how to count clients (i.e., as individuals or households).
- Briefing and debriefing of DAC participants.

OPERATING *PROCEDURES*

The DAC Manager, SCO, and DAC supporting agencies will strive to operate each DAC in accordance with the following principles:

- **Mission-Focused:** The day-to-day operations will be consistent with the DAC mission.
- **Scalability:** Develop DACs that can rapidly and effectively size up or down to meet requirements of the local community.
- **Standardization:** DACs will be consistently structured and operated throughout the state.
- **Accountability:** DACs receiving federal and/or state funding may be subject to audit.
- **Interoperability:** Technological systems and tools must be able to operate on different platforms by different agencies represented in the DAC.

COMMAND

General Activities

The Command functional activities provide for overall guidance, decision-making, and supervision of DAC operations. Command functional activities monitor that all operations are in accordance with the DAC mission. Functional general activities include:

- Conduct regular meetings.
- Conduct change of shift briefings, as necessary.
- Ensure media coordinator participates in all phases of DAC operations to keep the public informed.
- Coordinate DAC closure information with media coordinator as soon as DAC closure date is known.

Staffing

Functional staffing activities in Command include:

- Ensure representation of appropriate agencies. Providing adequate training of specific duties to DAC participants, such as intake staff.
- Provide multi-lingual capabilities, as necessary.
- Staff main telephone and reception, if applicable at the DAC.

Health and Safety

Functional health and safety activities in Command include:

- Train a sufficient number of DAC participants in CPR and first aid.
- Provide first aid kits and fire extinguishers on-site.
- Verify the facility has a completed fire inspection certification and site safety plan on record.
- Provide Worker's Compensation information to DAC participants.
- Assess facility for any potential safety hazards and available emergency exits.
- Make crisis counseling and/or stress debriefing available for DAC participants as needed.

Security

Functional security activities in Command include:

- Provide a safe environment for clients and DAC participants during normal operations and after hours by coordinating security operations with local law enforcement.
- Provide locking mechanisms for physical structures and vulnerable technological systems (e.g., doors, computers, files).

Media

Functional media activities in Command include:

- Facilitate public awareness of the opening and closing of the DAC.
- Coordinate responses to press inquiries in accordance with media procedures.
- Facilitate DAC visits of elected officials and the press.
- Regularly evaluate public announcements and media releases.
- Include local, state, and federal government public information representatives in appropriate internal briefings.
- Coordinate with DAC Manager to identify any public information issues or media needs.
- Coordinate DAC closure information with DAC Manager as soon as DAC closure date is known.

PLANNING

General Activities

The activities of the Planning function are performed by the local government and the state emergency management agency. This includes initial planning, hours, location, etc. The DAC Manager will facilitate these plans and in coordination with the SCO, keep all DAC participants updated.

Deactivation

Functional deactivation activities in Planning include:

- Return all local supplies, furniture, equipment, etc. to appropriate agencies.

- Cleanup facility.
- Create a written agreement that validates the facility owner is satisfied with condition of facility post-DAC operation.

Operational Review

Functional operational review activities in Planning include:

- Plan and facilitate final debriefing session with all DAC participants, including a review of operational pros and cons.
- The DAC Manager and the SCO will coordinate to determine the need for stress debriefing for DAC participants.
- Facilitate stress debriefing with local mental health officials, if necessary.
- Prepare and distribute a report to all participating agencies and organizations. The report should document successful operational procedures and any identified issues that require resolution before a future DAC operation.

OPERATIONS

General Activities

The DAC Manager, the SCO, and all DAC participants are responsible for the day-to-day operational activities of providing information and referrals to clients affected by a disaster.

Outreach

Functional outreach activities in Operations include:

- Establish and staff an Intake/Reception Desk to assist incoming clients with resource information.
- Distribute and collect an Intake Survey Form developed by local government specific to the disaster.
- Distribute local jurisdiction agency information/handouts through the Intake/ Reception Desk.
- Maintain local, geographic maps depicting disaster impact area.
- Compile and analyze visitor intake information as outreach tool to identify target areas for additional outreach activities.
- Conduct outreach to impacted communities to communicate details of the DAC.

Client Appointment System

After any disaster, there is always the potential for DAC operations to become overwhelmed by the numbers of potential clients. This is especially true during the initial days of the operation. Consideration should be given to establishing a client appointment system to provide the orderly and timely use of DAC resources. An appointment system may be implemented to run concurrently with normal DAC operations.

Data Collection

Functional data collection activities in Operations include:

- Compile DAC service statistics in cooperation with the SCO and program providers (i.e., how many people served, what programs were provided).
- Analyze daily DAC statistics to assist DAC Manager and SCO in decision-making and advance planning.
- Use the following forms that may be modified for specific DAC needs. These examples contain the elements that have been identified as useful for data collection purposes:
  - Client Sign-in Sheet (Attachment A: Client Sign-In). This form to be used at the reception area; information to be used for client triage and incorporated into the Daily Client Summary.
  - Triage: Client Routing Form (Attachment B: Triage - Client Routing Form). The registrar completes this form to route the clients to appropriate DAC participants. Each DAC participant (agencies that are staffing the tables) may suggest additional stations.
  - Client Count Summary (Attachment C: Client Count Summary). This form assists in determining trends in client flow, hours of operation, and schedule changes. The information for this form is obtained from the Client Sign-in Sheet.
  - Station Tally (Attachment D: Station Tally). DAC participants use this form to track the number of clients interviewed and served. This information is incorporated into the Station Tally Summary.
  - Weekly Station Summary (Attachment E: Weekly Station Summary). This form assists in determining trends in client flow. The information for this form is obtained from the Station Tally forms.
  - Client Damage Survey (Attachment F: Client Damage Survey). This form is a sample and can be revised specific to the event. It may be used to glean information from clients visiting the DAC to identify potential unmet needs. If the client agrees this information can be shared with long term recovery committees to address unmet needs once the DAC closes.

Exit Interview

An Exit Interview Form should be developed for distribution to clients. The information may be used to identify specific target areas, systems improvements, etc. The data collected may be used for future planning.

Exit interviews may be conducted so that each DAC client has received necessary and appropriate information and referrals. Attachment B: Triage - Client Routing Form can be used as a basis for this interview. The interview is designed to capture the client's satisfaction of the information provided, including referrals.

Facility Evaluation

Each DAC participant is encouraged to provide a list of any identified facility changes that might improve their customer service capabilities in the future. The DAC Manager will utilize this information for future planning purposes.

LOGISTICS

General Activities

The activities of the Logistics function include the coordination of facilities, services, equipment and supplies in support of the DAC operations. Logistics processes service requests from the DAC Manager, SCO, and DAC participants.

Site Selection

Considerations for selecting a site should include (see **Attachment G: Sample Floor Plan**):

- Compatibility with the Occupational Safety and Health Administration (OSHA) and the Americans with Disabilities Act (ADA) requirements including facility size.
- In close proximity to individuals and families affected by the disaster.
- Convenient access to public transportation (e.g., highways, main thoroughfares, mass transit).
- Secured, lighted parking areas and walkways adequate for number of DAC participants and clients.
- In close proximity to available food services (e.g., restaurant, coffee shop).
- Adequate office space for processing applicants and confidential discussions with clients and DAC participants. (See **Attachment G: Sample Floor Plan** for formula for estimating square footage.)
- Sufficient number of telephone and data lines.
- Appropriate lighting, heating, ventilation, electrical, plumbing capabilities and restrooms.
- Availability of adequate janitorial and waste disposal services.

Facility Equipment/Supplies

Considerations regarding facility/equipment supplies should include:

- Access keys for DAC Manager.
- Telephone lines and computer printer(s) and paper.
- One telephone per voice line and backup communication system, as necessary.
- Display area/desk for informational pamphlets, brochures, etc.
- One table or desk and at least two chairs per DAC station.
- Additional chairs for client waiting area.
- Two computers with Internet access (one for use by DAC participants and one for client access).
- Photocopier (high speed copier with collating and stapling capabilities).
- Emergency equipment (e.g., fire extinguishers, first aid kits).
- Local public telephone directories.
- Janitorial and office supplies.

Identification and Signs

Considerations regarding DAC identification and signs should include:

- Agency identification badges worn by all DAC participants.
- DAC signage should be posted for easy identification from public roads.
- Permits necessary for legally posting DAC location.
- Multi-lingual DAC signs.
- Directions to the DAC from public routes.
- Direction of traffic flow within the DAC.
- Posting operational hours and changes, when necessary.

Internal Communications

Functional internal communication activities should include:

- Develop and distribute the following telephone directories:
  - Internal DAC participants
  - Emergency numbers for law, fire, ambulance, medical assistance, etc.
  - Information technology support.
  - Ensuring DAC participants are provided internal communication capabilities such as computer networking, messaging system, telephone transferring, etc.

ATTACHMENT A: CLIENT SIGN IN

Date:_____

Page _____ of _____

Disaster Assistance Center / Client Sign-In Sheet (Please Print)

Name	Address	Phone #	Time

ATTACHMENT B: TRIAGE – CLIENT ROUTING FORM

Disaster Assistance Center / Client Routing Form

You may visit Disaster Assistance Center (DAC) stations other than those recommended. Use as many forms as necessary to complete one entry per station. Please return all forms to the receptionist before exiting the DAC.

Client Name:	
Complete the following questions for every station visited.	
STATION VISITED (_ of____)	
Organization:	
Station Number:	
Answer "yes" or "no" to these questions about the station visited.	
Recommended?	**Visited?**
Follow-up Required?	**Rcvd Info?**
Provide a summary of any recommended referrals you received at this station:	
STATION VISITED (_ of____)	
Organization:	
Station Number:	
Answer "yes" or "no" to these questions about the station visited.	
Recommended?	**Visited?**
Follow-up Required?	**Rcvd Info?**

Provide a summary of any recommended referrals you received at this station:	
STATION VISITED (_ of____)	
Organization:	
Station Number:	
Answer "yes" or "no" to these questions about the station visited.	
Recommended?	**Visited?**
Follow-up Required?	**Rcvd Info?**
Provide a summary of any recommended referrals you received at this station:	

ATTACHMENT C: CLIENT COUNT SUMMARY

Disaster Assistance Center / Client County Summary

Day of Operation	Date	Start Time	End Time	Daily Total

ATTACHMENT D: STATION TALLY

Date: _____

Page _____ of _____

Disaster Assisstance Center

Station Number: _____

DAC Organization: _____

Date	Clients Served (Tally Mark)	Daily Total

ATTACHMENT E: STATION TALLY

Date: _____

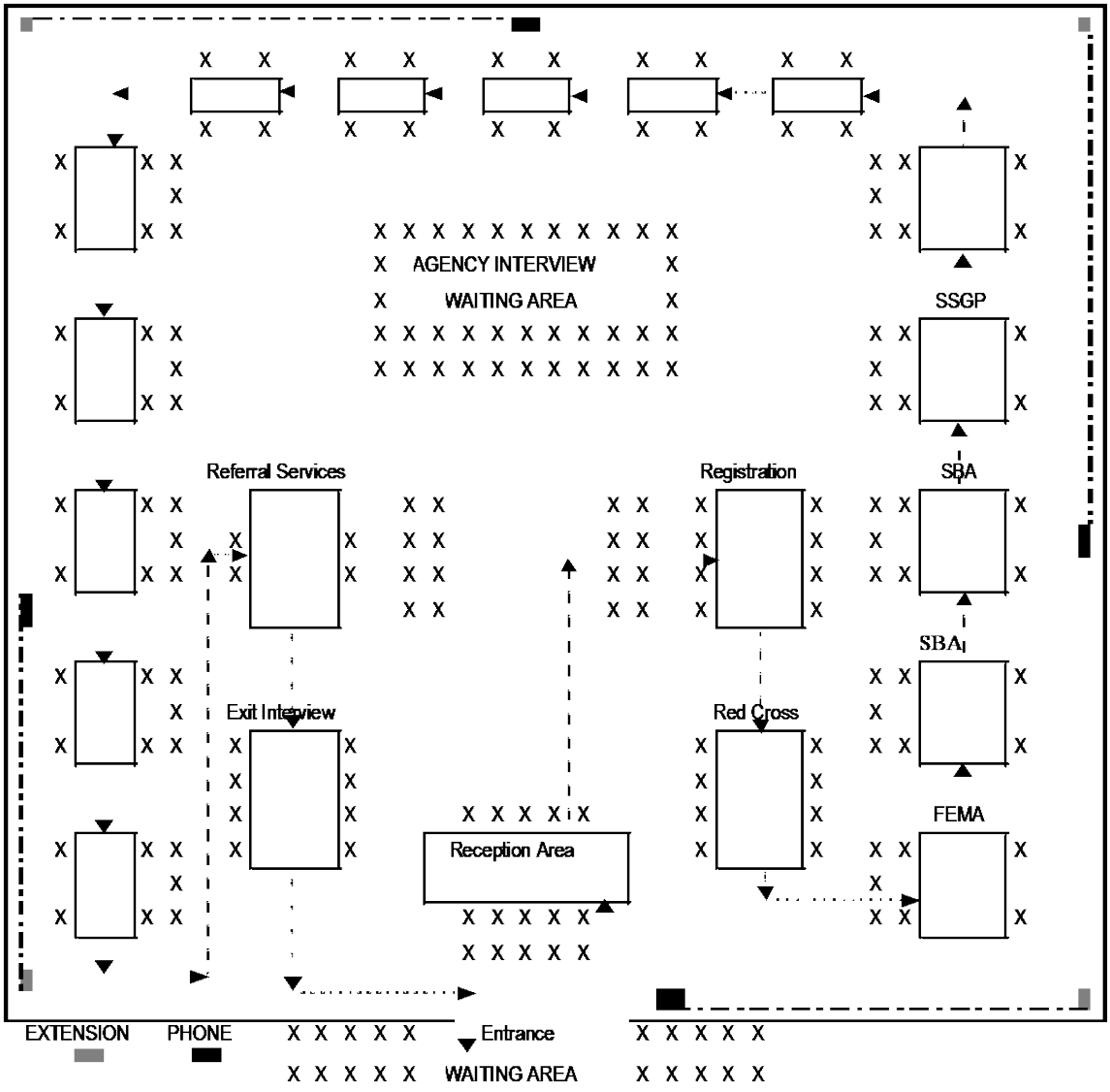
Page _____ of _____

Disaster Assistance Center

State Number	DAC Organization	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Weekly Total

ATTACHMENT F: SAMPLE FLOOR PLAN

The diagram below represents floor space of approximately 5,000 square feet (ft^2). Blank tables are for additional services.



Formula for estimating square footage:

150 ft^2 for each DAC participant PLUS 50 ft^2 for each client that could be in the DAC at a given time.

Example: A center to accommodate 10 DAC participants and 30 clients at any given time would require a minimum of 3,000 ft^2: (150 ft^2 x 10 DAC participants) + (50 ft^2 x 30 clients).

NOTE: DACs may require more or less square footage based on the size and magnitude of the event. Partitions of some type may be necessary if one table is used to interview more than one client.

Appendix Q: Coordination Checklists

Colorado - Southeast Region Recovery Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Coordination Checklists

Coordination checklists will be a key tool for the region to be completed during each phase of recovery (short-, intermediate-, and long-term). These can be modified depending on the disaster situation and scope.

Table 41: Sample Coordination Checklist for Recovery Leadership

Activation	
☐	Coordinate with the EOCs to facilitate the transition from response to recovery.
☐	Coordinate with EOCs to determine activation of RSFs
☐	Determine the need for activation of Officer Positions to assist in carrying out responsibilities.
☐	Direct coordination between activated RSFs and the EOCs
☐	Provide support to RSF lead agencies in initiating and implementing RSFs
☐	Brief elected officials on the disaster situation and how the Plan is being used in the recovery process.
Operations	
☐	Coordinate with each RSF to build a recovery vision and develop and implement strategies to achieve that vision. Coordination calls can be held to support these efforts.
☐	Coordinate between all activated RSFs to create a cohesive and coordination regional recovery vision across all recovery strategies. Coordination calls can be held to support these efforts.
☐	Coordinate strategic planning discussions with all RSF lead agencies to discuss common priorities, milestones, and activities. Coordination calls can be held to support these efforts.
☐	Coordinate day-to-day actions and resources of regional recovery between RSFs and other regional and local stakeholders. Coordination calls can be held to support these efforts.
☐	Maintain communications with elected and senior officials regarding policy level as well as financing and reimbursement issues, decisions, and concerns.
☐	Support coordination of public messaging related to the regional incident (e.g., provide a message board).
☐	Assess activation or deactivation of Officer positions monthly.
☐	Assess Activation or demobilization of RSFs
Demobilization	

☐	Coordinate with RSF lead agencies to demobilize the RSF recovery structure as the community builds capacity to execute recovery.
☐	Communicate timing with local governments and other activated RSFs.
☐	Maintain partnerships and communication that were established during recovery.
☐	Transition to preparedness phase activities.
☐	Help identify and develop new public/private partnerships tailored to disaster recovery needs.
☐	Document lessons learned and best practices post-disaster and develop a system for record-keeping for future disasters.

Table 42: Recovery Support Function Sample Coordination Checklist

Activation	
☐	Develop disaster-specific inter-stakeholder action plan to support local governments through the coordinated action of all agencies, stakeholders, and supporting entities and to reduce duplicative or counterproductive objectives.
☐	Coordinate with external partners (e.g., state and federal entities) to support initial impact and needs assessments.
☐	Coordinate with other activated RSFs and ESFs to develop a transitional public information and communications plan.
☐	Establish initial coordination meeting frequency, location, and structure. ▪ Determine frequency, length and location according to disaster needs and conditions. ▪ Provide remote access for stakeholders not able to attend in person. ▪ Develop standardized meeting agendas to facilitate reporting by all active stakeholders on their current effort or projects. ▪ Identify early RSF-specific recovery priorities.
☐	Identify primary and secondary means of communications throughout recovery operations.
☐	Review pre-established and disaster-specific reporting structures and processes.
☐	Ensure all activated stakeholders understand reporting expectations and processes.
Operations	
☐	Coordinate with activated RSFs to align priorities, milestones, and activities and prevent duplication of efforts. Coordination calls can be held to support these efforts.

☐	Coordinate with the Recovery Manager to identify needs and priorities, determine funding sources, and track implementation. Coordination calls can be held to support these efforts.
☐	Capture meeting action items and disseminate a meeting summary to the stakeholder group.
☐	Ensure stakeholders provide updates on implementation of appropriate action items at the next meeting.
☐	Change meeting frequency, length, location, and involved stakeholders as recovery conditions evolve over time.
☐	Develop a planning approach and long-term vision for recovery
☐	Establish tracking mechanisms and success criteria to coordinate execution of projects
☐	Determine the success of projects in addressing identified needs and reassess unmet needs.
Demobilization	
☐	Gradually demobilize the RSF recovery structure as the community builds capacity to execute recovery.
☐	Communicate timing with local governments and other activated RSFs.
☐	Maintain partnerships and communication that were established during recovery.
☐	Transition to preparedness and mitigation phase activities
☐	Launch new public/private partnerships tailored to disaster recovery needs.

Table 43: City/County Executives Sample Coordination Checklist

Activation	
☐	Establish and maintain communication with the Recovery Manager regarding policy level issues, decisions, and concerns.
☐	Review and activate existing plans, policies, and procedures that are likely to impact recovery.
☐	Identify any emerging or prominent issues, unmet needs, or challenges that are impeding fair, equitable, and resilient recovery. Determine whether interim or permanent policy should be enacted to resolve or alleviate identified challenges.
Operations	
☐	Address key policy decisions across the region regarding recovery operations.
☐	Monitor enacted laws or policies to assist with recovery do not contradict or counteract each other.
☐	Convey a unified message and effective communication and public engagement of the whole community.
☐	Provide updates to the Recovery Manager regarding policy level issues, decisions, and concerns.
☐	Assess the impact of new temporary or permanent policies and procedures on the whole community, and the larger region. Suggest or enact modifications to policy to support equity and social justice.
Demobilization	
☐	Convey a unified message as recovery operations begin to ramp down.
☐	Coordinate communication of recovery successes and provide transparency of future redevelopment strategies and plans.
☐	Remove or demobilize temporary legislation or policy. Determine whether interim policies should become permanent.

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Southeast Colorado

Regional Hazard Mitigation Plan

Comprehensive Update

2020



(Image from Kiowa County Independent – Lex Nichols)

Prepared by the Southeast Region Counties of Baca, Bent, Crowley, Kiowa, Otero, and Prowers; with professional planning assistance provided by CDR Maguire / Synergy Disaster Recovery

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1. Introduction

1.1. Purpose

The Southeast Colorado Region, including the counties and communities within: Baca, Bent, Crowley, Kiowa, Otero, and Prowers Counties, has prepared this local hazard mitigation plan to guide hazard mitigation planning to better protect the people and property of the Region from the effects of hazard events. This plan demonstrates commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources. The plan is intended to be a living document through ongoing implementation and regular updates every five years. The original regional plan was developed in 2014 and was updated in 2020.

This plan was also developed to make participating counties and jurisdictions eligible for certain federal disaster assistance, specifically, the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance (HMA) grant programs, as well as to make the County more disaster resistant.

1.2. Background and Scope

Each year in the United States, disasters take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. These monies only partially reflect the true cost of disasters, because additional expenses to insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Many disasters are predictable, and much of the damage caused by these events can be alleviated or even eliminated.

Hazard mitigation is defined by FEMA as "any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event." Hazard mitigation planning is the process through which hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies to lessen impacts are determined, prioritized, and implemented. This plan documents the Southeast Region's hazard mitigation planning process, identifies relevant hazards and risks, and identifies the strategy the counties and participating jurisdictions will use to decrease vulnerability and increase resiliency and sustainability.

The Southeast Region Hazard Mitigation Plan is a multi-jurisdictional plan that geographically covers everything within Colorado's Southeast Region. The following Unincorporated counties and the following municipalities participated in the planning process and plan to formally adopt this plan:

- Baca County
- Town of Campo
- Town of Pritchett
- Town of Springfield
- Town of Two Buttes
- Town of Vilas
- Town of Walsh
- Bent County
- Crowley County
- Kiowa County
- Otero County
- Prowers County
- City of Lamar

This plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (Public Law 106-390) and the implementing regulations set forth by the Interim Final Rule published in the Federal Register on February 26, 2002 (44 CFR §201.6) and finalized on October 31, 2007. (Hereafter, these requirements and regulations will be referred to collectively as the Disaster Mitigation Act - DMA.) The 2007 amendments also incorporate mitigation planning requirements of the Flood Mitigation Assistance (FMA) program authorized by the National Flood Insurance Act of 1968. While the DMA emphasized the need for mitigation plans and more coordinated mitigation planning and implementation efforts, the regulations established the requirements that local hazard mitigation plans must meet in order for a local jurisdiction to be eligible for certain federal disaster assistance and hazard mitigation funding under the Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288). Because the Southeast Regional planning area is subject to many kinds of hazards, access to these programs is vital.

Information in this plan will be used to help guide and coordinate mitigation activities and decisions for local land use policy in the future. Proactive mitigation planning will help reduce the cost of disaster response and recovery to the communities and their property owners by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruption. The Southeast Region has been affected by hazards in the past and is thus committed to reducing future disaster impacts and maintaining eligibility for federal funding.

1.3. Plan Organization

The Southeast Region Hazard Mitigation Plan is organized in several chapters and appendices as follows.

- Chapter 1: Introduction
- Chapter 2: Mitigation Strategy
- Chapter 3: Planning Process
- Chapter 4: Plan Maintenance, Revision, and Integration
- Chapter 5: Community Profile
- Chapter 6: Hazard Identification and Risk Assessment (HIRA)
- Appendix A: Meeting Sign-in Sheets and Agendas
- Appendix B: Public Involvement
- Appendix C: HIRA Appendix
- Appendix D: Jurisdictional Plan Adoptions
- Appendix E (for official use only): Critical Facilities and Dam Inundation Appendix
- Appendix F (for official use only): Dam Failure Mapping Appendix

2. Mitigation Strategy

2.1. Hazard Mitigation Strategy Overview

The Mitigation Strategy provides a blueprint for the Southeast Region to follow to become less vulnerable to its identified hazards. It is based on general consensus of the Local Planning Committee, the findings and conclusions of the Risk Assessment, and input from the public and stakeholders. The Mitigation Strategy includes hazard mitigation plan goals, objectives, and hazard mitigation actions. The plan goals and objectives serve as the guiding principles for future mitigation policy and project administration and hazard mitigation actions serve as implementable items that support goals. The mitigation strategy includes a process for evaluating mitigation actions to ensure actions are feasible based on community capabilities, tied to plan goals, and effective in reducing hazard losses for current and future structures and populations.

This section outlines the goals, objectives, capabilities, mitigation action evaluation, and prioritization process undertaken in the Southeast Region.

2.2. Hazard Mitigation Goals and Objectives

The goals and objectives identified in the 2014 Southeast Region Mitigation Strategy were reviewed as part of the planning process and when developing mitigation actions. The planning team decided to largely keep the goals and objectives the same from the 2014 Plan, with the only changes relating to: removing the 2014 goal concerning the hazard mitigation plan and adding an objective focused on cyber security. These Plan goals and objectives reflect current needs and priorities of the Region and are intended to reduce long-term vulnerability and risk to all hazards identified in this Plan. The 2020 mitigation goals and objectives are as follows:

A. IMPROVE COUNTY CAPABILITY TO REDUCE DISASTER LOSSES

a. Have Each County Certified as "Storm Ready" by NWS

i. Coordinate with National Weather Service (NWS)
ii. Seek NOAA Weather Radio Repeaters
iii. Identify Other Program Requirement Needs
    1. Communications Equipment

b. Improve Local Flood Protection Programs (where appropriate)

i. Promote National Flood Insurance Program (NFIP) Participation
ii. Promote Public Awareness of Flood Hazard Areas & Potential Losses
iii. Promote Flood Insurance
iv. Seek Improved Floodplain Mapping

c. Coordinate Planning Requirements and Community Plans

i. Disaster Plans
    1. Local Emergency Operations Plans
    2. Homeland Security Plans
        a. Bioterrorism/Health Department Plans

b. WMD/Terrorism Plans

ii. Hazardous Materials and LEPC Plans
1. Materials Transported through the County
2. Materials Stored in the County
3. Materials Manufactured in the County

iii. Regional Transportation Plans
1. CDOT

iv. County Comprehensive Plans

d. Reduce Damage to and Maintain Functionality of Critical Facilities and Infrastructure.

e. 1.4.1 Improve Cyber Security

B. REDUCE LOSS OF LIFE, PROPERTY DAMAGES, AND ECONOMIC IMPACTS FROM HAZARDS

a. Reduce Losses from Drought
i. Improve Water Supply
ii. Seek Grazing on CRP Land
iii. Use Low-Water Crops

b. Reduce Losses from Flood
i. Promote Flood Insurance
ii. Sponsor Cost-Effective Site-Specific Projects

c. Reduce Losses from Tornadoes / Wind storms
i. Improve Warning
ii. Promote “Safe-Rooms” and Other Shelters
iii. Promote Erosion Mitigation Techniques

d. Reduce Agricultural Losses Hazards
i. Promote Crop Insurance

e. Reduce Losses from Wildfires

f. Reduce Losses from Winter Storms

g. Reduce Losses from Other Hazards Identified in This Plan, Where Practical and Feasible

C. INCREASE PUBLIC AWARENESS OF POTENTIAL HAZARD LOSSES

a. Sponsor an Annual Public Education Project
i. Have an “Awareness” Week
1. Show Hazard Maps, List Past Losses, Explain Insurance Availability/Cost
2. Use Billing “Stuffers,” County Fair, Websites, Newsletters, Radio, Newspapers, 4-H Clubs

ii. Target Specific Areas (floodplains)

2.3. Capabilities Assessment

Prior to forming new mitigation actions, a capabilities assessment was conducted for the Region to understand what: planning and regulatory; administrative and technical; financial; and education and outreach capabilities exist (or are lacking) for implementing hazard mitigation projects. To assess capabilities, an online survey was distributed to each jurisdiction. Additionally, mitigation capabilities were discussed during each planning team workshop. Southeast Region capabilities are described in the tables below. Overall, similar capabilities are available to each county.

Table 2-1 Baca County Planning and Regulatory Capabilities

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
Building Codes	X			X			
Building Codes Year							
BCEGS Rating			9				
Capital Improvements Program (CIP) or Plan				X			
Community Rating System (CRS)							
Community Wildfire Protection Plan (CWPP)	X	X	X	X	X	X	X
Comprehensive, Master, or General Plan	X		X	X			
Economic Development Plan	X	X		X			X
Elevation Certificates							
Erosion/Sediment Control Program	X						
Floodplain Management Plan or Ordinance							X

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
Flood Insurance Study							
Growth Management Ordinance							
Non-Flood Hazard-Specific Ordinance or Plan (e.g.- Steep Slope, Wildfire, Snow Load)	X						
NFIP							X
Site Plan Review Requirements	X			X			
Stormwater Program, Plan, or Ordinance	X						
Zoning Ordinance	X			X			
Other				Water Backflow Program; Municipal Safety Program; will be adopting a Water/ Wastewater Master Plan			

Table 2-2 SE Region Planning and Regulatory Capabilities

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
Building Codes	X	X		X		X

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
Building Codes Year						
BCEGS Rating	10				4	
Capital Improvements Program (CIP) or Plan						X
Community Rating System (CRS)						
Community Wildfire Protection Plan (CWPP)	X	X	X	X	X	X
Comprehensive, Master, or General Plan	X					X
Economic Development Plan	X	X		X		X
Elevation Certificates						
Erosion/Sediment Control Program						
Floodplain Management Plan or Ordinance	X			X	X	X
Flood Insurance Study						X
Growth Management Ordinance						
Non-Flood Hazard-Specific Ordinance or Plan (e.g.- Steep Slope, Wildfire, Snow Load)						
NFIP	X			X	X	X
Site Plan Review Requirements					X	X
Stormwater Program, Plan, or Ordinance						X
Zoning Ordinance				X		X

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
Other			Ambulance Service			

Table 2-3 Baca County Administrative and Technical Capabilities

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
Emergency Manager	X	X	X	X	X	X	X
Floodplain Administrator	X						
Community Planning:							
- Planner/Engineer (Land Development)	X			X			
- Planner/Engineer/Scientist (Natural Hazards)	X						
- Engineer/Professional (Construction)	X			X			
- Resiliency Planner							
- Transportation Planner							
Full-Time Building Official	X			X	X		
GIS Specialist and Capability	X						
Grant Manager, Writer, or Specialist	X		X	X			

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
Warning Systems/Services:							
- General	X			X			X
- Flood	X						
- Wildfire	X	X	X		X		X
- Tornado	X	X	X	X	X		X
- Geological Hazards	X						
Other							

Table 2-4 SE Region Administrative and Technical Capabilities

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
Emergency Manager	X	X	X	X	X	X
Floodplain Administrator				X	X	
Community Planning:						
- Planner/Engineer (Land Development)	X			X	X	X
- Planner/Engineer/Scientist (Natural Hazards)						
- Engineer/Professional (Construction)				X		X
- Resiliency Planner						

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
- Transportation Planner						
Full-Time Building Official	X	X		X		X
GIS Specialist and Capability				X		X
Grant Manager, Writer, or Specialist						
Warning Systems/Services:						
- General	X	X		X	X	
- Flood	X	X		X	X	
- Wildfire	X	X		X	X	
- Tornado	X	X		X	X	X
- Geological Hazards						
Other			Ambulance Director			

Table 2-5 Baca County Financial Capabilities

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
Has community used any of the following to fund mitigation activities?							
- Levy for Specific Purposes with Voter Approval							

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
- Utilities Fees				X			
- System Development / Impact Development Fee				X			
- General Obligation Bonds to Incur Debt							
- Special Tax Bonds to Incur Debt							
- Withheld Spending in Hazard-Prone Areas							
- Stormwater Service Fees							
- Capital Improvement Project Funding				X			
- Community Development Block Grants				X			
- Other							

Table 2-6 SE Region Financial Capabilities

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
Has community used any of the following to fund mitigation activities?						
- Levy for Specific Purposes with Voter Approval	X			X		
- Utilities Fees						
- System Development / Impact Development Fee						

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
- General Obligation Bonds to Incur Debt	X					
- Special Tax Bonds to Incur Debt	X					
- Withheld Spending in Hazard-Prone Areas						
- Stormwater Service Fees						X
- Capital Improvement Project Funding				X		X
- Community Development Block Grants		X				
- Other						

Table 2-7 Baca County Education and Outreach Capabilities

Capability	Baca County	Campo	Pritchett	Springfield	Two Buttes	Vilas	Walsh
Local Citizen Groups That Communicate Hazard Risks	**X**						
Firewise							
StormReady	**X**				**X**		**X**
Other	Local EM Preparedness Group						

Table 2-8 SE Region Education and Outreach Capabilities

Capability	Bent County	Crowley County	Kiowa County	Otero County	Prowers County	City of Lamar
Local Citizen Groups That Communicate Hazard Risks	X					X
Firewise	X		X			
StormReady		X	X		X	
Other						

2.4. Continued NFIP Compliance

Given the flood hazard and risk across the Region, and recognizing the importance of the NFIP in mitigating flood losses, an emphasis will be placed on continued compliance with the NFIP by participating jurisdictions. As NFIP participants, many of these communities have and will continue to make every effort to remain in good standing with NFIP. This includes continuing to comply with the NFIP's standards for updating and adopting floodplain maps and maintaining and updating the floodplain zoning ordinance. Other details related to NFIP participation are discussed in the flood vulnerability discussion specific to each county in Chapter 6 of this Plan.

2.5. Past Action Reporting

Table 2-9 describes the progress on actions from the 2014 Southeast Region Hazard Mitigation Plan. Communities chose to include some past actions in the list of 2020 actions, these are noted as such.

Table 2-9 Southeast Region Progress on 2014 Mitigation Actions

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-01	Regional	Coordinate with Edison Power to Identify Strategies to Improve Power System Redundancies (or resilience), including Undergrounding	H	Southeast Colorado Power Association	Deferred	

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
		Vulnerable Lines in Adjacent Counties.				
2014-02	Baca County	Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program	H	Baca County Emergency Management	On-going	Public Awareness will always be priority
2014-03	Baca County	Community Wildfire Protection Plans	M	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-04	Baca County	CWPP Projects as identified by the County's CWPP	M	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-05	Baca County	Firewise Outreach Message to appropriate audiences within the County CWPP Plan	M	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-06	Baca County	Develop ordinances to address burn permitting and restrictions	H	Baca County Office of Emergency Management	On-going	Working with S.O. trying to get this passed

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-07	Baca County	Countywide fire district establishment	M	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-08	Baca County	Install outdoor warning sirens in unincorporated towns in the county (Stonington, North Walsh)	H	Baca County Office of Emergency Management	On-going	
2014-09	Baca County	Educate residences on the importance of fire mitigation efforts around their houses /structures	H	Baca County Office of Emergency Management	On-going	Through Newspaper & Social Media
2014-10	Baca County	Educate the public on current fire conditions by public outreach and roadside signs.	H	Baca County Office of Emergency Management	On-going	Always promoting awareness
2014-11	Baca County	Street Identification Signs	H	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-12	Baca County	Address/House number identification	H	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-13	Baca County	NFPA 704 enforcement and education to Tier II facilities and others to identify locations of hazardous materials	H	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-14	Baca County	Public awareness of flooding potential, Ag infestation, Drought, Heat, Cold	H	Baca County Office of Emergency Management	On-going	Always promoting awareness
2014-15	Baca County	Install River Gauges	M	Baca County Office of Emergency Management	No Longer Applicable	Previous EM added this, not finding any records of completion.
2014-16	Baca County	Weather radio placement in public places	H	Baca County Office of Emergency Management	On-going	Always promoting
2014-17	Baca County	Tornado Shelter Designation and Education	H	Baca County Office of Emergency Management	On-going	Shelters have been identified but constantly working on

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
						improved building & locations
2014-18	Town of Pritchett	Address/House number identification	H	Mayor's Office	On-going	Town is always working on improvements
2014-19	Town of Pritchett	Street Identification Signs	M	Mayor's Office	In Progress	Signs purchased, not installed
2014-20	Town of Pritchett	Tornado Shelter Designation and Education	H	Mayor's Office	On-going	Shelters have been identified but constantly working on improved building & locations
2014-21	Town of Springfield	Street Identification Signs	M	Mayor's Office	On-going	Town is always working on improvements
2014-22	Town of Springfield	Tornado Shelter Designation and Education	H	City Manager	On-going	Shelters have been identified but constantly working on improved building & locations
2014-23	Town of Springfield	Build outdoor warning system to include the south Hwy 287 area	H	Mayor's Office	On-going	Siren has been installed, promoting more awareness is on-going
2014-24	Town of Walsh	Address/House number identification	H	Mayor's Office	On-going	Town is always working on improvements

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-25	Town of Walsh	Street Identification Signs	M	Mayor's Office	On-going	Town is always working on improvements
2014-26	Town of Walsh	Public awareness of flooding potential, Ag infestation, Drought, Heat, Cold	H	Mayor's Office	On-going	Always promoting awareness
2014-27	Town of Walsh	Tornado Shelter Designation and Education	H	Mayor's Office	On-going	Shelters have been identified but constantly working on improved building & locations
2014-28	Bent County	Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program	H	Bent County Emergency Management	Deferred	
2014-29	Bent County	CWPP Projects as identified by the County's CWPP	M	Bent County Office of Emergency Management	Deferred	
2014-30	Bent County	Firewise Outreach Message to appropriate audiences within the County CWPP Plan	M	Bent County Office of Emergency Management	Deferred	
2014-31	Bent County	Community Wildfire Protection Plans	M	Bent County Office of Emergency Management	Deferred	
2014-32	Arkansas River Conservancy District	Armoring levy	M	Board of Directors, Arkansas River Conservancy District	Not a plan update participant	

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-33	Arkansas River Conservancy District	Amassing of Rip Rap	H	Board of Directors, Arkansas River Conservancy District	Not a plan update participant	
2014-34	Arkansas River Conservancy District	Removal of woody invasive species within levy narrow area.	M	Board of Directors, Arkansas River Conservancy District	Not a plan update participant	
2014-35	Crowley County	Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program	H	Crowley County Emergency Management	Deferred	
2014-36	Crowley County	Lane 27 drainage project	M	Crowley County Road & Bridge	On-going / 2020 Action	County did not succeed with any funding to date. County did implement some localized mitigation (replaced culvert, road work, grading).
2014-37	Crowley County	CWPP Projects as identified by the County's CWPP	M	Crowley County Emergency Management	No Longer Applicable	CWPP needs finalized
2014-38	Crowley County	Firewise Outreach Message to appropriate audiences within the County CWPP Plan	M	Crowley County Emergency Management	Deferred	

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-39	Crowley County	Community Wildfire Protection Plans	M	Crowley County Emergency Management	On-going / 2020 Action	This will be a mitigation focus for the 2020 HMP
2014-40	Town of Ordway	Ordway drainage project	M	Ordway Public Works Department	Not a plan update participant	
2014-41	Kiowa County	Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program	H	Kiowa County Emergency Management	On-going	To provide and conduct through weather spotter training to comply with Storm Ready Status.
2014-42	Kiowa County	CWPP Projects as identified by the County's CWPP	M	Kiowa County Fire Department	On-going	
2014-43	Kiowa County	Firewise Outreach Message to appropriate audiences within the County CWPP Plan	M	Kiowa County Fire Department	On-going	Public Outreach including Fire Prevention Awareness through community and school facilites.
2014-44	Kiowa County	Community Wildfire Protection Plans	M	Kiowa County Fire Department	On-going	
2014-45	Kiowa County	Eads/Kiowa County Fire Protection District	M	Eads/Kiowa County Fire Department	Complete	Kiowa County Fire Protection District formed and operating independently
2014-46	Kiowa County	Eads Maine Street Drainage Improvements	M	Town of Eads	Complete	

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-47	Otero County	Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program	H	Otero County Emergency Management	On-going	
2014-48	Otero County	CWPP Projects as identified by the County's CWPP	M	Otero County Emergency Management	On-going	
2014-49	Otero County	Firewise Outreach Message to appropriate audiences within the County CWPP Plan	M	Otero County Emergency Management	On-going	
2014-50	Otero County	Community Wildfire Protection Plans	M	Otero County Emergency Management	On-going	
2014-51	City of La Junta	Flooding – Southwest La Junta Drainage and Roadway Improvements	H	City of La Junta Department of Engineering	Not a plan update participant	
2014-52	City of La Junta	Storm Drain Backflow Prevention	M	City Engineer's Office	Not a plan update participant	
2014-53	City of La Junta	Continue to implement sound floodplain management practices	H	City Engineer's Office	Not a plan update participant	
2014-54	North La Junta Conservancy District	Removal of tamarisk, Russian olive, and debris for better water river flow.	H	North La Junta Conservancy District	Not a plan update participant	
2014-55	Prowers County	Develop and Conduct a Multi-Hazard Seasonal Public Awareness Program	H	Prowers County Emergency Management	No Longer Applicable	

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
2014-56	Prowers County	Continue to Implement Sound Floodplain Management Practices through Participation in the National Flood Insurance Program (NFIP) and Updated Statewide Floodplain Rules	M	Prowers County Land Use	On-going / 2020 Action	2016-Received updated FEMA FIRM Flood Plain Maps. CWCB is performing Arkansas River Update/Risk MAP Project
2014-57	Prowers County	Community Wildfire Protection Plans	M	Prowers County Rural Fire Department	No Longer Applicable	
2014-58	Prowers County	CWPP Projects as identified by the County's CWPP	M	Prowers County Rural Fire Department	No Longer Applicable	AWOP are signed every year
2014-59	Prowers County	Firewise Outreach Message to appropriate audiences within the County CWPP Plan	M	Prowers County Rural Fire Department	No Longer Applicable	
2014-60	Prowers County	Prowers County Stream Notification System	M	Prowers County Office of Emergency Management	On-going / 2020 Action	NWS request for funding was not awarded
2014-61	Prowers County	Critical Facilities Relocation Fire	H	Prowers County Rural Fire Department	On-going / 2020 Action	Location identified, trying to secure funding
2014-62	Prowers County	Prowers Fire District Establishment	H	Prowers County Rural Fire Department	No Longer Applicable	
2014-63	Prowers County	Prowers Fire All-Hazard Response Apparatus	H	Prowers County Rural Fire Department	Complete	Purchase made in 2018, $44,000
2014-64	Prowers County	Wiley CR 196 Bridge Project	H	Prowers County Office	On-going / 2020 Action	

ID	Org.	Action	Priority	Responsible Party	2020 Status	2020 Status Summary
				of Emergency Management		
2014-65	Prowers County	Tornado Shelter	H	Prowers County Office of Emergency Management	No Longer Applicable	
2014-66	Prowers County	CR 196 Flood Project	M	Prowers County Office of Emergency Management	No Longer Applicable	
2014-67	Prowers County	Bristol Drainage Project	H	Prowers County Office of Emergency Management	On-going / 2020 Action	
2014-68	Town of Hartman	Evaluate the Benefits of Joining the National Flood Insurance Program (NFIP)	H	Community planning/zoning/public works department	Not a plan update participant	
2014-69	Town of Holly	Holly Flood Control Dike	H	Holly Flood Control, Drainage, and Sanitation District and Prowers County OEM	Not a plan update participant	
2014-70	City of Lamar	Willow Creek Dike Project	H	City of Lamar Water and Waste	On-going / 2020 Action	2018 study requires the dike to be raised 2" – Prowers has taken over this action
2014-71	City of Lamar	Parmenter East Storm Drainage Project	H	City of Lamar Water and Waste	On-going / 2020 Action	
2014-72	Lamar School District	Lightning Detection/Warning Systems	H	Lamar School District Maintenance	Not a plan update participant	

2.6. Identification of New Mitigation Actions

2.6.1 Selection of Mitigation Actions

Selected actions are included in the Mitigation Action Plan (MAP), which is presented in Table 2-10. The MAP is a functional plan for action and is considered to be the most essential outcome of the mitigation planning process. The MAP includes a prioritized listing of proposed hazard mitigation actions for the Counties and participating jurisdictions to implement. Each action includes accompanying information such as the department responsible for completing the action, timeline, and funding source. The MAP provides those departments or individuals responsible for implementing mitigation actions with a clear path to reduce risk and vulnerability over time. Further, the MAP provides a mechanism to monitor progress over time. Each action also considers the benefits and costs of an action, to ensure it is cost effective, which is included in the prioritization of actions.

Mitigation actions were derived from the HIRA, local planning committee workshops, the public surveys, and other municipal plans. Changes in priorities were reflected in the selected mitigation actions by reviewing what has been completed since 2014, reviewing how changes in development have impacted hazard risk (discussed in Section 6 – HIRA for each hazard), and through the local planning committee discussions and workshops.

2.6.2 Prioritization of Mitigation Actions

During the third round of planning team workshops, methods to prioritize mitigation actions were discussed. It was determined that a “high, medium, low” prioritization scheme would work best for the Region. Actions were ranked high, medium, or low based on the following criteria:

1. Overall hazard ranking
2. Availability of local match / funding
3. Beneficial impacts to critical facilities and infrastructure
4. Beneficial economic impacts
5. Alignment with other local objectives
6. Life safety
7. Social equity

2.6.3 Implementation of Mitigation Actions

The MAP includes several measures to ensure actions are implemented. Each county’s emergency manager will serve as the coordinating lead, however, each action is tied to a responsible agency or organization who will be responsible for leading the completion of the mitigation action. By assigning responsibility, it increases accountability and the likelihood of action.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date has been assigned in order to assess whether actions are being implemented in a timely fashion. Further, Plan adoptees will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When known, potential funding sources have been identified for proposed actions listed in the Mitigation Action Plan. For higher cost projects, communities should evaluate mitigation grant funding opportunities available through FEMA’s Hazard Mitigation Assistance (HMA) programs. As of this plan’s writing, FEMA is in the process of standing up its new Building Resilient Infrastructure and Communities (BRIC) grant program.

This program should be monitored closely by the Region's communities to identify project funding opportunities.

Further detail on implementation can be found in the Maintenance and Implementation section of this Plan.

2.6.4 2020 Southeast Region Mitigation Actions

This section describes the 2020 Southeast Region mitigation actions and their MAPs. Each action includes a number of items, detailed below. This is followed by the 2020 mitigation actions, beginning in Table 2-10.

- Action ID
- Organization
- Mitigation Action
- Lead / Partner Organization
- Priority
- Goal(s) addressed
- Hazard(s) to be Mitigated
- Estimated Completion date
- Cost
- Potential funding sources

Table 2-10 Southeast Region 2020 Mitigation Action Plan

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
2020-01	Baca County	Proactively promote living fences on public and private lands for wind breaks and snow fences	Emergency Management	H	1,2,3	Drought, Severe Weather, Windstorm	2025	<$5K	County General Fund, USFS
2020-02	Baca County	Promote xeriscape landscaping and planting of drought-tolerant plants around homes and businesses to minimize water consumption.	Emergency Management	M	2	Drought	2025	<$5K	County General Fund
2020-03	Baca County	Encourage citizens to implement water-saving measures including but not limited to: installing low-flow shower heads, toilets, etc. Checking for leaking plumbing, installing graywater systems in homes to encourage water reuse.	Emergency Management	M	2,3	Drought, Extreme Heat	2025	<$5K	County General Fund
2020-04	Baca County	Town designates drought stage conditions and places watering restrictions for public and private properties within town limits	Public Works	M	2,3	Drought	2025	<$5K	General Funds
2020-05	Baca County	Shelters have been identified, continue working on improved buildings and locations	Emergence Management	M	2	Severe Weather, Tornado, Winter Storm,	2025	<$5K	County General Fund

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
						Wildfire, Windstorm, Hazmat Release			
2020-06	Baca County	Publicize locations of public shelters for residents, displaced or stranded people in case of a severe weather event.	Emergency Management	H	2,3	Severe Weather, Tornado, Winter Storm, Wildfire, Windstorm, Hazmat Release	2025	<$5K	County General Fund
2020-07	Baca County	Educate public on Wildfire Mitigation Measures	Emergency Management, Forest Service	H	1,2,3	Wildfire	2025	<$5K	County General Fund
2020-08	Baca County	Educate community with information of how to mitigate homes from natural hazards by posting information on Website, Newspaper, Social Media and Bill Inserts.	Emergency Management	H	1,2,3	Drought, Extreme Cold, Extreme Heat, Severe Weather, Tornado, Wildfire,	2025	<$5K	General Funds

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
						Windstorm, Winter Storm, Civil Unrest, Cyber Hazards, Hazmat Release, Pandemic and Zoonotic Disease			
2020-09	Baca County	Identify Access and Functional Needs population that may need assistance during any natural hazard.	Home Health, DHS, Emergency Management	M	2	Multiple	2025	<$5K	General Funds
2020-10	Baca County	Work with Road and Bridge on projects for improvement of bar ditches, bridges and culverts.	Baca County, Emergency Management	M	1,2	Flooding	2025	>$30,000	County General Fund, Transportation / Infrastructure Grants,

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
									FEMA HMA
2020-11	Baca County	Ensure strong working relationships with partners through good communication, training and exercising.	Emergency Management	M	1	Multiple	2025	<$5K	County General Fund
2020-12	Baca County	Promote Cyber Security Best Practices	Emergency Management	M	1,2,3	Cyber Hazards	2025	<$5K	County General Fund
2020-13	Baca County	Promote public education on personal and precautionary protection behaviors during pandemic/zoonotic disease.	Emergency Management, Public Health	M	2,3	Pandemic and Zoonotic Disease	2025	<$5K	County General Fund
2020-14	Baca County	Keep good communication with local conservation district (NRCS & FSA), local Extension Agent and Colorado Department of Agriculture to ensure quality support during any Ag related event.	Emergency Management, NRCS, FSA, Extension Agent, CO Dept of Ag	M	1,2	Ag Infestation	2025	<$5K	General Funds
2020-27	Bent County	Dredge and remove debris in Arkansas river bottom from the west county line to John Martin	Bent County / City of Las Animas	M	1,2	Flooding, Streambank Erosion	2025	$750k	
2020-28	Bent County	Remove vegetation from areas between the City of Las Animas and the river bottom	Bent County / City of Las Animas	M	1,2	Wildfire	2025	$10k	

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
2014-71*	City of Lamar	Parmenter East Drainage Project will alleviate flooding issues in a majority of centralized areas in the City.	City of Lamar / County OEM	M	2	Flooding	2025	$1.650M	City, State, FEMA HMA
*Note: The City of Lamar is entirely focused on implementing this project, carried over from the previous plan, as their top mitigation priority.									
2014-36	Crowley County	Lane 27 drainage improvement project	Crowley County	M	2	Flooding	2025	$1.5M	County, State, FEMA HMA
2020-29	Crowley County	Complete community wildfire protection plan (CWPP)	Emergency Management	H	1,2,3	Wildfire	2025	<$5K	General Funds
2020-30	Kiowa County	Eads Maine Street Drainage Improvements. Culvert placement on city streets where dips are deep.	Kiowa County	H	2	Flooding	2025	<$50K	
2020-31	Kiowa County	Community Storm Shelters / Safe Rooms	Kiowa County	M	1,2	Multiple	2025	<$200K	FEMA HMA
2020-32	Kiowa County	Installation of Curb Address Numbers	Kiowa County	M	1,2	Multiple	2025	<$5K	
2020-33	Kiowa County	Power Line Tree Clearing	Kiowa County	M	2	Wildfire	2025	<$20K	
2020-34	Otero County	Flood mitigation along the Arkansas river through La Junta	Otero County/ City of La Junta	M	2	Flooding	2022	$500K	FEMA HMA, Army Corps of

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
									engineers, Local
2020-35	Otero County	Coordination with state and federal organizations to continue discussions regarding a full dredging of the Arkansas River from Pueblo to the John Martin Reservoir.	Otero County	M	2	Flooding	2025	>$10M	FEMA HMA, Army Corps of engineers, State
2020-36	Otero County	Dike maintenance and upkeep through the La Junta area.	Otero County/ City of La Junta	M	2	Flooding	2025	<$200K	FEMA HMA
2014-56	Prowers County	Continue to Implement Sound Floodplain Management Practices through Participation in the National Flood Insurance Program (NFIP) and Updated Statewide Floodplain Rules	Prowers Land Use	H	2	Flooding	2023	$100k	CWCB, State, County, FEMA HMA
2014-60	Prowers County	Stream Notification System (Butte Creek/Two Buttes Reservoir Dam) If a breech occurs downstream homes will not be warned due to the remote location of the dam.	Prowers OEM	M	2	Flooding	2026		CWCB, County
2014-61	Prowers County	Relocate fire station out of flood plain, new fire station location with tornado resistant construction to provide public sheltering and an	Prowers Rural Fire	H	1	Flooding	2022	$900k	County, State, FEMA HMA

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
		alternate Emergency Operations Center.							
2014-64	Prowers County	County Road 196 Wiley bridge replacement. Bridge is not designed for large stream flows which will allow flooding into residences.	Prowers OEM	M	2	Flooding	2030	$1M	County, State, FEMA HMA
2014-67	Prowers County	Bristol Drainage Project	Prowers OEM	M	2	Flooding	2025	$300k	County, State, FEMA HMA
2014-70	Prowers County	Willow Creek Dike Project	Prowers Land Use	M	2	Flooding	2025	$100k	County, State, FEMA HMA
2020-37	Prowers County	Arkansas River Tamarisk removal within 2 miles of each Town or City and government infrastructure by chemical and mechanical measures 20 miles total.	Prowers OEM	H	2	Flooding	2024	$2M	FEMA HMA
2020-38	Prowers County	Arkansas River removal of Tamarisk for 19 miles by chemical and mechanical measures.	Prowers OEM	H	2	Flooding	2026	$2M	County, State, FEMA HMA

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
2020-39	Prowers County	Government Critical Facilities Standby Generators. Powering facilities such as fire stations, courthouse and other municipal critical facilities is needed.	Prowers OEM	M	1	Severe Weather, Pandemic	2023	$200k	County, State, FEMA HMA
2020-40	Prowers County	Drone for use in all listed hazards such as rescue, observation of haz mat incidents, flooding events and wildfires.	Prowers Sheriff	M	2	Multiple	2022	$50k	County, DOJ
2020-41	Prowers County	Outdoor Warning Sirens are aged and require frequent repair to maintain capability and with new development in the county additional sirens are required	Prowers OEM	M	2	Severe Weather	2025	$115k	County, HS, FEMA HMA
2020-15	Town of Campo	Encourage wildfire fuel reductions by posting information on town website, newspaper or insert with utility bill	Town	H	1,2,3	Wildfire	2025	<$5K	General Funds
2020-16	Town of Campo	Educate community with information of how to mitigate homes from natural hazards by posting information on Website, Newspaper, Social Media and Bill Inserts.	Town	H	1,2,3	Multiple	2025	<$5K	General Funds
2020-45	Town of Campo	Street drainage improvements.	Public Works	M	1,2	Flooding	2026	>$500k	General Funds, Grants

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
2020-51	Town of Campo	Bi-annually create a large fuel break around each town.	Public Works	H	1,2	Wildfire	2026	<$5K	General Funds
2020-17	Town of Pritchett	Encourage wildfire fuel reductions by posting information on town website, newspaper or insert with utility bill	Town	H	1,2,3	Wildfire	2025	<$5K	General Funds
2020-18	Town of Pritchett	Educate community with information of how to mitigate homes from natural hazards by posting information on Website, Newspaper, Social Media and Bill Inserts.	Town	H	1,2,3	Multiple	2025	<$5K	General Funds
2020-44	Town of Pritchett	Enforce Ordinance to clean up lots within the municipality of debris and old vegetation	Town Council	M	2	Fire	2026	<$5K	General Funds
2020-46	Town of Pritchett	Street drainage improvements.	Public Works	M	1,2	Flooding	2026	>$500k	General Funds, Grants
2020-52	Town of Pritchett	Bi-annually create a large fuel break around each town.	Public Works	H	1,2	Wildfire	2026	<$5K	General Funds
2020-19	Town of Springfield	Encourage wildfire fuel reductions by posting information on town website, newspaper or insert with utility bill	Town	H	1,2,3	Wildfire	2025	<$5K	General Funds
2020-20	Town of Springfield	Educate community with information of how to mitigate homes from natural hazards by posting	Town	H	1,2,3	Multiple	2025	<$5K	General Funds

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
		information on Website, Newspaper, Social Media and Bill Inserts.							
2020-42	Town of Springfield	Clearing Cat Creek of debris and brush yearly	Public Works	M	1,2	Flooding, Wildfire	2026	<$5k	General Funds
2020-47	Town of Springfield	Street drainage improvements.	Public Works	M	1,2	Flooding	2026	>$500k	General Funds, Grants
2020-53	Town of Springfield	Bi-annually create a large fuel break around each town.	Public Works	H	1,2	Wildfire	2026	<$5K	General Funds
2020-21	Town of Two Buttes	Encourage wildfire fuel reductions by posting information on town website, newspaper or insert with utility bill	Town	H	1,2,3	Wildfire	2025	<$5K	General Funds
2020-22	Town of Two Buttes	Educate community with information of how to mitigate homes from natural hazards by posting information on Website, Newspaper, Social Media and Bill Inserts.	Town	H	1,2,3	Multiple	2025	<$5K	General Funds
2020-48	Town of Two Buttes	Street drainage improvements.	Public Works	M	1,2	Flooding	2026	>$500k	General Funds, Grants
2020-54	Town of Two Buttes	Bi-annually create a large fuel break around each town.	Public Works	H	1,2	Wildfire	2026	<$5K	General Funds
2020-23	Town of Vilas	Encourage wildfire fuel reductions by posting information on town website, newspaper or insert with utility bill	Town	H	1,2,3	Wildfire	2025	<$5K	General Funds

Action ID	Organization	Mitigation Action	Lead / Partner Organization	Priority	Goal(s) Addressed	Hazard(s) to be Mitigated	Estimated Completion Date	Cost	Potential Funding Sources
2020-24	Town of Vilas	Educate community with information of how to mitigate homes from natural hazards by posting information on Website, Newspaper, Social Media and Bill Inserts.	Town	H	1,2,3	Multiple	2025	<$5K	General Funds
2020-43	Town of Vilas	Towns natural drainage, clear debris and brush yearly	Public Works	M	1,2	Flooding, Wildfire	2026	<$5k	General Funds
2020-49	Town of Vilas	Street drainage improvements.	Public Works	M	1,2	Flooding	2026	>$500k	General Funds, Grants
2020-55	Town of Vilas	Bi-annually create a large fuel break around each town.	Public Works	H	1,2	Wildfire	2026	<$5K	General Funds
2020-25	Town of Walsh	Encourage wildfire fuel reductions by posting information on town website, newspaper or insert with utility bill	Town	H	1,2,3	Wildfire	2025	<$5K	General Funds
2020-26	Town of Walsh	Educate community with information of how to mitigate homes from natural hazards by posting information on Website, Newspaper, Social Media and Bill Inserts.	Town	H	1,2,3	Multiple	2025	<$5K	General Funds
2020-50	Town of Walsh	Street drainage improvements.	Public Works	M	1,2	Flooding	2026	>$500k	General Funds, Grants
2020-56	Town of Walsh	Bi-annually create a large fuel break around each town.	Public Works	H	1,2	Wildfire	2026	<$5K	General Funds

3. Planning Process

3.1. Introduction

This section provides an overview of the planning process used to create the 2020 Southeast Hazard Mitigation Plan update (Plan). This section includes how the Plan was prepared, who was involved in preparing the Plan, how the public and stakeholders were involved, and the review and incorporation of existing plans and studies.

3.2. Background on Hazard Mitigation Planning in the Southeast Region

Prior to initiating the development of this regional multi-jurisdictional Hazard Mitigation Plan in 2014, a substantial coordination effort took place to ensure the participation of all 6 counties within the Southeast Colorado All Hazards Region (SECAHR).

This plan was prepared as a regional, multi-jurisdictional plan. The planning region is comprised of the 6 counties of the Southeast Colorado All-Hazards Planning Region established by DHSEM. These counties include Baca, Bent, Crowley, Kiowa, Otero, and Prowers. All local units of government, special districts, and relevant organizations in each county were invited to participate in the planning process. The decision whether or not to participate in this process was a local decision, based on local community needs. Communities have the options to not prepare a plan, to prepare a stand-alone plan for their jurisdiction, or to participate in a multi-jurisdiction or county-wide plan.

3.3. The Planning Process

The planning process was organized in five phases, including:

- Phase I: Organize resources/planning process
- Phase II: Assess risks
- Phase III: Develop the mitigation strategy
- Phase IV: Implement the plan and monitor progress
- Phase V: Plan adoption

The following sections detail each phase of the planning process.

3.3.1. Phase I: Organize Resources

Hazard Mitigation Planning Steering Committee Kickoff Webinar

This phase started with a commitment to updating the Southeast Region Hazard Mitigation Plan from all six counties. Efforts such as refining the scope of the Plan and the schedule; discussing coordination with participating departments and individuals who should be invited to serve on the local planning teams; establishing clear participation standards for all Plan participants; gathering and review of initial data and documents relative to the planning process; clearly defining roles and responsibilities of the consultant (CDR Maguire and Synergy Disaster Recovery) and all adopting jurisdictions and entities; discussion of an initial public involvement strategy; and setting dates for the kick-off meeting with the local planning committee (LPC) all identified as important initial planning steps.

A pre-kickoff webinar was held on May 1, 2019 with the Hazard Mitigation Planning Steering Committee (Steering Committee), listed in the table below. A copy of the agenda can be found in Appendix A.

Table 3-1 Southeast Region Hazard Mitigation Planning Steering Committee

Name	Organization	Title
Jerry Casebolt	SE Region	Southeast Region Homeland Security Coordinator
Rick Stwalley	Bent County	County Emergency Manager
Jennifer Leathers	Baca County	County Emergency Manager
John Reitan	Crowley County	County Emergency Manager
Theresa Witte	Kiowa County	County Emergency Manager
Danny Chavez	Otero County	County Emergency Manager
Staffon Warn	Prowers County	County Emergency Manager
Mark Thompson	State of Colorado	Mitigation Planning Specialist
Riley Frazee	State of Colorado	Southeast Region Field Manager
Michael Garner	CDR Maguire	Consultant – Project Manager
Lisa Clay	CDR Maguire	Consultant - Project Planner

Major outcomes of the kickoff webinar were a discussion of what went well and what could be improved from the County's previous plans; discussion of how to conduct outreach to the planning team, stakeholders, and the public; communication preferences between the Steering Committee; initial conversation about hazards and major events since the previous plans; and participation standards. It was agreed that there would be three workshops (each held twice in two locations across the Region) during the planning process to include a: planning team kickoff, review of the Hazard Identification and Risk Assessment Results, and a Mitigation Strategy workshop.

The planning team kickoff meeting was scheduled for July. The agreed-upon participation standards were as follows:

Consultant:

- Facilitate the planning process to ensure tasks are being completed in agreement with the project timeline.
- Provide overall planning guidance and plan organization in close coordination with participating jurisdictions.
- Guide the public participation process.
- Overall plan writing and data analysis with input from participating jurisdictions and planning team.

- Ensure the plan meets all FEMA requirements.

Hazard Mitigation Planning Steering Committee:

- Work closely with the consultant to ensure data requests are being fulfilled and the planning process moves forward on schedule.
- Aids with communication between the planning team, the public, stakeholders, and the consultant.
- Participates in planning team meetings.

Local Planning Committee (LPC)

- Meeting attendance and participation.
- Providing requested information and data.
- Participation across jurisdictional staff.
- Community and stakeholder involvement and education.
- Review draft plan sections
- Adopt plan as participating jurisdictions.

Local Planning Committee Kickoff Meeting

The LPC kickoff workshops were both held on July 22, 2019 in La Junta (Otero County) and in Lamar (Prowers County). The workshops were also offered as a webinar for participants that couldn't attend in-person. In preparation for the kickoff, the consultant coordinated with the Steering Committee to create a LPC representing all counties, municipalities, local stakeholders, and neighboring entities to be invited to the kickoff workshop. Participants were invited through email. The local planning team is presented in Appendix A

Major goals of the kickoff meeting were for the planning team members to understand the process and importance of hazard mitigation planning; understand their roles and responsibilities as members of the LPC; review the current stage of the planning process; review data requests; review the draft public involvement strategy; provide an overview of the capabilities assessment; and review next steps in the planning process. The full agenda and sign-in sheets can be found in Appendix A.

Major outcomes of the workshops included a final draft list of hazards to profile in the HIRA; discussion of recent community planning efforts; recent hazard events; and particular problem areas/hazard concerns across the Region. Another important discussion focused on the public involvement strategy. It was determined that a combination of tools and resources work the best for public involvement across the Region, including: LEPC meetings, social media, organizational websites and distribution lists, and local media.

The timeline for public involvement was also discussed, and the consultant used this information to further refine the public involvement plan. Data requests, such as critical facilities, were reviewed and the planning team provided input on other relevant plans. The following post-meeting action items were discussed for the local planning team:

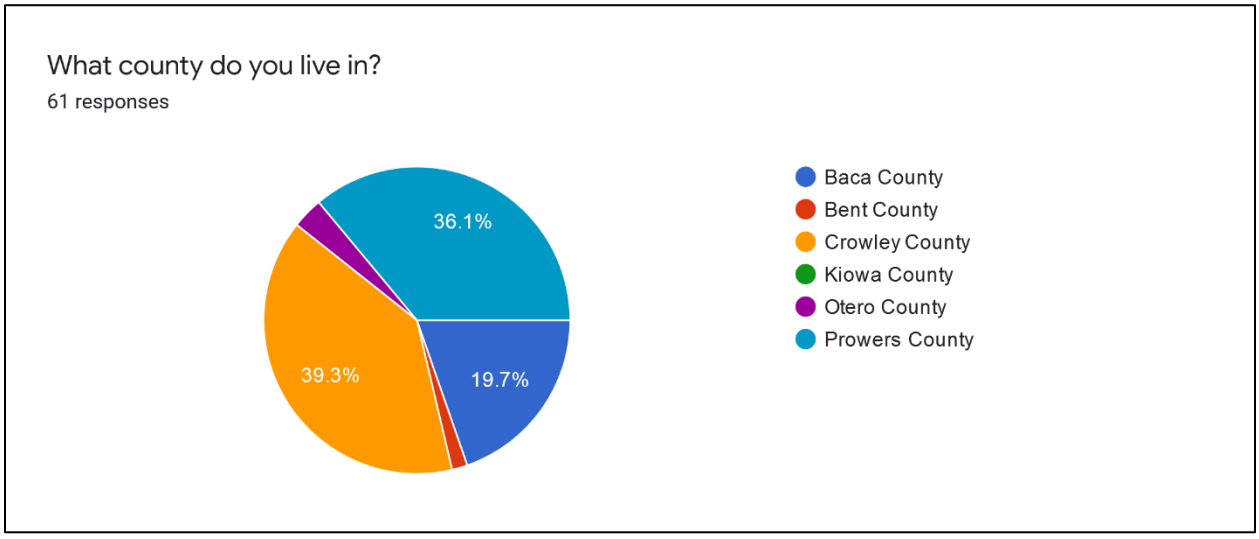
- Provide Best Available Data / Recent Community Plans
- Provide any additional Local Planning Committee Participants
- Mitigation Capabilities Input
- Public Involvement Input

Public Involvement

Based on feedback from the Steering Committee and the LPC kickoff workshops, a Public Involvement Plan (PIP) was developed for the Region in the summer of 2019. It was disseminated to the LPC for their input on public involvement tools and the timeline to utilize each tool for outreach to the public. Examples of public outreach tools for the Region included: LEPC meetings; organizational websites, social media, and distribution lists; and local media. The completed PIP is provided in Appendix B. With input from the LPC, the consultant helped develop the public outreach material and disseminate it in accordance with the PIP timeline and contacts. The timeline also ensured outreach would be utilized in each phase of the planning process, so the public remained involved and informed.

As part of the PIP, two surveys were distributed to the public during the planning process. The first was the Hazard Risk Perception Survey, distributed in summer/fall of 2019. This survey was sent out to gain an understanding of public knowledge of hazards in their communities, and their perception of what poses the most risk. Overall, the survey gathered 61 responses. Figure 3-1 shows the distribution of the location of participants.

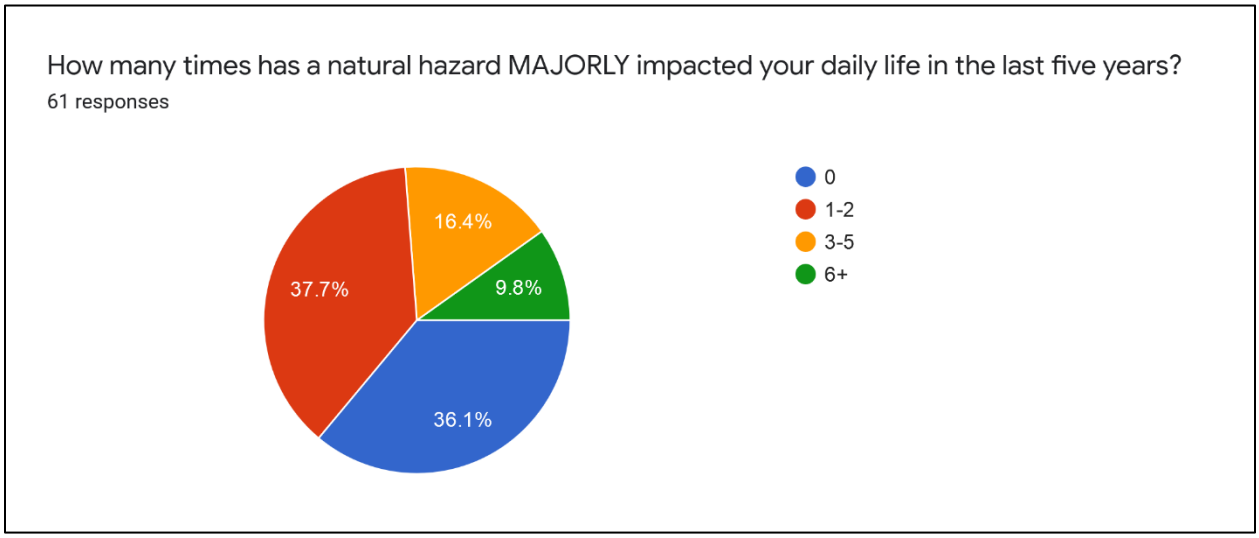
Figure 3-1 Public Survey 1 Responses

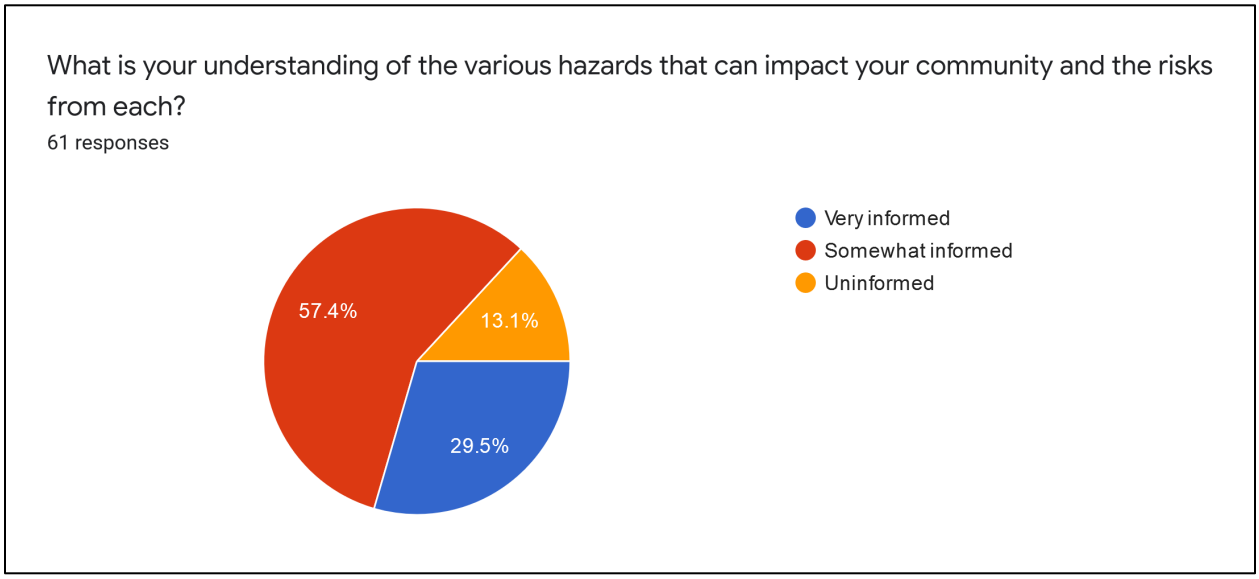


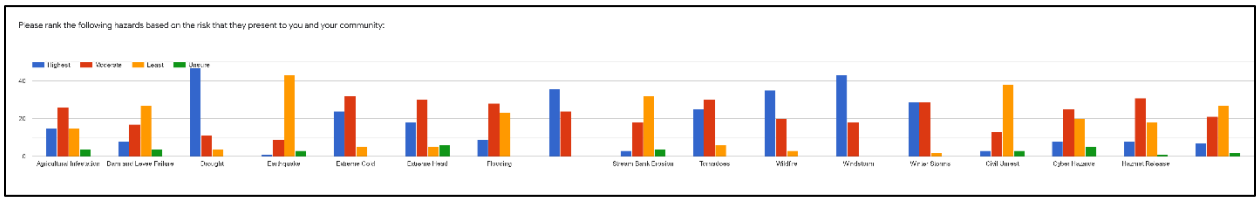
The results are portrayed in the figures below. Key takeaways from this survey are:

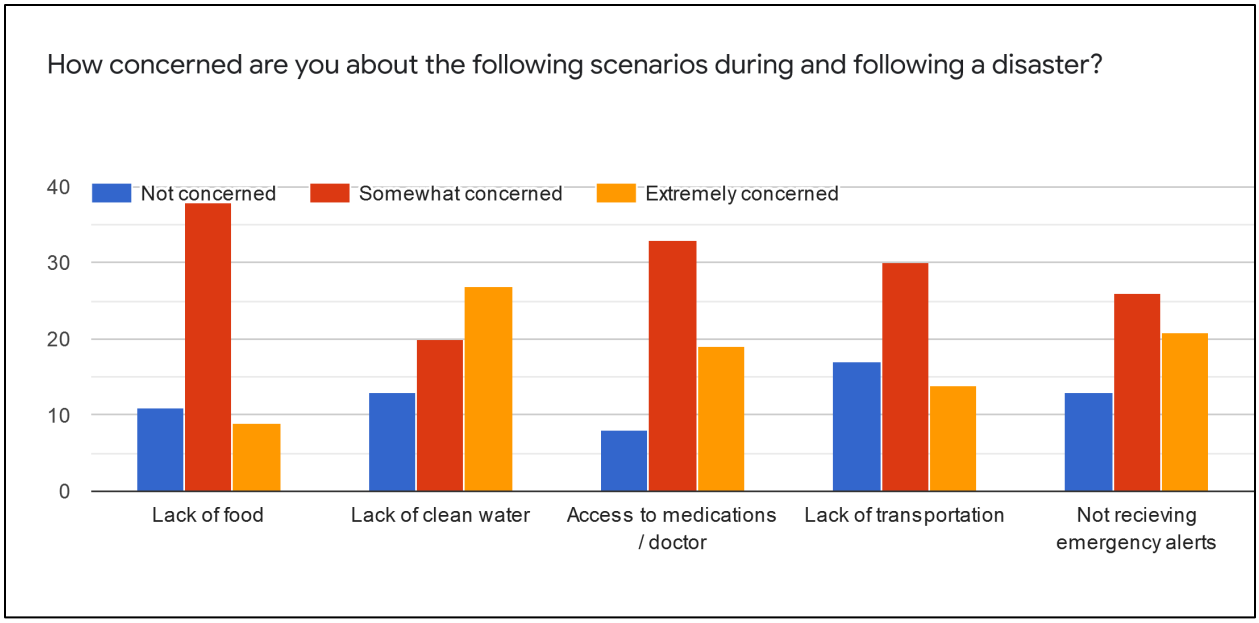
- Approximately 38% of the respondents have been majorly impacted by at least one natural hazard in the past five years.
- Only 30% of respondents consider themselves “very informed” on how various hazards can impact their community. Over 57% consider themselves “somewhat informed”.
- Respondents ranked drought, severe weather, wildfire, and windstorm as the hazards presenting the greatest risk to the Region. Earthquake, civil unrest, and stream bank erosion ranked as the lower risk hazards.
- Lack of clean water was the top concern following disasters. Not receiving emergency alerts and access to medications were the lower of concerns.
- Over half of the respondents have an emergency kit, and over 57% have taken action to make their home or neighborhood more resistant to hazards.

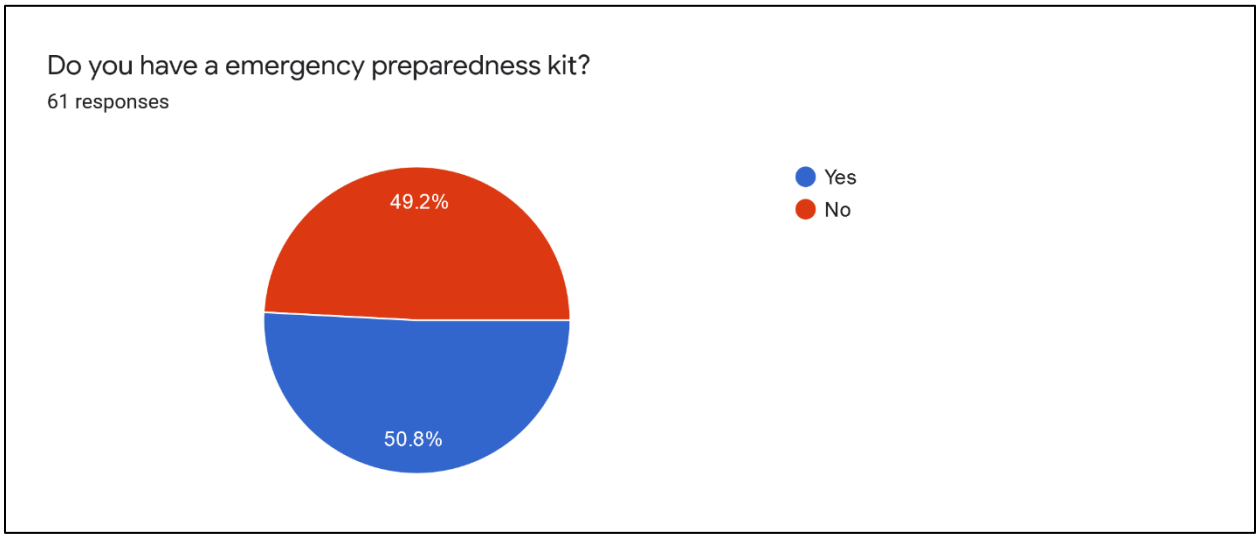
- Social media is the most effective way to receive information about hazard mitigation by respondents (85%), followed by television/radio (46%).

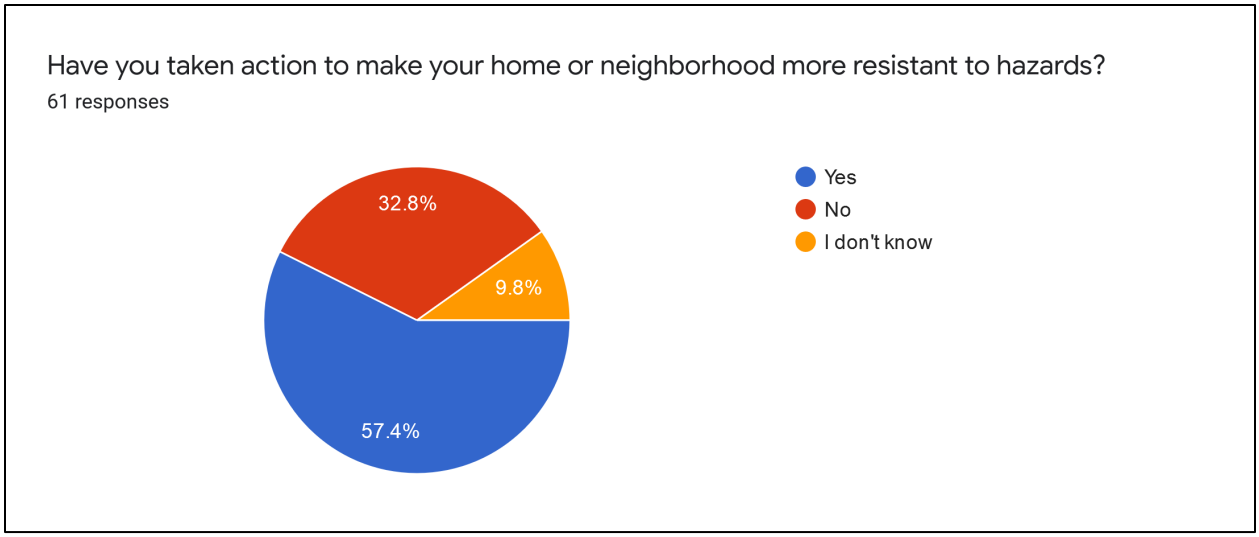


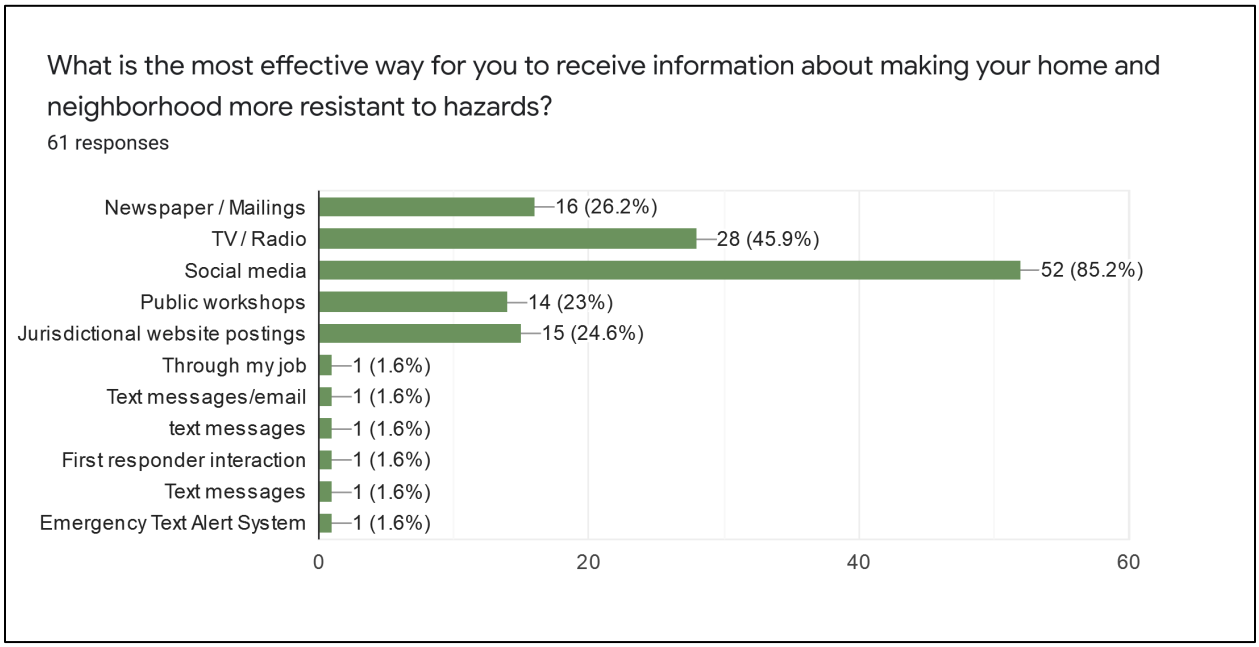





How concerned are you about the following scenarios during and following a disaster?
40
30
20
10
0
Not concerned
Somewhat concerned
Extremely concerned
Lack of food
Lack of clean water
Access to medications / doctor
Lack of transportation
Not recieving emergency alerts


Do you have a emergency preparedness kit?
61 responses
49.2%
50.8%
Yes
No



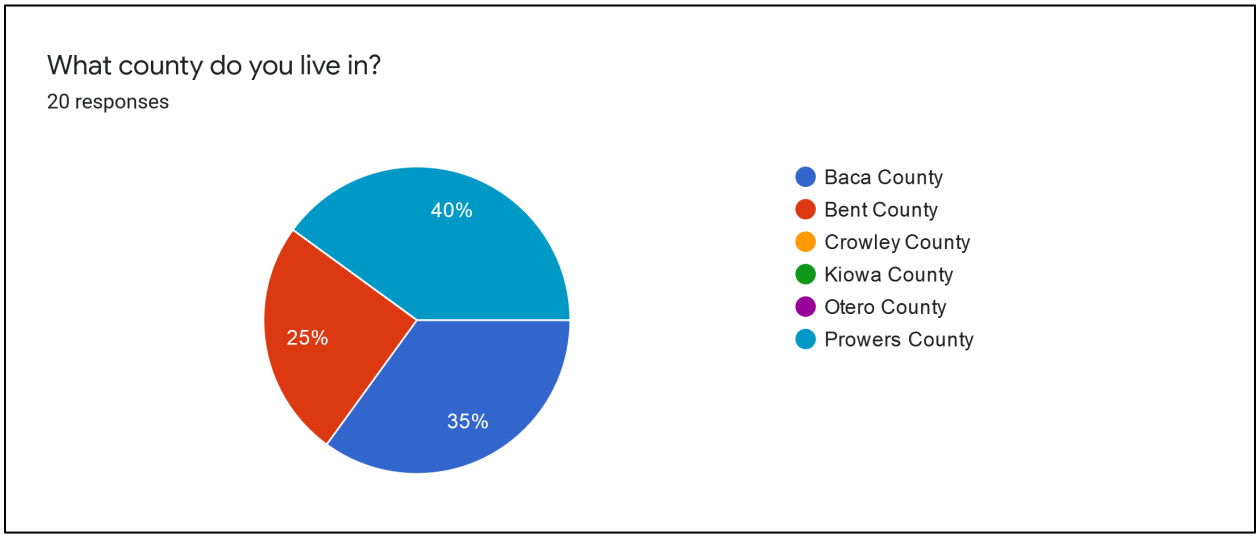


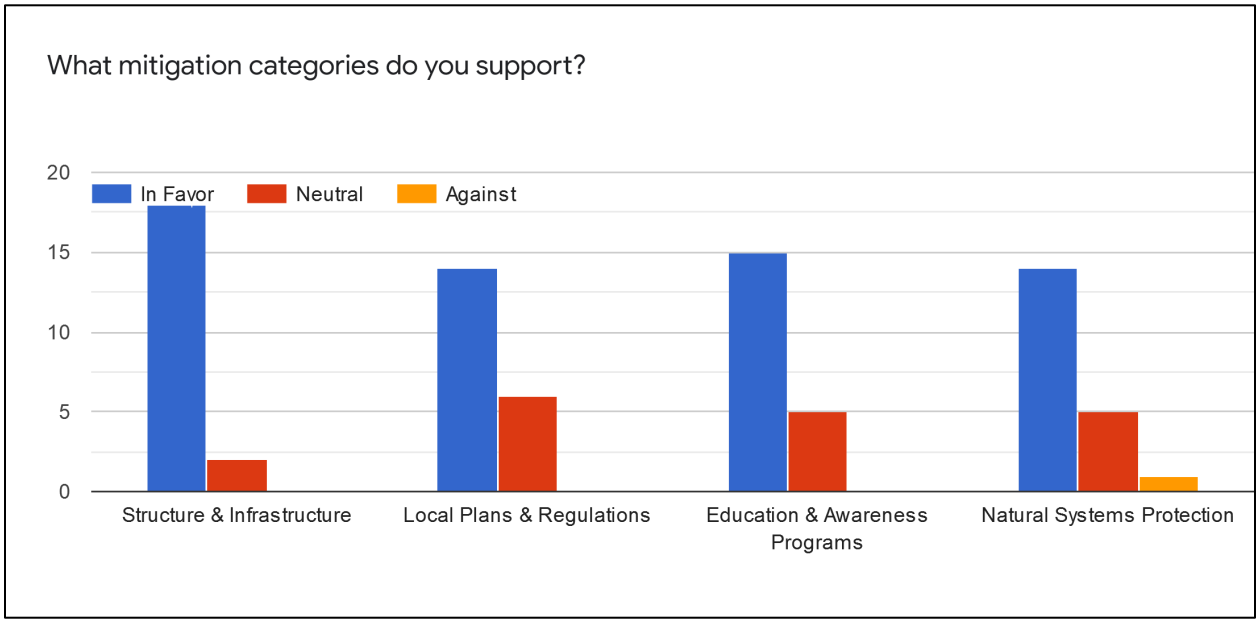
The second survey distributed to the public was the Public Hazard Mitigation Survey, distributed in fall/winter 2019. This survey was sent out to educate the public on mitigation actions, gain an understanding what types of mitigation strategies the public supports, and give the public an opportunity to contribute potential mitigation actions. Overall, the survey gathered 20 responses.

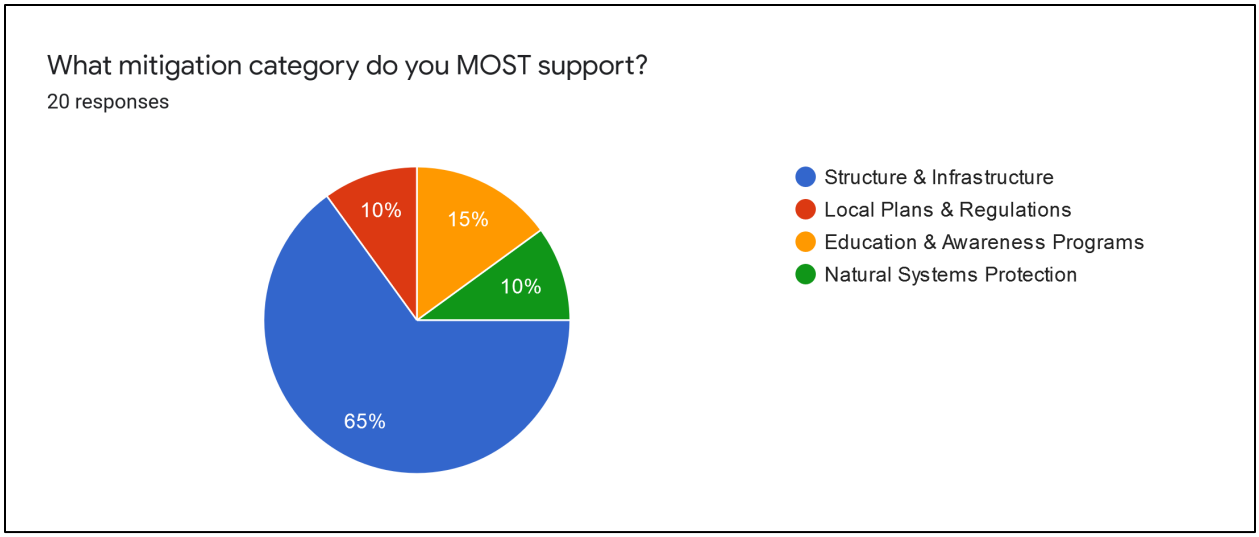
The results are portrayed in the figures below. Key takeaways from this survey are:

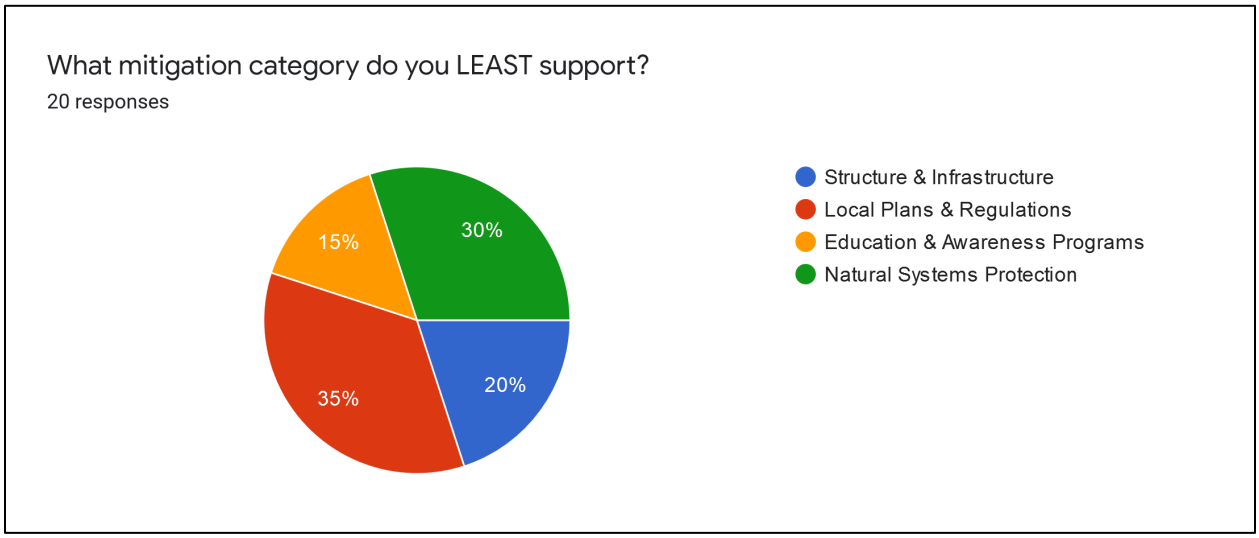
- Overall, the majority of respondents are in favor of all types of mitigation actions.
- Structure and infrastructure projects were the public's preferred type of mitigation.
- The least supported mitigation categories included local plans & regulations and natural systems protection.

- Many of the open ended comments focused on the hazards of wildfire, severe weather, and winter storms.









Lastly, the public was given the opportunity to review and comment on the draft plan between May 1, 2020 and May 15, 2020. Digital copies of the final draft plan were distributed in accordance with the public involvement plan. There were no comments received from the public.

Review and Incorporation of Existing Planning Mechanisms

Over the course of the planning process, numerous other plans, studies, reports, and technical information were obtained and reviewed for incorporation or reference purposes. The majority of sources referenced and researched pertain to the risk assessment and the capabilities assessment. The mitigation strategy also includes input from existing community plans and technical information research. The following list shows the primary documents and technical resources reviewed and used for incorporation into this HMP.

Southeast Region

- Southeast Colorado All-Hazards Region (SECAHR) Debris Management Plan (2019)
- SECAHR Tactical Interoperable Communications Plan (TICP) (2019)

- Southeast Regional Healthcare Coalition (SERHCC) Response Plan (2019)
- SERHCC Hazard Vulnerability Analysis (2018)
- Southeast Regional Emergency Management Alert Procedures (REMAP) (2019)

Baca County

- Threat and Hazard Identification and Risk Assessment (THIRA) (2017)

3.3.2. Phase II: Assess Risks

The Hazard Identification and Risk Assessment (HIRA) process began almost immediately. Data were gathered from other planning resources (see above), the LPC, the Steering Committee, the State of Colorado, and other publicly available data sources. Sources of data are discussed in the text and as footnotes throughout the HIRA section. The Steering Committee and LPC were instrumental in supplying jurisdictional-specific data to the consultant, who performed the analysis and writing of the HIRA. As data requests were needed, requests went out to the Steering Committee, who would direct the consultant to the correct person on the planning team for the data. Data were collected and incorporated into the HIRA through October 2019, and the draft results of the HIRA were presented to the planning team during the Risk and Vulnerability Assessment workshops. Additionally, the results of the public Hazard Risk Perception Survey were incorporated into the HIRA. The draft HIRA was sent for planning team review in October 2019 and finalized in December 2019 after all comments were incorporated.

Planning Team Risk and Vulnerability Assessment Workshops

The planning team risk and vulnerability assessment virtual workshops were held on November 1st and 4th, 2019 through webinars.

Major goals of these workshops were for the results of the HIRA to be presented to the planning team and to receive any feedback on the results and hazard rankings, review critical facility analysis results, review remaining data requests, continue with the public involvement strategy, and to finalize mitigation goals as well as start gathering ideas for mitigation objectives and actions. The full agenda and sign-in sheets can be found in Appendix A.

Outcomes of the workshops included final input on the HIRA results and rankings. Remaining data requests were provided to finalize the HIRA. The capability assessment results were also presented and reviewed. The goals from the 2014 Southeast Region Hazard Mitigation Plan were reviewed and determined to still be relevant for this Plan update. Additionally, the public involvement strategy was discussed and the second public survey was to be sent shortly after the workshop. The following post-meeting action items were discussed for the local planning team:

- Continue local discussions relating to this project
- Begin identifying new mitigation actions
- Capability assessment survey revisions (if necessary)
- Public survey / involvement
- Review of Risk Assessment section

Following these LPC workshops, county emergency managers agreed to share an update of this planning process with their respective LEPC's at this point and going forward. Available documentation is included in Appendix A.

3.3.3. Phase III: Develop the Mitigation Strategy

Mitigation strategy development was initiated by reviewing the goals and objectives from the previous hazard mitigation plan. Ultimately, the LPC determined to proceed with these goals and objectives, with some minor edits. The previous mitigation actions were reviewed by each jurisdiction, and new actions were developed based on planning team input, the results of the HIRA, other planning documents, and the public mitigation strategy survey. All mitigation actions were incorporated into a database for easy tracking and updating by the Region.

Planning Team Mitigation Strategy Workshop

The LPC mitigation strategy workshops were both held on January 22, 2020. As with the kick-off workshops, the same two locations (La Junta and Lamar) were utilized to maximize in-person LPC participation. Major goals of these workshops were to review goals/potential objectives, review the results of the capability assessment, obtain status updates on past high priority mitigation actions, review the results of the public mitigation strategy survey, discuss plan maintenance and integration, and create new mitigation actions. The full agenda and sign-in sheets can be found in Appendix A.

Major outcomes of the workshops were discussions around plan maintenance, implementation, and integration (discussed more below and in Chapter 4 of this Plan). Significant time was spent brainstorming new mitigation actions. A mitigation action project sheet was provided to all participants for the creation of mitigation actions, which would later be added to a database for simplified tracking. Additionally, it was determined to rank new mitigation actions based on defined priorities (see Chapter 2). It was decided to review the Plan annually by providing updates during one of the quarterly LEPC meetings. The following post-meeting action items were discussed for the local planning team:

- Finalize past Mitigation Actions / Projects reporting
- Finalize new Mitigation Actions / Projects
- Review draft updated Plan
- Public Review and Comment

3.3.4. Phase IV: Implement the Plan and Monitor Progress

As discussed previously, the implementation phase was discussed in detail during the mitigation strategy workshops. It was determined that the Plan will be reviewed at an annual (1st or 2nd quarter) LEPC quarterly meeting, ensuring it is an agenda item at least once a year. Further discussion about implementation, monitoring, and Plan integration is discussed in Chapter 4 of this Plan.

4. Plan Maintenance, Revision, and Integration

4.1. Introduction

This section of the Plan describes the ongoing methods to keep this Plan current. It describes how the Plan will be reviewed annually, how the public will be kept involved, and how the Plan will be integrated into other planning mechanisms. The plan maintenance process details the formal process that will ensure the Southeast Region Hazard Mitigation Plan remains an active and relevant document. The procedures include a schedule for monitoring and evaluating the Plan annually, as well as revising it every five years. This section also describes how the Region will integrate public participation throughout the plan maintenance process. It was determined during the mitigation strategy workshops the Region will utilize each County's Local Emergency Planning Commission (LEPC) for monitoring and updating this Plan. Each LEPC is chaired by the county emergency manager and consists of representatives for all jurisdictions and applicable organizations that work in each county.

4.2. Plan Monitoring, Evaluation, and Enhancement

The county emergency managers are tasked with the overall responsibility of monitoring their components of this Regional Plan. The Plan will be periodically reviewed to ensure it reflects current vulnerabilities and priorities of the counties and participating jurisdictions. Reviewing and monitoring the Plan also gives plan developers an opportunity to report progress made and provides the public with an opportunity to see progress made.

4.2.1. Annual Meeting and Review

The Plan will be reviewed annually during the quarterly county LEPC meetings. This will occur in the first or second quarter. Led by each county emergency manager, the meeting will be used to determine the effectiveness of programs and reflect changes in programs that may affect mitigation priorities. As part of the evaluation process, responsible agencies will be invited to share an update on their project or projects at the meeting.

In addition, the following questions will be asked:

- Have any potential hazards developed that were not addressed in the Plan?
- Have any natural disasters occurred that were not addressed in the Plan?
- Has any unanticipated development occurred that is vulnerable to hazards?
- Are there any additional mitigation ideas that need to be incorporated?
- Have projects been initiated and or completed?
- What are the barriers to completing projects identified in the Plan?
- Are the Plan goals still reflective of community priorities to reduce hazard vulnerabilities?

The purpose of these questions is to determine if the goals are still current and what progress has been made on the Plan. Agencies responsible for mitigation actions, as well as all participating jurisdictions, will be asked to submit any progress on implementing actions. An update will be required at the annual meeting and can be submitted at any time to the county emergency managers. The discussion will be documented so that when the Plan is revised, the findings of the monitoring can be incorporated in the next five-year update.

Following the annual review meeting, each emergency manager will then prepare a present a summary update to their respective boards or councils, during a publicly held meeting. The Southeast Regional Healthcare Coalition is also able to help disseminate these annual updates to the public during summer (June) events.

4.2.2. Five Year Update of the Plan

Any of the following three situations could trigger a review and update of the Plan:

- Occurrence of a major natural disaster in or near the Region
- Passage of five years
- Change in state or federal regulations which must meet compliance.

The Plan will be thoroughly reviewed and updated at the five-year mark unless it has undergone a more recent revision (with associated FEMA approval). At the five-year mark, several questions will be asked:

- Do the goals address current and expected conditions?
- Has the nature or magnitude of risks changed?
- What additional hazard events have occurred?
- Have the capabilities changed including social, technical, administrative, political, legal, economic, and environmental?
- Are there any coordination issues that should be addressed?
- What progress has been made to complete mitigation actions?
- How has the public remained involved over the last five years?
- Did the identified departments, individuals and/or other partners participate in the Plan implementation process as assigned?

4.2.3. Five Year Revision Procedures

Should a major disaster occur in the Southeast Region, the LPC shall meet following the disaster to determine whether a review of the hazard mitigation plan is warranted. In the absence of a major disaster, the five-year review will take place during the year+ period preceding the FEMA approval anniversary date (or sooner). The Southeast Region and the 2020 Plan's LPC will focus on the following tasks:

- Review the Hazard Mitigation Plan Review Tool form completed by the CO DHSEM and FEMA during their most recent review of the Plan.
- Examine and revise the risk assessment data as needed to ensure it is current.
- Update the mitigation strategies to incorporate completion of actions and add any needed strategies or projects.
- Identify problems that may be hindering or affecting implementation of the Plan and recommend actions for resolving those problems.
- Recommend any necessary revisions to the hazard mitigation plan.
- Comply with all applicable regulations and statutes.

Forty-five days prior (or earlier) to the five-year anniversary date, a final draft of the revised plan will be submitted to DHSEM, and then to FEMA. Once FEMA approval has been granted, the Plan will be adopted locally.

4.3. Plan Adoption

Plan adoption will occur following an "approved pending adoption" status by FEMA. Once this status has been received, the counties and participating jurisdictions need to adopt the Plan. Adoption will occur via a resolution and will be passed by county commissions and other governing bodies. A copy of the current resolution can be found in Appendix D. The county emergency managers will be the primary authority in maintaining and coordinating the Plan adoption by the jurisdiction.

4.4. Continued Public Involvement

The public is encouraged to be involved in the continual updates of the hazard mitigation plan. Through the 2020 Plan update, the Region's counties and municipalities implemented a public engagement effort and the methods utilized can continue to be leveraged for ongoing public involvement. The county emergency managers will be the lead to ensure the public remains involved over the next five years via following methods:

- Including hazard mitigation education annually at the Southeast Regional Healthcare Coalition's June event.
- Reporting of the annual Plan review summary to each jurisdiction's respective boards or councils, during a publicly held meeting.
- All jurisdictions will continue to utilize social media, print media, and community websites to involve the public on hazard mitigation efforts.

4.5. Integration of Hazard Mitigation into other Planning Mechanisms

The participating jurisdictions will integrate this Hazard Mitigation Plan into relevant government decision-making processes or mechanisms, where feasible. This includes integrating the requirements of the Hazard Mitigation Plan into other local planning documents, processes, or mechanisms, such as comprehensive or capital improvement plans, when appropriate. The members of the LPC will remain charged with ensuring that the goals and actions of new and updated local planning documents are consistent and do not conflict with the goals and actions of the Hazard Mitigation Plan. Further, they will ensure that any actions will not contribute to increased hazard vulnerability in the Region.

The county emergency managers see most community plans, as they originate or filter through the Emergency Management office. Much of the information in this Plan, such as the risk assessment, will be incorporated into other emergency management planning efforts, such as the EOP. Many different entities will be responsible for following the Southeast Region Hazard Mitigation Plan. Each of the county commissioners and participating jurisdictions will have the authority to promote policies regarding hazards. Each county's LEPC will also consider the hazard mitigation plan in its efforts. It can refer to the Plan for guidance on past occurrences and future impacts. Agencies can also utilize the plan to seek out grants and projects that fulfill the mitigation requirements outlined in the Plan. The county emergency managers will include the necessary information in future plans and coordinate this operation through other agencies as plans are revised and reviewed.

5. Southeast Colorado Region Community Profile

5.1 Geography and Climate

The planning region is comprised of six counties of the Southeast All-Hazards Planning Region established by the Colorado Division of Homeland Security and Emergency Management (DHSEM). These Counties include Baca, Bent, Crowley, Kiowa, Otero, and Prowers Counties. This region of the State is generally characterized by the Great Plains. As shown in Table 5-1, the region covers 9,598 square miles of land and 65 square miles of water, and elevations range between 3,000 and 6,000 feet, which increases from east to west.[1]

Table 5-1 Southeast Region Geography

	Baca	Bent	Crowley	Kiowa	Otero	Prowers
Land (sq. mi)	2,557	1,541	800	1,786	1,270	1,644
Water (sq mi)	1	27	11	15	7	4
Total	**2,558**	**1,568**	**811**	**1,801**	**1,277**	**1,648**

As shown in Table 5-2, the majority of the land mass is devoted to agriculture, with an estimated 8,565 square miles devoted to farmland (89% of the planning area).[2]

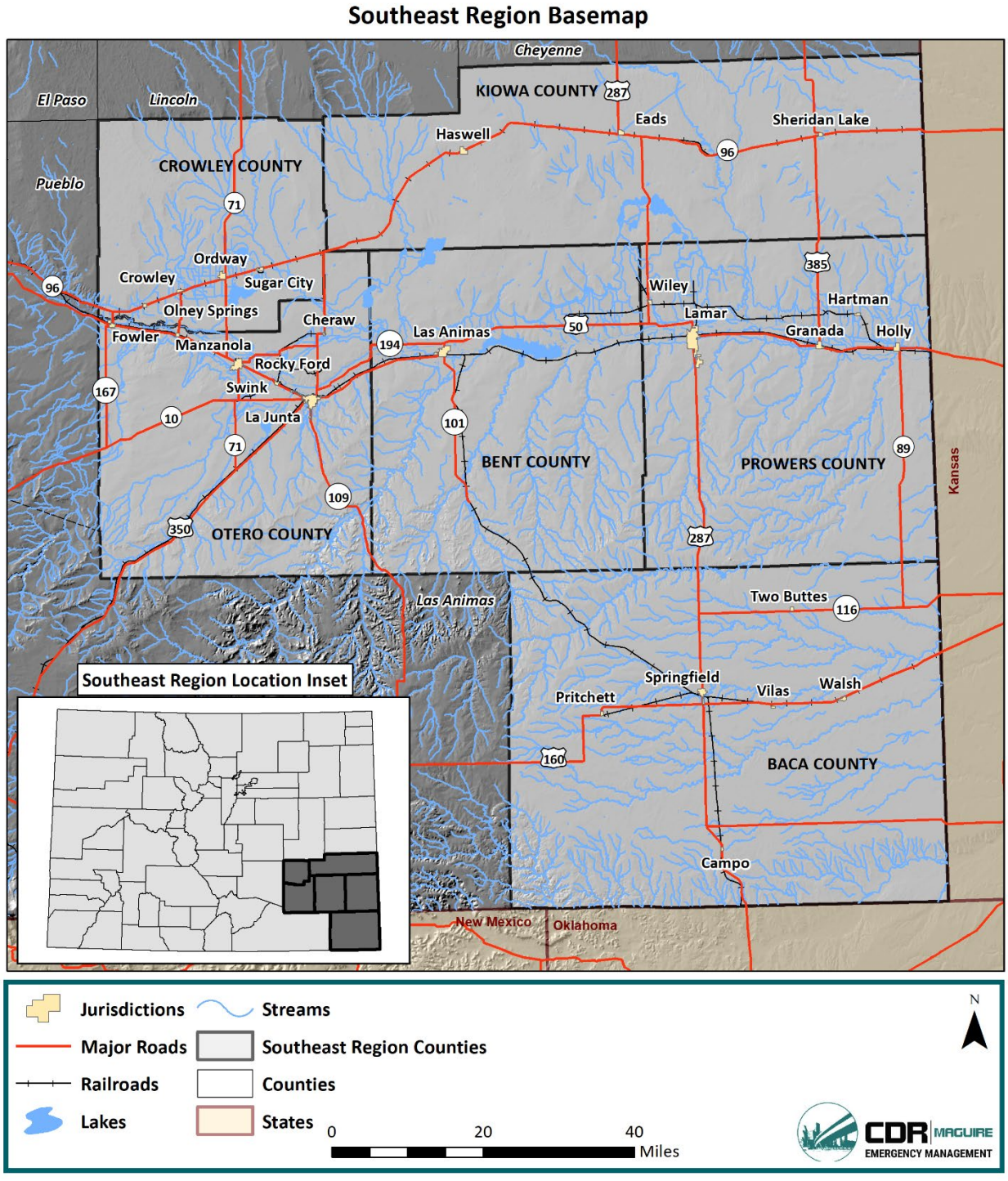
Table 5-2 Southeast Region Farms

	Baca	Bent	Crowley	Kiowa	Otero	Prowers
Farms	667	274	246	388	444	472
Land in Farms (sq. mi)	2,300	1,148	757	1,706	1,074	1,580
Land in Farms (acres)	1,471,783	734,630	484,328	1,091,807	687,530	1,011,291
Average Size of Farm (acres)	2,207	2,681	1,969	2,814	1,548	2,143

The major rivers in the region include the Arkansas River, Big Sandy Creek, the Purgatoire River, and Two Butte Creek. Major roadways include US 50, US 385, US 287, US 350, State Highway 96, State Highway 71, and State Highway 10. A base map of the planning region is illustrated in Figure 5-1.

[1] US Census Bureau
[2] USDA, 2017 Census of Agriculture.

Figure 5-1 Southeast Region Basemap



The climate of the Great Plains is characterized by dry winters with occasional wind-blown snow and alternating periods of very cold temperatures followed by very warm days. Springs are windy and highly variable, including the occasional blizzard, rapid and drastic temperature changes, and high levels of precipitation in the form of both snow and rain. Summers offer low humidity with hot days and cool

nights. Large thunderstorms are common and some of the most ferocious hail storms in the entire continent occur here. The fall is cool and dry. Overall, the area is considered semi-arid.

5.2 Population

The estimated 2017 population for the Southeast Region is 46,892, which is a decrease of 4.1% since 2010. All counties have estimated to lost population since the previous Plan. Looking over a longer time period, Crowley County has grown 4.2% since 2000. Table 5-3 shows the population information for the Region.

Table 5-3 Southeast Region Population

County	2000*	2010*	2017**	% Change 2010 to 2017	% Change 2000 to 2017
Baca	4,517	3,788	3,539	-6.6%	-21.7%
Bent	5,998	6,499	5,866	-9.7%	-2.2%
Crowley	5,518	5,823	5,749	-1.3%	4.2%
Kiowa	1,622	1,398	1,364	-2.4%	-15.9%
Otero	20,311	18,831	18,370	-2.4%	-9.6%
Prowers	14,483	12,551	12,004	-4.4%	-17.1%
Region	52,449	48,890	46,892	-4.1%	-10.6%

*U.S. Census Bureau

**Colorado Demography Office, 2017 population estimates

Although population growth has not been significant in the Region, it was noted by the Planning Team that some changes have occurred since the previous Plan, including the Colorado Coalition for the Homeless now located in the Region, as well as the addition of hemp processing facilities, primarily in Otero and Prowers Counties.

Select demographic information for the Southeast Region is shown in Table 5-4.[3] Certain demographic characteristics such as age, disability, living in a mobile home, and language spoken can increase a population's vulnerability to the impacts of hazard events. The relation to vulnerability is discussed more thoroughly in each hazard profile's vulnerability assessment. It should be noted that in populations as small as many counties in the Southeast Region, Census data is less precise, and these statistics are to be used as general trends.

Table 5-4 Southeast Region Demographics

Characteristic	Baca	Bent	Crowley	Kiowa	Otero	Prowers
Gender/Age						
Male (%)	48.4	64.9	68.0	50.2	48.9	50.6
Female (%)	51.6	35.1	32.0	49.8	51.1	49.4

[3] U.S. Census Bureau, 2017 ACS

Characteristic	Baca	Bent	Crowley	Kiowa	Otero	Prowers
Under 5 years (%)	5.3	3.7	3.2	10.8	6.0	6.7
65 years and over (%)	25.2	16.9	13.3	21.3	19.3	16.7
Race/Ethnicity						
White (%)	95.3	89.9	87.0	92.4	90.2	95.2
American Indian/Alaska Native (%)	1.1	1.0	1.4	0	1.5	0.3
Asian (%)	0	0.4	0.5	0	1.0	0.6
Black or African American (%)	1.5	6.1	4.3	0.6	0.8	0.5
Native Hawaiian or other Pacific Islander (%)	0	0	0	0	0.9	0
Hispanic or Latino (of any race) (%)	10.5	32.0	30.7	4.4	41.5	37.2
Two or more races (%)	1.4	1.3	5.1	7.0	2.0	2.1
Education						
High school graduate or higher (%)	85.5	84.9	84.9	95.4	85.3	81.3
Disability						
Total civilian noninstitutionalized population (%)	21.9	25.9	25.4	15.2	20.6	17.2
Mobile Homes						
Mobile Homes (%)	12.1	14.3	18.1	17.3	7.0	13.1
Language						
Speaks English less than “very well” (%)	3.6	6.0	7.1	0.6	4.2	8.3

5.3 Economy

Table 5-5 shows select economic characteristics of the County based on the 2017 U.S. Census ACS.

Table 5-5 Southeast Region Economic Characteristics

Characteristic	Baca	Bent	Crowley	Kiowa	Otero	Prowers
Persons below Poverty Level (%)	19.5	24.5	24.6	10.6	22.9	18.3
Median Home Value ($)	79,800	77,700	79,700	83,200	91,800	94,400
Median Household Income ($)	35,898	32,500	35,292	39,250	35,051	41,740
Population in Labor Force (%)	59	30.2	46.3	62.3	54.3	63.2
Unemployment (%)	4.5	9.3	21.4	3.1	9.3	8.4

5.4 Development Trends

As part of the planning process, the Planning Team looked at growth and development trends. These trends are examined further in the context of each hazard in the HIRA, and how the changes in growth and development affect vulnerability to hazards.

According to the U.S. Census Bureau, the population across all counties in the Region has largely stayed constant or decreased from 2010 to July 1, 2018 (population estimate), with the largest percent decrease in Bent County (-9.5%). Additionally, the number of housing units has stayed relatively constant during this same time period, with the largest increase experienced in Kiowa County (2.7% increase).

Table 5-6 Population and Housing Change from 2010 to 2017

County	2010 Population	2018 Population	# Change	% Change	2010 Housing Units	2018 Housing Units	# Change	% Change
Baca	3,788	3,585	-203	-5.4%	2,248	2,257	9	0.4%
Bent	6,499	5,882	-617	-9.5%	2,242	2,269	27	1.2%
Crowley	5,823	5,858	35	0.6%	1,559	1,593	34	2.2%
Kiowa	1,398	1,383	-15	-1.1%	805	827	22	2.7%
Otero	18,831	18,432	-399	-2.1%	8,969	8,994	25	0.3%
Prowers	12,551	12,164	-387	-3.1%	5,942	5,983	41	0.7%

Population forecasts are produced annually by the State Demography Office on a County scale. Growth is projected to decline through 2050 in all counties except for Crowley, where population is projected to increase by 16%. Table 5-7 shows the population projections for the counties through 2050 and the percent change from the 2018 population.

Table 5-7 County Population Forecast through 2050

County	2018	2020	2025	2030	2035	2040	2045	2050	2017-2050 % Change
Baca	3,585	3,510	3,396	3,258	3,132	3,025	2,931	2,843	-21%
Bent	5,882	5,836	5,812	5,752	5,691	5,631	5,574	5,530	-6%
Crowley	5,858	5,915	6,100	6,256	6,437	6,618	6,702	6,793	16%
Kiowa	1,383	1,373	1,342	1,296	1,249	1,205	1,171	1,145	-17%
Otero	18,432	18,287	18,236	17,756	17,210	16,687	16,194	15,715	-15%
Prowers	12,164	12,027	12,007	11,912	11,793	11,660	11,528	11,395	-6%

6. Hazard Identification and Risk Assessment (HIRA)

6. Hazard Identification and Risk Assessment (HIRA)

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6.1. Disaster Declaration Summary

Major disaster declarations were used to identify and assess hazards in the Region. The following table presents a list of all federal disaster and emergency declarations that have occurred in the Region, according to the Federal Emergency Management Agency (FEMA) and the U.S. Department of Agriculture (USDA). For USDA Secretarial Designations, only primary counties are included, while contiguous counties are not. In addition, the 2018 Colorado State Hazard Mitigation Plan lists disasters declared by the Governor in the State, and are included in this table. This list presents support for identifying which hazards pose the greatest risk to Southeast Region communities. It is evident the Region experiences a multitude of major hazard events, including, but not limited to, drought, flooding, hail, fire, extreme weather/storms, and winter weather.

Table 6-1 Disaster Declarations

Year	Declaring Jurisdiction	Counties Affected	Disaster Type
2019	USDA – Secretarial Designation (S4468)	Crowley, Otero	Drought
2018	USDA – Secretarial Designation (S4313)	Crowley, Kiowa	Drought
2018	USDA – Secretarial Designation (S4304)	Otero	Drought
2018	USDA – Secretarial Designation (S4293)	Baca, Prowers	Drought
2018	USDA – Secretarial Designation (S4280)	Baca	Drought
2017	USDA – Secretarial Designation (S4250)	Otero	Hail
2017	USDA – Secretarial Designation (S4145)	Baca	Drought
2017	State of Colorado	Bent, Otero	Extreme Weather and Flooding
2017	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Wildfire
2015	USDA – Secretarial Designation (S3785)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
2015	Federal – DR 4229	Baca	Severe Weather/Flooding
2014	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Extreme Weather
2014	USDA – Secretarial Designation (S3764)	Otero	Hail
2014	USDA – Secretarial Designation (S3627)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
2013	Federal – DR 4145	Crowley	Flood
2013	State of Colorado	Crowley, Otero, Prowers	Flood
2013	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Winter Storm
2013	USDA – Secretarial Designation (S3456)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
2012	USDA – Secretarial Designation (S3260)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought, excessive heat, high winds
2009	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Severe Blizzard
2009	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Severe Spring Snowstorm
2008	USDA – Secretarial Designation (S2750)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
2008	Federal – Fire Management Assistance Declaration (FM-2760)	Crowley	Wildfire
2008	State of Colorado	Crowley	Wildfire

Year	Declaring Jurisdiction	Counties Affected	Disaster Type
2007	Federal – Emergency (3271-EM, 3270-EM)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Snow
2007	State of Colorado	Prowers	Tornado
2006	State of Colorado	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Snow
2006	USDA – Secretarial Designation (S2351)	Otero	Heat, high winds, drought
2006	USDA – Secretarial Designation (S2329)	Bent, Kiowa	Heat, high winds, insect pests, late freeze, drought
2005-2006	USDA – Secretarial Designation (S2327)	Baca, Prowers	Drought, Fire, High Winds, Heat
2005-2006	USDA – Secretarial Designation (S2287)	Kiowa	Drought, Crop Diseases, Insect Infestation
2005	Federal – Emergency (3224-EM)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Hurricane Katrina Evacuation
2005	USDA – Secretarial Designation (S2188)	Crowley, Otero	Drought, Wind, Heavy Rain, Hail
2004	USDA – Secretarial Designation (S1947)	Baca, Kiowa, Prowers	Drought, Freeze, Hail
2003	USDA – Secretarial Designation (S1843)	Crowley, Otero	Drought, Insects
2003	USDA – Secretarial Designation (S1797)	Baca, Bent, Kiowa, Prowers	Drought
2002	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Snow Emergency
2002	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
2002	State of Colorado*	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Wildfires
2002	USDA – Secretarial Designation (S1643)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
2001	Federal – Major Disaster (1374-DR)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Severe Winter Storms
2001	USDA – Secretarial Designation (S1514)	Crowley, Otero, Prowers	Drought
2000	USDA – Secretarial Designation (S1498)	Baca, Bent	Drought, High Winds, Lightning
2000	USDA – Secretarial Designation (S1451)	Kiowa	Drought, Freezing Temperatures
1999	Federal – Major Disaster (1276-DR)	Bent, Crowley, Kiowa, Otero, Prowers	Flooding
1999	State of Colorado	Bent, Crowley, Kiowa, Otero	Flooding, Landslides, Mudslides
1997	Federal – Emergency	Baca, Crowley, Kiowa, Otero, Prowers	Heavy Flash Flooding

Year	Declaring Jurisdiction	Counties Affected	Disaster Type
1997	State of Colorado	Baca, Crowley, Kiowa, Otero Prowers	Flooding
1995-1996	USDA – Secretarial Designation (S999)	Baca, Bent, Kiowa	Drought
1994	USDA – Secretarial Designation (S767)	Kiowa	Freezing Temperatures
1977	Federal – Major Disaster	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Drought
1965	Federal – Major Disaster (200-DR)	Baca, Bent, Crowley, Kiowa, Otero, Prowers	Tornadoes, Severe Storms, and Flooding
1955	Federal – Major Disaster (33-DR)	Otero	Flood and Tornado

6.2. Hazard Identification

As part of the update process, the hazards from the 2014 Southeast Region Hazard Mitigation Plan were reviewed, and new hazards were considered. The existing hazards were also cross-checked with hazards in the 2018 Colorado State Hazard Mitigation Plan. The hazards profiled in the 2014 Southeast Region Hazard Mitigation Plan were determined to mostly all still be relevant, although not every hazard was determined to be relevant for each jurisdiction. Therefore, it was determined for Local Planning Committee (LPC) members to state whether each hazard is something the County would like to mitigate against, and only profile the ones relevant to each County. Only hazards ranked as 'high' or 'medium' are included in the community profiles and were focused on during mitigation strategy development ('low' hazards were not included). It should also be noted that hazard rankings in this updated plan may differ from those in previous plans. This is a direct result of the updated planning process and may relate to differences in the ranking methodology and recent hazard events.

Further details are found in each County's Risk Assessment section. The following table compares the hazards from the previous hazard mitigation plan to the ones profiled in this Plan, as well as to the State Plan. It was determined there were no major areas of subsidence in the Region, and therefore was excluded from this Plan.

Table 6-2 Hazards Profiled

2014 Southeast Region HMP	2019 Southeast Region HMP	2018 Colorado HMP
Agricultural Infestation	Agricultural Infestation	Avalanche
Dam and Levee Failures	Dam and Levee Failures	Dam Failure
Drought	Drought	Debris Flow
Earthquake	Earthquake	Drought
Extreme Cold	Extreme Cold	Earthquake
Extreme Heat	Extreme Heat	Extreme Temperatures
Flooding	Flooding	Flooding
Severe Weather (Thunderstorms/Lightning/Hail)	Severe Weather (Thunderstorms/Lightning/Hail)	Hazardous Materials Incident
Stream Bank Erosion	Stream Bank Erosion	Landslide/Rockslide
Subsidence	Tornadoes	Lightning

2014 Southeast Region HMP	2019 Southeast Region HMP	2018 Colorado HMP
Tornadoes	Wildfire	Mass Casualty Event
Wildfire	Windstorm	Public Health Emergency
Windstorm	Winter Storms	Severe Winter Storm
Winter Storms	Civil Unrest	Imminent Threat
Civil Unrest	Cyber Hazards	Wildfires
Cyber Hazards	Hazardous Materials	Windstorm
Hazardous Materials	Pandemic and Zoonotic Diseases	Dense Fog
Pandemic and Zoonotic Diseases		Hail
		Tornado
		Erosion/Deposition
		Expansive Soils/Heaving Bedrock
		Radon/Carbon Monoxide/Methane/Other Seeps
		Sinkholes/Subsidence
		Animal Disease Outbreak
		Wildlife Vehicle Collisions
		Pest Infestation
		Critical Infrastructure Disruption/Failure
		Mine Accident
		Power Failure
		Radiological Release

6.3. Critical Facilities

For the purpose of this Plan, 'critical facilities' are defined as local assets vital to the health, safety, and well-being of residents and visitors during the time of and following a natural disaster. These facilities can include: community centers, churches, hospitals, libraries, non-profits, post offices, water treatment centers, police and fire stations, and city administration buildings. Critical facilities are essential to a community's long-term disaster resilience as they are important delivery pathways for diverse crisis management services and resources. As part of the planning process, the Southeast Region Counties identified facilities being termed as critical by utilizing the best available data from the previous planning efforts.

The critical facilities analysis is located in Appendix E (For Official Use Only), available to the LPC and jurisdictions.

6.4. Hazard Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of

the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in Figure 6-1 below. Overall, risk varies somewhat with each jurisdiction, but consistently high ranked hazards include drought, severe weather, wildfire, windstorm, and winter storm.

Figure 6-1 Hazard Rankings

Jurisdiction	Ag Infestation	Dam and Levee Failure	Drought	Earthquake	Extreme Cold	Extreme Heat	Flooding	Severe Weather	Stream Bank Erosion	Tornado	Wildfire	Windstorm	Winter Storm	Civil Unrest	Cyber Hazards	Hazmat Release	Pandemic and Zoonotic Disease
Baca County	H	M	H	L	H	M	M	H	L	H	H	H	H	M	H	H	M
Campo	M	M	H	L	H	M	M	H	L	M	M	M	H	L	M	M	L
Pritchett	H	M	H	L	M	M	M	H	L	H	H	H	H	M	M	M	M
Springfield	M	M	H	L	H	M	L	H	L	H	H	H	H	L	M	H	L
Two Buttes	M	L	H	L	M	M	L	H	L	M	H	M	H	L	M	L	M
Vilas	M	L	H	L	M	M	M	H	L	M	H	M	H	L	M	M	M
Walsh	M	M	H	L	M	M	L	H	L	M	H	M	H	L	M	H	L
Bent County	H	M	H	L	H	M	M	H	H	H	H	H	H	M	M	M	M
Crowley County	M	M	H	M	H	M	M	H	L	H	H	H	H	M	M	M	M
Kiowa County	M	M	H	M	M	M	M	H	L	H	H	H	H	L	M	H	M
Otero County	M	M	H	M	M	M	M	H	M	M	M	M	H	L	M	H	M
Prowers County	H	M	M	L	H	M	H	H	M	H	H	M	H	L	H	H	M
Lamar	M	M	H	L	M	M	M	H	L	H	H	H	H	L	M	H	M

6.5. Hazard Profiles

6.5.1. Profile Methodology

The following sections profile each identified hazard. Due to the similarities across the counties in the Region, hazard description, extent, and location are provided at a regional level in sections 4.5.3 through 4.5.19. The description, extent, and location are described below.

- **Description:** A scientific explanation of the hazard.
- **Extent:** The strength or magnitude of the hazard. Measures of extent may include, but are not limited to, an established scientific scale, wind speed, speed of onset, or duration of the hazard event.
- **Location:** Geographical areas within the Region that are affected by the hazard.

Following these sections, each County in the Southeast Region has a designated risk assessment that details location (if different than the regional location), previous occurrences, probability of occurrence, and the vulnerability assessment. Only high or medium ranked hazards that each County identified are included in the County risk assessments. Supporting information for each hazard can be found in

Appendix C – HIRA Appendix. The hazard profiles are consistently formatted to cover the same information. This format includes seven different subsections that are described below:

- **Previous Occurrences:** Information regarding historical events of the hazard in each County. Previous occurrence data was derived from a variety of sources, including, but not limited to, the LPC, news articles, County websites, the State of Colorado, and federal databases. The National Center for Environmental Information (NCEI), which has been tracking severe weather since 1950, is a primary database used for previous occurrences in this Plan. Their storm events database tracks severe weather events on a county basis and contains data for the following identified hazards in this plan: extreme cold/heat, flooding, lightning, severe weather, tornadoes, windstorms, and severe winter storms.
- **Probability:** The likelihood of future events impacting each County. Given that an exact probability is often difficult to quantify, this characteristic is categorized into ranges to be used in hazard profiles:
    - Unlikely: Less than 1% annual probability
    - Possible: Between 1% and 10% annual probability
    - Likely: Between 10+% and 90% annual probability
    - Highly Likely: Greater than 90% annual probability
- **Vulnerability Assessment:** The vulnerability assessment addresses conditions that may increase or decrease vulnerability. This section will include the inventory exposed/impacts, potential losses, and future conditions.
    - **Inventory Exposed/Impacts:** A qualitative or quantitative analysis of impacts on structures, the economy, people, and the environment.
    - **Loss estimations**: A qualitative or quantitative analysis on potential losses from each hazard is conducted using best available data and resources. Methods utilized include GIS analysis and Hazus analysis where data is available. Additionally, damage estimates are calculated based on reported damages from previous occurrences by jurisdiction, where available. For this Plan, SHELDUS county-wide damage data was also utilized for a method of consistent loss estimations across hazards. It is noted that SHELDUS only reports on a county-wide scale, so it is not possible to determine losses by jurisdiction using this data. Additionally, SHELDUS results may vary from other sources of data, such as NCEI, due to differences in reporting. It should be viewed as an additional resource to understand damage impacts and risks across hazards. SHELDUS results are explained in more detail in Section 6.5.2, as well as in each hazard profile.
    - **Land Use and Development**: Discusses the impact of development trends on jurisdiction's vulnerability to each hazard. Land use and development data was obtained from jurisdiction planners and population statistics from the U.S. Census Bureau and the State of Colorado Department of Local Affairs.

6.5.2. SHELDUS Results

The Spatial Hazard Events and Losses Database for the United States (SHELDUS) Version 17.0 was utilized to assess losses from the following hazards: drought, flooding, fog, hail, lightning, severe storm/thunderstorm, tornado, wildfire, wind, and winter weather. SHELDUS is a county-level dataset that allows for consistent comparison of losses across hazards. All loss information used in this Plan from SHELDUS is reported in 2017 dollars to facilitate even comparison between hazards. SHELDUS utilizes data from 1960 to 2017. It is recognized that this data is not reported by jurisdiction, but can still provide value in consistent comparison across hazards at the county-level. A region-wide summary of

SHELDUS data is reported below, and individual county results are included in the county risk assessment sections in this chapter.

From 1960 to 2017, the Southeast Region experienced a total of 881 hazard events equating to $322,637,340 (2017 dollars) in crop and property damages reported across all hazards. The Region experienced more wind events (232) than any other hazard. This is followed by winter weather events (173). Of the damages, $148,906,323 were crop damages and $173,731,018 were property damages. Total number of events by hazard is displayed in Figure 6-2 below, and total damages is displayed in Figure 6-3 below.

Figure 6-2 SHELDUS Hazard Events

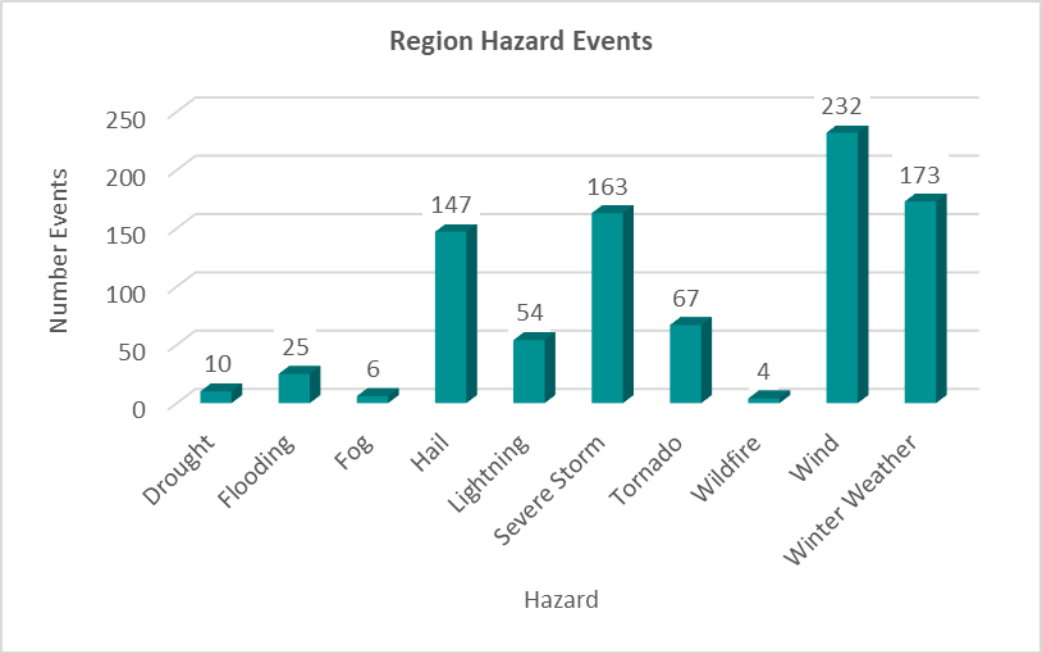
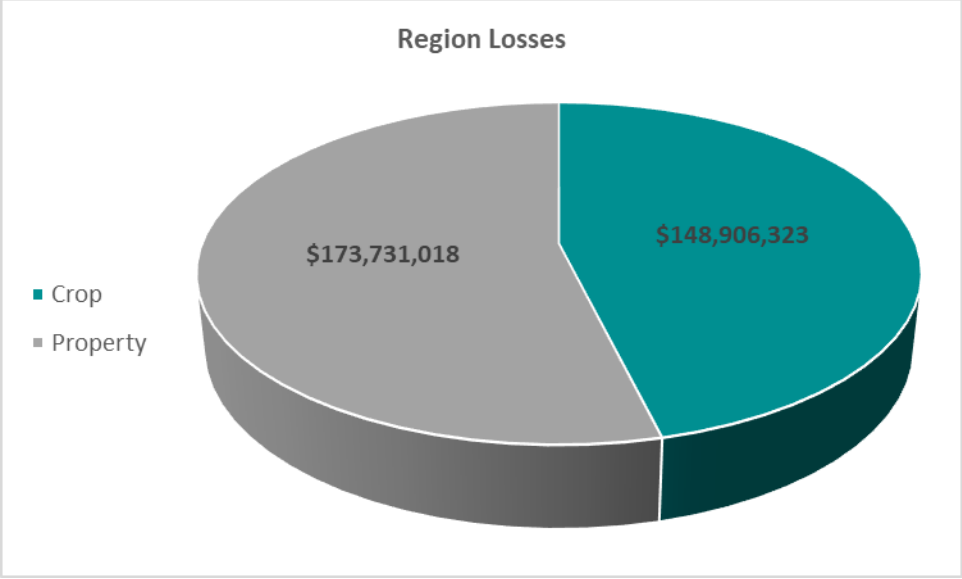


Figure 6-3 SHELDUS Total Losses



Winter weather caused the most in total damages from 1960 to 2017, causing $70,053,481 in total damages. Flooding followed with $66,286,055 in total damages. Figure 6-4 shows damages by hazard.

Figure 6-4 SHELDUS Damages by Hazard

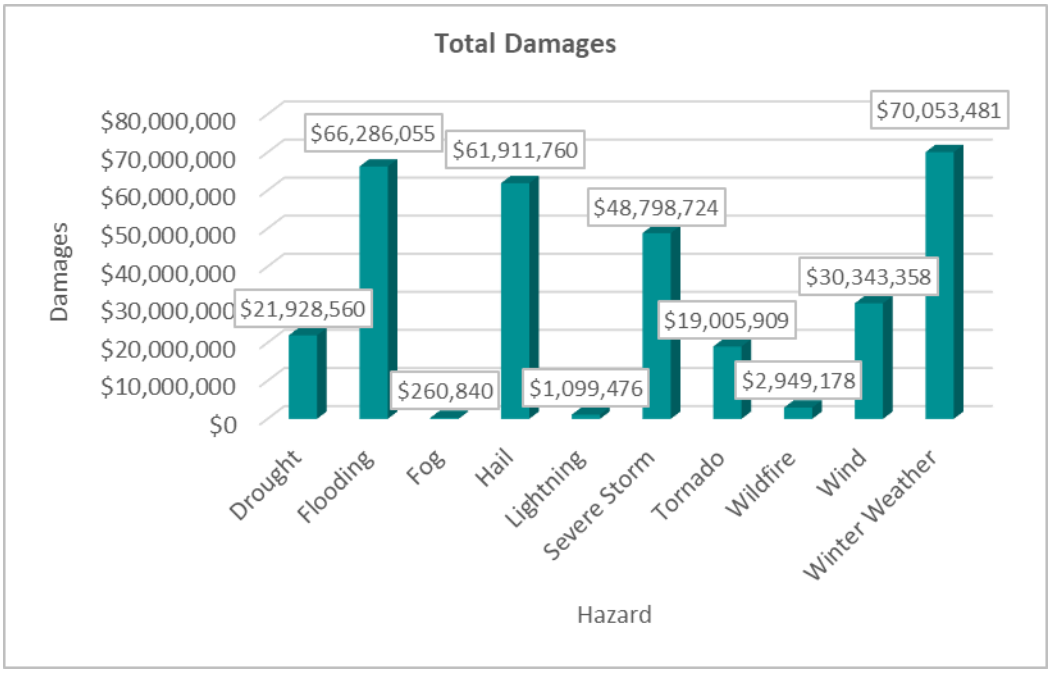


Table 6-3 summarizes the SHELDUS event data across all counties and Table 6-4 summarizes the SHELDUS damages data across all counties.

Table 6-3 SHELDUS Hazard Events by County

County	Drought	Flooding	Fog	Hail	Lightning	Severe Storm	Tornado	Wildfire	Wind	Winter Weather	Total
Baca	2	2	1	22	9	26	17	0	41	27	**147**
Bent	2	3	1	25	9	30	9	1	39	30	**149**
Crowley	1	6	1	18	6	20	4	1	29	29	**115**
Kiowa	2	2	1	22	8	25	17	0	39	30	**146**
Otero	1	7	1	27	11	32	6	1	43	29	**158**
Prowers	2	5	1	33	11	30	14	1	41	28	**166**
Total	**10**	**25**	**6**	**147**	**54**	**163**	**67**	**4**	**232**	**173**	**881**

Table 6-4 SHELDUS Losses by County

County	Drought	Flooding	Fog	Hail	Lightning	Severe Storm	Tornado	Wildfire	Wind	Winter Weather	Total
Baca	$4,533,293	$30,456,708	$43,473	$3,855,811	$108,507	$6,004,047	$4,875,215	$0	$5,748,887	$15,550,061	**$71,176,002**
Bent	$4,533,293	$1,169,156	$43,473	$15,516,230	$155,088	$6,259,091	$1,983,361	$0	$5,504,157	$15,613,766	**$50,777,614**
Crowley	$1,897,695	$1,398,239	$43,473	$1,010,219	$246,740	$3,839,779	$59,646	$2,896,302	$4,016,645	$3,831,097	**$19,239,835**
Kiowa	$4,533,293	$1,343	$43,473	$2,336,556	$161,249	$4,964,736	$791,272	$0	$5,233,870	$15,613,809	**$33,679,602**
Otero	$1,897,695	$1,542,703	$43,473	$22,146,424	$268,947	$21,789,245	$568,201	$34,317	$4,325,425	$3,831,097	**$56,447,525**
Prowers	$4,533,293	$31,717,907	$43,473	$17,046,522	$158,944	$5,941,825	$10,728,214	$18,559	$5,514,375	$15,613,651	**$91,316,762**
Total	**$21,928,560**	**$66,286,055**	**$260,840**	**$61,911,760**	**1,099,476**	**$48,798,724**	**$19,005,909**	**$2,949,178**	**$30,343,358**	**$70,053,481**	**$322,637,340**

6.5.3. Agricultural Infestation

Description

Agricultural infestation encompasses a wide range of potential hazards, including pestilence (rodents and insect infestations) and noxious weeds. These are described in more detail below.

Pestilence

Rodent and insect infestations threaten crops, which is one of the primary industries in the planning region. Rodents, such as mice and rabbits, damage crops in all stages of the production process. Young plants are vulnerable to the rodents, who feed on them. Harvested and stored crops may be contaminated by rodents burrowing into storage units, either to feed on the materials or create nests during winter months.

Insect plagues also cause significant damage to crops in the region. Most losses occur in the fall because of freezing temperatures. Grasshoppers move from the range into the crop. The last major grasshopper infestation in the United States occurred in the 1930s. Following this disaster, it was decided that local control of grasshopper outbreaks were insufficient and that regional coordination was required. The 1934 Congress charged the U.S. Department of Agriculture (USDA) with controlling grasshoppers on federal rangeland. Later, in 1987, the Animal and Plant Health Inspection Service (APHIS), which is part of the USDA, created the Grasshopper Integrated Pest Management (GHIPM) Project to develop new technologies for managing grasshopper populations. Subsequent grasshopper infestations in the 1950s, 1980s, and predicted infestations for the early 2000s further underscore the importance of mitigating this insect-driven hazard. In 2009, the planning area experienced the highest grasshopper infestation since 2002-2003. Similar insect hazards include locusts, aphids, and bark beetle plagues.

Noxious Weeds

According to the Colorado Noxious Weed Management Program, noxious weeds are a hazard across the entire State of Colorado, and particularly in the agricultural region included in the planning area. The Colorado Noxious Weed Act defines noxious weeds as “plant species that are not indigenous (native) to the state of Colorado and meet at least one of several criteria regarding their negative impacts upon crops, native plant communities, livestock, and the management of natural or agricultural systems. This definition applies to species listed by both state and local governing bodies.” Native plants are also defined in the Act as “species that are indigenous to Colorado, may not be designated as noxious weeds by either state or local governments. Furthermore, the law does not permit distinctions to be made regarding the historical range or habitats of native species. Therefore, according to the Colorado Environmental Pesticide Education Program, even a native species that expands its range within Colorado due to human influences and otherwise meets the descriptive criteria as a noxious weed may not be listed as such.”

Noxious weeds are aggressive and highly competitive, stealing moisture, nutrients and sunlight from native, desirable plants. Established noxious weeds compete with both the production of agricultural crops and natural grasses, plants, and groundcover. Often, noxious weeds can out-compete native plants entirely, which impacts the entire ecology of the area.

Some of the more common are profiled below.

- Salt Cedar or Tamarisk (scientific name: Tamarix ramosissima) is a small evergreen shrub or tree that grows between 5 and 20 feet in height. Mature plants can produce up to 600,000 seeds per year. The plant was introduced from central Asia, northern Africa, and southern Europe for

ornamentation and stream bank stabilization. Salt Cedar can aggravate drought conditions by sucking up large volumes of water from riverbeds, increase the salinity of surface soil (which renders the soil inhospitable to native plants) and aggravate flooding by becoming a barrier within the watercourse channels.

- Other noxious weeds such as Spotted Knapweed (Centaurea maculosa), Diffuse Knapweed (Centaurea diffusa), and Russian Knapweed (Centaurea repens) readily establish on any disturbed soil. The plants produce as many as 40,000 seeds per plant. The plants thrive in both wet and dry conditions, and out-compete livestock and wildlife forage plant species. Their early spring growth makes them competitive for soil moisture and nutrients and there is some evidence that they release chemical substances that inhibit surrounding vegetation.
- Field Bindweed (Convolvulus arvensis) is difficult to eradicate because of a root system that can penetrate the soil to a depth of 20 feet and which gives rise to numerous lateral roots. The plant seeds may remain viable in the ground for up to 40 years. It can adapt to different environmental conditions and can be found at altitudes as high as 10,000 feet. The plant is extremely competitive, and continual stress on the plant is necessary to ensure eradication.

The State Noxious Weed Act requires that local governing bodies of counties and municipalities uphold a number of duties, responsibilities, and powers regarding the management of noxious weeds. A 2007 legislative update requires all local governing bodies to have a noxious weed management plan. The State also has a management plan, which outlines regional and general control concepts. Funding for addressing noxious weeds is available through the Colorado Noxious Weed Management Program, including assistance for implementation of preventative strategies and public education.

Extent

Variables that contribute to the extent of pestilence infestations include the geographic distribution of the rodents and the crops, the number of rodents in the area, and the reproduction rates relative to the amount of natural food resources available. The presence of predators, such as foxes, snakes, and hawks, also impacts the potential numbers of rodents. As such, historical recollection provides the majority of the hazard profile's content.

Noxious weeds are divided into three categories. Weeds listed in the "AW" category are considered A-list weeds, and are those species which are designated for eradication by the State Agricultural Commissioner. List B species (those listed in the "BW" category) are those in which the Commissioner develops and implements state noxious weed management plans designed to stop the continued spread of the species. This category is assigned based on consultation with the state noxious weed advisory committee, local governments, and other interested parties. List C weeds (those categorized as "CW") are those species which the Commissioner will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species, as defined by the Colorado Department of Agriculture.

Location

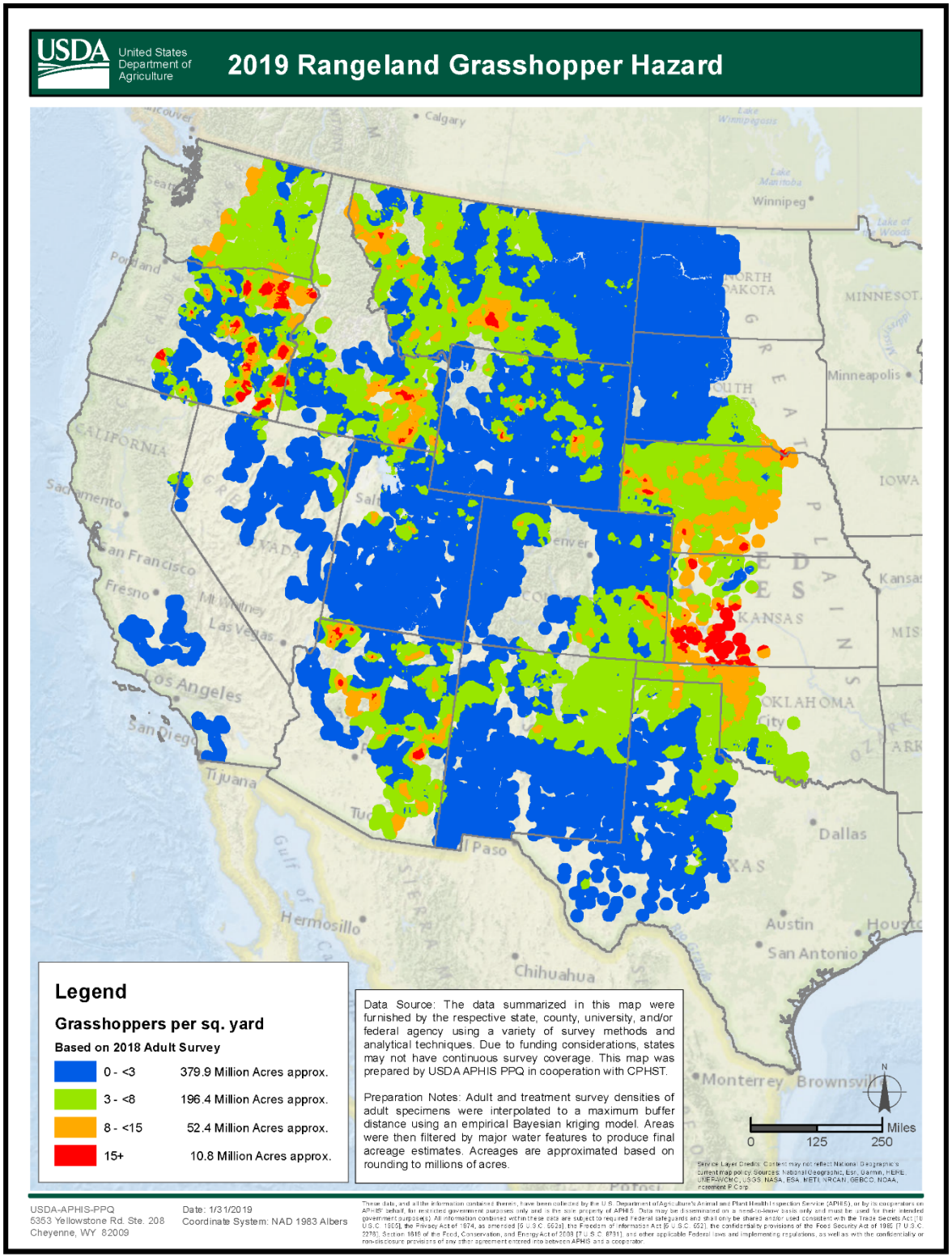
Due to lack of county-specific location data for this hazard, the location is presented at the regional scale.

Pestilence

Rodents such as mice, rats, and rabbits, are found across the entire planning region, as are insects. The presence of the rodents and insects is a consistent feature, with normal population density flows following the seasonal patterns. However, when density of these populations exceeds the capacity of the ecosystem, agricultural industries such as crops and the health of livestock are threatened. The ability to model these trends is difficult and inconsistent. Figure 6-5 depicts a recent grasshopper density map at a point in time for the western United States, including Colorado, which demonstrates how varying densities pose different threats.[1] It is evident that parts of southeast Colorado have higher densities than much of the State.

[1] United States Department of Agriculture (USDA)

Figure 6-5 2019 Rangeland Grasshopper Hazard



Noxious Weeds

The entire Region is exposed to noxious weeds. Maps of noxious weeds can be found on the Colorado Department of Agriculture website, using the EDDMapSWest application.[2]

Previous Occurrences

Historical data is limited on this hazard and due to the similarities across all counties in the Region, previous occurrences are reported at the regional scale. Recorded infestation events are described below.

Pestilence

On December 29, 1924, the Colorado Governor declared a "Hunt Day" targeting the rabbits that were causing devastating damage to crops across the planning area. In one day, 125,000 rabbits were killed in a six-county area (and 4,000 were shipped to Denver to feed the needy). Photos of pick-up trucks piled high with the bounty still adorn the walls of local historic societies, barbershops, and drug stores. There is some documentation of similar hunts in earlier years (around 1900) that were organized to rid the fields of roving bands of coyotes.

One State disaster declarations was made for a grasshopper plague and the impact on agriculture in 1981 impacting "eastern Colorado counties."

Noxious Weeds

Weeds are not tracked as other hazards are and so documentation is difficult to compile. The LPC was unable to find any documentation on the weed hazard, in that there are no direct links between weeds and verifiable damages. In common discussion, weeds are an annual problem that affects all residents to some degree within the Region.

Probability

While the population of rodents and insects in the region is a yearly occurrence, this alone cannot describe the probability of future occurrences. These populations are part of the natural ecosystem of the region and are expected in certain quantities each year. The presence of such populations only becomes a hazard when the population number reaches a number greater than the surrounding ecosystem can support, driving the rodents and/or insects to severely damage crops and/or livestock. Weed infestations exist annually, with some years worse than others, and the hazard is expected to continue, though the state weed mitigation programs may reflect an impact on the hazards in the future. It is difficult to quantify when this may become an issue, as the data for tracking such events is not always available. Based on the information collected in this plan, the probability is highly likely.

[2] https://www.colorado.gov/pacific/agconservation/noxious-weed-mapping

6.5.4. Dam and Levee Failure

Description

Dam Failure

Dam failure incidents involve unintended releases or surges of impounded water. Dam failure can be caused by rainfall, earthquakes, blockages, animal activity (such as burrowing), landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism.

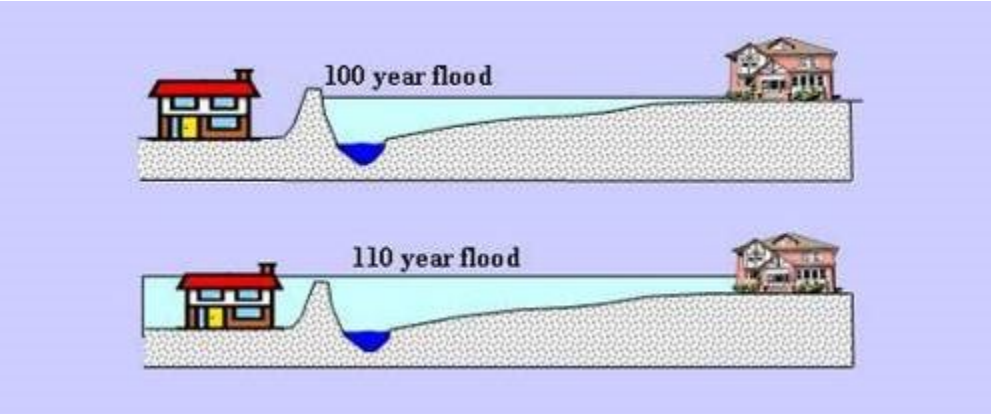
Dam failures can be arranged into four classifications: overtopping, foundation failure, structural failure, and other unforeseen failures. Overtopping failures result from the uncontrolled flow of water over, around, and adjacent to the dam. Earthen dams are most susceptible to this type of failure. Hydraulic failures account for approximately 28% of all dam failures. Foundation and structural failures are usually tied to seepage through the foundation of the main structure of the dam. Deformation of the foundation or settling of the embankment can also result in dam failure. Structural failures account for approximately 28% of all dam failures, and foundation problems account for another 25%. Earthquakes or sabotage account for 12% of all dam failures, while inadequate design and construction account for the remaining 7% of failures. According to the Association of State Dam Safety Officials, the average age of dams in the U.S. is 51 years. This means many dams are likely reaching their useful life cycle and are in need of replacement, upgrades, and rehabilitation activities.

Levee Failure

A levee is a type of dam that runs along the banks of a river or canal. Levees reinforce the banks and help prevent flooding. By confining the flow, levees can also increase the speed of the water. Levees can be natural or man-made. A natural levee is formed when sediment settles on the river bank, raising the level of the land around the river. To construct a man-made levee, workers pile dirt or concrete along the river banks, creating an embankment. This embankment is flat at the top, and slopes at an angle down to the water. For added strength, sandbags are sometimes placed over dirt embankments.

Levees provide strong flood protection, but they are not failsafe. Levees are designed to protect against a specific flood level and could be overtopped during severe weather events. Levees only reduce the risk to individuals and structure behind them, they do not eliminate risk.

Figure 6-6 Flooding from Levee Overtopping



Unfortunately, in the rare occurrence when a levee system fails or is overtopped as in Figure 6-7, severe flooding can occur due to increased elevation differences associated with levees and the increased

water velocity that is created. It's also important to remember that no levee provides protection from events for which it was not designed, and proper operation and maintenance are necessary to reduce the probability of failure.

Figure 6-7 Levee Failure[3]



Extent

Dams are classified through the U.S. Army Corps of Engineers (USACE) based upon hazard potential. This classification is based on the consequences if the dam were to fail, *not the potential of failure, or the existing condition of the dam*. The dams are rated (1) high, (2) significant, or (3) low hazard. The Army Corps of Engineers based the hazard potential designation on such items as acre-feet capacity of the dam, distance from nearest community downstream, population density of the community, and age of the dam.

- **High Hazard Dam Failure:** In case of failure of the dam, the dam would likely cause loss of life.
- **Significant Hazard Dam Failure:** Dam would, in case of failure, likely cause significant property damage, but no loss of life.
- **Low Hazard Dam Failure:** Dam would likely cause only minimal property damage. Hazard potential classification is no guarantee of safety.

Additionally, both dam and levee failure extent can be defined by warning time. During periods of prolonged, consistent rainfall, there may be more warning time indicating a possible failure allowing evacuations and preparations to take place. However, a failure has the potential to be sudden and catastrophic from hazards such as earthquakes; landslides; or severe storms, as well as undetected structural issues.

[3] River Partners, www.riverpartners.org

6.5.5. Drought

Description

Drought is a condition of climatic dryness that is severe enough to reduce soil moisture and water below the minimum necessary for sustaining plant, animal, and human life systems. Influencing factors include temperature patterns, precipitation patterns, agricultural and domestic water supply needs, and growth. Lack of annual precipitation and poor water conservation practices can result in drought conditions.

Drought is a complex issue involving many factors, it occurs when a normal amount of moisture is not available to satisfy an area's usual water-consuming activities. Drought can often be defined regionally based on its effects:

- Meteorological drought is usually defined by a period of below average water supply.
- Agricultural drought occurs when there is an inadequate water supply to meet the needs of the region's crops and other agricultural operations such as livestock.
- Hydrological drought is defined as deficiencies in surface and subsurface water supplies. It is generally measured as streamflow, snowpack, and as lake, reservoir, and groundwater levels.
- Socioeconomic drought occurs when a drought impacts health, well-being, and quality of life or when a drought starts to have an adverse economic impact on a region.

Due to Colorado's semiarid conditions, drought is a natural but unpredictable occurrence in the State. However, because of natural variations in climate and precipitation sources, it is rare for all of Colorado to be deficient in moisture at the same time. Single season droughts over some portion of the State are quite common. Unlike Colorado's higher elevations, the majority of precipitation in southeast Colorado falls in the late spring and summer months. Hot and dry conditions that persist into spring, summer, and fall can aggravate drought conditions, making the effects of drought more pronounced as water demands increase during the growing season and summer months. Drought in southeast Colorado can be exacerbated by lack of winter snowfall or changes in runoff patterns.

Extent

Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or wildfires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multi-year period, and can take years before the consequences are realized. It is often not obvious or easy to quantify when a drought begins and ends. Droughts can be a short-term event over several months or a long-term event that lasts for years or even decades.

The Palmer Drought Severity Index (PDSI) was developed by Wayne Palmer in the 1960s and uses temperature and rainfall information in a formula to determine dryness. Over time it has become the semiofficial drought index for risk assessment and hazard analysis. The Palmer Index is most effective in determining long term drought, a matter of several months, and is not used for short-term forecasts (a matter of weeks). It uses a zero as normal conditions and drought is shown in terms of negative numbers; for example, -2 is moderate drought, -3 is severe drought, and -4 is extreme drought. The following table provides an overview of the Palmer Index compared to other drought classification systems. The return period is related to how often the type of drought typically occurs. For example, a minor drought occurs every three to four years.

Table 6-5 Palmer Drought Severity Index

			Drought Monitoring Indices		
Drought Severity	**Return Period (years)**	**Description of Possible Impacts**	**Standardized Precipitation Index (SPI)**	**NDMC* Drought Category**	**Palmer Drought Index**
Abnormal Drought	3 to 4	Going into drought, short term dryness slowing growth of crops or pastures. Fire risk above average. Coming out of drought, some lingering water deficits, pastures or crops not fully recovered.	-0.5 to -0.7	DO	-1.0 to -1.9
Moderate Drought	5 to 9	Some damage to crops or pastures, fire risk high, streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-0.8 to -1.2	D1	-2.0 to -2.9
Severe Drought	10 to 17	Crop or pasture losses likely, fire risk very high, water shortages common, water restrictions imposed.	-1.3 to -1.5	D2	-3.0 to -3.9
Extreme Drought	18 to 43	Major crop and pasture losses, extreme fire danger, widespread water shortages or restrictions	-1.6 to -1.9	D3	-4.0 to -4.9
Exceptional Drought	44+	Exceptional and widespread crop and pasture losses, exceptional fire risk, shortages of water in reservoirs, streams, and wells creating water emergencies.	Less than -2.0	D4	-5.0 or less

*National Drought Monitoring Center

6.5.6. Earthquake

Description

An earthquake is caused by a sudden slip on a fault, which is a plane of weakness in the earth's crust. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up and the rocks slip suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking that is felt during an earthquake. The amount of energy released during an earthquake is usually expressed as a Richter magnitude and is measured directly from the earthquake as recorded on seismographs. Another measure of earthquake severity is intensity. Intensity is an expression of the amount of shaking, typically the greatest cause of losses to structures during earthquakes, at any given location on the surface as felt by humans and defined in the Modified Mercalli Intensity Scale.

Liquefaction is the phenomenon that occurs when the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Essentially, the soil acts like a fluid, similar to wet sand near the beach, resulting in ground failure. Liquefaction causes two types of ground failure: lateral spread and loss of bearing strength. Lateral spreads develop on gentle slopes and entails the sidelong

movement of large masses of soil as an underlying layer liquefies. Loss of bearing strength results when the soil supporting structures liquefies and causes structures to collapse.

Extent

Earthquake magnitude is measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake through a measure of shock wave amplitude (Table 6-6). Each unit increase in magnitude on the Richter Scale corresponds to a 10-fold increase in wave amplitude, or a 32-fold increase in energy. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale based on direct and indirect measurements of seismic effects. The scale levels are typically described using roman numerals, ranging from "I" corresponding to imperceptible (instrumental) events to "XII" for catastrophic (total destruction). A detailed description of the Modified Mercalli Intensity Scale of earthquake intensity and its correspondence to the Richter Scale is given in Table 6-7.

Table 6-6 Richter Scale[4]

Richter Magnitudes	Earthquake Effects
< 3.5	Generally not felt, but recorded.
3.5 - 5.4	Often felt, but rarely causes damage.
5.4 - 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1 - 6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0 - 7.9	Major earthquake. Can cause serious damage over larger areas.
8 or >	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Table 6-7 Modified Mercalli Intensity Scale for Earthquakes[5]

Scale	Intensity	Description of Effects	Corresponding Richter Scale Magnitude
I	Instrumental	Detected only on seismographs.	
II	Feeble	Some people feel it.	< 4.2
III	Slight	Felt by people resting; like a truck rumbling by.	
IV	Moderate	Felt by people walking.	
V	Slightly strong	Sleepers awake; church bells ring.	< 4.8
VI	Strong	Trees sway; suspended objects swing, objects fall off shelves.	< 5.4
VII	Very strong	Mild alarm; walls crack; plaster falls.	< 6.1

[4] FEMA
[5] FEMA

Scale	Intensity	Description of Effects	Corresponding Richter Scale Magnitude
VIII	Destructive	Moving cars uncontrollable; masonry fractures, poorly constructed buildings damaged.	
IX	Ruinous	Some houses collapse; ground cracks; pipes break open.	< 6.9
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread.	< 7.3
XI	Very disastrous	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards.	< 8.1
XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves.	> 8.1

Another way to express an earthquake's severity is to compare its acceleration to the normal acceleration due to gravity. Peak ground acceleration (PGA) measures the strength of ground movements in this manner and represents the rate in change of motion of the Earth's surface during an earthquake as a percent. PGA can be partly determined by what soils and bedrock characteristics exist in the region. Unlike the Richter scale, PGA is not a measure of the total energy released by an earthquake, but rather of how hard the earth shakes at a given geographic area (the intensity). PGA is measured by using instruments including accelerographs and correlates well with the MMI scale. PGA is represented as %g, and is described in Table 6-8 below.

Table 6-8 PGA Intensity Descriptions

Perceived Shaking	Not Felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
Potential Damage	None	None	None	Very light	Light	Moderate	Moderate/ Heavy	Heavy	Very Heavy
Peak Acc (%G)	< .17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
Peak Vel (Cm/S)	< 0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
Instrumental Intensity	I	II-III	IV	V	VI	VII	VIII	IX	X+

Location

Due to the regional impact of earthquakes, the location of this hazard is analyzed for the entire Southeast Region.

Colorado is considered a region of minor earthquake activity. Geologic studies indicate there are about 90 potentially active faults in Colorado with documented movement within the last 1.6 million years. Active faults, which represent the highest earthquake hazard, are those that have ruptured to the ground surface during the Holocene period (about the last 15,000 years). There are no active faults in the Southeast Region.

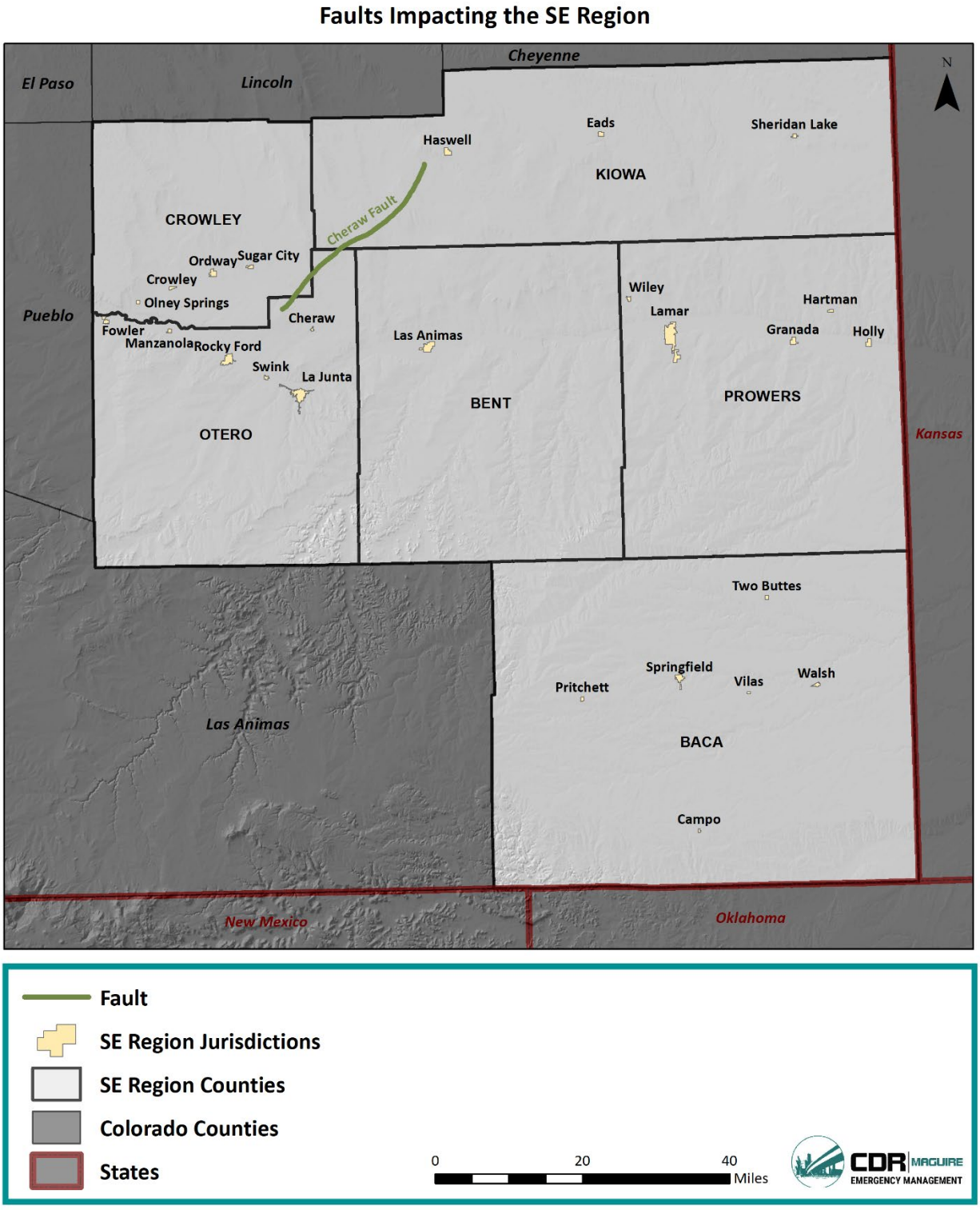
Faults with evidence of movement during the past 130,000 years are often considered potentially active faults. There is one potentially active fault in the Region, the Cheraw Fault, located in the northwest corner of the Region, as shown in Figure 6-8. Based on the 2014 Southeast Region Hazard Mitigation Plan, the Cheraw Fault is currently thought to be able to produce a maximum of a magnitude 7.0 earthquake.

The Cheraw fault has been actively studied by the CGS since 2011. In 2016, the CGS funded an investigation of a poorly studied segment of the fault zone led by paleoseismologists Dean Ostenaa and Mark Zellman, the authors of a recent CGS publication, “Paleoseismic Investigation of the Cheraw Fault at Haswell, Colorado." As of May 2019, another study is currently underway on the Cheraw Fault where the team will be re-excavating a trench across the fault near the town of Arlington in southeastern Colorado. Trenching is an effective tool for charting disturbances in near-surface sediments that then helps to establish the historical activity of a fault. Data gathered from a prior 1995 trenching effort by the USGS was limited by the geologic dating technologies of the time as well as groundwater conditions. This research effort hopes to resolve the complex paleoseismic issues on the fault prior to 20,000 years ago to understand the possible recurrence of fault activity and ultimately drive building codes.[6]

Thousands of other faults exist in Colorado, but few have been studied in sufficient detail to determine their activity during the recent geologic past. Faults in Kansas, New Mexico, and Oklahoma, in addition to others located along the southern front range of Colorado may also impact the Region.

[6] http://www.minesnewsroom.com/news/colorado-geological-survey-trenching-cheraw-fault

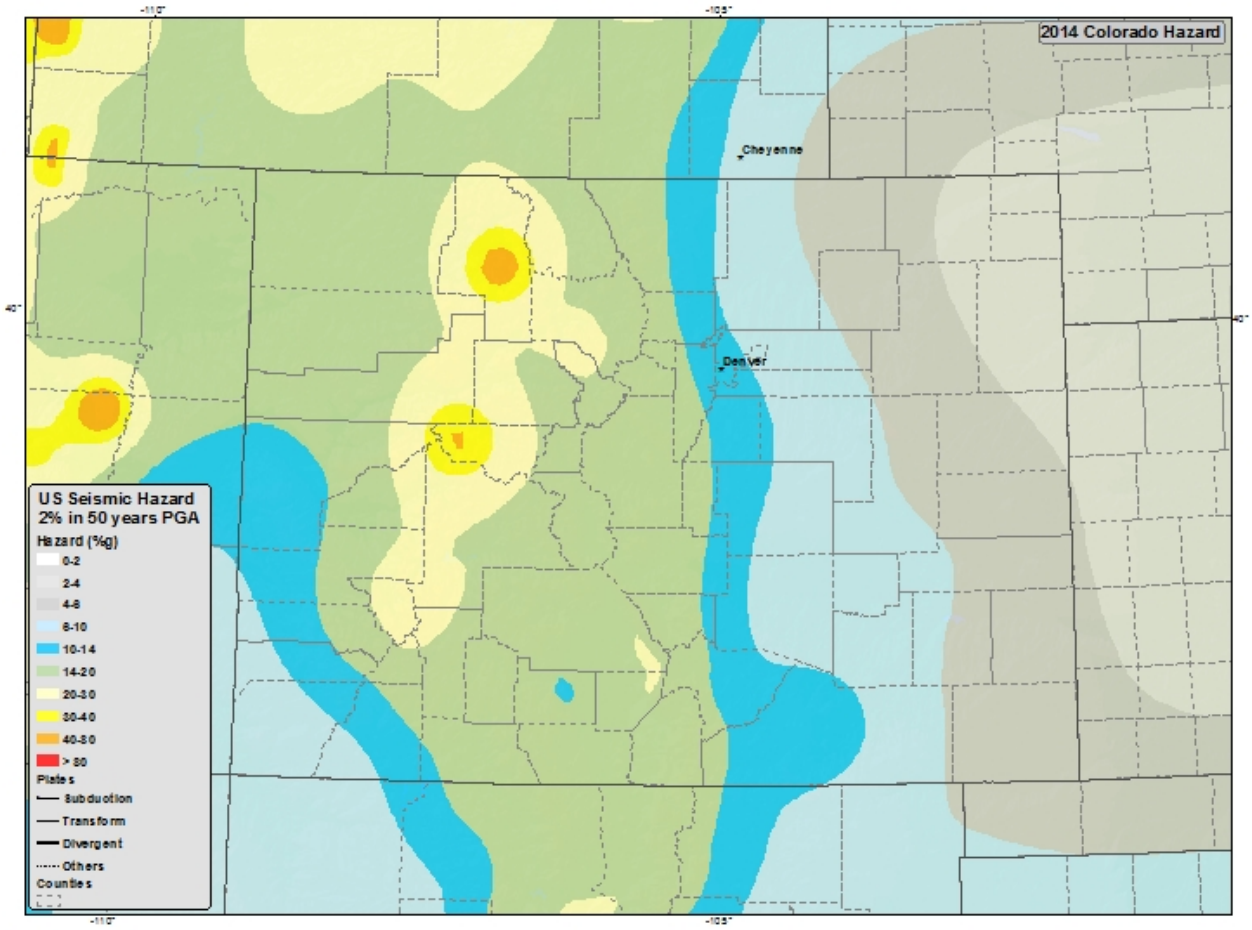
Figure 6-8 Cheraw Fault



Additionally, Figure 6-9 shows the USGS 2014 Seismic Hazard map for Colorado. This map shows the seismic hazard for a 2% in 50 years PGA for the State. It is evident the Southeast Region has some of the

lowest hazard in the State. The hazard is slightly higher for the western portions of the Region than the eastern.

Figure 6-9 2014 Seismic Hazard Map for Colorado



6.5.7. Extreme Temperatures: Extreme Cold

Description

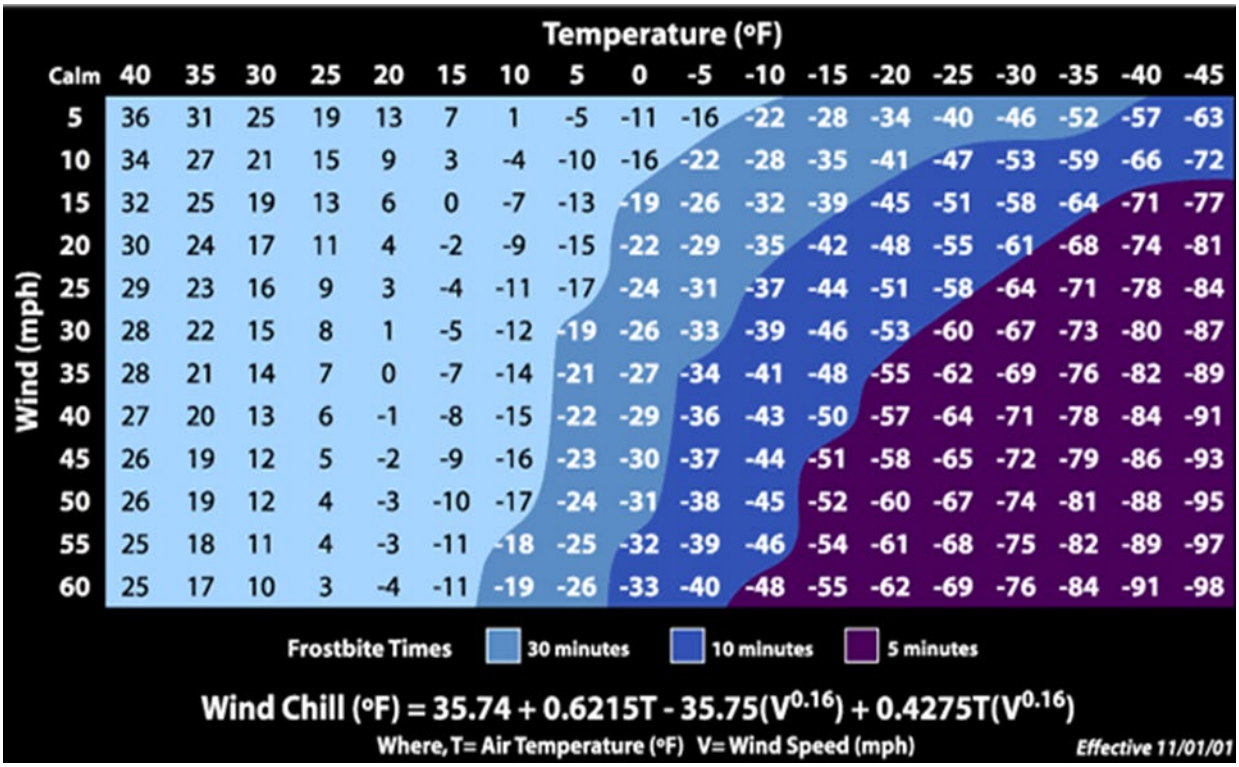
Extreme cold often accompanies a winter storm or is left in its wake. It is most likely to occur in the winter months of December, January, and February. On average, December-January are the coldest months in the Southeast Region. The average last freeze/frost day in the Southeast Region is, on average, between May 11 and May 20.

What constitutes extremely cold temperatures varies across different areas of the United States based on normal climate temperatures for the time of year. In Colorado, cold temperatures are normal during the winter. When temperatures drop at least 20 degrees below normal winter lows, the cold is considered extreme and begins to impact daily operations. Extreme cold/wind chill also impacts plants, animals, and water supplies.

The effects of extremely cold temperatures are amplified by strong to high winds that can accompany winter storms. Wind-chill measures how wind and cold feel on exposed skin and is not a direct measurement of temperature. As wind increases, heat is carried away from the body faster, driving down the body temperature, which in turn causes the constriction of blood vessels, and increases the

likelihood of severe injury or death to exposed persons. Animals are also affected by wind-chill, however cars, buildings, and other objects are not. In 2001, the National Weather Service (NWS) implemented an updated Wind Chill Temperature Index (see Figure 6-10). This index was developed to describe the relative discomfort/danger resulting from the combination of wind and temperature. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold.

Figure 6-10 National Weather Service Wind Chill Chart[7]



Extent

Extreme cold temperatures typically occur December through January and accompany winter storms. Extreme cold temperatures are typically predictable and come with warning from the NWS. The NWS issues wind chill warning, watches, and advisories, as described below.[8]

- **Wind Chill Warning:** Take Action! NWS issues a wind chill warning when dangerously cold wind chill values are expected or occurring. If you are in an area with a wind chill warning, avoid going outside during the coldest parts of the day. If you do go outside, dress in layers, cover exposed skin, and make sure at least one other person knows your whereabouts. Update them when you arrive safely at your destination.
- **Wind Chill Watch:** Be Prepared: NWS issues a wind chill watch when dangerously cold wind chill values are possible. As with a warning, adjust your plans to avoid being outside during the coldest parts of the day. Make sure your car has at least a half a tank of gas, and update your winter survival kit.

[7] https://www.weather.gov/safety/cold-wind-chill-chart
[8] https://www.weather.gov/safety/cold-wind-chill-warning

- **Wind Chill Advisory:** Be Aware: NWS issues a wind chill advisory when seasonably cold wind chill values but not extremely cold values are expected or occurring. Be sure you and your loved ones dress appropriately and cover exposed skin when venturing outdoors.

6.5.8. Extreme Temperatures: Extreme Heat

Description

According to information provided by FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Extreme heat is most likely to occur in the summer months of June, July, and August. On average, July is the warmest month.

Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans succumb to the demands of summer heat. According to the National Weather Service (NWS), among natural hazards, only the cold of winter—not lightning, hurricanes, tornadoes, floods, or earthquakes—takes a greater toll. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the heat wave of 1980, more than 1,250 people died.

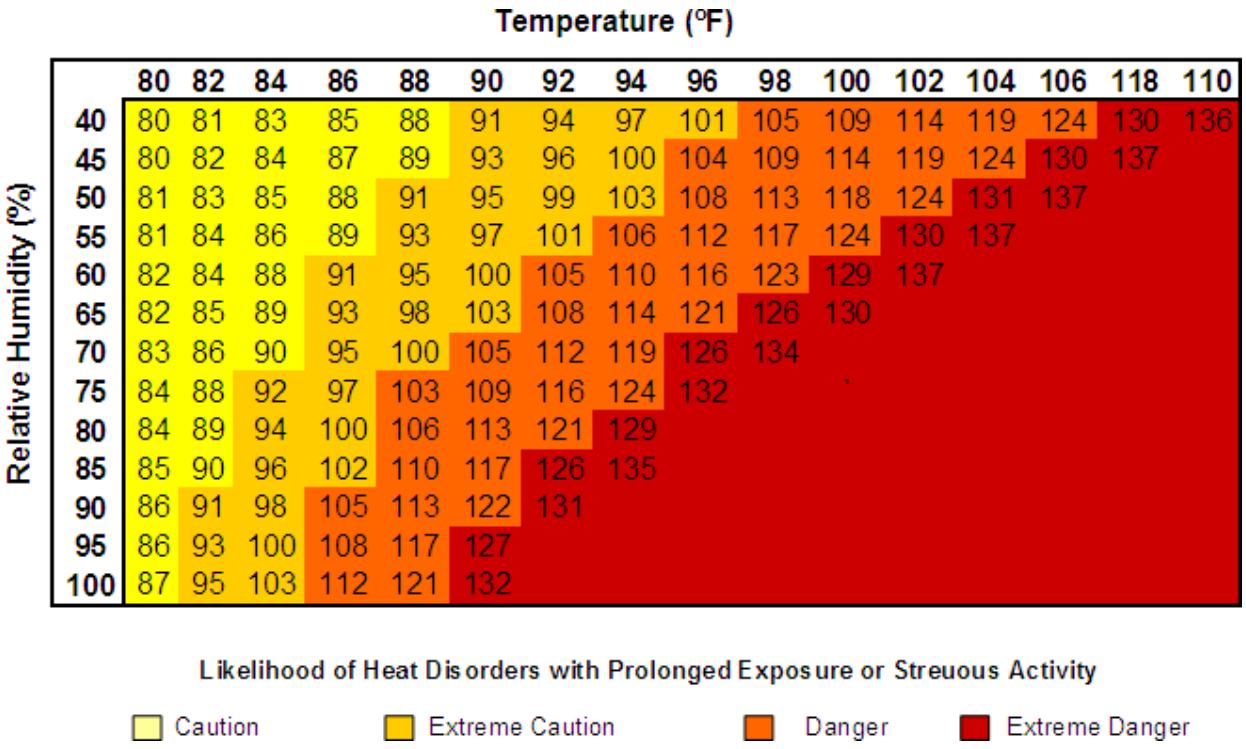
Heat disorders generally have to do with a reduction or collapse of the body's ability to shed heat by circulatory changes and sweating or a chemical (salt) imbalance caused by too much sweating. When heat gain exceeds the level the body can remove, or when the body cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and heat-related illness may develop. Elderly persons, small children, people with chronic illnesses, those on certain medications or drugs, and persons with weight and alcohol problems are particularly susceptible to heat reactions, especially during heat waves in areas where moderate climate usually prevails.

The following Figure shows the Heat Index (HI) as a function of heat and relative humidity.[9] The Heat Index describes how hot the heat-humidity combination makes it feel. As relative humidity increases, the air seems warmer than it actually is because the body is less able to cool itself via evaporation of perspiration. As the HI rises, so do health risks.

- When the HI is 90°F, heat exhaustion is possible with prolonged exposure and/or physical activity.
- When it is 90°-105°F, heat exhaustion is probable with the possibility of sunstroke or heat cramps with prolonged exposure and/or physical activity.
- When it is 105°-129°F, sunstroke, heat cramps or heat exhaustion is likely, and heatstroke is possible with prolonged exposure and/or physical activity.
- When it is 130°F and higher, heatstroke and sunstroke are extremely likely with continued exposure. Physical activity and prolonged exposure to the heat increase the risks.

[9] National Weather Service

Figure 6-11 Heat Index



Note: Since HI values were devised for shady, light wind conditions, exposure to full sunshine can increase HI values by up to 15°F. Also, strong winds, particularly with very hot, dry air, can be extremely hazardous.

Extreme heat can impact livestock and pets, causing heat stress and possibly death. It can exacerbate droughts, which in turn depletes water supplies for livestock and crops. Droughts and extreme heat also increase wildfire risk. The combination of hot, dry weather and dry thunderstorms ignite wildfires that can quickly become devastating and overwhelm local firefighting capabilities.

Extent

Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly take the lives of vulnerable populations.

The NWS has a system in place to initiate alert procedures (advisories or warnings) when the Heat Index is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. A common guideline for the issuance of excessive heat alerts is when the maximum daytime high is expected to equal or exceed 105°F and a nighttime minimum high of 80°F or above is expected for two or more consecutive days. The can issue the following heat-related advisory as conditions warrant.

- **Excessive Heat Warning/Advisory:** Issued when an excessive heat event is expected in the next 36 hours. These products are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life

or property. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life and/or property.

- **Excessive Heat Watch:** Issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours. A Watch is used when the risk of a heat wave has increased, but its occurrence and timing is still uncertain. A Watch provides enough lead time so those who need to prepare can do so, such as cities that have excessive heat event mitigation plans.
- **Excessive Heat Outlook:** Issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to Heat Index forecast map for the contiguous United States those who need considerable lead time to prepare for the event, such as public utilities, emergency management, and public health officials.

Additionally, Figure 6-12 shows heat index categories based on their danger level.

Figure 6-12 Possible Heat Disorders by Heat Index Level

Heat Index	Category	Possible heat disorders for people in high risk groups
130°F or higher	Extreme Danger	Heatstroke risk extremely high with continued exposure.
105° - 129°F	Danger	Sunstroke, Heat Cramps and Heat Exhaustion likely, Heatstroke possible with prolonged exposure and/or physical activity.
90° - 105°F	*Extreme Caution*	*Sunstroke, Heat Cramps and Heat Exhaustion possible with prolonged exposure and or physical activity.*
80° - 90 °F	Caution	Fatigue possible with prolonged exposure and/or physical activity.

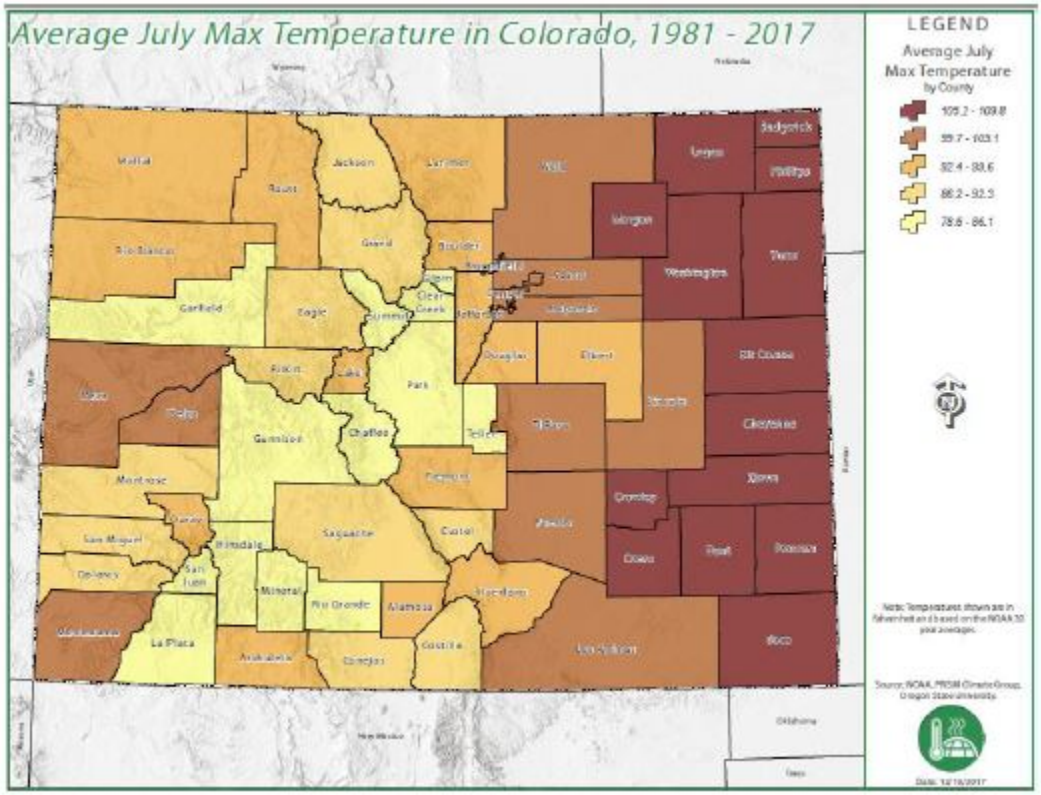
Location

The Southeast Region shares common characteristics regarding extreme heat, described below. Further detail of location of extreme heat for each county is described in the individual county risk assessments.

Colorado's far eastern plains experience the highest average high temperatures in the State. According to the 2018 Colorado State Hazard Mitigation Plan, the six Southeast Region counties hold the top six number of days above 90 degrees in the State from 1981 to 2017 (Bent County 4,691; Otero County 4,220; Prowers County 4,190; Crowley County 3,912; Kiowa County 3,587; and Baca County 3,191). In addition, Colorado's eastern plains experience some of the highest humidity levels in the State, adding to the feel and health danger of extreme heat events, although it should be noted that the humidity levels are still low compared to much of the nation.[10] The figure below shows average July maximum temperatures by county for the State.[11] It is evident the Southeast Region has some of the highest recorded temperatures in the State.

[10] 2018 Colorado State Hazard Mitigation Plan
[11] 2018 Colorado State Hazard Mitigation Plan

Figure 6-13 Average July Maximum Temperature in Colorado, 1981-2017



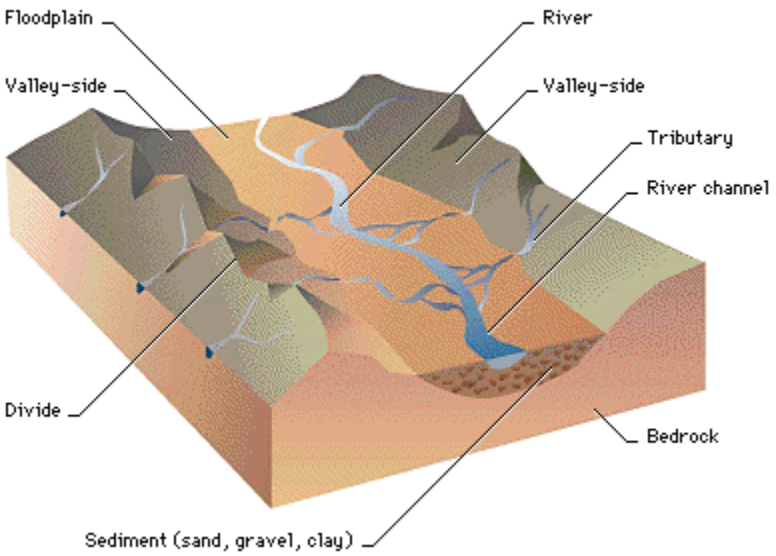
6.5.9. Flooding

Description

Riverine flooding is defined as when a watercourse exceeds its "bank-full" capacity and is usually the most common type of flood event. Riverine flooding generally occurs as a result of prolonged rainfall, or rainfall that is combined with soils already saturated from previous rain events. The area adjacent to a river channel is its floodplain (Figure 6-14).[12] In its common usage, "floodplain" most often refers to that area that is inundated by the 100-year flood, the flood that has a 1% chance in any given year of being equaled or exceeded. Other types of floods include general rain floods, thunderstorm generated flash floods, alluvial fan floods, snowmelt and rain on snow floods, dam failure floods, and local drainage floods. The 100-year flood is the national standard to which communities regulate their floodplains through the National Flood Insurance Program (NFIP).

[12] FEMA

Figure 6-14 Illustration of a Floodplain



The potential for flooding can change and increase through various land use changes and changes to land surface. A change in environment can create localized flooding problems inside and outside of natural floodplains by altering or confining watersheds or natural drainage channels. These changes are commonly created by human activities. These changes can also be created by other events such as wildfires. Wildfires create hydrophobic soils, a hardening or "glazing" of the earth's surface that prevents rainfall from being absorbed into the ground, thereby increasing runoff, erosion, and downstream sedimentation of channels.

The Southeast Region is susceptible to the following types of flooding:

- **Riverine flooding -** Riverine flooding, defined as when a watercourse exceeds its "bank-full" capacity, generally occurs as a result of prolonged rainfall, or rainfall that is combined with already saturated soils from previous rain events. This type of flood occurs in river systems whose tributaries may drain large geographic areas and include one or more independent river basins. The onset and duration of riverine floods may vary from a few hours to many days. Factors that directly affect the amount of flood runoff include precipitation amount, intensity and distribution, the amount of soil moisture, seasonal variation in vegetation, snow depth, and water-resistance of the surface due to urbanization. In the planning area, riverine flooding is largely caused by heavy and continued rains, increased outflows from upstream dams, and heavy flow from tributary streams. These intense storms can overwhelm the local waterways as well as the integrity of any flood control structures. The warning time associated with slow rise floods assists in life and property protection.
- **Flash Flooding -** Flash flooding describes localized floods of great volume and short duration. This type of flood usually results from a heavy rainfall on a relatively small drainage area. Precipitation of this sort usually occurs in the winter and spring. Flash floods often require immediate evacuation.
- **Localized flooding** - Localized flooding problems are often caused by flash flooding, severe weather, or an unusual amount of rainfall. Flooding from these intense weather events usually

occurs in areas experiencing an increase in runoff from impervious surfaces associated with development and urbanization as well as inadequate storm drainage systems.

- **Dam failure flooding -** Flooding from failure of one or more upstream dams is also a concern to the planning area. A catastrophic dam failure could easily overwhelm local response capabilities and require mass evacuations to save lives. Impacts to life safety will depend on the warning time and the resources available to notify and evacuate the public. Major loss of life could result, and there could be associated health concerns as well as problems with the identification and burial of the deceased. Dam failure is further addressed in Section 4.5.4 Dam and Levee Failure.

Extent

Flood events are typically described based on their frequency, such as the 100-year or 500-year flood event. Frequencies are determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular size occur. Another way of expressing the flood frequency is the chance of occurrence in a given year, which is the percentage of the probability of flooding each year. For example, the 100-year flood has a 1% chance of occurring in any given year, and the 500-year flood drops to a 0.2% chance of occurring in any given year. Therefore, they are commonly referred to as the 1% annual chance flood and 0.2% annual flood, respectively. It should be noted that flooding is possible every year and even multiple times each year.

Slow rise floods associated with snowmelt and sustained precipitation usually are preceded with adequate warning, though the event can last several days. Flash floods are more typical in the Region. Flash floods, by their nature, occur very suddenly but usually dissipate within hours. Even flash floods are usually preceded with warning from the National Weather Service in terms of flash flood advisories, watches, and warnings.

6.5.10. Severe Weather: Thunderstorm/Lightning/Hail

Description

Thunderstorm

Storms in the Region are generally characterized by heavy rain often accompanied by strong winds and sometimes lightning and hail. Approximately 10% of the thunderstorms that occur each year in the United States are classified as severe. A thunderstorm is classified as severe when it contains one or more of the following phenomena: hail that is 1 inch or greater, winds in excess of 50 knots (57.5 mph), or a tornado (profiled in Section 4.5.12).

Thunderstorms result from the rapid upward movement of warm, moist air. They can occur inside warm, moist air masses and at fronts. As the warm, moist air moves upward, its cools, condenses, and forms cumulonimbus clouds that can reach heights of greater than 35,000 ft. As the rising air reaches its dew point, water droplets and ice form and begin falling the long distance through the clouds towards earth's surface. As the droplets fall, they collide with other droplets and become larger. The falling droplets create a downdraft of air that spreads out at Earth's surface and causes strong winds associated with thunderstorms.

There are four ways in which thunderstorms can organize: single cell, multicell cluster, multicell lines (squall lines), and supercells. Even though supercell thunderstorms are most frequently associated with severe weather phenomena, thunderstorms most frequently organize into clusters or lines. Warm, humid conditions are favorable for the development of thunderstorms. The average single cell thunderstorm is approximately 15 miles in diameter and lasts less than 30 minutes at a single location.

However, thunderstorms, especially when organized into clusters or lines, can travel intact for distances exceeding 600 miles.

Thunderstorms are responsible for the development and formation of many severe weather phenomena, posing great hazards to the population and landscape. Damage that results from thunderstorms is mainly inflicted by downburst winds, large hailstones, and flash flooding caused by heavy precipitation. Stronger thunderstorms are capable of producing tornadoes and waterspouts.

Lightning

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a "bolt" when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning may also strike outside of heavy rain and might occur as far as 10 miles away from any rainfall.

Lightning is one of the more dangerous weather hazards in the United States and in Colorado. Each year, lightning is responsible for deaths, injuries, and millions of dollars in property damage, including damage to buildings, communications systems, power lines, and electrical systems. Lightning also causes forest and brush fires, as well as deaths and injuries to livestock and other animals. According to the National Lightning Safety Institute, lightning causes more than 26,000 fires in the United States each year.

U.S. lightning statistics compiled by the National Oceanic and Atmospheric Administration between 1959 and 1994 indicate that most lightning incidents occur during the summer months of June, July, and August and during the afternoon hours from between 2 and 6 p.m.

Hail

Hail is associated with thunderstorms that can also bring high winds and tornadoes. It forms when updrafts carry raindrops into extremely cold areas of the atmosphere where they freeze into ice. Hail falls when it becomes heavy enough to overcome the strength of the updraft and is pulled by gravity towards the earth. Hailstorms occur throughout the spring, summer, and fall in the region, but are more frequent in late spring and early summer. Hailstones are usually less than two inches in diameter and can fall at speeds of 120 mph. Hail causes nearly $1 billion in damage to crops and property each year in the United States. Hail is also one of the requirements which the National Weather Service uses to classify thunderstorms as 'severe.' If hail more than ¾ of an inch is produced in a thunderstorm, it qualifies as severe.

In all cases, the hail falls when the thunderstorm's updraft can no longer support the weight of the ice. The stronger the updraft the larger the hailstone can grow. Nebraska, Colorado, and Wyoming usually have the most hail storms in the United States. The area where these three states meet – "hail alley," averages seven to nine hail days per year. The reason why this area gets so much hail is that the freezing levels (the area of the atmosphere at 32 degrees or less) in the high plains are much closer to the ground than they are at sea level, where hail has plenty of time to melt before reaching the ground.

When viewed from the air, it is evident that hail falls in paths known as hail swaths. They can range in size from a few acres to an area 10 miles wide and 100 miles long. Piles of hail in hail swaths have been so deep, a snowplow was required to remove them, and occasionally, hail drifts have been reported.

Extent

Thunderstorm

A severe thunderstorm can happen very quickly in Colorado, particularly in the afternoons in the summer months. However, although they can form quickly, they can typically be predicted in advance. The National Weather Service issues two types of alerts for severe thunderstorms:

- A Severe Thunderstorm Watch indicates when and where severe thunderstorms are likely to occur. Citizens are urged to watch the sky and stay tuned to NOAA Weather Radio, commercial radio, or television for information. Severe Thunderstorm Watches are issued by the Storm Prediction Center in Norman, OK.
- A Severe Thunderstorm Warning is issued when severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm. Severe Thunderstorm Warnings are issued by the National Weather Service in Pueblo.

Lightning

Lightning is most typically associated with a thunderstorm, so the extent between these hazards is similar.

Hail

Likewise, since hail is associated with severe thunderstorms, the extent is similar. Additionally, hail is measured by its diameter, and the size of the hail is directly associated with how much damage the hail can cause (the larger the hail, the more damage). Table 6-9 shows standard measurements for hail.[13]

Table 6-9 Standard Hail Measurements

Average Diameter	Corresponding Household Object
.25 inch	Pea
.5 inch	Marble/Mothball
.75 inch	Dime/Penny
.875 inch	Nickel
1.0 inch	Quarter
1.5 inch	Ping-pong ball
1.75 inch	Golf-Ball
2.0 inch	Hen Egg
2.5 inch	Tennis Ball
2.75 inch	Baseball
3.00 inch	Teacup
4.00 inch	Grapefruit
4.5 inch	Softball

[13] National Weather Service

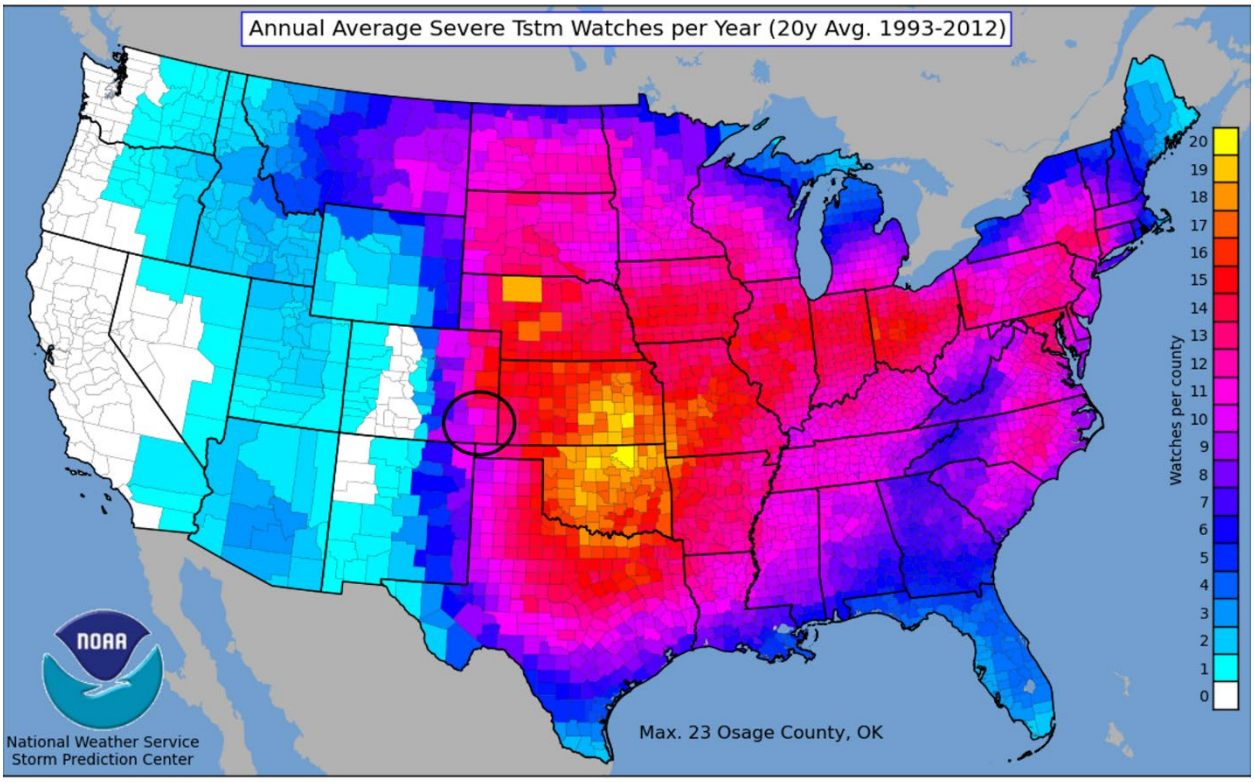
Location

Location for the severe weather hazard is analyzed on a regional scale based on the similarities between the counties in the Region. Overall, severe storms are a serious threat to all counties and jurisdictions in the Southeast Region. In general, the eastern plains in Colorado, including the Southeast Region, experience more severe weather days than the western portion of the State.

Thunderstorm

Figure 6-15 shows the annual average number of severe thunderstorm watches per year from 1993 to 2012 in the United States.[14] The Southeast Region (black circle) experiences approximately between nine and 15 watches per year, with Kiowa County experiencing the most watches and Otero and Crowley Counties experiencing the least. It is evident the Southeast Region experiences more severe thunderstorm watches than much of the State.

Figure 6-15 Annual Average Severe Thunderstorm Watches per Year 1993-2012 in the United States

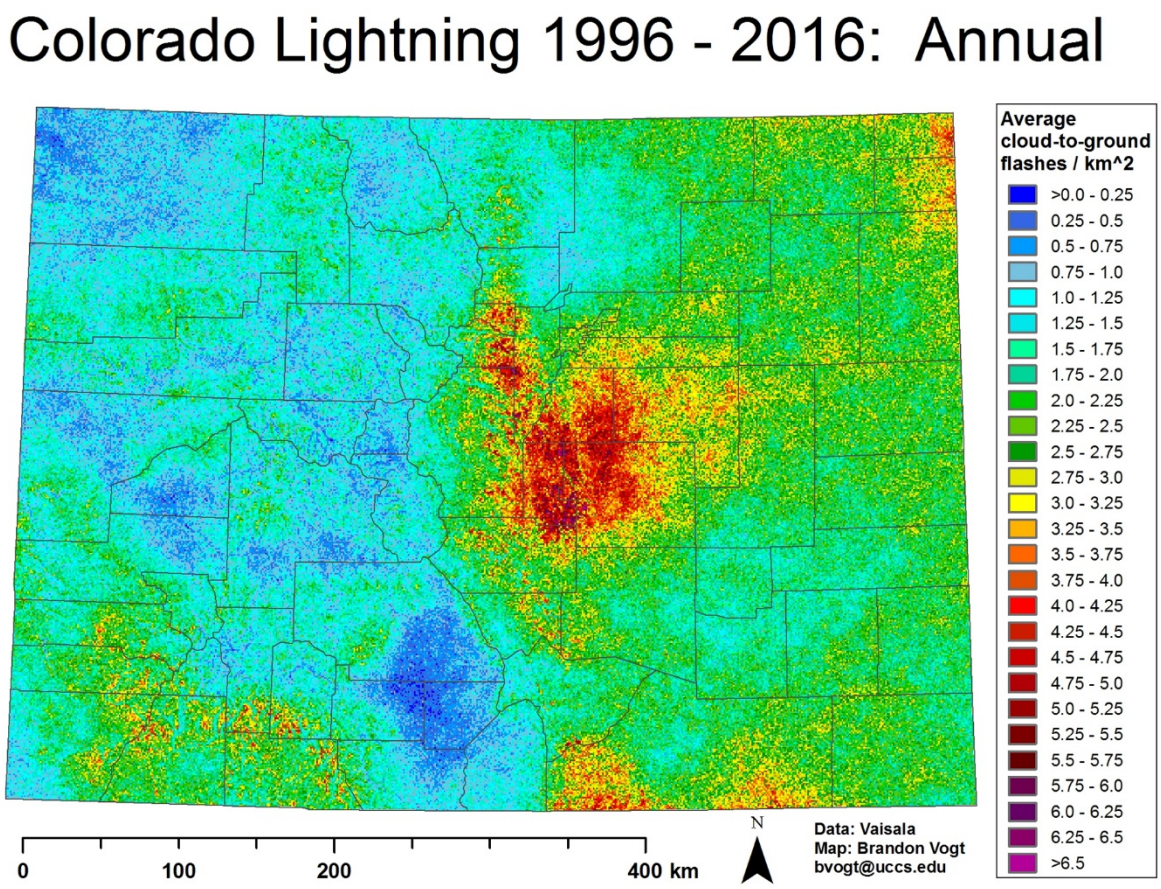


Lightning

Figure 6-16 shows the lightning flash density across Colorado from 1996 to 2016.[15] Within the Southeast Region, the eastern and southern portions experience the highest flash density, although the entire Region is susceptible to lightning flashes.

[14] National Weather Service, Storm Prediction Center; https://www.spc.noaa.gov/wcm/
[15] https://www.weather.gov/pub/lightningFlashDensityMaps

Figure 6-16 Lightning Flash Density Across Colorado 1996 to 2016

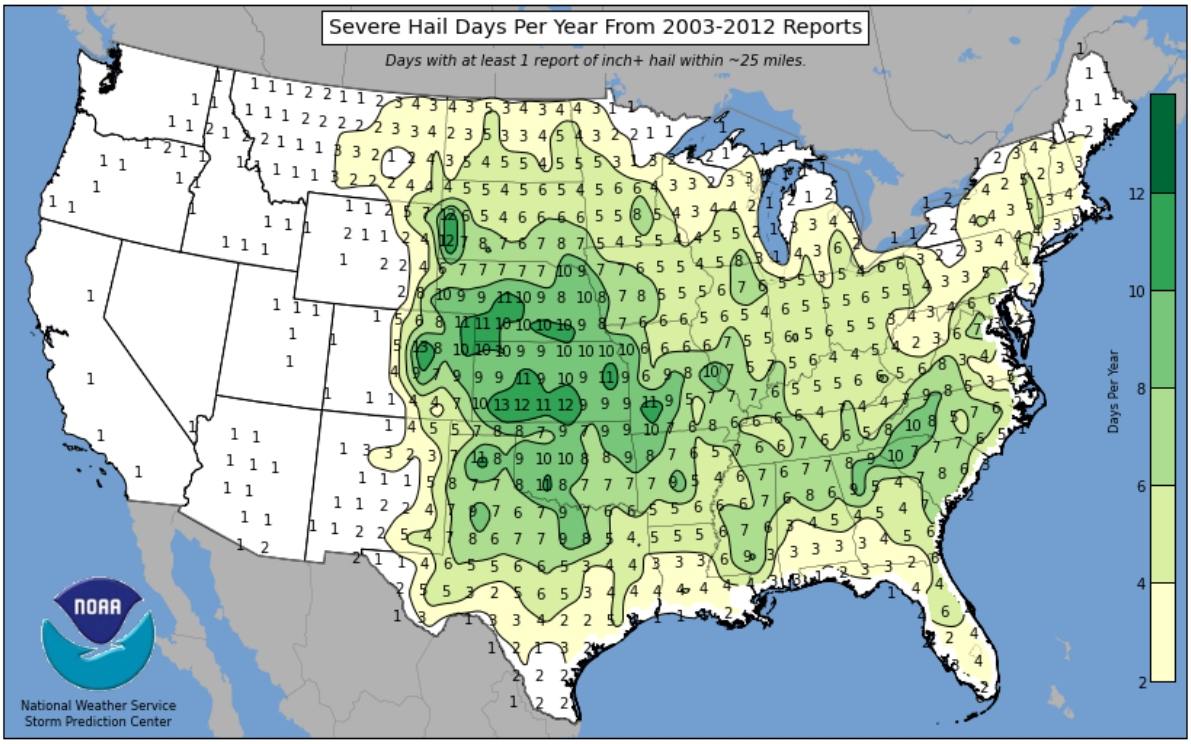


Hail

The annual severe hail days per year from 2003 to 2012 are shown in Figure 6-17.[16] Eastern Colorado has experienced the greatest number of hail days in the State, with the Southeast Region experiencing approximately four to nine days.

[16] NOAA National Severe Weather Laboratory

Figure 6-17 Hail Days per Year



6.5.11. Stream Bank Erosion/Stability

Description

Any flowing body of water (brook, creek, stream, river) is a stream. Stream flow is expressed as volume per unit time, usually cubic meters per second, cubic feet per second, sometimes cubic kilometers per second, or acre-feet per second or day. Stream flow varies tremendously with time. Short term controls include rainfall, snowmelt, and evaporation conditions. Long term controls include land use, soil, groundwater state, and rock type.

Streams erode by a combination of direct stream processes, like down cutting and lateral erosion, and indirect processes, like mass-wasting accompanied by transportation. Water tends to move downstream in slugs that extend all the way across a channel. When the channel bends, water on the outside of the bend (the cut-bank) flows faster and water on the inside of the bend (the point) flows slower. This distribution of velocity results in erosion occurring on the outside of the bend (cut) and deposition occurring on the inside of the bend.

Stream bank erosion is a natural process, but acceleration of this natural process leads to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects. Stream bank erosion processes, although complex, are driven by two major components: stream bank characteristics (erodibility) and hydraulic/gravitational forces. Many land use activities can affect both of these components and lead to accelerated bank erosion. The vegetation rooting characteristics can protect banks from fluvial entrainment and collapse, and also provide internal bank strength. When riparian vegetation is changed from woody species to annual grasses and/or forbs, the internal strength is weakened, causing acceleration of mass wasting processes. Stream bank aggradation or degradation is often a response to stream channel instability. Since bank erosion is often

a symptom of a larger, more complex problem, the long-term solutions often involve much more than just bank stabilization. Numerous studies have demonstrated that stream bank erosion contributes a large portion of the annual sediment yield.

Figure 6-18 Remnant "River Pedestals" Indicating High Rates of Lateral Erosion[17]



Determining the cause of accelerated streambank erosion is the first step in solving the problem. When a stream is straightened or widened, streambank erosion increases. Accelerated streambank erosion is part of the process as the stream seeks to re-establish a stable size and pattern. Damaging or removing streamside vegetation to the point where it no longer provides for bank stability can cause a dramatic increase in bank erosion. A degrading streambed results in higher and often unstable, eroding banks. When land use changes occur in a watershed, such as clearing land for agriculture or development, runoff increases. With this increase in runoff the stream channel will adjust to accommodate the additional flow, increasing streambank erosion. Addressing the problem of streambank erosion requires an understanding of both stream dynamics and the management of streamside vegetation.

Extent

Erosion and deposition are occurring continually at varying rates over the Southeast Region. Swiftly moving floodwaters cause rapid local erosion as the water carries away earth materials. Severe erosion removes the earth from beneath bridges, roads and foundations of structures adjacent to streams. The deposition of material can block culverts, aggravate flooding, destroy crops and lawns by burying them, and reduce the capacity of water reservoirs as the deposited materials displace water.

Streambank erosion increases the sediment that a stream must carry, results in the loss of fertile bottomland and causes a decline in the quality of habitat on land and in the stream.

[17] Source: Watershed Assessment of River Stability & Sediment Supply (WARSSS)

6.5.12. Tornadoes

Description

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity (but sometimes result from hurricanes and other tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail.

Extent

Tornadoes are most likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touchdown briefly, but even small short-lived tornadoes can inflict tremendous damage. Highly destructive tornadoes may carve out a path over a mile wide and several miles long. According to the National Weather Service, tornado wind speeds normally range from 40 miles per hour to more than 300 miles per hour. The most violent tornadoes have rotating winds of 250 miles per hour or more, are capable of causing extreme destruction, and can turn normally harmless objects into deadly missiles. Tornado magnitude is reported according to the Fujita and Enhanced Fujita Scales. Tornado magnitudes prior to 2005 were determined using the traditional version of the Fujita Scale, Table 6-10. Tornado magnitudes that were determined in 2005 and later were determined using the Enhanced Fujita Scale, Table 6-11.

Table 6-10 Fujita Scale (effective prior to 2005)

F-Scale Number	Intensity	Wind Speed	Damage
F0	GALE TORNADO	40–72 MPH	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
F1	MODERATE TORNADO	73–112 MPH	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	SIGNIFICANT TORNADO	113–157 MPH	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	SEVERE TORNADO	158–206 MPH	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
F4	DEVASTATING TORNADO	207–260 MPH	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	INCREDIBLE TORNADO	261–318 MPH	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.

F-Scale Number	Intensity	Wind Speed	Damage
F6[18]	INCONCEIVABLE TORNADO	319–379 MPH	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies.

Table 6-11 Enhanced Fujita Scale (effective 2005 and later)

EF-Scale Number	Intensity Phrase	3 Second Gust (Mph)	Damage
EF0	GALE	65–85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
EF1	MODERATE	86–110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF2	SIGNIFICANT	111–135	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
EF3	SEVERE	136–165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
EF4	DEVASTATING	166–200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
EF5	INCREDIBLE	Over 200	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.

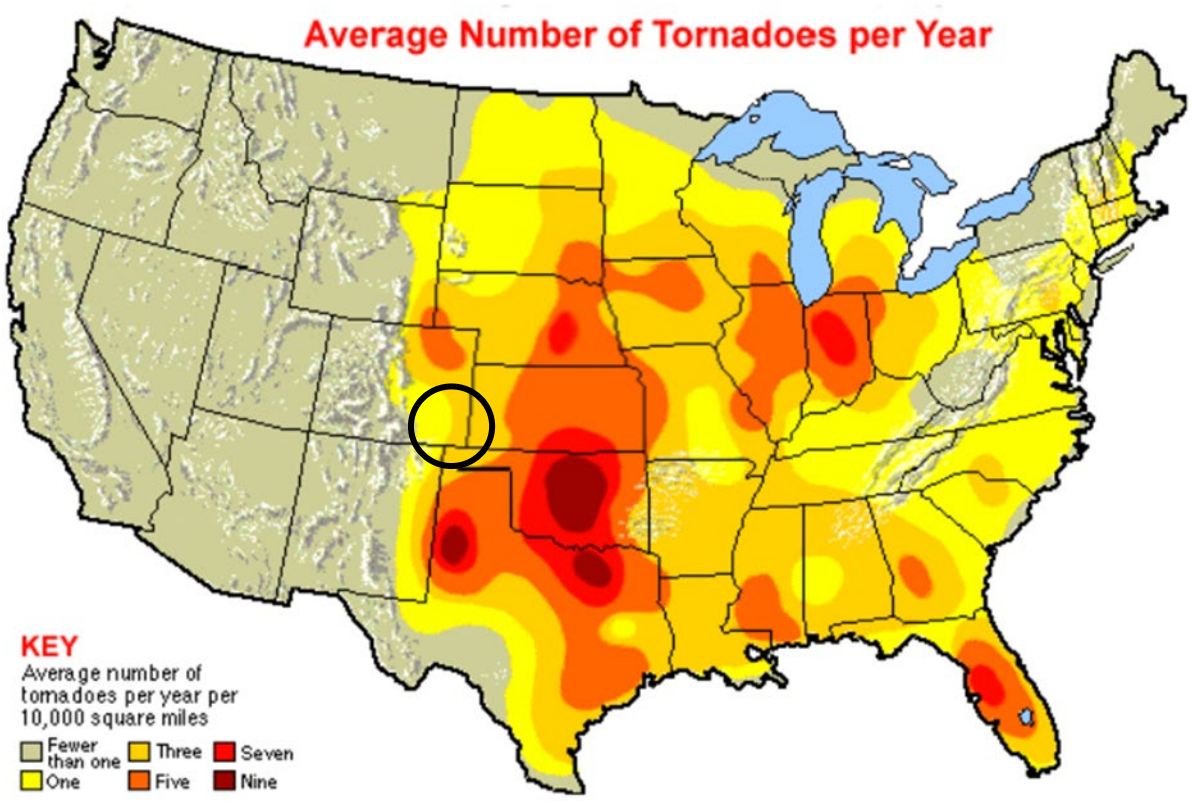
Location

Due to the similarities across all counties in the Southeast Region, the location of tornadoes is reviewed at the regional scale. Tornadoes are possible across the entire Southeast Region.

[18] F6 is not always included but has been used to describe extremely strong tornadoes that far surpass F5 levels.

The eastern plains of Colorado experience the highest number of tornadoes in the State. Figure 6-19 shows the average number of tornadoes per year per 10,000 square miles. Based on this graphic, the Southeast Region experiences one to three tornadoes a year, on average.[19]

Figure 6-19 Average Number of Tornadoes per Year in the United States



6.5.13. Wildfire

Description

The Colorado State Forest Service defines wildfires as "an open fire which spreads unconstrained through the environment. If not quickly controlled, the result can be a firestorm, often termed a 'conflagration,' which destroys large amounts of property and threatens lives." Wildfires occur everywhere in Colorado. In the Southeast Region, the most common kinds of wildfires are grassland fires, which occur along railroad tracks, in fields, and in the prairie land. Wildfires occur naturally (often through lightning strikes) and also from human causes, both intentional and accidental. Examples of human-driven causes of wildfire include campfires, sparks from railroad cars or engines, discarded cigarette butts, and grills. Droughts may increase the number of wildfire incidents by drying out fuel sources. Insect epidemics and forest parasites may also increase the number and severity of wildfires.

Wildfires are most likely to occur during the fire season, which extends from mid-spring to late fall, and is most prominent during the driest summer months of July and August. However, the fire season's

[19] https://scied.ucar.edu/webweather/tornadoes/where-tornadoes-happen

duration is impacted by local fire conditions. These include hot weather, vegetation growth, and low moisture content in air and fuel. These conditions, especially when combined with high winds and years of drought, increase the potential for wildfire to occur. The wildfire risk is predominantly associated with the wildland-urban interface (WUI). The WUI is made of up of areas where development is interspersed or adjacent to landscapes that support wildland fire. While traditionally associated with forested mountain areas, WUI areas are also present in grasslands, prairies, valleys, or in any area where a sustained wildfire may occur and impact developed areas. Fires in the WUI may result in major losses to property and structures, threaten greater numbers of human lives, and incur larger financial costs. In addition, WUI fires may be more dangerous than wildfires that do not threaten developed areas, as firefighters brave dangerous conditions in order to protect structures, such as businesses and homes. As the development of WUI areas increases, the likelihood of a damaging wildfire also increases.

Generally, there are three major factors that sustain wildfires and predict a given area's potential to burn. These factors are fuel, topography, and weather.

- **Fuel**— Vegetative fuels are characterized by size, continuity, and quantity and are often classified in terms of fire behavior fuel models (FBFM). These fuel characteristics determine responsiveness to weather conditions and ignition. Fuel sources are diverse and include ground fuels (roots, duff), surface fuels (forest litter, dead and down twigs and branches, grass, shrubs), and aerial fuels (the canopies of forest and brush). Manmade structures and other associated combustibles are also considered fuel sources. Light surface and canopy fuels, such as cured grasses and drought stressed tree crowns, burn quickly and serve as a catalyst for rapid fire spread.
- **Topography**—An area's terrain and land slopes affect its susceptibility to wildland fire spread. Fire intensities and rates of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. The natural arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes.
- **Weather**—Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildland fire. High temperatures and low relative humidity dry out the fuels that feed the wildland fire, creating a situation where fuel will more readily ignite and burn more intensely. Wind is the most influential weather factor for fire intensity and the direction and rate of fire spread. Winds can be significant at times in the Southeast Region. In addition to high winds, wind shifts can occur suddenly due to frontal passage, temperature changes, or the interaction of wind with topographical features such as slopes or steep hillsides. Seasonal and episodic drought effects fuels' susceptibility for combustion.
- **Ignitions**—Wildland fires are ignited by natural causes, predominately lightning, or human causes. Federal agencies categorize human caused fires based on their source including equipment, smoking, campfires, debris burning, railroads, and arson. Human caused ignitions are associated with travel corridors, population centers, recreational use, and commercial activities.

In wildland fire vernacular, hazard is defined as the physical situation with potential for causing damage to resource or assets, measured by burn probability and fire intensity. Risk is the overall measure of the possibility for loss or harm caused by wildfire. Risk is the combination of wildfire hazard and vulnerability. Fire danger refers to a combination of fuel moisture and weather conditions that combine with topography and other fuel characteristics to determine fire behavior as manifested in fire intensity and rate of spread. Fireline intensity is a function of rate of spread and heat per unit area; it is directly related to flame length and relates to the heat felt by a person standing next to the flames.

Extent

In the Southeast Region, small fires can grow rapidly when adequate fuels coincide with weather and topography favorable to fire. Wildfires can last from several hours to several months. Generally, the fire season extends from early spring to late fall.

The 2017 Colorado Wildfire Risk Assessment (CO-WRA) created a Fire Intensity Scale (FIS) to quantify potential fire intensity based on high to extreme weather, fuels, and topography. It is similar to the Richter scale for earthquakes, providing a standard scale to measure potential wildfire intensity by magnitude. The FIS consists of five classes where the order of magnitude between classes is ten-fold.[20] Table 6-12 describes the FIS.

Table 6-12 Fire Intensity Scale

Class 1 – lowest intensity	Class 2 – low	Class 3 – moderate	Class 4 – high	Class 5 – highest intensity

The extent of wildfires can also be described by their size. According to the National Wildfire Coordinating Group, there are seven classes of wildfire sizes, categorized from A-G:[21]

- Class A - one-fourth acre or less;
- Class B - more than one-fourth acre, but less than 10 acres;
- Class C - 10 acres or more, but less than 100 acres;
- Class D - 100 acres or more, but less than 300 acres;
- Class E - 300 acres or more, but less than 1,000 acres;
- Class F - 1,000 acres or more, but less than 5,000 acres;
- Class G - 5,000 acres or more.

6.5.14. Windstorm

Description

The Southeast Region is subject to significant, non-tornadic (straight-line), winds. High winds, as defined by the NWS glossary, are sustained wind speeds of 40 mph or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration. These winds may occur as part of a seasonal climate pattern or in relation to other severe weather events such as thunderstorms. Straight-line winds may also exacerbate existing weather conditions, as in blizzards, by increasing the effect on temperature and decreasing visibility due to the movement of particulate matters through the air, as in dust and snowstorms. The winds may also exacerbate fire conditions by drying out the ground cover, propelling fuel such as tumbleweeds, around the region, and increasing the ferocity and spread of existing fires. These winds may damage crops, push automobiles off roads, damage roofs and structures, and cause secondary damage due to flying debris.

A secondary hazard of high wind events is blowing dust and sedimentation. A study published in part by Jason Neff at the University of Colorado indicates that the amount of dust in the Western region of the

[20] CSFS, 2017 CO-WRA Final Report
[21] https://www.nwcg.gov/term/glossary/size-class-of-fire%C2%A0

United States has increased significantly since the 1800s. According to an article by Richard Harris on the NPR website, increased levels of dust in the atmosphere have been linked to increased rates of snowmelt, which may cause flooding and exacerbate drought conditions, or prolong the recovery periods from drought. Blowing dust also damages homes, vehicles, property, and livestock, and causes erosion and reduces visibility, which may increase the danger to motorists and travelers.

Extent

Wind can be categorized by the Beaufort Wind Scale as shown below.[22]

Table 6-13 Beaufort Wind Scale

Appearance of Wind Effects			
Force	**Wind (Knots)**	**WMO Classification**	**On Land**
0	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Twigs breaking off trees, generally impedes progress
9	41-47	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	
12	64+	Hurricane	

Additionally, straight-line winds associated with thunderstorms are considered “damaging” when they exceed 50 mph.[23]

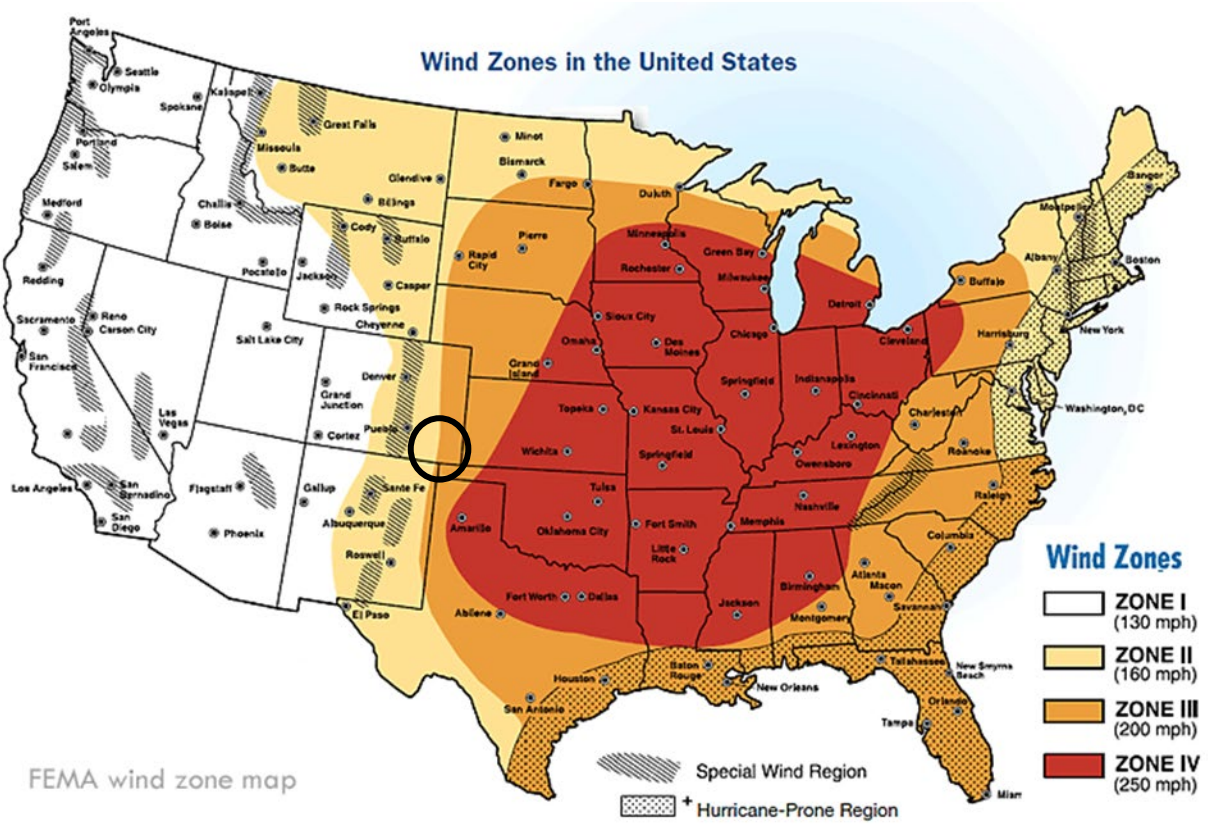
Location

Due to the similarities between the location of the wind hazard in each County, it is described at the regional scale.

Figure 6-20 depicts wind zones for the United States. The map denotes that the majority of the Southeast Region falls into Zone II, which is characterized by high winds of up to 160 mph. The eastern edges of the Region, containing Kiowa, Prowers, and Baca Counties, fall into Zone III, characterized by high winds of up to 200 mph.

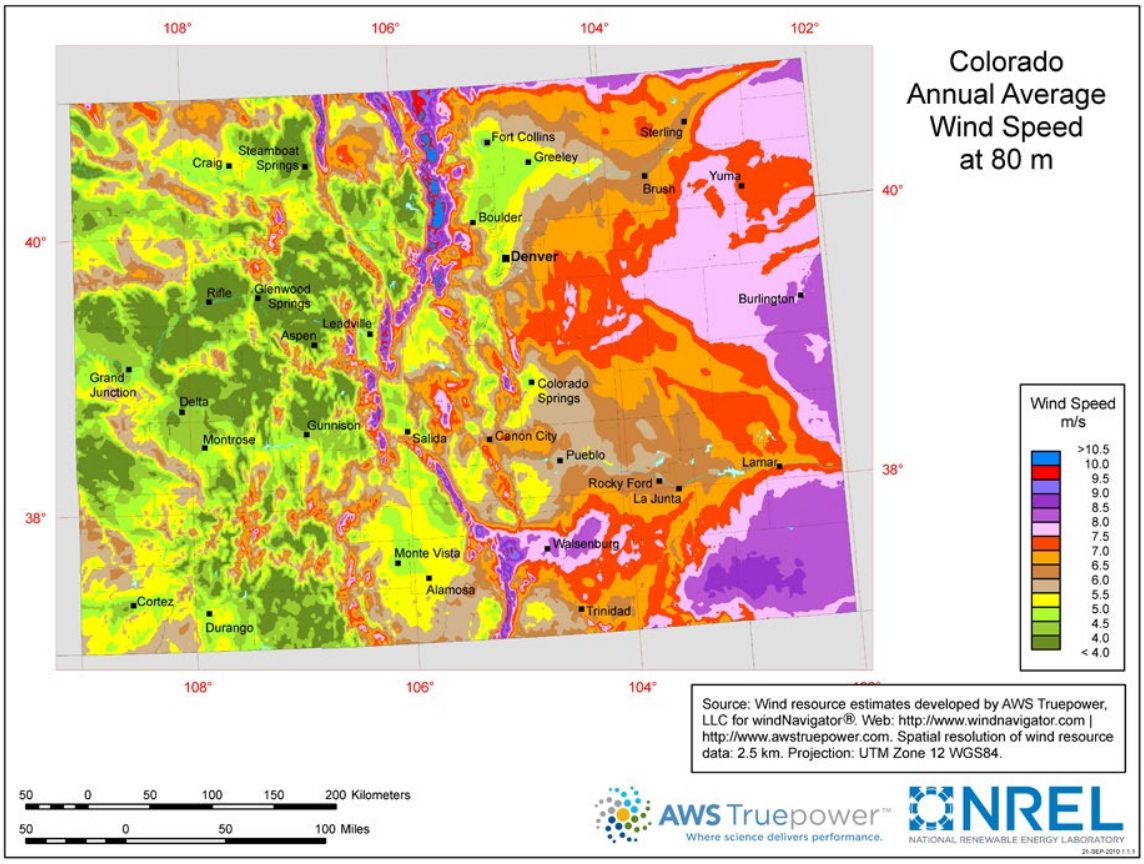
[22] https://www.spc.noaa.gov/faq/tornado/beaufort.html
[23] https://www.nssl.noaa.gov/education/svrwx101/wind/

Figure 6-20 Wind Zones in the United States



Additionally, Figure 6-21 shows wind speeds at 80 meters in Colorado. It is evident that the Southeast Region has some of the highest wind speeds in the State.

Figure 6-21 Colorado Annual Average Wind Speed at 80m



6.5.15. Winter Storms

Description

Heavy snow, ice, severe winter storms, and blizzards are common occurrences in Colorado. The size of such events varies and may range in size from isolated (impacting only a portion of a county) to statewide. Generally, severe winter storm events are considered to be a regional occurrence, impacting multiple counties simultaneously and for extended time periods.

The National Weather Service Glossary defines common winter storm characteristics as follows:

- **Blizzard:** A blizzard means that the following conditions are expected to prevail for a period of three hours or longer:
  - Sustained wind or frequent gusts to 35 miles an hour or greater; and
  - Considerable falling and/or blowing snow (i.e., reducing visibility frequently to less than ¼ mile).
- **Heavy Snow:** This generally means:
  - Snowfall accumulating to 4" or more in depth in 12 hours or less; or
  - Snowfall accumulating to 6" or more in depth in 24 hours or less.

  - In forecasts, snowfall amounts are expressed as a range of values, e.g., “8 to 12 inches.” However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as “up to 12 inches” or alternatively “8 inches or more.”
- **Ice Storm:** An ice storm is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of ¼" or greater.

Heavy snow can immobilize a region, stranding commuters, stopping the flow of supplies, and disrupting emergency and medical services. Accumulations of snow can collapse roofs and knock down trees and power lines. In rural areas, homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, damage repair, and business losses can have a tremendous impact on cities and towns. Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days until damages are repaired. Even small accumulations of ice may cause extreme hazards to motorists.

Some winter storms are accompanied by strong winds, creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chills. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines. Blowing snow can reduce visibilities to only a few feet in areas where there are no trees or buildings. Serious vehicle accidents can result with injuries and deaths.

Heavy snowfall during winter can also lead to flooding or landslides during the spring if the area snowpack melts too quickly.

Extent

Winter storms are defined differently in various parts of the country relevant to their standard weather. Two inches of snow may create serious disruptions to traffic in areas where snowfall is not expected, however this may be considered a light dusting in regions where snowfall is typical, such as Colorado. Therefore, there are multiple ways in which to measure a winter storm, based on snowfall, temperatures, wind speeds, societal impact, etc. Generally, winter storms are forecasted in advance and provide adequate warning time for populations to prepare. Winter storm advisories, watches, and warnings are issued by the National Weather Service in advance of a winter storm.

Location

The entire Southeast Region can experience a winter storm. Many times, one winter storm can cover multiple counties or the entire Region.

6.5.16. Civil Unrest

Description

Civil unrest refers to a situation where groups intentionally choose not to observe the law. Civil unrest may also be defined as random acts of violence by three or more persons with the potential to injure people or damage property, but that does not meet the definition of a terrorist act. Civil unrest can take the form of small gatherings or large groups that block or impede access to a building, or disrupt normal activities by generating noise and intimidating people. Other examples range from peaceful sit-ins to a

full-scale riot in which a group destroys property and disregards or retaliates against law enforcement response. Civil disorder varies widely in size and scope, and its overall impact is generally low.

There are two types of large gatherings typically associated with civil disorders: crowds and mobs. A crowd can be defined as a casual, temporary collection of people without a strong, cohesive relationship. Crowds can be classified into four categories:

1. **Casual Crowd –** A casual crowd is merely a group of people who happen to be in the same place at the same time. The likelihood of violent conduct is non-existent.
2. **Cohesive Crowd –** A cohesive crowd consists of people who are involved in some type of unified behavior, such as worshiping, dancing, or watching a sporting event. Although they may have intense internal discipline, they require substantial provocation to arouse to action.
3. **Expressive Crowd –** An expressive crowd is one held together by a common commitment or purpose. Although they may not be formally organized, they are assembled as an expression of common sentiment or frustration. Members wish to be seen as a formidable influence. One of the best examples of this type is a group assembled in general or specific protest.
4. **Aggressive Crowd –** An aggressive crowd is comprised of individuals who have assembled for a specific purpose. This crowd often has leaders who attempt to arouse the members or motivate them to action. Aggressive crowd members are noisy, threatening, and often taunt authorities. They tend to be impulsive, highly emotional, and require only minimal provocation to arouse them to violence. Examples of this type of crowd include demonstrations and strikers.

A mob can be defined as a large, disorderly crowd or throng. Mobs are usually emotional, loud, tumultuous, violent, and lawless. Like crowds, mobs have different levels of commitment and can be classified into four categories:

1. **Aggressive Mob –** An aggressive mob is one that attacks, riots, and terrorizes. The object of violence may be a person, property, or both. An aggressive mob is distinguished from an aggressive crowd only by lawless activity. Examples of this type are inmate mobs in prisons and jails, those that act out their frustrations after political defeat, or violent ones at political protests or rallies.
2. **Escape Mob –** An escape mob attempts to flee from something such as a fire, bomb, flood, or other catastrophe. Members of escape mobs have lost their capacity to reason and are generally impossible to control. They are characterized by unreasonable terror.
3. **Acquisitive Mob –** An acquisitive mob is one motivated by a desire to acquire something. Riots caused by other factors often turn into looting sprees. This mob exploits a lack of control by authorities in safeguarding property. Examples of acquisitive mobs would include the looting in south central Los Angeles in 1992 or, more recently, those in New Orleans during Hurricane Katrina in 2005.
4. **Expressive Mob –** An expressive mob is one that expresses fervor or revelry following some sporting event, religious activity, or celebration. Members experience a release of pent-up emotions in highly charged situations. Examples of this type of mob include the June 1994 riots in Canada, following the Stanley Cup professional hockey championship, European soccer riots, and those occurring after other sporting events worldwide.

In the Southeast Region, civil unrest is profiled due to the number of private and public prisons located in the Region, in addition to historical events.

Extent

Civil unrest may be caused by a reaction from a specific event. This type of civil unrest can be planned for ahead of the event to help mitigate any unrest that occurs. However, civil unrest could also be a random event, making it difficult to plan for.

6.5.17. Cyber Hazards

Description

A computer virus is a computer program that can copy itself and infect a computer. The term “virus” is also commonly but erroneously used to refer to other types of malware, including but not limited to rasomware, adware, and spyware programs that do not have the reproductive ability. A true virus can spread from one computer to another (in some form of executable code) when its host is taken to the target computer; for instance, because a user sent it over a network or the internet, or carried it on a removable medium such as a floppy disk, CD, DVD, or USB drive. Viruses can increase their chances of spreading to other computers by infecting files on a network file system or a file system that is accessed by another computer.

As stated above, the term “computer virus” is sometimes used as a catch-all phrase to include all types of malware, even those that do not have the reproductive ability. Malware includes computer viruses, computer worms, Trojan horses, most rootkits, ransomeware, spyware, dishonest adware, and other malicious and unwanted software, including true viruses. Viruses are sometimes confused with worms and Trojan horses, which are technically different. A worm can exploit security vulnerabilities to spread itself automatically to other computers through networks, while a Trojan horse is a program that appears harmless but hides malicious functions. Worms and Trojan horses, like viruses, may harm a computer system's data or performance. Some viruses and other malware have symptoms noticeable to the computer user, but many are surreptitious or simply do nothing to call attention to themselves. Some viruses do nothing beyond reproducing themselves.

Viruses affect the world in a very costly way. An example would be the ILoveYou virus that hit the government, corporations, and private sectors in May of 2000. It erased large amounts of data and also did the following four things: it made its way into the user’s address book and sent itself to all of the addresses; it made its way to the software that supports chat rooms so that everyone in the chat room would receive it; and finally it incorporated a password-stealing program in Internet Explorer. This virus spread worldwide in a few hours and the damage was estimated at a minimum of $15 billion.

Ransomware specifically is becoming a growing concern across the nation, as thieves are increasing attacks. Many of these attacks are directed towards smaller, more rural communities that may not have adequate technological resources to mitigate the risk.

Extent

There is not standardized scale to measure the extent of a cyber-attack. Several factors can contribute to the severity of an attack. For example, a disruption affecting a small, isolated system could impact only a few functions/processes. Disruptions of large, integrated systems could impact many functions/processes, as well as many individuals that rely on those systems. Additionally, the nature of the information accessed can contribute to the severity of the event.

Location

All jurisdictions in the Region are vulnerable to a cyber-attack. Local governments and utility facilities/networks are at the highest risk for an attack.

6.5.18. Hazardous Materials Release

Description

A hazardous material release can take place on roads, in the air, through pipelines, and at fixed facilities that manufacture, use, or store dangerous chemical substances. A hazardous materials incident may occur at any time during routine business operations or as a result of a natural disaster. The release of hazardous materials can threaten people and natural resources in the immediate vicinity of the accident. Air releases can prompt large-scale population evacuations and spills into water or onto the ground can adversely affect public water and sewer systems.

A transportation incident refers to accidental and uncontrolled releases of chemicals or other hazardous materials during transport (i.e., highways, pipelines, and airways). A fixed-facility incident is an uncontrolled release of chemicals or other potentially hazardous materials from a facility. Fixed facilities include companies that store hazardous materials at their facility as well as all hazardous waste sites.

The U.S. Department of Transportation (U.S. DOT) uses nine classes of hazardous materials:

- Explosives
- Compressed Gasses: Flammable Gasses; Non-Flammable Compressed Gasses; Poisonous Gasses
- Flammable Liquids: Flammable (Flash Point Below 141 degrees); Combustible (Flash Point 141 degrees – 200 degrees)
- Flammable Solids; Spontaneously Combustible; Dangerous When Wet
- Oxidizers and Organic Peroxides
- Toxic Materials: Material that is Poisonous; Infectious Agents
- Radioactive Material
- Corrosive Material: Destruction of Human Skin; Corrode Steel at a Rate of 0.25 Inches Per Year
- Miscellaneous

The U.S. DOT, U.S. Environmental Protection Agency (EPA), and the Occupational Health and Safety Administration (OSHA) all have responsibilities in regulating hazardous materials and waste.

Extent

The extent for a hazmat release can vary widely based on the chemical released, amount, weather, and location of release. Likely, a release would be sudden and unpredicted.

6.5.19. Pandemic and Zoonotic Diseases

Description

For this Plan pandemic influenza and zoonotic diseases including hantavirus, the plague, rabies, tularemia, and the West Nile virus.

Colorado state law requires the Colorado Department of Public Health and Environment (CDPHE) to monitor, investigate and control the causes of epidemic and communicable diseases affecting the public health in Colorado.

In the predominately agricultural region that makes up the Southeast Region, zoonotic diseases are also a significant hazard to the population and livestock of the area. Zoonotic diseases are those which can be transmitted from animals and humans. The CDHPE indicates that the most common of these diseases in Colorado are hantavirus, plague, rabies, tularemia, West Nile Virus (WNV) (and other mosquito-borne diseases) and various tick-borne diseases.

Pandemic Influenza

A pandemic is a global disease outbreak. A pandemic flu is a virulent human flu that causes a global outbreak, or pandemic, of serious illness. A flu pandemic occurs when a new influenza virus emerges for which people have little or no immunity, and for which there is no vaccine. This disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in very short time. The U.S. Centers for Disease Control and Prevention has been working closely with other countries and the World Health Organization to strengthen systems to detect outbreaks of influenza that might cause a pandemic and to assist with pandemic planning and preparation.

An especially severe influenza pandemic could lead to high levels of illness, death, social disruption, and economic loss. Impacts could range from school and business closings to the interruption of basic services such as public transportation, health care, and the delivery of food and essential medicines.

Hantavirus

Hantavirus Pulmonary Syndrome (HPS) is an infectious respiratory disease endemic to North and South America. It is caused by a virus generally known as the hantavirus. Hantavirus is spread through the saliva, urine, and feces of the deer mouse and is caused by the Sin Nombre virus. Contamination is only possible when humans come into direct contact with the rodents or dust and feces contaminated by the mice. Hantavirus was initially identified in the Four Corners region of the United States in 1985. The CDPHE reports that mitigation of the disease includes adequate sanitation and use of respiratory and eye protection when working in areas where exposure may occur, including barns, hay lots, basements, and attics.

Plague

Plague is a severe and potentially deadly bacterial infection. Plague is a rodent disease transmitted to humans by flea bites, and is widespread in the western United States. Plague may also infect felines. The disease has epidemic histories, most famously as the “Black Death” plagues of the Middle Ages. The disease is easily mitigated through improved sanitation and rat control; and when detected early, the plague can be treated. However, the disease may still prove fatal if not treated quickly enough.

Rabies

Rabies is a preventable viral disease of mammals most often transmitted through the bite of a rabid animal. The vast majority of rabies cases reported to the Centers for Disease Control and Prevention (CDC) each year occur in wild animals like raccoons, skunks, bats, and foxes. Domestic animals account for less than 10% of the reported rabies cases, with cats, cattle, and dogs most often reported rabid.

Rabies virus infects the central nervous system, causing encephalopathy and ultimately death. Symptoms of rabies in humans are initially nonspecific, consisting of fever, headache, and general malaise. As the disease progresses, neurological symptoms appear and may include insomnia, anxiety, confusion, slight or partial paralysis, excitation, hallucinations, agitation, hypersalivation, difficulty swallowing, and hydrophobia (fear of water). Death usually occurs within days of the onset of symptoms. There is no treatment for rabies after symptoms of the disease appear. However, an

extremely effective rabies vaccine can provide immunity to rabies when administered after an exposure (postexposure prophylaxis) or for protection before an exposure occurs (preexposure prophylaxis).

In Colorado, the primary reservoirs for rabies are bats and skunks. Starting in 2008, rabies in skunks began to spread from eastern Colorado towards the Front Range. Instances of rabies among other wild and domestic animals are rare. According to the CDPHE, a few cases have recently been documented in foxes in Colorado, due to infection with rabies from skunks. Rodents and lagomorphs are rarely positive anywhere in the country.

Tularemia

Tularemia is an illness caused by a bacterium. It results in fever , rash, and greatly enlarged lymph nodes. Tularemia is commonly called "rabbit fever," though it occurs in over a hundred species of wild animals, birds, and insects. Transmission is most common when ticks bite infected animals, particularly rabbits and rodents, and then transfer the disease via human bites. The bacteria may also be inhaled or ingested via the consumption of infected meat or food and water contaminated with the urine from infected animals. Tularemia is not currently transmissible via human-to-human contact, but the disease is easily aerosolized. For this reason, the disease is considered a potential bioterrorism agent and falls under national pharmaceutical stockpile regulations. In addition, as reported by the CDPHE, corpses who have not been treated or were treated for less than 48 hours should be considered contagious and appropriate caution and equipment should be utilized in disposing of remains, both human and animal. The CDPHE reports that tularemia is easily mitigated through appropriate hygiene, limitation of contact between human and rodent populations, and appropriate sanitation of water and food supplies, particularly local garden produce.

West Nile Virus

West Nile virus (WNV), which is spread through mosquito bites, can be contracted by birds, humans, horses, cattle, and other livestock. Symptoms may include headaches, fever, malaise, encephalitis, and death, although not all infected individuals exhibit symptoms. The CDPHE reports that there is no treatment for the virus except supportive care. The Colorado Mosquito-Borne Virus Surveillance Program, local health departments, and the Colorado Department of Public Health and Environment have conducted WNV surveillance since 2001. Many resources exist for local communities to mitigate the risk of WNV. Online resources include the "Fight the Bite" website (www.fightthebitecolorado.com), which provides tips and tools for local homeowners to mitigate mosquito populations on private property. Other mitigation efforts include spraying, use of personal pesticide sprays, avoiding outdoor activities during dawn and dusk, and draining bodies of water that have little or no circulation.

Extent

Pandemic

According to the Colorado Department of Public Health and Environment (CDPHE) 2018 Pandemic Influenza Plan, Influenza pandemics are unpredictable, but expected, and may arrive with very little warning. Certain conditions make pandemic influenza more likely:

- A novel influenza A virus emerges when two or more different strains or different viruses combine to form a new subtype, with some characteristics of the original viruses. This process is called "antigenic shift".
- The population is susceptible with little or no immunity to the new virus.
- The virus is highly contagious.

- The virus is virulent with the capacity to cause serious illness and death.[24]

Zoonotic Diseases

The extent of zoonotic diseases varies with the type of disease. Symptoms such as a fever can be an early sign of the contraction of a disease, but symptoms may also appear suddenly without a previous indicator of contracting a disease. West Nile virus is more prevalent in the spring and summer months when mosquitos are present.

Location

The entire Southeast Region is at risk to a pandemic or zoonotic disease. Carriers for zoonotic diseases (such as rodents and mosquitos) are present across the entire Region, therefore all counties have equal exposure to this hazard.

[24] CDPHE Pandemic Influenza Plan, 2018

6.6. Baca County Risk Assessment

6.6.1. Hazard Summary Risk Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in the following figures below. Those hazards ranked as "low" were determined by the LPC to not be a focus of this plan's overall mitigation strategy, therefore earthquake and streambank erosion are not further assessed for Baca County.

Table 6-14 Baca County Risk Ranking

Baca County	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	3	2	7	H
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	3	2	8	H
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	2	2	5	M
Cyber Hazards	2	3	2	7	H
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

Table 6-15 Campo Risk Ranking

Campo	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L

Campo	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Extreme Cold	3	3	2	8	H
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	2	2	6	M
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	1	3	2	6	M
Pandemic and Zoonotic Disease	1	1	2	4	L

Table 6-16 Pritchett Risk Ranking

Pritchett	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	3	2	7	H
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	2	2	5	M
Cyber Hazards	2	2	2	6	M
Hazmat Release	1	3	2	6	M
Pandemic and Zoonotic Disease	1	1	3	5	M

Table 6-17 Springfield Risk Ranking

Springfield	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	3	2	8	H
Extreme Heat	1	3	2	6	M
Flooding	2	1	1	4	L
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	2	4	L

Table 6-18 Two Buttes Risk Ranking

Two Buttes	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	L
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	1	1	4	L
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	3	3	8	H
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	2	3	2	7	L

Two Buttes	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Pandemic and Zoonotic Disease	1	1	2	4	M

Table 6-19 Vilas Risk Ranking

Vilas	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	L
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	1	1	4	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	3	3	8	H
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	2	3	2	7	M
Pandemic and Zoonotic Disease	1	1	2	4	M

Table 6-20 Walsh Risk Ranking

Walsh	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	1	1	4	L
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	3	3	8	H

Walsh	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	2	4	L

6.6.2. Agricultural Infestation

Previous Occurrences

Due to the regional nature of this hazard, see section 4.5.3.

Vulnerability Assessment

Inventory Exposed/Impacts

Crops and rangeland in the County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Baca County's economy. According to the 2017 USDA Census of Agriculture, Baca County has 667 farms totaling 1,471,783 acres. The estimated market value of agricultural products sold is $114,083,000. An agricultural infestation could impact the livelihood of residents in the County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation.

Economic impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not be direct, as it would be for the rest of the unincorporated County, but the indirect impacts to each Town's overall economies would greatly affect these municipalities.

Potential Losses

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Baca County has experienced $158,981 in crop indemnity payments due to insects from 1991 to 2018. This equates to $5,888 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost to control the infestation.

Land Use and Development

Any future agricultural endeavor in the County is vulnerable to the impacts of this hazard. Population change and related structural development are not impacted by or directly impact this hazard.

6.6.3. Dam and Levee Failure

Location

Dams

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are 18 jurisdictional dams in Baca County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.[25] Four of these dams are low hazard, one is high hazard (Two Buttes), 10 are considered No Public Hazard (NPH), and three are considered No Hazard (N). The high hazard dam has an Emergency Action Plan (EAP) dated 1/25/2016. These dams are listed in Table 6-21.

Table 6-21 Jurisdictional Dams in Baca County

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Two Buttes	Two Butte Creek	Holly	High	Yes	1/25/2016
John L. Jones	Furnish Canyon	Kenton, Oklahoma	Low	Not Required	N/A
A.F. Mizer #1	West Carrizo	Kenton, Oklahoma	Low	Not Required	N/A
A.F. Mizer Dry Creek	West Carrizo	Kenton, Oklahoma	Low	Not Required	N/A
Turks Pond	Horse Creek	Walsh	Low	Not Required	N/A
Fish Hatchery Pond	Two Butte Creek	Holly	N	Not Required	N/A
Homsher Stock	Bear Creek	Springfield	N	Not Required	N/A
Thompson	Cat Creek	Springfield	N	Not Required	N/A
Konantz	San Arroyo	Deerfield, Kansas	NPH	Not Required	N/A
Hoopengarner SW #1	Bear Creek	Deerfield, Kansas	NPH	Not Required	N/A
Hoopengarner EC #2	Bear Creek	Deerfield, Kansas	NPH	Not Required	N/A
Hoopengarner SW #3	Bear Creek	Deerfield, Kansas	NPH	Not Required	N/A
Hoopengarner SW #4	Bear Creek	Deerfield Kansas	NPH	Not Required	N/A
Kelsey #1	North Horse Creek	Lakin, Kansas	NPH	Not Required	N/A

[25] https://data.colorado.gov/Water/DWR-Dam-Safety-Jurisdictional-Dam/mgjv-xmr5

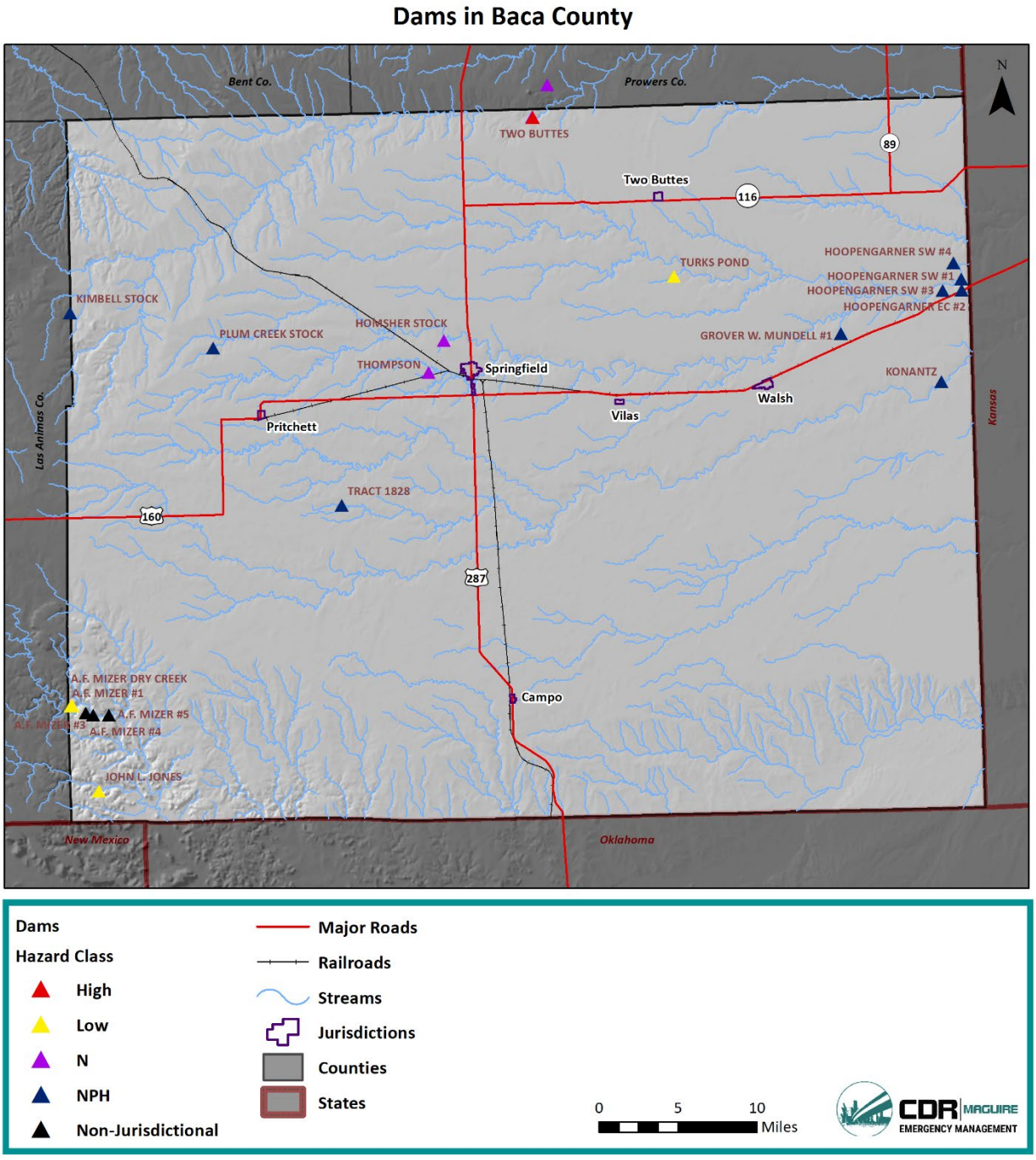
Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Kimbell Stock	Two Butte Creek	Holly	NPH	Not Required	N/A
Plum Creek Stock	Plum Creek	Springfield	NPH	Not Required	N/A
Tract 1828	Sand Arroyo	Walsh	NPH	Not Required	N/A
Grover W. Mundell #1	Horse Creek	Johnson, Kansas	NPH	Not Required	N/A

There are three non-jurisdictional dams in the County. A non-jurisdictional dam is a dam creating a reservoir with a capacity of 100 acre-feet or less and a surface area of 20 acres or less and with a height measured as defined in Rules 4.2.5.1 and 4.2.19 of 10 feet or less.[26] The dams are A.F. Mizer #3, A.F. Mizer #4, and A.F. Mizer #5, all located on West Carrizo stream. These dams are mapped in Figure 6-22.

Additionally, there are upstream dams in neighboring counties and states that could potentially impact Baca County. Currently none of these dams are rated as presenting a high or significant hazard.

[26] https://data.colorado.gov/Water/DWR-Dam-Safety-Non-Jurisdictional-Dam/6smc-zj6j

Figure 6-22 Dams in Baca County



Lastly, there are 157 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses which the state engineer has

determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.[27]

Levees

There are no documented levees in Baca County. However, the levee inventory may not be complete, as the County has not been mapped by the NFIP. Additionally, smaller levees or embankments that do not provide 100-year flood protection would not be captured in this inventory.

Previous Occurrences

There are no reports of significant dam or levee failures in Baca County. However, Two Buttes dam is listed as one of Colorado Parks and Wildlife's (CPW) 11 dams statewide that are in need of "critical repairs." Two Buttes dam was built from 1910 to 1914 with horse, mule and hand labor by the Two Buttes irrigation district. The dam has seen several large storms including a 1965 flood which nearly over-topped the dam. As a result, the owners enlarged the spillway and added an additional four feet to the top of the dam. The dam was sold to CPW in 1970, and in 1983, the State Dam Safety Branch determined the spillway, widened after the 1965 flood, did not meet safety standards and a restriction was placed on the dam limiting the amount of water it can hold. The current restriction is approximately 10,504 acre-feet of a total storage capacity of 22,000 acre-feet at the spillway crest. In August 2013, monsoonal rains delivered a surge of water into the reservoir, which was dry at the time. Water rose 32 feet, or about 12,000 acre-feet. CPW enlarged the spillway after the 2013 event and initiated meetings with the State Engineer's office to lift the restriction and increase the storage capacity of the reservoir, one of the few recreational areas in the region. As of August 2018, CPW engineers have nearly completed design of the $3.4 million project, which includes replacing two gates on the dam at a cost of $678,00 and installing a bulkhead for the gate repairs, improving the channel below the spillway for $1.37 million, installing a spillway tower for $875,000 and constructing a new gate control building for $467,000.[28]

Probability

Although there has not been any significant dam or levee failures in Baca County, with 18 dams in the County and lack of reporting on levees, the risk of a failure remains. Based on this assessment, the probability is rated as possible, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and

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[27] https://data.colorado.gov/Water/DWR-Livestock-Water-Tank-and-Erosion-Control-Dams/r2rp-ecjb

[28] Kiowa County Press, Repairs, Upgrades to Two Buttes Reservoir Dam Planned, August 25, 2018; https://kiowacountypress.net/content/repairs-upgrades-two-buttes-reservoir-dam-planned

evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Although not a failure event, the improvements to the Two Buttes dam to enlarge the spillway cost approximately $3.4 million. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries.

The Colorado Dam Safety database indicates the nearest downstream town from each jurisdictional dam. In Baca County, Springfield is the first community downstream from Homsher Stock, Thompson, and Plum Creek Stock dams. Walsh is the first community downstream from the Turks Pond and Tract 1828 dams. These communities are at a higher risk to impacts from a dam failure in the County. The first communities downstream from the remaining dams in Baca County are communities in surrounding counties.

The Towns of Campo, Pritchett, Two Buttes, and Vilas will not be directly impacted by any dam failure events.

Colorado law requires that high hazard dams have Emergency Action Plans (EAP), and that failure inundation maps be prepared as part of those plans. The LPC did confirm the existence of an EAP for Two Buttes dam, the only high hazard dam in the County. Dam inundation maps prepared by dam owners are on file with the County, and for security purposes, can only be accessed by the Baca County Emergency Manager.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

6.6.4. Drought

Location

All of Baca County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

Previous Occurrences

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing: precipitation averages over time to identify periods with precipitation amounts below the long-term average, U.S. Drought Monitor records/current conditions, and previous drought disaster declarations.

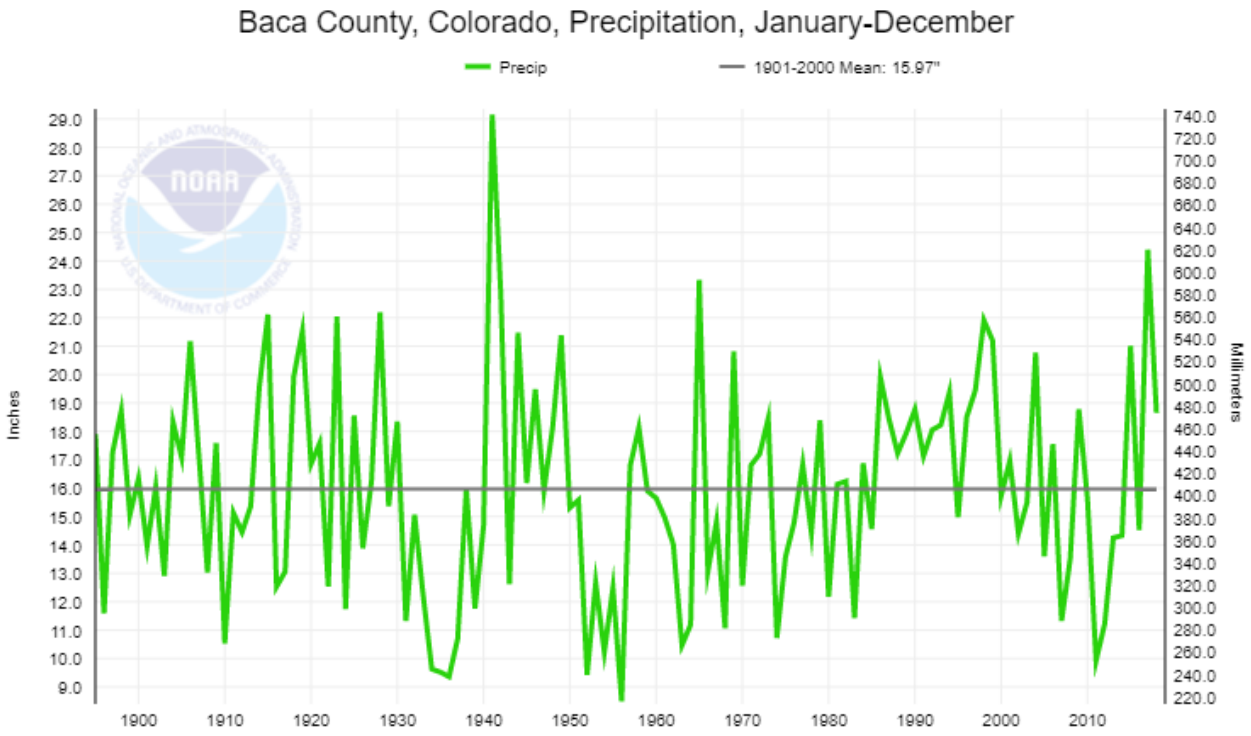
Drought conditions based on precipitation deficits are described in Table 6-22, indicating the top five years of precipitation deficit departure from the long-term average of 15.97 inches. Precipitation deficits are also shown in Figure 6-23. It is evident precipitation deficits have occurred throughout history in Baca County, particularly in the 1930s and 1950s. However, more recently, 2011 was the sixth driest

year since 1895, with 9.93 inches of precipitation, equaling a 6.04-inch deficit. The year 2018, which was a notably dry year in much of Colorado, resulted in precipitation deficits in Baca County.[29]

Table 6-22 Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
15.97 in.	1956	8.50 in.	7.47 in.
15.97 in.	1936	9.36 in.	6.61 in.
15.97 in.	1952	9.42 in.	6.55 in.
15.97 in.	1935	9.52 in.	6.45 in.
15.97 in.	1934	9.63 in.	6.34 in.

Figure 6-23 Precipitation Deficits 1895-2016

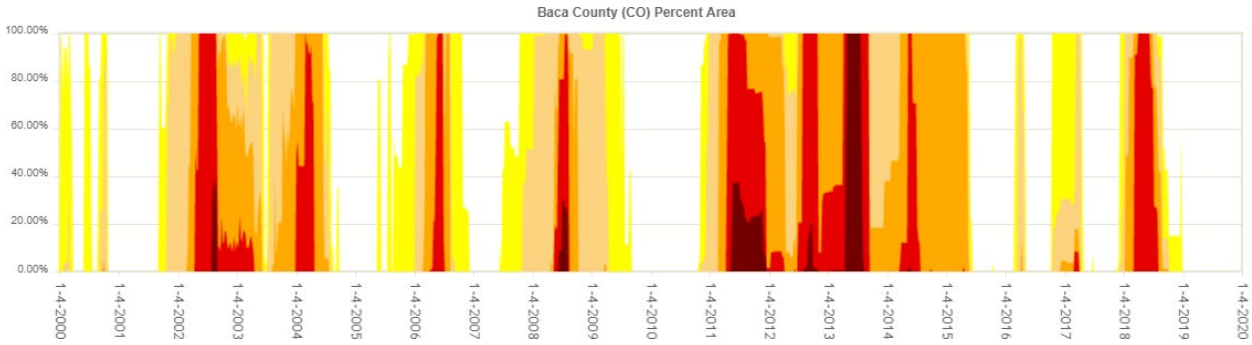


Drought conditions based on U.S. Drought Monitor records are shown in Figure 6-24.[30] Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2011 to 2014. For parts of 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2004, 2006, 2008, and 2018. There has been some level of drought in the County nearly every year since 2000.

[29] NOAA National Centers for Environmental information, Climate at a Glance: County Time Series, published May 2019, retrieved on May 8, 2019 from https://www.ncdc.noaa.gov/cag/

[30] https://droughtmonitor.unl.edu/Data/Timeseries.aspx for Baca County

Figure 6-24 Baca County Previous Droughts

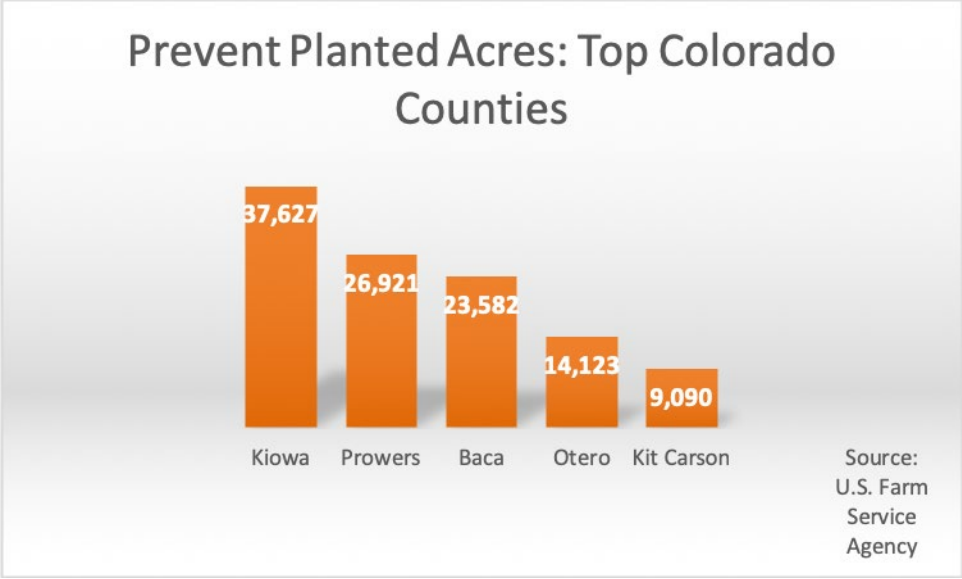


Lastly, there have been 16 drought disaster declarations that have impacted Baca County from 1977 to 2018 (see Table 6-1-Disaster Declaration Summary).

Recent droughts are described below.

Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Baca County, was experiencing extreme (D3) drought conditions. In Baca County, these conditions impacted farmers as well as heightened wildfire concerns. In southeastern Colorado, Baca, Kiowa, Otero and Prowers counties had, in total, tens of thousands of acres that went unplanted due to fears that the crops would fail, otherwise known as "prevent planted" acres. Figure 6-25 shows the top counties in the State with prevent planted acres due to the 2018 drought. Baca County placed third, with 23,582 acres.[31]

Figure 6-25 Prevent Planted Acres due to 2018 Drought



In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the

[31] https://www.krcc.org/post/drought-puts-pinch-southern-colorado-agriculture

worst impacts of drought to the agricultural community in Baca County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought. The 2018 drought did lead to declaring Baca County as a Primary county in a USDA Secretarial Natural Disaster designation for drought.

After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres.[32] The 2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.

As of July 2019, no part of Baca County is experiencing drought.

See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

Probability

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.

For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought conditions that negatively impact the Southeast Region. In Baca County, there have been 16 drought disaster declarations from 1977 to 2018, equating to a 39% annual chance of drought occurrence, or a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Baca County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Baca County has 667 farms totaling 1,471,783 acres. The estimated market value of agricultural products sold is $114,083,000.

[32] https://climate.colostate.edu/pdfs/drought_2012.pdf

The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Baca County, during this time period, there has been 68 reported impacts. The most impacts (27) were categorized as "agriculture," followed by plants and wildlife (15 impacts), and relief, response, and restrictions (14 impacts).

Economic impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not be directly caused by drought, as it would be for the rest of the County, but the indirect impacts to the overall economy would also greatly affect each municipality.

Potential Losses

The largest potential losses in Baca County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Baca County, and droughts causing major economic impacts to crops could also trickle into the rest of the economy. All jurisdictions and unincorporated County are impacted by drought events due to the connected nature of agriculture, water use, and the economy in Baca County.

Based on SHELDUS data from 1960 to 2017, Baca County has experienced $4,533,293 in crop losses from drought (2017 dollars). This equates to $79,531 in annual losses. No property damages were recorded in SHELDUS.

Other reported impacts and losses from previous droughts in the County are as follows:

- Impacts to the cattle industry by forcing ranchers to sell off their herds because they could not provide enough feed due to the drought impact upon feed-crops. Drought has further impacted the herds because ranchers take their cattle to feed lots earlier in order to reduce the amount of feed they need, and to use less electricity to power the irrigation pumps used to grow the feed.
- Created an increase in the rates for hydroelectric power.
- Affected the population and distribution of wildlife. This, in turn, has affected the economy due to a lower than normal number of hunters and fishermen.
- Affected wildfire by providing a greater fuel source (dried out vegetation) and diminished fire-fighting capacity (the closing off of wells leaves less water to fight fires).
- Increased the volume of noxious weeds, because they are now growing in areas that no longer can support crops.

Land Use and Development

An increase in population and development can put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions.

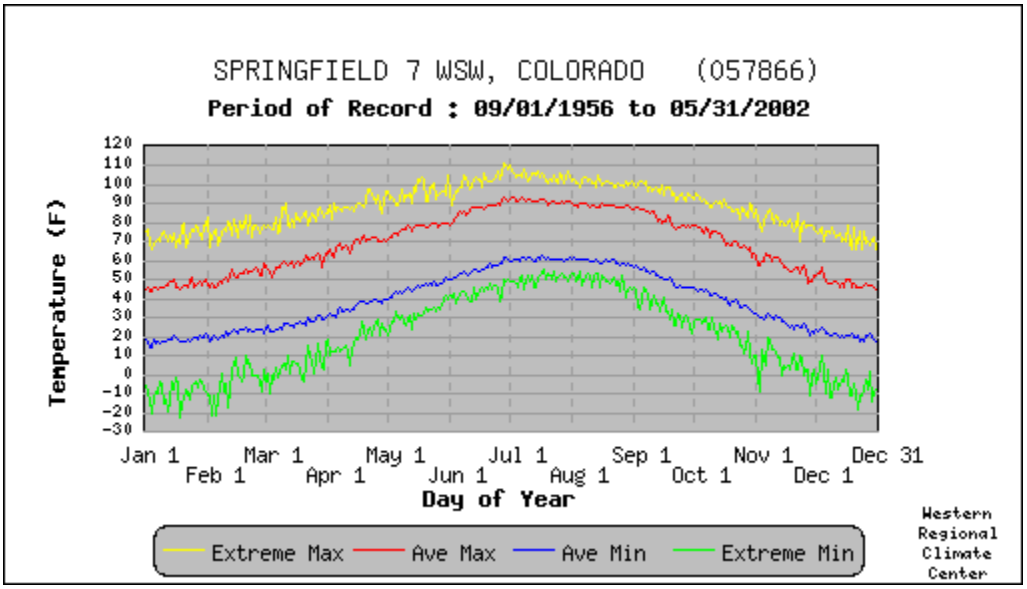
6.6.5. Extreme Temperatures: Extreme Cold

Location

Extreme cold temperatures can impact the entire County. Figure 6-26 show the extreme temperature highs and lows for Springfield. The lowest recorded temperature in the County is -26 degrees, recorded in Campo.[33]

[33] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-26 Temperature Extremes in Springfield, Colorado



Previous Occurrences

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Baca County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Baca County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

Probability

Extreme cold temperatures occur yearly in Baca County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Baca County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the County is most vulnerable to temperature extremes. The percentage of elderly people (age 65 or over) in Baca County is 25%. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Baca County has 667 farms totaling 1,471,783 acres. The estimated market value of agricultural products sold is $114,083,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County. Economic impacts to the agricultural sector will not have as large of a direct effect on the municipalities, but the indirect impacts to the overall economy could also greatly affect each municipality.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in each jurisdiction are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Baca County has experienced $11,612,159 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.[34] This equates to $430,079 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

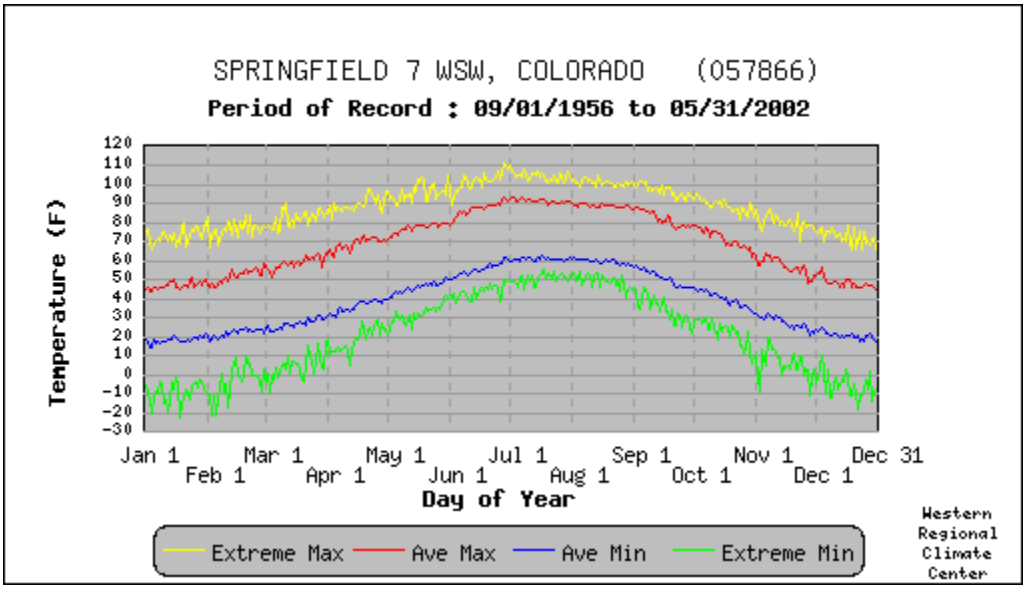
[34] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

6.6.6. Extreme Temperatures: Extreme Heat

Location

Extreme heat can impact the entire County. Figure 6-27 shows the extreme temperature highs and lows for Springfield. The highest recorded temperature in the County is 111 degrees in Two Buttes in August 1902 and again in July 1903, as well as Springfield in June 1990.[35] Across the County, maximum temperatures routinely break 100 degrees during the summer months.

Figure 6-27 Temperature Extremes in Springfield, Colorado



Previous Occurrences

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Baca County has experienced 2,090, 957, and 144 days above 90, 95, and 100 degrees, respectively. Additionally, the county has experienced 217 heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.[36]

Probability

Based on the climate of Baca County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

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[35] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html
[36] Colorado Climate Center

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Baca County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. In Baca County, 25% of people are 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Additionally, people who work, frequently recreate, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Baca County has 667 farms totaling 1,471,783 acres. The estimated market value of agricultural products sold is $114,083,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County. Economic impacts to the agricultural sector will not have as large of a direct effect on the municipalities, but the indirect impacts to the overall economy could also greatly affect each municipality.

Potential Losses

There is no recorded damage information for extreme heat in Baca County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat.

Based on USDA Risk Management Agency Data, Baca County has experienced $14,854,671 in insured indemnity amounts from 1991 through 2018 due to heat.[37] This equates to $550,173 in annual losses.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme heat.

[37] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

6.6.7. Flooding

Location

Baca County's floodplain is not mapped by the NFIP. Therefore, the best available floodplain data was generated for the 2018 Colorado State Hazard Mitigation Plan. Using Hazus-MH 4.0, a standard Level 1 flood analysis was conducted. This resulted in the development of a stream network and hydrology for 10-square mile drainage areas. The 30-meter (one arc second) DEMs were used in this analysis as the terrain source. Hazus then ran hydraulics for and delineated the 100-year floodplain boundary. While not as accurate as an official FEMA floodplain, this boundary is available for use in GIS and is currently the best available data for the County. Figure 6-28 shows the floodplain for Baca County. The only jurisdiction that the floodplain intersects with is the Town of Springfield, shown in Figure 6-29.

Figure 6-28 Baca County 100-year Hazus Floodplain

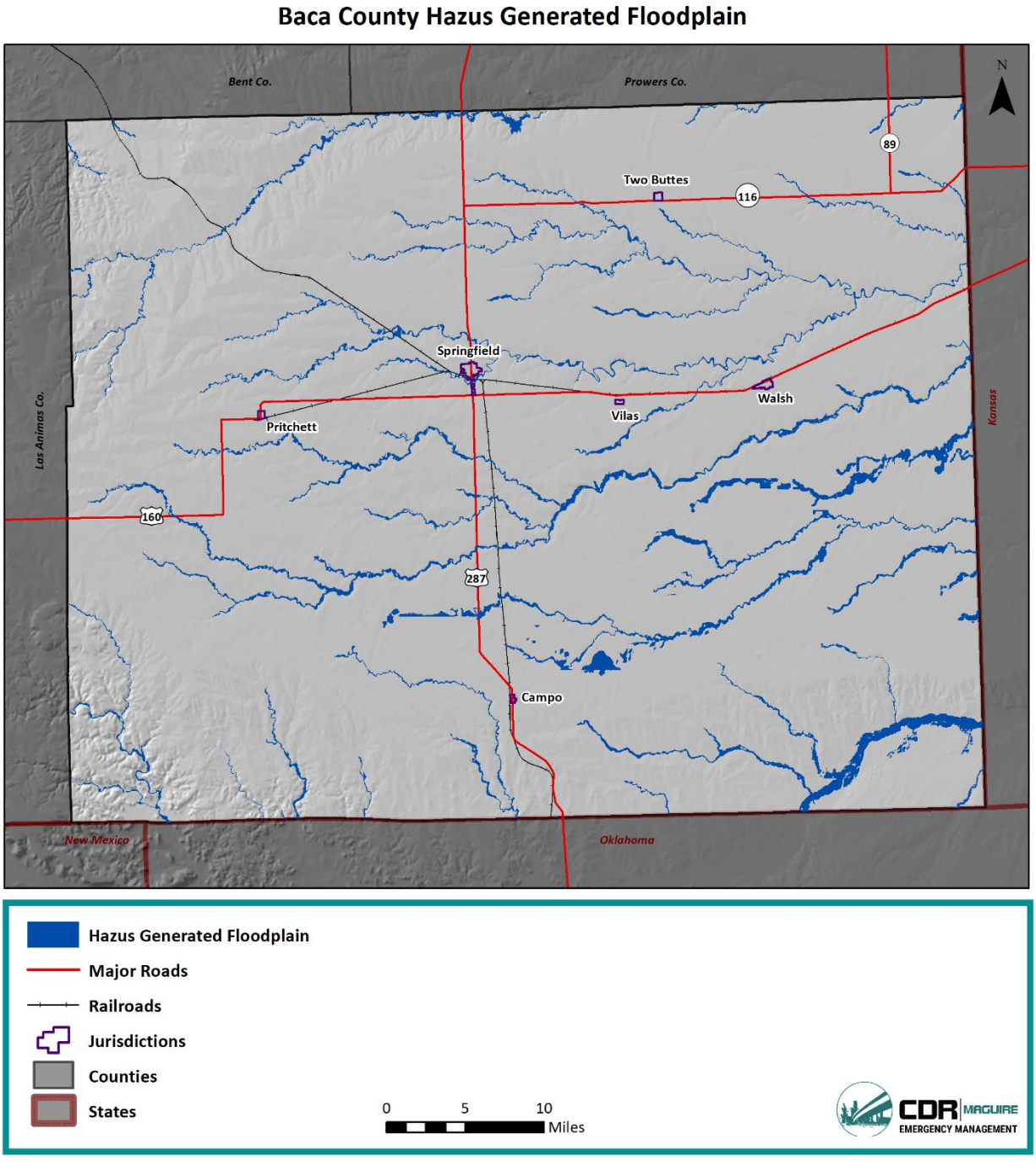
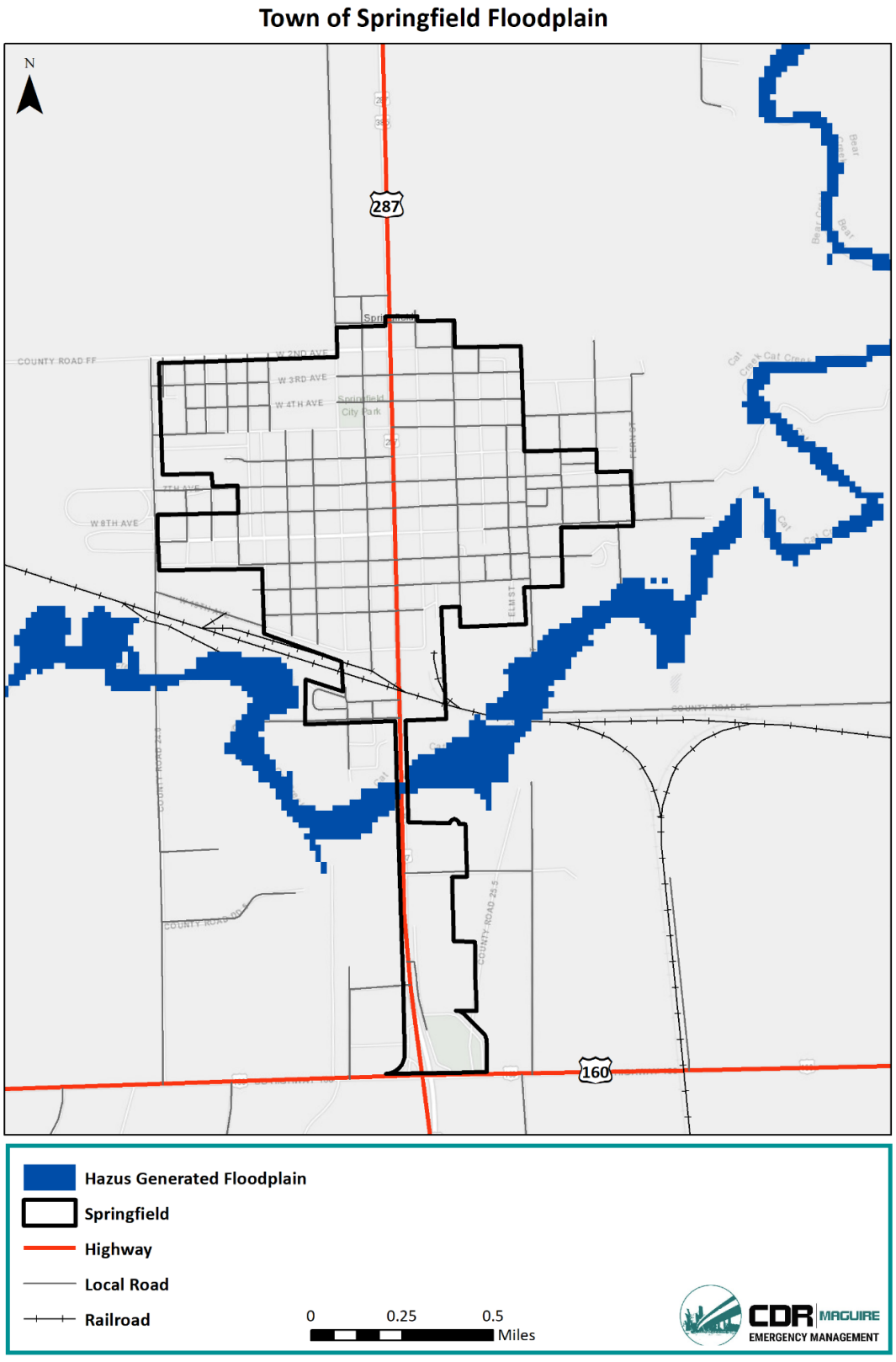


Figure 6-29 Town of Springfield 100-year Hazus Floodplain



Previous Occurrences

In total, there have been 11 recorded flooding events in the County from 1965 to May 2019 based on NCEI data.[38] Two of these events were labeled as floods and nine as flash floods. One of these events occurred near Pritchett, three near Springfield, one near Two Buttes, one near Vilas, three near Walsh, one in unincorporated County (Bartlett), and one with an unspecified location. None of these events have recorded injuries or deaths. There are no quantitative damages reported with any of these events, however, qualitative damage reports several damages, including, damaged irrigation controls on Bear Creek; flooded roads, homes, basements, and the high school in both Vilas and Walsh.

Additionally, Baca County received a Federal Disaster Declaration (Federal – DR 4229) in 2015 from severe storms that caused flooding in the County. Over $26 million was granted for Public Assistance to 11 counties in Colorado, including Baca.

Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below. A description of all previous occurrences can be found in Appendix C.

Table 6-23 Flooding Events in Baca County from 2014 to May 2019

Date	Location	Flood Type	Description
7/26/2014	Pritchett	Flash Flood	Strong, slow moving storms produced heavy rain and flash flooding across portions of Bent, Baca, and Prowers Counties. Many roads were flooded and washed out.
7/29/2014	Springfield	Flash Flood	Numerous strong, slow-moving storms caused flash flooding across Kiowa, Bent, Prowers, and Baca Counties.
8/7/2014	Walsh	Flash Flood	A nearly stationary storm produced very heavy rain and flash flooding at low water crossings.

NFIP Information

Baca County does not participate in the NFIP nor is it mapped. The Town of Walsh is the only entity within the County that participates in the NFIP. There is no Special Flood Hazard Area (NSFHA) in Walsh. Additionally, there have been no claims, and no policies are currently in force.

There are no repetitive loss properties in the County.

Probability

Based on 11 floods from 1950 to 2019, there is a 16% annual chance of flood occurrence in the County, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County. Damages in these areas can include (but are not limited to) rural structures, roads, and crops. Additionally, every jurisdiction except for Campo has reported flooding events based on the previous occurrences. Significant damages occurred in Vilas and

[38] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; LPC

Walsh even though they are not within the floodplain. This indicates much of the County is vulnerable to this hazard. Flooding can also cause injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Baca County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100-year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. While not as accurate as official flood maps, these floodplain boundaries are available for use in GIS and could be valuable to Baca County, given it has not been mapped by the National Flood Insurance Program. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhance (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, no buildings would be at least moderately damaged by a county-wide 100-year flood. The model estimates nine households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. None of the population will seek temporary shelter in public shelters.

The total economic loss estimated for the flood event is $1.63 million, which represents 1.71% of the total replacement value of the County's building stock. Total economic losses are a combination of direct building losses and business interruption losses.

The economic losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood. The total building-related losses for the County were $1.63 million, all of which were direct building losses. Residential occupancies made up 74.16% of the total loss.

Additionally, the model estimates that a total of 278 tons of debris will be generated. Of the total amount, Finishes comprises 42% of the total and Structure comprises 27% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 11 truckloads (25 tons/truck) to remove the debris generated by the flood.

Figure 6-30 shows the Hazus generated flood depths for a 1% annual chance (100-year) flood event for the County. The majority of the 100-year floodplain is located in unincorporated Baca County. The only jurisdiction potentially impacted by this floodplain is the Town of Springfield, shown in Figure 6-31.

Figure 6-30 Baca County Hazus Estimated 100-year Flood Depth

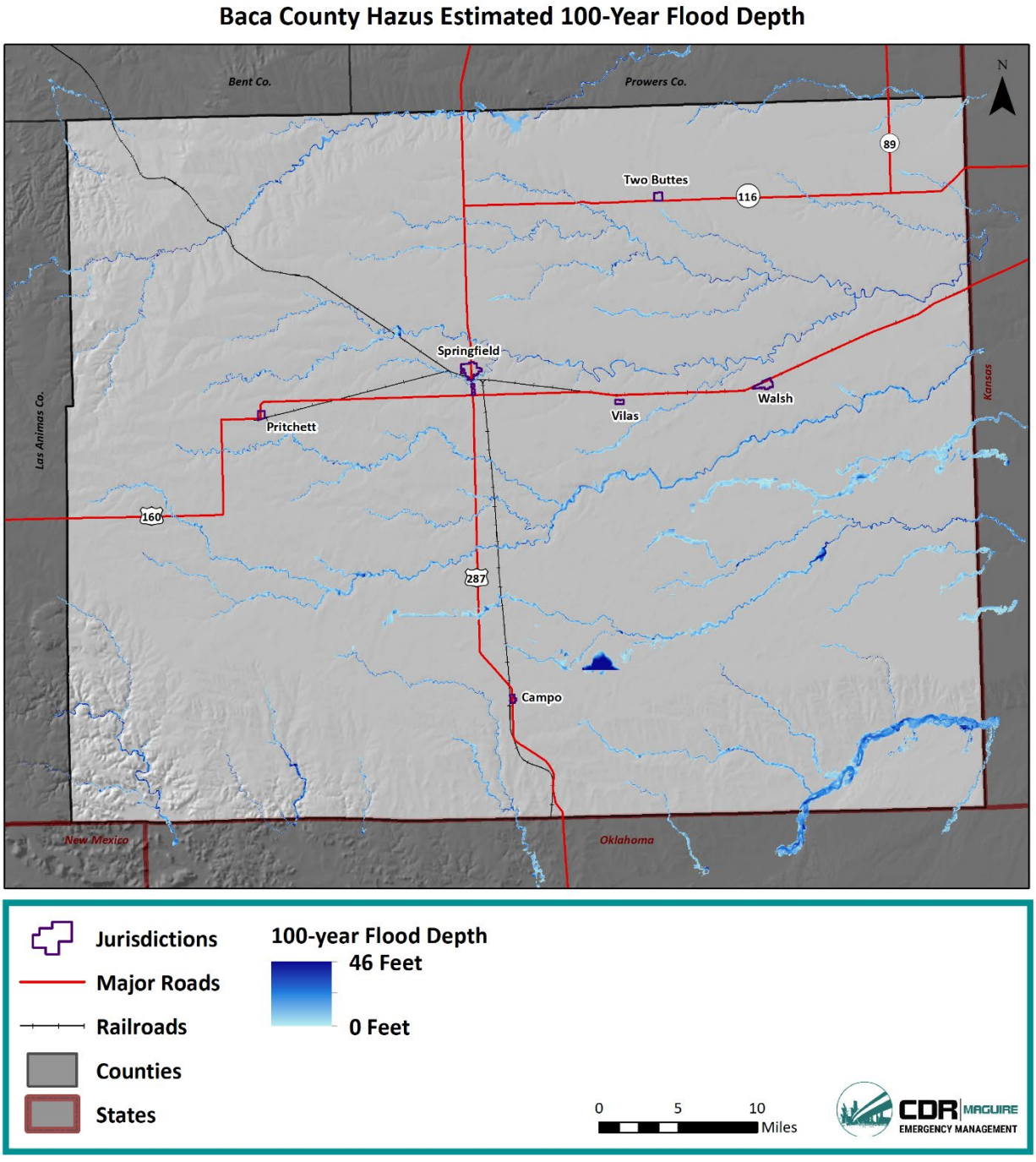


Figure 6-31 Springfield Hazus Estimated 100-year Flood Depth

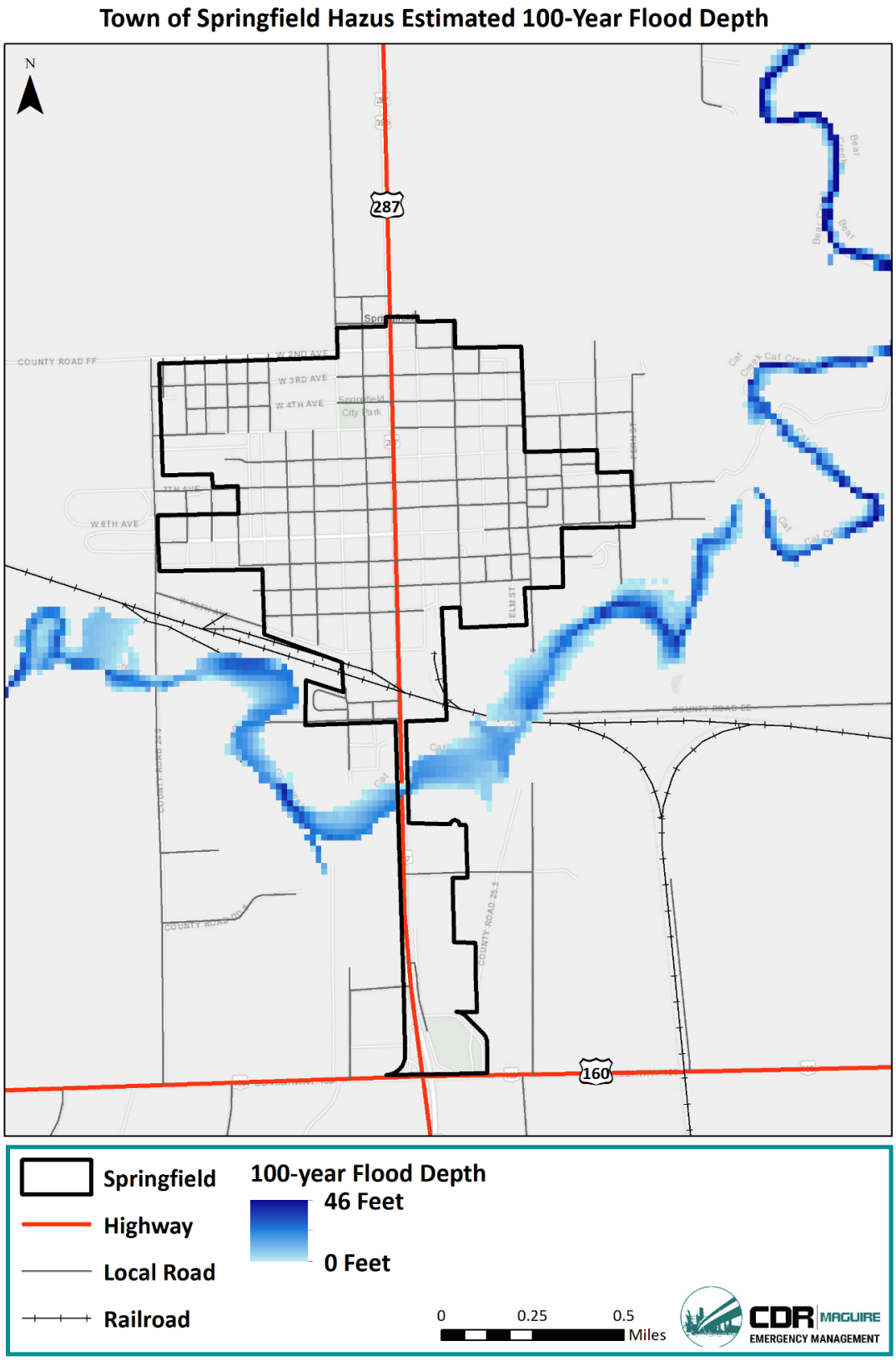


Figure 6-32 shows total losses from this event for the County ($1.63 million). The highest flood losses are projected to occur in unincorporated Baca County, generally on the eastern side of the County.

GIS was used to estimate losses by jurisdiction, shown in the table below. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall magnitude of flood losses in and surrounding each jurisdiction. The highest amount of losses are projected for unincorporated County.

Table 6-24 Baca County Hazus Estimated Flood Losses by Jurisdiction

Jurisdiction	Estimated 100-year Flood Losses
Campo	$0
Pritchett	$0
Springfield	$249,000
Vilas	$43,000
Walsh	$0
Two Buttes	$0
Unincorporated County	$1,337,000
Total	**$1,629,000**

Figure 6-32 Baca County Hazus Estimated 100-year Flood Losses

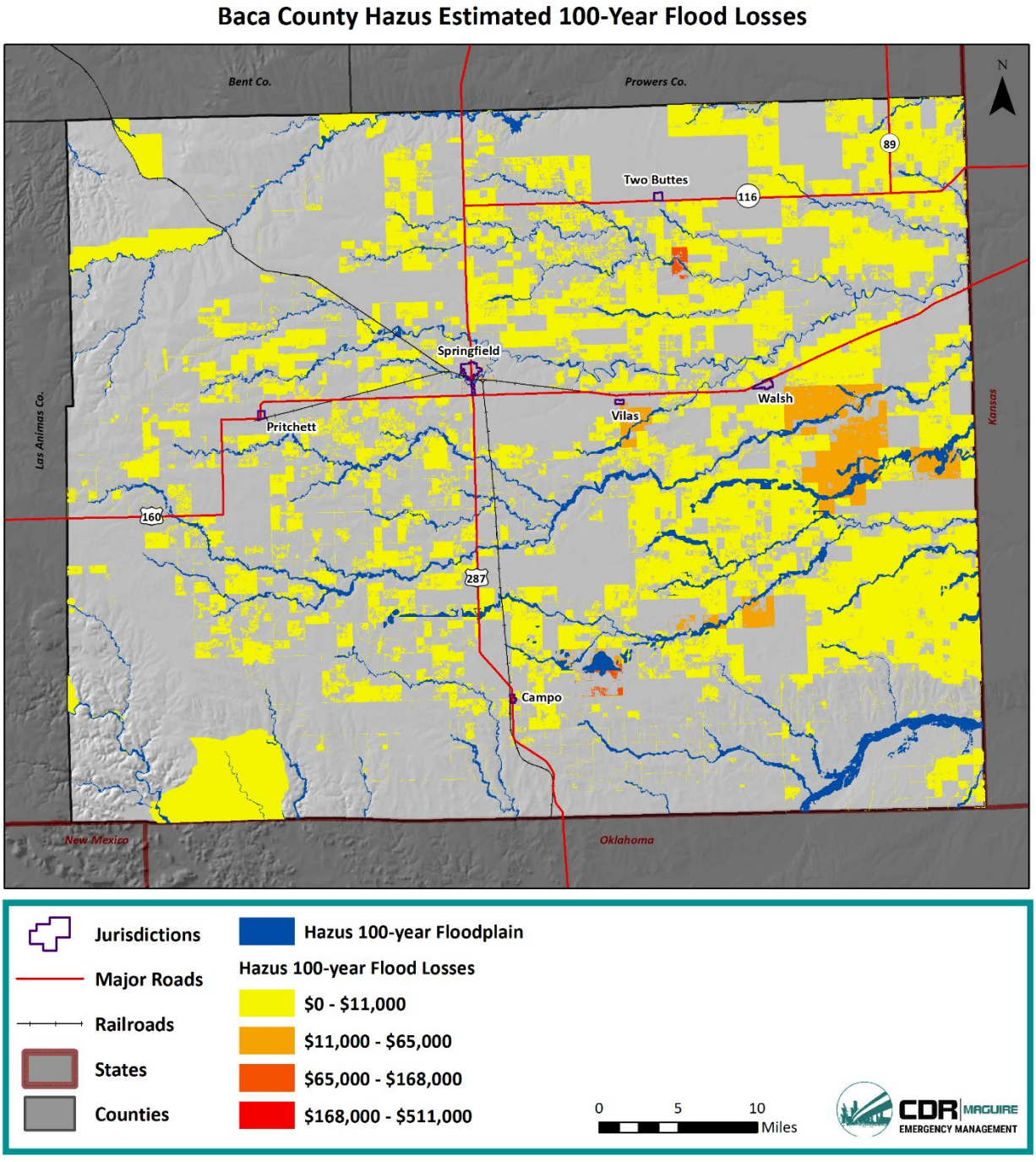
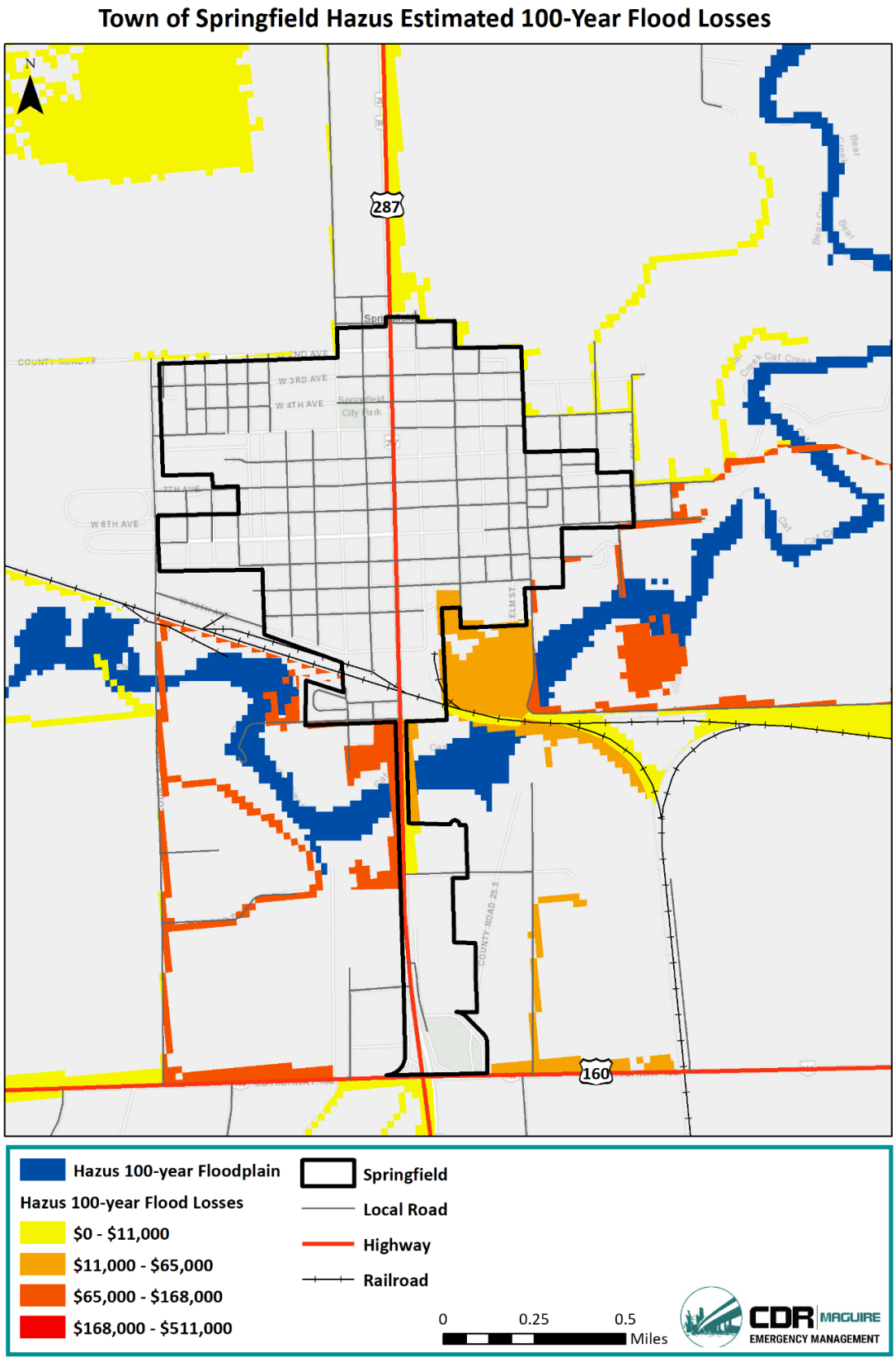


Figure 6-33 Springfield Hazus Estimated 100-year Flood Losses



In addition to the potential losses estimated by Hazus, there have been $30,456,708 in recorded losses in Baca County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $534,328 in annual losses. This is the highest amount of losses from any SHELDUS-reported hazard in the County.

Land Use and Development

Regulating new development can help reduce the risk of new structures from flooding. Currently, only Walsh participates in the NFIP. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

6.6.8. Severe Weather: Thunderstorms/Lightning/Hail

Previous Occurrences

Thunderstorm

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 62 thunderstorm wind events have occurred in Baca County from 1960 to May 2019, with 48 separate days with an event. Two of these events occurred near Pritchett, 4 near Campo, 18 near Springfield, 5 near Two Buttes, 3 near Vilas, 12 near Walsh, and 18 in unincorporated County. The highest recorded wind gust was 100 mph, which occurred on several occasions; July 2, 1991 in unincorporated County and June 25, 2017 near Walsh. The event in Walsh damaged power poles and irrigation equipment, as well as partially ripped a roof off a barn. These storms caused one death, two injuries, and $2,218,000 in property damages. The highest amount of damages occurred during the June 25, 2017 thunderstorm near Walsh, causing approximately $2 million in damages. Table 6-25 summarizes this information by jurisdiction, and Table 6-26 describes thunderstorm wind events that have occurred since the 2014 Southeast Region Hazard Mitigation Plan.

Table 6-25 Baca County Thunderstorm Wind Events Summary Table

Jurisdiction	# Events	# Deaths	# Injuries	Damages
Campo	4	0	0	$0
Pritchett	2	0	0	$0
Springfield	18	0	0	$121,000
Two Buttes	5	0	0	$5,000
Vilas	3	1	0	$30,000
Walsh	12	0	2	$2,055,000
Unincorporated County	18	0	0	$7,000
Totals	**62**	**1**	**2**	**$2,218,000**

Table 6-26 Recent Thunderstorm Wind Events in Baca County

Date	Location	Deaths	Injuries	Damages	Description
6/22/2014	Springfield	0	0	$0	Several severe storms caused hail up to the size of half dollars and wind gust from 60 to 70 mph across the I-25 corridor and southeast plains.

Date	Location	Deaths	Injuries	Damages	Description
6/22/2014	Springfield	0	0	$0	Several severe storms caused hail up to the size of half dollars and wind gust from 60 to 70 mph across the I-25 corridor and southeast plains.
6/22/2014	Campo	0	0	$0	Several severe storms caused hail up to the size of half dollars and wind gust from 60 to 70 mph across the I-25 corridor and southeast plains.
7/30/2014	Vilas	1	0	$30,000	High end EF1 damage occurred with a very compact microburst. A manufactured home was completely destroyed, along with three power poles. An 84-year old man died.
6/11/2015	Springfield	0	0	$15,000	Damaging winds knocked down 10 power poles along Highway 160.
6/11/2015	Springfield	0	0	$20,000	Damaging winds occurred in Springfield, of note, at the Fairgrounds and High School.
7/4/2015	Stonington	0	0	$2,000	A pole barn was damaged.
7/4/2015	Stonington	0	0	$0	Severe storms produced hail over 2 inches in diameter and damaging winds.
7/15/2015	Springfield	0	0	$1,000	High winds downed many tree branches, some up to 6 inches in diameter, and caused minor damage to a house.
7/15/2015	Two Buttes	0	0	$0	High winds brought down numerous large tree branches.
8/17/2015	Springfield	0	0	$0	Severe storms produced hail up to the size of tennis balls in and around Peyton, as well as wind gusts in excess of 60 mph.
6/13/2016	Campo	0	0	$0	Trees were downed in Campo.
7/1/2016	Walsh	0	0	$0	Strong to severe storms produced hail up to half dollar size and flash flooding across the I-25 corridor and southeast plains.
6/25/2017	Walsh	0	2	$2,000,000	A few severe storms produced very large hail up to the size of baseballs and a tornado near Walsh. Very large hail and severe winds in Walsh caused extensive damage to structures and vehicles. Power was knocked out for several hours and numerous businesses were closed for several days for cleanup. Severe

Date	Location	Deaths	Injuries	Damages	Description
					microburst winds also occurred west of Walsh. The tornado occurred just west of the microburst damage. Trees and tree limbs down, causing damage to power lines, structures and vehicles. Two people sustained very minor injuries.
6/25/2017	Walsh	0	0	$30,000	Three quarters of a mile of power poles were snapped off.
6/25/2017	Walsh	0	0	$25,000	One half mile of pivot irrigation was damaged and destroyed, and a roof was partially lifted off a barn.
6/6/2018	Stonington	0	0	$0	A severe thunderstorm generated wind gusts around 60 mph near Stonington in Baca county near Stonington.
Totals	**Count=17**	**1**	**2**	**$2,123,000**	

Lightning

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in Colorado.[39] Baca County averages 8,500 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009-2018) and fourth in the nation for number of lightning fatalities (years 1959-2017).[40]

The NCEI Storm Events Database reports on the number of damaging or significant lighting events. In Baca County there has been one recorded damaging lightning event, on May 7, 2015 in Stonington (unincorporated County). This event caused $1,500 in property damages from three horses killed by lightning.

Hail

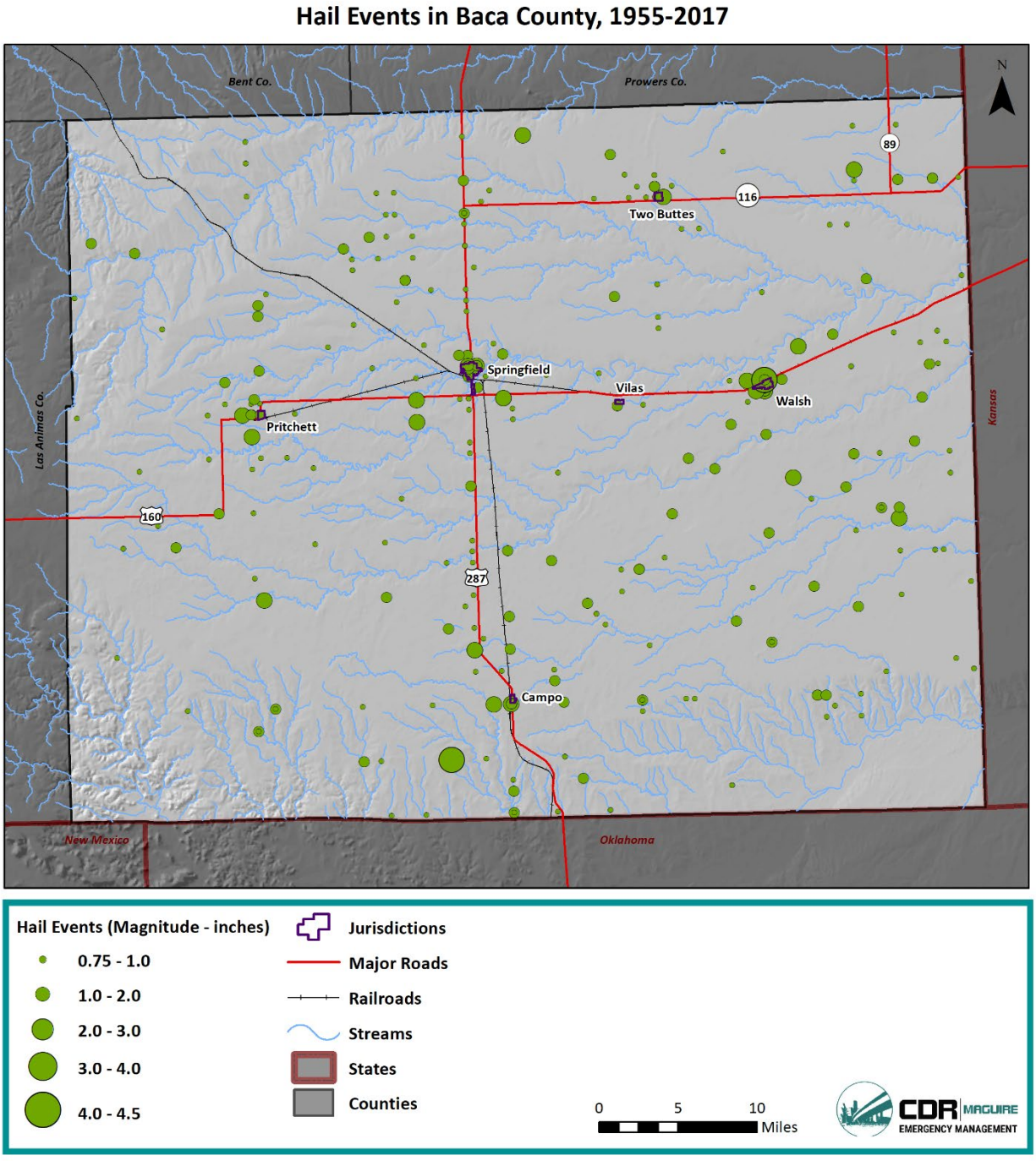
According to the NCEI Storm Events Database, there have been 354 recorded hail events in Baca County from 1955 through 2017. These events are summarized in Table 6-27. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. Examples of damages reported from these events are: broken windows, roofs partially ripped off modular homes, and outbuildings and vehicles damaged or destroyed. Figure 6-34 shows this information on a map. It is evident the entire County is vulnerable to hail events.[41]

[39] https://www.weather.gov/pub/lightningCgCountyColorado
[40] https://www.weather.gov/pub/Colorado_ltg_ranking
[41] NOAA Storm Prediction Center, SVRGIS; https://www.spc.noaa.gov/gis/svrgis/

Table 6-27 Baca County Previous Hail Events, 1955-2017

Jurisdiction	# Events	Max Magnitude	# Deaths	# Injuries	Damages
Campo	67	4.5 in	0	0	$50,000
Pritchett	51	2.75 in	0	0	$0
Springfield	97	3 in	0	0	$350,000
Two Buttes	35	2.75 in	0	0	$0
Vilas	6	2 in	0	0	$0
Walsh	42	4.25 in	0	0	$0
Unincorporated County	56	3 in	0	0	$0
Totals	**354**	**4.5 in**	**0**	**0**	**$400,000**

Figure 6-34 Baca County Previous Hail Events, 1955-2017



Probability

The probability of annual occurrence for all severe weather events (thunderstorm, lightning, and hail) is 100%, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences of thunderstorm events include infrastructure damage and building damage such as torn off roofs. Previous occurrences show the most amount of damages in Walsh, however, the entire County is vulnerable to damaging events. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County areas have similar vulnerabilities, as well as increased risk to crop losses from thunderstorms.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. Persons recreating or working outdoors during the months of April through September will be most at risk to lightning strikes. Fortunately, there have been no incidents of death of injury associated with lightning in the County.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail events. Springfield has experienced the most in damages from previous hail events, but as described in the Previous Occurrences section, the entire County has experienced significant magnitude hail events. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roofs damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County, but they may be multiplied by each municipality's denser development. Economic impacts to the agricultural sector will not have as large of a direct effect on the Towns, but the indirect impacts to the overall economy could also greatly affect each municipality.

Potential Losses

Recorded damages from thunderstorm events equate to $2,218,000 from 1960 to 2019. This equates to $37,593 in annual losses. The majority of these damages occurred in Walsh, however, each jurisdiction is equally at risk to losses from thunderstorms. The most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

The only recorded damages from lightning in the County equate to $1,500 since 1996, occurring in unincorporated County. However, lightning occurs frequently every spring through fall in the County, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

Hail has caused $400,000 in damages from 1955 through 2017 in Baca County. This equates to $6,451 in annual damages. The majority of these damages were reported in Springfield, but similar to other thunderstorm hazards, the entire County is vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

Land Use and Development

Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

6.6.9. Tornadoes

Previous Occurrences

According to the NCEI, from 1950 through 2019, there have been 78 recorded tornadoes in Baca County. These tornadoes resulted in four injuries and $3,047,500 in recorded property damages. The strongest magnitude event was an F4 tornado that stayed on the ground for 9.3 miles on May 18, 1977. The tornado was 440 yards wide, and caused 2.5 million dollars in damage. No deaths or injuries were attributed to this tornado. This was also the most damaging tornado event in the County. Table 6-28 summarizes the recorded tornado events in Baca County. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. It is evident all jurisdictions are at risk to a tornado event. Examples of damages recorded during these events include, damaged roofs and buildings, downed power poles, equipment/machinery damage, livestock damage, and windmill damage.

Table 6-28 Summary of Tornadoes in Baca County, 1955-2017

Jurisdiction	# Events	# Deaths	# Injuries	Damages
Campo	7	0	0	$35,000
Pritchett	8	0	0	$20,000
Springfield	12	0	0	$134,000
Two Buttes	2	0	0	$5,000
Vilas	2	0	0	$0
Walsh	8	0	0	$42,000
Unincorporated County	39	0	4	$2,811,500
Totals	**78**	**0**	**4**	**$3,047,500**

Tornadoes that have occurred since the 2014 Southeast Region Hazard Mitigation Plan are described in Table 6-29 below.

Table 6-29 Recent Tornadoes in Baca County

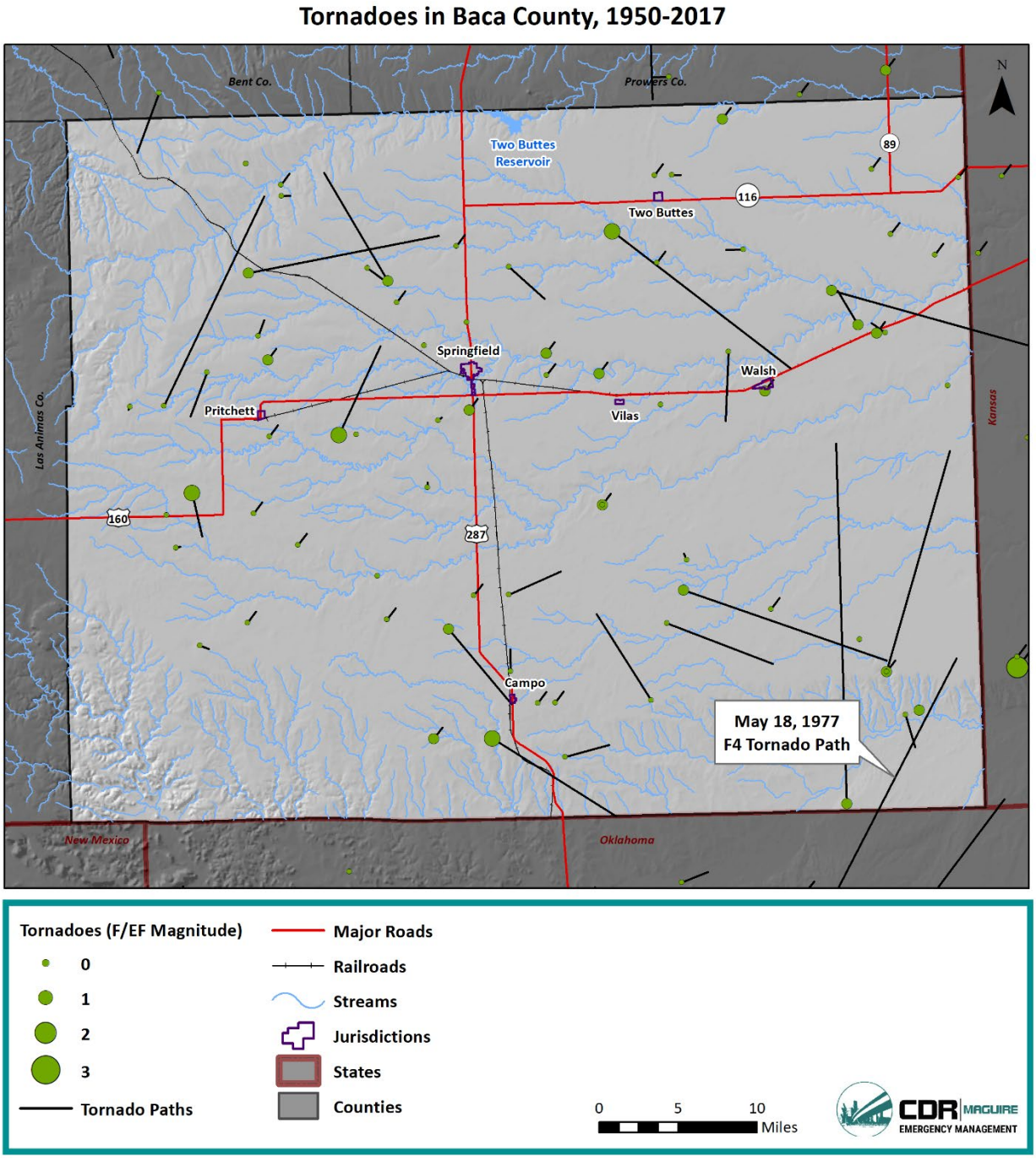
Date	Location	Mag	Injuries	Damages	Description
6/30/2014	Springfield	EF0	0	0	A cluster of strong to severe storms produced hail up to golf ball size and a brief tornado west-southwest of Springfield.
5/7/2015	Stonington (unincorporated County)	EF1	0	$3,000	Severe storms produced large hail across parts of southeast Colorado. Slow moving storms produced a large amount of hail, which caused flooding and accidents on Colorado Springs area roadways, and flooding also occurred due to clogging of drains. A severe storm

Date	Location	Mag	Injuries	Damages	Description
					produced a short-lived tornado and killed three horses and struck a windmill in southeast Baca County.
5/28/2015	Vilas	EF0	0	0	Severe storms produced quarter size hail and two tornadoes in Las Animas and Baca Counties. A landspout moved across open country, narrowly missing a ranch, and caused no damage.
6/25/2017	Walsh	EF0	0	$2,000	A few severe storms produced very large hail up to the size of baseballs and a tornado near Walsh. Very large hail and severe winds in Walsh caused extensive damage to structures and vehicles. Power was knocked out for several hours and numerous businesses were closed for several days for clean up. Severe microburst winds also occurred west of Walsh. The tornado occurred just west of the microburst damage. A tornado, at one time multiple-vortex, did some damage to fencing as it moved mainly across open fields around 3 miles west of Walsh and crossed US Highway 160.
Totals	**Count = 4**		**0**	**$5,000**	

Additionally, Figure 6-35 shows tornadoes and tornado paths in Baca County as documented by the NOAA Storm Prediction Center.[42]

[42] https://www.spc.noaa.gov/gis/svrgis/

Figure 6-35 Baca County Previous Tornadoes



Probability

Based on previous occurrences in Baca County, there is a 100% chance that a tornado will happen every year, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Historical evidence shows that Baca County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. Previous occurrences show tornadoes in each jurisdiction. However, it cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)
- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Baca County, 12.1% of the housing units are mobile homes.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County, but they may be multiplied by each municipality's denser development. Economic impacts to the agricultural sector will not have as large of a direct effect on the Towns, but the indirect impacts to the overall economy could also greatly affect each municipality.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

Historical loss information shows the most losses in unincorporated County ($2,811,500). The majority of these losses is from a single event, which indicates how one event can be highly destructive, independent of location. The most vulnerable areas in the County to high losses are incorporated jurisdictions that have more buildings and people, as well as agricultural land in unincorporated parts of the County.

SHELDUS reports $4,875,215 in damages from tornadoes in Baca County from 1960 to 2017. This equates to $85,530 in annual damages. Of these damages, $2,058,946 are crop damages and $2,816,269 are property damages, indicating both agricultural areas and structures are vulnerable to this hazard.

Land Use and Development

Tornadoes can impact any location in the County; therefore, all new development and populations may be impacted by a tornado. Building codes can help reduce the risk to structures and people from tornado impacts.

6.6.10. Wildfire

Location

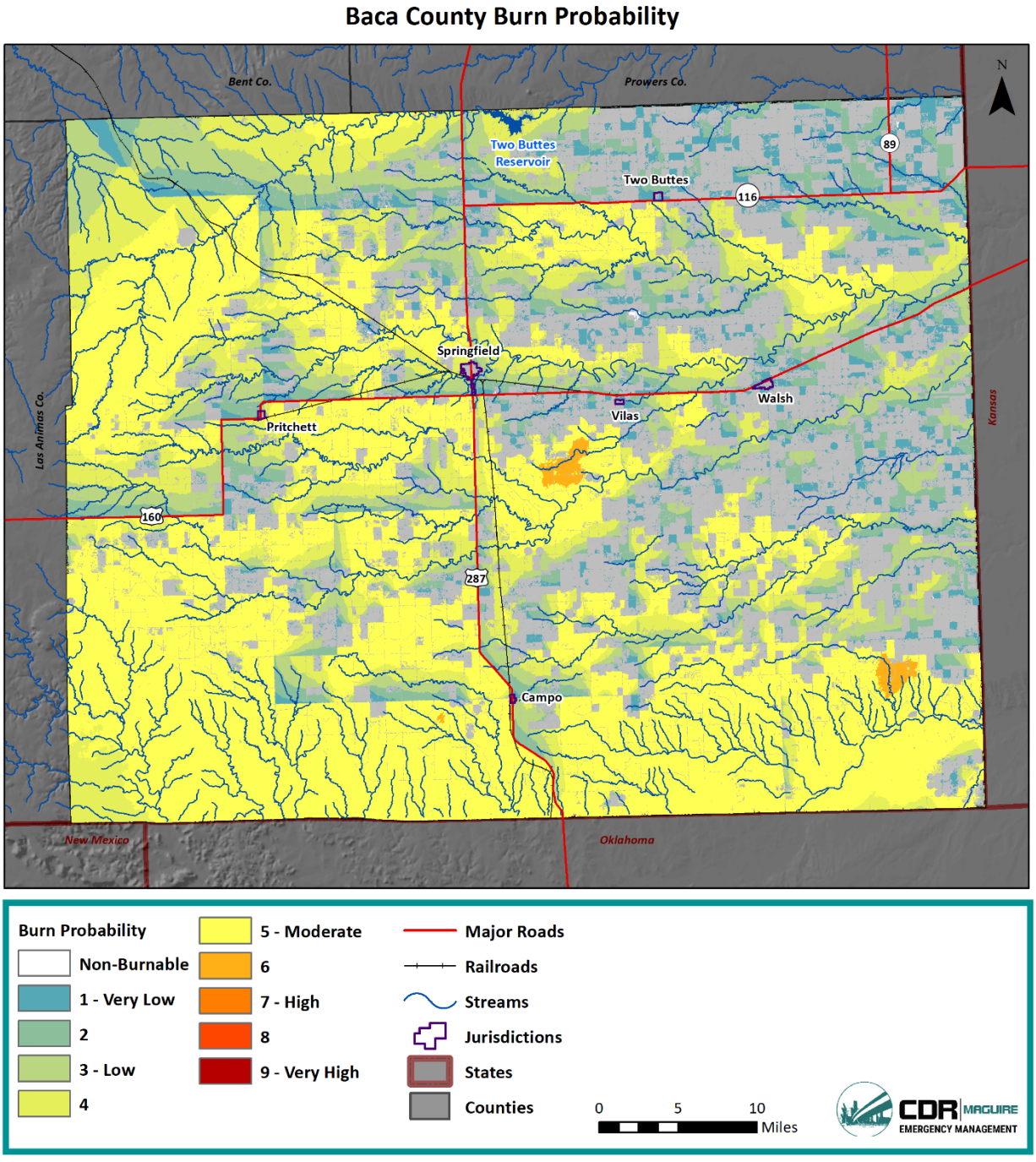
For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.[43]

Burn probability for the County is mapped in the figures below. It is evident that the majority of the County has a low to moderate burn probability. Areas of moderate probability are primarily in the southern and western portions of the County. There are pockets of moderate-high probabilities southwest of Vilas and in the southeastern corner of the County. In general, the jurisdictions have low burn probabilities, but can increase quickly outside of the municipal boundaries.

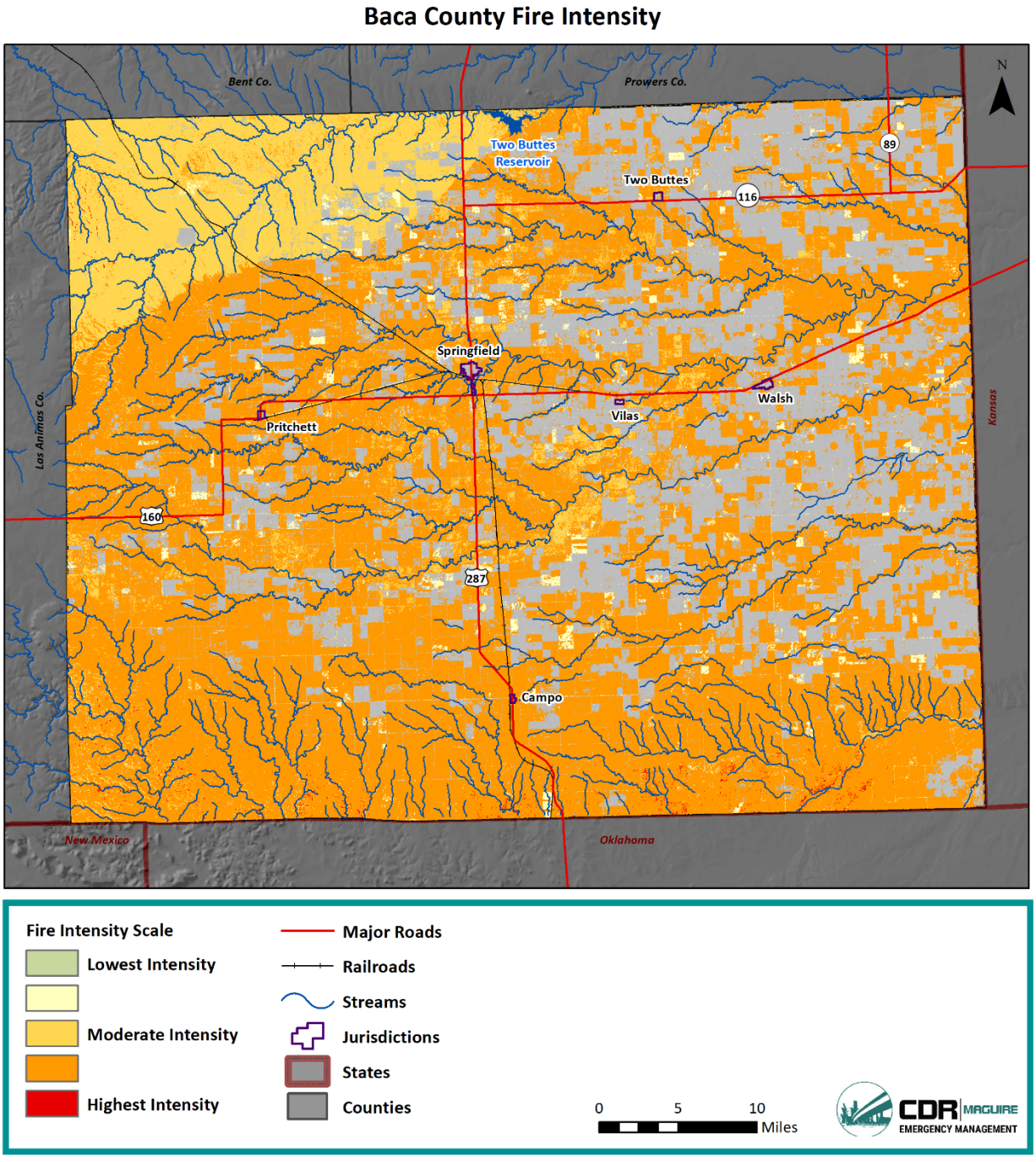
[43] CSFS, 2017 CO-WRA Final Report

Figure 6-36 Baca County Burn Probability



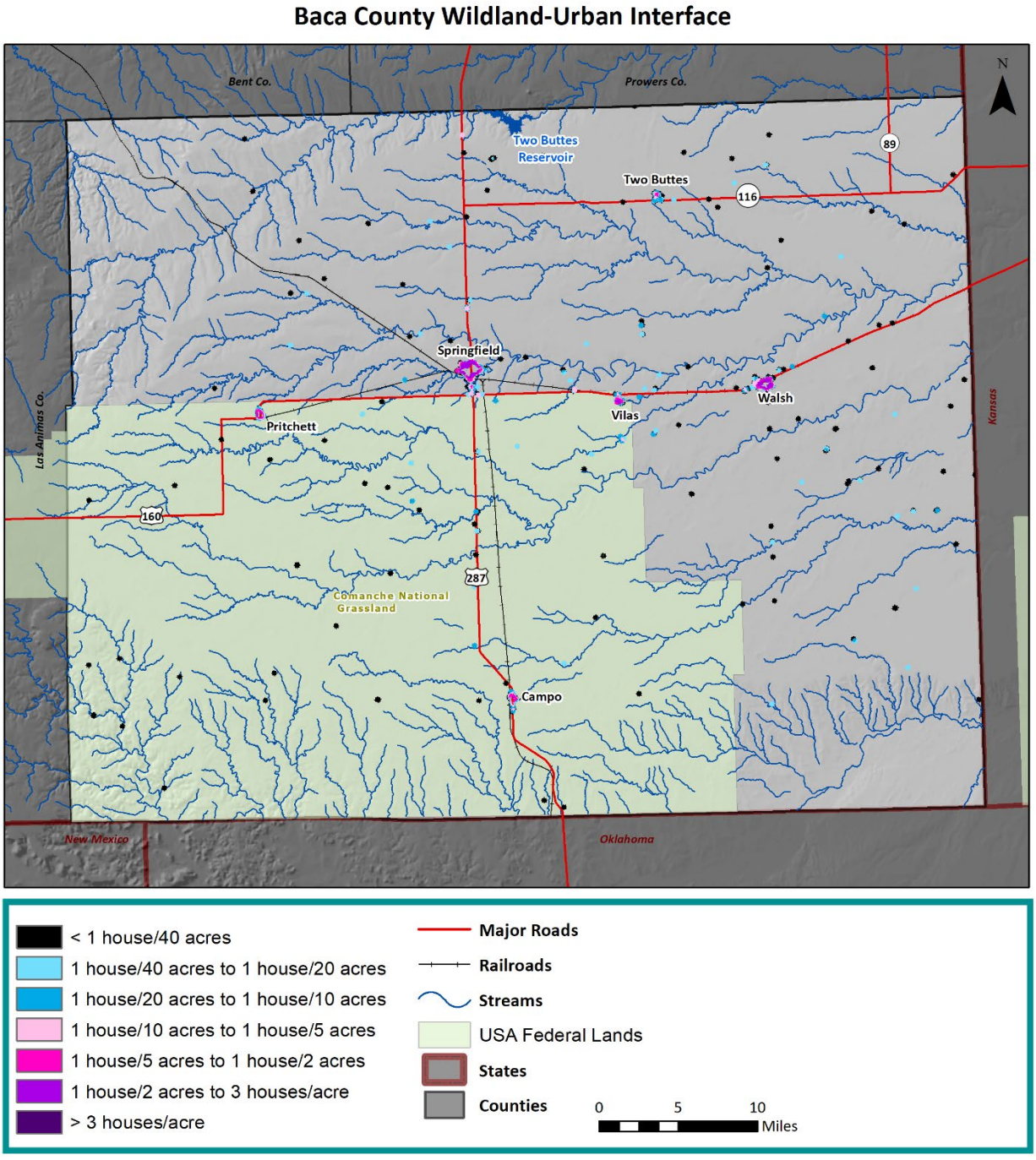
The figure below shows the wildfire intensity for Baca County. Much of the County has moderate to moderate-high wildfire intensity, highlighting the potential for high-intensity fires. The southern portion of the County contains the most area with the potential for moderate-high intensity fires, with some areas having the potential for the highest intensity fires. All of the jurisdictions are surrounded by areas with the potential for at least moderate-high intensity fires.

Figure 6-37 Baca County Fire Intensity



There are low density WUI locations throughout the entire County. Higher density WUI locations are located exclusively surrounding municipal boundaries. All jurisdictions have areas in the WUI or WUI areas just outside the municipal boundaries. The following figures show WUI locations throughout the County in addition to federal land ownership.

Figure 6-38 Baca County Wildland-Urban Interface



Previous Occurrences

According to the CO-WRA data, there have been 317 wildfires on federal lands from 1992 to 2015. Of these fires, 99 have been Class A (one-fourth acre or less), 91 Class B (1/4 to 10 acres), 80 Class C (10 to 100 acres), 22 Class D (100 to 300 acres), 21 Class E (300 to 1,000 acres), and 4 Class F (1,000 to 5,000 acres). Additionally, of these wildfires, 94 have been lightning-caused, 92 human-caused (including

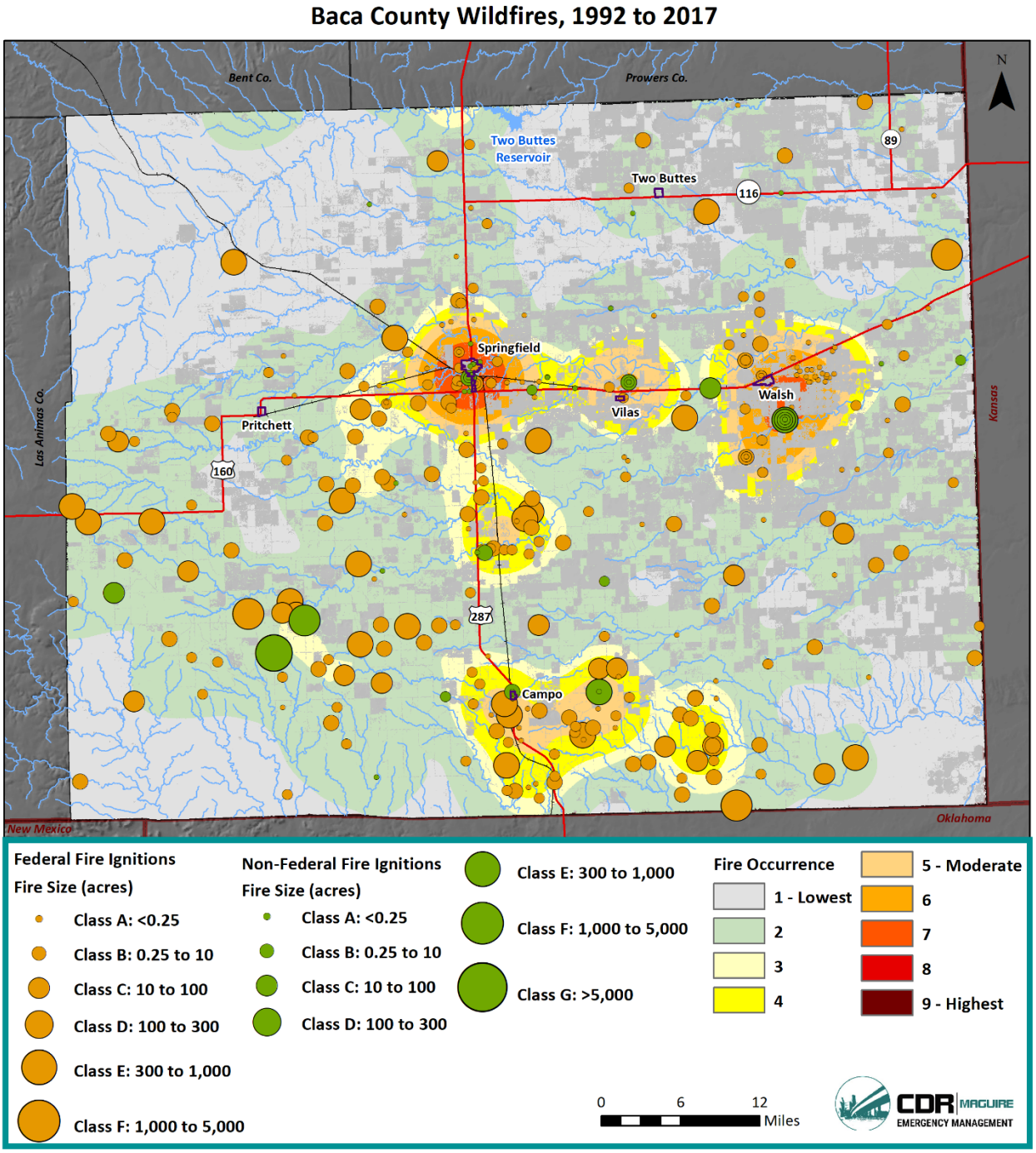
arson, campfire, debris burning, equipment use, fireworks, and smoking), 1 from the railroad, 32 miscellaneous, and 98 missing or unidentified.

Additionally, there have been 82 non-federal wildfires from 2009 to 2017. Of these fires, 40 have been Class A, 13 Class B, 19 Class C, 4 Class D, 4 Class E, 1 Class F, and 1 Class G. Information regarding the cause of the wildfire is not available for non-federal fires.

Of these reported fires, the largest occurred on April 9, 2011 when a rollover car crash on Baca County Road M about 7 miles east of U.S. 287 sparked a wildfire that burned 12,000 acres.

Figure 6-39 shows these previous wildfires within Baca County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident the southern and central portions of the County have experienced the most wildfires, although they are prevalent all throughout the County. This data, overlayed with the fire occurrence layer, shows that areas around Springfield, Campo, Vilas, and Walsh are at a higher risk of wildfire occurrence than other parts of the County.

Figure 6-39 Baca County Previous Wildfires



Notable wildfires since the 2014 Southeast Region Hazard Mitigation Plan are described below.

February 13, 2019 - Officials believe a driver tossed a smoldering cigarette while driving past the state line sign on Highway 287 or while stopping there, causing a large wildfire about eight miles south of Campo. Heavy wind gusts and ample dry fuel helped push the fire north of the Colorado/Oklahoma state line towards the town of Walsh. The blaze was reported around 2 p.m. and was contained more than six hours later. It burned 3,800 acres before crews were able to contain the blaze. More than half a dozen

structures were threatened at one point, but as of the last update, there are no reports of damage. The fire did prompt evacuations.[44]

April 17, 2018 - The Badger Hole Wildfire ignited on April 17th near Walsh and spread quickly across Baca County and western Kansas fueled by strong winds, low relative humidity, and dry fuels. The fire burned 50,858 acres total, including 33,609 acres in Colorado and 17,249 acres in Kansas. This makes it the 10th largest wildfire in Colorado recorded history. The fire was contained on April 19th. Multiple homes, outbuildings, livestock, and infrastructure were destroyed. The cause is unknown.[45]

Probability

Based on all of the available previous occurrence data, there have been 401 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the LPC, the areas that are most vulnerable to wildfire are agricultural areas where Conservation Reserve Program (CRP) or grassland is burned, rural areas where trash and debris are burned, and the WUI areas. Homes built in rural areas are more vulnerable since they are in closer proximity to CRP land that is burned, and homeowners are more likely to burn trash and debris in rural locations. The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

According to the Baca County CWPP, the following are areas of highest wildfire concern for the County: the communities and all development near the communities; the recreational areas; the railroad/high-use travel corridors in the County; and the USFS Comanche Grassland sites.

Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

Potential impacts are further assessed by utilizing the CO-WRA data to visualize WUI risk throughout the County. The following figures show the WUI risk in the County. The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.[46] Every jurisdiction contains moderate to high WUI risk areas, particularly along the outskirts of the municipal boundary. These areas are more exposed to WUI fires than unincorporated parts of the County. However, there are small areas of low to moderate WUI risk throughout the entire County.

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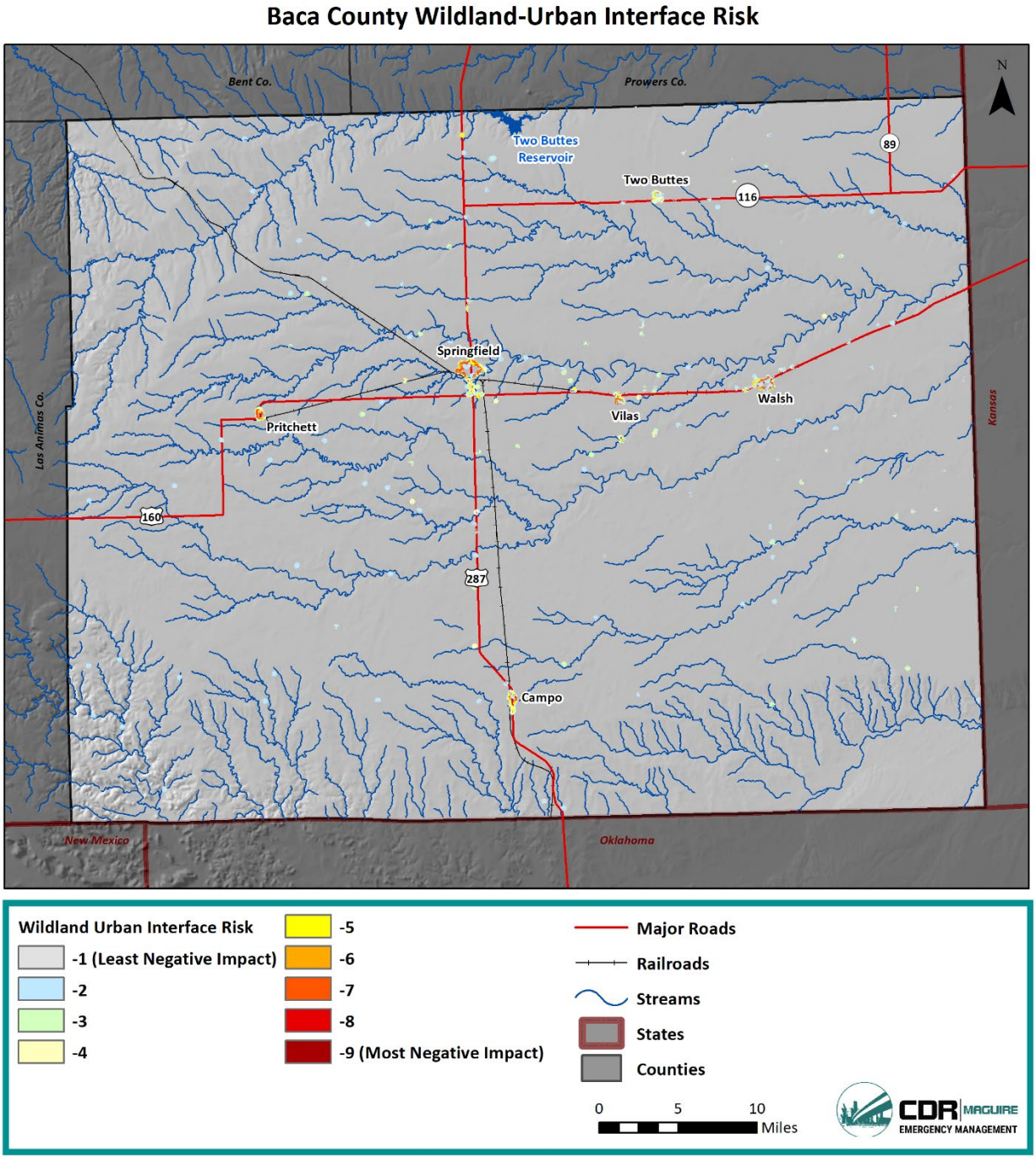
[44] KKTV 11 News, https://www.kktv.com/content/news/Crews-tackle-wildfire-started-by-a-person-in-Baca-County-that-prompted-evacuations-505810951.html; KRDO, https://www.krdo.com/news/wildfire-in-baca-county-100-contained-according-to-officials/1017457825

[45] NCEI Storm Events Database

[46] 2017 CO-WRA

WUI risk in the Town of Springfield and the Town of Walsh are the highest across the entire County. The Towns of Campo, Pritchett, Two Buttes, and Vilas also are impacted by higher risks as compared to the unincorporated areas. This is mainly caused by each Town's denser development and increased physical interface with wildfire.

Figure 6-40 Baca County WUI Risk



In addition to people and structures in the WUI, other assets at risk to wildfire in the County include drinking water, forest assets, and riparian assets. Based on the 2017 CO-WRA data, drinking water assets are measured by quality and quantity of public surface drinking water categorized by watershed. Forest assets are described as forested lands characterized by height, cover, and susceptibility/response to fire. Riparian assets are described as forested riparian areas characterized by functions of water quantity, quality, and ecology. Risk of each of these assets to wildfire was calculated during the CO-WRA. Overall, the risk to drinking water is negligible throughout the County. The risk to forest assets is mostly negligible throughout the County. However, there are areas of low-moderate risk along the southwest and northwest edges of the County. Additionally, small areas of high risk are located along the southeastern border of the County. Higher riparian asset risks are also mostly negligible in the County, with pockets of moderate to high risk along streams in the southwestern and northwestern edges of the County.

Potential Losses

Although there are no recorded dollar figures for losses available for the County, losses from wildfires can be substantial. Wildfires can impact structures, infrastructure, crops, and livestock as well as cause injuries and fatalities. Additionally, as with other parts of the western United States, the number of wildfires and acres burned in the Great Plains has increased and is projected to continue to increase. From 1985 to 1994, there were an average of 33 fires per year on the plains. From 2005 to 2014, that average soared to 117 per year, an increase of almost 350%.[47] Causes of this increase are cited as previous fire suppression, more people living in the WUI, need for more education for property owners, and climate change. For example, many residents have created windbreaks by planting fast growing trees like red cedar and ash juniper close to their houses, inadvertently creating a source of fuel that is particularly volatile during prolonged periods of little to no rain. With this trend, wildfire losses will likely continue to grow in the County. However, mitigation practices such as prescribed burns do take place in the County, helping to lower the potential risk. On March 7, 2019, the U.S. Forest Service announced it would be conducting seven prescribed burns in the County when weather and fuel conditions are appropriate.[48]

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of “living” wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

6.6.11. Windstorms

Previous Occurrences

According to the NCEI database, there have been 39 recorded high wind events, which also includes one dust devil event, in Baca County from 2003 to February 2019. Within this database, wind events are reported at an NWS Zone level (Baca County is one zone), so it is not possible to derive jurisdictional data. However, strong winds have been commonly recorded in Campo, Springfield, and Two Buttes. The dust devil event took place just north of Pritchett on May 22, 2012. The dust devil destroyed a 14x60

[47] Kiowa County Independent, http://kiowacountyindependent.com/news/1052-great-plains-new-wildfire-frontier
[48] U.S. Forest Service, https://www.fs.usda.gov/detail/psicc/news-events/?cid=FSEPRD611956

foot mobile home, resulting in $10,000 in damages. These are the only damages recorded by wind events in the County. Notable events since the 2014 Southeast Region Hazard Mitigation Plan are described below.

December 12, 2018 - A storm system produced winds, gusting to around 65 mph at times over sections of southeastern Colorado. A wind gust of 64 mph was measured 4 miles to the southwest of Campo.

November 24, 2018 - A storm system produced winds, gusting to 80 mph at times over portions of southern Colorado. Wind gusts between 58 mph and 65 mph were recorded near Springfield.

April 17, 2018 - An intense storm system produced strong winds in excess of 80 mph at times over large sections of southern Colorado. Some of the highest reported wind gusts with this event included wind gusts between 58 mph and 64 mph near Springfield. Wind gusts between 65 and 69 mph were observed near Two Buttes.

April 13, 2018 - A passing storm system produced winds, gusting to around 80 mph at times over sections of southern Colorado. Wind gusts between 58 mph and 65 mph were realized near Two Buttes. Wind gusts of 76 mph were measured near Springfield. Finally, a wind gust that clocked 79 mph occurred near Campo.

March 24, 2017 - A potent winter storm produced snow and high winds across in I-25 corridor and plains. Some of the higher reported wind gusts included: 60 to 70 mph near Springfield Baca County and gusts of around 75 mph were observed near Campo.

March 6, 2017 - A vigorous weather system generated high winds across many portions of southern Colorado. Some of the higher reported wind gusts included 60 to 70 mph near Two Buttes.

November 16, 2015 - A vigorous storm system produced wind gusts near 80 mph across sections of southern Colorado. Some of the higher reported wind gusts included 70 to 78 mph in Campo and west of Two Buttes.

December 23, 2014 - A storm system generated high winds across the I-25 corridor and southeast plains of Colorado. The highest reported wind gusts include 61 mph near Springfield and 71 mph near Campo.

March 18, 2014 - Winds gusting in excess of 70 mph were measured over portions of southern Colorado. Wind gusts reaching 60 to 64 mph were recorded near Springfield. Sixty-five to 70 mph wind gusts impacted locations near Campo and Two Buttes (Baca County).

Probability

Based on 39 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

While there has been some scattered record keeping describing the impacts of dust storms, there is little information to indicate damages from wind events. Mitigation measures, such as "Living Snow Fences" (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County, but they may be multiplied by each municipality's denser development.

Potential Losses

SHELDUS reports $5,748,887 (2017 dollars) in losses from wind events from 1960 through 2017. This equates to $100,857 in annual damages. It is difficult to determine details on losses since the data does not provide loss or damage information. However, it is evident from the SHELDUS data that losses can be expected in Baca County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

6.6.12. Winter Storms

Location

Baca County averages approximately 26 inches of snow per year. The amount of snowfall varies around the County. The annual average snowfall amounts from the Western Regional Climate Center for different parts of the County are listed below.

- Utleyville (western county): 18.5 inches
- Campo (southern county): 19.6 inches
- Springfield (central county): 27 inches
- Two Buttes (northern county): 19.7 inches
- Walsh (eastern county): 22.8 inches

Previous Occurrences

According to the NCEI database, there have been 23 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2002 to February 2019. No damages were reported with these events. However, SHELDUS reports $15,550,061 in damages from 27 events. No injuries or deaths have been reported. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below. Notable winter storm events that impacted Baca County prior to the 2014 Southeast Region Hazard Mitigation Plan are described in Appendix C.

Table 6-30 Winter Storm Events in Baca County, 2014-2019

Date	Event Type	Description
11/17/2015	Winter Storm	A vigorous storm system produced heavy snow in combination with strong winds and deep snow drifts to many sections of southern Colorado. Some of the higher reported snow amounts and snow drifts from this event are as follows: 18 inches near Springfield with 4-foot drifts. I-25 was closed for a time south of Walsenburg, as well as US Highway 160 in Baca and Las Animas Counties, and US Highway 287 in Prowers and Baca Counties. People were stranded on US Highway 287 south of Lamar and had to be rescued.
12/13/2015	Winter Storm	A storm system generated snow, heavy at times, across portions of southern Colorado. Wind whipped snow occurred across the far eastern plains in portions of Kiowa and Las Animas Counties, and all of Prowers and Baca Counties causing major impacts.
1/14/2017	Winter Storm	A Pacific storm system generated gusty winds and heavy snow to southern Colorado.
4/29/2017	Winter Storm	A vigorous late spring storm impacted many sections of southern Colorado with impressive snow amounts in combination with gusty winds and localized snow drifts around 5 feet in combination with many downed tree limbs. Ten to fifteen inches of snow was noted near Springfield and Blende. Fifteen to 20 inches of snow graced the communities of Wetmore, Pritchett and Holly. 23 inches of snow was measured near Beulah. An impressive 25 to 30 inches of snow covered the communities of Rye, Colorado City and Two Buttes, while a whopping 39 inches of snow impacted San Isabel. According to KKTV, zero visibility in Baca County trapped residents in their homes and caused snowplows to shut down. More than 50 power poles were blown over or broken and about 60 percent of Baca County residents were left without power during the storm. The town of Pritchett sheltered over 70 people in the two shelters that they have available due to poor visibility or vehicles stuck in drifts. Walsh and Springfield also opened shelters. Two Buttes sheltered 50 people at the old WPA-era Community Building who were stranded after a wedding reception. The Baca County Sheriff's Office received 50 calls of service involving stuck, abandoned and wrecked vehicles. There are reports of livestock being as far as 10 miles away from their original location. Cattle from Colorado were found as far

Date	Event Type	Description
		away as three miles into Oklahoma. Eight producers reported more than 300 cattle died. One producer reported losing 100 head.
12/26/2018	Winter Storm	A storm system produced snow, heavy at times in combination with strong winds across portions of the far southeastern Colorado. Three inches of snow was recorded near the community of Two Buttes. In addition to the snow, wind gusts between 58 and 63 mph were recorded near Lamar, Springfield, and Campo respectively.
3/13/2019	Blizzard	A blizzard termed a “bomb cyclone” impacted much of Colorado’s Front Range and Eastern Plains. To qualify as a "bomb cyclone," an area of low pressure must drop at least 24 millibars in 24 hours or less. A Barometric pressure reading of 970.4 mb recorded in Lamar on March 13 is the lowest reading ever recorded in the State. The blizzard produced 80-90 mph winds, stranded people on impassable roadways, and caused power outages throughout the Region.
Total	**6**	

Probability

Utilizing the 23 reported NCEI events from 2002-2019, there is a 100% chance of a winter storm event occurring annually in Baca County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

Vulnerability Assessment

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard profiled in Section 4.6.5.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County’s elderly population is a potentially vulnerable demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County, but they may be multiplied by each municipality's denser development. Economic impacts to the agricultural sector will not have as large of a direct effect on the Towns, but the indirect impacts to the overall economy could also greatly affect each municipality.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $15,550,061 (2017 dollars) in total losses from winter weather events. This is the second-highest losses from any SHELDUS-reported hazard in the County (behind flooding). This equates to $272,808 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code (for those areas with building codes) should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services. Areas without building codes should consider adopting and enforcing some type of building code.

6.6.13. Civil Unrest

Location

Unlike other counties in the Southeast Region, Baca County does not have any major places that would facilitate civil unrest, such as a prison. Therefore, the most likely location for civil unrest in the County would be the populated municipalities. Additionally, any event or gathering that takes place in the County could be a location of civil unrest.

Previous Occurrences

Baca County is where protests and rallies occurred in the late 1970's, centered upon the American Agricultural Movement (AAM).

Probability

Due to the lack of prominent locations for civil unrest to occur, as well as no recorded previous occurrences, the probability of civil unrest in Baca County is unlikely, or less than 1% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Civil unrest could cause injuries or fatalities for those involved, bystanders, or first responders. Additionally, structures and infrastructure could be damaged through impacts such as fires and destruction of property by crowds or mobs.

Potential Losses

It is difficult to predict potential losses without any previous occurrence data. However, as mentioned above, losses could come in the form of injuries/fatalities, property damage, as well as any cleanup costs after the event.

Land Use and Development

With lack of significant population growth in the County, land use and development are not projected to impact this hazard.

6.6.14. Cyber Hazards

Previous Occurrences

Across the southeast region, there have been two reported events where counties paid ransomware.

Probability

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

Vulnerability Assessment

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Impacts specific to the County's municipalities would not vary from those of the County.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

Land Use and Development

If population increases in the County, more people are exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

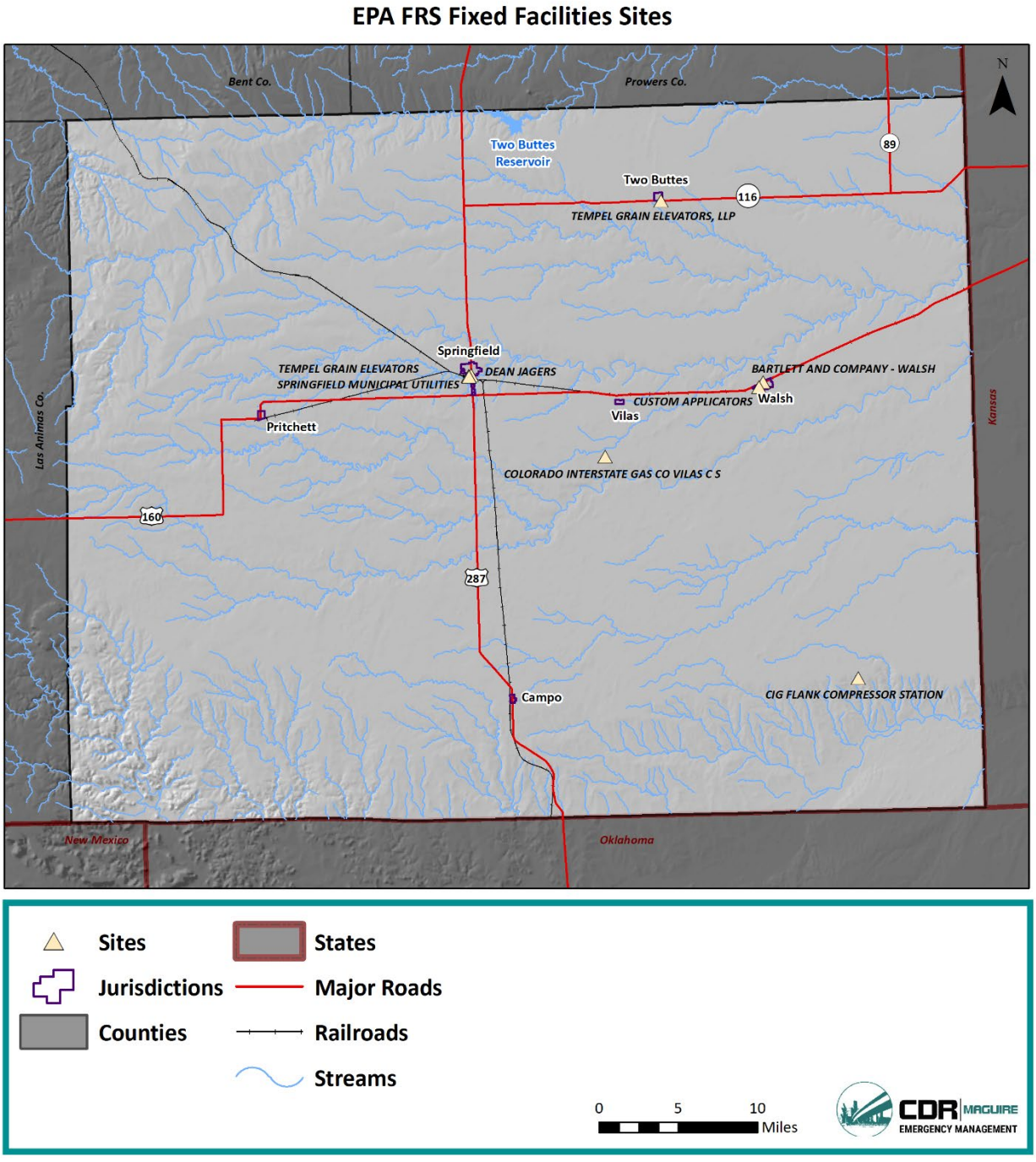
6.6.15. Hazardous Materials Release

Location

Locations of fixed facilities in Baca County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.[49] Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Baca County has eight fixed facilities that could result in a hazmat release, as shown in Figure 6-41.

[49] https://iaspub.epa.gov/sor_internet/registry/facilreg/home/basicinformation/

Figure 6-41 Baca County Fixed Facility Hazmat Sites



For transportation related incidents, in Baca County Highway 287 is a designated Hazardous Materials Route by CDOT. Additionally, Highway 160 is a designated gasoline, diesel fuel, and liquified petroleum gas route. The AT & SF Railroad also runs through Baca County. These areas could be more likely sources of transportation related hazmat incidents.

Previous Occurrences

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 6-31 below. There has been a total of 12 incidents from 1974 to July 2019. Eleven of these incidents were on the highway and one via rail, totaling $305,651 in damages. All incidents occurred in/near Springfield, Campo, or Walsh.

Table 6-31 Baca County Hazmat Events

Date	Route	Location	Injuries	Damages	Mode	Failure Cause Description
6/26/1974		Springfield	0	$0	Highway	Description unavailable
9/27/1977		Springfield	0	$0	Highway	Vehicular Crash or Accident Damage
2/11/1984		Campo	0	$0	Rail	Derailment; Vehicular Crash or Accident Damage
1/5/1988		Walsh	0	$0	Highway	Vehicular Crash or Accident Damage
7/24/1988		Campo	0	$0	Highway	Description unavailable
4/5/1998	Hwy 287	Springfield	0	$12,750	Highway	Rollover Accident; Vehicular Crash or Accident Damage
2/27/2001	CO 287 mp #17	Campo	0	$147,345	Highway	Rollover Accident; Vehicular Crash or Accident Damage
5/27/2001	Highwa y 287	Springfield	0	$65	Highway	Rollover Accident; Vehicular Crash or Accident Damage
8/29/2006	County road m 16 mi. South &	Walsh	0	$51,391	Highway	Rollover Accident; Rollover Accident
8/25/2011	Highwa y 287 and 2nd Avenue	Springfield	0	$5,000	Highway	Loose Closure Component or Device
10/1/2011	Hwy 287	Springfield	0	$7,500	Highway	Deterioration or Aging
2/8/2012	Illinois & Pine St.	Walsh	1	$81,600	Highway	Over-pressurized
Total - 12			**1**	**$305,651**		

There have not been any significant fixed facilities hazmat incidents in Baca County.

Probability

Based on 12 previous occurrences from 1974 to 2019, there is a 27% chance of annual occurrence of a hazmat incident in Baca County, equating to a likely probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

Vulnerability Assessment

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Baca County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a high risk to accidents that may lead to releases. Highways 287 and 160 facilitate hazardous materials transportation. Populations near these highways are at a higher risk to transportation related hazmat incidents. Highway 287 runs through Campo and Springfield, and Highway 160 runs through Pritchett, Springfield, Vilas, and Walsh. Fixed facility releases are less common in the County, however, there is still potential for a release. Fixed facilities are located in Springfield, Two Buttes, and Walsh, increasing the risk of a release in these communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Baca County has experienced $305,651 in damages from hazmat incidents from 1974 to July 2019, equating to $6,792 in annual losses.

Land Use and Development

Future development in the County could increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

6.6.16. Pandemic and Zoonotic Diseases

Previous Occurrences

Pandemic Influenza

There were four acknowledged pandemics in the twentieth century and one in the twenty-first century. It is likely these pandemics impacted Baca County.

- **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.
- **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.
- **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.

- **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.

Hantavirus

From 1993 (when the disease was first reported by CDPHE) and December 2018, there have been one reported case of hantavirus in Baca County, occurring in 2018. Statewide during this timeframe, there have been 115 cases, with 41 of those ending in a fatality.[50]

Plague

The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Baca County.

Rabies

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. During this time, there have been three rabies-positive skunks reported in Baca County, one coyote (2017), one "other", and one cat, for a total of six cases. No cases have been reported in humans.

Tularemia

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Baca County.

West Nile Virus

According to the CDPHE, in Baca County there have been 10 cases of West Nile virus from 2002-2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.[51]

Probability

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Pandemic Influenza

[50] CDPHE; https://docs.google.com/document/d/1BBBKEIU9sUHKKXVh93anVcOnouyISJ2AgNExlkb3MmE/pub
[51] https://www.cdc.gov/westnile/statsmaps/cumMapsData.html

The total County population of 3,539 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Baca County population, approximately 1,061 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County, but they may be multiplied by each municipality's denser development.

Zoonotic Diseases

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock, which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Baca County, 25.2% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Impacts specific to the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh would not vary from those of the County. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to significantly impact this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

6.7. Bent County Risk Assessment

6.7.1. Hazard Summary Risk Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in the following figures below. Those hazards ranked as "low" were determined by the LPC to not be a focus of this plan's overall mitigation strategy, therefore earthquake is not further assessed for Bent County.

Table 6-32 Bent County Risk Ranking

Bent County	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	3	2	7	H
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	3	2	8	H
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	2	3	2	7	H
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	2	2	5	M
Cyber Hazards	2	3	2	7	H
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

6.7.2. Agricultural Infestation

Previous Occurrences

Due to the regional nature of this hazard, see Section 4.5.3.

Vulnerability Assessment

Inventory Exposed/Impacts

Crops and rangeland in Bent County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Bent County's economy. According to the 2017 USDA Census of Agriculture,

Bent County has 274 farms totaling 734,630 acres. The estimated market value of agricultural products sold is $60,817,000. An agricultural infestation could impact the livelihood of residents in the County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation.

Potential Losses

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Bent County has experienced $6,900 in crop indemnity payments due to insects from 1991 to 2018. This equates to $255 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost to control the infestation.

Land Use and Development

Any future agricultural endeavor in the County is vulnerable to the impacts of this hazard. Population change and related structural development will not impact this hazard.

6.7.3. Dam and Levee Failure

Location

Dams

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are 10 jurisdictional dams in Bent County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.[52] Two of these dams are low hazard, two high hazard (Adobe Creek and John Martin), two are considered No Public Hazard (NPH), and four are considered No Hazard (The two high hazard dams have an Emergency Action Plan (EAP) dated 5/4/2018 for Adobe Creek and 4/1/2017 for John Martin. These dams are listed in Table 6-33.

Table 6-33 Jurisdictional Dams in Bent County

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Adobe Creek	Adobe Creek	Las Animas	High	Yes	5/4/2018
Landsat #A-44a	Purgatoire River	Las Animas	NPH	Not Required	
Antelope #1	West Muddy Creek	Lamar	N	Not Required	
Bent County	Muddy Creek	Lamar	N	Not Required	
Dingwall Ditch Reg.	Arkansas River	Lamar	Low	Not Required	
John Martin	Arkansas River	Caddoa	High	Yes	4/1/2017

[52] https://data.colorado.gov/Water/DWR-Dam-Safety-Jurisdictional-Dam/mgjv-xmr5

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Muddy Creek	Muddy Creek	Lamar	N	Not Required	
State Stock #7	Maverick Creek	Holly	NPH	Not Required	
Vance	Rock Canyon	Lamar	N	Not Required	
G.W. Verhoeff	Arkansas River	Lamar	Low	Not Required	

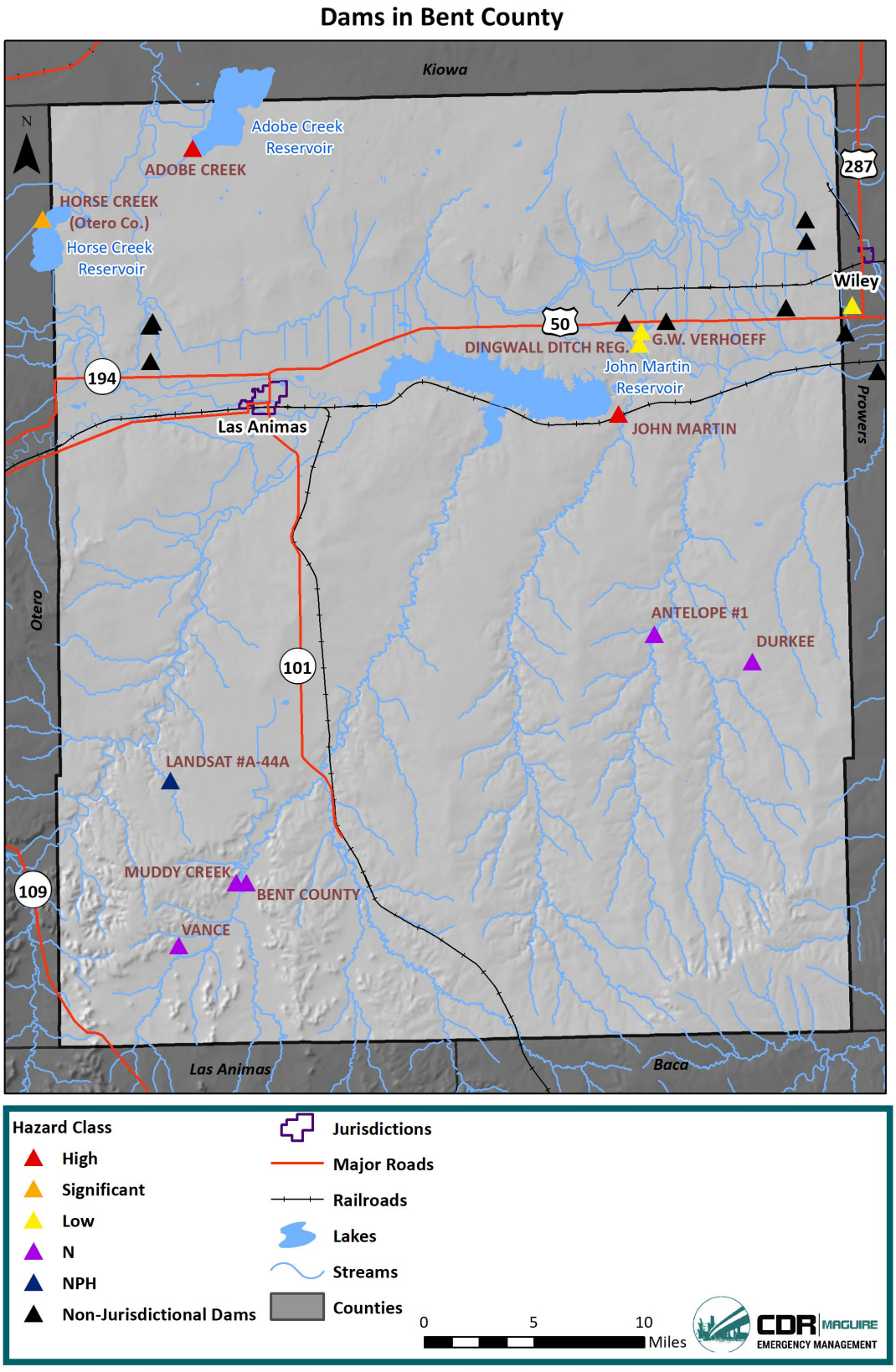
Additionally, there are seven non-jurisdictional dams in the County. A non-jurisdictional dam is a dam creating a reservoir with a capacity of 100 acre-feet or less and a surface area of 20 acres or less and with a height measured as defined in Rules 4.2.5.1 and 4.2.19 of 10 feet or less.[53] These dams are listed along with the stream they are located on (if available) below.

- Dawn (located on Adobe Creek)
- Las Animas Fish Hat. 70b (located on Adobe Creek)
- Las Animas Fish Hat. 70a (located on Adobe Creek)
- W.C. Smith Farm Irrigation Pond
- Schleining Farm Irrigation Pond
- School House Dam
- Tyrel Reed #1 Dam

These dams are mapped in Figure 6-42 below.

[53] https://data.colorado.gov/Water/DWR-Dam-Safety-Non-Jurisdictional-Dam/6smc-zj6j

Figure 6-42 Dams in Bent County



Lastly, there are 103 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses which the state engineer has determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.[54]

Levees

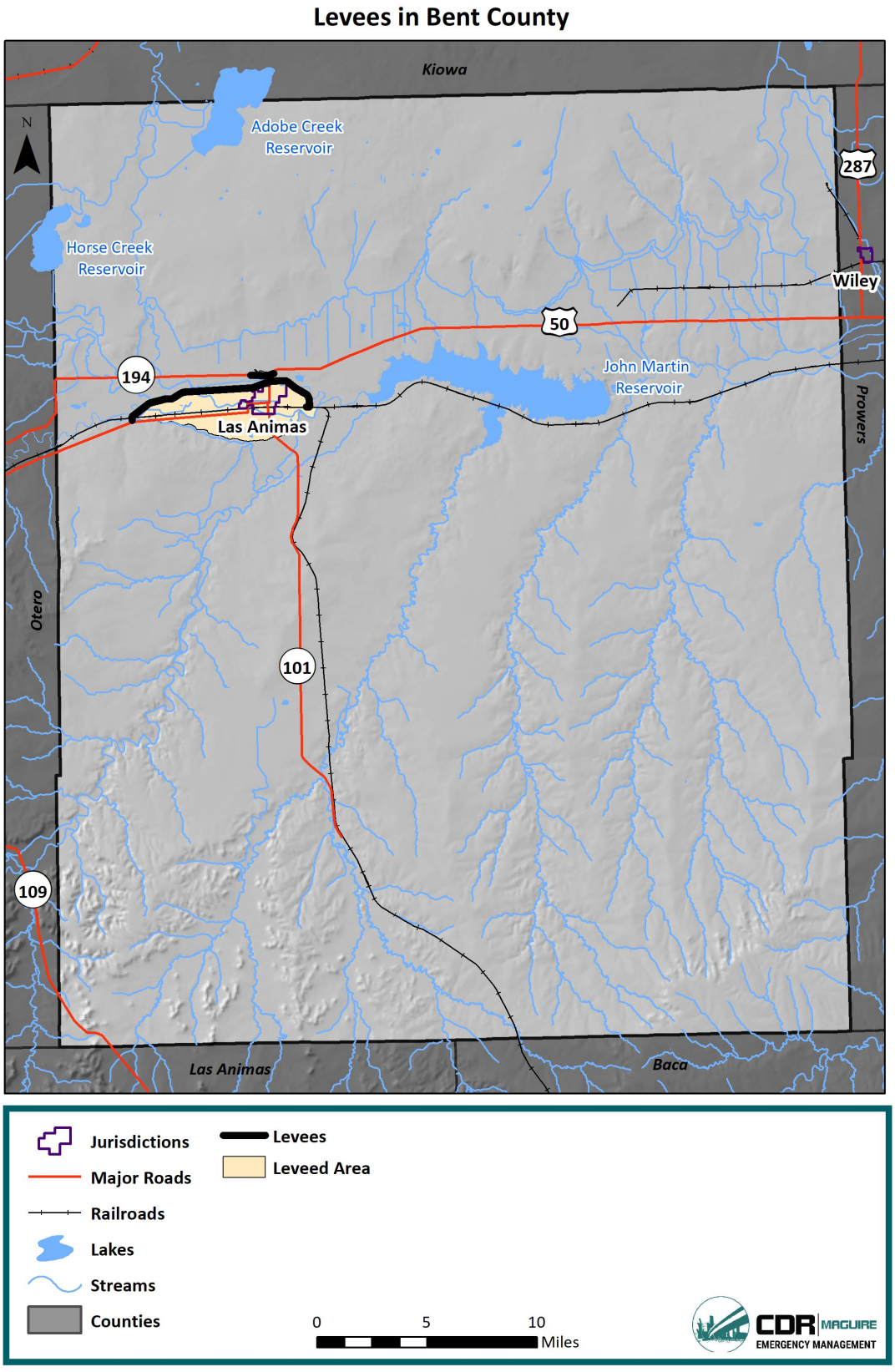
There are two documented levee systems in Bent County, listed in Table 6-34 and mapped in Figure 6-43 below.[55] Both of these levees protect Las Animas. It should be noted smaller levees or embankments that do not provide 100-year flood protection would not be captured in this inventory.

Table 6-34 Bent County Levees

Levee Name	Flooding Source	Owner	FEMA Levee Certified	Date Built	FIRM Panel(s)	Level of Protection	In USACE Database?
Las Animas North	Arkansas River	Arkansas River Conservancy District	Yes	1978	0802710004B	100 year	Yes
Las Animas South	Arkansas River	Arkansas River Conservancy District	Yes	1978	0802710004B 0802710005B	100 year	Yes

[54] https://data.colorado.gov/Water/DWR-Livestock-Water-Tank-and-Erosion-Control-Dams/r2rp-ecjb
[55] National Levee Database

Figure 6-43 Bent County Levees



Previous Occurrences

There is one report of significant dam or levee failure in Bent County. This failure occurred during a flood event in 1965, impacting the Sitchfield or Muddy Creek Reservoir (the levees were not rebuilt). An additional incident is reported by the National Performance of Dams Program (NPDP). The NPDP tracks dam incidents, described as events that affect the structural and functional integrity of dams, though not necessarily causing failure and not including ordinary maintenance and repair, vandalism, acts of war, recreational accidents, and sabotage. The event is described in Table 6-35 below.

Table 6-35 Bent County Previous Dam Incidents

Name	Date of Incident	Description of Incident	Nearest Town	County	Class	Waterway	Failure?
GW Verhoeff	6/13/1995	Seepage: Piping	Lamar	Bent	Low	Arkansas	No

Probability

There has been one significant dam or levee failures in Bent County. With 17 dams in the County and levees protecting Las Animas, the risk of a failure remains. Based on this assessment, the probability is rated as possible, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas. Inundation areas for high hazard dams are available through Colorado Dam Safety. These areas are mapped in Appendix F (FOUO). Based on this data, the City of Las Animas is at an increased risk to a dam failure event. It should be noted that the Las Animas area is also at risk to dam failure events from dams originating outside of the County, including the Pueblo Dam in Pueblo County and the Horse Creek Dam in Otero County.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

Additionally, Colorado Dam Safety has performed several analyses of dam failure risk throughout the State. First, the social vulnerability of populations in the event of a dam failure were analyzed for high and significant hazard dams across the State. Social vulnerability was measured based on factors such as age (under 5/over 65), race and ethnicity, percent living in group quarters, population, population density, income, English speaking ability, percent of population living in mobile homes, and more. The only dam included in this analysis in Bent County was Adobe Creek, which received a social vulnerability score of 10.8, which equates to a “high” social vulnerability. Colorado Dam Safety also analyzed population at risk to dam failure. In Bent County, 79 people were determined at risk.

Lastly, Colorado Dam Safety conducted a first of its kind analysis to determine risk from high hazard dams during a range of release scenarios. Recent flooding events in Colorado in 2013 and 2015, and nationwide in 2017, have highlighted cases where excessive reservoir inflows caused dam spillway flows at dams to exceed normal rates and/or required controlled releases of water to lower reservoir levels. In some of these cases hazardous conditions developed in the channels and floodplains downstream of the dams and emergency actions were required. Although all high hazard dams in Colorado have dam failure inundation maps to delineate flooding limits for dam failures, no mapping exists nor is it required to be developed for the range of releases that might be anticipated to occur during flooding events. The "Colorado High Hazard Dam Release – Downstream Floodplain Impacts Database and Ranking Tool" was created to begin to fill this gap. This database and ranking tool provides a screening level assessment of the potential for hazardous conditions downstream of high hazard dams throughout the state. It provides a ranking of high hazard dams where there is either a high, moderate or low likelihood of the existence of dangerous conditions created by dam and reservoir release operations simultaneously with naturally occurring flood conditions. Overall, 367 dams were analyzed, and in Bent County, Adobe Creek ranked 101st and John Martin was ranked 154th. This indicates a relative medium risk for both dams compared to other dams in the State for downstream floodplain impacts.

Similar to dam failure, a levee failure can result in downstream flooding, impacting the population and structures intended to be protected by the levee. The populations and structures in the identified levee protected areas in and around Las Animas are at the highest risk to levee failure. According to the National Levee Database, the Las Animas North levee protects one structure; and the Las Animas South levee protects 1,347 structures and 4,443 people. This puts 1,348 structures and 4,443 people at risk in or near Las Animas.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries. Las Animas and the surrounding area are at the highest risk to losses in the County from a dam failure event.

Colorado law requires that high hazard dams have Emergency Action Plans (EAP), and that failure inundation maps be prepared as part of those plans. The LPC did confirm the existence of an EAP for Adobe Creek and John Martin dams, which can help reduce losses in the event of a failure.

In addition, the City of Las Animas is at the highest risk to levee failure in the County. According to the National Levees Database, the Las Animas North levee protects $340,000 in property value and the Las Animas South levee protects $487 million in property value. This puts $ 487,340,000 at risk near Las Animas. It should be noted these are worst case scenario losses, assuming the entire property would be lost in the event of a failure.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

6.7.4. Drought

Location

All of Bent County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

Previous Occurrences

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing: precipitation averages over time to identify periods with precipitation amounts below the long-term average, U.S. Drought Monitor records/current conditions, and drought disaster declarations.

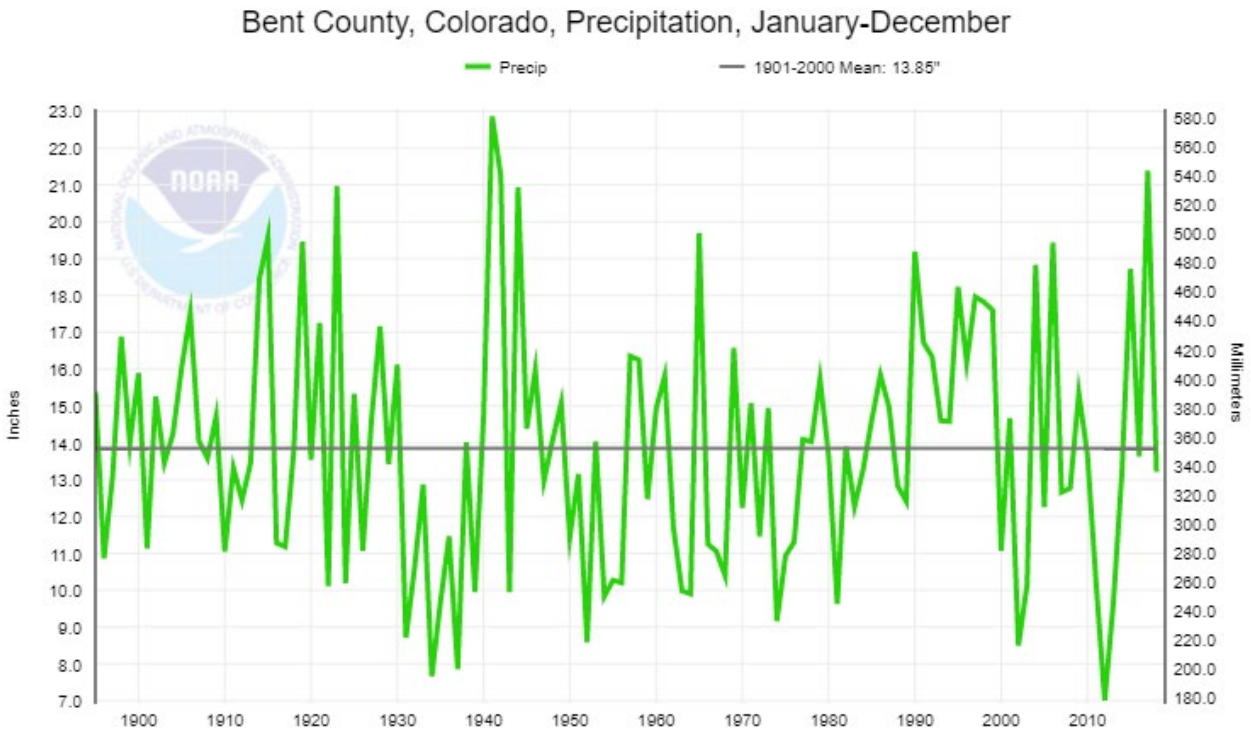
Drought conditions based on precipitation deficits are described in Table 6-36, indicating the top five years of precipitation deficit departure from the long-term average of 13.85 inches. Precipitation deficits are also shown in Figure 6-44. It is evident precipitation deficits have occurred throughout history in Bent County, particularly in the 1930s, 1950s, and 2012. Notably, 2012 was the top driest year since 1895, with 7.01 inches of precipitation, equaling a 6.84-inch deficit. Neither 2017 nor 2018, which were notably dry years in much of Colorado, resulted in significant precipitation deficits in Bent County.[56]

Table 6-36 Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
13.85 in.	2012	7.01 in.	6.84 in.
13.85 in.	1934	7.66 in.	6.19 in.
13.85 in.	1937	7.86 in.	5.99 in.
13.85 in.	2002	8.50 in.	5.35 in.
13.85 in.	1952	8.59 in.	5.26 in.

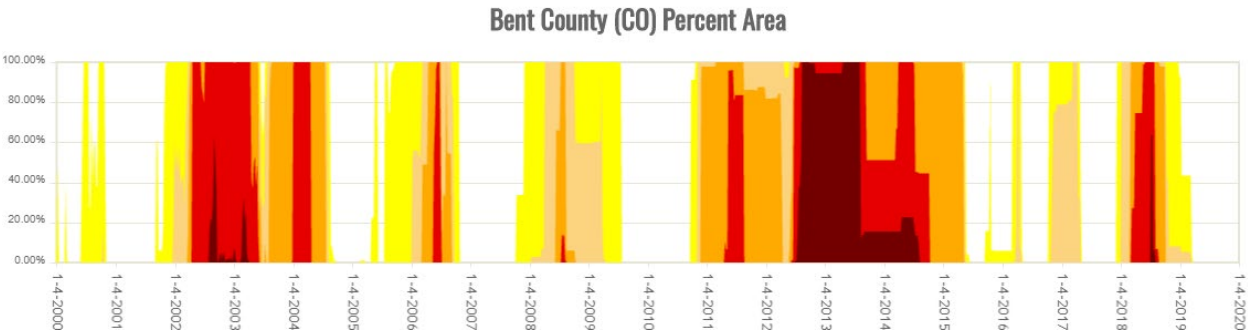
[56] NOAA National Centers for Environmental information, Climate at a Glance: County Time Series, published May 2019, retrieved on July 19, 2019 from https://www.ncdc.noaa.gov/cag/

Figure 6-44 Precipitation Deficits 1895-2016



Drought conditions based on U.S. Drought Monitor records are shown in Figure 6-45.[57] Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2012 to 2015. For parts of 2012 and 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2004, 2006, and 2018. There has been some level of drought in the County nearly every year since 2000.

Figure 6-45 Bent County Previous Droughts



Lastly, there have been 11 drought disaster declarations that have impacted Bent County from 1977 to 2018 (see Table 6-1 - Disaster Declaration Summary).

[57] https://droughtmonitor.unl.edu/Data/Timeseries.aspx for Bent County

Recent droughts are described below.

2018: Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Bent County, was experiencing extreme (D3) drought conditions. These conditions impacted farmers as well as heightened wildfire concerns. In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the worst impacts of drought to the agricultural community in Bent County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought.

2012: After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres.[58] Additionally, 2012 was the driest year in terms of precipitation deficits for Bent County. The 2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.

As of July 2019, no part of Bent County is experiencing drought.

See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

Probability

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.

For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought conditions that negatively impact the Southeast Region. In Bent County, there have been 11 drought disaster declarations from 1977 to 2018, equating to a 27% annual chance of drought occurrence, or a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Additionally, drought conditions can increase the County's risk to wildfire. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface

[58] https://climate.colostate.edu/pdfs/drought_2012.pdf

water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Bent County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Bent County has 274 farms totaling 734,630 acres. The estimated market value of agricultural products sold is $60,817,000. These assets are at risk to drought impacts. According to the Colorado Drought Plan – Visualization Story Map, the agriculture sector is the most vulnerable sector to drought in Bent County, with a vulnerability score of 3.4. this is higher than the State average of 2.4.[59]

The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Bent County, during this time period, there has been 78 reported impacts. The most impacts (31) were categorized as "agriculture," followed by plants and wildlife (14 impacts), and relief, response, and restrictions (14 impacts).

Potential Losses

The largest potential losses in Bent County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Bent County, and droughts causing major economic impacts to crops and cattle could also trickle into the rest of the economy. All jurisdictions and unincorporated County are impacted by drought events due to the connected nature of agriculture, water use, and the economy in the County.

Based on SHELDUS data from 1960 to 2017, Bent County has experienced $4,533,293 in crop losses from drought (2017 dollars). This equates to $79,531 in annual losses. No property damages were recorded in SHELDUS.

Land Use and Development

An increase in population and development can put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions.

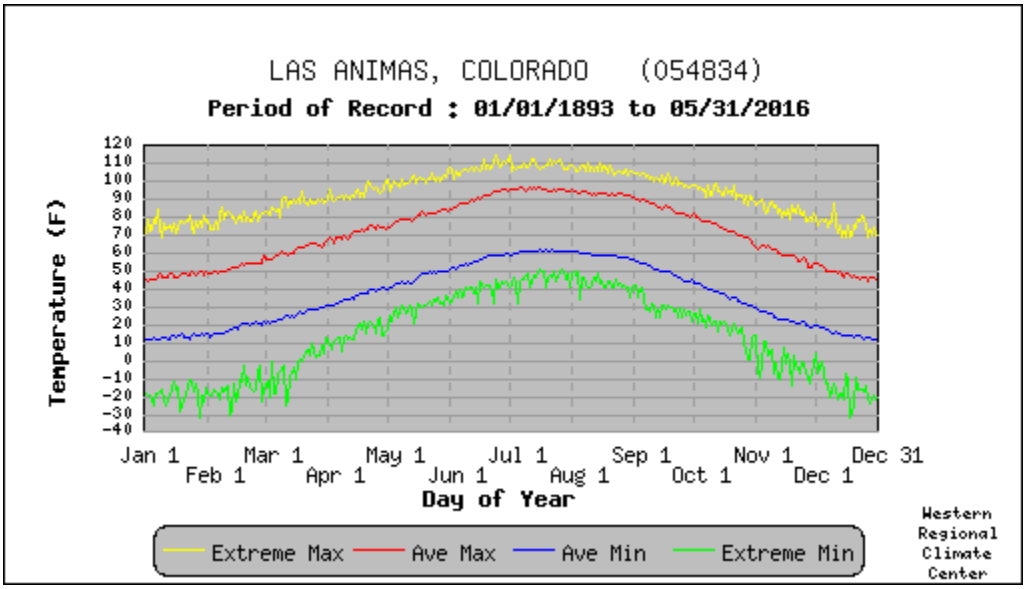
6.7.5. Extreme Temperatures: Extreme Cold

Location

Extreme cold temperatures can impact the entire County. Figure 6-46 shows the extreme temperature highs and lows for Las Animas. The lowest recorded temperature in this data is -32 degrees.[60]

[59] CWCB, State Drought Planning; https://lynker.maps.arcgis.com/apps/MapSeries/index.html?appid=8b8a995c2574439cbef10088a08d12ae
[60] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-46 Temperature Extremes in Las Animas, Colorado



Previous Occurrences

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Bent County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Bent County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

Probability

Extreme cold temperatures occur yearly in Bent County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Bent County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the planning area is most vulnerable to temperature extremes. In Bent County, 17% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Bent County has 274 farms totaling 734,630 acres. The estimated market value of agricultural products sold is $60,817,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in the County are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Bent County has experienced $985,954 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.[61] This equates to $36,516 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

6.7.6. Extreme Temperatures: Extreme Heat

Location

Extreme heat can impact the entire County. Figure 6-47 shows the extreme temperature highs and lows for Las Animas. The highest recorded temperature in this data is 114 degrees.[62] Across the County, maximum temperatures routinely break 100 degrees during the summer months.

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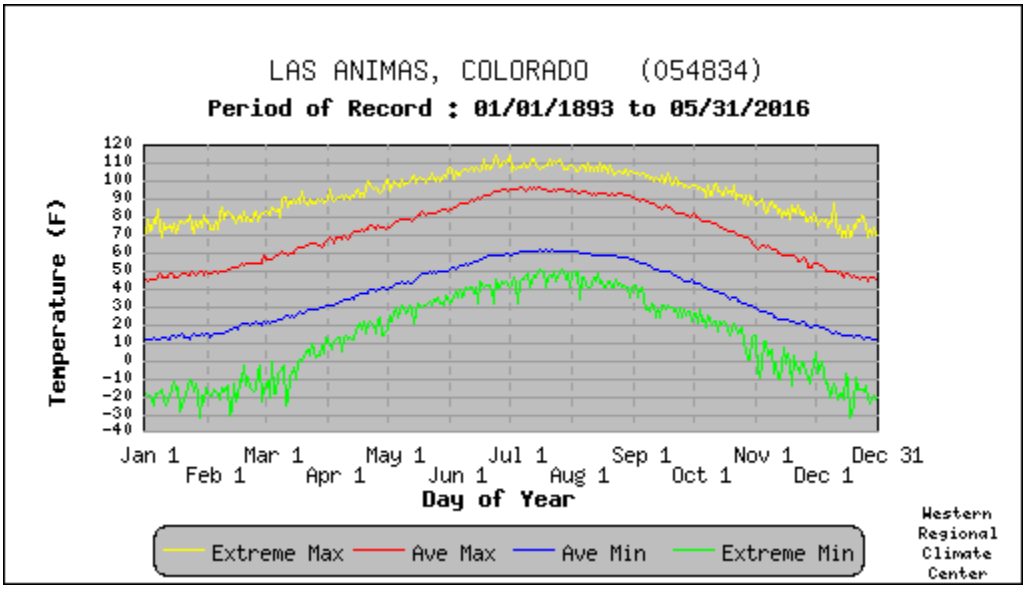
[61] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

[62] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-47 Temperature Extremes in Las Animas, Colorado - Heat



Previous Occurrences

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Bent County has experienced 2,700, 1,511, and 480 days above 90, 95, and 100 degrees, respectively. Additionally, the County has experienced 308 heat waves during this time period. This places Bent County first in the State for number of days above 90 degrees from 1981 to 2017, as well as first in the State for number of heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.[63]

Probability

Based on the climate of Bent County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Bent County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. In Bent County, 17% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and

[63] Colorado Climate Center

accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Additionally, people who work, frequently recreate, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Bent County has 274 farms totaling 734,630 acres. The estimated market value of agricultural products sold is $60,817,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Potential Losses

There is no recorded damage information for extreme heat in Bent County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat.

Based on USDA Risk Management Agency Data, Bent County has experienced $3,202,623 in insured indemnity amounts from 1991 through 2018 due to heat.[64] This equates to $118,615 in annual losses.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme heat.

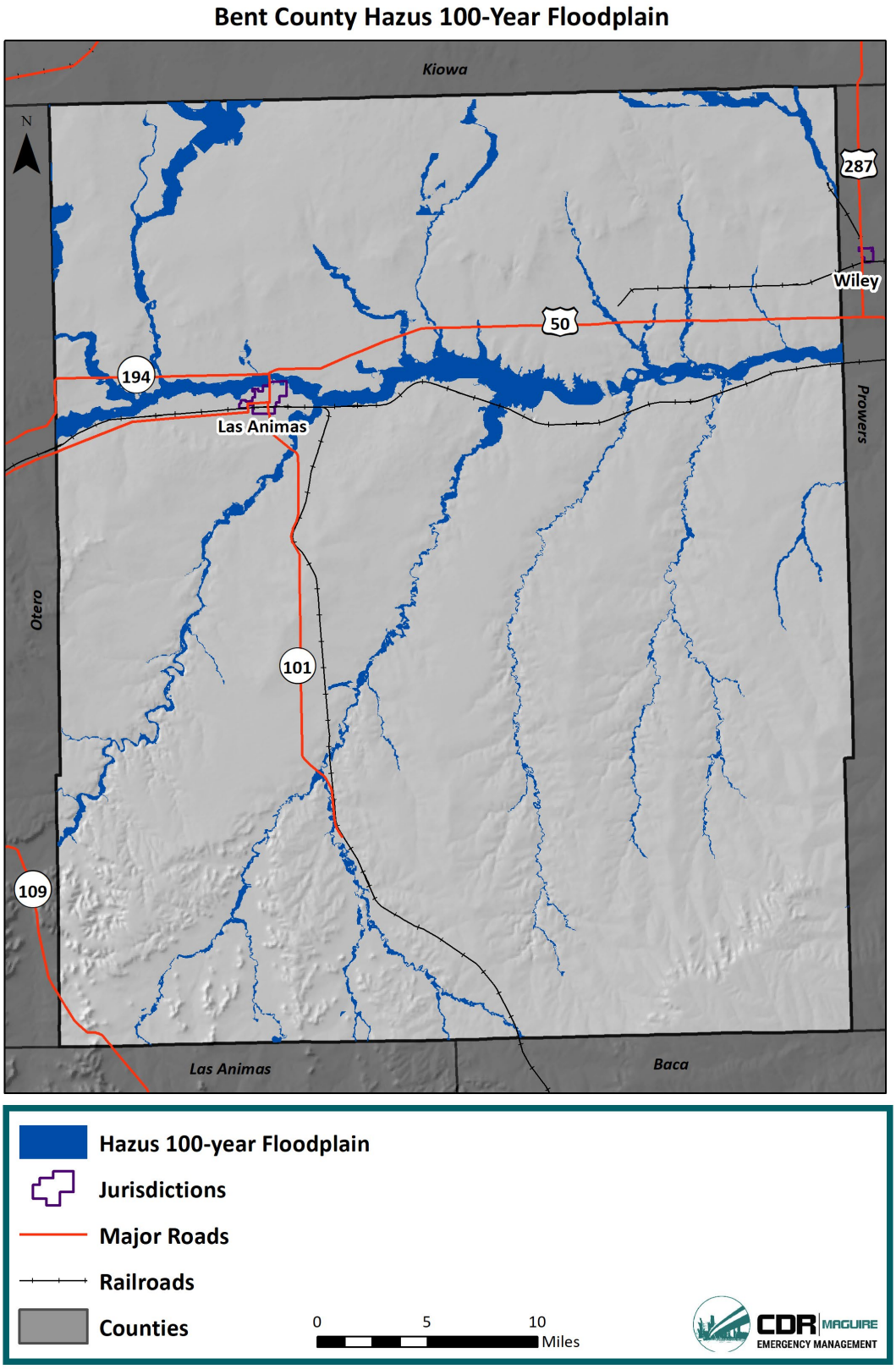
6.7.7. Flooding

Location

Bent County's floodplain is not digitally mapped by the NFIP, though updated mapping is underway. Therefore, the best available floodplain data was generated for the 2018 Colorado State Hazard Mitigation Plan. Using Hazus-MH 4.0, a standard Level 1 flood analysis was conducted. This resulted in the development of a stream network and hydrology for 10-square mile drainage areas. The 30-meter (one arc second) DEMs were used in this analysis as the terrain source. Hazus then ran hydraulics for and delineated the 100-year floodplain boundary. While not as accurate as an official FEMA floodplain, this boundary is available for use in GIS and is currently the best available data for the County. Figure 6-48 shows the Hazus floodplain for Bent County. The floodplain largely follows the Arkansas River and its tributaries, impacting the northern portion of Las Animas.

[64] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

Figure 6-48 Bent County Hazus 100-year Floodplain



Previous Occurrences

In total, there have been 16 recorded flooding events in the County from 1950 to May 2019.[65] Five of these events were labeled as floods and 11 as flash floods. Twelve of these events occurred near Las Animas and four in unincorporated County. None of these events have recorded injuries or deaths. There are no quantitative damages reported with any of these events, however, qualitative damage reports several damages, including, flooded basements in Las Animas, road closures, agricultural damage, and road washouts.

Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below. A description of all previous occurrences can be found in Appendix C.

Table 6-37 Flooding Events in Bent County from 2014 to 2019

Date	Location	Flood Type	Description
7/13/2014	Las Animas	Flood	The Purgatoire River briefly went above flood stage east of Las Animas, causing minor agricultural flooding.
7/15/2014	Las Animas	Flood	The Purgatoire River near Las Animas briefly went above flood stage causing minor agricultural flooding.
7/18/2014	Las Animas	Flood	The Purgatoire River near Las Animas went above flood stage, causing minor agricultural flooding.
7/29/2014	Mc Clave	Flash Flood	Strong storms with heavy rain caused flash flooding in the northeast part of the county. Numerous roads were flooded with washouts reported.
7/1/2016	Las Animas	Flash Flood	A storm produced flash flooding of arroyos and roadways in a rural area of southwest Bent County.
7/28/2017	Las Animas	Flash Flood	Very heavy rain from a thunderstorm produced water in excess of 6 inches on streets in Las Animas and briefly flooded county roads near and south of John Martin Reservoir.

NFIP Information

Bent County joined the NFIP on May 1, 1989. The City of Las Animas joined the NFIP on July 10, 1985. As of July 24, 2019, there are currently five flood insurance policies in force in Bent County. The total amount of insurance in force is $364,900. There have been two flood claims in Bent County. The NFIP has paid out $2,689.25 to settle these claims. As of July 24, 2019, there are currently 2 flood insurance policies in force in the City of Las Animas. The total amount of insurance in force is $630,000. There have been no flood claims to date in the City of Las Animas.

There are no repetitive loss properties in the County or the City of Las Animas.

Probability

Based on 16 floods from 1950 to 2019, there is a 23% annual chance of flood occurrence in the County, equating to a likely probability.

[65] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; LPC

Vulnerability Assessment

Inventory Exposed/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County along the Arkansas River and its tributaries, and the northern portion of Las Animas. Damages in unincorporated areas can include (but are not limited to) rural structures, roads, and crops. As demonstrated in the previous occurrences, issues such as flooded basements and roads can occur in Las Animas. This indicates much of the County is vulnerable to this hazard. Flooding can also cause injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Bent County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100-year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. While not as accurate as official flood maps, these floodplain boundaries are available for use in GIS and could be valuable to Bent County, given it has not been digitally mapped by the National Flood Insurance Program. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhance (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, no buildings would be at least moderately damaged by a county-wide 100-year flood. The model estimates 30 households (or 90 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. The majority of the population displacement will occur along the Arkansas River. One person is estimated to seek temporary shelter in public shelters.

The total economic loss estimated for the flood event is $2.01 million, which represents 2.28% of the total replacement value of the County's building stock. Total economic losses are a combination of direct building losses and business interruption losses.

The economic losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood. The total building-related losses for the County were $2.01 million, all of which were direct building losses. Residential occupancies made up 61.39% of the total loss.

Additionally, the model estimates that a total of 207 tons of debris will be generated. Of the total amount, Finishes comprises 55% of the total, Structure comprises 16% of the total, and Foundation comprises 29%. If the debris tonnage is converted into an estimated number of truckloads, it will require nine truckloads (25 tons/truck) to remove the debris generated by the flood.

Figure 6-49 shows the Hazus generated flood depths for a 1% annual chance (100-year) flood event for the County. Higher flood depths can be found along the Arkansas River, west and east of the John Martin Reservoir, as well as in the southern tributaries.

Figure 6-49 Bent County Hazus 100-year Flood Depth

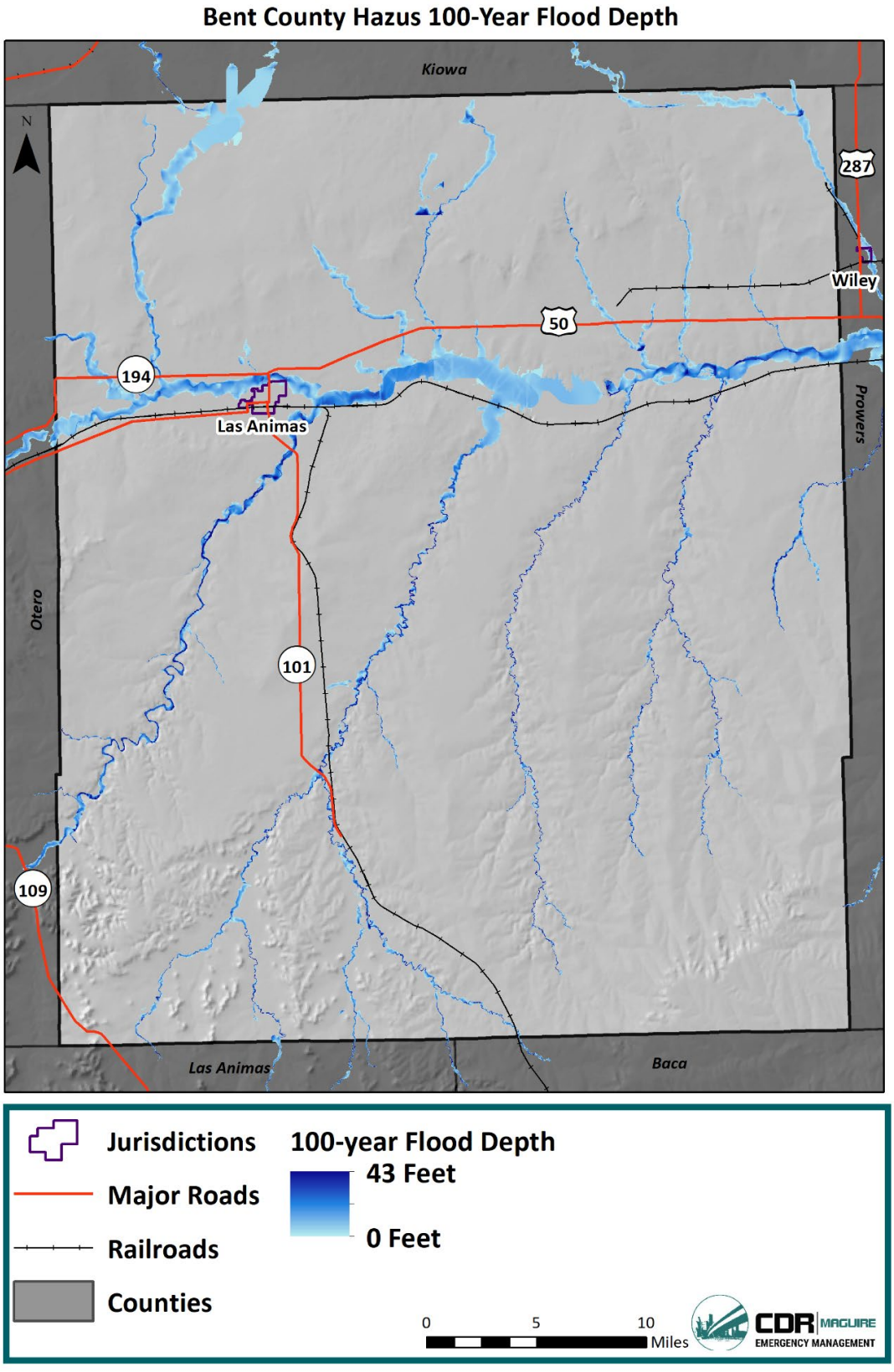


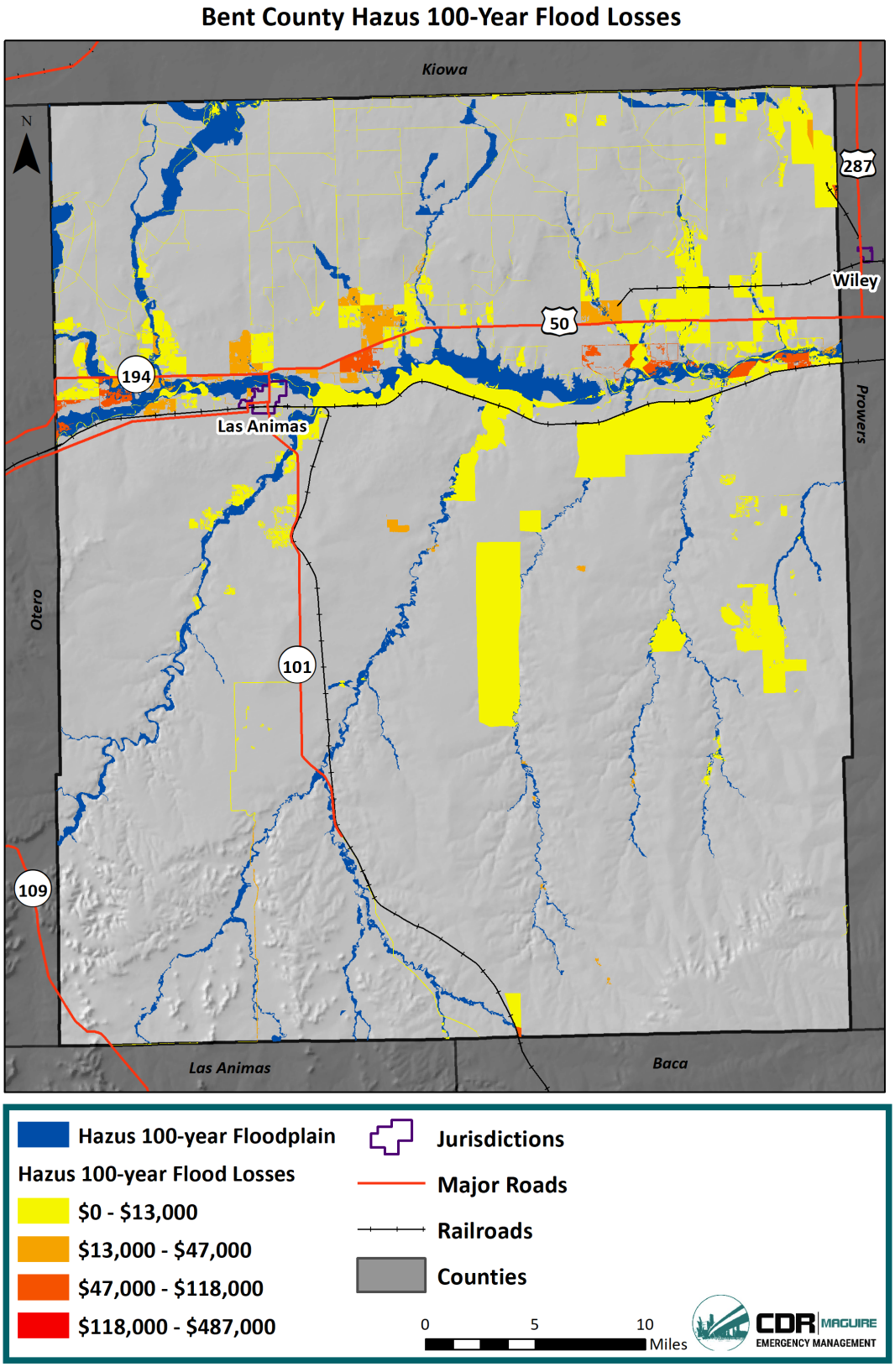
Figure 6-50 shows total building related losses from this event for the County ($2.01 million). The highest flood losses are projected to occur in unincorporated Bent County, generally along the Arkansas River, primarily just east and west of the John Martin Reservoir.

GIS was used to estimate losses by jurisdiction, shown in the table below. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall magnitude of flood losses in and surrounding each jurisdiction. The highest amount of losses are projected for unincorporated County

Table 6-38 Bent County Hazus Estimated Flood Losses by Jurisdiction

Jurisdiction	Estimated 100-year Flood Losses
Las Animas	$91,000
Unincorporated County	$1,916,000
Total	**$2,007,000**

Figure 6-50 Bent County Hazus 100-year Flood Losses



In addition to the potential losses estimated by Hazus, there have been $1,169,156 in recorded losses in Bent County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $20,511 in annual losses to Bent County from flooding.

Land Use and Development

Regulating new development and continued participation in the NFIP can help reduce the risk of new structures from flooding. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

6.7.8. Severe Weather: Thunderstorms/Lightning/Hail

Previous Occurrences

Thunderstorm

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 41 thunderstorm wind events have occurred in Bent County from 1960 to May 2019, causing $341,000 in damages. The highest recorded wind gust was 115 mph, which occurred on 8/31/1997 near McClave. This event caused one death, one injury, and $80,000 in damages. A description of this event is below:

> A damaging microburst wind, estimated to be at least 115 mph in strength, struck a mobile home, rolling it a few hundred yards. The intense damage was 50 to 75 yards across. Twin brothers were in the mobile home. One brother was thrown from the mobile home and sustained a broken eye socket. The other brother was rolled inside the mobile home, sustaining numerous injuries to his body, neck, and head. He died six days later.

The highest amount of damages occurred during the 7/23/2001 thunderstorm near Las Animas, causing approximately $100,000 in damages. The damages resulted from 1.5 miles of downed power poles along Highway 101, about seven miles south of Las Animas. It took around two to three weeks to replace the poles. Table 6-39 describes thunderstorm wind events that have occurred since the 2014 Southeast Region Hazard Mitigation Plan.

Table 6-39 Recent Thunderstorm Wind Events in Bent County

Date	Location	Deaths	Injuries	Damages	Description
5/31/2016	Las Animas	0	0	$0	Severe storms produced hail up to the size of quarters in El Paso County, severe winds in Otero and Bent Counties, and flash flooding.
6/25/2016	Las Animas	0	0	$20,000	Severe storms produced damaging winds, in some cases over 70 mph. Large cottonwood trees, taller than 25 feet, were uprooted at the Las Animas golf course.
5/27/2017	Las Animas	0	0	$0	Severe storms produced hail up to the size of golf balls from near

Date	Location	Deaths	Injuries	Damages	Description
					Walsenburg (Huerfano County) and Cheraw (Otero County).
7/28/2017	Las Animas	0	0	$0	A few severe storms produced flash flooding and damaging wind gusts. A few trees and many tree limbs were downed in Las Animas.
6/28/2018	Las Animas	0	0	$0	Severe thunderstorm produced wind gusts up to 74 mph over portions of Prowers and Bent counties during the afternoon of the 28th.
Totals	**Count: 5**	**0**	**0**	**$20,000**	

Lightning

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in Colorado.[66] Bent County averages 6,700 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009-2018) and fourth in the nation for number of lightning fatalities (years 1959-2017).[67]

The NCEI Storm Events Database reports on the number of damaging or significant lighting events. There are no reported damaging events in Bent County

Hail

According to the NCEI Storm Events Database, there have been 140 recorded hail events in Bent County from 1955 through 2017. The highest magnitude event was on 10/11/1997 when hail measuring 4.5 inches struck near Las Animas. The most damaging event occurred on 6/7/2001 near Ft. Lyon, causing $6,000,000 in recorded damages. The event is described below.

> A slow-moving severe thunderstorm brought very heavy rain, causing flooding and baseball sized hail to the Ft. Lyon area for nearly an hour. The large hail broke windows and destroyed roofs on houses. Many vehicles also sustained major damage. The VA Medical Center's tile roof was completely destroyed, along with many windows. The grounds also sustained major damage. In addition, crops were totally destroyed in the area. Damage estimates were still preliminary at the time of submission.

Overall, these events caused $6,200,500 in recorded damages. Examples of damages reported from these events are crop damages, vehicle damages, and structural damages such as broken windows. Recorded hail event since the 2014 Southeast Region Hazard Mitigation Plan are described in Table 6-40 below, and Figure 6-51 shows all recorded events from 1955 to 2017 on a map. It is evident the entire County is vulnerable to hail events.[68]

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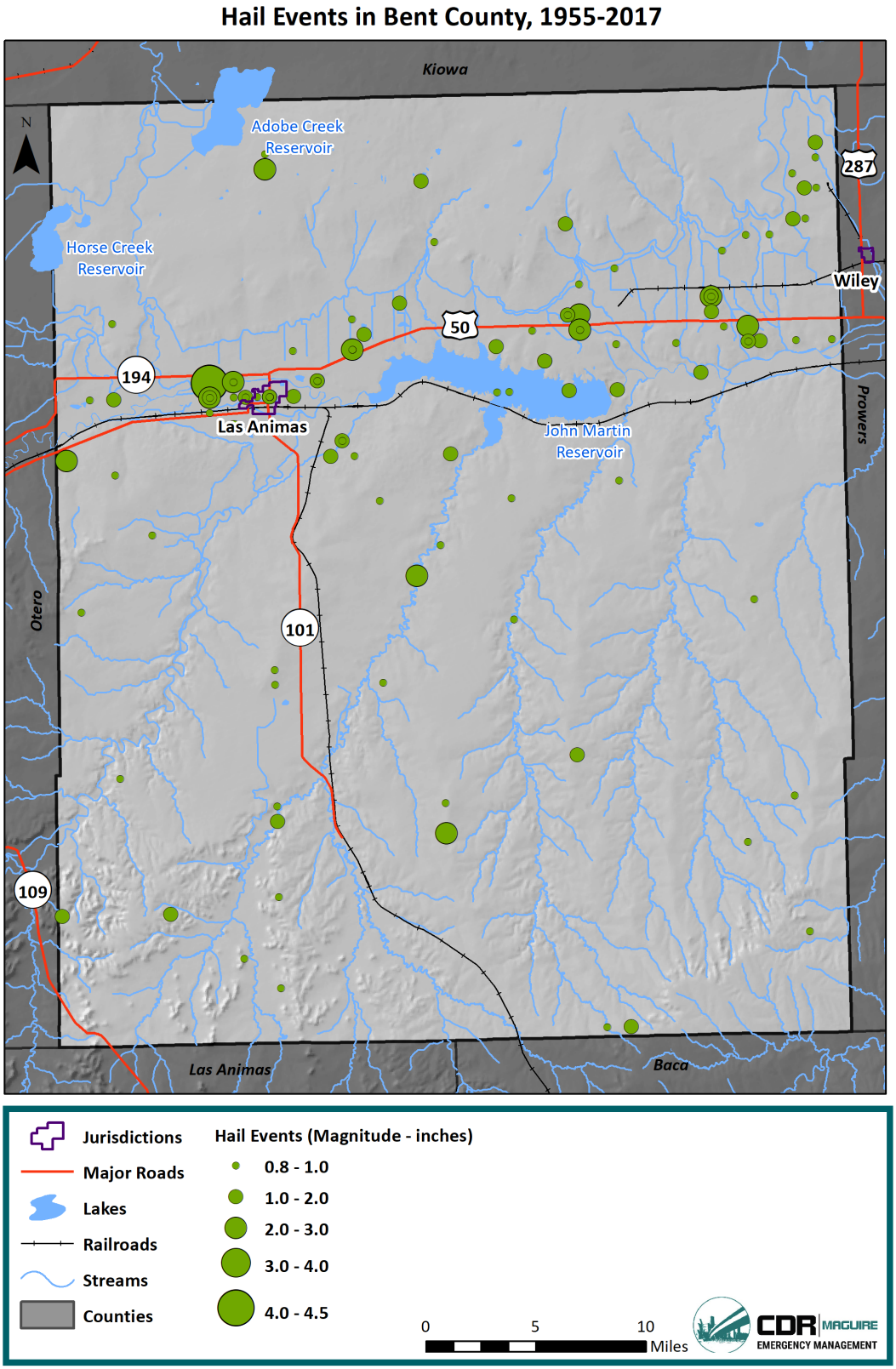
[66] https://www.weather.gov/pub/lightningCgCountyColorado
[67] https://www.weather.gov/pub/Colorado_ltg_ranking
[68] NOAA Storm Prediction Center, SVRGIS; https://www.spc.noaa.gov/gis/svrgis/

Table 6-40 Recent Hail Events in Bent County

Date	Location	Magnitude (inches)	Damages	Description
5/6/2015	Mc Clave	0.88	$0	Strong storms brought hail up to the size of nickels in Bent and Pueblo Counties.
5/9/2015	Hasty	0.75	$0	Description unavailable
8/7/2015	Las Animas	1.25	$0	A few severe storms produced hail up to the size of half dollars across Otero and Bent Counties.
7/17/2016	Las Animas	1.75	$0	Severe storms produced hail up to the size of golf balls and isolated severe winds. No dollar amounts of damage were available at this time.
7/17/2016	Mc Clave	1.5	$0	Severe storms produced hail up to the size of golf balls and isolated severe winds. No dollar amounts of damage were available at this time.
5/27/2017	Las Animas	0.88	$0	Severe storms produced hail up to the size of golf balls from near Walsenburg (Huerfano County) and Cheraw (Otero County).
6/29/2017	Mc Clave	1.75	$0	A few severe storms produced hail up to the size of baseballs.
7/16/2017	Mc Clave	0.75	$0	A storm produced hail up to the size of pennies in eastern Bent County.
8/10/2017	Hasty	2.75	$0	Several severe storms produced damaging hail up to around the size of baseballs.
9/30/2017	Las Animas	1.75	$0	A severe storm produced hail up to the size of golfballs.
5/18/2018	Hasty	1	$0	Severe thunderstorms moving across portions of eastern Colorado produced hail up to the size of golf balls and winds gusting around 60 mph at times during the afternoon of the 18th.
5/26/2019	Hasty	1.25	$0	The afternoon and evening of Sunday, May 26th was a very active severe weather day across the eastern Colorado plains. The region had been outlooked with a Moderate risk of severe thunderstorms and tornadoes. A mesoscale discussion from SPC came out at 1119 AM MDT highlighting much of the eastern plains of Colorado for the need of a Tornado Watch within the next couple of hours. At 1230 PM MDT SPC

Date	Location	Magnitude (inches)	Damages	Description
				issued Tornado Watch #253 to include Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers Counties. Throughout the afternoon and evening hours several supercell thunderstorms developed and moved southwest to northeast through the eastern Colorado plains counties. Several reports of large damaging hail, destructive winds, and a few tornadoes were seen by area SKYWARN spotters and Storm Chasers.
Totals	**Count: 12**	**Max: 2.75**	**$0**	

Figure 6-51 Bent County Previous Hail Events, 1955-2017



Probability

The probability of annual occurrence for all severe weather events (thunderstorm, lightning, and hail) is 100%, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences of thunderstorm events include infrastructure damage and building damage such as torn off roofs, as well as crop damage. Previous occurrences show many previous occurrences near Las Animas, however, the entire County is vulnerable to damaging events. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County areas have similar vulnerabilities, as well as increased risk to crop losses from severe weather.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. Persons recreating or working outdoors during the months of April through September will be most at risk to lightning strikes. There have been no reported incidents of death or injury associated with lightning in the County.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail. The entire County has experienced significant magnitude hail events. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roofs damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Potential Losses

According to SHELDUS, there have been $6,259,091 in damages from severe storms from 1960 to 2017 (2017 dollars). This equates to $109,808 in annual damages. Based on NCEI previous events, many of these damages occurred near Las Animas, however damages have occurred countywide. Overall, the most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

No damages have been recorded due to lightning in the County. However, lightning occurs frequently every spring through fall, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

According to SHELDUS, there have been $15,516,230 in damages from hail from 1960 to 2017 (2017 dollars). This equates to $272,214 in annual damages. Similar to other thunderstorm hazards, the entire County is vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

Land Use and Development

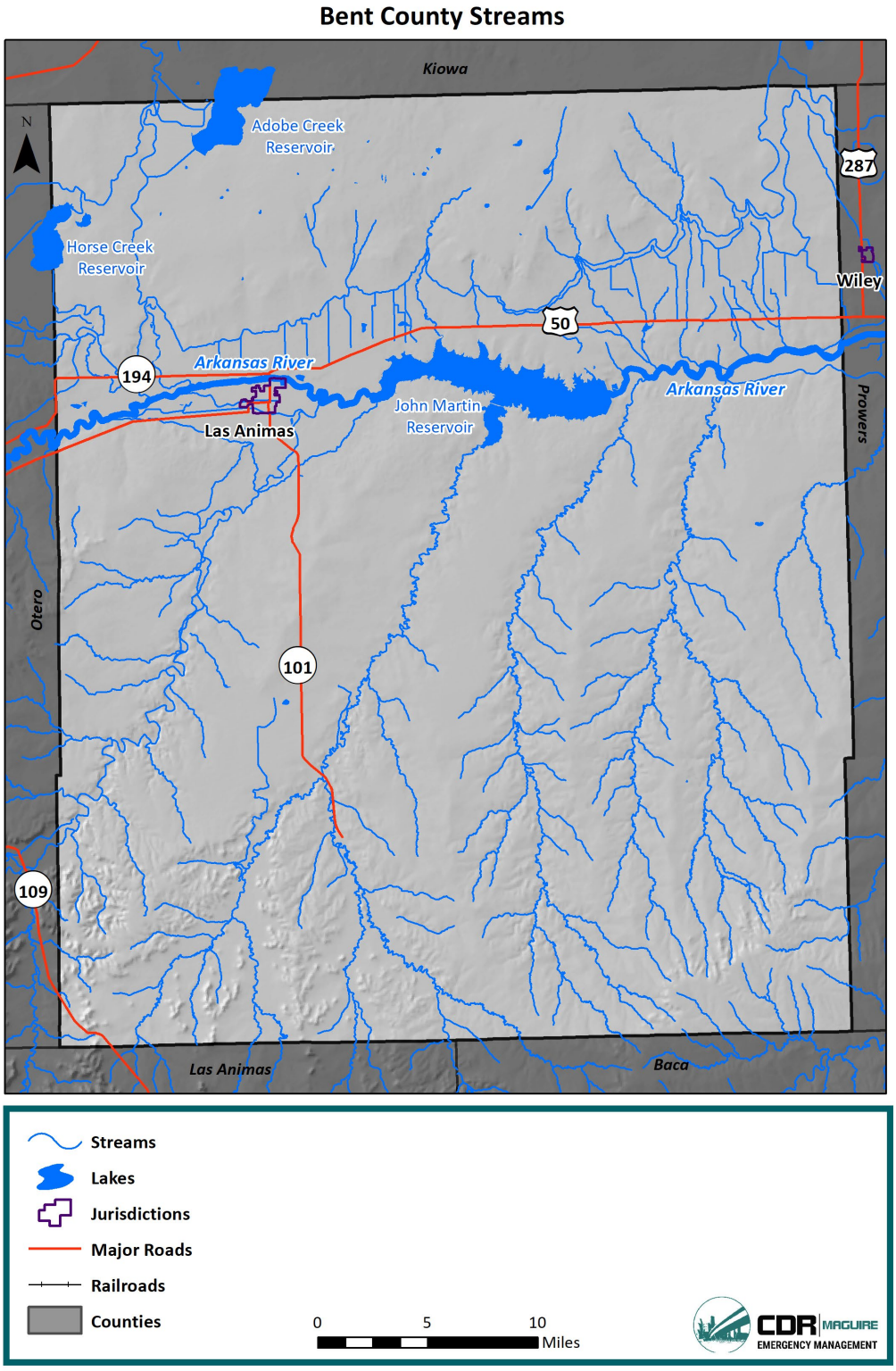
Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

6.7.9. Stream Bank Erosion/Stability

Location

Figure 6-52 shows streams in Bent County. All of these areas are vulnerable to erosion. Additionally, stream bank erosion along the Arkansas River is an issue in Bent County, and the City of Las Animas is particularly vulnerable to the impacts of erosion on the Arkansas River.

Figure 6-52 Streams in Bent County



Previous Occurrences

Notable previous occurrences of stream bank erosion are described below.

The Arkansas River has eroded sufficiently to reach the toe of the south bank levee at the west end of the project several times since construction. The Arkansas River Levee District has successfully repaired the damage and restored the levee toe. This problem reoccurred during June 1994 when the river eroded into the toe of the levee approximately 1/2 mile from the beginning of the levee west of Las Animas. Some of the jacks installed for levee protection were washed out. The District is fighting this streambank erosion and has restored the levee toe but another section downstream is being threatened. A large scale, vigorous program of streambank stabilization and levee toe protection will be necessary to maintain the integrity of the levee at the critically important west end. A separate erosion problem developed at the west end of the project where the Consolidated Canal river return outlet channel has eroded into the toe of the levee. This problem should also be addressed in a vigorous manner to maintain the integrity of the levee.

During the 1999 flooding, after a field inspection of the reservoir on May 6, 1999, John Martin Project Office personnel discovered a slide on the Burlington Northern - Santa Fe (BNSF) railway embankment adjacent to the reservoir. The BNSF railway was notified of this problem on May 6, 1999. An inspection of the reservoir on May 11, 1999 indicated that problem was getting worse. Railroad personnel visited the site on the afternoon of May 11, 1999. Subsequently, the railroad placed a speed limit on all trains in the area and took action to make the necessary repairs. The railroad dumped at least 69 train cars of riprap at this site to stabilize the slide. With the slope stabilized, the railroad began placing riprap in specific areas that required protection.

The levee in Las Animas experienced erosion at one location, but provided protection during the entire 10-year to 25-year flood event. LPC members were not able to give specific dates for this occurrence.

Erosion events are likely underreported, and this does not mean that erosion is not taking place. According to the 2018 Colorado Hazard Mitigation Plan, the Colorado Water Conservation Board (CWCB) is creating pilot erosion hazard maps as a component of the RiskMAP flood mapping program. This information should be utilized to further assess the erosion hazard in Bent County when available.

Probability

Streambank erosion is a natural process and will continue to occur in the future. Problematic occurrences were rated as likely by the LPC.

Vulnerability Assessment

Inventory Exposed/Impacts

Bent County has had events of stream bank erosion in the past. Stream bank erosion is a natural process, but acceleration of this natural process leads to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects. Local interests have, with limited finances, sought for many years to provide protection from reoccurring floods on the Arkansas River. A major stumbling block in the quest for flood protection has been the aggradation of the streambed. Aggradation of the Arkansas River has been and continues to be a major problem from Pueblo to the Colorado-Kansas state line. In addition to aggradation, there is concern of an increasingly serious flood threat at Las Animas caused by heavy plant growth in the riverbed which retarded flows and resulted in deposition of silt and decreased channel capacity. Sedimentation in the Arkansas River has lead to changes in river depth, which has affected the toe of the levee that protects the City of Las Animas.

Erosion can result in minor inconveniences or major destruction of property and infrastructure. Severe erosion removes the earth from beneath bridges, roads, and foundations of structures adjacent to streams. By undercutting, it can lead to increased rockfall and landslide hazard. The deposition of material can block culverts, aggravate flooding, destroy crops and lawns by burying them, and reduce the capacity of water reservoirs as the deposited materials displace water, and cause overall degradation of the water supply.[69]

Riverine erosion has many consequences including land and development loss. It can also affect river sedimentation and degrade channel navigation. Other problems include water quality reduction due to high sediment loads, native aquatic habitat losses, damage to public utilities (roads, bridges and dams), and increased maintenance, prevention, and control costs. Sedimentation of streams degrades habitat essential for many aquatic organisms. Erosion and deposition can also increase risk of pollution of surface waters, as nutrients and pesticides from agricultural and residential uses are more easily carried off the surface by runoff.

Additionally, burn scar areas from wildfires are at a higher risk to erosion due to the lack of vegetation as well as changes to the physical condition of the soil.

Potential Losses

No loss information is available for the stream bank erosion hazard in Bent County. The greatest potential losses from stream bank erosion would likely be to infrastructure. The Las Animas levee has been impacted by erosion, which also increases flood risk to the City. Additionally, erosion can deposit sediment into streams and reservoirs, increasing flooding risk as well as requiring costly remediation.

Land Use and Development

Human activities greatly influence the rate and extent of erosion and deposition. Stripping the land surface of vegetation, altering natural drainages, and rearranging the earth through construction of highways, subdivision development, farmland preparation, and modification of drainage channels for water control projects are significant factors in increased erosion and deposition.

6.7.10. Tornadoes

Previous Occurrences

According to the NCEI, from 1950 through 2019, there have been 43 recorded tornadoes in Bent County. These tornadoes resulted in eight injuries and $1,440,500 in recorded property damages. The strongest magnitude event was F2/EF2 events, happening on several occasions. The most damaging event occurred on 6/20/2004 near Las Animas. This was an F1 tornado that caused severe damage to at least seven buildings at Mountain Prairie Hog Farms. Seven farrowing barns (380 feet x 60 feet) were destroyed. Only one pig was killed. A fire started in one of the structures when a gas line broke. Debris was scattered a few miles east southeast of the Farms. The total damages equated to approximately $1 million with one injury. Table 6-41 summarizes the recent tornado events in Bent County. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. Examples of damages recorded during these events include: damaged roofs and buildings, downed power poles, equipment/machinery damage, and livestock damage. Figure 6-53 shows tornadoes and tornado paths in Bent County as documented by the NOAA Storm Prediction

[69] 2018 Colorado Hazard Mitigation Plan

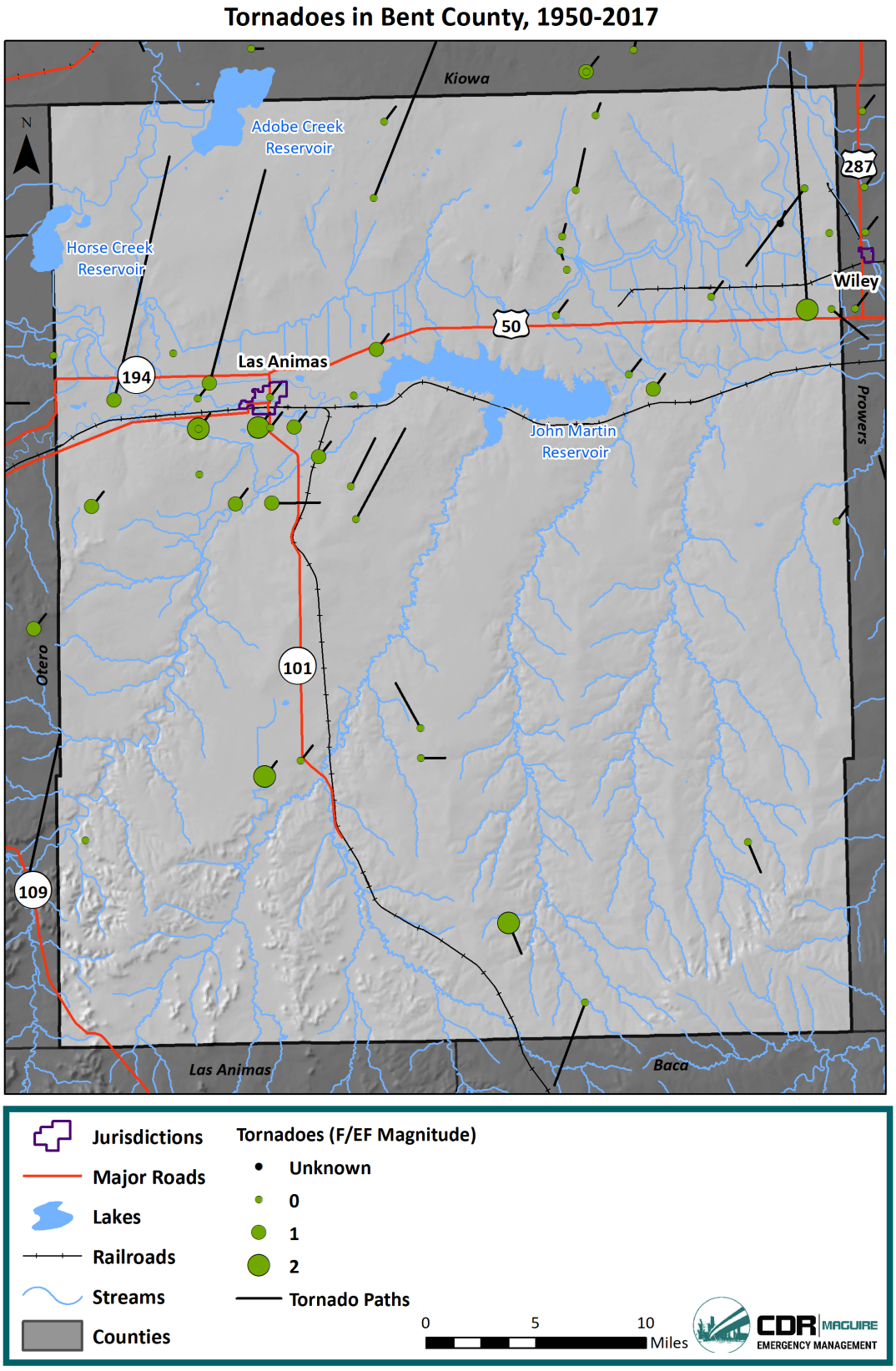
Center.[70] It is evident the entire County is at risk to this hazard, and many tornadoes have occurred near Las Animas.

Table 6-41 Recent Tornadoes in Bent County

Date	Location	Mag	Damages	Description
4/22/2010	Las Animas	EF0	$0	Tornado occurred over open country and caused no damage.
4/22/2010	Hasty	EF0	$0	Tornado occurred over open country and caused no damage.
4/22/2010	Mc Clave	EF0	$0	Tornado occurred over open country and caused no damage.
4/27/2012	Mc Clave	EF2	$25,000	Two locations experienced heavy damage. On State Highway 196 a metal building was destroyed and a home damaged. Four metal power poles were bent over. On County Road PP a metal barn was damaged and horse corrals were destroyed. One horse was killed.
6/5/2014	Hasty	EF0	$0	A brief tornado occurred in a field causing no damage.
4/15/2016	Mc Clave	EFU	$0	Storm chasers captured video of a tornado across open country. The tornado caused no damage from which the NWS could assign an EF-scale rating.
Totals	**Count: 6**		**$25,000**	

[70] https://www.spc.noaa.gov/gis/svrgis/

Figure 6-53 Bent County Tornadoes



Probability

Based on previous occurrences in Bent County, there is a 62% chance that a tornado will happen every year, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Historical evidence shows that Bent County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. It cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)
- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Bent County, 14.3% of the housing units are mobile homes.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

NCEI historical loss information shows $1.4 million in total losses, in which $1 million is from a single event near Las Animas. This indicates how one event can be highly destructive. The most vulnerable areas in the County to high losses are jurisdictions that have more buildings and people, such as Las Animas, as well as agricultural land and mobile homes in unincorporated parts of the County.

SHEDLUS records $1,983,361 in County-wide losses from tornadoes from 1960 to 2017 (2017 dollars). This equates to $34,795 in annual losses from tornadoes. The vast majority of these damages are property damage ($1,982,443).

Land Use and Development

Tornadoes can impact any location in the County; therefore, all new development and populations may be impacted by a tornado. Building codes can help reduce the risk to structures and people from tornado impacts.

6.7.11. Wildfire

Location

For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.[71]

Burn probability for the County is mapped in Figure 6-54. Much of the County has a low to moderate burn probability, however the northeast portion of the County has moderate to high probability. The areas directly around Las Animas have relatively low burn probability.

[71] CSFS, 2017 CO-WRA Final Report

Figure 6-54 Bent County Burn Probability

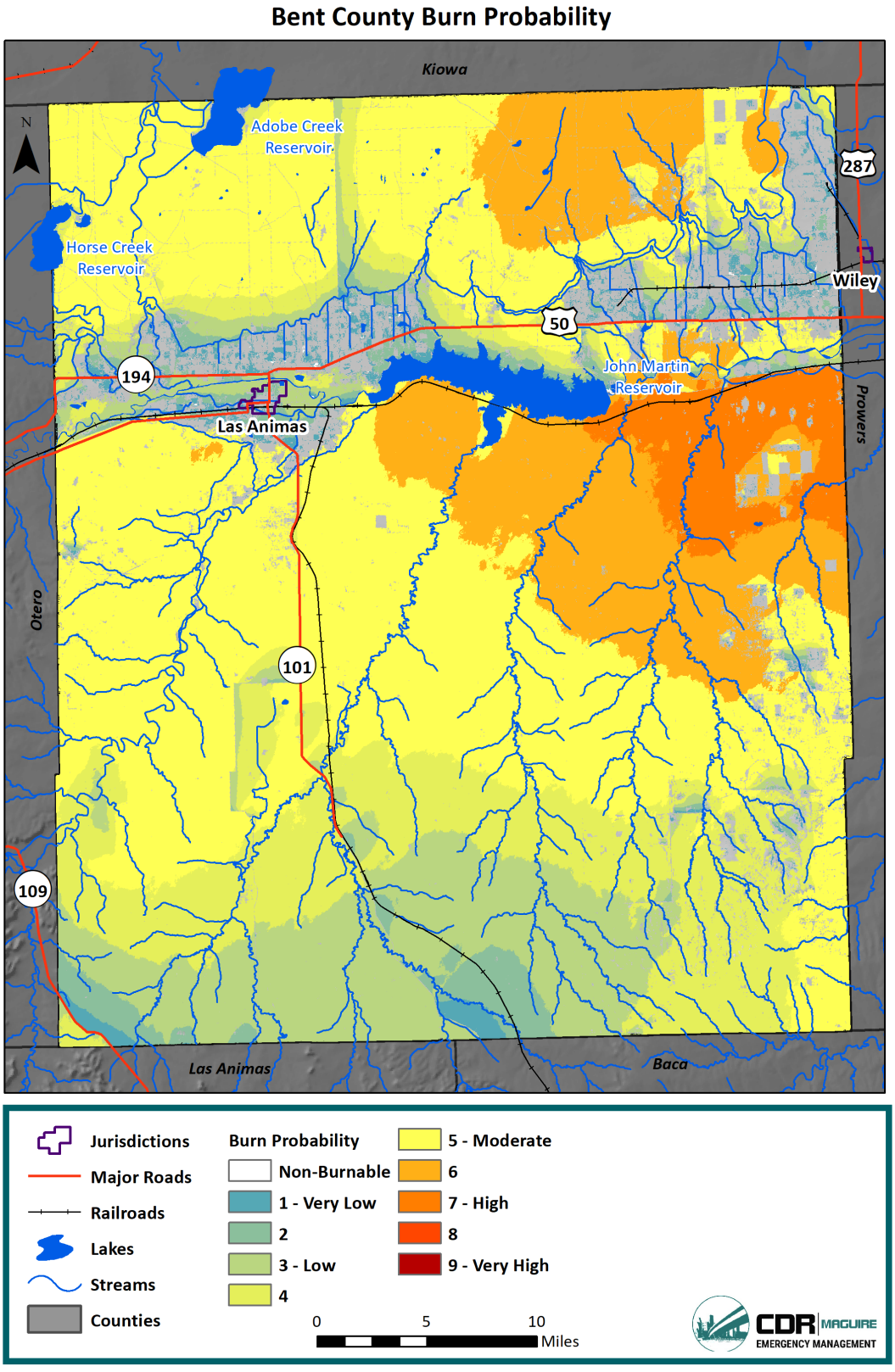
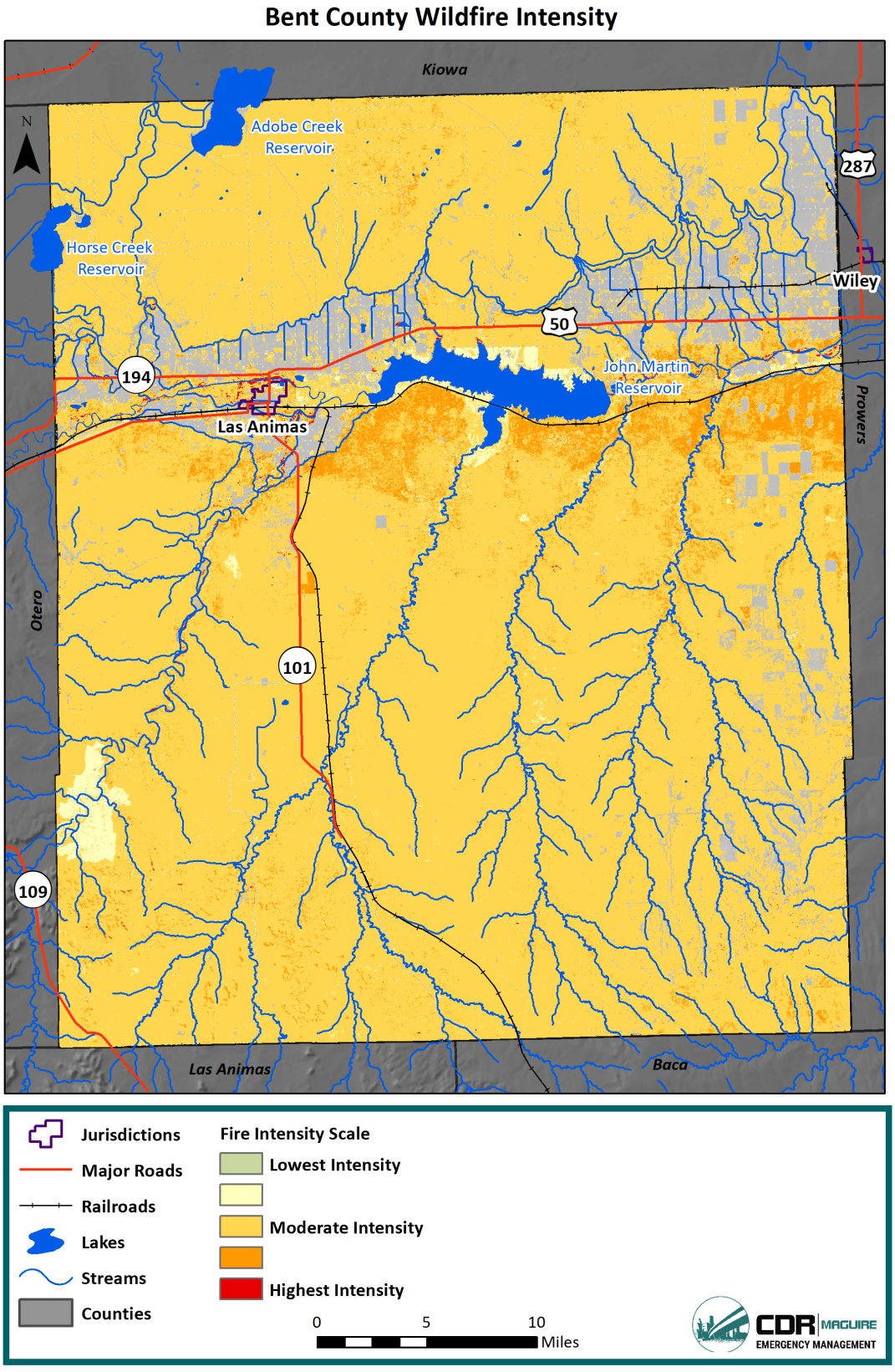


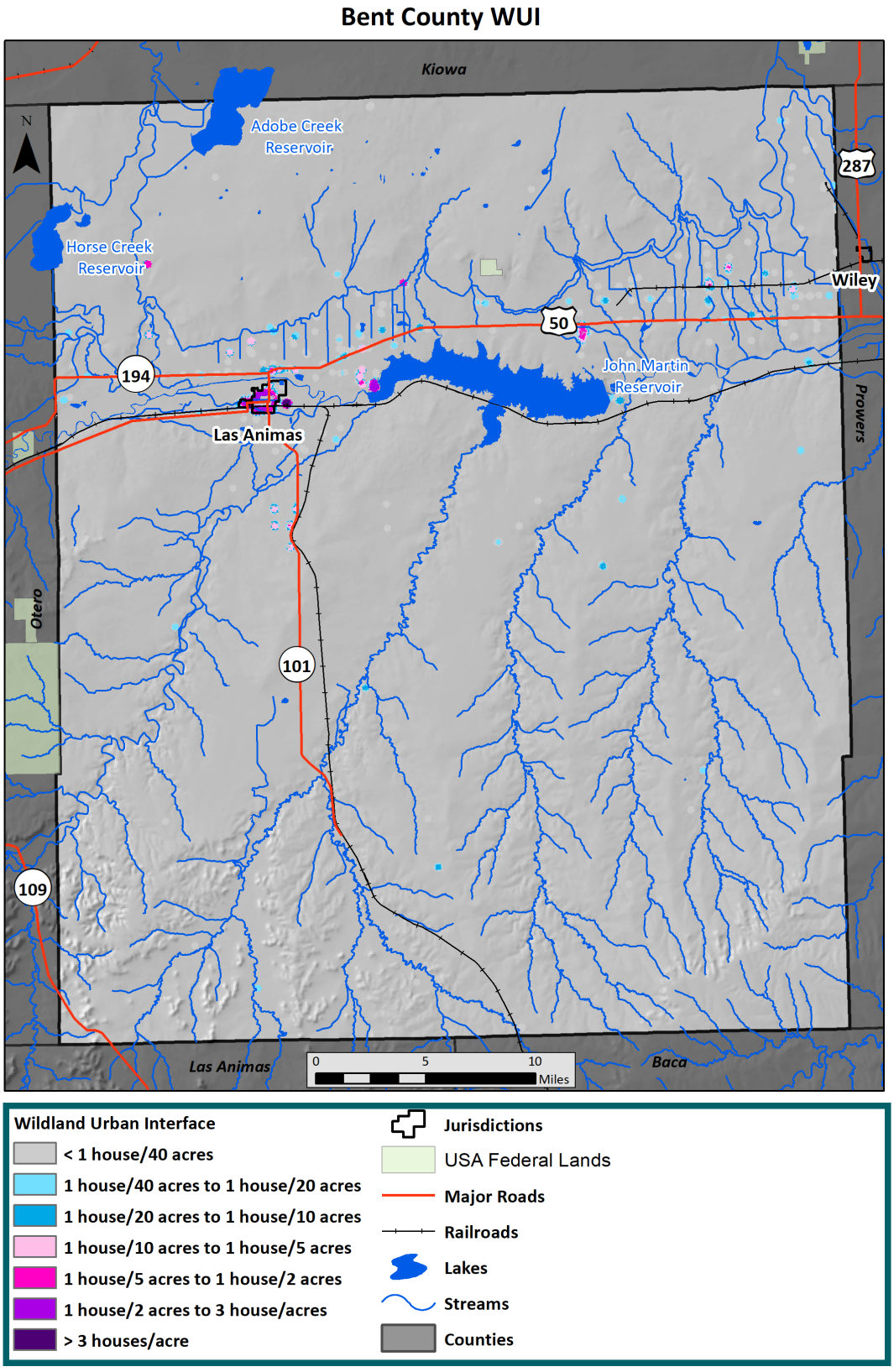
Figure 6-55 show the wildfire intensity for Bent County. Much of the County has moderate wildfire intensity. The central portion of the County has potential for higher intensity fires, as do areas around Las Animas.

Figure 6-55 Bent County Wildfire Intensity



There are low density WUI locations throughout the entire County. Higher density WUI locations are located close to Las Animas and the John Martin Reservoir. Figure 6-56 shows WUI locations throughout the County in addition to federal land ownership.

Figure 6-56 Bent County Wildland-Urban Interface



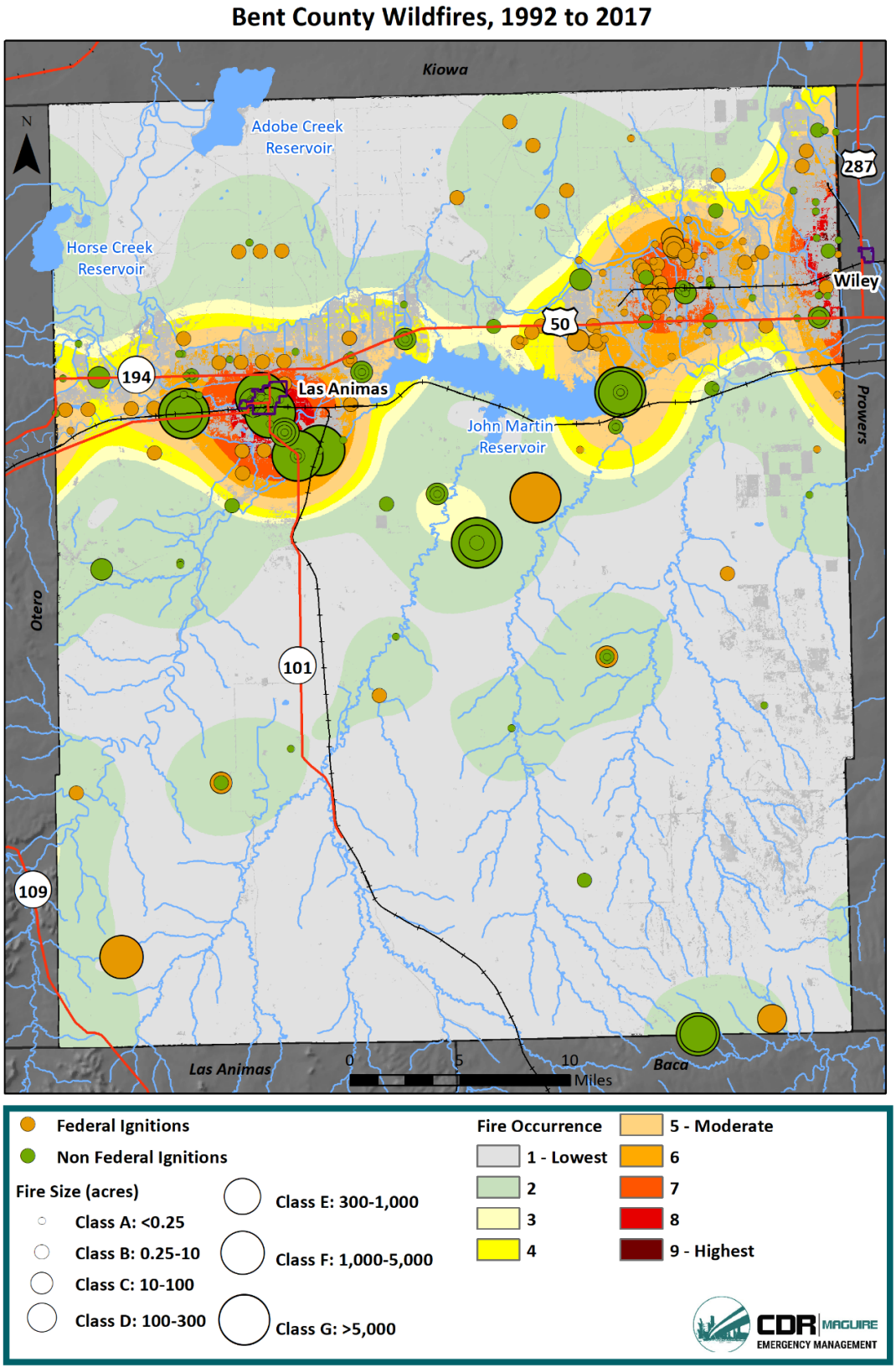
Previous Occurrences

According to the CO-WRA data, in Bent County there have been 131 wildfires on federal lands from 1992 to 2015. Of these fires, 44 have been Class A (one-fourth acre or less), 76 Class B (1/4 to 10 acres), 7 Class C (10 to 100 acres), 2 Class D (100 to 300 acres), 1 Class F (1,000 to 5,000 acres), and 1 Class G (5,000 or more acres). Additionally, of these wildfires, 6 have been lightning-caused, 21 human-caused (including arson, campfire, debris burning, equipment use, and smoking), 19 miscellaneous, and 85 missing or unidentified.

Additionally, there have been 168 non-federal wildfires from 2009 to 2017. Of these fires, 90 have been Class A, 49 Class B, 11 Class C, 3 Class D, 3 Class E, 3 Class F, and 10 Class G. Information regarding the cause of the wildfire is not available for non-federal fires.

Figure 6-57 shows these previous wildfires within Bent County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident the central portions of the County have experienced the most wildfires, although they have occurred throughout the entire County. This data, overlayed with the fire occurrence layer, shows that areas around Las Animas and the northwest corner are at a higher risk of wildfire occurrence than other parts of the County.

Figure 6-57 Bent County Previous Wildfires



Notable wildfires since the 2014 Southeast Region Hazard Mitigation Plan are described below.

April 5, 2019 – The Black Bridge Fire began at around 5:00 p.m. Thursday near a steel truss bridge that crosses the Purgatoire River. The fire burned over 1,600 acres in Bent County just east of Las Animas near Fort Lyon and the John Martin Reservoir. Fort Lyon was without power and the fire destroyed transmission lines, but backup generators were supplying emergency buildings. Seven homes near the Bent County Correctional Facility were evacuated Friday, but no structures were damaged. Evacuations later were lifted.

Probability

Based on all of the available previous occurrence data, there have been 300 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the Bent County CWPP, the following are areas of highest wildfire concern for the County:

Bent County's highest concern areas are the communities and all development near the communities including but not limited to the Fort Lyon Supportive Residential Community, the private prison near Las Animas, the hog farm and feed lots, the hay mill, and wind farms in the county; the recreational areas including John Martin Reservoir State Park, the U.S. Army Corps of Engineers Dam property, the Colorado Division of Wildlife managed areas; the historical areas including Bent's Old Fort National Historic Site, National Park Service (near the Otero/Bent County Line); the Bent's New Fort site; the Boggsville National Historic Register Site (county); the Star School House site (county); the Santa Fe Trail(s) and sites; the railroad/high-use travel corridors in the county; and the Arkansas River watershed and tributaries for water quality.

The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

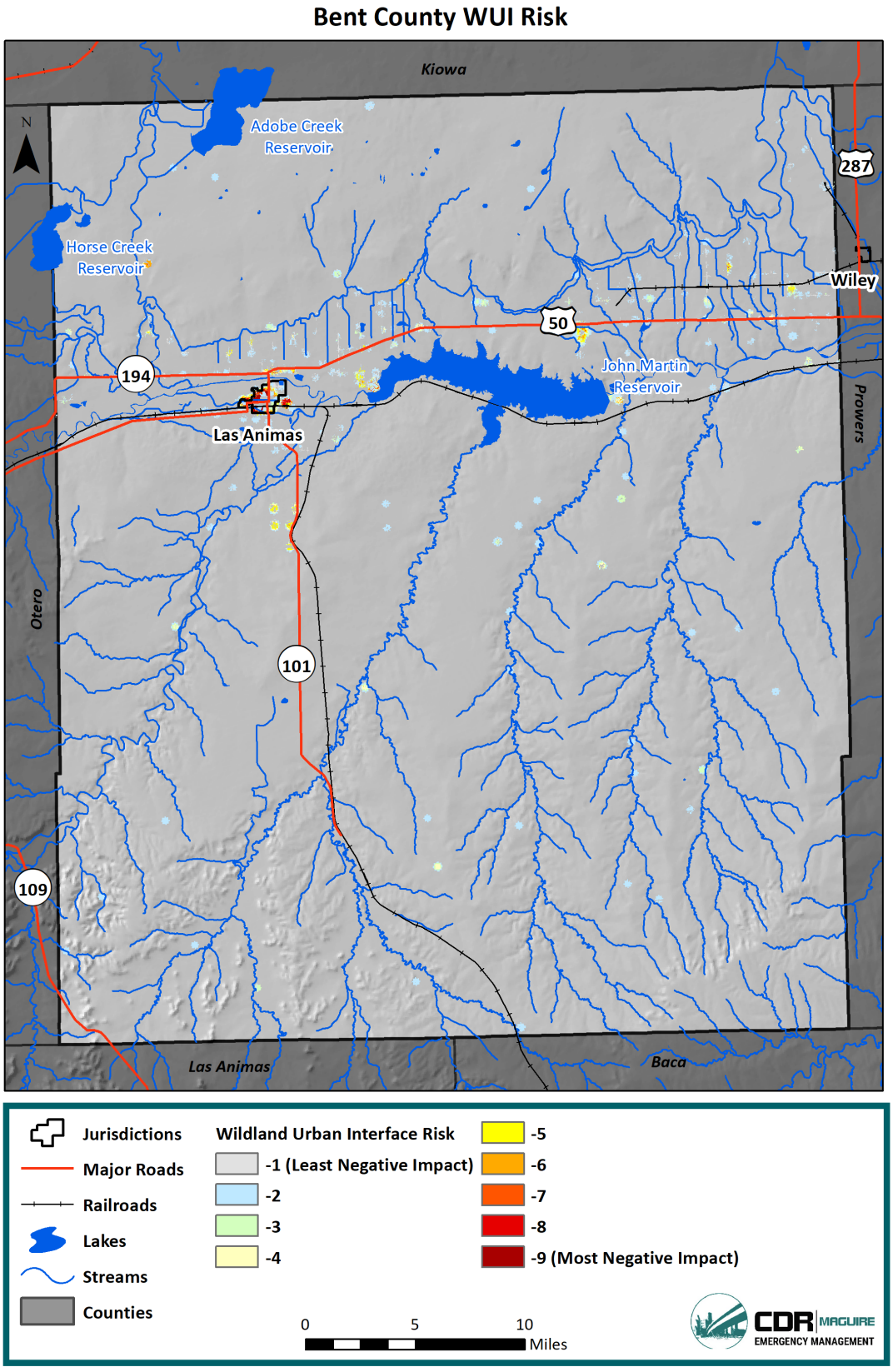
Potential impacts are further assessed by utilizing the CO-WRA data to visualize different components of wildfire risk throughout the County.

Figure 6-58 shows the WUI risk in the County. The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.[72] According to the CSFS, 85% of the population in Bent

[72] 2017 CO-WRA

County lives within the WUI. The majority of the County's WUI is in low negative impact areas. However, small portions, mostly around Las Animas, are in higher negative impact WUI areas.

Figure 6-58 Bent County WUI Risk



In addition to people and structures in the WUI, other assets at risk to wildfire in the County include drinking water, forest assets, and riparian assets. Based on the 2017 CO-WRA data, drinking water assets are measured by quality and quantity of public surface drinking water categorized by watershed. Forest assets are described as forested lands characterized by height, cover, and susceptibility/response to fire. Riparian assets are described as forested riparian areas characterized by functions of water quantity, quality, and ecology. Risk of each of these assets to wildfire was calculated during the CO-WRA. Overall, the risk to drinking water is negligible throughout the County. The risk to forest assets is mostly low throughout the County. However, there are areas of low-moderate risk along the southwest portion of the County. Additionally, small areas of high risk are located along the southeastern border of the County. Riparian asset risks are also mostly negligible in the County, with pockets of moderate to high risk along streams.

Potential Losses

Although there are no recorded losses available for the County, losses from wildfires can be substantial. Wildfires can impact structures, infrastructure, crops, and livestock as well as cause injuries and fatalities. Additionally, as with other parts of the western United States, the number of wildfires and acres burned in the Great Plains has increased and is projected to continue to increase. From 1985 to 1994, there were an average of 33 fires per year on the plains. From 2005 to 2014, that average soared to 117 per year, an increase of almost 350%.[73] Causes of this increase are cited as previous fire suppression, more people living in the WUI, need for more education for property owners, and climate change. For example, many residents have created windbreaks by planting fast growing trees like red cedar and ash juniper close to their houses, inadvertently creating a source of fuel that is particularly volatile during prolonged periods of little to no rain. With this trend, wildfire losses will likely continue to grow in the County.

Structures in WUI areas as well as agricultural land and rural infrastructure in areas with high wildfire probability and intensity are at the risk to highest losses.

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of “living” wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

6.7.12. Windstorms

Previous Occurrences

According to the NCEI database, there have been 37 recorded high wind events in Bent County from 2003 to 2019. Within this database, wind events are reported at an NWS Zone level (Bent County is one zone), so it is not possible to derive jurisdictional data. In Bent County, many of the high wind events are associated with winter storms or thunderstorms, but stand-alone high wind events are also common. The highest recorded magnitude event took place on 4/27/2014 with gusts up to 65mph where a strong upper level disturbance produced severe, damaging wind gusts and low visibilities due to blowing dust. Vehicle accidents occurred (five cars and two semi-trailers), as well as downed trees and roof damage. No damages, deaths, or injuries were recorded in the NCEI database, however, SHELDUS reports

[73] Kiowa County Independent, http://kiowacountyindependent.com/news/1052-great-plains-new-wildfire-frontier

$5,504,157 in damages from wind events from 1960 to 2017 (2017 dollars). No further details are available with the SHELDUS data. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below.

Table 6-42 Bent County Recent Wind Events

Date	Description
3/18/2014	Winds gusting in excess of 70 mph were measured over portions of southern Colorado. Some of the higher reported wind gusts were 59 mph at Schriever AFB (El Paso County)...NWS Pueblo (Pueblo County) and near Cheraw (Otero County)...60 to 64 mph wind gusts were recorded near Springfield (Baca County)...Peterson AFB (El Paso County...65 to 70 mph wind gusts impacted locations near Campo and Two Buttes (Baca County)...and a 75 mph wind gust was measured near Yoder (El Paso County).
4/27/2014	Across the far southeast plains...a strong upper level disturbance produced severe, damaging wind gusts and low visibilities due to blowing dust. Vehicle accidents occurred (five cars and two semi-trailers), as well as downed trees and roof damage.
4/29/2014	A strong upper level storm system over the upper Midwest generated wind gusts in excess of 60 mph across the southeast plains. Widespread low visibility prompted a Dust Storm Warning.
11/16/2015	A vigorous storm system produced wind gusts near 80 mph across sections of southern Colorado. Some of the higher reported wind gusts included...58 to 68 mph in Colorado City and Blende (Pueblo County)...in Fountain and Security (El Paso County)...in Cheraw (Otero County)...in Lamar (Prowers County)...and 70 to 78 mph in Campo and west of Two Buttes (Baca County).
3/23/2016	A intense weather system produced strong to high winds across many sections of southern Colorado. Wind gusts in the 58 mph to 69 mph range were reported across several locations for which there were high wind warnings. In addition, wind gusts between 70 and 80 mph were also observed across portions of El Paso and Pueblo Counties.
12/25/2016	A strong upper level jet stream moving across Colorado generated strong to high winds from the eastern mountains into and through the southeast plains of Colorado. Widespread wind gusts between 60 and 70 mph occurred across the lower elevations. Winds gusted in excess of 75 mph across the eastern mountains and down the adjacent lee slopes. Despite the high winds, widespread damage did not occur.
3/6/2017	A vigorous weather system generated high winds across many portions of southern Colorado. Some of the higher reported wind gusts included: near 60 mph at Florence (Fremont County) and Lamar (Prowers County), 60 to 70 mph near Two Buttes (Baca County), Cheraw (Otero County), Walsenburg and La Veta (Huerfano County), Wetmore (Custer County), and Hoehne (Las Animas County), 70 to 80 mph at Colorado City (Pueblo County), and around 85 mph near La Veta Pass ((Costilla County) and Swissvale (Fremont County).
3/24/2017	A potent winter storm produced snow and high winds across in I-25 corridor and plains. Some of the higher reported wind gusts included: near 60 mph at Cheraw (Otero County) and Colorado Springs, Fountain, Truckton, Peterson AFB (El Paso County), 60 to 70 mph near Colorado City (Pueblo County), La Veta (Huerfano County), Thatcher and Hoehne (Las Animas County), Springfield (Baca County), Finally, wind gusts of around 75 mph were observed near Campo (Baca County) and Blende (Pueblo County).

Date	Description
4/13/2018	A passing storm system produced winds, gusting to around 80 mph at times over sections of southern Colorado. Wind gusts between 58 mph and 65 mph were realized near Two Buttes, Truckton, the Lamar Airport, the Colorado Springs Airport and the Air Force Academy. Wind gusts between 66 mph and 70 mph were recorded at the La Junta airport while a 76 mph wind gust was measured near Springfield. Finally, a wind gust that clocked 79 mph occurred near Campo.
4/17/2018	An intense storm system produced strong winds in excess of 80 mph at times over large sections of southern Colorado. Some of the highest reported wind gusts with this event included wind gusts between 58 mph and 64 mph near Holly, Weston, Westcreek, Sargents, Florence, Truckton, Del Norte, Gardner, Monument, Penrose, Springfield, San Miguel, Wetmore, the Royal Gorge, the Fort Carson Airport and the Air Force Academy. Wind gusts between 65 and 69 mph were observed near Creed, San Isabel, Blende, Canon City, Two Buttes, Walsenburg, La Veta Pass as well as the Alamosa, Colorado Springs, Pueblo and Trinidad airports. Wind gusts between 70 and 79 mph were noted near Colorado City, Swissvale, La Veta Pass, Wagon Wheel Gap, the Pikes Peak Summit and the La Junta and Lamar airports. In addition, a wind gust of 85 mph was measured near Wolf Creek Pass.
11/24/2018	A storm system produced winds, gusting to 80 mph at times over portions of southern Colorado. Wind gusts between 58 mph and 65 mph were recorded near Walsenburg, Springfield, Hoehne, Sargents, Cheraw, Peterson Air Force Base, Lamar and Fountain. Wind gusts between 66 mph and 70 mph were measured near Weston and the Air Force Academy. Finally, a wind gust that clocked 80 mph was realized near the Pikes Peak summit.
12/12/2018	A storm system produced winds, gusting to around 65 mph at times over sections of southeastern Colorado. A wind gust of 58 mph was measured 4 miles to the south of Cheraw, while a wind gust of 64 mph was measured 4 miles to the southwest of Campo.
3/13/2019	An extremely powerful low pressure system (setting records for lowest pressure measurements in Colorado) developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.
Total	**13**

Probability

Based on 37 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

There is little information to indicate damages from wind events. Mitigation measures, such as "Living Snow Fences" (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Potential Losses

SHELDUS reports $5,504,157 in damages from wind events from 1960 to 2017 (2017 dollars). This equates to $96,564 in annual damages. It is difficult to determine details on losses since the SHELDUS data does not provide loss or damage information. However, it is evident that losses can be expected in Bent County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

6.7.13. Winter Storms

Location

Bent County averages approximately 25 inches of snow per year. Las Animas averages 20 inches of snowfall annually.[74] The entire County experiences winter storm events.

[74] https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?co4834

Previous Occurrences

According to the NCEI database, there have been 15 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2005 to 2019. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information. No damages, deaths, or injuries were reported with these events. However, SHELDUS reports $15,613,766 in damages from 30 events. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below. Notable winter storm events that impacted Bent County prior to the 2014 Southeast Region Hazard Mitigation Plan are described in Appendix C.

Table 6-43 Winter Storm Events in Bent County, 2014-2019

Date	Type	Description
2/3/2014	Winter Storm	An intensifying storm system across southeast Colorado generated heavy snow in combination with gusty northerly winds at times. Generally, around 6 inches accumulated across the warning area in the southeast counties. Lesser amounts occurred outside the warning area...including...4 to 5 inches near Pueblo Reservoir and Beulah (Pueblo County), Monument and Colorado Springs (El Paso County), Trinidad (Las Animas County), La Junta and Cheraw (Otero County). Finally, 12 inches of snow was measured at Wolf Creek Pass in Mineral county.
2/21/2015	Winter Storm	A vigorous winter storm system impacted large portions of southern Colorado with significant snow and gusty winds. Some reported snow amounts included 6 to 10 inches at Colorado Springs (El Paso County)...Woodland Park (Teller County)...Pueblo and Pueblo West (Pueblo County)...Salida (Chaffee County)...Texas Creek (Fremont County)...Crestone (Saguache County) and Alamosa. Eleven to 15 inches graced Monument and the Air Force Academy (El Paso County)...Penrose (Fremont County)...Walsenburg (Huerfano County)...Poncha Springs (Chaffee County)...while 16 to 20 inches of snow was measured near Beulah and Colorado City (Pueblo County)...Rosita (Custer County) and Monarch Pass (Chaffee County). Twenty to 26 inches was noted near Westcliffe (Custer County)...Rye (Pueblo County) and Maysville (Chaffee County)...while 39 inches covered Wolf Creek Pass (Mineral County).
1/14/2017	Winter Storm	A Pacific storm system generated gusty winds and heavy snow to southern Colorado, especially over the higher terrain. Some of the higher reported snow totals included: 6 to 9 inches near the Spanish Peaks and Walsenburg (Huerfano County), Rye and Beulah (Pueblo County), Monte Vista (Rio Grande County), Leadville (Lake County), Kim, Hoehne, Trinidad (Las Animas County), Maysville (Chaffee County), and 17 inches near Monarch Pass (Chaffee County).
4/29/2017	Winter Storm	A vigorous late Spring storm impacted many sections of southern Colorado with impressive snow amounts in combination with gusty winds and localized snow drifts around 5 feet in combination with many downed tree limbs. Some of the higher reported snow totals with this event included six to nine inches of snow near Leadville, Salida, the Air Force Academy, Lamar, Woodland Park, La Junta, Texas Creek, Pueblo, Rocky Ford and Maysville. Ten to fifteen inches of snow was noted near West Cliffe, Manzanola, Walsenburg, Black Forest, Calhan, Pueblo West, Monument, Avondale,

Date	Type	Description
		Springfield and Blende. 15 to 20 inches of snow graced the communities of Wetmore, Pritchett and Holly. 23 inches of snow was measured near Beulah. An impressive 25 to 30 inches of snow covered the communities of Rye, Colorado City and Two Buttes, while a whopping 39 inches of snow impacted San Isabel.
2/22/2019	Winter Storm	A slow moving snow storm generated widespread snow, heavy at times over many portions of southern Colorado. Some of the higher reported snow totals with this event included six inches of snow near Creede, Monument, Florissant, Palmer Lake and Rye. Seven inches of snow graced locations near Buena Vista, Cascade, Hillside, Rosita, Westcliffe, Colorado City, Texas Creek and Beulah. Eight inches of snow was observed near South Fork, Colorado Springs and Manitou Springs. Locations near the Spanish Peaks, Black Forest and San Isabel recorded nine to ten inches of snow with this event, while Wolf Creek Pass was inundated with 40 inches of snow with this storm system.
3/13/2019	Blizzard	A blizzard termed a “bomb cyclone” impacted much of Colorado’s Front Range and Eastern Plains. To qualify as a "bomb cyclone," an area of low pressure must drop at least 24 millibars in 24 hours or less. A Barometric pressure reading of 970.4 mb recorded in Lamar on March 13 is the lowest reading ever recorded in the State. The blizzard produced 80-90 mph winds, stranded people on impassable roadways, and caused power outages throughout the Region.

Probability

Utilizing the 15 reported NCEI events from 2005-2019, there is a 100% chance of a winter storm event occurring annually in Bent County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

Vulnerability Assessment

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard profiled in Section 6.7.5.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County’s elderly population is a potentially vulnerable

demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $15,613,766 (2017 dollars) in total losses from winter weather events. This is the highest loss from any SHELDUS-reported hazard in the County. This equates to $273,925 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services.

6.7.14. Civil Unrest

Location

The Bent County Correctional Facility is located near Las Animas and is a potential location for civil unrest. Additionally, any event or gathering that takes place in the County could be a location of civil unrest.

Previous Occurrences

There have not been any documented occurrences of civil unrest in Bent County.

Probability

Although no recorded previous occurrences, due to the location of the correctional facility, the probability of civil unrest in Bent County is possible, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Civil unrest could cause injuries or fatalities for those involved, bystanders, or first responders. Additionally, structures and infrastructure could be damaged through impacts such as fires and destruction of property by crowds or mobs.

Potential Losses

It is difficult to predict potential losses without any previous occurrence data. However, as mentioned above, losses could come in the form of injuries/fatalities, property damage, as well as any cleanup costs after the event.

Land Use and Development

With lack of significant population growth in the County, land use and development are not projected to be impacted by this hazard.

6.7.15. Cyber Hazards

Previous Occurrences

Across the southeast region, there have been two reported events where counties paid ransomware.

Probability

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

Vulnerability Assessment

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

Land Use and Development

If population increases in the County, more people would be exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

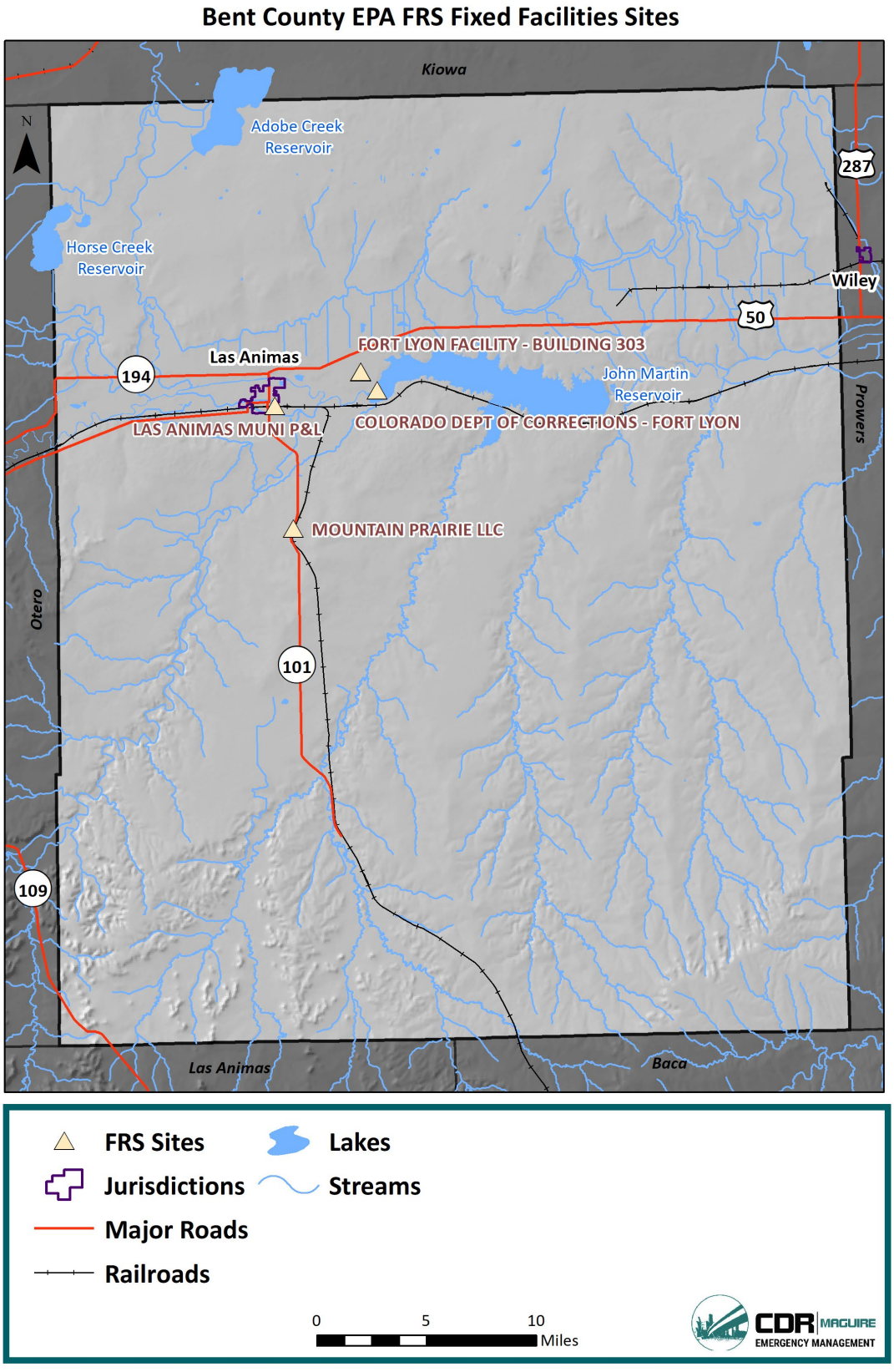
6.7.16. Hazardous Materials Release

Location

Locations of fixed facilities in Bent County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.[75] Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Bent County has four fixed facilities that could result in a hazmat release, as shown in Figure 6-59.

[75] https://iaspub.epa.gov/sor_internet/registry/facilreg/home/basicinformation/

Figure 6-59 Bent County Hazmat Fixed Facility Sites



For transportation related incidents, in Bent County Highway 50 is a designated Hazardous Materials Route by CDOT. Additionally, the AT & SF Railroad runs through Bent County. These areas could be more likely sources of transportation related hazmat incidents.

Previous Occurrences

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 6-44 below. There has been a total of 6 incidents from 1976 to July 2019, totaling $461,905 in damages. All incidents occurred in/near Las Animas.

Table 6-44 Bent County Previous Hazmat Occurrences

Date of Incident	Incident City	Incident route	Damages	Mode of Transportation	Description
1/11/2015	Las Animas	Colorado Hwy 50 post 397	$460,850	Highway	It is still unknown for sure exactly what caused the accident since the driver passed away with no witnesses. However, the truck rolled on the road just west of las animas co. In the process of rolling on its side it rolled off the hwy to the right for a total of 1 3/4 rolls. The side of the fuel tank was ripped open by the pavement approx. 1 by 5 roughly in the middle of the barrel of the tank. The tank came to rest with the gouge facing up so the release took place during the roll. No one was there to help stop the leak immediately.
3/9/1995	Las Animas	Hwy 50	$20	Highway	Driver did not stick tanks per customer request and overfilled. Above ground tank.
3/16/1994	Las Animas	Route 50	$1,020	Highway	Quick connect hose came off while unloading causing approximately 15 - 20 gallons to spill on ground. Area was secured and cleaned up by certified haz mat company. I believe some type of locking system should be used to prevent cam locks from opening up and causing a spill.
11/16/1992	Las Animas	7th & Grove Street	$15	Highway	Driver began unloading process not aware that his station had already received a load earlier and the tank was full. When driver started to unload the tank ran over and spilled product.
9/2/1977	Las Animas		$0	Highway	Description unavailable
6/20/1976	Las Animas		$0	Highway	Description unavailable
Totals: 6			**$461,905**		

Additionally, although not noted in national databases, Bent County noted a 2008 hazardous materials release. A mix of poisons, corrosives, and explosives were released on the west edge of Las Animas at US Highway 50 and the airport. There were $15,000 in damages associated with the spill. All costs were paid by the trucking company involved. This brings the total damages in the County to $476,905.

There have not been any significant fixed facilities hazmat incidents in Bent County.

Probability

Based on 7 previous occurrences from 1976 to 2019, there is a 16% chance of annual occurrence of a hazmat incident in Bent County, equating to a likely probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

Vulnerability Assessment

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Bent County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a high risk to accidents that may lead to releases, particularly along Highway 50. Populations near the highway are at a higher risk to transportation related hazmat incidents. Highway 50 runs through Las Animas. Fixed Facility releases are less common in the County, however, there is still potential for a release. Fixed facilities are located in Las Animas and unincorporated County, increasing the risk of a release in these communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Bent County has experienced $476,905 in damages from hazmat incidents from 1976 to July 2019, equating to $11,090 in annual losses.

Land Use and Development

Future development in the County can increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

6.7.17. Pandemic and Zoonotic Diseases

Previous Occurrences

Pandemic Influenza

There were four acknowledged pandemics in the twentieth century and two in the twenty-first century. It is likely these pandemics impacted Bent County.

- **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others

from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.

- **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.
- **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.
- **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.
- **2020-? (on-going) COVID-19**—This pandemic occurred during the final phases of this Plan's update and remains on-going. Additional details will be added to future updates, as final event information becomes available.

Hantavirus

From 1993 (when the disease was first reported by CDPHE) through December 2018, there have not been any cases of hantavirus in Bent County. However, hantavirus is typically found in rural areas like Bent County, so the County is still vulnerable to the virus. Statewide during this timeframe, there have been 115 cases, with 41 of those ending in a fatality.[76]

Plague

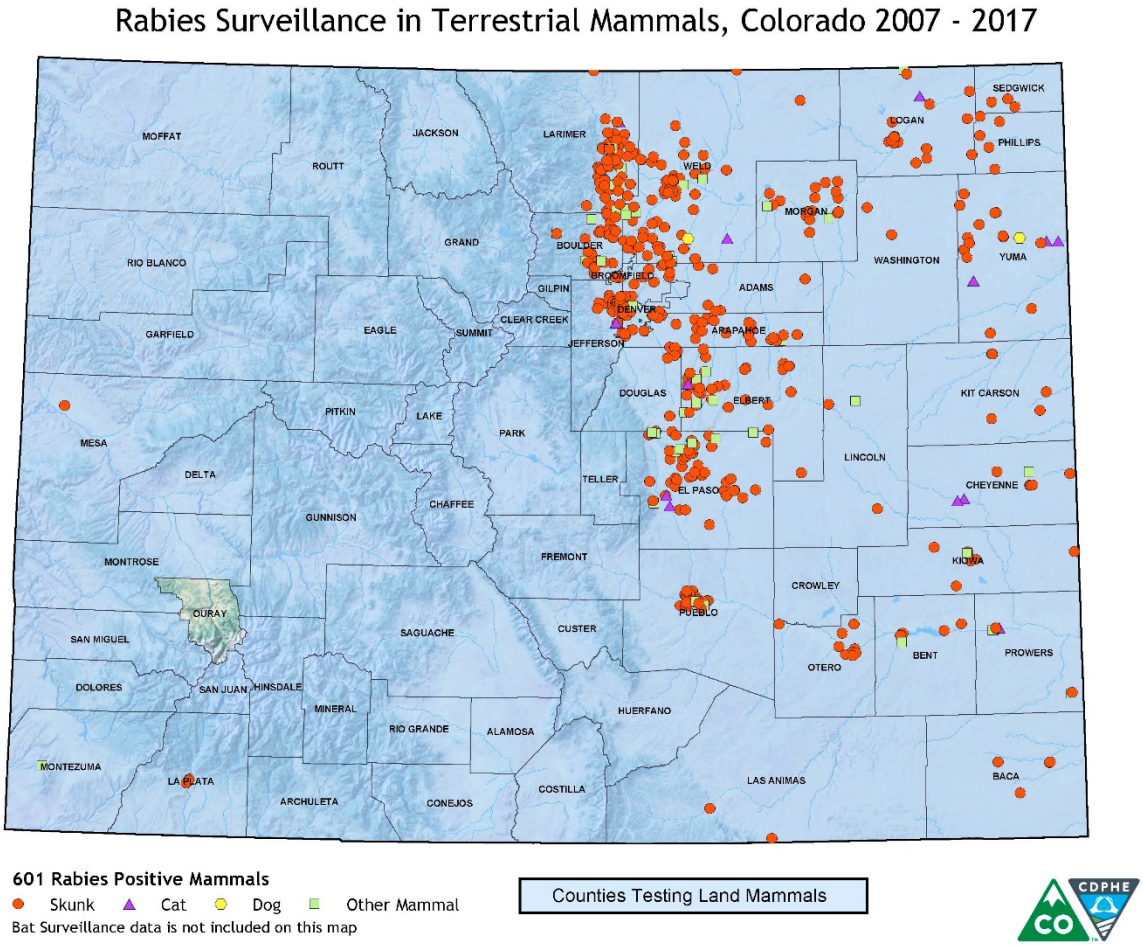
The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Bent County.

Rabies

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. Figure 6-60 shows rabies-positive terrestrial mammals during this time period, with several reports in Bent County.

[76] CDPHE; https://docs.google.com/document/d/1BBBKElU9sUHKKXVh93anVcOnouyISJ2AgNExlkb3MmE/pub

Figure 6-60 Rabies Positive Mammals in Colorado



Tularemia

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Bent County.

West Nile Virus

According to the CDPHE, in Bent County there have been 20 cases of West Nile virus from 2002-2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.[77]

Probability

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

[77] https://www.cdc.gov/westnile/statsmaps/cumMapsData.html

Vulnerability Assessment

Inventory Exposed/Impacts

Pandemic Influenza

The total County population of 5,866 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Bent County population, approximately 1,759 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Zoonotic Diseases

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock, which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Bent County, 16.9% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to significantly impact this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

6.8. Crowley County Risk Assessment

6.8.1. Hazard Summary Risk Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in the following figures below. Those hazards ranked as "low" were determined by the LPC to not be a focus of this plan's overall mitigation strategy, therefore streambank erosion is not further assessed for Crowley County.

Table 6-45 Crowley County Risk Ranking

Crowley County	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	2	2	1	5	M
Extreme Cold	3	3	2	8	H
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	2	2	5	M
Cyber Hazards	2	3	2	7	H
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

6.8.2. Agricultural Infestation

Previous Occurrences

Due to the regional nature of this hazard, see Section 4.5.3.

Vulnerability Assessment

Inventory Exposed/Impacts

Crops and rangeland in Crowley County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Crowley County's economy. According to the 2017 USDA Census of

Agriculture, Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. An agricultural infestation could impact the livelihood of residents in the County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation.

Potential Losses

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Crowley County has experienced $4,954 in crop indemnity payments due to insects from 1991 to 2018. This equates to $183 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost of control of the infestation.

Land Use and Development

Any future agricultural endeavor in the County is vulnerable to the impacts of this hazard. Population change and related structural development will not directly impact this hazard.

6.8.3. Dam and Levee Failure

Location

Dams

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are 22 jurisdictional dams in Crowley County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.[78] Five of these dams are low hazard, one significant hazard, one high hazard (Lake Henry), four are considered No Public Hazard (NPH), and eleven are considered No Hazard. The high hazard dam has an Emergency Action Plan (EAP) dated 3/26/2018. These dams are listed in Table 6-46 and mapped in Figure 6-61. There are no non-jurisdictional dams in the County.

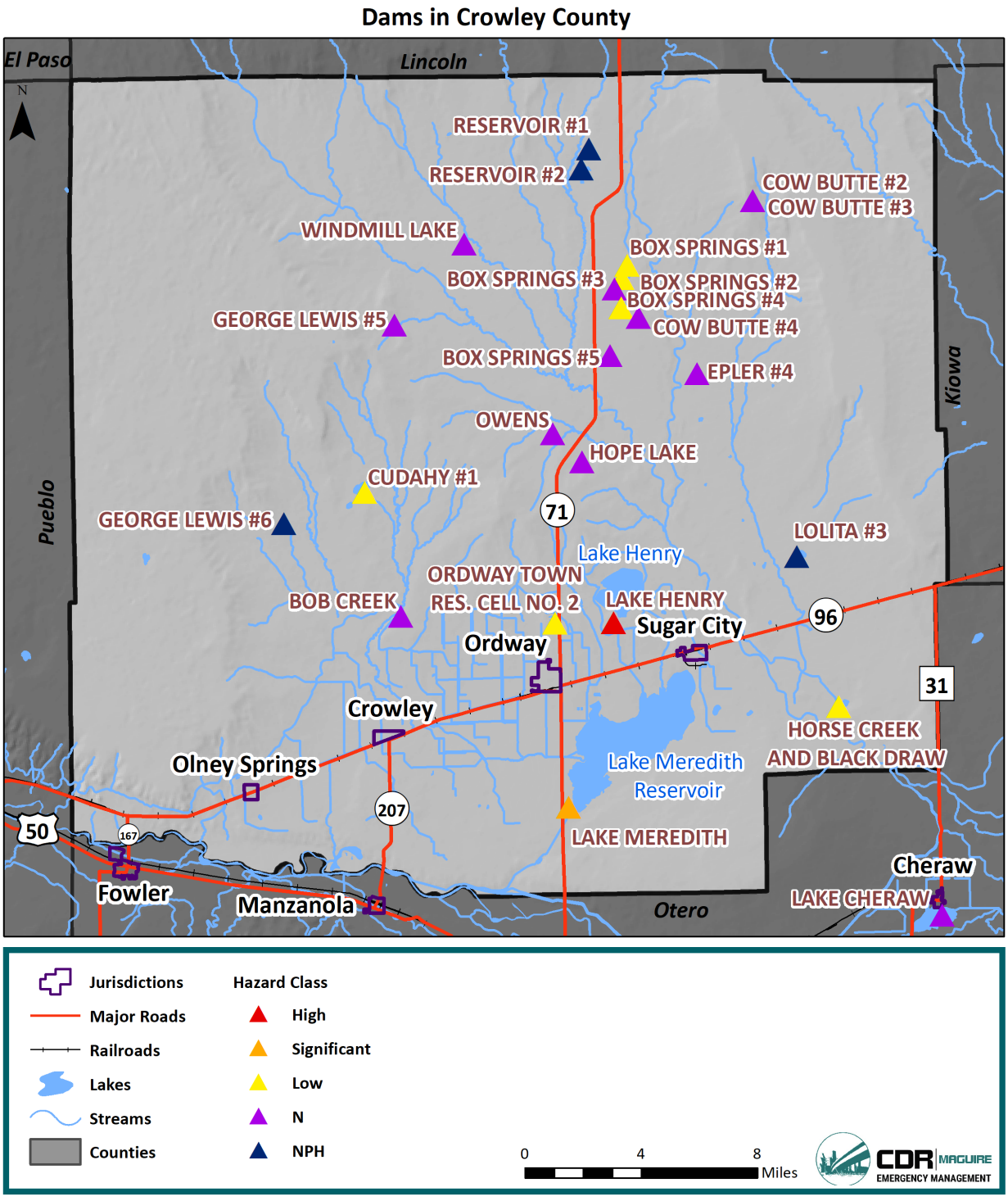
Table 6-46 Jurisdictional Dams in Crowley County

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Box Springs #1	Horse Creek	Las Animas	Low	Not Required	
Box Springs #2	Horse Creek	Las Animas	Low	Not Required	
Box Springs #3	Horse Creek	Las Animas	N	Not Required	
Box Springs #4	Horse Creek	Las Animas	Low	Not Required	

[78] https://data.colorado.gov/Water/DWR-Dam-Safety-Jurisdictional-Dam/mgjv-xmr5

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Box Springs #5	Horse Creek	Las Animas	N	Not Required	
Bob Creek	Bob Creek	Crowley	N	Not Required	
Cow Butte #2	Black Draw	Las Animas	N	Not Required	
Cow Butte #3	Black Draw	Las Animas	N	Not Required	
Cow Butte #4	Black Draw	Las Animas	N	Not Required	
Cudahy #1	Bob Creek	Rocky Ford	Low	Not Required	
Epler #4	Black Draw	Las Animas	N	Not Required	
George Lewis #5			N	Not Required	
George Lewis #6	Arkansas River	Olney Springs	NPH	Not Required	
Hope Lake	Breckenridge Creek	Las Animas	N	Not Required	
Lake Henry	Horse Creek	Ordway	High	Yes	3/26/2018
Lake Meredith	Bob Creek	Rocky Ford	Significant	Yes	12/26/2017
Lolita #3	Black Draw	Las Animas	NPH	Not Required	
Owens	Breckenridge Creek	Ordway	N	Not Required	
Reservoir #1	Pond Creek	Las Animas	NPH	Not Required	
Reservoir #2	Pond Creek	Las Animas	NPH	Not Required	
Windmill Lake	Lone Tree Creek	Las Animas	N	Not Required	
Ordway Town Res. Cell No. 2	Bob Creek	Ordway	Low	Not Required	

Figure 6-61 Dams in Crowley County



Lastly, there are 22 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses which the state engineer has

determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.[79]

Levees

There are no documented levees in Crowley County. However, the levee inventory may not be complete, as the County has not been mapped by the NFIP. Additionally, smaller levees or embankments that do not provide 100-year flood protection would not be captured in this inventory.

Previous Occurrences

There are no reports of significant dam or levee failures in Crowley County. However, there has been three incidents in the County (all involving the Lake Henry dam), reported by the National Performance of Dams Program (NPDP). The NPDP tracks dam incidents, described as events that affect the structural and functional integrity of dams, though not necessarily causing failure and not including ordinary maintenance and repair, vandalism, acts of war, recreational accidents, and sabotage. The events are described in Table 6-47 below.

Table 6-47 Dam Incidents in Crowley County

Name	Date of Incident	Description of Incident	Nearest Town	County	Class	Waterway	Failure?
Lake Henry	6/9/1995	Seepage	Ordway	Crowley	Low	Horse Creek	No
Lake Henry	4/20/2001	Embankment Slide	Ordway	Crowley	Low	Horse Creek	No
Lake Henry	6/14/2001	Embankment Slide	Ordway	Crowley	Low	Horse Creek	No

Probability

Although there has not been any significant dam or levee failures in Crowley County, with 22 dams in the County, the risk of a failure remains. Based on this assessment, the probability is rated as occasional, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas. Inundation areas for high hazard dams are available through Colorado Dam Safety. These areas are mapped in Appendix F (FOUO). Based on this data, only a small portion of the southwest corner of the County is at risk to inundation from the Pueblo dam (located in Pueblo County). However, the Town of Ordway is listed as the first downstream community for Lake

[79] https://data.colorado.gov/Water/DWR-Livestock-Water-Tank-and-Erosion-Control-Dams/r2rp-ecjb

Henry dam, which is a high hazard dam, as well as Owens dam and Ordway Town Res. Cell No. 2, which is a low hazard dam.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

No Crowley County dams were included in the Colorado Dam Safety social vulnerability, population at risk, or Colorado high hazard dam release analyses.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries. The southwest corner of the County is at the highest risk to losses in the County from a dam failure event.

Colorado law requires that high hazard dams have Emergency Action Plans (EAP), and that failure inundation maps be prepared as part of those plans. The LPC did confirm the existence of an EAP for Lake Henry and Lake Meredith dams, which can help reduce losses in the event of a failure.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

6.8.4. Drought

Location

All of Crowley County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

Previous Occurrences

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing: precipitation averages over time to identify periods with precipitation amounts below the long-term average, U.S. Drought Monitor records/current conditions, and drought disaster declarations.

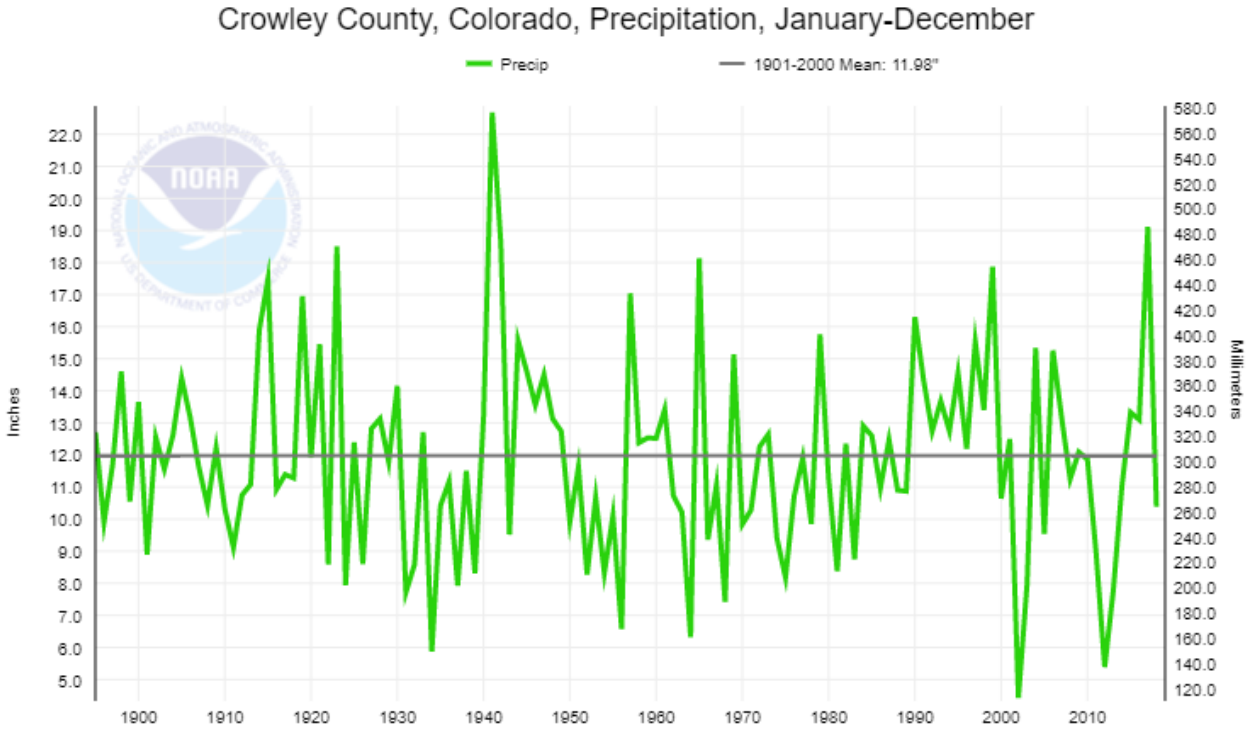
Drought conditions based on precipitation deficits are described in Table 6-48, indicating the top five years of precipitation deficit departure from the long-term average of 11.98 inches. Precipitation deficits are also shown in Figure 6-62. It is evident precipitation deficits have occurred throughout history in Crowley County, particularly in the 1930s and 2000s. Notably, 2002 was the top driest year since 1895, with only 4.43 inches of precipitation, equaling a 7.55-inch deficit. The year 2018, which was a notably

dry year in much of Colorado, resulted in a 1.59-inch precipitation deficit in the County, ranking it the 36th driest year since 1895.[80]

Table 6-48 Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
11.98 in.	2002	4.43 in.	7.55 in.
11.98 in.	2012	5.39 in.	6.59 in.
11.98 in.	1934	5.87 in.	6.11 in.
11.98 in.	1964	6.32 in.	5.66 in.
11.98 in.	1956	6.57 in.	5.41 in.

Figure 6-62 Precipitation Deficits 1895-2016

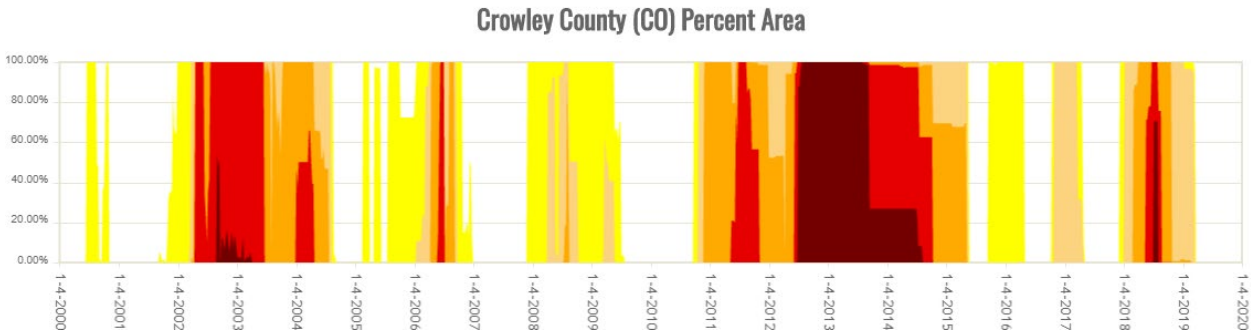


Drought conditions based on U.S. Drought Monitor records are shown in Figure 6-63.[81] Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2012 to 2015. For parts of 2012 and 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2004, 2006, 2011, and 2018 to 2019. There has been some level of drought in the County nearly every year since 2000.

[80] NOAA National Centers for Environmental information, Climate at a Glance: County Time Series, published May 2019, retrieved on July 19, 2019 from https://www.ncdc.noaa.gov/cag/

[81] https://droughtmonitor.unl.edu/Data/Timeseries.aspx for Crowly County

Figure 6-63 Crowley County Previous Droughts



Lastly, there have been 13 drought disaster declarations that have impacted Crowley County from 1977 to 2018 (see

Table 6-1-Disaster Declaration Summary).

Recent droughts are described below.

2018: Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Crowley County, was experiencing extreme (D3) drought conditions. These conditions impacted farmers as well as heightened wildfire concerns. In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the worst impacts of drought to the agricultural community in Bent County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought. The 2018 drought did lead to declaring Crowly County as a Primary county in a USDA Secretarial Natural Disaster designation for drought.

2012: After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres.[82] During this time 100% of Crowley County was experiencing exceptional (D4) drought conditions. The 2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.

As of July 2019, no part of Crowley County is experiencing drought.

See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

Probability

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.

[82] https://climate.colostate.edu/pdfs/drought_2012.pdf

For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought conditions that negatively impact the Southeast Region. In Crowley County, there have been 13 drought disaster declarations from 1977 to 2018, equating to a 32% annual chance of drought occurrence, or a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Additionally, drought conditions can increase the County's risk to wildfire. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Crowley County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. These assets are at risk to drought impacts. According to the Colorado Drought Plan – Visualization Story Map, the agriculture sector is the second-most vulnerable sector to drought in Crowley County (behind State assets), with a vulnerability score of 2.4. this is on par with the State average of 2.4.[83]

The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Crowley County, during this time period, there has been 92 reported impacts. The most impacts (32) were categorized as "agriculture," followed by plants and wildlife (18 impacts), and relief, response, and restrictions (15 impacts). Examples of recorded impacts from the 2018 drought include fire bans, wildlife approaching buildings looking for food, boat restrictions on lakes due to low water, and increased dust. For agriculture, hay prices increased, and producers fed cattle a mix of hay and kale. Additionally, ranchers weened and sold cattle early.

Potential Losses

The largest potential losses in Crowley County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Crowley County, and droughts causing major economic impacts to crops and cattle could also trickle into the rest of the economy in the County. All jurisdictions and unincorporated County are impacted by drought events due to the connected nature of agriculture, water use, and the economy in the County.

[83] CWCB, State Drought Planning; https://lynker.maps.arcgis.com/apps/MapSeries/index.html?appid=8b8a995c2574439cbef10088a08d12ae

Based on SHELDUS data from 1960 to 2017, Crowley County has experienced $1,897,695 in crop losses from drought (2017 dollars). This equates to $33,292 in annual losses. No property damages were recorded in SHELDUS.

Land Use and Development

An increase in population and development can put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions.

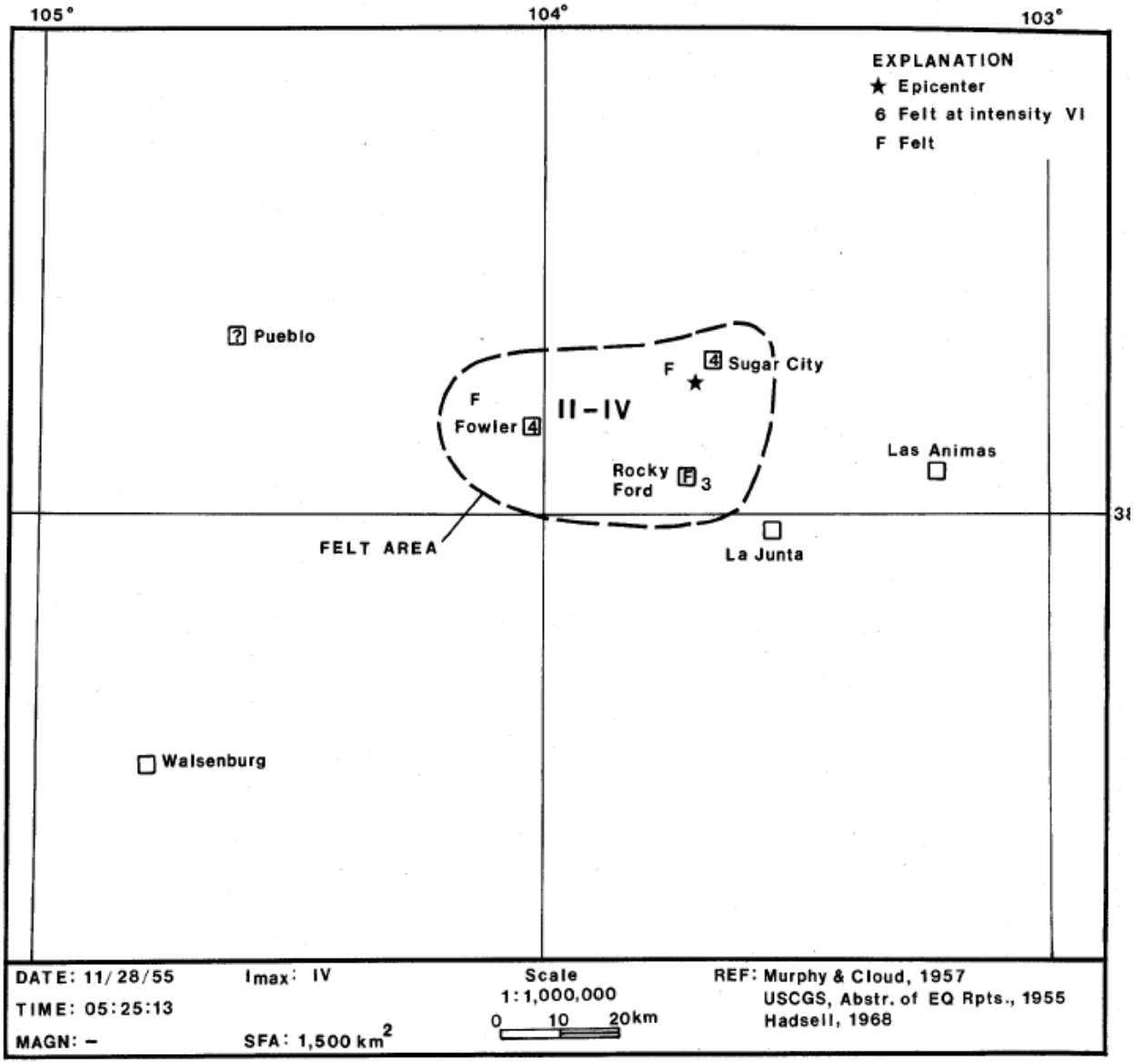
6.8.5. Earthquake

Previous Occurrences

There are limited reports of earthquakes in Crowley County. Past occurrences in the County were reported in the Earthquake Evaluation Report released by the CGS. The CGS also released a publication, titled "Colorado Earthquake Information 1867-1996," that provides details on past earthquakes. Based on that report, information of specific occurrences that affected the County are as follows:

November 28, 1955 – During the late evening on November 27, 1955 (local time) a light earthquake shook a limited area in southeastern Colorado. Murphy and Cloud (1957) stated that intensity IV was reported at Fowler and Sugar City. The CGS rated the report for the Colorado Experiment Station at III. The earthquake was also felt at Nepesta, Ordway, and Rocky Ford. Figure 6-103 is an intensity map for this event. According to the USGS quarterly series "Abstracts of Earthquake Reports," Pueblo experienced intensity IV effects. Based on the intensity map, the felt area for this event is around 1,500 km^2. Hadsell (1968) reported it at 1,000 km^2.

Figure 6-64 Crowley County November 28, 1955 Earthquake



August 16, 2009 - An earthquake hit Colorado's plains, setting off tremors across the southeastern part of the state and into western Kansas, but causing no reported damage. The National Earthquake Information Center in Golden confirmed that a magnitude 3.9 earthquake occurred at 6:22 p.m. in southeastern Colorado, about 180 miles southeast of Denver.

Additionally, the USGS Earthquake Catalog was searched for previous earthquakes in the County. According to this database, there has been no additional earthquakes in the County since 1900.

Probability

Based on previous occurrences and knowledge on seismic activity in Crowley County, the probability of an earthquake is possible.

Vulnerability Assessment

Inventory Exposed/Impacts

It can be assumed all existing and future buildings and populations are at risk to the earthquake hazard. However, building codes can help reduce the risk to structures during an earthquake. Previous damages from earthquakes in Crowley County have been minor (rattling of loose objects). However, it is possible for the Cheraw Fault, which passes through the southeastern portion of the County, to produce a strong earthquake. The 2008 and 2014 Southeast Region hazard mitigation plans utilized a 7.0 magnitude scenario as the maximum magnitude produced from the Cheraw Fault. A 7.0 magnitude earthquake is considered a major earthquake that can cause serious damage over larger areas. Older buildings that are not constructed to modern day building codes are more at risk to these damages throughout the County. Additionally, the southern portion of the County is at a closer proximity to the fault than the northern non-incorporated areas, putting communities there at a higher risk to damages.

Potential Losses

The most appropriate loss estimation methodology for seismic hazards involves scenario modeling using FEMA's Hazus loss estimation software. There are two levels of Hazus analysis, 'Standard,' which uses the default FEMA-derived datasets and damage functions, and 'Enhanced,' which uses independently compiled and accurately verified structure and infrastructure inventories and damage functions. The earthquake analysis conducted for this report includes a Standard level analysis using the latest version, Hazus-MH Earthquake Model V4.2. This risk assessment leveraged census tract data to conduct a Standard Hazus probabilistic scenario for Crowley County.

A 2,500-year return period probabilistic scenario was used for the analysis (probability of 2% of occurrence in 50 years). A 2,500-year return period was chosen because the new International Building Code uses a 2,500-year map as the basis for building design. Based on CGS data, the highest magnitude earthquake that could be expected to occur in Crowley County is a 7.0. This value was used in the probabilistic scenario in Hazus.

Results

Hazus estimates that there are 1,000 buildings in the County which have an aggregate total replacement value of $313 million (excluding contents). Hazus estimates that about 53 buildings will be at least moderately damaged. This is under 1% of the buildings in the County. Residential homes will be the most impacted.

The total economic loss estimated for the earthquake is $4.37 million, which includes building and lifeline related losses based on the County's available inventory. The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total building-related losses were $2.19 million; business-related losses were estimated at $500 thousand. The largest loss was sustained by the residential occupancies which made up over 44% of the total loss. Due to the analysis performed by Census Tract (with only one located across the entire County), it is difficult to determine losses by jurisdiction. In general, it can be estimated that the highest losses will be associated with populated towns, which contain more buildings.

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not
- promptly treated.
- Severity Level 4: Victims are killed by the earthquake

The lone casualty estimated for Crowley County was a Level 1. This was modeled to be the same during any time of the day.

A number of variables are included in Hazus analyses in order to arrive at the estimated values of loss due to earthquake. For this reason, it is important to note that the Hazus loss estimates detailed above should not be used as a precise measure, but rather viewed from the perspective of the potential magnitudes of expected losses.

Land Use and Development

With the unpredictable nature of earthquake epicenter locations, it is not feasible to identify specific areas where development may exacerbate the risk to an earthquake. If population and development expand, enforcement of the unified construction code has great potential to mitigate increasing vulnerability and development pressure.

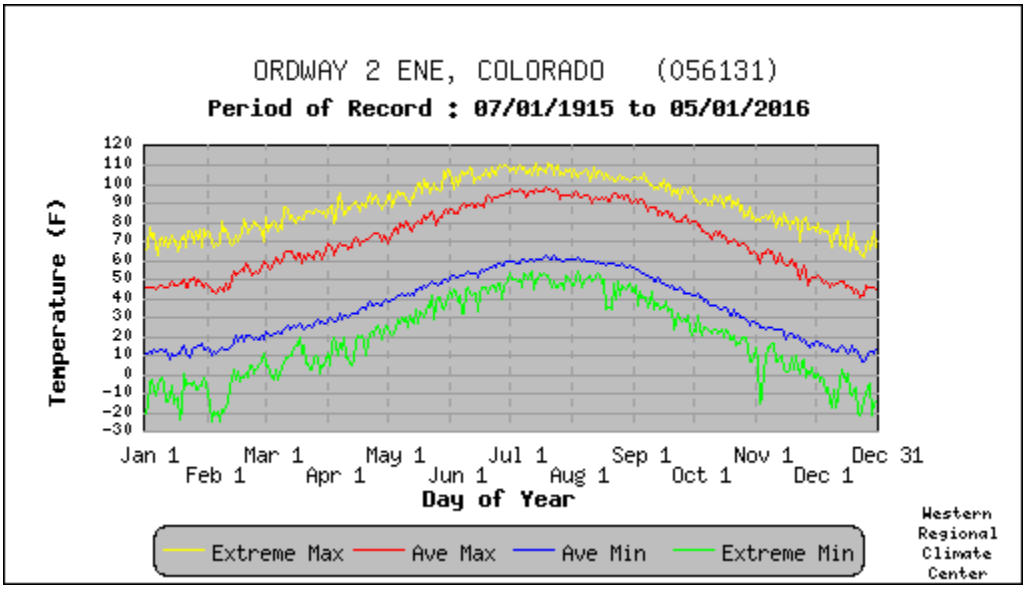
6.8.6. Extreme Temperatures: Extreme Cold

Location

Extreme cold temperatures can impact the entire County. Figure 6-65 shows the extreme temperature highs and lows for Ordway. The lowest recorded temperature from this data is -25 degrees.[84]

[84] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-65 Temperature Extremes in Ordway, Colorado - Cold



Previous Occurrences

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Crowley County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Crowley County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

Probability

Extreme cold temperatures occur yearly in Crowley County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Crowley County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the County is most vulnerable to temperature extremes. In Crowley County, 13% of the population is 65 and older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in the County are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Crowley County has experienced $122,395 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.[85] This equates to $4,533 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

6.8.7. Extreme Temperatures: Extreme Heat

Location

Extreme heat can impact the entire County. Figure 6-66 shows the extreme temperature highs and lows for Las Animas. The highest recorded temperature in this data is 111 degrees.[86] Across the County, maximum temperatures routinely break 100 degrees during the summer months.

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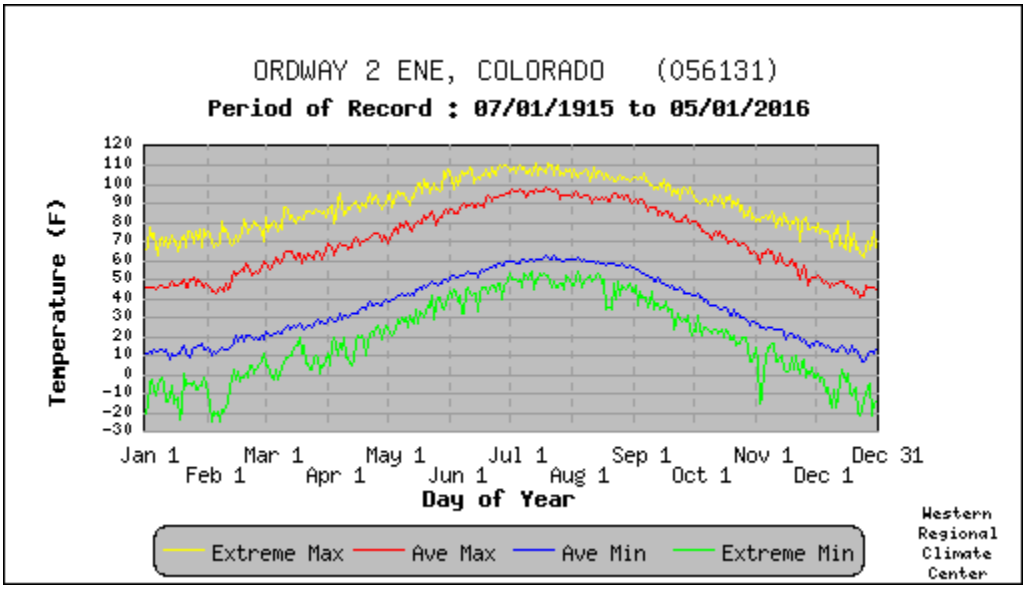
[85] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

[86] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-66 Temperature Extremes in Ordway, Colorado - Heat



Previous Occurrences

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Crowley County has experienced 2,386, 1,221, and 305 days above 90, 95, and 100 degrees, respectively. Additionally, the County has experienced 266 heat waves during this time period. This places Crowley County fourth in the State for number of days above 90 degrees from 1981 to 2017, as well as third in the State for number of heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.[87]

Probability

Based on the climate of Crowley County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Crowley County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. In Crowley County, 13% of the population is 65 and older. However, many residents of southeast Colorado are self-sufficient and

[87] Colorado Climate Center

accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Additionally, people who work, frequently recreate outside, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Crowley County has 246 farms totaling 484,328 acres. The estimated market value of agricultural products sold is $96,277,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Potential Losses

There is no recorded damage information for extreme heat in Crowley County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat.

Based on USDA Risk Management Agency Data, Crowley County has experienced $169,387 in insured indemnity amounts from 1991 through 2018 due to heat.[88] This equates to $6,273 in annual losses.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme heat.

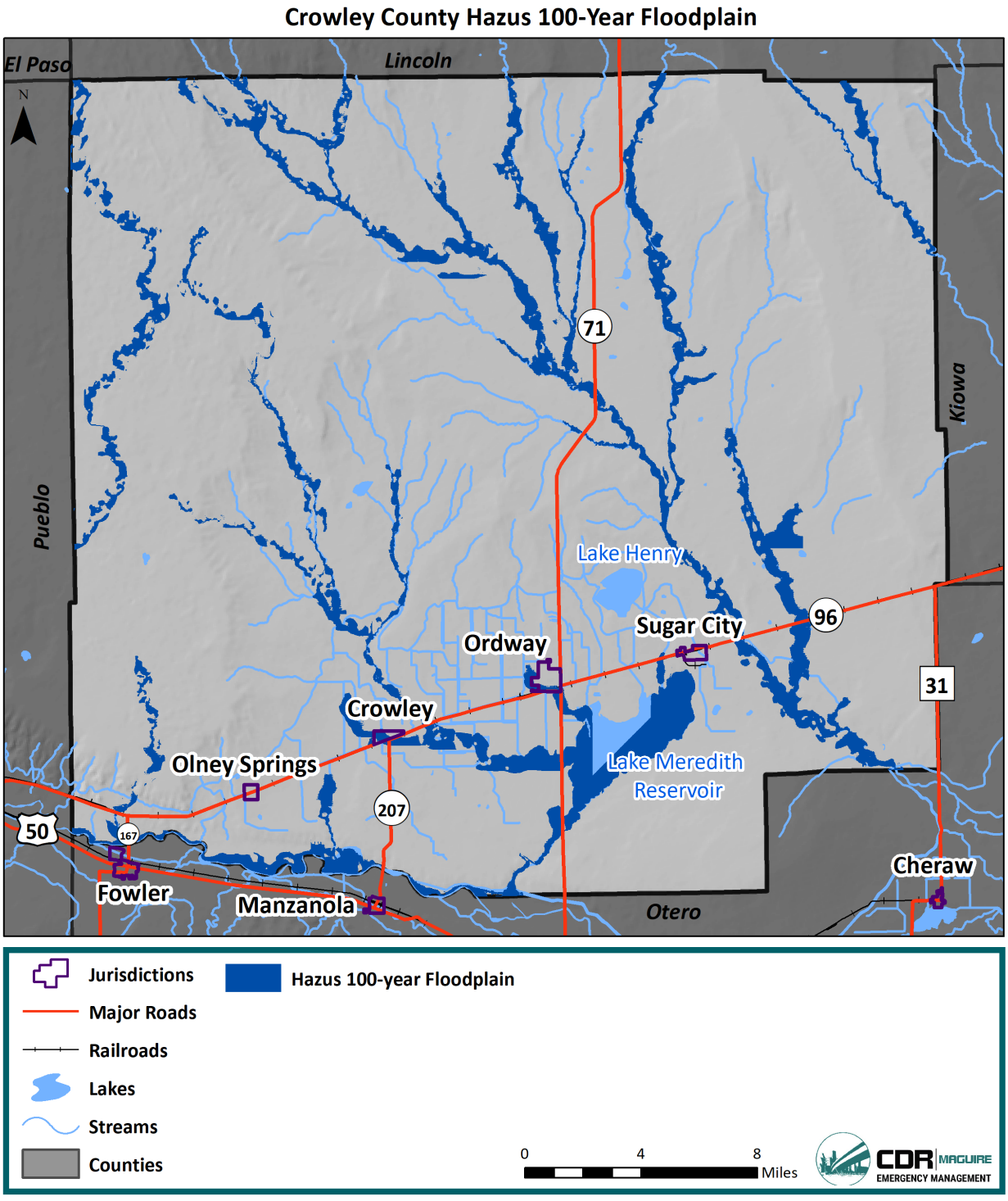
6.8.8. Flooding

Location

The Crowley County floodplain is not digitally mapped by the NFIP. Therefore, the best available floodplain data was generated for the 2018 Colorado State Hazard Mitigation Plan. Using Hazus-MH 4.0, a standard Level 1 flood analysis was conducted. This resulted in the development of a stream network and hydrology for 10-square mile drainage areas. The 30-meter (one arc second) DEMs were used in this analysis as the terrain source. Hazus then ran hydraulics for and delineated the 100-year floodplain boundary. While not as accurate as an official FEMA floodplain, this boundary is available for use in GIS and is currently the best available data for the County. Figure 6-67 shows the floodplain for Crowley County. The floodplain impacts many areas of unincorporated County, as well as through several jurisdictions, including Crowley, Ordway, and parts of Sugar City.

[88] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

Figure 6-67 Crowley County Hazus 100-year Floodplain



Localized flooding also occurs throughout the County with several areas of primary concern. The County has determined a number of areas that incur repetitive local flooding. The Crowley County Emergency Manager maintains a map of locations of flooding. These areas are listed below.

- 26483 Highway 96, Sugar City

- Lane 21 North of Highway 96, where Pond Creek Crosses Lane 21
- Low Water Crossing on Road U at Lane 22 (approximately)
- Low Water Crossing on Road K where K is crossed by Horse Creek
- Lane 27 between CC & DD, approximately 1 mile south of the Lincoln County line
- Road K and Lane 10
- Road F.5 and Lane 11
- Road C and Lane 11
- Road D and Lane 13
- Road D between Lane 13 and 14

It was also noted that there has been repetitive flash flooding in Sugar City. An event in April of 2000 washed out a 12" culvert. This affected the wells owned by Sugar City. As long as there continues to be a low water crossing at this area, flooding will continue.

Previous Occurrences

In total, there have been six recorded flooding events in the County from 1950 to May 2019.[89] One of these events were labeled as a flood and five as flash floods. One of these events occurred near Crowley, three in Ordway, one in Sugar City, and one in unincorporated County. None of these events have recorded injuries or deaths. One event, occurring on 8/19/2004 in Sugar City caused $30,000 in recorded damages, including water in basements, in some cases more than four feet deep, which damaged and destroyed personal property. Other recorded qualitative damages include, flooded highways, washed out bridges, and road closures.

Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below. A description of all previous occurrences can be found in Appendix C.

Table 6-49 Flooding Events in Crowley County from 2014 to 2019

Date	Location	Flood Type	Description
7/25/2016	Town of Crowley	Flash Flood	Heavy rain produced flash flooding and high water in the Crowley and Ordway areas.

NFIP Information

Crowley County has not been mapped by the NFIP nor does it participate in the program at this time. The Town of Ordway has no policies, and the Town of Crowley has no Special Flood Hazard Area (NSFHA) and no policies.

Probability

Based on six floods from 1950 to 2019, there is a 9% annual chance of flood occurrence in the County, equating to a possible probability.

[89] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; LPC

Vulnerability Assessment

Inventory Exposed/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County and the Towns of Crowley and Ordway, as well as near Sugar City. Damages in unincorporated areas can include (but are not limited to) rural structures, roads, and crops. As demonstrated in the previous occurrences, issues such as flooded basements, bridges, and roads can occur in/near the jurisdictions, particularly in Ordway, Crowley, and Sugar City. The area around Olney Springs is largely not impacted by flooding. This indicates much of the County is vulnerable to this hazard. Flooding can also cause injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Crowley County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

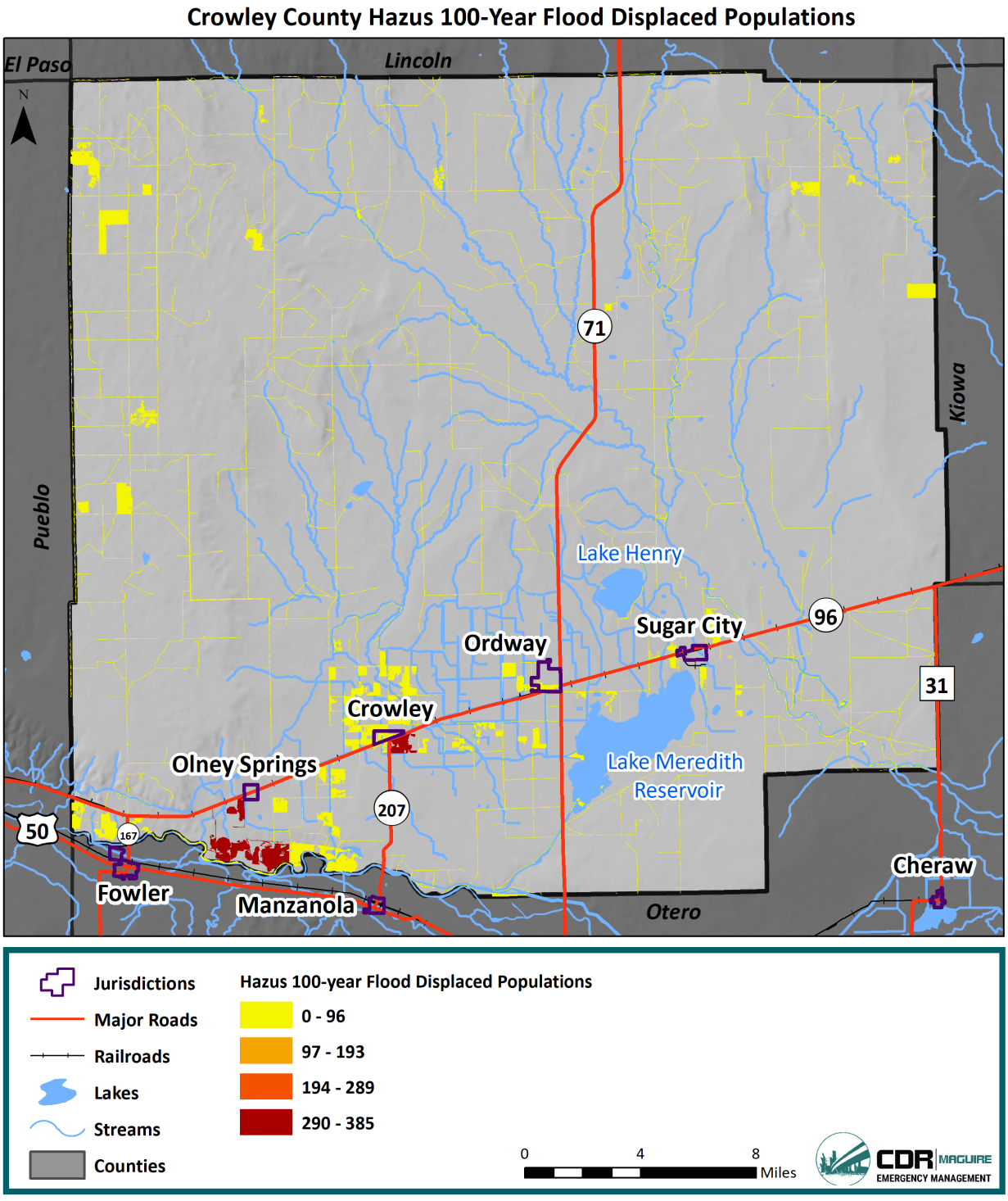
Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100-year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. While not as accurate as official flood maps, these floodplain boundaries are available for use in GIS and could be valuable to Crowley County, given it has not been mapped by the National Flood Insurance Program. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhance (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, about 14 buildings would be at least moderately damaged by a county-wide 100-year flood, which is over 60% of the buildings in the scenario. No buildings are estimated to be completely destroyed. The model estimates 365 households (or 1,096 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. The areas with the majority of displaced populations include along the Arkansas River in southern unincorporated County (356 people) and just south of the Town of Crowley (385 people). In Ordway, 190 people are estimated to be displaced. Of the total displaced populations, 622 people are estimated to seek temporary shelter in public shelters. Figure 6-68 shows locations of displaced populations.

Figure 6-68 Crowley County Hazus 100-year Flood Displaced Populations



The total economic loss estimated for the flood event is $6.07 million, which represents 4.27% of the total replacement value of the County's building stock. Total economic losses are a combination of direct building losses and business interruption losses.

The economic losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood. The direct building-related losses for the County were $6.04 million. Residential occupancies made up 76.66% of the total loss. Business interruption losses were $30,000.

Additionally, the model estimates that a total of 619 tons of debris will be generated. Of the total amount, Finishes comprises 76% of the total, Structure comprises 7% of the total, and Foundation comprises 17%. If the debris tonnage is converted into an estimated number of truckloads, it will require 25 truckloads (25 tons/truck) to remove the debris generated by the flood.

Figure 6-69 shows the Hazus generated flood depths for a 1% annual chance (100-year) flood event for the County.

Figure 6-69 Crowley County Hazus 100-year Flood Depth

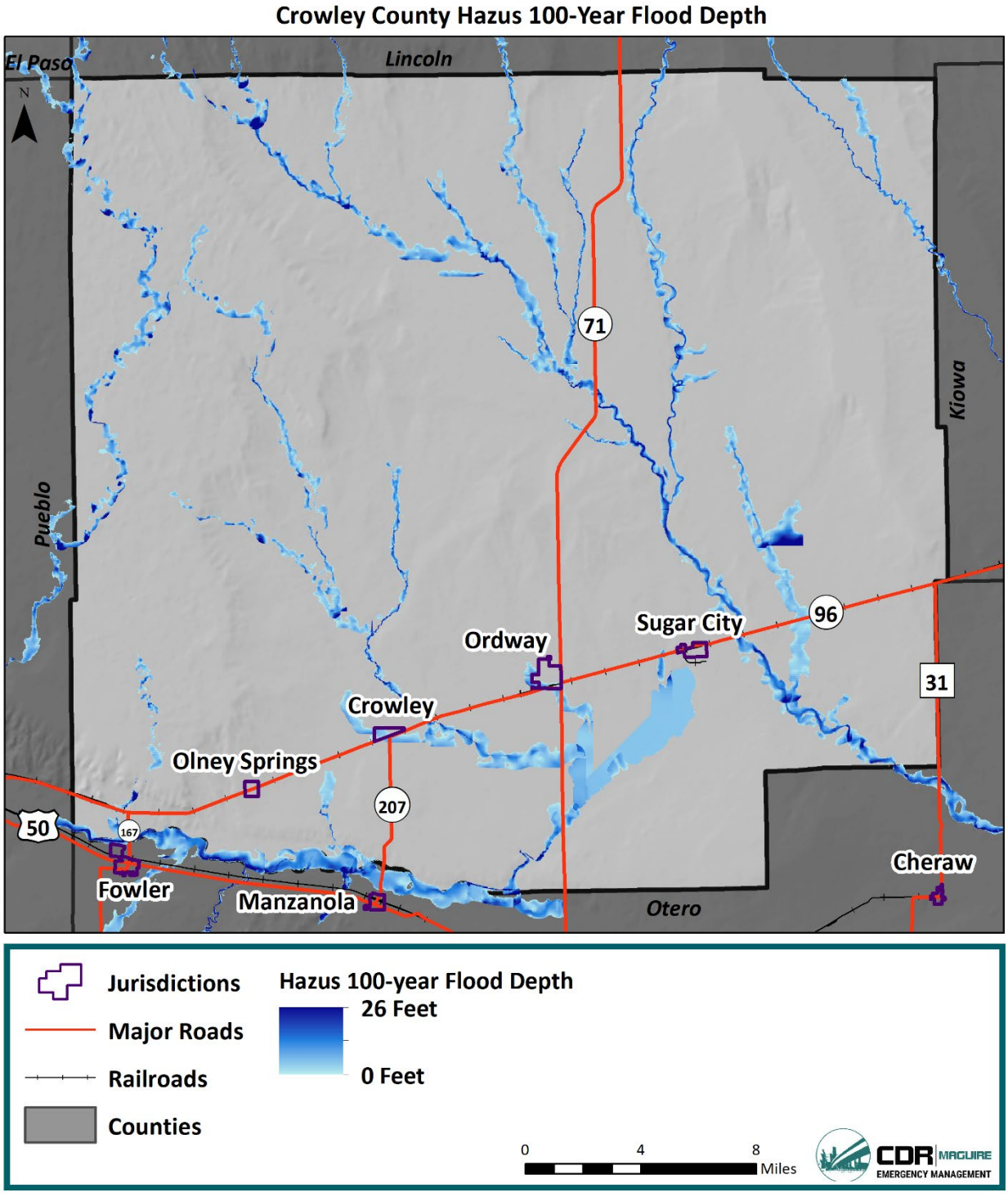


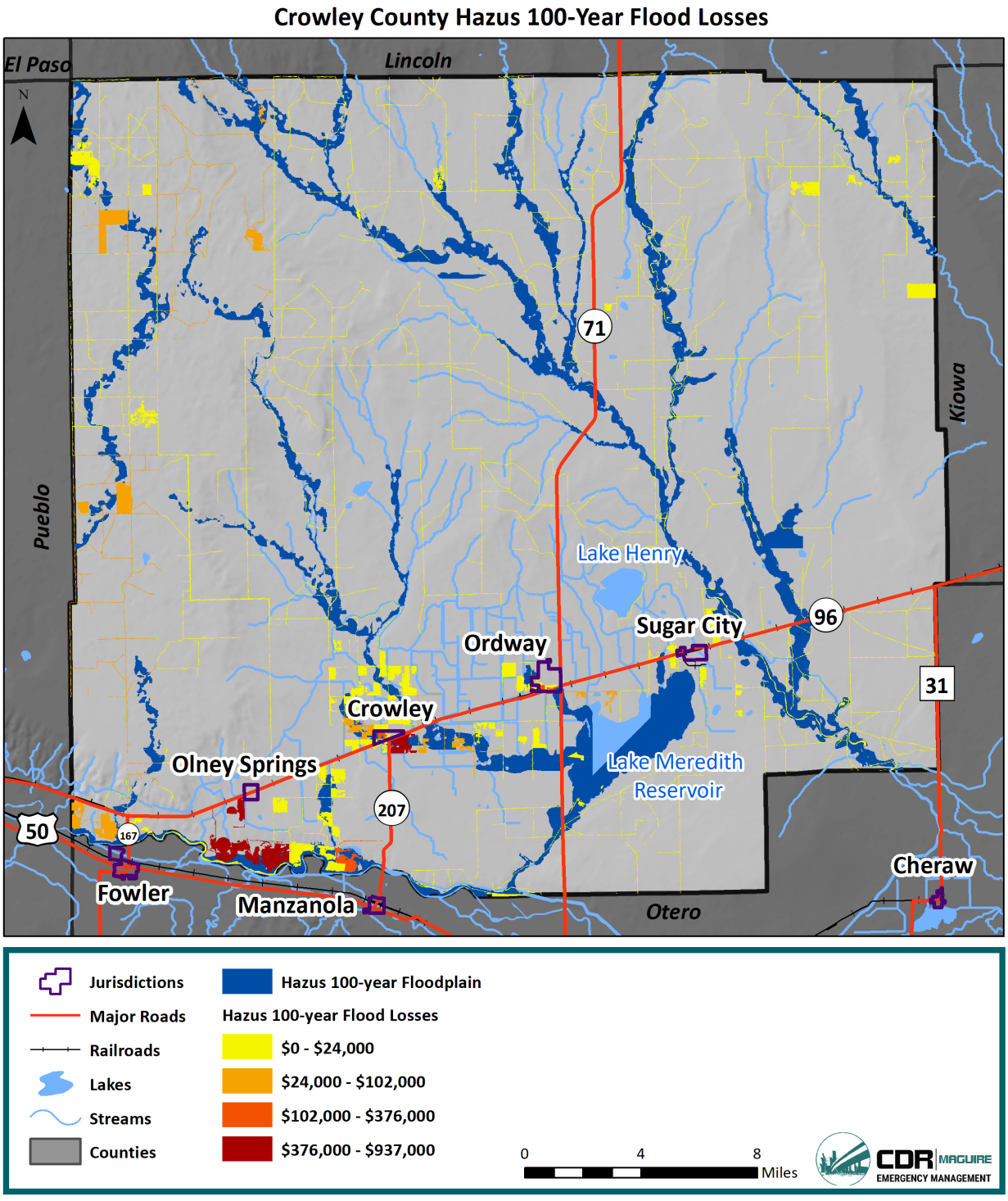
Figure 6-70 shows total economic losses from this event for the County ($6.07 million). The highest flood losses are projected to occur in southern portions of unincorporated Crowley County along the Arkansas River, as well as just south of the Town of Crowley. GIS was used to estimate losses by jurisdiction, shown in the table below. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall

magnitude of flood losses in and surrounding each jurisdiction. The highest amount of losses are projected for Ordway.

Table 6-50 Crowley County Hazus Estimated Flood Losses by Jurisdiction

Jurisdiction	Estimated 100-year Flood Losses
Olney Springs	$936,000
Crowley	$363,000
Ordway	$2,899,000
Sugar City	$13,000
Unincorporated County	$1,859,000
Total	**$6,070,000**

Figure 6-70 Crowley County Hazus 100-year Flood Losses



In addition to the potential losses estimated by Hazus, there have been $1,398,239 in recorded losses in Crowley County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $24,530 in annual losses to Crowley County from flooding.

Land Use and Development

Regulating new development can help reduce the risk to new structures from flooding. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

6.8.9. Severe Weather: Thunderstorms/Lightning/Hail

Previous Occurrences

Thunderstorm

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 19 thunderstorm wind events have occurred in Crowley County from 1955 to 2019. Seven of these events were recorded in Ordway, three in Olney Springs, one in Sugar City, and eight with no location listed. The highest recorded wind gust was 70 mph, which occurred on several occasions. Overall, these storms caused $10,050 in property damages and five injuries. The highest amount of damages occurred during the 6/8/2002 thunderstorm near Sugar City, causing approximately $10,000 in damages and five injuries when a microburst knocked over several camping trailers at Lake Meredith southwest of Sugar City causing five minor injuries.

Table 6-51 summarizes this information by jurisdiction, and Table 6-52 describes thunderstorm wind events that have occurred since the 2014 Southeast Region Hazard Mitigation Plan.

Table 6-51 Crowley County Thunderstorm Wind Events Summary Table

Jurisdiction	# Events	# Deaths	# Injuries	Damages
Ordway	7	0	0	$50
Olney Springs	3	0	0	$0
Sugar City	1	0	5	$10,000
Unincorporated County	8	0	0	$0
Totals	**19**	**0**	**5**	**$10,050**

Table 6-52 Recent Thunderstorm Wind Events in Crowley County

Date	Location	Deaths	Injuries	Damages	Description
6/12/2016	Olney Springs	0	0	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/25/2016	Ordway	0	0	$0	Severe storms produced damaging winds, in some cases over 70 mph, downing cottonwood trees.
Totals	**Count: 2**	**0**	**0**	**$0**	

Lightning

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in Colorado.[90] Crowley County averages 3,500 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009-2018) and fourth in the nation for number of lightning fatalities (years 1959-2017).[91]

The NCEI Storm Events Database reports on the number of damaging or significant lighting events. In Crowley County there has been one recorded damaging lightning event, on 4/29/2000 near Ordway. This event caused $1,000 in property damages where a tree was struck by lightning. A branch fell and broke a window in a residence.

Hail

According to the NCEI Storm Events Database, there have been 89 recorded hail events in Crowley County from 1955 through 2017. These events are summarized in Table 6-53. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. The largest recorded magnitude hail was 2.75 inches, occurring on several occasions. No damages, injuries, or deaths were recorded with any of these events.

Table 6-53 Crowley County Previous Hail Events, 1955-2017

Jurisdiction	# Events	Max Magnitude	# Deaths	# Injuries	Damages
Ordway	29	2.0	0	0	$0
Olney Springs	16	1.75	0	0	$0
Sugar City	18	1.75	0	0	$0
Crowley	13	1.75	0	0	$0
Unincorporated County	13	2.75	0	0	$0
Totals	**Count: 89**	**Max: 2.75**	**0**	**0**	**$0**

Table 6-54 shows hail events since the 2014 Southeast Colorado Hazard Mitigation Plan and Figure 6-71 shows all previous hail events on a map. It is evident the entire County is vulnerable to hail events.[92]

Table 6-54 Crowley County Recent Hail Events

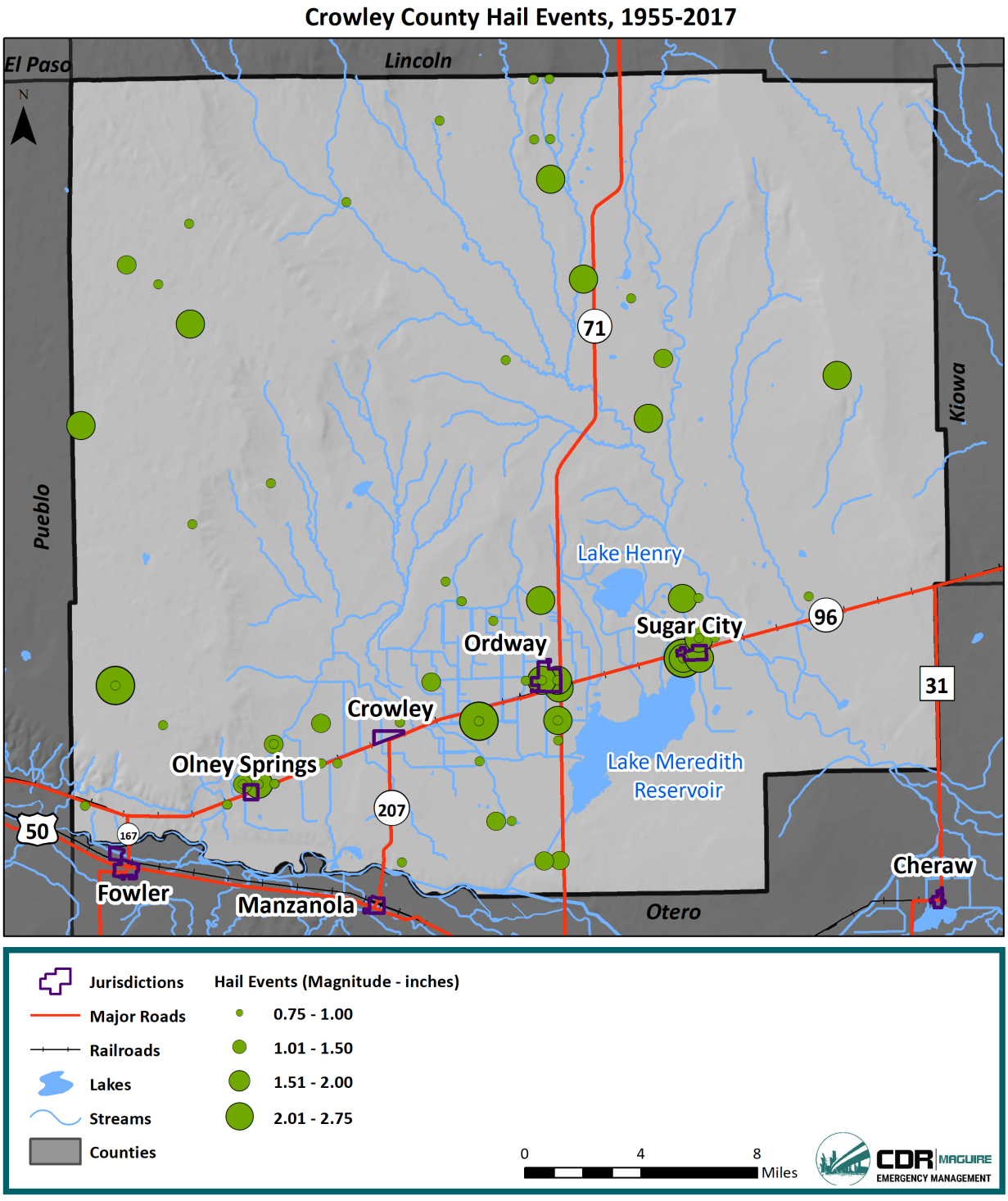
Date	Location	Magnitude (inches)	Damages	Description
6/3/2015	Ordway	1.75	$0	A severe storm produced hail up to the size of golf balls north of Ordway in Crowley County.
6/12/2016	Olney Springs	1.25	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County

[90] https://www.weather.gov/pub/lightningCgCountyColorado
[91] https://www.weather.gov/pub/Colorado_ltg_ranking
[92] NOAA Storm Prediction Center, SVRGIS; https://www.spc.noaa.gov/gis/svrgis/

Date	Location	Magnitude (inches)	Damages	Description
				when severe winds flipped his trailer home.
6/29/2016	Sugar City	1	$0	Strong to severe storms caused hail up to quarter size and gusty winds from Crowley County to Prowers County.
7/8/2016	Ordway	2	$0	Severe storms occurred from late in the evening on the 7th and into the morning of the 8th across the northern I-25 corridor and southeast plains. Hail up to the size of golf balls occurred and flash flooding was reported from central El Paso County into Pueblo. No dollar amounts of damage were available at this time.
7/25/2016	Crowley	0.75	$0	Strong to severe storms produced damaging winds and flooding rains. The largest hail reported was nickel size.
9/14/2016	Olney Springs	1	$0	Severe storms generated hail up to golfball size.
9/14/2016	Crowley	1.5	$0	Severe storms generated hail up to golfball size.
9/14/2016	Ordway	1.75	$0	Severe storms generated hail up to golfball size.
9/14/2016	Sugar City	1.75	$0	Severe storms generated hail up to golfball size.
5/9/2017	Sugar City	0.75	$0	A few marginally severe storms occurred, one producing a brief landspout near Brandon in Kiowa County.
6/25/2017	Sugar City	1.75	$0	A few severe storms produced very large hail up to the size of baseballs and a tornado near Walsh. Very large hail and severe winds in Walsh caused extensive damage to structures and vehicles. Power was knocked out for several hours and numerous businesses were closed for several days for clean up. Severe microburst winds also occurred west of Walsh. The tornado occurred just west of the microburst damage.
8/10/2017	Ordway	1.25	$0	Several severe storms produced damaging hail up to around the size of baseballs.
8/13/2017	Olney Springs	1.25	$0	Isolated severe storms across the southeast plains produced hail up to the

Date	Location	Magnitude (inches)	Damages	Description
				size of baseballs which damaged vehicles and windows.
Totals	**Count: 14**	**Max: 2.0**	**$0**	

Figure 6-71 Crowley County Previous Hail Events, 1955-2017



Probability

The probability of annual occurrence for all severe weather events (thunderstorm, lightning, and hail) is 100%, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences from thunderstorm events include infrastructure damage and building damage such as torn off roofs. Previous occurrences show events throughout the entire County. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County has similar vulnerabilities, as well as increased risk to crop losses from thunderstorms.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. Persons recreating or working outdoors during the months of April through September will be most at risk to lightning strikes. Fortunately, there have been no incidents of death of injury associated with lightning in the County. Additionally, property and infrastructure damage is possible.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail events. Ordway has experienced the most previous hail events, but as described in the Previous Occurrences section, the entire County has experienced hail events. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roof damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Potential Losses

According to SHELDUS, there have been $3,839,779 in damages from severe storms from 1960 to 2017 (2017 dollars) in the County. This equates to $67,364 in annual damages. No losses were associated with the recorded NCEI events, but most previous occurrences occurred in the jurisdictions, indicating likely losses. Overall, the most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

The only recorded damages from lightning in the County equate to $1,000 since 1996, occurring near Ordway. However, lightning occurs frequently every spring through fall in the County, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

According to SHELDUS, there have been $1,010,219 in damages from hail from 1960 to 2017 (2017 dollars). This equates to $17,723 in annual damages. Similar to other thunderstorm hazards, the entire County is vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

Land Use and Development

Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

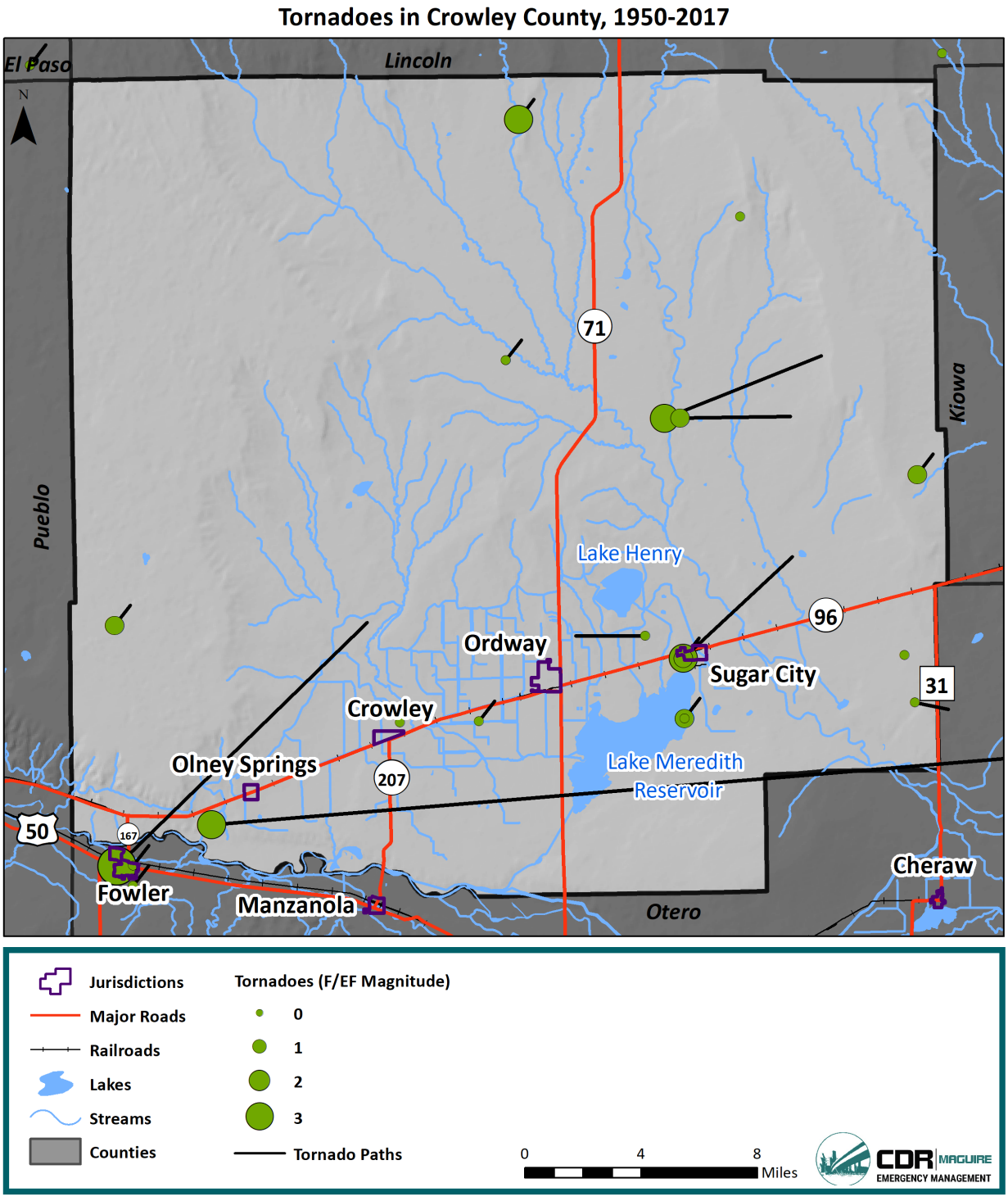
6.8.10. Tornadoes

Previous Occurrences

According to the NCEI, from 1950 through 2019, there have been 16 recorded tornadoes in Crowley County. These tornadoes resulted in $27,750 in recorded property damages. The strongest magnitude event was F2 events, happening on several occasions. The most damaging event was an F2 tornado on 5/23/1965, causing $25,000 in property damages. No further information was provided for this event. No events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Crowley County. Figure 6-72 shows tornadoes and tornado paths in the County as documented by the NOAA Storm Prediction Center.[93] It is evident a tornado can occur throughout the County, however, the area around Sugar City has seen more tornadoes than other parts of the County.

[93] https://www.spc.noaa.gov/gis/svrgis/

Figure 6-72 Crowley County Tornadoes



Probability

Based on previous occurrences in Crowley County, there is a 23% chance that a tornado will happen every year, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Historical evidence shows that Crowley County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. It cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)
- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Crowley County, 18.1% of the housing units are mobile homes.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

NCEI historical loss information shows $27,750 in total losses. The most vulnerable areas in the County to high losses are jurisdictions that have more buildings and people, as well as agricultural land and mobile homes in unincorporated parts of the County.

SHEDLUS records $59,646 in County-wide losses from tornadoes from 1960 to 2017 (2017 dollars). This equates to $1,046 in annual losses from tornadoes. The vast majority of these damages are property damages ($58,729).

Land Use and Development

Tornadoes can impact any location in the County; therefore, all new development and populations may be impacted by a tornado. Building codes can help reduce the risk to structures and people from tornado impacts.

6.8.11. Wildfire

Location

For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.[94]

Burn probability for the County is mapped in Figure 6-73. Countywide, the burn probability is low to moderate.

[94] CSFS, 2017 CO-WRA Final Report

Figure 6-73 Crowley County Burn Probability

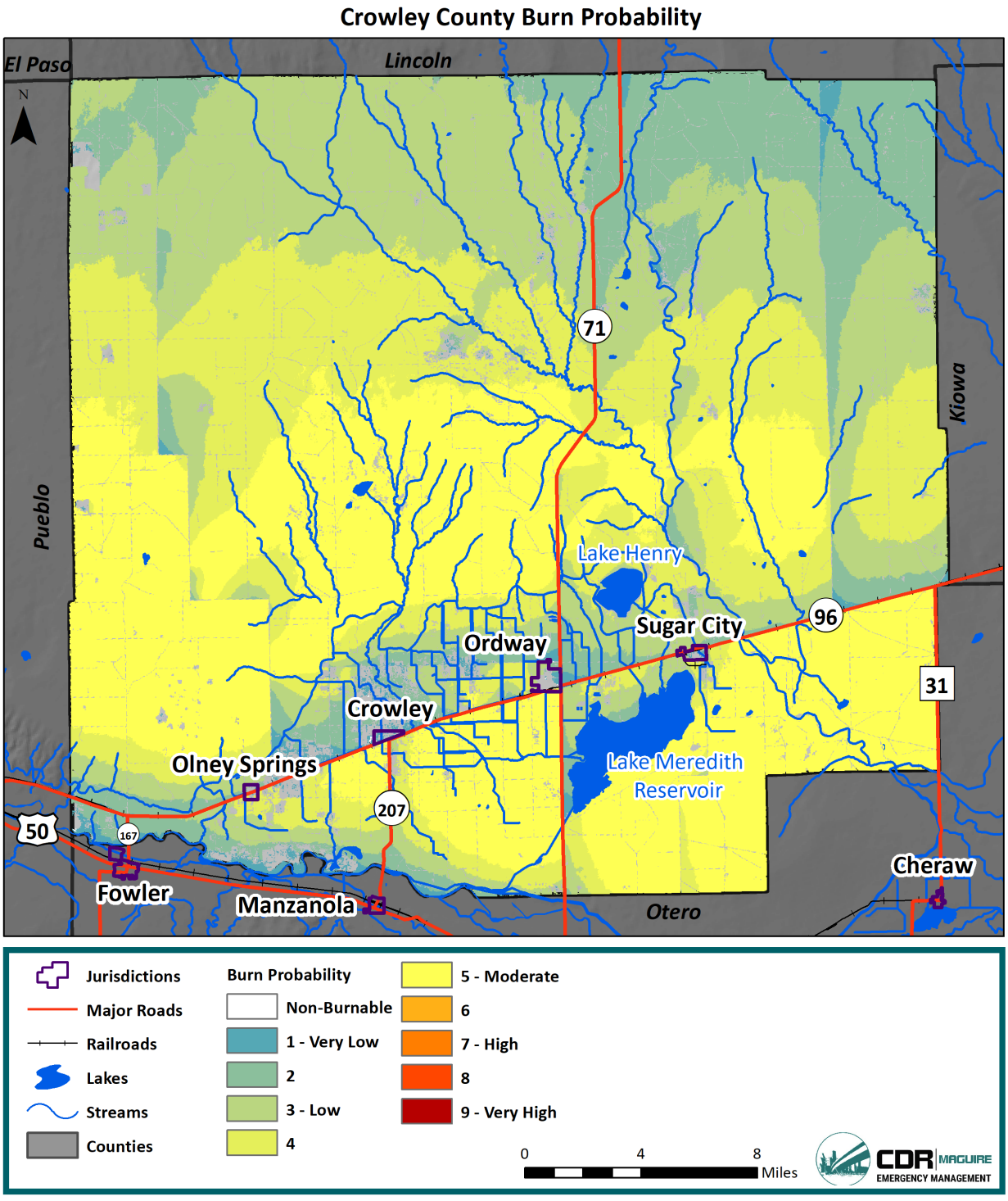
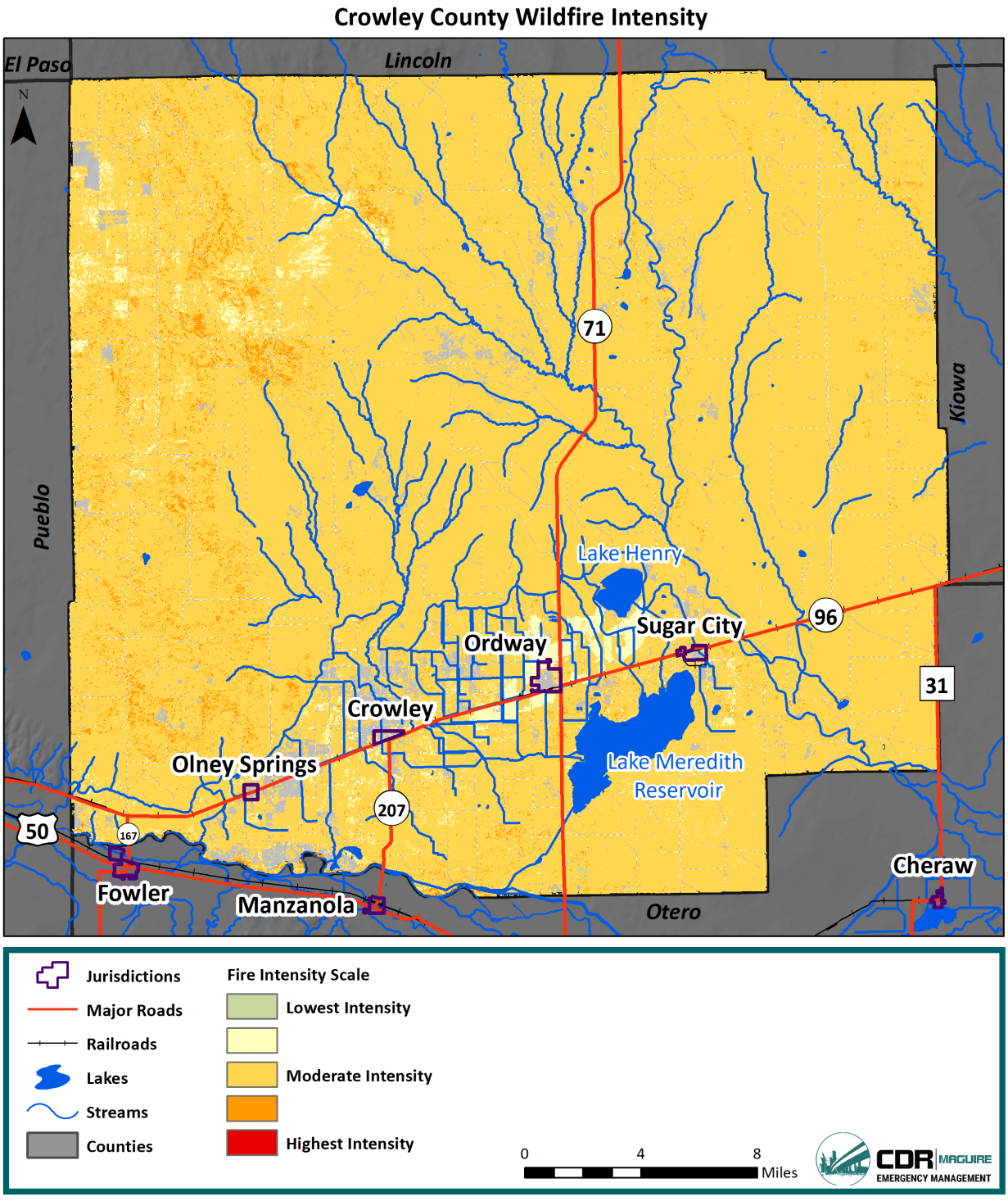


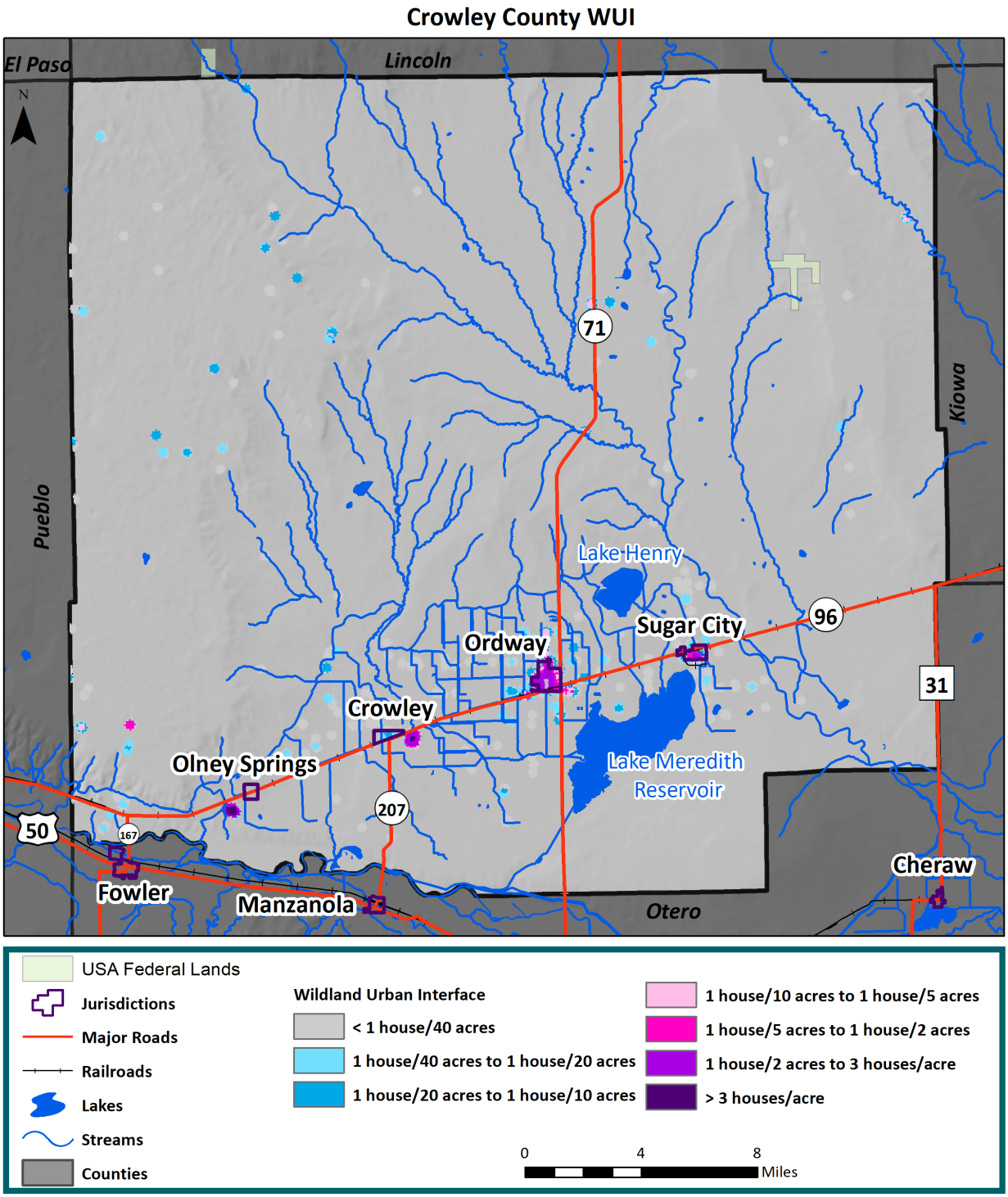
Figure 6-74 show the wildfire intensity for Crowley County. Much of the County has moderate wildfire intensity. The western portion of the County has areas with higher wildfire intensity.

Figure 6-74 Crowley County Wildfire Intensity



There are low density WUI locations throughout the entire County. Higher density WUI locations are located close to the jurisdictions, in particular Ordway and Sugar City. Figure 6-75 shows WUI locations throughout the County in addition to federal land ownership.

Figure 6-75 Crowley County Wildland-Urban Interface



Previous Occurrences

According to the CO-WRA data, there have been 54 wildfires on federal lands from 1992 to 2015. Of these fires, 35 have been Class A (one-fourth acre or less), 15 Class B (1/4 to 10 acres), 2 Class C (10 to 100 acres), 1 Class D (100 to 300 acres), and 1 Class G (5,000 or more acres). Additionally, of these wildfires, 3 have been lightning-caused, 18 human-caused (including arson, campfire, debris burning, equipment use, and smoking), 12 miscellaneous, and 21 missing or unidentified.

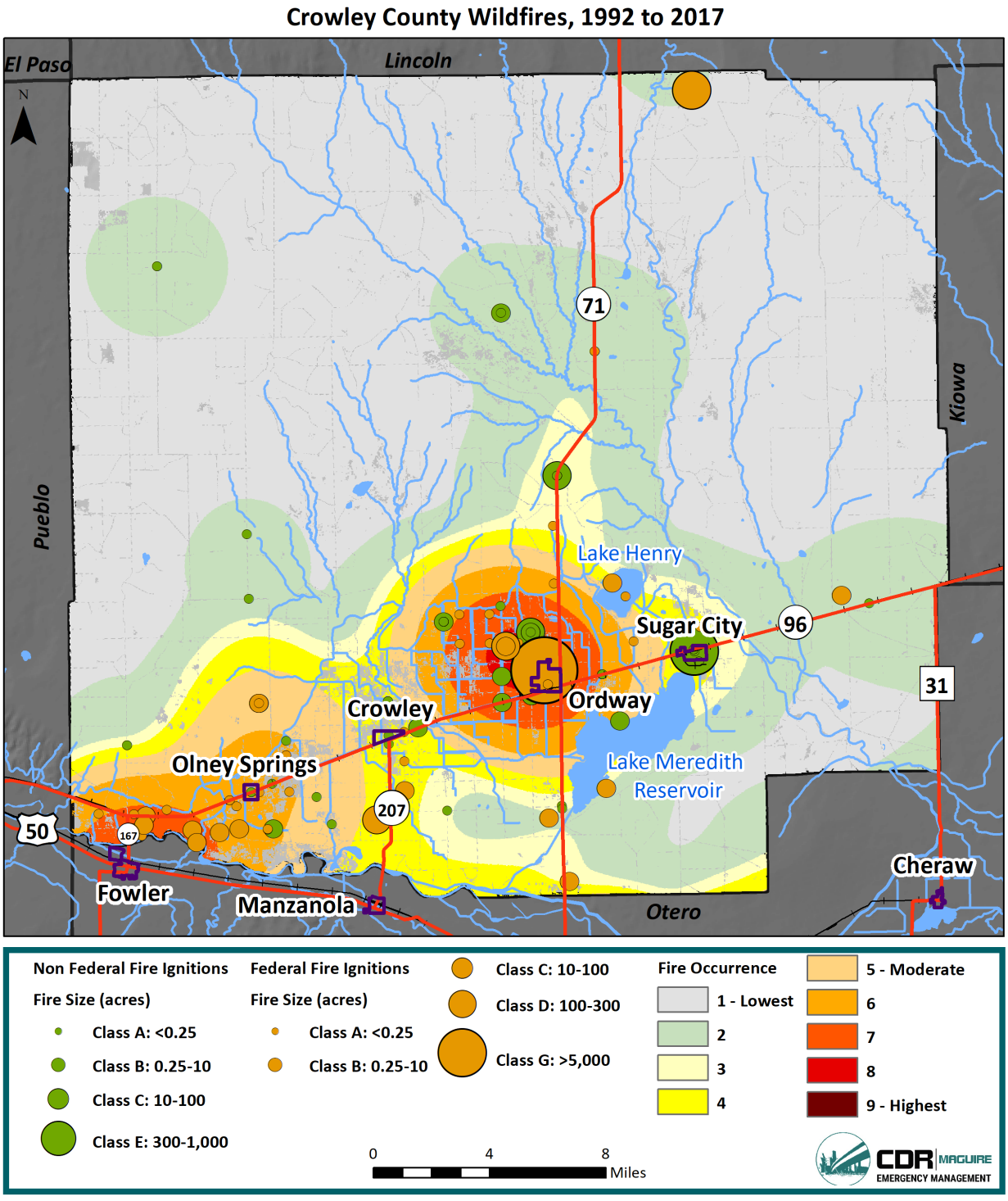
Additionally, there have been 102 non-federal wildfires from 2009 to 2017. Of these fires, 71 have been Class A, 26 Class B, 4 Class C, and 1 Class E. Information regarding the cause of the wildfire is not available for non-federal fires.

The 2008 Ordway fire caused significant impacts to the community, as described below.

> **April 15 and 16, 2008** - the Ordway Fire, which resulted in Fire Management Assistance Declaration FM-2760, was caused by an unpermitted prescribed burn south of the City of Ordway. Strong winds spread the blaze rapidly east northeastward. Highways 96 and 71 were shut down, as 8,900 acres of grassland was consumed. Firefighters from 35 agencies battled the blaze. Twenty-four structures were destroyed west and north of Ordway. Over 150 power poles were destroyed. The entire Town of Ordway was evacuated. Tragically, two firefighters perished when the truck they were in plummeted into a culvert, where a bridge had burned out. Over $5 million of property damage were attributed to this fire. In addition to the damages to property, there were other economic damages. According to members of the LPC, the location of the fires near large herds of cattle caused stress in herds. Many cattle lost three to five percent of their body weight, resulting in millions of dollars of lost income for area ranchers.

Figure 6-76 shows these previous wildfires within Crowley County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident the southern portions of the County have experienced the most wildfires, although they have occurred throughout the entire County. This data, overlayed with the fire occurrence layer, shows that areas around Ordway, Sugar City, and Olney Springs are at a higher risk of wildfire occurrence than other parts of the County.

Figure 6-76 Crowley County Previous Wildfires



There have not been any notable wildfires in the County since the 2014 Southeast Region Hazard Mitigation Plan. However, the 2018 drought contributed to extremely dry conditions in the County and wildfire danger was high.

Probability

Based on all of the available previous occurrence data, there have been 125 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the Crowley County CWPP, the following are areas of highest wildfire concern for the County:

> Crowley County's highest concern areas are the communities and all development near the communities including but not limited to the Arkansas Valley Correctional Facility, the Crowley County Correctional facility, the Crowley County Heritage Center, the feed lots, a privately owned produce structure and the local community cemeteries; the recreational areas including Lake Meredith, Lake Henry, Ordway Reservoir, and the Colorado Division of Wildlife managed areas; the railroad/high-use travel corridors in the county; the Arkansas River watershed/tributaries and irrigation ditches/laterals for water quality, the abandoned irrigation ditches/laterals that run throughout the County with their high fuel load concern; and the Bureau of Land Management parcels in the County.

The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

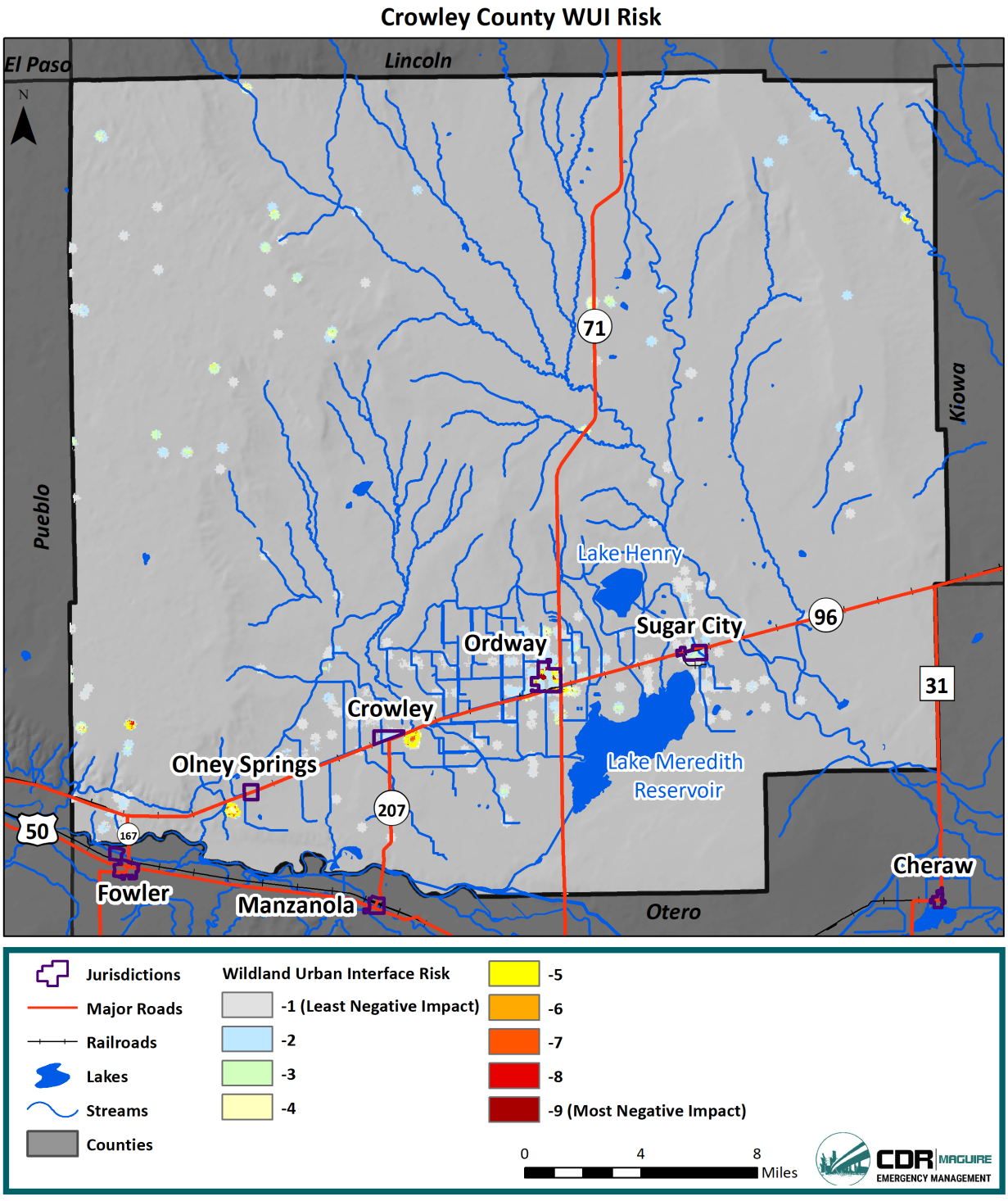
Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

Potential impacts are further assessed by utilizing the CO-WRA data to visualize different components of wildfire risk throughout the County.

Figure 6-77 shows the WUI risk in the County. The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.[95] According to the CSFS, 99% of the population in Crowley County lives within the WUI. The majority of the County's WUI is in low negative impact areas. However, small portions, mostly around each jurisdiction, are in higher negative impact WUI areas.

[95] 2017 CO-WRA

Figure 6-77 Crowley County WUI Risk



Potential Losses

The best available recorded losses from wildfire in the County are from the SHELDUS database, which records $2,896,302 in losses from 1960 to 2017 (2017 dollars). This equates to $50,812 in annual losses. This is likely a low estimate, as the 2008 Ordway fire caused over $5 million in property damages alone. Overall, losses from wildfires can be substantial. Wildfires can impact structures, infrastructure, crops, and livestock as well as cause injuries and fatalities. Additionally, as with other parts of the western United States, the number of wildfires and acres burned in the Great Plains has increased and is projected to continue to increase. From 1985 to 1994, there were an average of 33 fires per year on the plains. From 2005 to 2014, that average soared to 117 per year, an increase of almost 350%.[96] Causes of this increase are cited as previous fire suppression, more people living in the WUI, need for more education for property owners, and climate change. For example, many residents have created windbreaks by planting fast growing trees like red cedar and ash juniper close to their houses, inadvertently creating a source of fuel that is particularly volatile during prolonged periods of little to no rain. With this trend, wildfire losses will likely continue to grow in the County.

All jurisdictions are at risk to losses from wildfire. Structures in WUI areas as well as agricultural land and rural infrastructure in areas with higher wildfire probability and intensity are at the risk to highest losses.

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of "living" wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

6.8.12. Windstorms

Previous Occurrences

According to the NCEI database, there have been 35 recorded high wind events in Crowley County from 2003 to 2019. Within this database, wind events are reported at an NWS Zone level (Crowley County is one zone), so it is not possible to derive jurisdictional data. In Crowley County, many of the high wind events are associated with winter storms or thunderstorms, but stand-alone high wind events are also common. The highest recorded magnitude event took place on 3/13/2019 with gusts up to 71mph. The event is described below:

> An extremely powerful low pressure system (setting records for lowest pressure measurements in Colorado) developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.

[96] Kiowa County Independent, http://kiowacountyindependent.com/news/1052-great-plains-new-wildfire-frontier

No damages, deaths, or injuries were recorded in the NCEI database, however, SHELDUS reports $4,016,645 in damages from wind events from 1960 to 2017 (2017 dollars). No further details are available with the SHELDUS data. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below.

Table 6-55 Crowley County Recent Wind Events

Date	Description
3/18/2014	Winds gusting in excess of 70 mph were measured over portions of southern Colorado. Some of the higher reported wind gusts were 59 mph at Schriever AFB (El Paso County)...NWS Pueblo (Pueblo County) and near Cheraw (Otero County)...60 to 64 mph wind gusts were recorded near Springfield (Baca County)...Peterson AFB (El Paso County...65 to 70 mph wind gusts impacted locations near Campo and Two Buttes (Baca County)...and a 75 mph wind gust was measured near Yoder (El Paso County).
4/29/2014	A strong upper level storm system over the upper Midwest generated wind gusts in excess of 60 mph across the southeast plains. Widespread low visibility prompted a Dust Storm Warning.
12/23/2014	A storm system generated high winds across the I-25 corridor and southeast plains of Colorado. The highest reported wind gusts include 58 mph near Falcon (El Paso County...61 mph near Springfield and 71 mph near Campo (Baca County).
11/16/2015	A vigorous storm system produced wind gusts near 80 mph across sections of southern Colorado. Some of the higher reported wind gusts included...58 to 68 mph in Colorado City and Blende (Pueblo County)...in Fountain and Security (El Paso County)...in Cheraw (Otero County)...in Lamar (Prowers County)...and 70 to 78 mph in Campo and west of Two Buttes (Baca County).
3/23/2016	A intense weather system produced strong to high winds across many sections of southern Colorado. Wind gusts in the 58 mph to 69 mph range were reported across several locations for which there were high wind warnings. In addition, wind gusts between 70 and 80 mph were also observed across portions of El Paso and Pueblo Counties.
12/25/2016	A strong upper level jet stream moving across Colorado generated strong to high winds from the eastern mountains into and through the southeast plains of Colorado. Widespread wind gusts between 60 and 70 mph occurred across the lower elevations. Winds gusted in excess of 75 mph across the eastern mountains and down the adjacent lee slopes. Despite the high winds, widespread damage did not occur.
3/6/2017	A vigorous weather system generated high winds across many portions of southern Colorado. Some of the higher reported wind gusts included: near 60 mph at Florence (Fremont County) and Lamar (Prowers County), 60 to 70 mph near Two Buttes (Baca County), Cheraw (Otero County), Walsenburg and La Veta (Huerfano County), Wetmore (Custer County), and Hoehne (Las Animas County), 70 to 80 mph at Colorado City (Pueblo County), and around 85 mph near La Veta Pass ((Costilla County) and Swissvale (Fremont County).
3/23/2017	A potent winter storm produced snow and high winds across in I-25 corridor and plains. Some of the higher reported wind gusts included: near 60 mph at Cheraw (Otero County) and Colorado Springs, Fountain, Truckton, Peterson AFB (El Paso County), 60 to 70 mph near Colorado City (Pueblo County), La Veta (Huerfano County), Thatcher and Hoehne (Las Animas County), Springfield (Baca County), Finally, wind gusts of around 75 mph were observed near Campo (Baca County) and Blende (Pueblo County).

Date	Description
4/3/2018	A strong cold front generated northerly winds around 60 mph at times across portions of Crowley and Kiowa counties.
4/13/2018	A passing storm system produced winds, gusting to around 80 mph at times over sections of southern Colorado. Wind gusts between 58 mph and 65 mph were realized near Two Buttes, Truckton, the Lamar Airport, the Colorado Springs Airport and the Air Force Academy. Wind gusts between 66 mph and 70 mph were recorded at the La Junta airport while a 76 mph wind gust was measured near Springfield. Finally, a wind gust that clocked 79 mph occurred near Campo.
4/17/2018	An intense storm system produced strong winds in excess of 80 mph at times over large sections of southern Colorado. Some of the highest reported wind gusts with this event included wind gusts between 58 mph and 64 mph near Holly, Weston, Westcreek, Sargents, Florence, Truckton, Del Norte, Gardner, Monument, Penrose, Springfield, San Miguel, Wetmore, the Royal Gorge, the Fort Carson Airport and the Air Force Academy. Wind gusts between 65 and 69 mph were observed near Creed, San Isabel, Blende, Canon City, Two Buttes, Walsenburg, La Veta Pass as well as the Alamosa, Colorado Springs, Pueblo and Trinidad airports. Wind gusts between 70 and 79 mph were noted near Colorado City, Swissvale, La Veta Pass, Wagon Wheel Gap, the Pikes Peak Summit and the La Junta and Lamar airports. In addition, a wind gust of 85 mph was measured near Wolf Creek Pass.
11/24/2018	A storm system produced winds, gusting to 80 mph at times over portions of southern Colorado. Wind gusts between 58 mph and 65 mph were recorded near Walsenburg, Springfield, Hoehne, Sargents, Cheraw, Peterson Air Force Base, Lamar and Fountain. Wind gusts between 66 mph and 70 mph were measured near Weston and the Air Force Academy. Finally, a wind gust that clocked 80 mph was realized near the Pikes Peak summit.
12/12/2018	A storm system produced winds, gusting to around 65 mph at times over sections of southeastern Colorado. A wind gust of 58 mph was measured 4 miles to the south of Cheraw, while a wind gust of 64 mph was measured 4 miles to the southwest of Campo.
3/13/2019	An extremely powerful low pressure system(setting records for lowest pressure measurements in Colorado)developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.
4/10/2019	A deep storm system produced strong wind gusts across portions of southern Colorado. Some of the higher reported wind gusts with this system included wind gusts of 63 mph near Blende, 68 mph near Pueblo and a 76 mph wind gust near Wolf Creek Pass.
Total	**15**

Probability

Based on 35 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

There is little information to indicate damages from wind events. Mitigation measures, such as “Living Snow Fences” (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Potential Losses

SHELDUS reports $4,016,645 in damages from wind events from 1960 to 2017 (2017 dollars). This equates to $70,467 in annual damages. It is difficult to determine details on losses since the SHELDUS data does not provide loss or damage information. However, it is evident that losses can be expected in Crowley County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

6.8.13. Winter Storms

Location

The entire County is subject to winter storm events. Crowley County averages approximately 20 inches of snow per year.

Previous Occurrences

According to the NCEI database, there have been 15 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2005 to 2019. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information (Crowley Count is one zone). No damages, deaths, or injuries were reported with these events. However, SHELDUS reports $3,831,097 in damages from 29 events. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below. Notable winter storm events that impacted Crowley County prior to the 2014 Southeast Region Hazard Mitigation Plan are described in Appendix C.

Table 6-56 Winter Storm Events in Crowley County, 2014-2019

Date	Type	Description
2/21/2015	Winter Storm	A vigorous winter storm system impacted large portions of southern Colorado with significant snow and gusty winds. Some reported snow amounts included 6 to 10 inches at Colorado Springs (El Paso County)...Woodland Park (Teller County)...Pueblo and Pueblo West (Pueblo County)...Salida (Chaffee County)...Texas Creek (Fremont County)...Crestone (Saguache County) and Alamosa. Eleven to 15 inches graced Monument and the Air Force Academy (El Paso County)...Penrose (Fremont County)...Walsenburg (Huerfano County)...Poncha Springs (Chaffee County)...while 16 to 20 inches of snow was measured near Beulah and Colorado City (Pueblo County)...Rosita (Custer County) and Monarch Pass (Chaffee County). Twenty to 26 inches was noted near Westcliffe (Custer County)...Rye (Pueblo County) and Maysville (Chaffee County)...while 39 inches covered Wolf Creek Pass (Mineral County).
2/1/2016	Winter Storm	A powerful weather system produced significant snow. Some of the reported snow totals included...6 to 9 inches near Blende and Pueblo (Pueblo County)...Canon City (Fremont County) and Ordway (Crowley County)...10 to 13 inches near Cripple Creek and Woodland Park (Teller County)...Rosita and Silver Cliff (Custer County)...La Veta (Huerfano County)...Colorado City (Pueblo County)...Manitou Springs and Calhan (El Paso County)...14 to 17 inches in the rest of the Colorado Springs metro area (El Paso County)...Beulah (Pueblo County) and Maysville (Chaffee County...18 to 24 inches at Penrose (Fremont County)...northern El Paso County...Westcliffe (Custer County) and the Spanish Peaks (Huerfano County)...22 inches at Rye (Pueblo County)...30 inches at Monarch Pass (Chaffee County)...and 40 inches at the summit of Wolf Creek Pass (Mineral County).
2/1/2016	Winter Storm	A powerful weather system produced significant snow. Some of the reported snow totals included...6 to 9 inches near Blende and Pueblo (Pueblo County)...Canon City (Fremont County) and Ordway (Crowley County)...10 to 13 inches near Cripple Creek and Woodland Park (Teller County)...Rosita and Silver Cliff (Custer County)...La Veta (Huerfano County)...Colorado City

Date	Type	Description
		(Pueblo County)...Manitou Springs and Calhan (El Paso County)...14 to 17 inches in the rest of the Colorado Springs metro area (El Paso County)...Beulah (Pueblo County) and Maysville (Chaffee County...18 to 24 inches at Penrose (Fremont County)...northern El Paso County...Westcliffe (Custer County) and the Spanish Peaks (Huerfano County)...22 inches at Rye (Pueblo County)...30 inches at Monarch Pass (Chaffee County)...and 40 inches at the summit of Wolf Creek Pass (Mineral County).
1/14/2017	Winter Storm	A Pacific storm system generated gusty winds and heavy snow to southern Colorado, especially over the higher terrain. Some of the higher reported snow totals included: 6 to 9 inches near the Spanish Peaks and Walsenburg (Huerfano County), Rye and Beulah (Pueblo County), Monte Vista (Rio Grande County), Leadville (Lake County), Kim, Hoehne, Trinidad (Las Animas County), Maysville (Chaffee County), and 17 inches near Monarch Pass (Chaffee County).
4/29/2017	Winter Storm	A vigorous late Spring storm impacted many sections of southern Colorado with impressive snow amounts in combination with gusty winds and localized snow drifts around 5 feet in combination with many downed tree limbs. Some of the higher reported snow totals with this event included six to nine inches of snow near Leadville, Salida, the Air Force Academy, Lamar, Woodland Park, La Junta, Texas Creek, Pueblo, Rocky Ford and Maysville. Ten to fifteen inches of snow was noted near WestCliffe, Manzanola, Walsenburg, Black Forest, Calhan, Pueblo West, Monument, Avondale, Springfield and Blende. 15 to 20 inches of snow graced the communities of Wetmore, Pritchett and Holly. 23 inches of snow was measured near Beulah. An impressive 25 to 30 inches of snow covered the communities of Rye, Colorado City and Two Buttes, while a whopping 39 inches of snow impacted San Isabel.
2/22/2019	Winter Storm	A slow moving snow storm generated widespread snow, heavy at times over many portions of southern Colorado. Some of the higher reported snow totals with this event included six inches of snow near Creede, Monument, Florissant, Palmer Lake and Rye. Seven inches of snow graced locations near Buena Vista, Cascade, Hillside, Rosita, Westcliffe, Colorado City, Texas Creek and Beulah. Eight inches of snow was observed near South Fork, Colorado Springs and Manitou Springs. Locations near the Spanish Peaks, Black Forest and San Isabel recorded nine to ten inches of snow with this event, while Wolf Creek Pass was inundated with 40 inches of snow with this storm system.
3/13/2019	Blizzard	A blizzard termed a “bomb cyclone” impacted much of Colorado’s Front Range and Eastern Plains. To qualify as a "bomb cyclone," an area of low pressure must drop at least 24 millibars in 24 hours or less. A Barometric pressure reading of 970.4 mb recorded in Lamar on March 13 is the lowest reading ever recorded in the State. The blizzard produced 80-90 mph winds, stranded people on impassable roadways, and caused power outages throughout the Region.
Total: 7		

Probability

Utilizing the 15 reported NCEI events from 2005-2019, there is a 100% chance of a winter storm event occurring annually in Crowley County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

Vulnerability Assessment

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard profiled in Section 4.8.4.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County's elderly population is a potentially vulnerable demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $3,831,097 (2017 dollars) in total losses from winter weather events. This equates to $67,212 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code (for those areas with building codes) should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services. Areas without building codes should consider adopting and enforcing some type of building code.

6.8.14. Civil Unrest

Location

The Crowley County Correctional Facility is located near Olney Springs, and the Arkansas Valley Correctional Facility is located near Crowley. Both correctional facilities are potential locations for civil unrest. Additionally, any event or gathering that takes place in the County could be a location of civil unrest.

Previous Occurrences

There have been two documented events of civil unrest in Crowley County, detailed below.

March 1999 – At the Crowley County Correctional Facility, inmates who had just been transferred from the State of Washington rioted when they refused to "lock down." Inmates flooded floors, smashed doors and windows and tried to set fires, and prison staff responded with gas and rubber bullets. About 400 prisoners at the prison were involved in an uprising that left one inmate and one staff member with minor injuries.

July 2004 - Several hundred prisoners rioted at the Crowley County Correctional Facility, setting fires and leaving more than a dozen people injured before the violence was quelled. No guards were hurt, but more than a dozen inmates were hurt, including one prisoner with multiple stab wounds. Another inmate was shot in the foot by guards using rubberized bullets to quell the five-hour riot at the medium-security Crowley County Correctional Facility. The riot started in the recreation yard and grew to include several hundred prisoners. Four of the prison's five living units for inmates were uninhabitable because of broken windows, fire, smoke and water damage, and a vocational greenhouse burned to the ground.

Probability

Although only two recorded previous occurrences, due to the location of correctional facilities in the County, the probability of civil unrest in Crowley County is possible, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Civil unrest could cause injuries or fatalities for those involved, bystanders, or first responders. Additionally, structures and infrastructure could be damaged through impacts such as fires and destruction of property by crowds or mobs.

Potential Losses

It is difficult to predict potential losses without any previous occurrence data. However, as mentioned above, losses could come in the form of injuries/fatalities, property damage, as well as any cleanup costs after the event.

Land Use and Development

With lack of significant population growth in the County, land use and development are not projected to be impacted by this hazard.

6.8.15. Cyber Hazards

Previous Occurrences

Across the southeast region, there have been two reported events where counties paid ransomware.

Probability

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

Vulnerability Assessment

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

Land Use and Development

If population increases in the County, more people would be exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

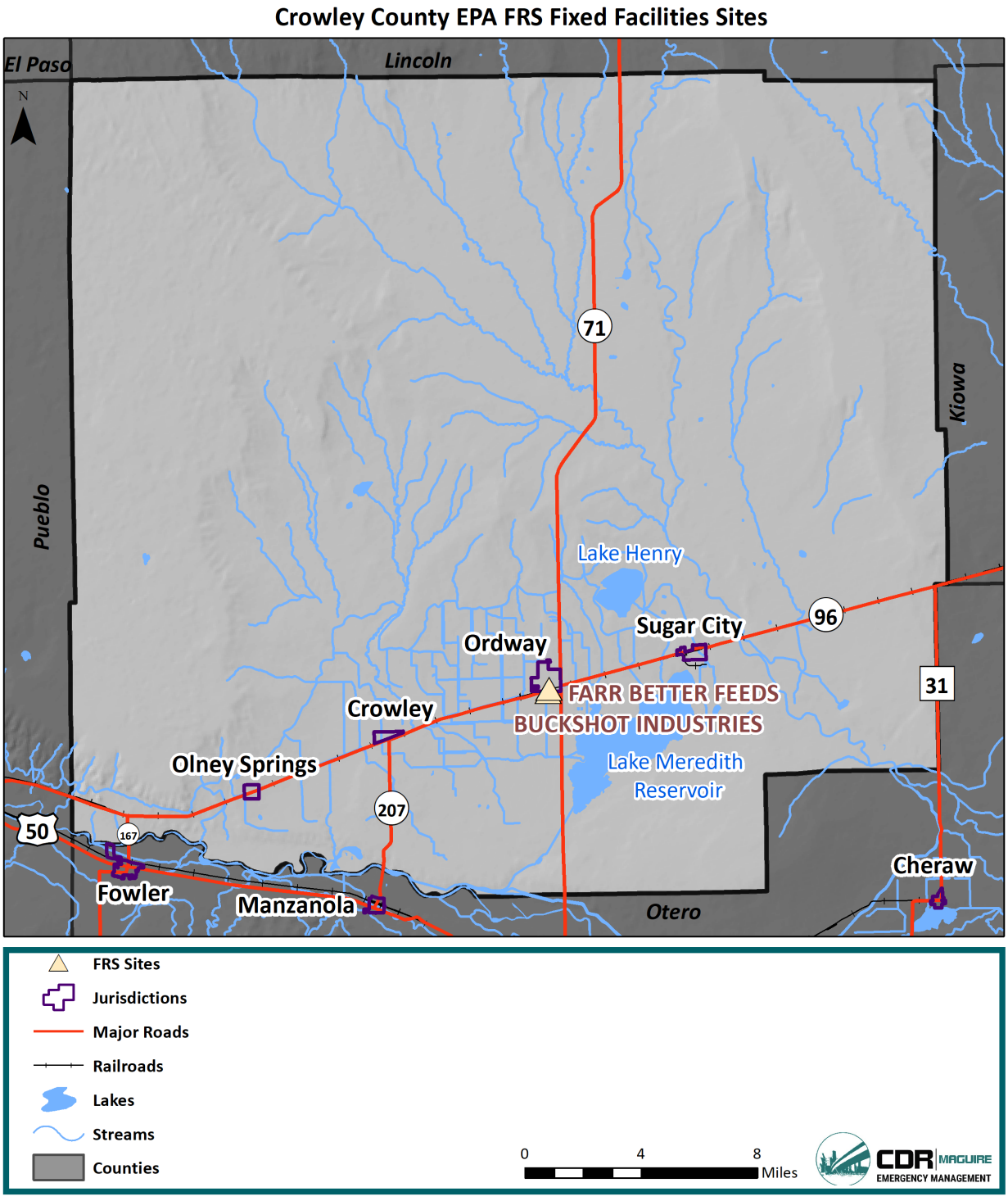
6.8.16. Hazardous Materials Release

Location

Locations of fixed facilities in Crowley County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.[97] Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Crowley County has two fixed facilities that could result in a hazmat release, as shown in Figure 6-78.

[97] https://iaspub.epa.gov/sor_internet/registry/facilreg/home/basicinformation/

Figure 6-78 Crowley County EPA Fixed Facility Sites



For transportation related incidents, in Crowley County Highway 71 is a designated Hazardous Materials Route by CDOT. Additionally, Highway 96, east of the intersection of Highway 71, is a designated Gasoline, Diesel Fuel, and Liquified Petroleum Gas Route. The Victoria Southern & Towner Railroad runs through Crowley County. These areas could be more likely sources of transportation related hazmat incidents.

Previous Occurrences

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 6-57 below. There has been a total of two incidents from 1971 to July 2019, totaling $630,175 in damages. One incident occurred near Crowley and one near Sugar City.

Table 6-57 Crowley County Previous Hazmat Events

Date	Incident Route	City	Injuries	Damages	Mode of Transportation	Description
8/10/2016	Hwy 125 Mile Marker 68	Crowley	1	$630,175	Highway	A turner gas crude driver in its Rawlins division spilled approximately 115 barrels of crude oil while he was driving buck from Sand Ridge (Northpark Colorado) en route to Sinclair's Rawlins/Getty lact 011 the late evening of august 10 2016. The spill was the result of a rollover and subsequent break in the rear compartment of the tanker trailer. The spill occurred on highway 125 at mile marker 68 off the side of the road. No crude spilled into any water source and was quickly contained
11/22/1971		Sugar City	0	$0	Highway	
Total: 2				**$630,175**		

There have not been any significant fixed facilities hazmat incidents in Crowley County.

Probability

Based on two previous occurrences from 1971 to 2019, there is a 4% chance of annual occurrence of a hazmat incident in Crowley County, equating to a possible probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

Vulnerability Assessment

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Crowley County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a risk to accidents that may lead to releases. Populations near the highway are at a higher risk to transportation related hazmat incidents. Highway 71 runs north/south through unincorporated County and Ordway, putting people near these areas at a higher risk. Additionally, parts of Highway 96 are designated as a Gasoline, Diesel Fuel, and Liquified Petroleum Gas Route, which passes through Ordway and Sugar City. Fixed Facility releases are less common in the County, however, there is still potential for a release.

Fixed facilities are located in Ordway, increasing the risk of a release in the communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Crowley County has experienced $630,175 in damages from hazmat incidents from 1971 to July 2019, equating to $13,128 in annual losses. It should be noted that all of these damages were from one incident in 2016, demonstrating that one event can cause high amounts of damages.

Land Use and Development

Future development in the County would increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

6.8.17. Pandemic and Zoonotic Diseases

Previous Occurrences

Pandemic Influenza

There were four acknowledged pandemics in the twentieth century and one in the twenty-first century. It is likely these pandemics impacted Crowley County.

- **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.
- **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.
- **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.
- **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.

Hantavirus

From 1993 (when the disease was first reported by CDPHE) and December 2018, there have not been any cases of hantavirus in Crowley County. However, hantavirus is typically found in rural areas like Crowley County, so the County is still vulnerable to the virus. Statewide during this timeframe, there have been 115 cases, with 41 of those ending in a fatality.[98]

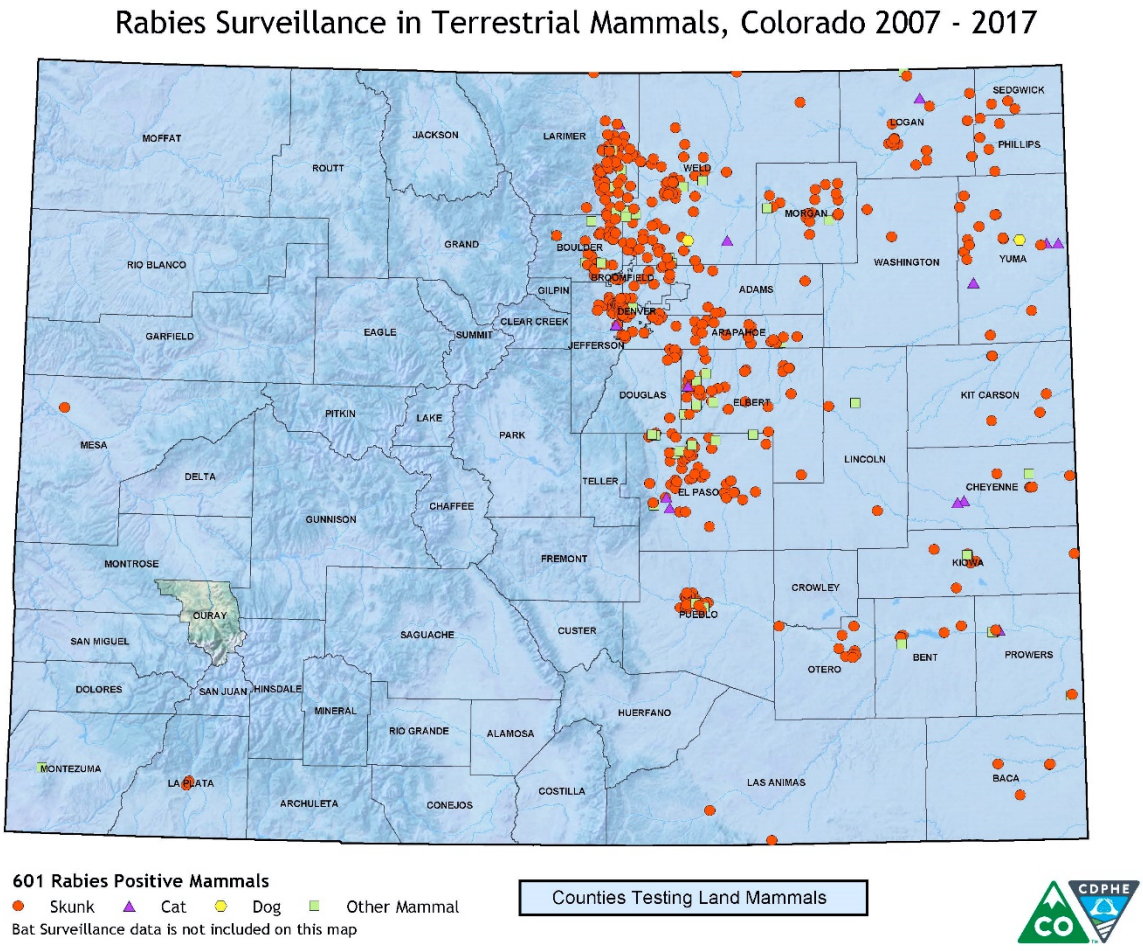
Plague

The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Crowley County.

Rabies

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. Figure 6-79 shows rabies-positive terrestrial mammals during this time period, with one report near the border of Otero and Crowley County.

Figure 6-79 Rabies Positive Animals in Colorado



[98] CDPHE; https://docs.google.com/document/d/1BBBKElU9sUHKKXVh93anVcOnouyISJ2AgNExlkb3MmE/pub

Tularemia

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Crowley County.

West Nile Virus

According to the CDPHE, in Crowley County there have been 11 cases of West Nile virus from 2002-2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.[99]

Probability

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Pandemic Influenza

The total County population of 5,749 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Crowley County population, approximately 1,724 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Zoonotic Diseases

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock,

[99] https://www.cdc.gov/westnile/statsmaps/cumMapsData.html

which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Crowley County, 13.3% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to significantly impact this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

6.9. Kiowa County Risk Assessment

6.9.1. Hazard Summary Risk Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in the following figures below. Those hazards ranked as "low" were determined by the LPC to not be a focus of this plan's overall mitigation strategy, therefore civil unrest and streambank erosion are not further assessed for Kiowa County. Although not formally adopting this plan, the Town of Haswell contributed their risk ranking through this planning process.

Table 6-58 Kiowa County Risk Ranking

Kiowa County	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	2	2	1	5	M
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	3	2	7	H
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

Table 6-59 Haswell Risk Ranking

Haswell	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	2	2	2	6	M

Haswell	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Earthquake	2	2	1	5	M
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	1	1	4	L
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	3	2	7	H
Hazmat Release	1	3	2	6	M
Pandemic and Zoonotic Disease	1	1	3	5	M

6.9.2. Agricultural Infestation

Previous Occurrences

Due to the regional nature of this hazard, see section 4.5.3.

Vulnerability Assessment

Inventory Exposed/Impacts

Crops and rangeland in Kiowa County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Kiowa County's economy. According to the 2017 USDA Census of Agriculture, Kiowa County has 388 farms totaling 1,091,807 acres. The estimated market value of agricultural products sold is $65,468,000. An agricultural infestation could impact the livelihood of residents in the County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation.

Potential Losses

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Kiowa County has experienced $174,073 in crop indemnity payments due to insects from 1991 to 2018. This equates to $6,447 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost of control of the infestation.

Land Use and Development

Any future agricultural endeavor in the County is vulnerable to the impacts of this hazard. Population change and related structural development are not impacted by or directly impact this hazard.

6.9.3. Dam and Levee Failure

Location

Dams

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are eight jurisdictional dams in Kiowa County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.[100] Two of these dams are significant hazard, one is considered No Public Hazard (NPH), and five are considered No Hazard. The two significant hazard dams have an Emergency Action Plan (EAP), both dated 6/18/2015. These dams are listed in Table 6-60.

Table 6-60 Jurisdictional Dams in Kiowa County

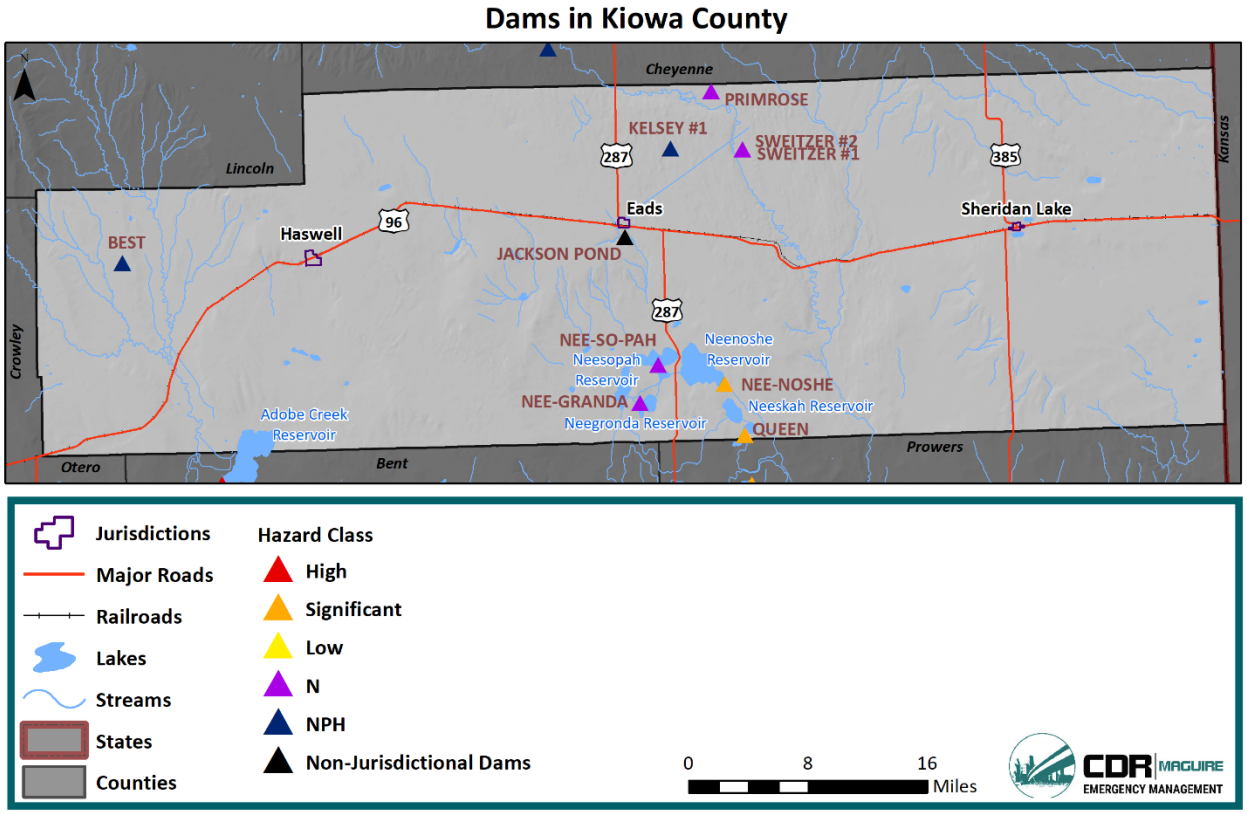
Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Best	Mustang Creek	Las Animas	NPH	Not Required	
Nee-Granda	Arkansas	Lamar	N	Not Required	
Nee-Noshe	Arkansas River	Lamar	Significant	Yes	6/18/2015
Nee-So-Pah	Arkansas River	Lamar	N	Not Required	
Primrose	Rush Creek	Holly	N	Not Required	
Queen	Arkansas River	Lamar	Significant	Yes	6/18/2015
Sweitzer #1	Rush Creek	Holly	N	Not Required	
Sweitzer #2	Rush Creek	Holly	N	Not Required	

Additionally, there is one non-jurisdictional dam (Jackson Pond – located on Kiowa Creek) in the County. A non-jurisdictional dam is a dam creating a reservoir with a capacity of 100 acre-feet or less and a surface area of 20 acres or less and with a height measured as defined in Rules 4.2.5.1 and 4.2.19 of 10 feet or less.[101]

These dams are mapped in Figure 6-80 below.

[100] https://data.colorado.gov/Water/DWR-Dam-Safety-Jurisdictional-Dam/mgjv-xmr5
[101] https://data.colorado.gov/Water/DWR-Dam-Safety-Non-Jurisdictional-Dam/6smc-zj6j

Figure 6-80 Dams in Kiowa County



Lastly, there are 24 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses which the state engineer has determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.[102]

Levees

There are no documented levees in Kiowa County. However, the levee inventory may not be complete, as the County has not been mapped by the NFIP. Additionally, smaller levees or embankments that do not provide 100-year flood protection would not be captured in this inventory.

Previous Occurrences

There are no reports of significant dam or levee failures in Kiowa County. In addition, there have been no dam incidents reported by the NPDP. The NPDP tracks dam incidents, described as events that affect the structural and functional integrity of dams, though not necessarily causing failure and not including ordinary maintenance and repair, vandalism, acts of war, recreational accidents, and sabotage.

[102] https://data.colorado.gov/Water/DWR-Livestock-Water-Tank-and-Erosion-Control-Dams/r2rp-ecjb

Probability

Although there has not been any significant dam or levee failures in Kiowa County, with nine dams in the County, the risk of a failure remains. Based on this assessment, the probability is rated as occasional, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas. Inundation areas for high hazard dams are available through Colorado Dam Safety. These areas are mapped in Appendix F (FOUO). Based on this data, no areas of Kiowa County are at risk to inundation from a high hazard dam failure event. Although not downstream of any high hazard dams, the Town of Eads is the first downstream community from the Kit Carson dam located in Cheyenne County, putting it at an increased risk to a failure event.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

No Kiowa County dams were included in the Colorado Dam Safety social vulnerability, population at risk, or Colorado high hazard dam release analyses.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries. Although not downstream from a high hazard dam, the Town of Eads is downstream of a dam in Cheyenne County, therefore the Town and areas upstream are at the highest risk to losses in the County from a dam failure event (although overall, this is a low risk).

The significant hazard dams in the County do have Emergency Action Plans (EAPs), which can help to reduce losses in the event of a failure.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

6.9.4. Drought

Location

All of Kiowa County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

Previous Occurrences

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing: precipitation averages over time to identify periods with precipitation amounts below the long-term average, U.S. Drought Monitor records/current conditions, and drought disaster declarations.

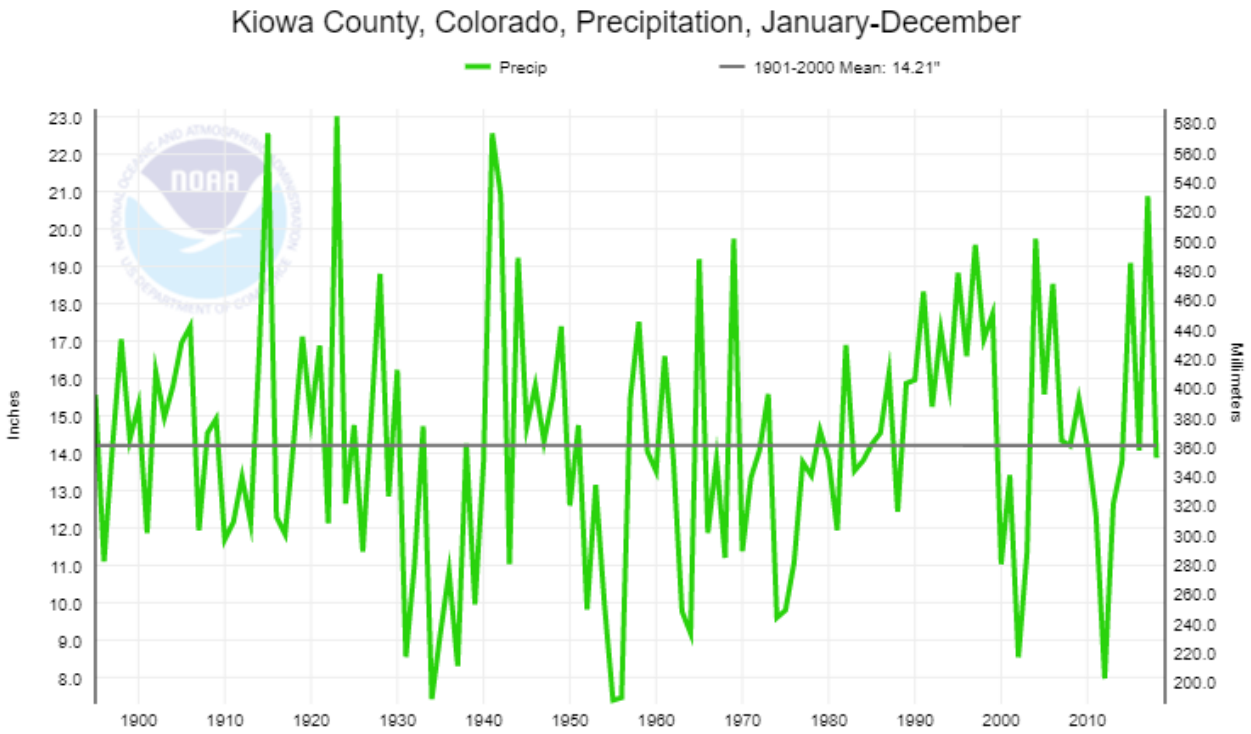
Drought conditions based on precipitation deficits are described in Table 6-61, indicating the top five years of precipitation deficit departure from the long-term average of 14.21 inches. Precipitation deficits are also shown in Figure 6-81. It is evident precipitation deficits have occurred throughout history in Kiowa County, particularly in the 1930s, 1950s and 2000s. The year 2018, which was a notably dry year in much of Colorado, resulted in only a 0.34-inch precipitation deficit in the County, ranking it the 56th driest year since 1895.[103]

Table 6-61 Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
14.21 in.	1955	7.39 in.	6.82 in.
14.21 in.	1934	7.42 in.	6.79 in.
14.21 in.	1956	7.46 in.	6.75 in.
14.21 in.	2012	7.97 in.	6.24 in.
14.21 in.	1937	8.31 in.	5.90 in.

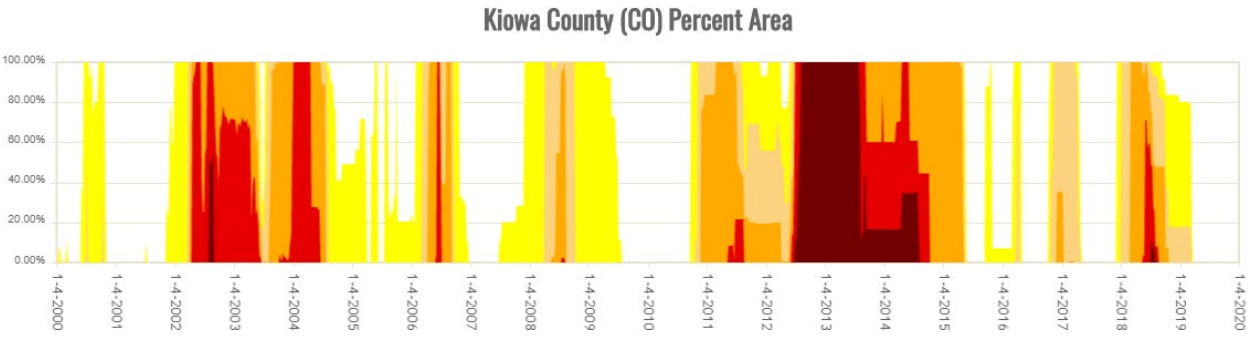
[103] NOAA National Centers for Environmental information, Climate at a Glance: County Time Series, published May 2019, retrieved on July 19, 2019 from https://www.ncdc.noaa.gov/cag/

Figure 6-81 Precipitation Deficits 1895-2016



Drought conditions based on U.S. Drought Monitor records are shown in Figure 6-82.[104] Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2012 to 2015. For parts of 2012 and 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2005, 2006, 2011, and 2018 to 2019. There has been some level of drought in the County nearly every year since 2000.

Figure 6-82 Kiowa County Previous Drought Events



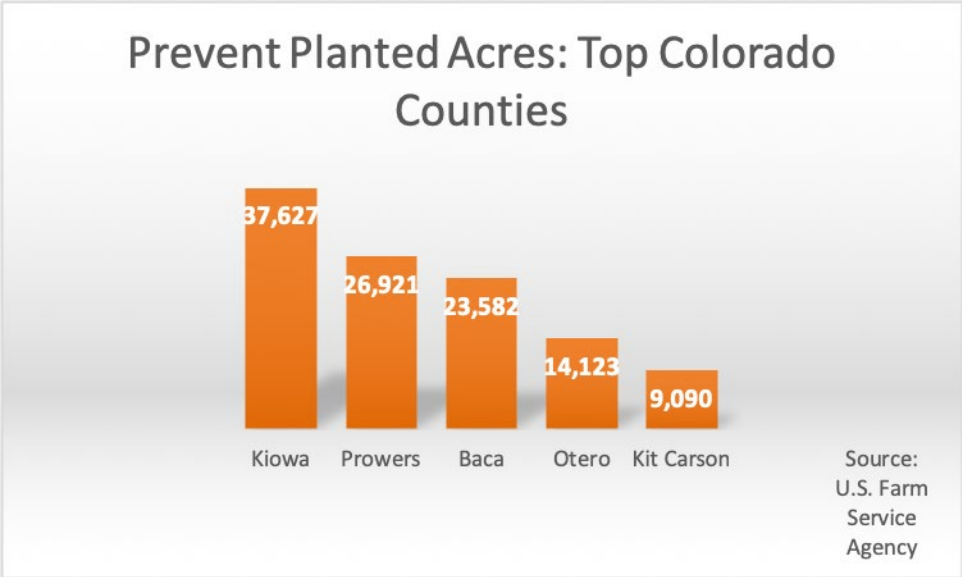
[104] https://droughtmonitor.unl.edu/Data/Timeseries.aspx for Kiowa County

Lastly, there have been 14 drought disaster declarations that have impacted Kiowa County from 1977 to 2018 (see Table 6-1-Disaster Declaration Summary).

Recent droughts are described below.

2018: Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Kiowa County, was experiencing extreme (D3) drought conditions. In Kiowa County, these conditions impacted farmers as well as heightened wildfire concerns. In southeastern Colorado, Baca, Kiowa, Otero and Prowers counties had, in total, tens of thousands of acres that went unplanted due to fears that the crops would fail, otherwise known as "prevent planted" acres. Figure 6-83 shows the top counties in the State with prevent planted acres due to the 2018 drought. Kiowa County placed first, with 37,627 acres.[105]

Figure 6-83 Prevent Planted Acres due to 2018 Drought



In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the worst impacts of drought to the agricultural community in Kiowa County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought. The 2018 drought did lead to declaring Kiowa County as a Primary county in a USDA Secretarial Natural Disaster designation for drought.

2012: After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres.[106] During this time 100% of Kiowa County was experiencing exceptional (D4) drought conditions. The 2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.

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[105] https://www.krcc.org/post/drought-puts-pinch-southern-colorado-agriculture
[106] https://climate.colostate.edu/pdfs/drought_2012.pdf

As of July 2019, no part of Kiowa County is experiencing drought.

See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

Probability

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.

For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought conditions that negatively impact the Southeast Region. In Kiowa County, there have been 14 drought disaster declarations from 1977 to 2018, equating to a 34% annual chance of drought occurrence, or a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Additionally, drought conditions can increase the County's risk to wildfire. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Kiowa County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Kiowa County has 388 farms totaling 1,091,807 acres. The estimated market value of agricultural products sold is $65,468,000. These assets are at risk to drought impacts. According to the Colorado Drought Plan – Visualization Story Map, the agriculture sector is the most vulnerable sector to drought in Crowley County, with a vulnerability score of 3.6, which is above the State average of 2.4.[107] Additionally, according to this analysis, Kiowa County has a higher than average socio-economic impact from drought, at 2.6, with the average being 2.49.

The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Kiowa County, during this time period, there has been 102 reported impacts. The most impacts (46) were categorized as "agriculture," followed by plants and wildlife (20 impacts), and relief, response, and restrictions (15 impacts). Examples of recorded impacts from the 2018 drought include fire bans, the inability to plant spring crops, and inability to grow crops/native plants. Additionally, ranchers weened and sold cattle early.

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[107] CWCB, State Drought Planning; https://lynker.maps.arcgis.com/apps/MapSeries/index.html?appid=8b8a995c2574439cbef10088a08d12ae

Potential Losses

The largest potential losses in Kiowa County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Kiowa County, and droughts causing major economic impacts to crops and cattle could also trickle into the rest of the economy. All jurisdictions and unincorporated County areas are impacted by drought events due to the connected nature of agriculture, water use, and the economy in the County.

Based on SHELDUS data from 1960 to 2017, Kiowa County has experienced $4,533,293 in crop losses from drought (2017 dollars). This equates to $79,531 in annual losses. No property damages were recorded in SHELDUS.

Land Use and Development

An increase in population and development could put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions.

6.9.5. Earthquake

Previous Occurrences

There are limited reports of earthquakes in Kiowa County. Past occurrences in the County were reported in the Earthquake Evaluation Report released by the CGS. The CGS also released a publication, titled "Colorado Earthquake Information 1867-1996," that provides details on past earthquakes. Based on that report, information of specific occurrences that affected the County are as follows:

Sept 29, 1928 – An earthquake shook Holly and other parts of Prowers County. Heck and Bodle (1930) described the earthquake as a rocking motion generally felt in Holly and indicated that many people were awakened and alarmed throughout the county. Stover, Reagor, and Algermissen (1984) rated this event at intensity IV.[108]

August 16, 2009 - An earthquake hit Colorado's plains, setting off tremors across the southeastern part of the state and into western Kansas, but causing no reported damage. The National Earthquake Information Center in Golden confirmed that a magnitude 3.9 earthquake occurred at 6:22 p.m. in southeastern Colorado, about 180 miles southeast of Denver.

Additionally, the USGS Earthquake Catalog was searched for previous earthquakes in the County. According to this database, there has been three additional earthquakes in or near the County since 1900. A magnitude 2.9 struck northeast of Wiley, just across the border with Prowers County, on January 10th, 2003. In 2014 a magnitude 3.0 struck on July 15th, 28km northwest of Eads in Kiowa County. On August 6th, 2016 a magnitude 2.5 quake occurred on the county line, 20km NNW of Lamar. 2nd, 1998.

Probability

Based on previous occurrences and knowledge on seismic activity in Kiowa County, the probability of an earthquake is possible.

[108] Colorado Earthquake Information 1867-1996

Vulnerability Assessment

Inventory Exposed/Impacts

It can be assumed all existing and future buildings and populations are at risk to the earthquake hazard. However, building codes can help reduce the risk to structures during an earthquake. Previous damages from earthquakes in Kiowa County have been minor (rattling of loose objects). However, it is possible for the Cheraw Fault, which passes through the western portion of the County, to produce a strong earthquake. The 2008 and 2014 Southeast Region hazard mitigation plans utilized a 7.0 magnitude scenario as the maximum magnitude produced from the Cheraw Fault. A 7.0 magnitude earthquake is considered a major earthquake that can cause serious damage over larger areas. Older buildings that are not constructed to modern day building codes are more at risk to these damages throughout the County.

Potential Losses

The most appropriate loss estimation methodology for seismic hazards involves scenario modeling using FEMA's Hazus loss estimation software. There are two levels of Hazus analysis, 'Standard,' which uses the default FEMA-derived datasets and damage functions, and 'Enhanced,' which uses independently compiled and accurately verified structure and infrastructure inventories and damage functions. The earthquake analysis conducted for this report includes a Standard level analysis using the latest version, Hazus-MH Earthquake Model V4.2. This risk assessment leveraged census tract data to conduct a Standard Hazus probabilistic scenario for Otero County.

A 2,500-year return period probabilistic scenario was used for the analysis (probability of 2% of occurrence in 50 years). A 2,500-year return period was chosen because the new International Building Code uses a 2,500-year map as the basis for building design. Based on CGS data, the highest magnitude earthquake that could be expected to occur in Kiowa County is a 7.0. This value was used in the probabilistic scenario in Hazus.

Results

Hazus estimates that there are under 1,000 buildings in the County which have an aggregate total replacement value of $156 million (excluding contents). Hazus estimates that about 16 buildings will be at least moderately damaged. Residential homes will be the most impacted.

The total economic loss estimated for the earthquake is $73 thousand, which includes building and lifeline related losses based on the County's available inventory. The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total building-related losses were $58 thousand; $15 thousand related to the business interruption of the County. Due to the analysis performed by Census Tract (with only one located across the entire County), it is difficult to determine losses by jurisdiction. In general, it can be estimated that the highest losses will be associated with populated towns, which contain more buildings.

A number of variables are included in Hazus analyses in order to arrive at the estimated values of loss due to earthquake. For this reason, it is important to note that the Hazus loss estimates detailed above should not be used as a precise measure, but rather viewed from the perspective of the potential magnitudes of expected losses.

Land Use and Development

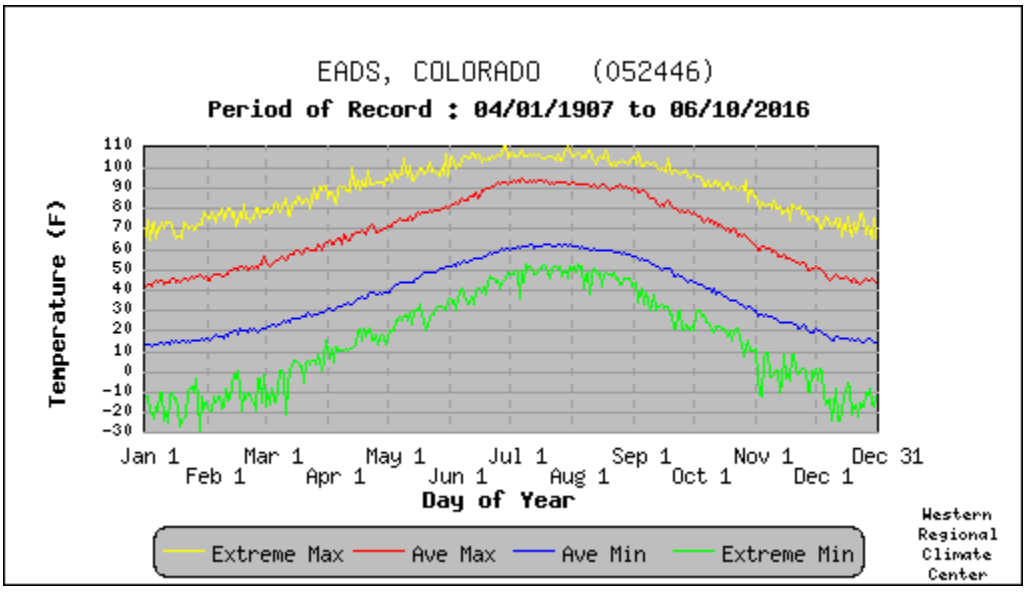
With the unpredictable nature of earthquake epicenter locations, it is not feasible to identify specific areas where development may exacerbate the risk to an earthquake. If population and development expand, enforcement of the unified construction code has great potential to mitigate increasing vulnerability and development pressure.

6.9.6. Extreme Temperatures: Extreme Cold

Location

Extreme cold temperatures can impact the entire County. Figure 6-84 shows the extreme temperature highs and lows for Eads. The lowest recorded temperature from this data is -29 degrees.[109]

Figure 6-84 Temperature Extremes in Eads, Colorado - Cold



Previous Occurrences

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Kiowa County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Kiowa County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

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[109] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

Probability

Extreme cold temperatures occur yearly in Kiowa County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Kiowa County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the planning area is most vulnerable to temperature extremes. In Kiowa County, 21% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Kiowa County has 388 farms totaling 1,091,807 acres. The estimated market value of agricultural products sold is $65,468,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in the County are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Kiowa County has experienced $11,146,970 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.[110] This equates to $412,850 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

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[110] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

Land Use and Development

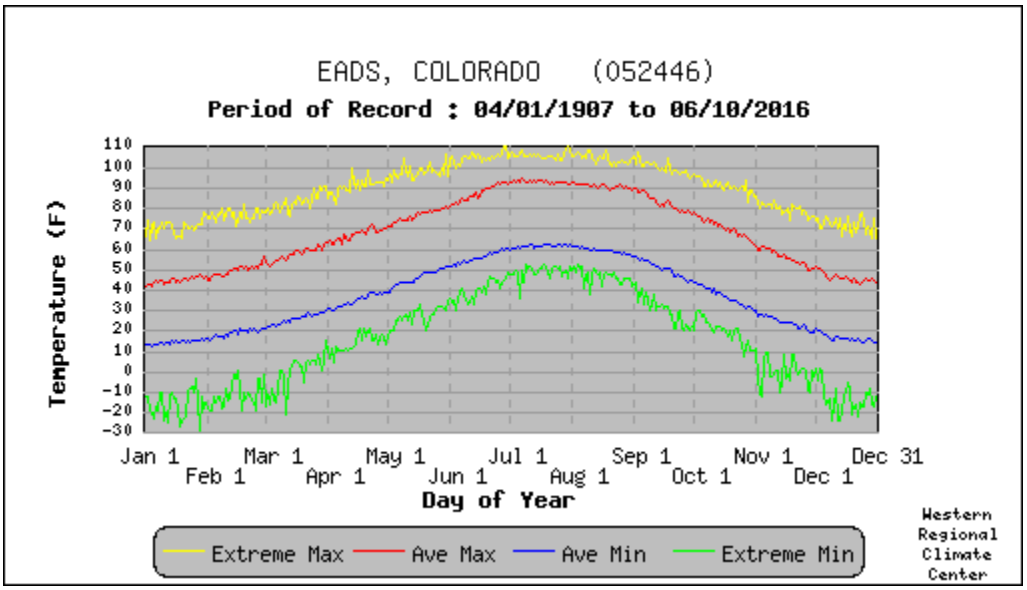
If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

6.9.7. Extreme Temperatures: Extreme Heat

Location

Extreme heat can impact the entire County. Figure 6-85 shows the extreme temperature highs and lows for Eads. The highest recorded temperature in this data is 110 degrees.[111] Across the County, maximum temperatures routinely break 100 degrees during the summer months.

Figure 6-85 Temperature Extremes in Eads, Colorado - Heat



Previous Occurrences

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Kiowa County has experienced 2,224, 1,116, and 247 days above 90, 95, and 100 degrees, respectively. Additionally, the County has experienced 219 heat waves during this time period. This places Kiowa County fifth in the State for number of days above 90 degrees from 1981 to 2017, as well as sixth in the State for number of heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable

[111] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.[112]

Probability

Based on the climate of Kiowa County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Kiowa County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. In Kiowa County, 21% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Additionally, people who frequently work, recreate outside, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Kiowa County has 388 farms totaling 1,091,807 acres. The estimated market value of agricultural products sold is $65,468,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Potential Losses

There is no recorded damage information for extreme heat in Kiowa County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat.

Based on USDA Risk Management Agency Data, Kiowa County has experienced $2,958,919 in insured indemnity amounts from 1991 through 2018 due to heat.[113] This equates to $109,589 in annual losses.

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[112] Colorado Climate Center

[113] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

Land Use and Development

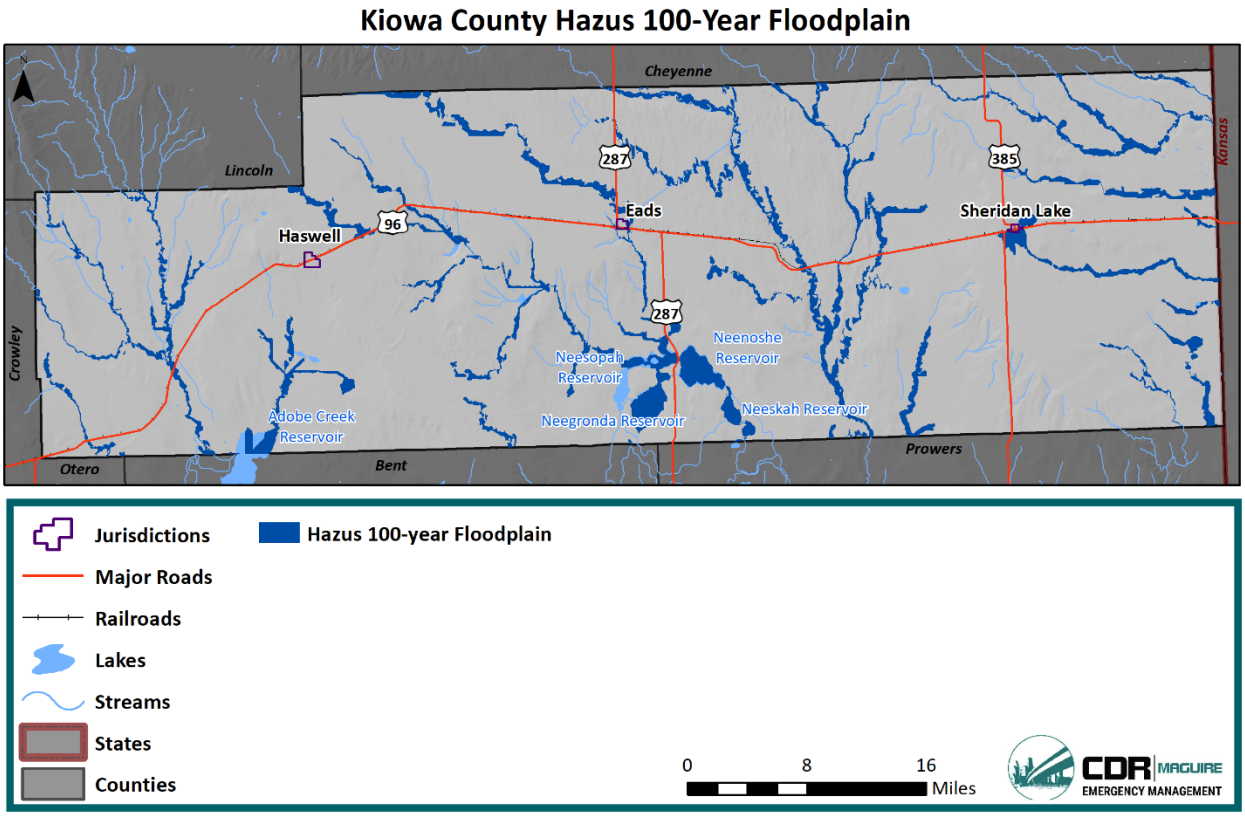
If development occurs and population grows, more people are at risk to the impacts of extreme heat.

6.9.8. Flooding

Location

The Kiowa County floodplain is not mapped by the NFIP. Therefore, the best available floodplain data was generated for the 2018 Colorado State Hazard Mitigation Plan. Using Hazus-MH 4.0, a standard Level 1 flood analysis was conducted. This resulted in the development of a stream network and hydrology for 10-square mile drainage areas. The 30-meter (one arc second) DEMs were used in this analysis as the terrain source. Hazus then ran hydraulics for and delineated the 100-year floodplain boundary. While not as accurate as an official FEMA floodplain, this boundary is available for use in GIS and is currently the best available data for the County. Figure 6-86 shows the floodplain for Kiowa County. The floodplain impacts many areas of unincorporated County, as well as through several jurisdictions, including portions of Eads and the majority of Sheridan Lake.

Figure 6-86 Kiowa County Hazus 100-year Floodplain



Previous Occurrences

In total, there have been 10 recorded flooding events in the County from 1950 to 2019.[114] All of these events were labeled as flash floods. Five of these events occurred near Eads, one in Haswell, two in Sheridan Lake, and two in unincorporated County near Brandon. None of these events have recorded

[114] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; LPC

injuries, deaths, or quantitative damages. However, recorded qualitative damages include flooded and washed out roads and road closures.

Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below. A description of all previous occurrences can be found in Appendix C.

Table 6-62 Flooding Events in Kiowa County from 2014 to 2019

Date	Location	Flood Type	Description
7/29/2014	Eads	Flash Flood	A nearly stationary strong storm produced over 5 inches of rain in and around Eads. Numerous roads and a viaduct were flooded. US Highway 287 was closed for a time.
7/29/2014	Eads	Flash Flood	Strong storms with heavy rain caused flash flooding in the south central section of the county. Numerous roads were flooded with washouts reported.
7/15/2017	Eads	Flash Flood	The underpass at US Highway 287 and State Highway 96 was flooded with over 2 feet of water. County Road 40 was also flooded.

NFIP Information

Kiowa County has not been mapped by the NFIP nor does it participate in the program at this time.

Probability

Based on 10 floods from 1950 to 2019, there is a 14% annual chance of flood occurrence in the County, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County and the Towns of Eads and Sheridan Lake. Damages in unincorporated areas can include (but are not limited to) rural structures, roads, and crops. As demonstrated in the previous occurrences, issues such as flooded and washed out roads can occur in/near the jurisdictions and unincorporated County. The area around Haswell is largely not impacted by flooding. However, much of the County is vulnerable to this hazard. Flooding can also cause injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Kiowa County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national

baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100-year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. While not as accurate as official flood maps, these floodplain boundaries are available for use in GIS and could be valuable to Kiowa County, given it has not been mapped by the National Flood Insurance Program. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhance (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, about three buildings would be at least moderately damaged by a county-wide 100-year flood. No buildings are estimated to be completely destroyed. The model estimates 25 households (or 74 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. The areas with the majority of displaced populations are near Sheridan Lake and Eads. Of the total displaced populations, three people are estimated to seek temporary shelter in public shelters.

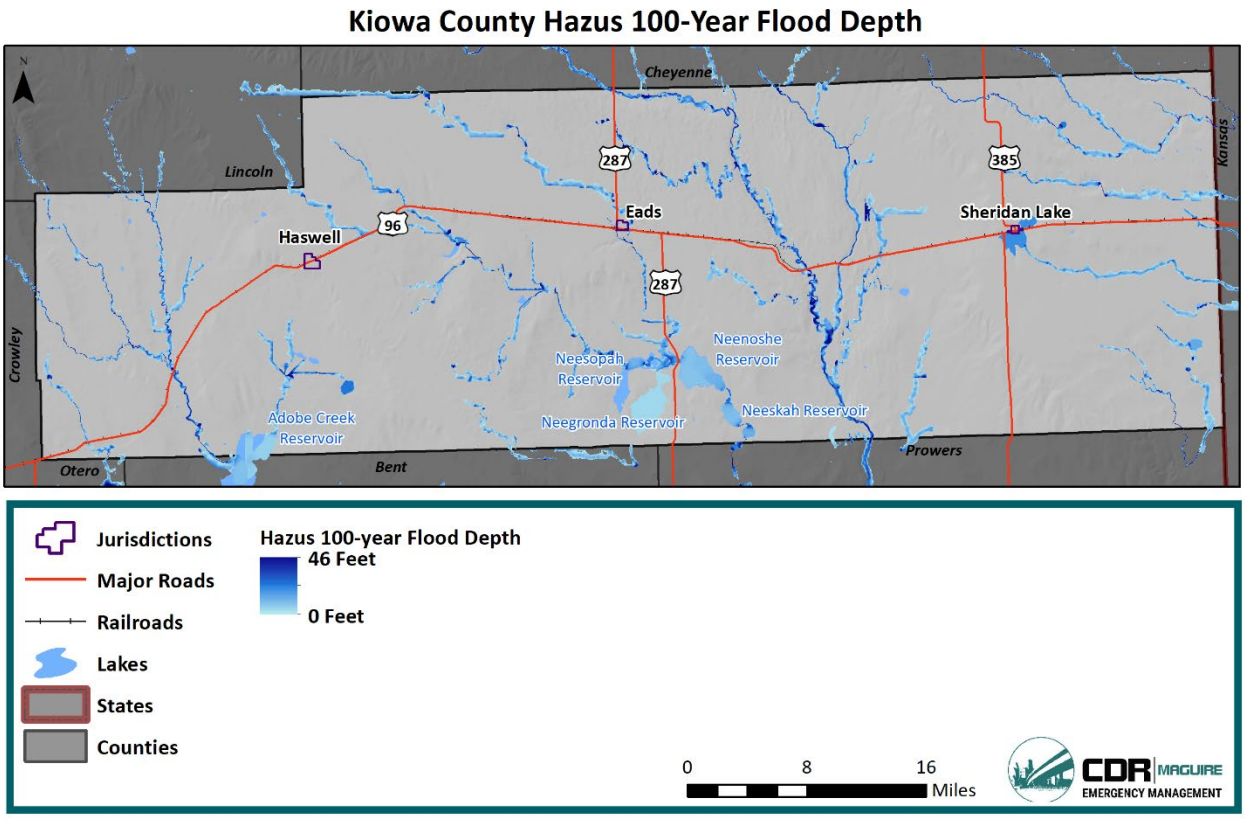
The total economic loss estimated for the flood event is $1.38 million, which represents 2.56% of the total replacement value of the County's building stock. Total economic losses are a combination of direct building losses and business interruption losses.

The economic losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood. All economic losses were direct building losses in this scenario. Residential occupancies made up 74.75% of the total loss.

Additionally, the model estimates that a total of 154 tons of debris will be generated. Of the total amount, Finishes comprises 68% of the total, Structure comprises 11% of the total, and Foundation comprises 21%. If the debris tonnage is converted into an estimated number of truckloads, it will require seven truckloads (25 tons/truck) to remove the debris generated by the flood.

Figure 6-87 shows the Hazus generated flood depths for a 1% annual chance (100-year) flood event for the County.

Figure 6-87 Kiowa County Hazus 100-year Flood Depth



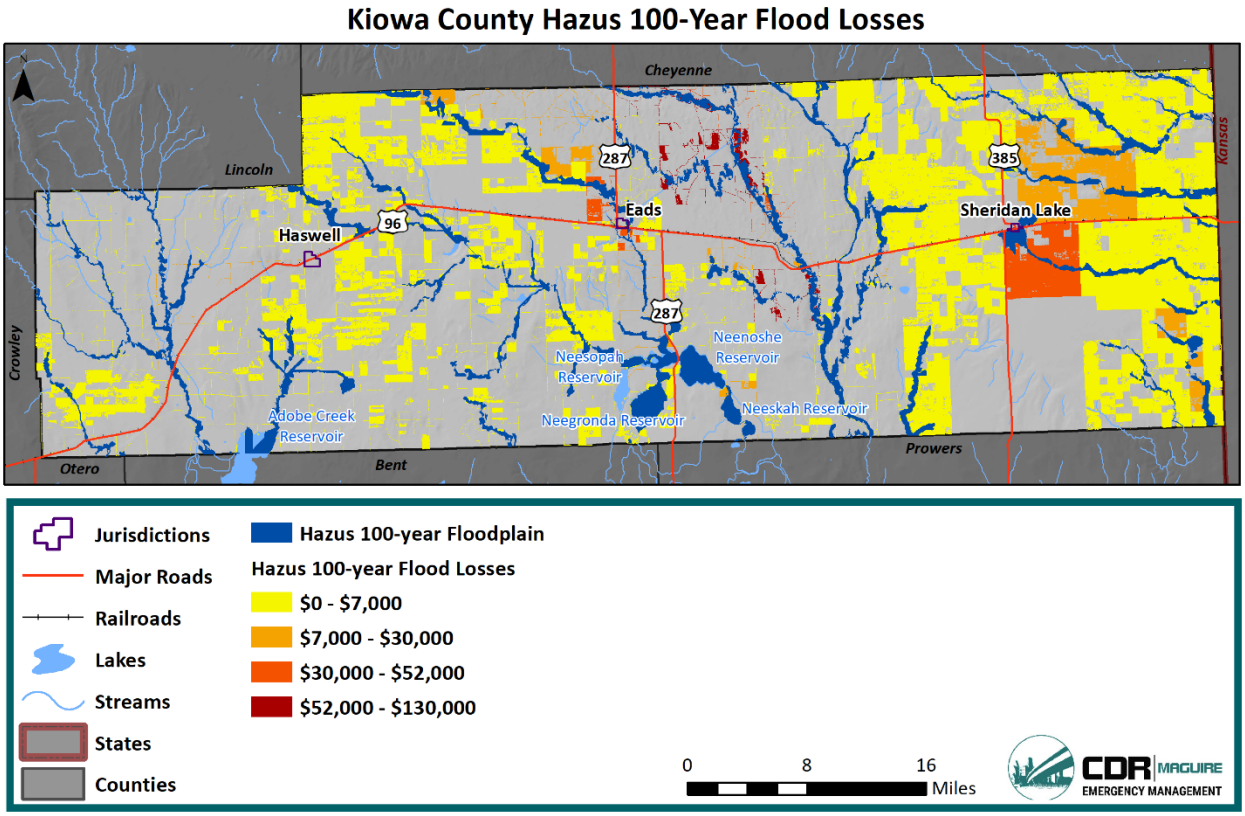
GIS was used to estimate losses by jurisdiction, shown in the table below. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall magnitude of flood losses in and surrounding each jurisdiction. The highest amount of losses are projected for unincorporated County.

Table 6-63 Kiowa County Hazus Estimated Flood Losses by Jurisdiction

Jurisdiction	Estimated 100-year Flood Losses
Haswell	$6,000
Eads	$112,000
Sheridan Lake	$367,000
Unincorporated County	$893,000
Total	**$1,378,000**

Figure 6-88 shows total economic losses from this event for the County ($1.38 million). The highest flood losses are projected to occur near Eads, north and south of Sheridan Lake, and in northern/central portions of unincorporated Kiowa County.

Figure 6-88 Kiowa County Hazus 100-year Flood Losses



In addition to the potential losses estimated by Hazus, there have been $1,343 in recorded losses in Kiowa County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $23.56 in annual losses to Kiowa County from flooding.

Land Use and Development

Regulating new development can help reduce the risk to new structures from flooding. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

6.9.9. Severe Weather: Thunderstorms/Lightning/Hail

Previous Occurrences

Thunderstorm

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 53 thunderstorm wind events have occurred in Kiowa County from 1955 to 2019. Thirteen of these events were recorded in Eads, eight in Haswell, 17 in Sheridan Lake, and

15 with no location listed/unincorporated County. The highest recorded wind gust was 115 mph, which occurred on 8/2/1972 in unincorporated County. Overall, these storms caused $32,000 in property damages and three injuries.

Table 6-64 summarizes this information by jurisdiction, and Table 6-65 describes thunderstorm wind events that have occurred since the 2014 Southeast Region Hazard Mitigation Plan.

Table 6-64 Kiowa County Thunderstorm Wind Events Summary Table

Jurisdiction	# Events	# Deaths	# Injuries	Damages
Eads	13	0	3	$18,000
Haswell	8	0	0	$2,000
Sheridan Lake	17	0	0	$10,000
Unincorporated County	15	0	0	$2,000
Totals	**53**	**0**	**3**	**$32,000**

Table 6-65 Recent Thunderstorm Wind Events in Kiowa County

Date	Location	Deaths	Injuries	Damages	Description
5/26/2016	Haswell	0	0	$0	Six inch diameter tree branches ripped off a tree.
5/26/2016	Haswell	0	0	$2,000	Windows broken in a house due to hail and winds.
5/26/2016	Eads	0	3	$11,000	Three semi-trailers were blown over on US Highway between 1 and 3 miles north of Eads. Slight roof damage to a house. Multiple trees downed.
7/15/2016	Sheridan Lake	0	0	$10,000	A hog farm sustained damage to the roofs on four buildings.
9/4/2016	Sheridan Lake	0	0	$0	Description unavailable
6/29/2018	Sheridan Lake	0	0	$0	A severe thunderstorm caused several telephone poles to be blown down from mile marker 192 to mile marker 197 on highway 96 in Kiowa county due to straight-line thunderstorms winds.
7/27/2018	Eads	0	0	$0	Four inch diameter tree limbs broken.
Totals	**Count: 7**	**0**	**3**	**$23,000**	

Lightning

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in

Colorado.[115] Kiowa County averages 7,300 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009-2018) and fourth in the nation for number of lightning fatalities (years 1959-2017).[116]

The NCEI Storm Events Database reports on the number of damaging or significant lighting events. In Kiowa County there has been one recorded damaging lightning event, on 5/23/2012 near Brandon (unincorporated County). This event caused $50,000 in damages when lightning struck a local oil company's holding tanks, igniting 350 barrels holding 15,000 gallons.

Hail

According to the NCEI Storm Events Database, there have been 290 recorded hail events in Kiowa County from 1955 through 2017. These events are summarized in Table 6-66. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. The largest recorded magnitude hail was 3.0 inches, occurring on 6/6/1994 near Towner (unincorporated County) and again on 7/29/2018 in unincorporated County. The 1994 event caused $500,000 in crop damages when hail destroyed up to one half of a wheat field southwest of Towner. Overall, these events caused $520,000 in recorded damages.

Table 6-66 Kiowa County Previous Hail Events, 1955-2017

Jurisdiction	# Events	Max Magnitude	# Deaths	# Injuries	Damages
Eads	88	2.75	0	0	$0
Haswell	55	2.75	0	0	$0
Sheridan Lake	48	2.5	0	0	$20,000
Unincorporated County	99	3.0	0	0	$500,000
Totals	**290**	**3.0**	**0**	**0**	**$520,000**

Table 6-67 shows hail events since the 2014 Southeast Colorado Hazard Mitigation Plan and Figure 6-89 shows all previous hail events on a map. It is evident the entire County is vulnerable to hail events.[117]

Table 6-67 Kiowa County Recent Hail Events

Date	Location	Magnitude (inches)	Damages	Description
5/9/2015	Eads	1.25	$0	An intense weather system caused heavy snow across the higher elevations and severe storms across the I-25 corridor and southeast plains. Flooding occurred with some of the storms and three tornadoes occurred in El Paso and Kiowa Counties.

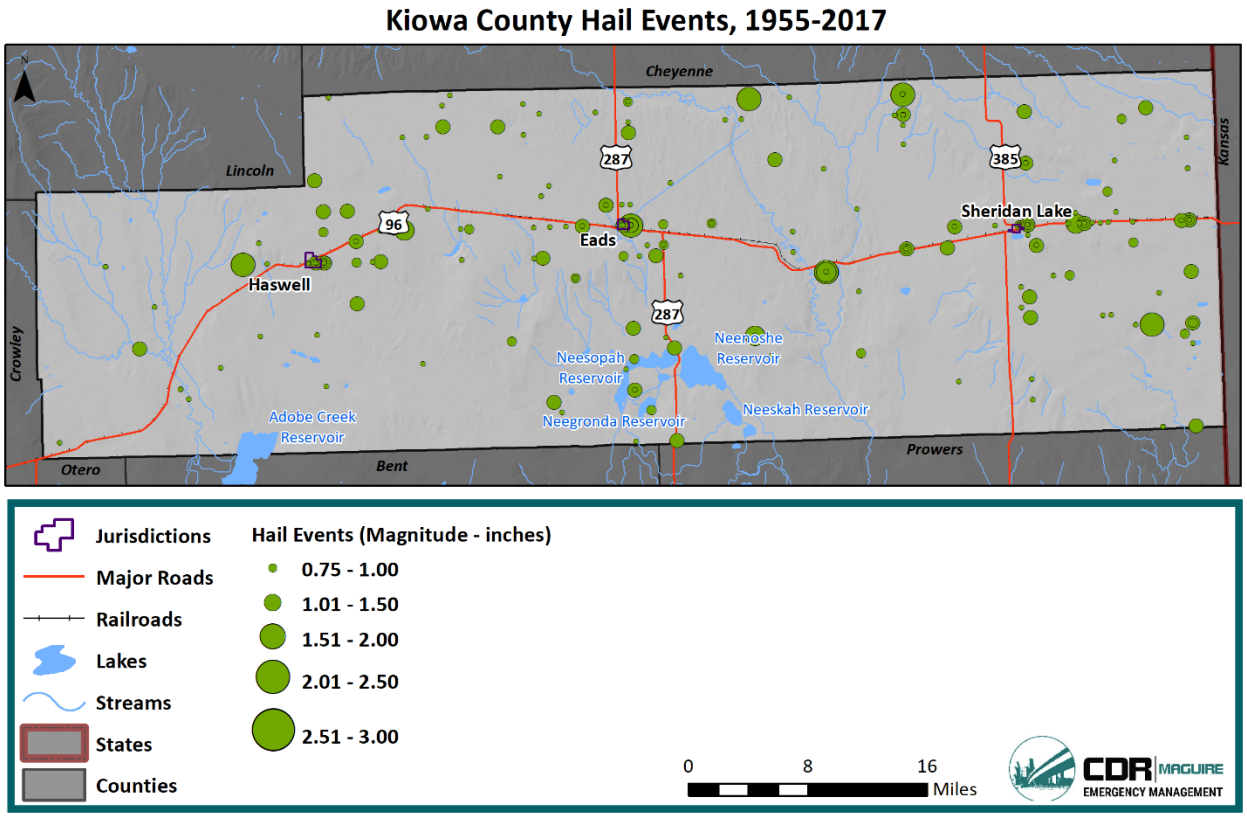
[115] https://www.weather.gov/pub/lightningCgCountyColorado
[116] https://www.weather.gov/pub/Colorado_ltg_ranking
[117] NOAA Storm Prediction Center, SVRGIS; https://www.spc.noaa.gov/gis/svrgis/

Date	Location	Magnitude (inches)	Damages	Description
7/19/2015	Eads	0.75	$0	A strong to severe storm produced hail up to the size of half dollars in northern and eastern Kiowa County.
7/19/2015	Towner	1.25	$0	A strong to severe storm produced hail up to the size of half dollars in northern and eastern Kiowa County.
4/15/2016	Eads	1.5	$0	Severe storms erupted across the southeast plains across Kiowa, Bent, and Baca Counties, causing hail up to the size of golfballs.
5/26/2016	Haswell	1	$0	Severe storms produced hail up to the size of half dollars, and damaging severe winds in Kiowa County.
5/30/2016	Eads	1.5	$0	A severe storm produced hail up to the size of ping pong balls.
7/15/2016	Sheridan Lake	2.5	$20,000	A very severe storm produced a wide swath of damaging winds and a tornado across eastern Kiowa and extreme northeastern Prowers County. A brief tornado was seen just east of Sheridan Lake, which broke windows in a house and did other minor property damage. Power poles, 18 in all, were snapped between Sheridan Lake and Towner. Windows were broken in many structures, including the Plainview School. Stadium lights were also destroyed. Eight miles south of the school, a hog farm sustained roof damage. In northeast Prowers County on County Road 35, a house and barn were severely damaged. Many power poles were also snapped.
9/3/2016	Chivington	1.25	$0	A severe storm produced hail up to half dollar size.
5/9/2017	Brandon	1.25	$0	A few marginally severe storms occurred.
5/15/2017	Eads	1	$0	A severe storm produced hail up to the size of quarters.
6/29/2017	Haswell	1.75	$0	A few severe storms produced hail up to the size of baseballs. The baseball size hail occurred in portions of Prowers and Baca Counties.
8/2/2017	Eads	0.88	$0	A strong storm produced hail up to nickel size.

Date	Location	Magnitude (inches)	Damages	Description
6/23/2018	Eads	1	$0	Hail up to the size of quarters were observed with a thunderstorm near Eads in Kiowa county.
7/29/2018	Brandon	1	$0	Severe thunderstorms impacted southeastern Colorado during the afternoon and evening of the 29th, producing hail up to the size of large apples as well damaging thunderstorm winds which caused tree damage, windows and windshields to be broken as well as damaging and/or destroying sheds. Some of the larger hailstone reports with this event included hail the size of quarters near Brandon, Calhan and Crestone, hail the size of Half Dollars near Fountain as well as hail the size of Ping-Pong Balls near Bristol and Sheridan Lake. Golf Ball hail was reported near Holly, while hail the size of Limes were measured near Fowler, Granada and Ramah. Finally, hail the size of large Apples impact locations near Chivington in Kiowa county.
7/29/2018	Chivington	3	$0	Description unavailable
7/29/2018	Sheridan Lake	1.5	$0	Description unavailable
8/17/2018	Haswell	1	$0	Severe thunderstorms produced strong winds and hail over portions of El Paso and Kiowa counties during the afternoon and evening of the 17th. Winds gusts around 60 mph were measured near Fountain, while hail the size of quarters were observed near Monument, Haswell and the Air Force Academy.
5/26/2019	Eads	2	$0	The afternoon and evening of Sunday, May 26th was a very active severe weather day across the eastern Colorado plains. Throughout the afternoon and evening hours several supercell thunderstorms developed and moved southwest to northeast through the eastern Colorado plains counties. Several reports of large damaging hail, destructive winds, and a few tornadoes

Date	Location	Magnitude (inches)	Damages	Description
				were seen by area SKYWARN spotters and Storm Chasers.
Totals	**Count: 18**	**Max: 3.0**	**$20,000**	

Figure 6-89 Kiowa County Previous Hail Events, 1955-2017



Probability

The probability of annual occurrence for all severe weather events (thunderstorm, lightning, and hail) is 100%, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences from thunderstorm events include infrastructure damage and building damage such as torn off roofs, as well as crop damage. Previous occurrences show events throughout the entire County. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County areas have similar vulnerabilities, as well as increased risk to crop losses from thunderstorms.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. Persons recreating or working outdoors during the months of April through

September will be most at risk to lightning strikes. Fortunately, there have been no incidents of death or injury associated with lightning in the County. Additionally, property and infrastructure damage are possible.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail events. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roof damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Potential Losses

According to SHELDUS, there have been $4,964,736 in damages from severe storms from 1960 to 2017 (2017 dollars) in the County. This equates to $87,100 in annual damages. According to the NCEI data, all jurisdictions have experienced losses from thunderstorm events. Overall, the most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

Recorded damages from lightning in the County equate to $50,000 since 1996, occurring from a single event. Lightning occurs frequently every spring through fall in the County, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

According to SHELDUS, there have been $2,336,556 in damages from hail from 1960 to 2017 (2017 dollars). This equates to $40,992 in annual damages. Similar to other thunderstorm hazards, the entire County is vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

Land Use and Development

Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

6.9.10. Tornadoes

Previous Occurrences

According to the NCEI, from 1950 through 2019, there have been 87 recorded tornadoes in Kiowa County. These tornadoes resulted in two injuries and $739,090 in recorded property damages. The strongest magnitude event was an F3 event occurring on 10/17/1971. This event caused $250,000 in reported damages, although no further description is available for these damages. This event, along with an F2 tornado on 5/12/1975, were the most damaging tornadoes in the County, each equating to $250,000 in recorded damages. Table 6-68 summarizes the recent tornado events in Kiowa County. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. Examples of damages recorded during these events include, damaged buildings, downed power poles, and equipment/machinery damage. Figure 6-90 shows tornadoes and

tornado paths in Kiowa County as documented by the NOAA Storm Prediction Center.[118] It is evident the entire County is at risk to this hazard.

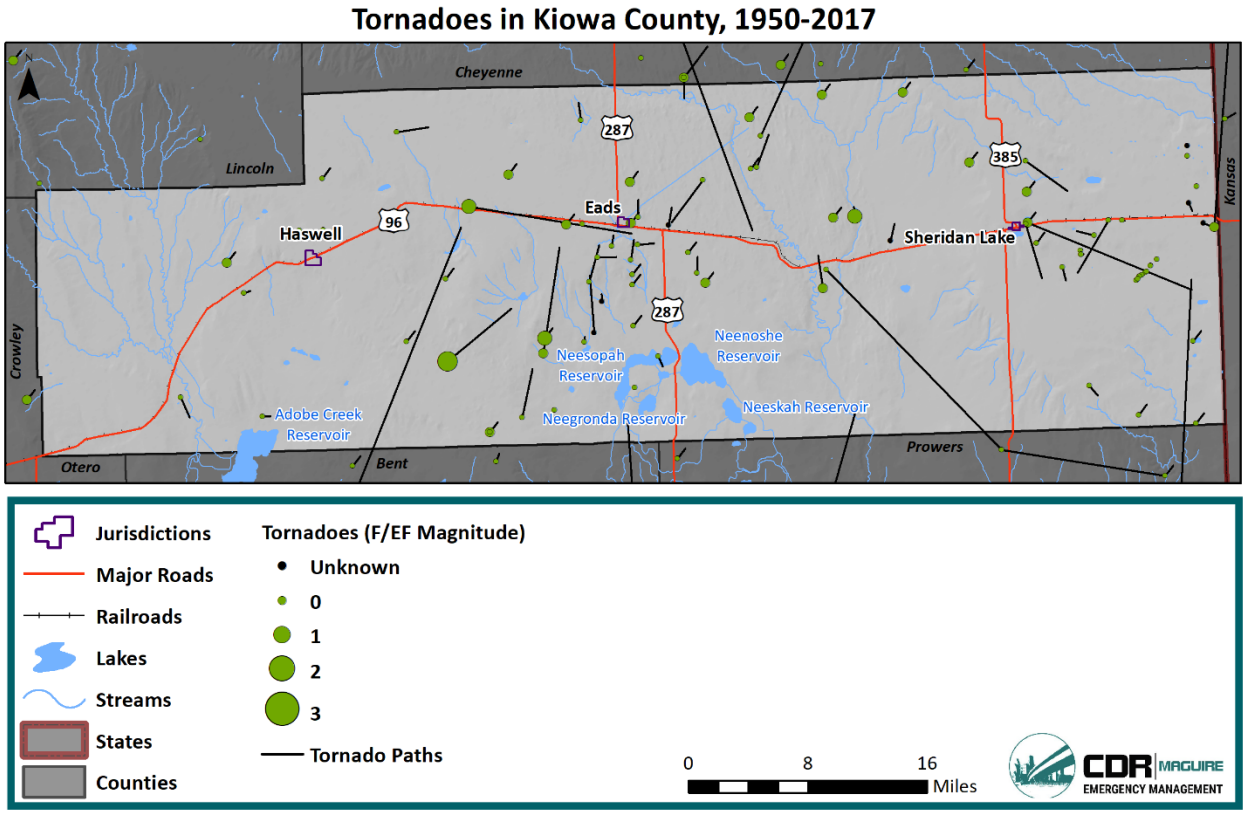
Table 6-68 Recent Tornadoes in Kiowa County

Date	Location	Mag	Injuries	Damages	Description
4/22/2010	Eads	EF1	0	$1,000	Tornado occurred over open country, but totally destroyed a small storage barn 10.3 miles southwest of Eads. Debris from the barn was carried as far as 1500 feet to the north-northeast.
5/18/2010	Chivington	EF0	0	$10,000	A tornado occurred over a rural area, taking down one power pole, flipping a center pivot irrigation system, and damaging an abandon farm house.
5/25/2010	Towner	EF0	0	$0	A landspout occurred over open country and caused no damage.
5/25/2010	Sheridan Lake	EF0	0	$0	A landspout occurred over open country and caused no damage.
7/15/2010	Eads	EF0	0	$0	A tornado occurred over open country causing no damage.
5/18/2011	Haswell	EF0	0	$0	A tornado occurred over open country causing no damage.
4/27/2012	Chivington	EF1	1	$40,000	Power poles just south of Chivington were downed, a mobile home was destroyed, and a church was damaged.
4/27/2012	Chivington	EF2	0	$30,000	A tornado destroyed an unoccupied mobile home and a garage.
6/2/2012	Eads	EF0	0	$0	A large, slowly rotating tornado occurred over a field, and caused no known damage.
8/23/2012	Sheridan Lake	EF0	0	$0	A landspout over farm fields caused no damage.
6/27/2014	Haswell	EF0	0	$0	A tornado occurred over open country causing no known damage.
5/9/2015	Eads	EF0	0	$0	A tornado produced no known damage as it tracked across mostly open country.
5/9/2015	Chivington	EF0	0	$3,000	A large tornado moved over mostly open country caused some damage to fencing and then moved in Cheyenne County.
4/15/2016	Eads	EFU	0	$0	Storm chasers captured video of a tornado across open country. The

[118] https://www.spc.noaa.gov/gis/svrgis/

Date	Location	Mag	Injuries	Damages	Description
					tornado caused no damage from which the NWS could assign an EF-scale rating.
5/27/2016	Towner	EFU	0	$0	Law enforcement witnessed a brief landspout tornado. The tornado caused no damage from which the NWS could assign an EF-scale rating.
5/27/2016	Towner	EFU	0	$0	A brief landspout tornado was witnessed by a trained spotter. The tornado caused no damage from which the NWS could assign an EF-scale rating.
5/27/2016	Towner	EFU	0	$0	A storm chaser captured video of a tornado across open country. The tornado caused no damage from which the NWS could assign an EF-scale rating.
7/15/2016	Sheridan Lake	EF0	0	$0	A small landspout tornado moved a vehicle off the road, broke windows in a house, and moved other smaller objects near the house.
5/9/2017	Brandon	EFU	0	$0	A brief landspout tornado was witnessed by the public. The tornado caused no damage from which the NWS could assign an EF-scale rating.
Totals	**Count: 19**		**1**	**$84,000**	

Figure 6-90 Kiowa County Tornadoes



Probability

Based on previous occurrences in Kiowa County, there is a 100% chance that a tornado will happen every year, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Historical evidence shows that Kiowa County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. It cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)

- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Kiowa County, 17.3% of the housing units are mobile homes.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

NCEI historical loss information shows $739,090 in total losses. Losses have occurred across the entire County. The most vulnerable areas in the County to high losses are jurisdictions that have more buildings and people, as well as agricultural land and mobile homes in unincorporated parts of the County.

SHEDLUS records $791,272 in County-wide losses from tornadoes from 1960 to 2017 (2017 dollars). This equates to $13,881 in annual losses from tornadoes. The majority of these damages are property damage ($789,062 property and $2,210).

Land Use and Development

Tornadoes can impact any location in the County; therefore, all new development and populations may be impacted by a tornado. Building codes can help reduce the risk to structures and people from tornado impacts.

6.9.11. Wildfire

Location

For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.[119]

[119] CSFS, 2017 CO-WRA Final Report

Burn probability for the County is mapped in Figure 6-91. Throughout the County, the burn probability ranges from low to moderate-high. The highest burn probability is in the southern/central region of the County.

Figure 6-91 Kiowa County Burn Probability

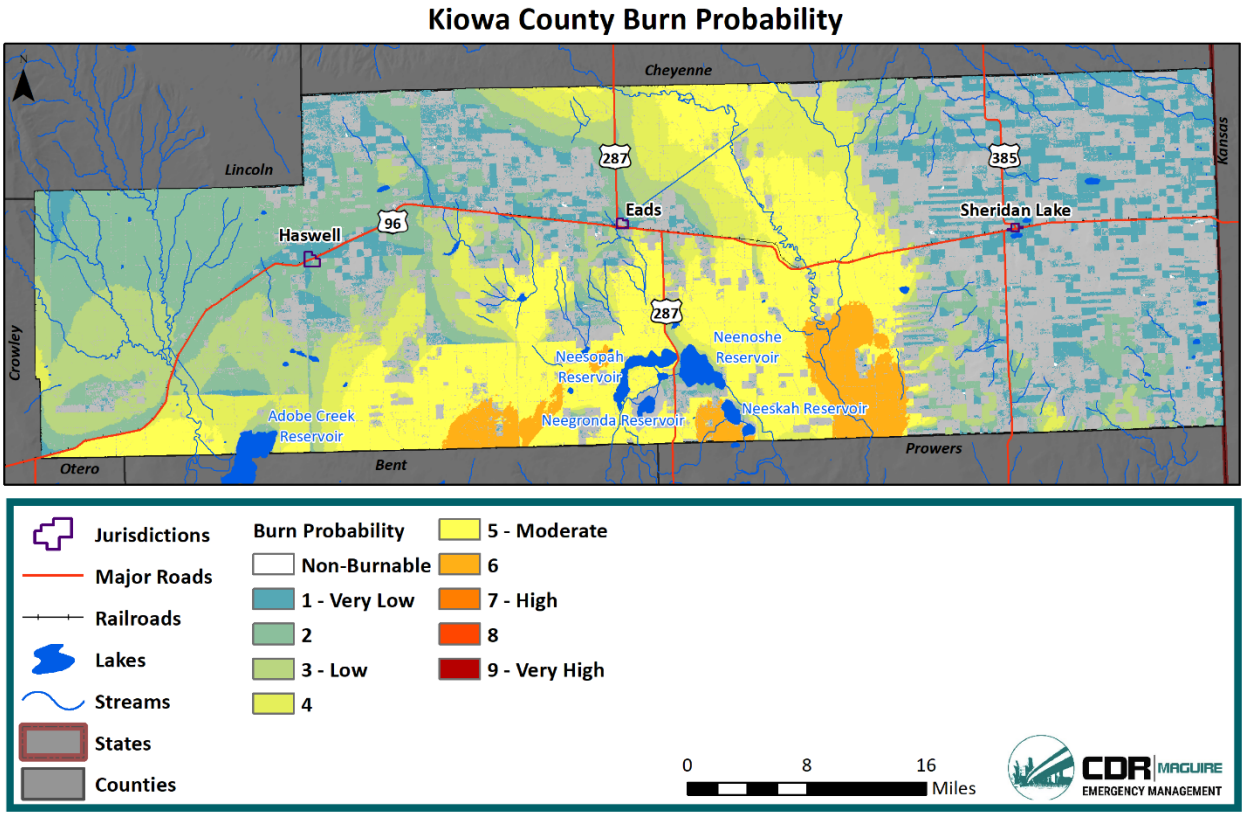
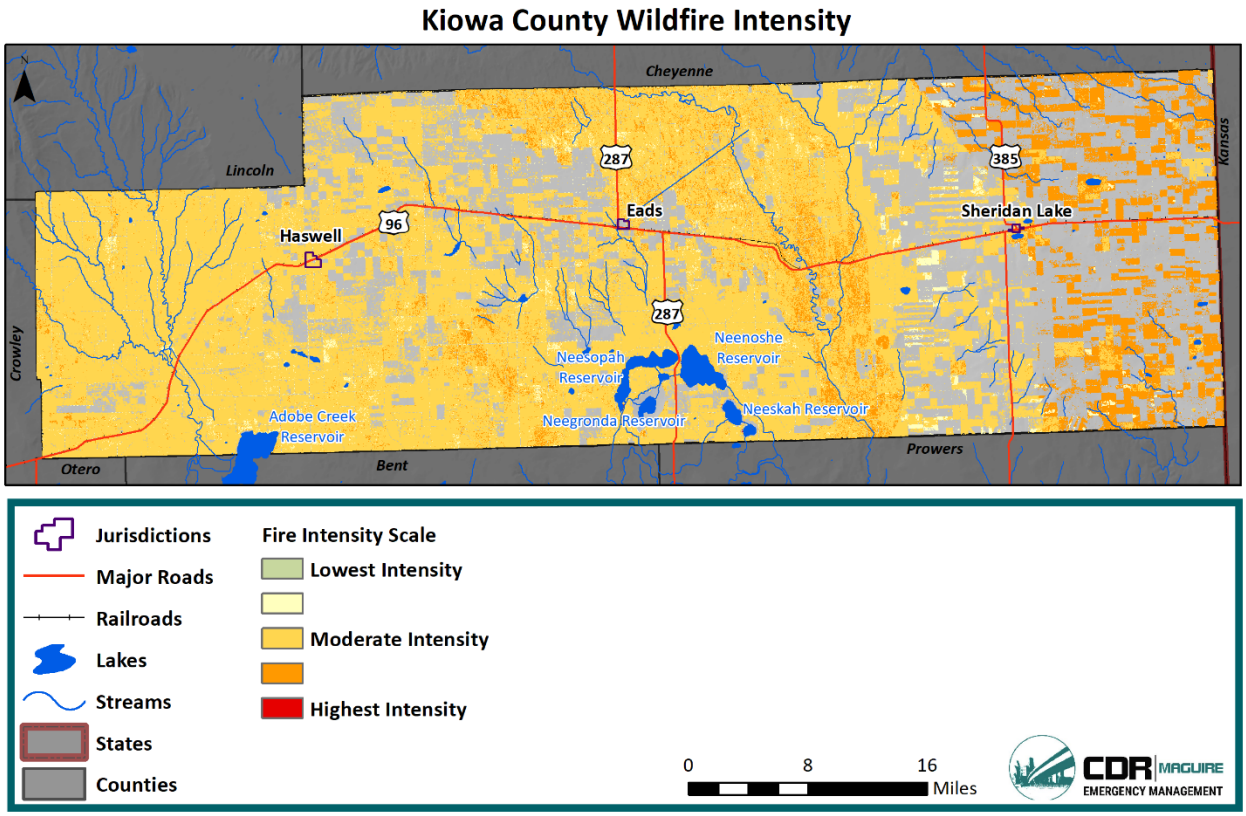


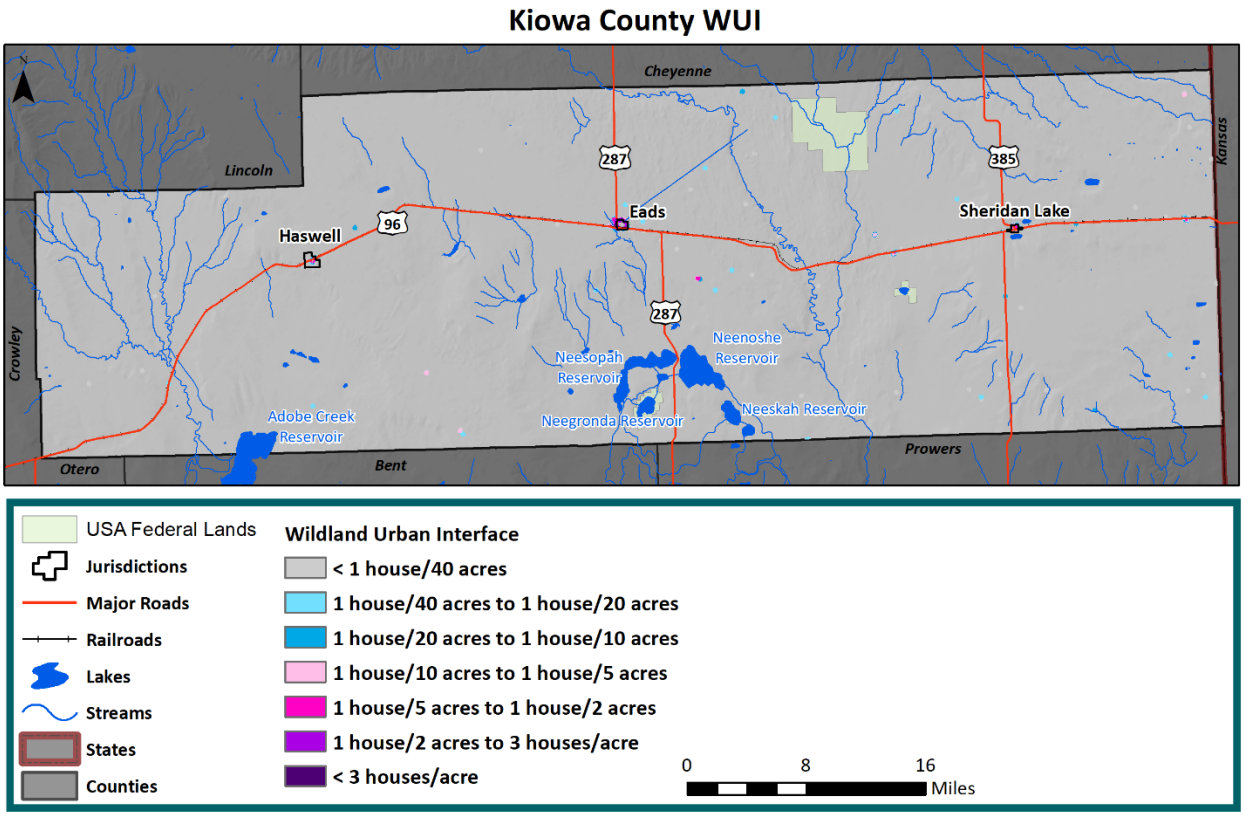
Figure 6-92 shows the wildfire intensity for Kiowa County. Much of the County has moderate wildfire intensity. The central portions of the County have higher wildfire intensity, as does the eastern portion, although this area was rated the lowest in terms of burn probability.

Figure 6-92 Kiowa County Wildfire Intensity



Overall, Kiowa County has very little WUI areas. The higher density WUI locations are located close to the jurisdictions, in particular Eads and Sheridan Lake. Figure 6-93 shows WUI locations throughout the County in addition to federal land ownership.

Figure 6-93 Kiowa County Wildland-Urban Interface



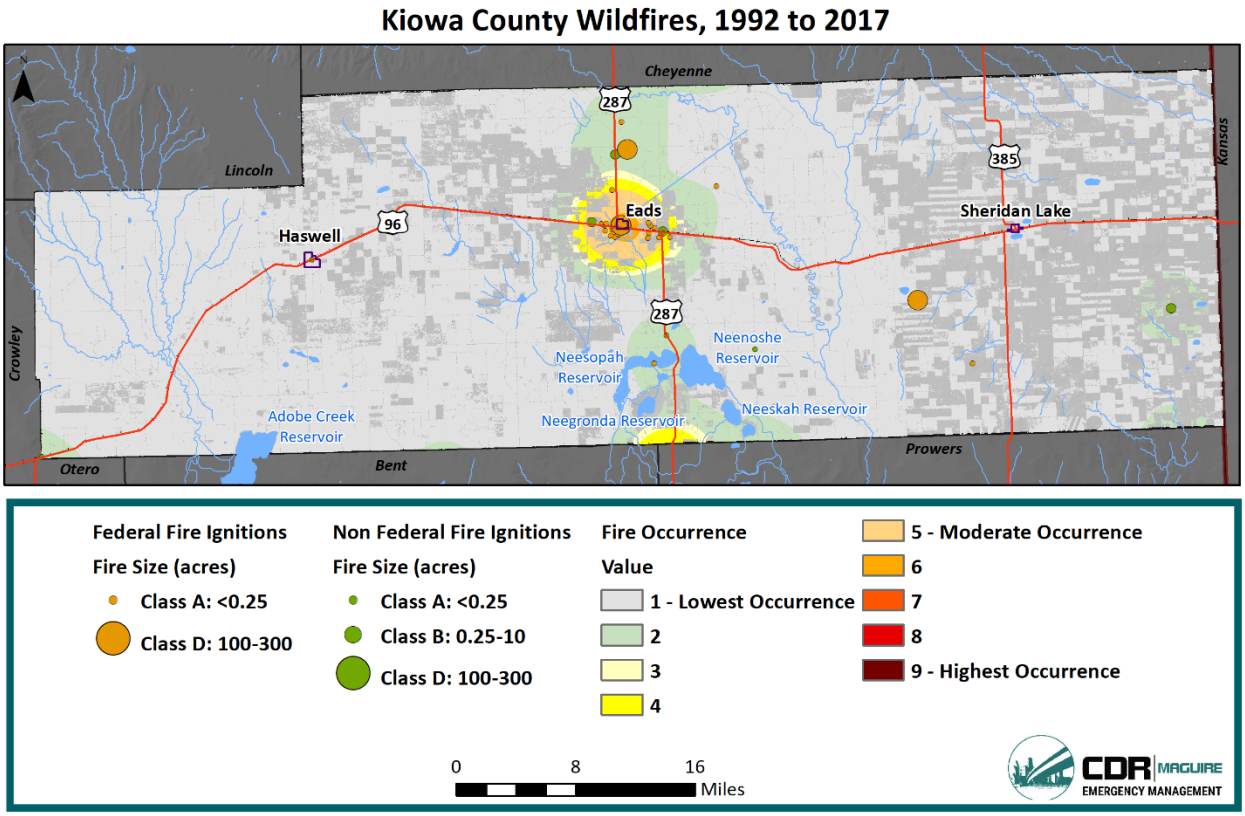
Previous Occurrences

According to the CO-WRA data, there have been 26 wildfires on federal lands from 1992 to 2015. Of these fires, 23 have been Class A (one-fourth acre or less) and 3 Class D (100 to 300 acres). Additionally, of these wildfires, two have been lightning-caused and the remaining 24 classified as miscellaneous, missing, unidentified.

Additionally, there have been 15 non-federal wildfires from 2009 to 2017. Of these fires, seven have been Class A, six Class B, and two Class D. Information regarding the cause of the wildfire is not available for non-federal fires.

Figure 6-94 shows these previous wildfires within Kiowa County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident the central portions of the County, particularly around Eads, have experienced the most previous wildfires.

Figure 6-94 Kiowa County Previous Wildfires



There have not been any notable wildfires since the 2014 Southeast Region Hazard Mitigation Plan.

Probability

Based on all of the available previous occurrence data, there have been 41 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the Kiowa County CWPP, the following are areas of highest wildfire concern for the County:

> Kiowa County's highest concern areas are the communities; the Sand Creek Massacre National Historic Site, National Park Service; the recreational areas; and the railroad/high-use travel corridors in the County. Also of concern are the river drainages and remaining travel corridors.

The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

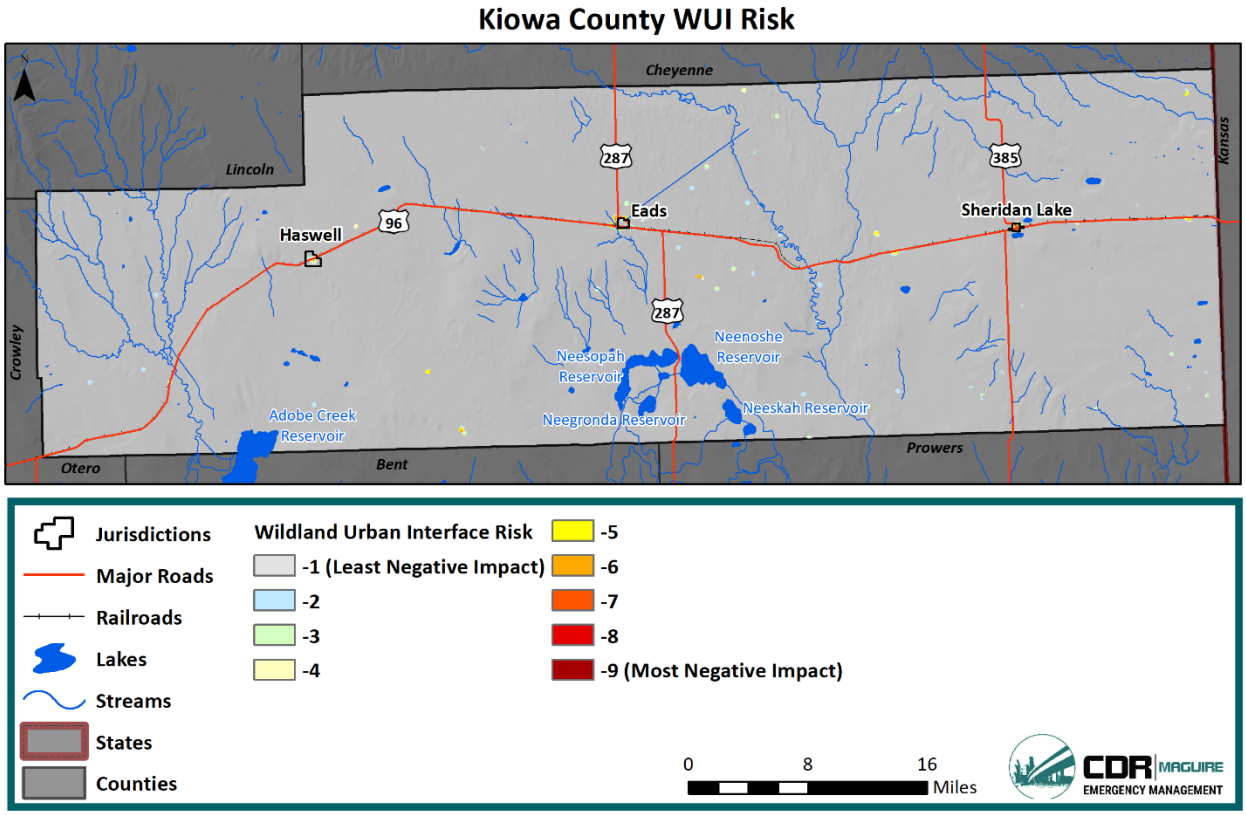
Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both

drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

Potential impacts are further assessed by utilizing the CO-WRA data to visualize different components of wildfire risk throughout the County.

Figure 6-95 shows the WUI risk in the County. The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.[120] According to the CSFS, 72% of the population in Kiowa County lives within the WUI. The majority of the County's WUI is in low to moderate negative impact areas. However, small portions, mostly around each jurisdiction and through central portions of the County, are in higher negative impact WUI areas.

Figure 6-95 Kiowa County WUI Risk



Potential Losses

Although there have not been any recorded losses from wildfire in the County, losses from wildfires can be substantial. Wildfires can impact structures, infrastructure, crops, and livestock as well as cause injuries and fatalities. Additionally, as with other parts of the western United States, the number of wildfires and acres burned in the Great Plains has increased and is projected to continue to increase. From 1985 to 1994, there were an average of 33 fires per year on the plains. From 2005 to 2014, that

[120] 2017 CO-WRA

average soared to 117 per year, an increase of almost 350%.[121] Causes of this increase are cited as previous fire suppression, more people living in the WUI, need for more education for property owners, and climate change. For example, many residents have created windbreaks by planting fast growing trees like red cedar and ash juniper close to their houses, inadvertently creating a source of fuel that is particularly volatile during prolonged periods of little to no rain. With this trend, wildfire losses will likely continue to grow in the County.

All jurisdictions are at risk to losses from wildfire. Structures in WUI areas as well as agricultural land and rural infrastructure in areas with higher wildfire probability and intensity are at the risk to highest losses. In Kiowa County, these areas are mostly concentrated through the central region of the County.

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of "living" wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

6.9.12. Windstorms

Previous Occurrences

According to the NCEI database, there have been 76 recorded high wind events in Kiowa County from 2003 to 2019. Within this database, wind events are reported at an NWS Zone level, so it is not possible to derive jurisdictional data. Kiowa County is split into two zones, to include the Eastern Kiowa County zone and Western Kiowa County zone. Each zone has experienced roughly the same number of events. In Kiowa County, many of the high wind events are associated with winter storms or thunderstorms, but stand-alone high wind events are also common. The highest recorded magnitude event took place on 10/10/2013 with gusts up to 70mph, where convection, without lightning, enhanced already high gradient winds in and near Eads, causing numerous trees limb to come down. Minor damage was also done to fences, outbuildings, and houses. This event caused $50,000 in recorded damages.

No deaths or injuries were recorded in the NCEI database. A total of $50,000 in damages were recorded from the single even ton 10/10/2013, however, SHELDUS reports $5,233,870 in damages from wind events from 1960 to 2017 (2017 dollars). No further details are available with the SHELDUS data. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below.

Table 6-69 Kiowa County Recent Wind Events

Zone	Date	Description
EASTERN & WESTERN KIOWA COUNTY (ZONE)	3/18/2014	Winds gusting in excess of 70 mph were measured over portions of southern Colorado. Some of the higher reported wind gusts were 59 mph at Schriever AFB (El Paso County)...NWS Pueblo (Pueblo County) and near Cheraw (Otero County)...60 to 64 mph wind gusts were recorded near Springfield (Baca County)...Peterson AFB (El Paso County...65 to 70 mph wind gusts impacted locations near Campo and Two Buttes (Baca

[121] Kiowa County Independent, http://kiowacountyindependent.com/news/1052-great-plains-new-wildfire-frontier

Zone	Date	Description
		County)...and a 75 mph wind gust was measured near Yoder (El Paso County).
EASTERN & WESTERN KIOWA COUNTY (ZONE)	4/29/2014	A strong upper level storm system over the upper Midwest generated wind gusts in excess of 60 mph across the southeast plains. Widespread low visibility prompted a Dust Storm Warning.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	12/23/2014	A storm system generated high winds across the I-25 corridor and southeast plains of Colorado. The highest reported wind gusts include 58 mph near Falcon (El Paso County...61 mph near Springfield and 71 mph near Campo (Baca County).
EASTERN & WESTERN KIOWA COUNTY (ZONE)	11/16/2015	A vigorous storm system produced wind gusts near 80 mph across sections of southern Colorado. Some of the higher reported wind gusts included...58 to 68 mph in Colorado City and Blende (Pueblo County)...in Fountain and Security (El Paso County)...in Cheraw (Otero County)...in Lamar (Prowers County)...and 70 to 78 mph in Campo and west of Two Buttes (Baca County).
EASTERN & WESTERN KIOWA COUNTY (ZONE)	3/23/2016	An intense weather system produced strong to high winds across many sections of southern Colorado. Wind gusts in the 58 mph to 69 mph range were reported across several locations for which there were high wind warnings. In addition, wind gusts between 70 and 80 mph were also observed across portions of El Paso and Pueblo Counties.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	12/25/2016	A strong upper level jet stream moving across Colorado generated strong to high winds from the eastern mountains into and through the southeast plains of Colorado. Widespread wind gusts between 60 and 70 mph occurred across the lower elevations. Winds gusted in excess of 75 mph across the eastern mountains and down the adjacent lee slopes. Despite the high winds, widespread damage did not occur.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	3/6/2017	A vigorous weather system generated high winds across many portions of southern Colorado. Some of the higher reported wind gusts included: near 60 mph at Florence (Fremont County) and Lamar (Prowers County), 60 to 70 mph near Two Buttes (Baca County), Cheraw (Otero County), Walsenburg and La Veta (Huerfano County), Wetmore (Custer County), and Hoehne (Las Animas County), 70 to 80 mph at Colorado City (Pueblo County), and around 85 mph near La Veta Pass ((Costilla County) and Swissvale (Fremont County).
EASTERN & WESTERN KIOWA COUNTY (ZONE)	3/24/2017	A potent winter storm produced snow and high winds across in I-25 corridor and plains. Some of the higher reported wind gusts included: near 60 mph at Cheraw (Otero County) and Colorado Springs, Fountain, Truckton, Peterson AFB (El Paso County), 60 to 70 mph near Colorado City (Pueblo County), La Veta (Huerfano County), Thatcher and Hoehne (Las Animas County), Springfield (Baca County), Finally, wind gusts of around 75 mph were observed near Campo (Baca County) and Blende (Pueblo County).

Zone	Date	Description
EASTERN & WESTERN KIOWA COUNTY (ZONE)	4/3/2018	A strong cold front generated northerly winds around 60 mph at times across portions of Crowley and Kiowa counties.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	4/13/2018	A passing storm system produced winds, gusting to around 80 mph at times over sections of southern Colorado. Wind gusts between 58 mph and 65 mph were realized near Two Buttes, Truckton, the Lamar Airport, the Colorado Springs Airport and the Air Force Academy. Wind gusts between 66 mph and 70 mph were recorded at the La Junta airport while a 76 mph wind gust was measured near Springfield. Finally, a wind gust that clocked 79 mph occurred near Campo.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	4/17/2018	An intense storm system produced strong winds in excess of 80 mph at times over large sections of southern Colorado. Some of the highest reported wind gusts with this event included wind gusts between 58 mph and 64 mph near Holly, Weston, Westcreek, Sargents, Florence, Truckton, Del Norte, Gardner, Monument, Penrose, Springfield, San Miguel, Wetmore, the Royal Gorge, the Fort Carson Airport and the Air Force Academy. Wind gusts between 65 and 69 mph were observed near Creed, San Isabel, Blende, Canon City, Two Buttes, Walsenburg, La Veta Pass as well as the Alamosa, Colorado Springs, Pueblo and Trinidad airports. Wind gusts between 70 and 79 mph were noted near Colorado City, Swissvale, La Veta Pass, Wagon Wheel Gap, the Pikes Peak Summit and the La Junta and Lamar airports. In addition, a wind gust of 85 mph was measured near Wolf Creek Pass.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	11/24/2018	A storm system produced winds, gusting to 80 mph at times over portions of southern Colorado. Wind gusts between 58 mph and 65 mph were recorded near Walsenburg, Springfield, Hoehne, Sargents, Cheraw, Peterson Air Force Base, Lamar and Fountain. Wind gusts between 66 mph and 70 mph were measured near Weston and the Air Force Academy. Finally, a wind gust that clocked 80 mph was realized near the Pikes Peak summit.
WESTERN KIOWA COUNTY (ZONE)	12/12/2018	A storm system produced winds, gusting to around 65 mph at times over sections of southeastern Colorado. A wind gust of 58 mph was measured 4 miles to the south of Cheraw, while a wind gust of 64 mph was measured 4 miles to the southwest of Campo.
EASTERN & WESTERN KIOWA COUNTY (ZONE)	3/13/2019	An extremely powerful low pressure system(setting records for lowest pressure measurements in Colorado)developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley,

Zone	Date	Description
		Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.
Total: 14		

Probability

Based on 76 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

There is little information to indicate damages from wind events. Mitigation measures, such as “Living Snow Fences” (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Potential Losses

SHELDUS reports $5,233,870 in damages from wind events from 1960 to 2017 (2017 dollars). This equates to $91,822 in annual damages. It is difficult to determine details on losses since the SHELDUS data does not provide loss or damage information. However, it is evident that losses can be expected in Kiowa County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

6.9.13. Winter Storms

Location

The entire County is subject to winter storm events. Kiowa County averages approximately 23 inches of snow per year.

Previous Occurrences

According to the NCEI database, there have been 35 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2005 to 2019. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information. Kiowa County is split into two zones, to include the Eastern Kiowa County zone and Western Kiowa County zone. The western zone has experienced 15 winter storm events and the eastern 20 events. No damages, deaths, or injuries were reported with these events. However, SHELDUS reports $15,613,809 in damages from 30 events. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below. Notable winter storm events that impacted Kiowa County prior to the 2014 Southeast Region Hazard Mitigation Plan are described in Appendix C.

Table 6-70 Winter Storm Events in Kiowa County, 2014-2019

Date	Type	Description
2/3/2014	Winter Storm	An intensifying storm system across southeast Colorado generated heavy snow in combination with gusty northerly winds at times. Generally, around 6 inches accumulated across the warning area in the southeast counties. Lesser amounts occurred outside the warning area...including...4 to 5 inches near Pueblo Reservoir and Beulah (Pueblo County), Monument and Colorado Springs (El Paso County), Trinidad (Las Animas County), La Junta and Cheraw (Otero County). Finally, 12 inches of snow was measured at Wolf Creek Pass in Mineral county.
2/21/2015	Winter Storm	A vigorous winter storm system impacted large portions of southern Colorado with significant snow and gusty winds. Some reported snow amounts included 6 to 10 inches at Colorado Springs (El Paso County)...Woodland Park (Teller County)...Pueblo and Pueblo West (Pueblo County)...Salida (Chaffee County)...Texas Creek (Fremont County)...Crestone (Saguache County) and Alamosa. Eleven to 15 inches graced Monument and the Air Force Academy (El Paso County)...Penrose (Fremont County)...Walsenburg (Huerfano County)...Poncha Springs (Chaffee County)...while 16 to 20 inches of snow was measured near Beulah and Colorado City (Pueblo County)...Rosita (Custer County) and Monarch Pass (Chaffee County). Twenty to 26 inches was noted near Westcliffe (Custer County)...Rye (Pueblo County) and Maysville (Chaffee County)...while 39 inches covered Wolf Creek Pass (Mineral County).
11/17/2015	Winter Storm	A vigorous storm system produced heavy snow in combination with strong winds and deep snow drifts to many sections of southern Colorado. Some of the higher reported snow amounts and snow drifts from this event are as

Date	Type	Description
		follows...12 to 14 inches near Walsenburg (Huerfano County) and Aguilar (Las Animas County) with 3 foot drifts...16 inches with 3 foot drifts near Branson (Las Animas County)...18 inches with 5 foot drifts 10 miles to the west-northwest of Kim (Las Animas County)...18 inches near Springfield (Baca County) and near the Spanish Peaks (Huerfano County)...20 inches near Monument (El Paso County) with 4 foot drifts...and 20 to 22 inches near Woodland Park (Teller County)...Trinidad (Las Animas County) and the summit of Wolf Creek Pass (Mineral County). I-25 was closed for a time south of Walsenburg, as well as US Highway 160 in Baca and Las Animas Counties, and US Highway 287 in Prowers and Baca Counties. People were stranded on US Highway 287 south of Lamar, and had to be rescued.
12/13/2015	Winter Storm	A storm system generated snow, heavy at times, across to portions of southern Colorado. Wind whipped snow occurred across the far eastern plains in portions of Kiowa and Las Animas Counties, and all of Prowers and Baca Counties causing major impacts. Elsewhere, heavier snow totals included...6 inches at Monarch Pass and Buena Vista (Chaffee County)...7 inches near Leadville (Lake County)...9 inches at the summit of Wolf Creek Pass (Mineral County)...Salida (Chafee County) and near Westcliffe (Custer County) and 12 inches at Maysville (Chaffee County).
1/14/2017	Winter Storm	A Pacific storm system generated gusty winds and heavy snow to southern Colorado, especially over the higher terrain. Some of the higher reported snow totals included: 6 to 9 inches near the Spanish Peaks and Walsenburg (Huerfano County), Rye and Beulah (Pueblo County), Monte Vista (Rio Grande County), Leadville (Lake County), Kim, Hoehne, Trinidad (Las Animas County), Maysville (Chaffee County), and 17 inches near Monarch Pass (Chaffee County).
4/29/2017	Winter Storm	A vigorous late Spring storm impacted many sections of southern Colorado with impressive snow amounts in combination with gusty winds and localized snow drifts around 5 feet in combination with many downed tree limbs. Some of the higher reported snow totals with this event included six to nine inches of snow near Leadville, Salida, the Air Force Academy, Lamar, Woodland Park, La Junta, Texas Creek, Pueblo, Rocky Ford and Maysville. Ten to fifteen inches of snow was noted near WestCliffe, Manzanola, Walsenburg, Black Forest, Calhan, Pueblo West, Monument, Avondale, Springfield and Blende. 15 to 20 inches of snow graced the communities of Wetmore, Pritchett and Holly. 23 inches of snow was measured near Beulah. An impressive 25 to 30 inches of snow covered the communities of Rye, Colorado City and Two Buttes, while a whopping 39 inches of snow impacted San Isabel.
2/22/2019	Winter Storm	A slow moving snow storm generated widespread snow, heavy at times over many portions of southern Colorado. Some of the higher reported snow totals with this event included six inches of snow near Creede, Monument, Florissant, Palmer Lake and Rye. Seven inches of snow graced locations near Buena Vista, Cascade, Hillside, Rosita, Westcliffe, Colorado City, Texas Creek and Beulah. Eight inches of snow was observed near South Fork, Colorado Springs and Manitou Springs. Locations near the Spanish Peaks, Black Forest

Date	Type	Description
		and San Isabel recorded nine to ten inches of snow with this event, while Wolf Creek Pass was inundated with 40 inches of snow with this storm system.
3/13/2019	Blizzard	A blizzard termed a “bomb cyclone” impacted much of Colorado’s Front Range and Eastern Plains. To qualify as a "bomb cyclone," an area of low pressure must drop at least 24 millibars in 24 hours or less. A Barometric pressure reading of 970.4 mb recorded in Lamar on March 13 is the lowest reading ever recorded in the State. The blizzard produced 80-90 mph winds, stranded people on impassable roadways, and caused power outages throughout the Region.
Total: 8		

Probability

Utilizing the 35 reported NCEI events from 2005-2019, there is a 100% chance of a winter storm event occurring annually in Kiowa County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

Vulnerability Assessment

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard profiled in Section 4.9.4.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County’s elderly population is a potentially vulnerable demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $15,613,809 (2017 dollars) in total losses from winter weather events. This is the highest loss from any SHELDUS reported hazard in the County. This equates to $273,926 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code (for those areas with building codes) should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services. Areas without building codes should consider adopting and enforcing some type of building code.

6.9.14. Cyber Hazards

Previous Occurrences

Across the southeast region, there have been two reported events where counties paid ransomware.

Probability

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

Vulnerability Assessment

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

Land Use and Development

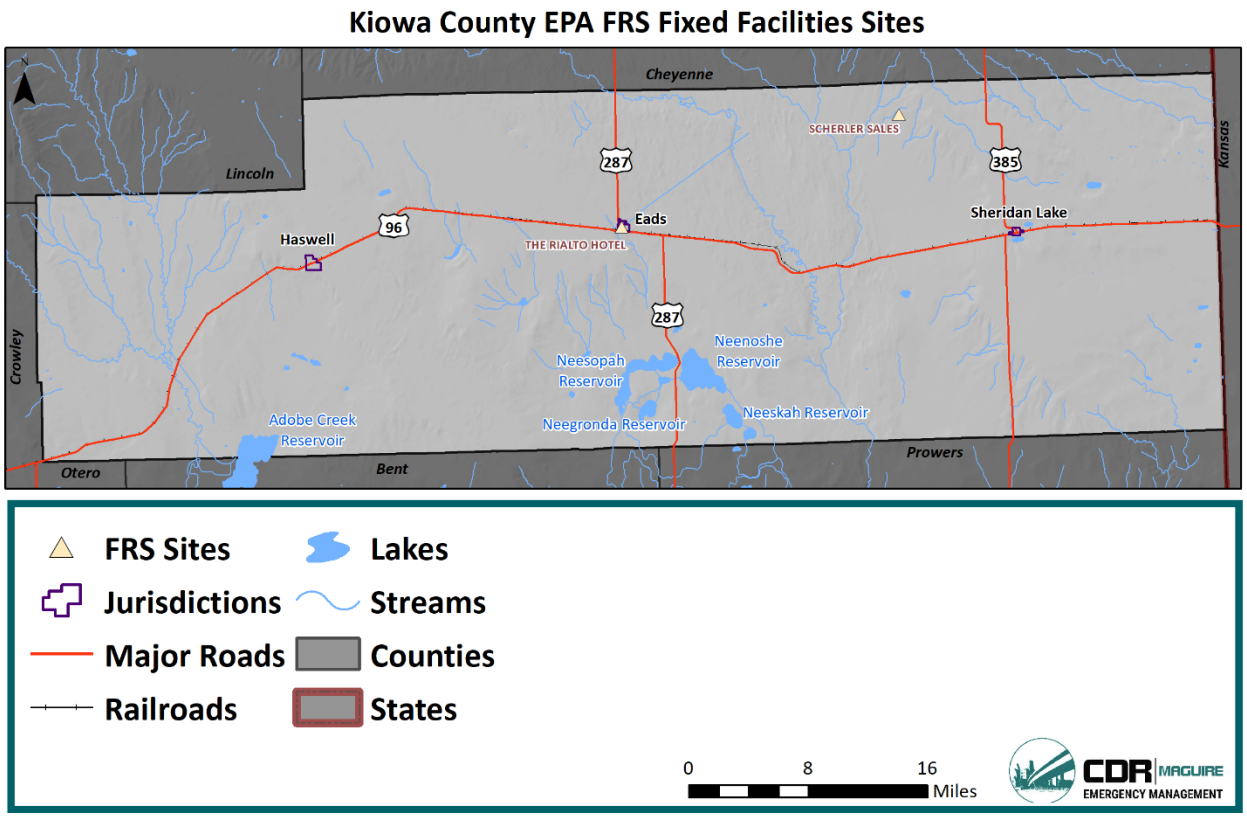
If population increases in the County, more people are exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

6.9.15. Hazardous Materials Release

Location

Locations of fixed facilities in Kiowa County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.[122] Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Kiowa County has two fixed facilities that could result in a hazmat release, as shown in Figure 6-96.

Figure 6-96 Kiowa County EPA Fixed Facility Sites



For transportation related incidents, in Kiowa County Highway 287 is a designated Hazardous Materials Route by CDOT. Additionally, Highways 96 and 385 are designated Gasoline, Diesel Fuel, and Liquified Petroleum Gas Routes. The Victoria Southern & Towner Railroad also runs through Kiowa County following Highway 96. These areas could be more likely sources of transportation related hazmat incidents.

[122] https://iaspub.epa.gov/sor_internet/registry/facilreg/home/basicinformation/

Previous Occurrences

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 6-71 below. There has been a total of five incidents from 1974 to July 2019, totaling $63,926 in damages. All incidents occurred near Eads.

Table 6-71 Kiowa County Hazmat Events

Date	City	Damages	Mode of Transportation	Description
6/16/2018	Eads	$5,000	Highway	Freight shifted while in transit due to improper blocking and bracing. The shift in freight caused damage to container resulting in a release of product. Dock personnel recovered released product with absorbents and placed into a container for proper disposal.
2/3/2010	Eads	$50,734	Highway	Combination vehicle was traveling north on highway 287 in the town of Eads Colorado. Roads were ice packed and it was dark. Vehicle slip of ice hitting a railroad trestle under overpass. Tank trailer came disconnected from traction on impact and rolled into roadway. Cargo leaked from dome lid vents while trailer may overturned.
4/28/1990	Eads	$8,192	Highway	Leak detected by transport operator at Eads, CO. The local fire dept was called for assistance. 1 drum was found to be leaking as a result of rubbing against other freight in trailer. Drum was removed and placed in a salvage drum by fire dept. Rock mountain environmental – Englewood, CO was called to supervise & cleanup spill to satisfaction of local police & fire dept. Residue from spill was removed from site by rocky mountain environmental to be disposed of as a non-hm.
3/25/1976	Eads	$0	Highway	Description unavailable
2/12/1974	Eads	$0	Highway	Description unavailable
Total: 5		**$63,926**		

There have not been any significant fixed facilities hazmat incidents in Kiowa County.

Probability

Based on five previous occurrences from 1974 to 2019, there is a 11% chance of annual occurrence of a hazmat incident in Kiowa County, equating to a likely probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

Vulnerability Assessment

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Kiowa County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a risk to accidents that may lead to releases. Populations near the highway are at a higher risk to transportation related hazmat incidents. Highway 96 passes all jurisdictions in the County, Highway 287 through Eads, and Highway 385 through Sheridan Lake, putting people near these areas at a higher risk. Fixed Facility

releases are less common in the County, however, there is still potential for a release. Fixed facilities are located in Eads and unincorporated County, increasing the risk of a release in the communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Kiowa County has experienced $63,926 in damages from hazmat incidents from 1974 to July 2019, equating to $1,420 in annual losses.

Land Use and Development

Future development in the County would increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

6.9.16. Pandemic and Zoonotic Diseases

Previous Occurrences

Pandemic Influenza

There were four acknowledged pandemics in the twentieth century and one in the twenty-first century. It is likely these pandemics impacted Kiowa County.

- **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.
- **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.
- **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.
- **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.

Hantavirus

From 1993 (when the disease was first reported by CDPHE) and December 2018, there have been one case of hantavirus in Kiowa County. However, hantavirus is typically found in rural areas like Kiowa County, so the County is still vulnerable to the virus. Statewide during this timeframe, there have been 115 cases, with 41 of those ending in a fatality.[123]

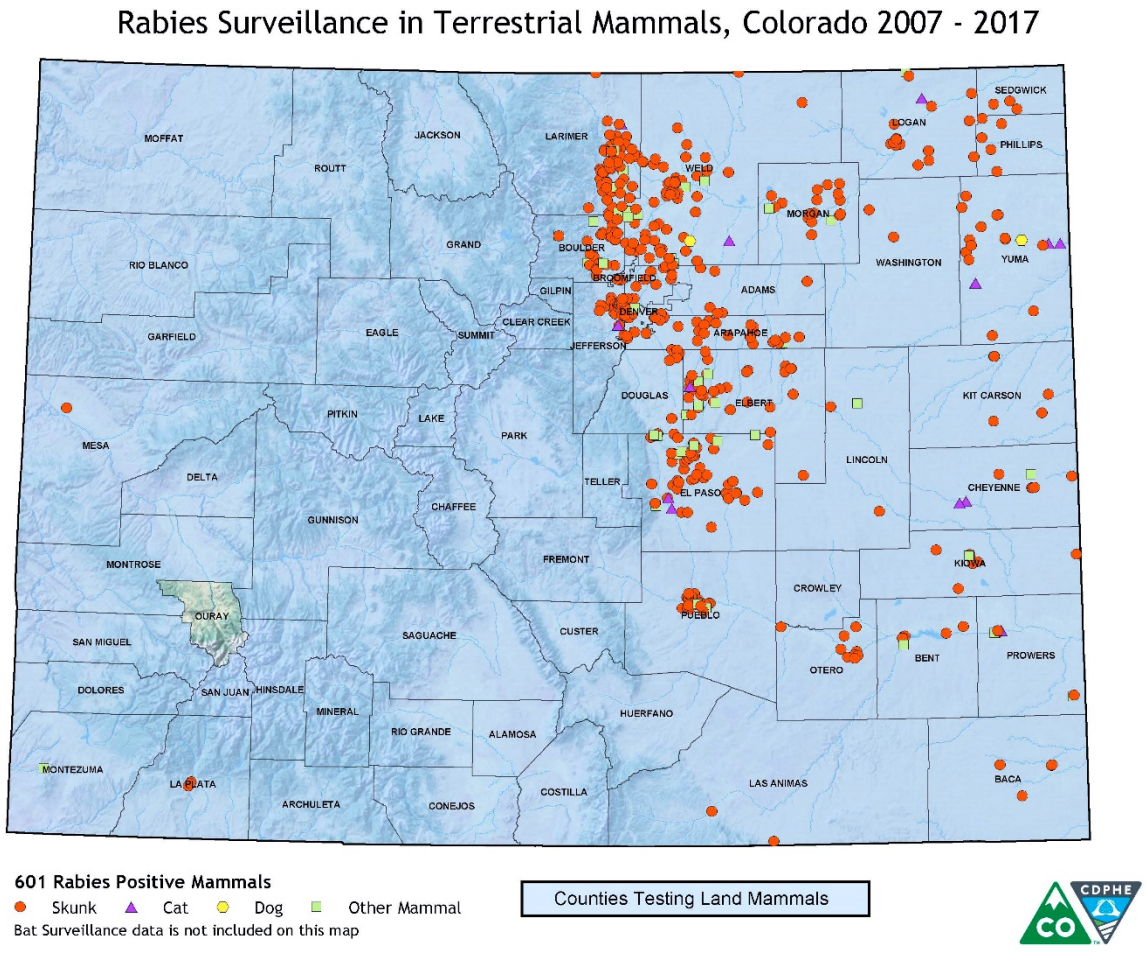
Plague

The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Kiowa County.

Rabies

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. Figure 6-97 shows rabies-positive terrestrial mammals during this time period, with several reports in Kiowa County.

Figure 6-97 Colorado Rabies Positive Mammals



[123] CDPHE; https://docs.google.com/document/d/1BBBKElU9sUHKKXVh93anVcOnouyISJ2AgNExlkb3MmE/pub

Tularemia

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Kiowa County.

West Nile Virus

According to the CDPHE, in Kiowa County there have been two cases of West Nile virus from 2002-2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.[124]

Probability

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Pandemic Influenza

The total County population of 1,364 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Kiowa County population, approximately 409 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Zoonotic Diseases

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock,

[124] https://www.cdc.gov/westnile/statsmaps/cumMapsData.html

which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Kiowa County, 21.3% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to be significantly impacted by this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

6.10. Otero County Risk Assessment

6.10.1. Hazard Summary Risk Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in the following figures below. Those hazards ranked as "low" were determined by the LPC to not be a focus of this plan's overall mitigation strategy, therefore civil unrest is not further assessed for Otero County. Although not formally adopting this plan, the Town of Cheraw contributed their risk ranking through this planning process.

Table 6-72 Otero County Risk Ranking

Otero County	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	2	2	1	5	M
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	2	2	5	M
Tornado	2	2	2	6	M
Wildfire	2	2	2	6	M
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	3	2	7	H
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

Table 6-73 Cheraw Risk Ranking

Cheraw	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	2	2	2	6	M

Cheraw	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Earthquake	2	2	1	5	M
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	1	1	4	L
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	2	2	6	M
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	1	2	1	4	L
Pandemic and Zoonotic Disease	1	1	3	5	M

6.10.2. Agricultural Infestation

Previous Occurrences

Due to the regional nature of this hazard, see 4.5.3.

Vulnerability Assessment

Inventory Exposed/Impacts

Crops and rangeland in Otero County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Otero County's economy. According to the 2017 USDA Census of Agriculture, Otero County has 444 farms totaling 687,530 acres. The estimated market value of agricultural products sold is $121,550,000. An agricultural infestation could impact the livelihood of residents in the County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation.

Potential Losses

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Otero County has experienced $1,601 in crop indemnity payments due to insects from 1991 to 2018. This equates to $59 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost of control of the infestation.

Land Use and Development

Any future agricultural endeavor in the County is vulnerable to the impacts of this hazard. Population change and related structural development are not impacted by or directly impact this hazard, however, a recent increase in hemp production in the County can alter the way agricultural infestations impact the County.

6.10.3. Dam and Levee Failure

Location

Dams

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are 24 jurisdictional dams in Otero County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.[125] Six of these dams are low hazard, eight significant hazard, three are considered No Public Hazard (NPH), and seven are considered No Hazard. The eight significant hazard dams all have an Emergency Action Plan (EAP). These dams are listed in Table 6-74.

Table 6-74 Jurisdictional Dams in Otero County

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Browning and Reese #1	Timpas Creek	La Junta	NPH	Not Required	
Browning and Reese #2	Timpas Creek	Swink	NPH	Not Required	
Crooked Arroyo Det Ca-1	Crooked Arroyo	La Junta	Significant	Yes	8/20/2014
Crooked Arroyo Det Ca-3	Crooked Arroyo	La Junta	Significant	Yes	8/20/2014
Crooked Arroyo Det Ca-4	Crooked Arroyo	La Junta	Significant	Yes	8/20/2014
Dye	Arkansas River	Swink	Significant	Yes	7/29/2014
Garrett #1	W. Dry Creek	Swink	N	Not Required	
Garrett #2	W. Dry Creek	Swink	N	Not Required	
Holbrook	Arkansas River	Cheraw	Significant	Yes	7/28/2014
Horse Creek and Black Draw	Horse Creek	Las Animas	Low	Not Required	
Prairie Land and Irr. #1	West Dry Creek	Rocky Ford	N	Not Required	
Swink #1	Patterson Hollow	Rocky Ford	Low	Not Required	
Swink #2	Patterson Hollow	Rocky Ford	Low	Not Required	
Swink #5	Apishipa	Rocky Ford	Low	Not Required	
Swink #6	Patterson Hollow	Rocky Ford	Low	Not Required	

[125] https://data.colorado.gov/Water/DWR-Dam-Safety-Jurisdictional-Dam/mgjv-xmr5

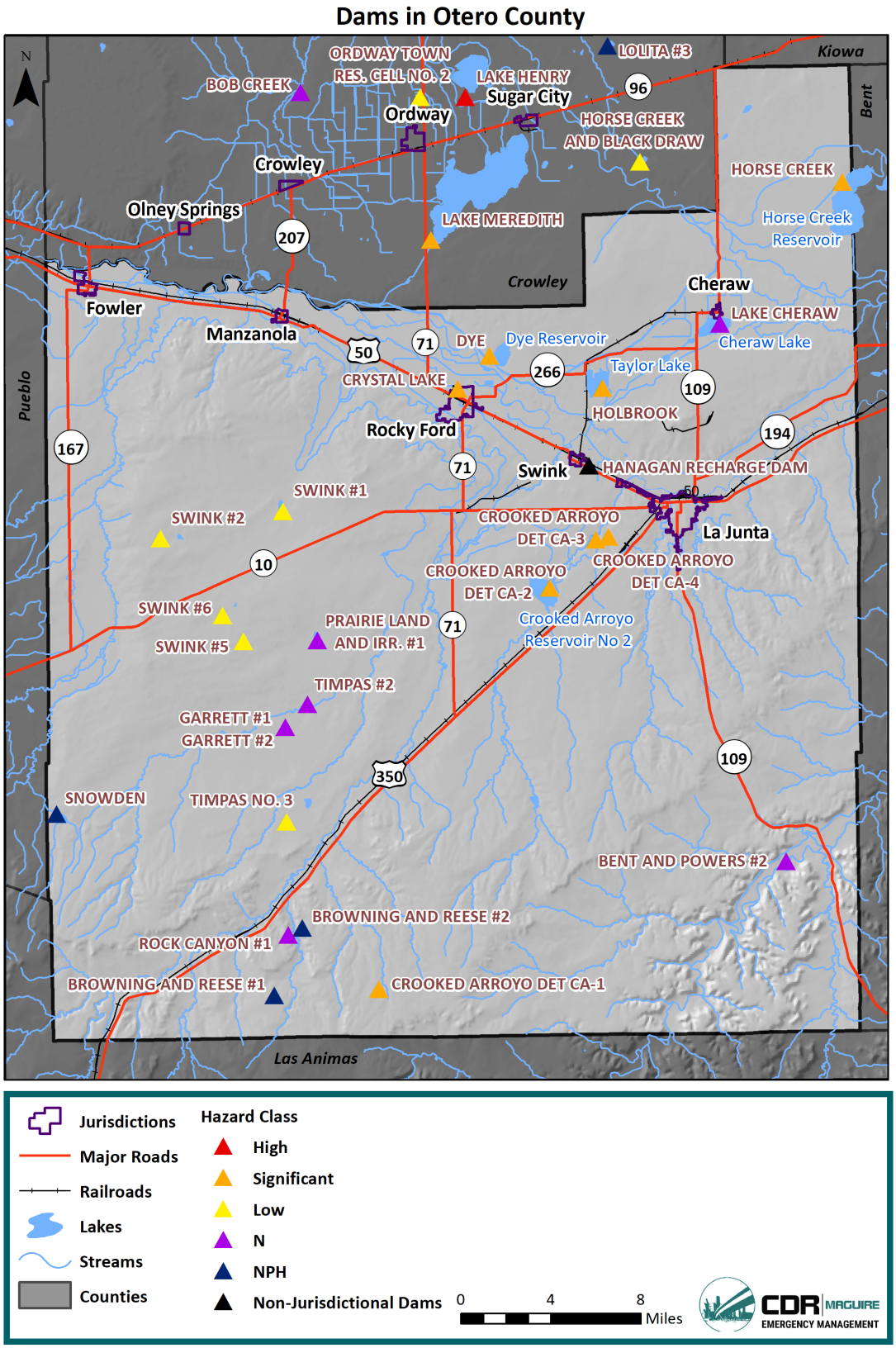
Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Timpas #2	W. Dry Creek	Rocky Ford	N	Not Required	
Timpas No. 3	S. Dry Creek	Rocky Ford	Low	Not Required	
Rock Canyon #1	Sheep Canyon Arroyo	Timpas	N	Not Required	
Horse Creek	Horse Creek	Las Animas	Significant	Yes	12/1/2014
Crooked Arroyo Det Ca-2	Crooked Arroyo	La Junta	Significant	Yes	8/12/2014
Snowden	Apishapa River	Swink	NPH	Not Required	
Lake Cheraw	Arkansas	Las Animas	N	Not Required	
Crystal Lake	Arkansas	Rocky Ford	Significant	Yes	3/25/2014
Bent and Powers #2	Purgatoire River	Lamar	N	Not Required	

Additionally, there is one non-jurisdictional dam in the County, the Hanagan Recharge Dam. A non-jurisdictional dam is a dam creating a reservoir with a capacity of 100 acre-feet or less and a surface area of 20 acres or less and with a height measured as defined in Rules 4.2.5.1 and 4.2.19 of 10 feet or less.[126]

These dams are mapped in Figure 6-98 below.

[126] https://data.colorado.gov/Water/DWR-Dam-Safety-Non-Jurisdictional-Dam/6smc-zj6j

Figure 6-98 Dams in Otero County



Lastly, there are 128 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses which the state engineer has determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.[127]

Levees

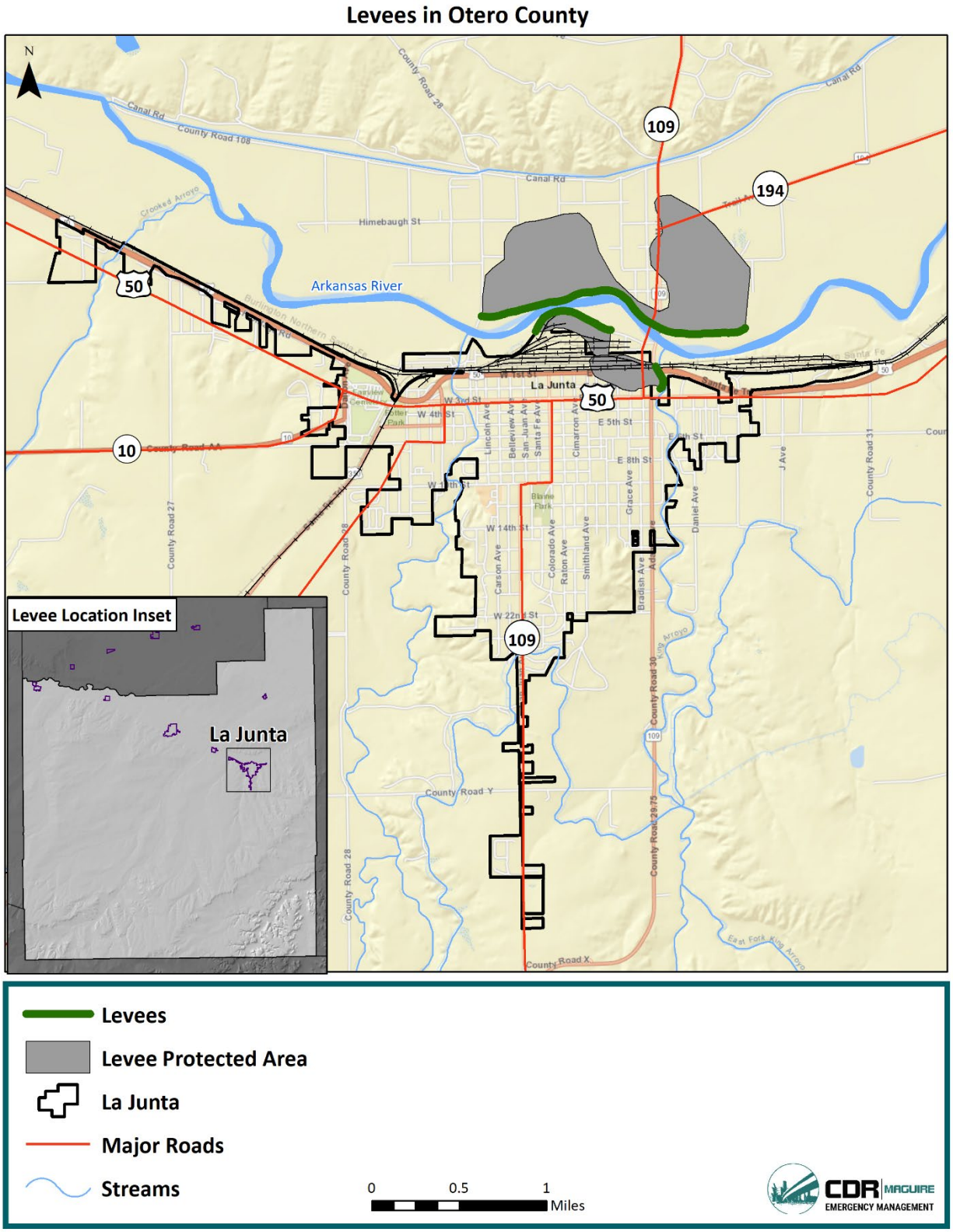
There are three documented levee systems in Otero County, listed in Table 6-75 and mapped in Figure 6-99 below.[128] All of these levees protect La Junta. It should be noted smaller levees or embankments would not be captured in this inventory.

Table 6-75 Otero County Levees

Levee Name	Flooding Source	Owner	FEMA Levee Certified	Date Built	FIRM Panel(s)	Level of Protection	In USACE Database?
East La Junta	King Arroyo	-	No	-	0801320155B 0801330003C	-	Yes
North La Junta	Arkansas River	-	No	-	0801320155B 0801330003C	-	Yes
North La Junta Railroad	Arkansas River	-	No	-	0801320155B 0801330003C	-	Yes

[127] https://data.colorado.gov/Water/DWR-Livestock-Water-Tank-and-Erosion-Control-Dams/r2rp-ecjb
[128] National Levee Database

Figure 6-99 Otero County Levees



Previous Occurrences

There are no reports of significant dam failures in Otero County. However, there has been one incident in the County, reported by the National Performance of Dams Program (NPDP). The NPDP tracks dam incidents, described as events that affect the structural and functional integrity of dams, though not necessarily causing failure and not including ordinary maintenance and repair, vandalism, acts of war, recreational accidents, and sabotage. The event is described in Table 6-76 below.

Table 6-76 Otero County Previous Dam Incidents

Name	Date of Incident	Description of Incident	Nearest Town	County	Class	Waterway	Failure?
Horse Creek	2/25/1999	Seepage	Las Animas	Otero	Significant	Horse Creek	No

There has been one occurrence of levee failure in Otero County. In 1999, three-day rainfall event occurred on April 29 to May 1, 1999. Heavy rain and saturated soil caused flooding in two major areas along the Front Range, specifically in Northeastern Colorado along the South Platte River and some of its tributaries, and Southeastern Colorado along the Arkansas River and some of its tributaries. Rainfall totals of up to 13 inches were recorded in the Cheyenne Mountain region of Colorado Springs. The La Junta region recorded approximately 8 inches over the same three-day period. The Arkansas River broke the dikes near North La Junta, flooding approximately 200 residences and businesses. The stormwater runoff from the three-day general rain resulted in large flood inundation and erosion in the Arkansas River and Fountain Creek watersheds.[129]

Probability

Although there has not been very significant dam or levee failures in Otero County, with 25 dams in the County and levees protecting La Junta, the risk of a failure remains. Based on this assessment, the probability is rated as occasional, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas. Inundation areas for high hazard dams are available through Colorado Dam Safety. These areas are mapped in Appendix F (FOUO). Based on this data, the inundation areas pass through or very close to all jurisdictions in the County, putting them at risk to a dam failure event.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and

[129] 2018 Colorado State Hazard Mitigation Plan

evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

Additionally, Colorado Dam Safety has performed several analyses of dam failure risk throughout the State. First, the social vulnerability of populations impacted by a dam failure were analyzed for high and significant hazard dams across the State. Social vulnerability was measured based on factors such as age (under 5/over 65), race and ethnicity, percent living in group quarters, population, population density, income, English speaking ability, percent of population living in mobile homes, and more. The following are the social vulnerability scores for dams in Otero County (a higher score equates to increased vulnerability):

- Dye – 8.7
- Crystal Lake – 16.3
- Crooked Arroyo Det Ca-2 – 1.4
- Crooked Arroyo Det Ca-3 – 1.4
- Crooked Arroyo Det Ca-4 – 1.4
- Holbrook – (-)1.7
- Crooked Arroyo Det Ca-1 – 1.8
- Horse Creek – 4.3

Crystal Lake dam has the highest score in the County. Colorado Dam Safety also analyzed population at risk to dam failure, described below for each dam:

- Dye - 277
- Crystal Lake - 213
- Crooked Arroyo Det Ca-2 - 91
- Crooked Arroyo Det Ca-3 - 54
- Crooked Arroyo Det Ca-4 - 47
- Holbrook - 32
- Crooked Arroyo Det Ca-1 - 30
- Horse Creek – 18

Dye and Crystal Lake dams have the highest number of people at risk. The closest downstream town to the Dye dam is Swink, and the closest downstream town to the Crystal Lake dam is Rocky Ford.

Lastly, Colorado Dam Safety conducted a first of its kind analysis to determine risk from high hazard dams during a range of release scenarios. Recent flooding events in Colorado in 2013 and 2015, and nationwide in 2017, have highlighted cases where excessive reservoir inflows caused dam spillway flows at dams to exceed normal rates and/or required controlled releases of water to lower reservoir levels. In some of these cases hazardous conditions developed in the channels and floodplains downstream of the dams and emergency actions were required. Although all high hazard dams in Colorado have dam failure inundation maps to delineate flooding limits for dam failures, no mapping exists nor is it required to be developed for the range of releases that might be anticipated to occur during flooding events. The "Colorado High Hazard Dam Release – Downstream Floodplain Impacts Database and Ranking Tool" was created to begin to fill this gap. This database and ranking tool provides a screening level assessment of the potential for hazardous conditions downstream of high hazard dams throughout the state. It provides a ranking of high hazard dams where there is either a high, moderate or low likelihood of the existence of dangerous conditions created by dam and reservoir release operations simultaneously with naturally occurring flood conditions. Overall, 367 dams were analyzed, and in Otero County, Horse Creek

ranked 69th. This indicates a relative high risk for the Horse Creek dam compared to other dams in the State, as it relates to downstream floodplain impacts.

Similar to dam failure, a levee failure can result in downstream flooding, impacting the population and structures intended to be protected by the levee. The populations and structures in the identified levee protected areas in and around La Junta are at the highest risk to levee failure. According to the National Levee Database, the East La Junta levee protects 34 structures and 52 people at risk; the North La Junta levee protects 137 structures and 247 people. This puts 171 structures and 299 people at risk in or near La Junta.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries. All jurisdictions in Otero County are at risk to losses from inundation from a dam failure, and overall, the northern portion of the County is at a higher risk than the rest of the County.

The significant hazard dams in the County do have Emergency Action Plans (EAPs), which can help to reduce losses in the event of a failure.

In addition, the City of La Junta is at the highest risk to levee failure in the County. According to the National Levees Database, the East La Junta levee protects $12.4 million in property value and the North La Junta protects $56.1 million in property value. This puts $68,500,000 at risk near La Junta. It should be noted these are worst case scenario losses, assuming the entire property would be lost in the event of a failure.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

6.10.4. Drought

Location

All of Otero County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

Previous Occurrences

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing precipitation averages over time to identify periods with precipitation amounts below the long-term average, reviewing U.S. Drought Monitor records/current conditions, and reviewing drought disaster declarations.

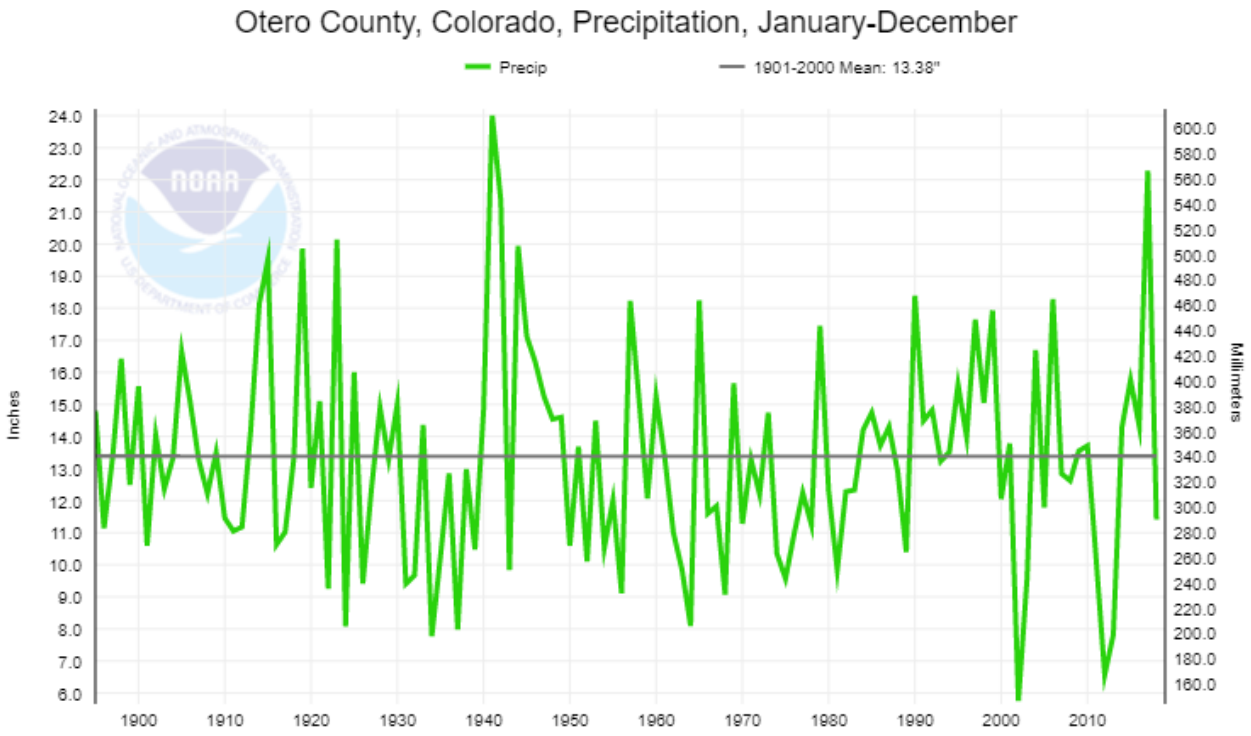
Drought conditions based on precipitation deficits are described in Table 6-77, indicating the top five years of precipitation deficit departure from the long-term average of 13.38 inches. Precipitation deficits are also shown in Figure 6-100. It is evident precipitation deficits have occurred throughout history in Otero County, particularly in the 1930s, 1960s, 2000s and 2012-2013. The year 2018, which was a

notably dry year in much of Colorado, resulted in a 1.97-inch precipitation deficit in the County, ranking it the 36th driest year since 1895.[130]

Table 6-77 Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
13.38 in.	2002	5.76 in.	7.62 in.
13.38 in.	2012	6.57 in.	6.81 in.
13.38 in.	1934	7.77 in.	5.61 in.
13.38 in.	2013	7.82 in.	5.56 in.
13.38 in.	1937	7.98 in.	5.40 in.

Figure 6-100 Precipitation Deficits 1895-2016

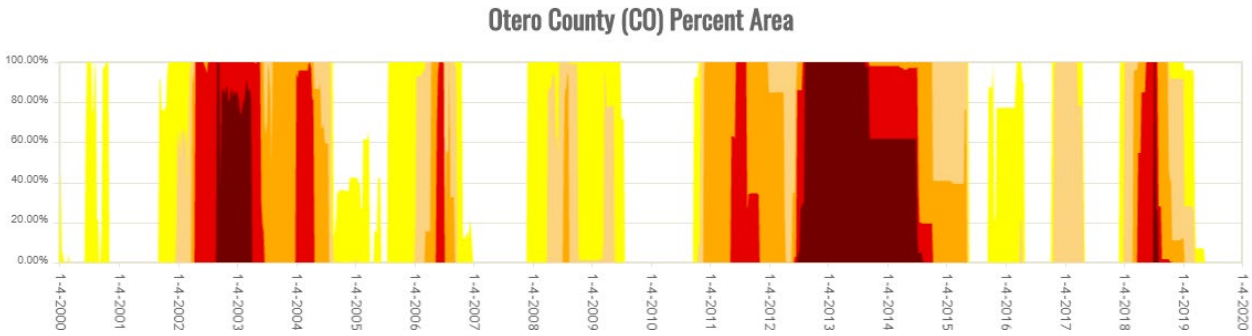


Drought conditions based on U.S. Drought Monitor records are shown in Figure 6-101.[131] Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2012 to 2015. For parts of 2012 and 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2005, 2006, 2011, and 2018 to 2019. There has been some level of drought in the County nearly every year since 2000.

[130] NOAA National Centers for Environmental information, Climate at a Glance: County Time Series, published May 2019, retrieved on July 19, 2019 from https://www.ncdc.noaa.gov/cag/

[131] https://droughtmonitor.unl.edu/Data/Timeseries.aspx for Kiowa County

Figure 6-101 Otero County Previous Droughts



Lastly, there have been 13 drought disaster declarations that have impacted Otero County from 1977 to 2018 (see

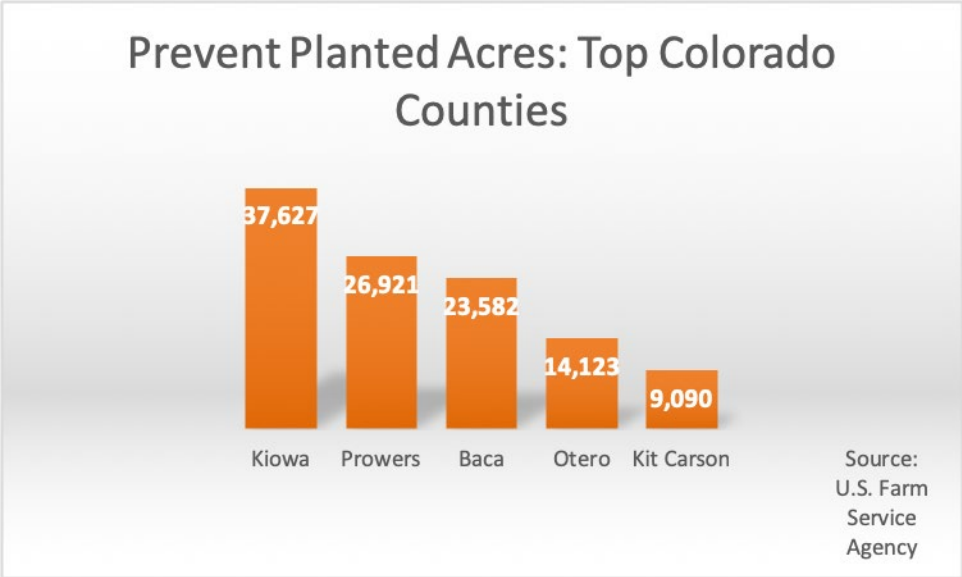
Table 6-1-Disaster Declaration Summary).

Recent droughts are described below.

2018: Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Otero County, was experiencing extreme (D3) drought conditions. In Otero County, these conditions impacted farmers as well as heightened wildfire concerns. In southeastern Colorado, Baca, Kiowa, Otero and Prowers counties had, in total, tens of thousands of acres that went unplanted due to fears that the crops would fail, otherwise known as "prevent planted" acres. Figure 6-102 shows the top counties in the State with prevent planted acres due to the 2018 drought. Otero County placed fourth, with 14,123 acres.[132]

[132] https://www.krcc.org/post/drought-puts-pinch-southern-colorado-agriculture

Figure 6-102 Prevent Planted Acres due to 2018 Drought



In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the worst impacts of drought to the agricultural community in Otero County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought. The 2018 drought did lead to declaring Otero County as a Primary county in a USDA Secretarial Natural Disaster designation for drought.

2012: After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres.[133] During this time 100% of Otero County was experiencing exceptional (D4) drought conditions. The year 2012 was the second driest year in Otero County in terms of precipitation deficit, and 2013 the fourth driest. The 2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.

As of July 2019, no part of Otero County is experiencing drought.

See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

Probability

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.

For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought

[133] https://climate.colostate.edu/pdfs/drought_2012.pdf

conditions that negatively impact the Southeast Region. In Otero County, there have been 13 drought disaster declarations from 1977 to 2018, equating to a 32% annual chance of drought occurrence, or a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Additionally, drought conditions can increase the County's risk to wildfire. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Otero County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Otero County has 444 farms totaling 687,530 acres. The estimated market value of agricultural products sold is $121,550,000. These assets are at risk to drought impacts. According to the Colorado Drought Plan – Visualization Story Map, the agriculture sector is the second-most vulnerable sector to drought in Otero County (behind State assets), with a vulnerability score of 3.0, which is above the State average of 2.4.[134] Additionally, according to this analysis, Otero County has a higher than average environmental impact from drought, at 2.2, with the average being 1.98.

The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Otero County, during this time period, there has been 90 reported impacts. The most impacts (35) were categorized as "agriculture," followed by plants and wildlife (18 impacts), and relief, response, and restrictions (12 impacts). Examples of recorded impacts from the 2018 drought include native grasses taking longer to break dormancy, causing pastures to have delayed growth for the 2018 grazing season. This resulted in ranchers feeding cattle and herds being liquidated or put into feedlots. Other agricultural impacts included decrease in water allocation; reduced yield; reduced pasture, forage; reduced grazing on public lands; and selling livestock. Additionally, increased dust, burn bans, and poor air quality were noted.

Potential Losses

The largest potential losses in Otero County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Otero County, and droughts causing major economic impacts to crops and cattle could also trickle into the rest of the economy in the County. All jurisdictions and unincorporated County are impacted by drought events due to the connected nature of agriculture, water use, and the economy in the County.

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[134] CWCB, State Drought Planning; https://lynker.maps.arcgis.com/apps/MapSeries/index.html?appid=8b8a995c2574439cbef10088a08d12ae

Based on SHELDUS data from 1960 to 2017, Kiowa County has experienced $1,897,695 in crop losses from drought (2017 dollars). This equates to $33,292 in annual losses. No property damages were recorded in SHELDUS.

Land Use and Development

An increase in population and development can put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions. Additionally, new hemp processing facilities in the County may be impacted by drought differently than traditional agriculture.

6.10.5. Earthquake

Previous Occurrences

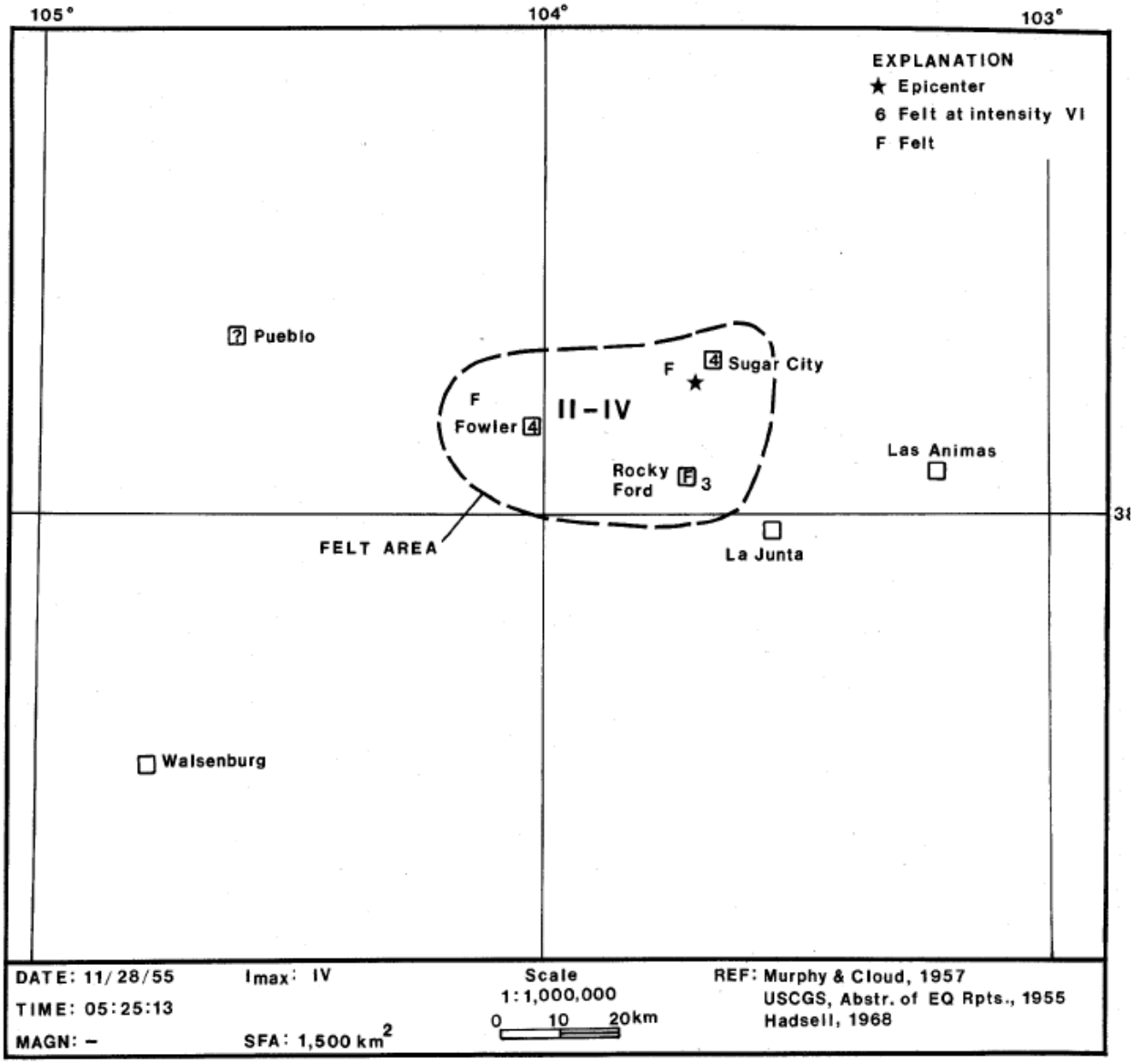
There are limited reports of earthquakes in Otero County. Past occurrences in the County were reported in the Earthquake Evaluation Report released by the CGS. The CGS also released a publication, titled "Colorado Earthquake Information 1867-1996," that provides details on past earthquakes. Based on that report, information of specific occurrences that affected the County are as follows:

Sept 29, 1928 – An earthquake shook Holly and other parts of Prowers County. Heck and Bodle (1930) described the earthquake as a rocking motion generally felt in Holly and indicated that many people were awakened and alarmed throughout the county. Stover, Reagor, and Algermissen (1984) rated this event at intensity IV.[135]

November 28, 1955 – During the late evening on November 27, 1955 (local time) a light earthquake shook a limited area in southeastern Colorado. Murphy and Cloud (1957) stated that intensity IV was reported at Fowler and Sugar City. The CGS rated the report for the Colorado Experiment Station at III. The earthquake was also felt at Nepesta, Ordway, and Rocky Ford. Figure 6-103 is an intensity map for this event. According to the USGS quarterly series "Abstracts of Earthquake Reports," Pueblo experienced intensity IV effects. Based on the intensity map, the felt area for this event is around 1,500 km^2. Hadsell (1968) reported it at 1,000 km^2.

[135] Colorado Earthquake Information 1867-1996

Figure 6-103 Otero County November 28, 1955 Earthquake



August 16, 2009 - An earthquake hit Colorado's plains, setting off tremors across the southeastern part of the state and into western Kansas, but causing no reported damage. The National Earthquake Information Center in Golden confirmed that a magnitude 3.9 earthquake occurred at 6:22 p.m. in southeastern Colorado, about 180 miles southeast of Denver.

Additionally, the USGS Earthquake Catalog was searched for previous earthquakes in the County. According to this database, there has been one additional earthquake in the County since 1900, on January 2nd, 1998. A magnitude 3.4 earthquake struck the far eastern border in unincorporated Otero County.

Probability

Based on previous occurrences and knowledge on seismic activity in Otero County, the probability of an earthquake is possible.

Vulnerability Assessment

Inventory Exposed/Impacts

It can be assumed all existing and future buildings and populations are at risk to the earthquake hazard. However, building codes can help reduce the risk to structures during an earthquake. Previous damages from earthquakes in Otero County have been minor (rattling of loose objects). However, it is possible for the Cheraw Fault, which passes through the northeastern portion of the County, to produce a strong earthquake. The 2008 and 2014 Southeast Region hazard mitigation plans utilized a 7.0 magnitude scenario as the maximum magnitude produced from the Cheraw Fault. A 7.0 magnitude earthquake is considered a major earthquake that can cause serious damage over larger areas. Older buildings that are not constructed to modern day building codes are more at risk to these damages throughout the County. Additionally, the northern portion of the County is at a closer proximity to the fault than the southern portion, putting communities there at a higher risk to damages.

Potential Losses

The most appropriate loss estimation methodology for seismic hazards involves scenario modeling using FEMA's Hazus loss estimation software. There are two levels of Hazus analysis, 'Standard,' which uses the default FEMA-derived datasets and damage functions, and 'Enhanced,' which uses independently compiled and accurately verified structure and infrastructure inventories and damage functions. The earthquake analysis conducted for this report includes a Standard level analysis using the latest version, Hazus-MH Earthquake Model V4.2. This risk assessment leveraged census tract data to conduct a Standard Hazus probabilistic scenario for Otero County.

A 2,500-year return period probabilistic scenario was used for the analysis (probability of 2% of occurrence in 50 years). A 2,500-year return period was chosen because the new International Building Code uses a 2,500-year map as the basis for building design. Based on CGS data, the highest magnitude earthquake that could be expected to occur in Otero County is a 7.0. This value was used in the probabilistic scenario in Hazus.

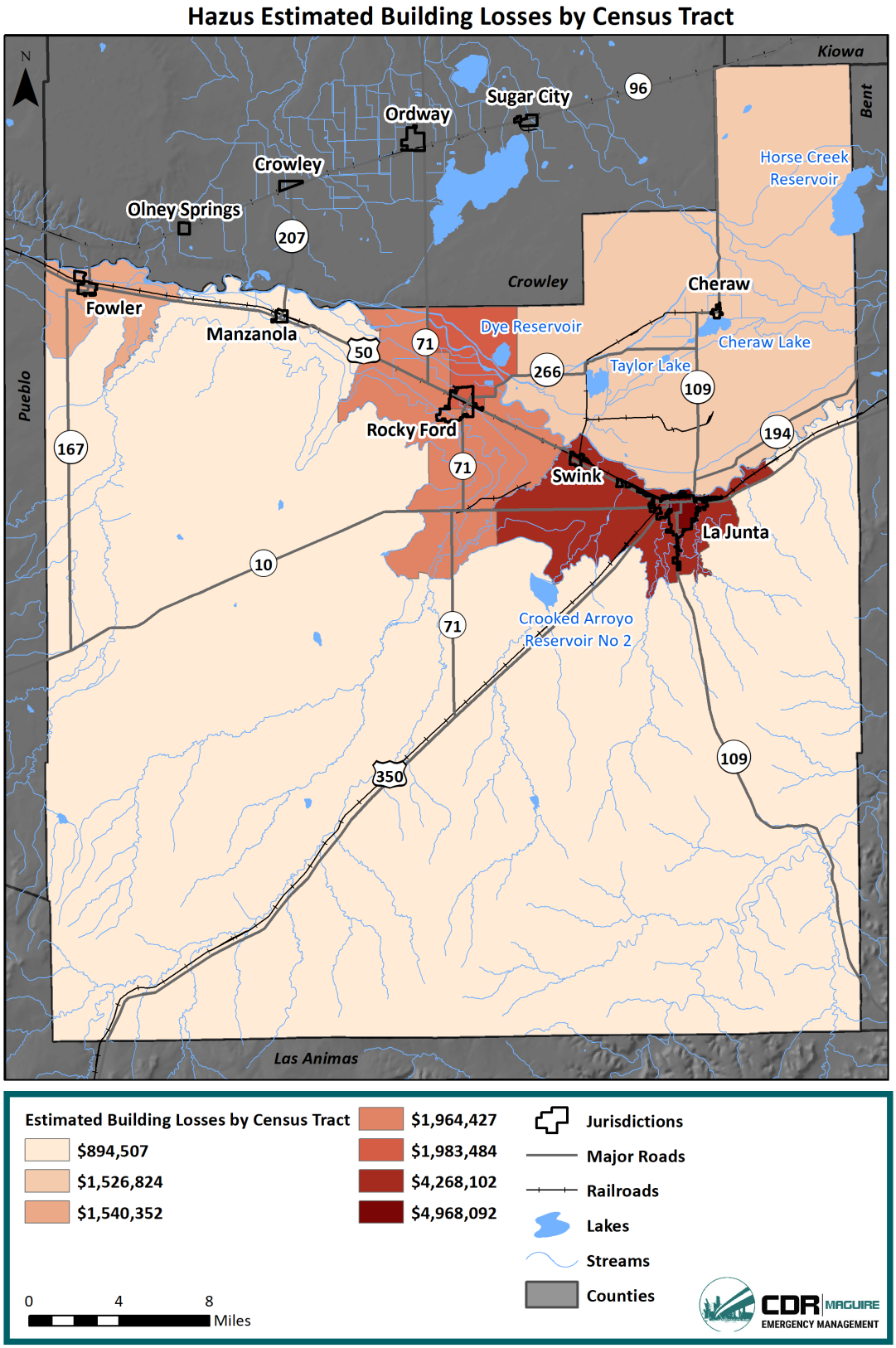
Results

Hazus estimates that there are 9,000 buildings in the County which have an aggregate total replacement value of $1.8 billion (excluding contents). Hazus estimates that about 248 buildings will be at least moderately damaged. This is over 3% of the buildings in the County. One building is estimated to be damaged beyond repair. Residential homes will be the most impacted.

The total economic loss estimated for the earthquake is $23.6 million, which includes building and lifeline related losses based on the County's available inventory. The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total building-related losses were $17.14 million; 24% of the estimated losses were related to the business interruption of the County. The largest loss was sustained by the residential occupancies which made up over 52% of the

total loss. Due to the analysis performed by Census Tract, it is difficult to determine losses by jurisdiction. However, Figure 6-104 shows the total building related losses by Census Tract to visualize which parts of the County may experience the highest losses. Based on this analysis, the highest losses are likely to be near the Towns La Junta and Swink. In general, it can be estimated that the highest losses will be associated with populated towns, which contain more buildings.

Figure 6-104 Otero County Earthquake Hazus Losses



The analysis also resulted in a total of 5,000 tons of debris generated. Of the total amount, Brick/Wood debris comprises 43% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 200 truckloads (at 25 tons/truck) to remove the debris generated by the earthquake.

Hazus also estimates four households to be displaced due to the earthquake. Of these, three people (out of a total population of 18,831) will seek temporary shelter in public shelters.

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not
- promptly treated.
- Severity Level 4: Victims are killed by the earthquake

Those casualties estimated for Otero County were all Level 1. Depending on the scenario, two are estimated to occur at 2:00am, four would occur at 2:00pm, and three at 5:00pm.

A number of variables are included in Hazus analyses in order to arrive at the estimated values of loss due to earthquake. For this reason, it is important to note that the Hazus loss estimates detailed above should not be used as a precise measure, but rather viewed from the perspective of the potential magnitudes of expected losses.

Land Use and Development

With the unpredictable nature of earthquake epicenter locations, it is not feasible to identify specific areas where development may exacerbate the risk to an earthquake. If population and development expand, enforcement of the unified construction code has great potential to mitigate increasing vulnerability and development pressure.

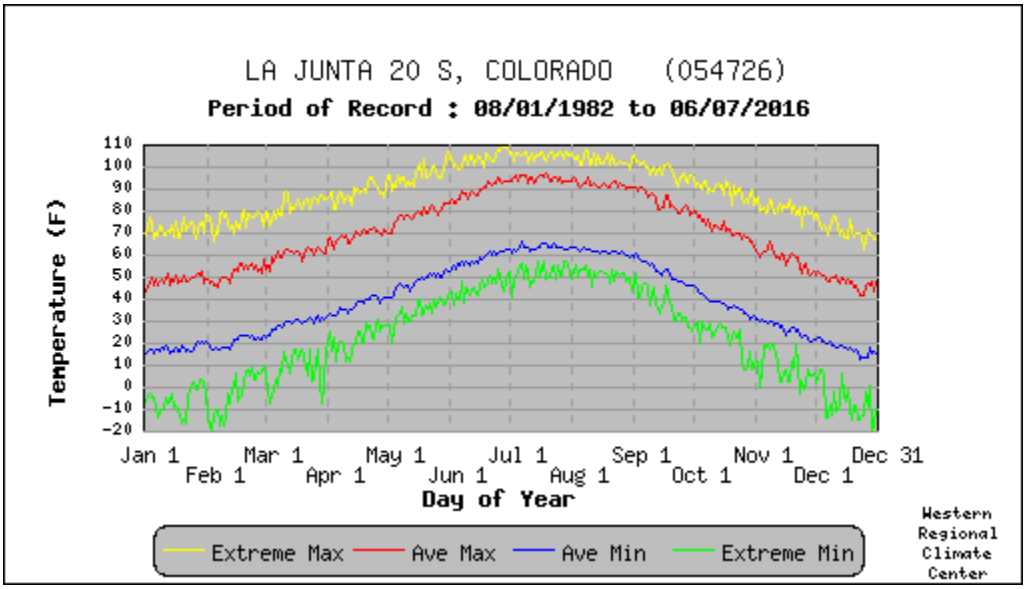
6.10.6. Extreme Temperatures: Extreme Cold

Location

Extreme cold temperatures can impact the entire County. Figure 6-105 shows the extreme temperature highs and lows for La Junta. The lowest recorded temperature from this data is -20 degrees.[136]

[136] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-105 Temperature Extremes in La Junta, Colorado - Cold



Previous Occurrences

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Otero County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Otero County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

Probability

Extreme cold temperatures occur yearly in Otero County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Otero County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the planning area is most vulnerable to temperature extremes. In Otero County, 19% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Otero County has 444 farms totaling 687,530 acres. The estimated market value of agricultural products sold is $121,550,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in the County are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Otero County has experienced $571,184 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.[137] This equates to $21,154 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

6.10.7. Extreme Temperatures: Extreme Heat

Location

Extreme heat can impact the entire County. Figure 6-106 shows the extreme temperature highs and lows for La Junta. The highest recorded temperature in this data is 109 degrees.[138] Across the County, maximum temperatures routinely break 100 degrees during the summer months.

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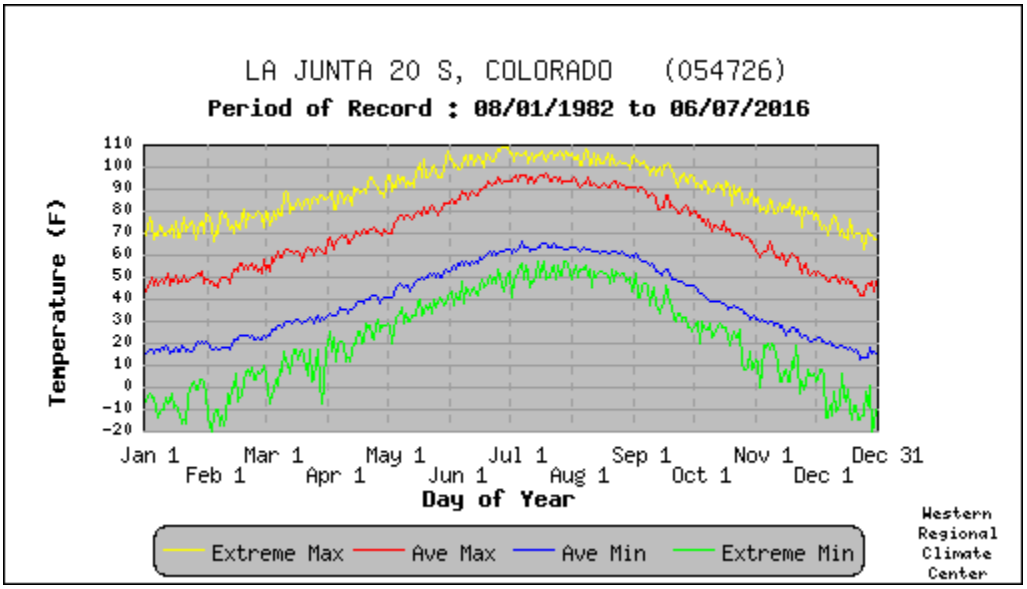
[137] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

[138] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-106 Temperature Extremes in La Junta, Colorado - Heat



Previous Occurrences

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Otero County has experienced 2,544, 1,342, and 334 days above 90, 95, and 100 degrees, respectively. Additionally, the County has experienced 282 heat waves during this time period. This places Otero County second in the State for number of days above 90 degrees from 1981 to 2017, as well as second in the State for number of heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.[139]

Probability

Based on the climate of Otero County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Otero County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. The elderly population in the planning area is most vulnerable to temperature extremes. In Otero County, 19% of the population is 65

[139] Colorado Climate Center

or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Additionally, people who frequently work, recreate outside, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Otero County has 444 farms totaling 687,530 acres. The estimated market value of agricultural products sold is $121,550,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Potential Losses

There is no recorded damage information for extreme heat in Otero County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat.

Based on USDA Risk Management Agency Data, Otero County has experienced $2,375,316 in insured indemnity amounts from 1991 through 2018 due to heat.[140] This equates to $87,974 in annual losses.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme heat.

6.10.8. Flooding

Location

The Otero County floodplain is not digitally mapped by the NFIP. Therefore, the best available floodplain data was generated for the 2018 Colorado State Hazard Mitigation Plan. Using Hazus-MH 4.0, a standard Level 1 flood analysis was conducted. This resulted in the development of a stream network and hydrology for 10-square mile drainage areas. The 30-meter (one arc second) DEMs were used in this analysis as the terrain source. Hazus then ran hydraulics for and delineated the 100-year floodplain boundary. While not as accurate as an official FEMA floodplain, this boundary is available for use in GIS and is currently the best available data for the County. Figure 6-107 shows the floodplain for Otero County. The floodplain largely follows the Arkansas River and its major tributaries, as well as the northwest portion of the County near Taylor Lake, Cheraw Lake, and Horse Creek Reservoir. It passes

[140] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

through or very close to Fowler, Manzanola, Swink, La Junta, and Cheraw. The floodplain in La Junta is primarily in the northern portion of the City, along the Arkansas River. Additionally, flooding from the Anderson Arroyo and King Arroyo occur through the City.

Figure 6-107 Otero County Hazus 100-year Floodplain

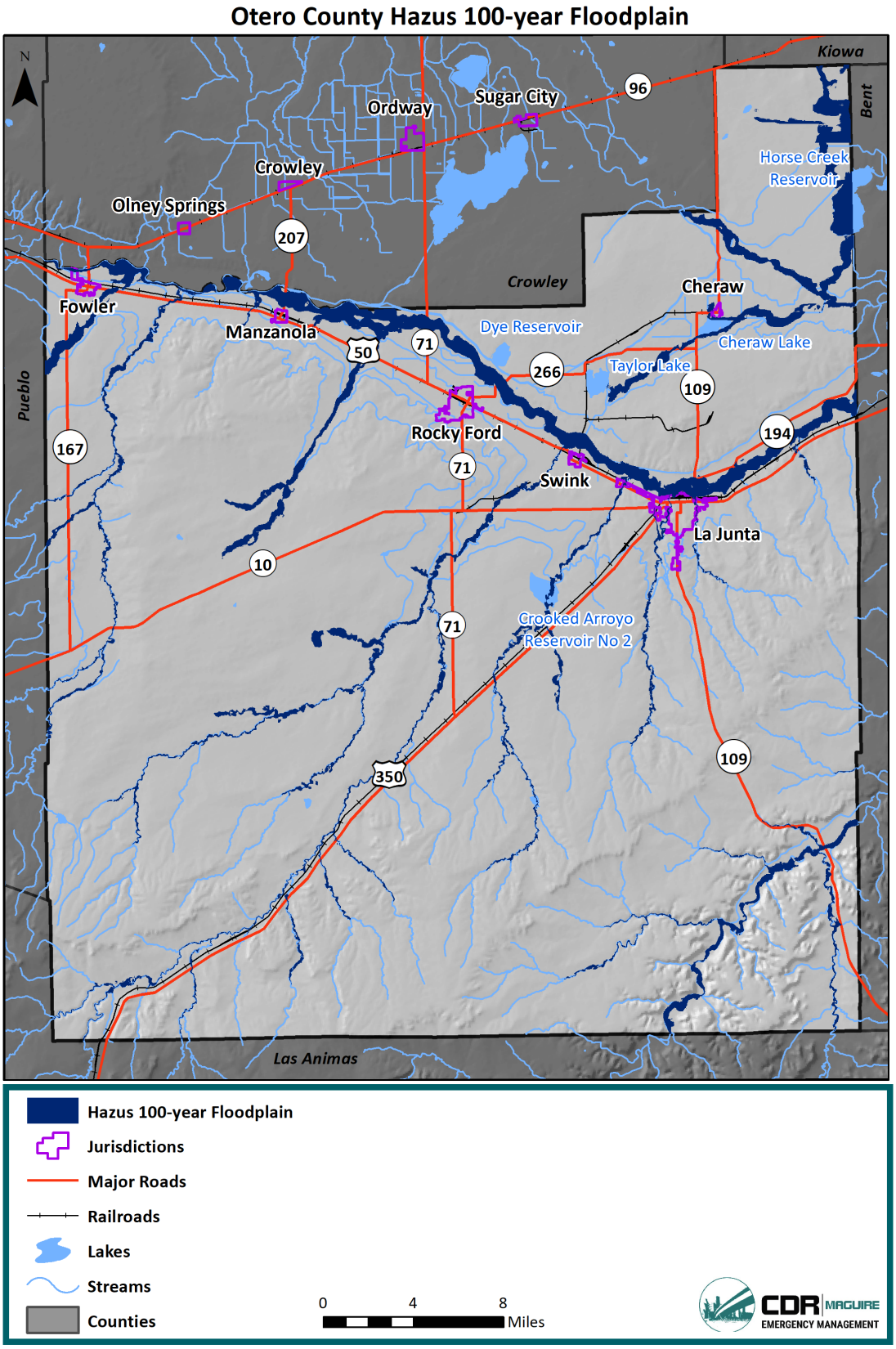


Figure 6-108 City of La Junta County 100-year Floodplain

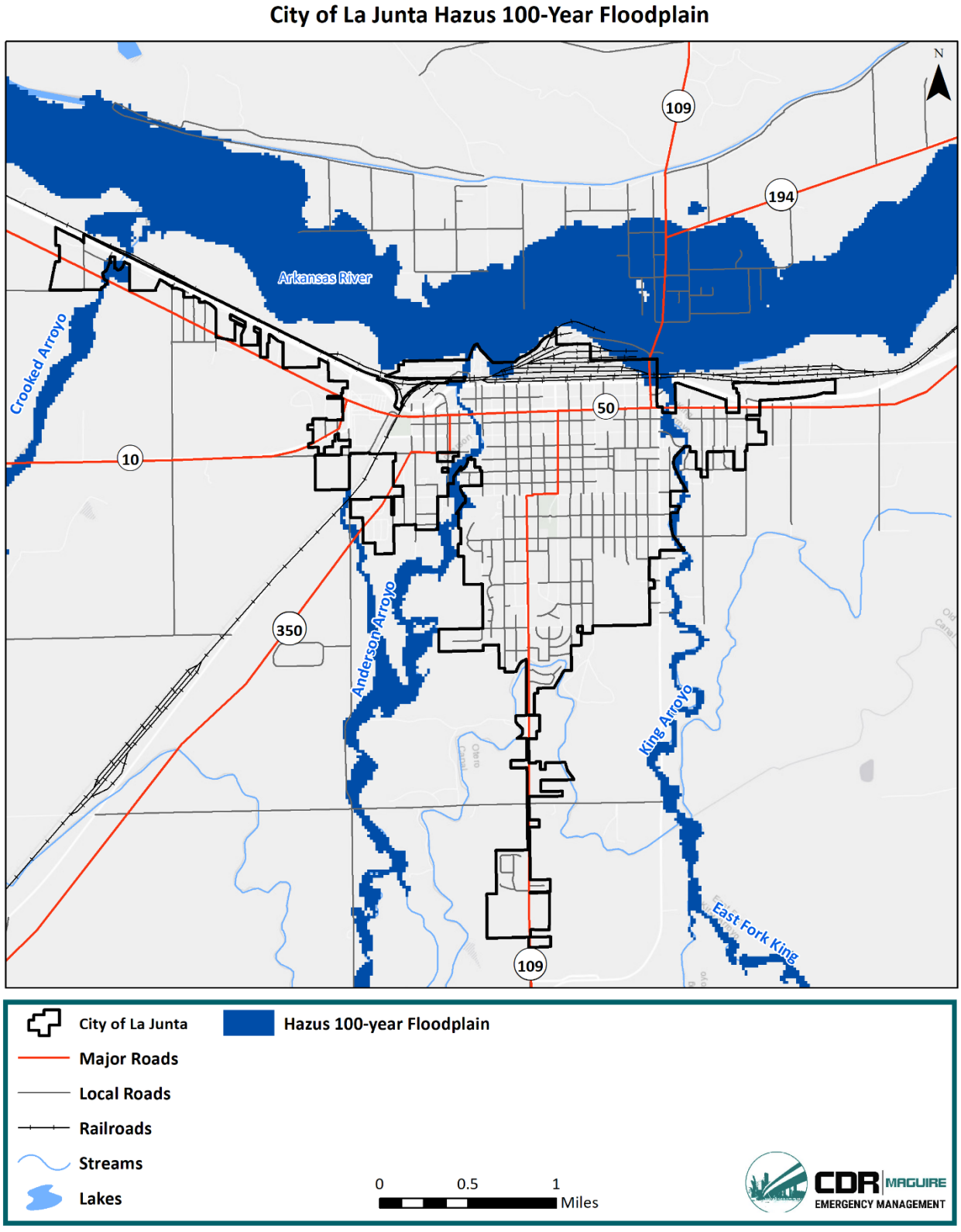


Figure 6-109 Fowler 100-year Floodplain

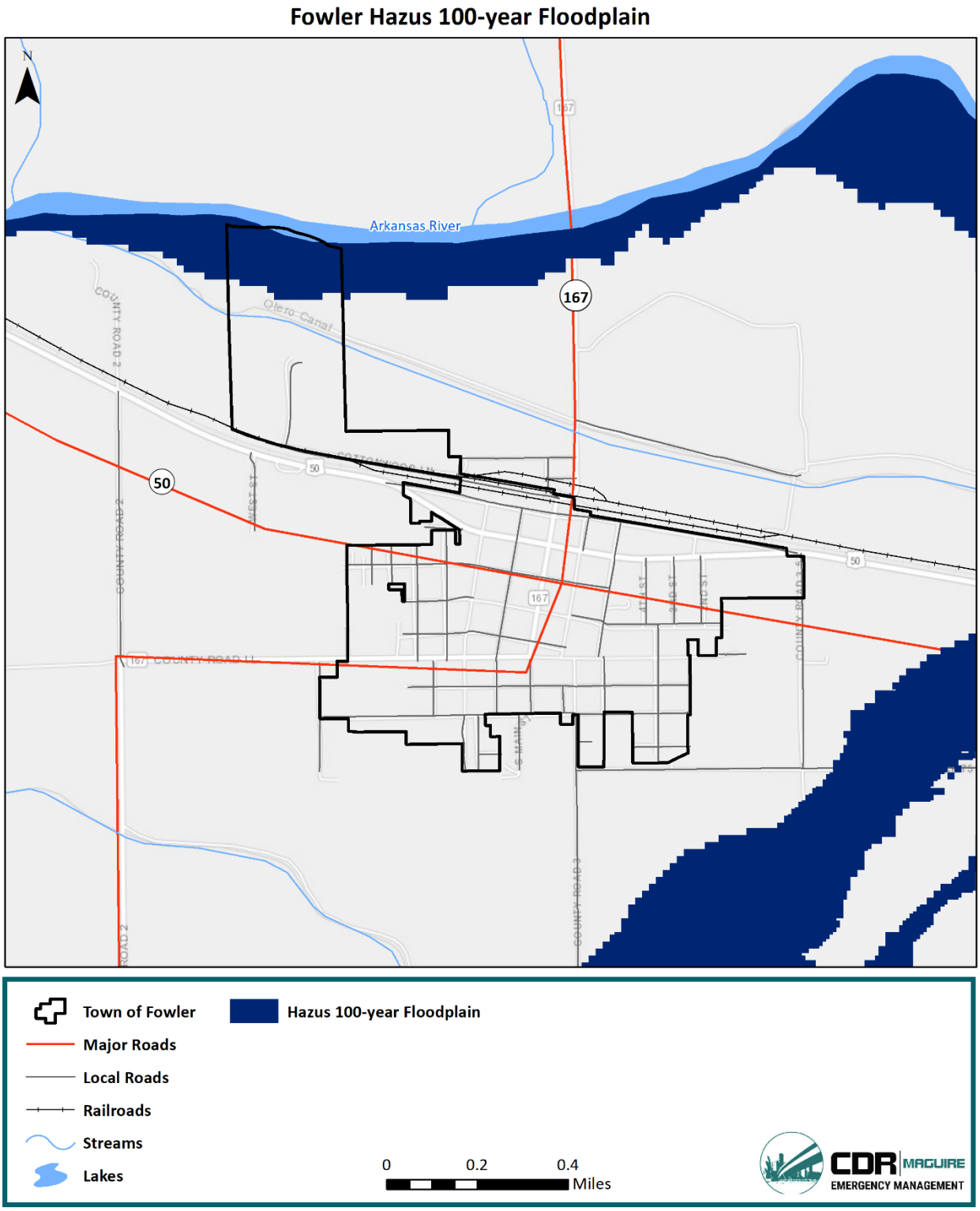


Figure 6-110 Manzanola 100-year Floodplain

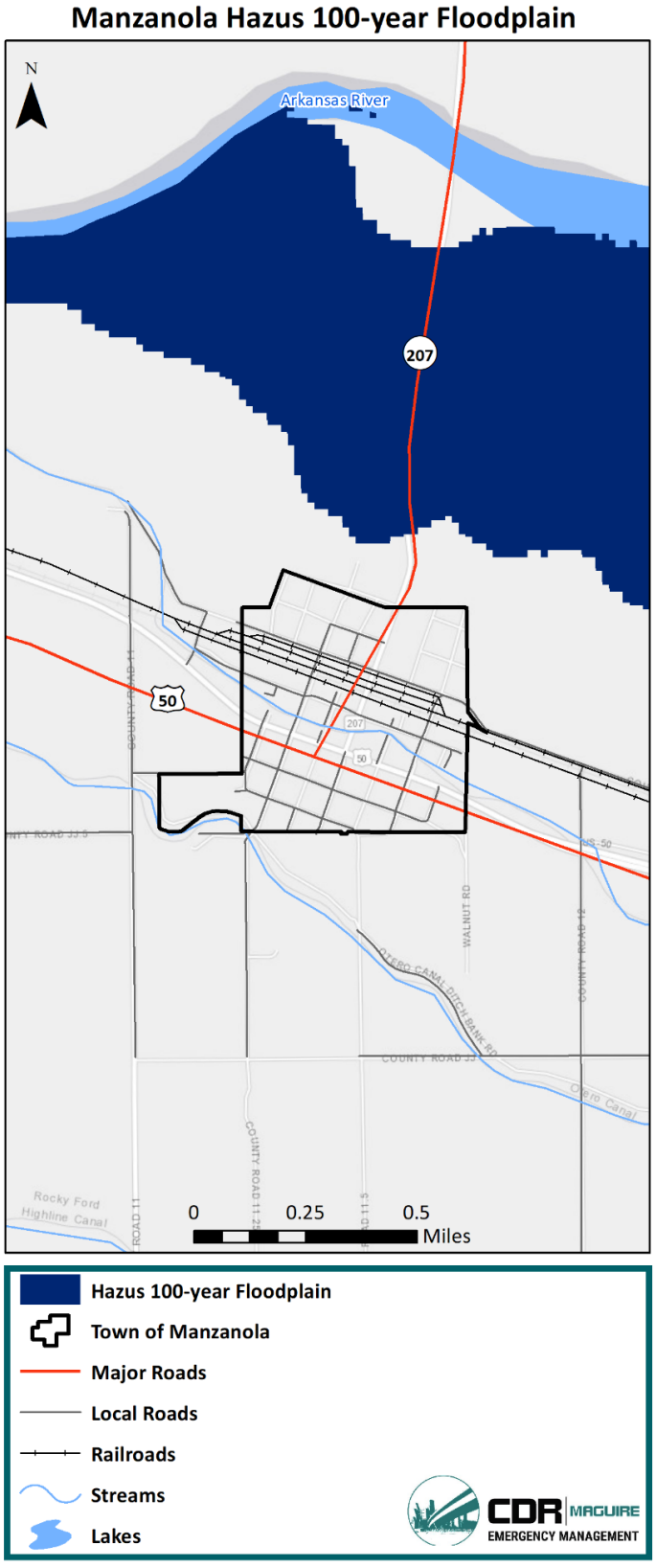


Figure 6-111 Rocky Ford 100-year Floodplain

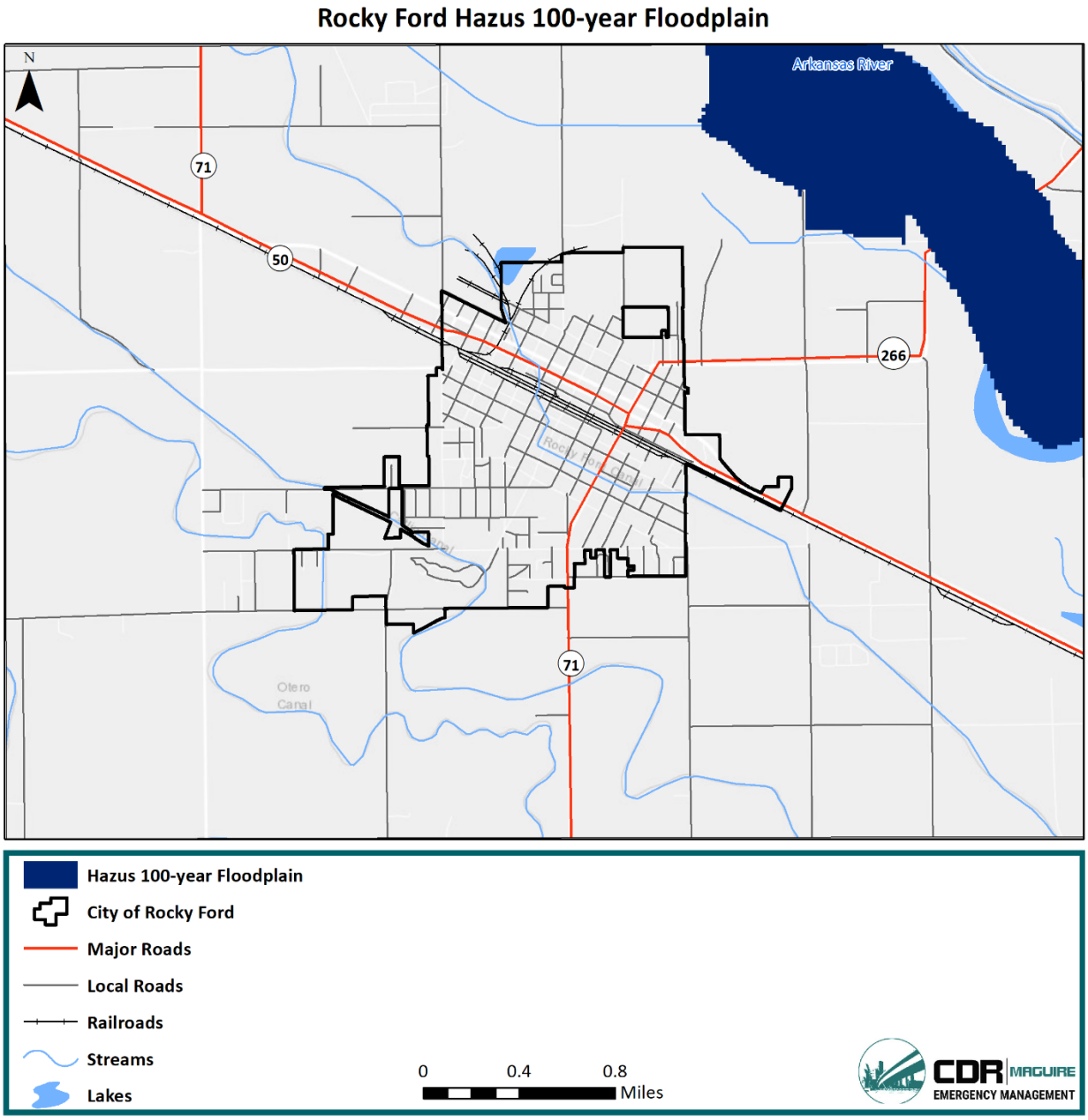


Figure 6-112 Swink 100-year Floodplain

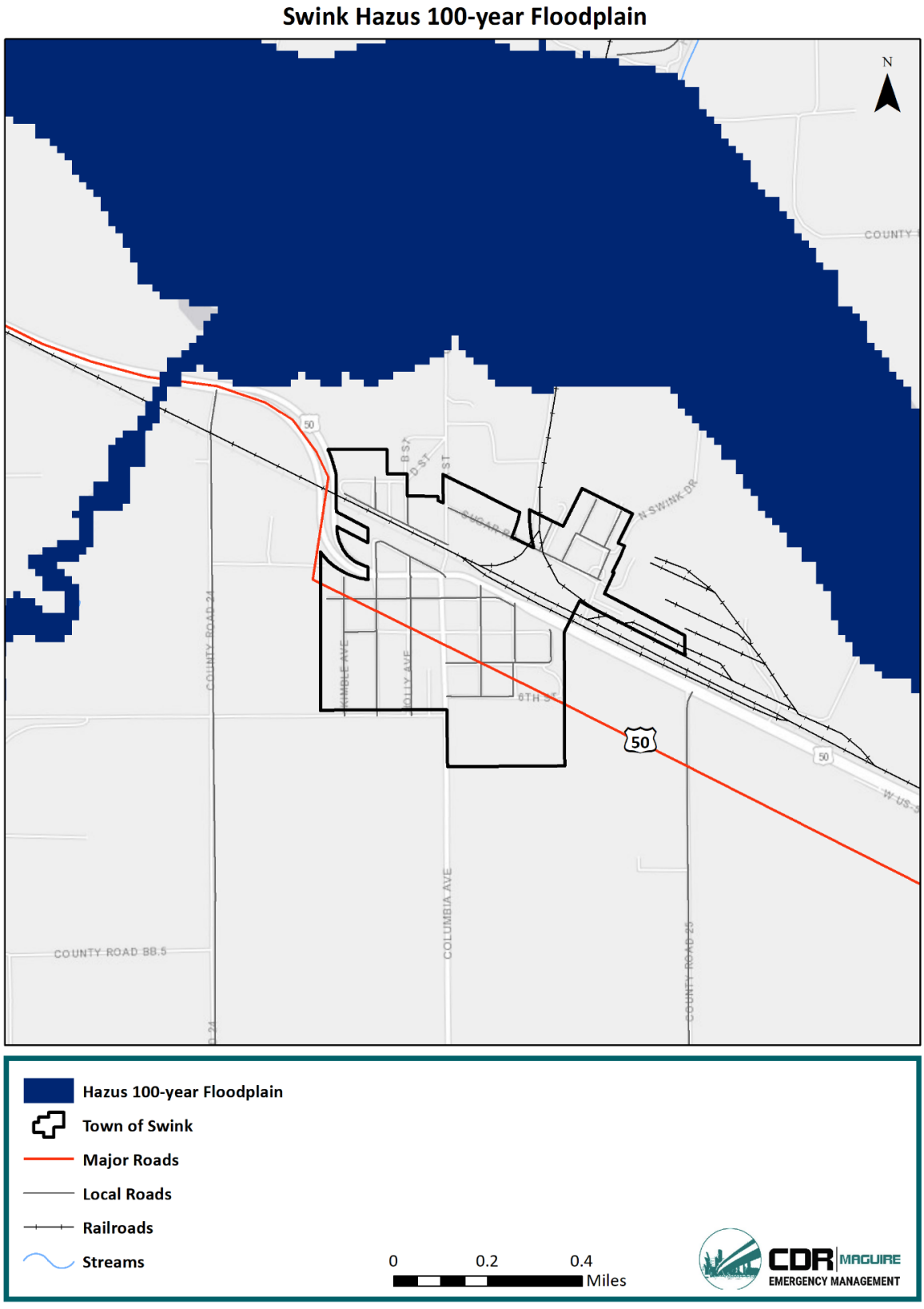
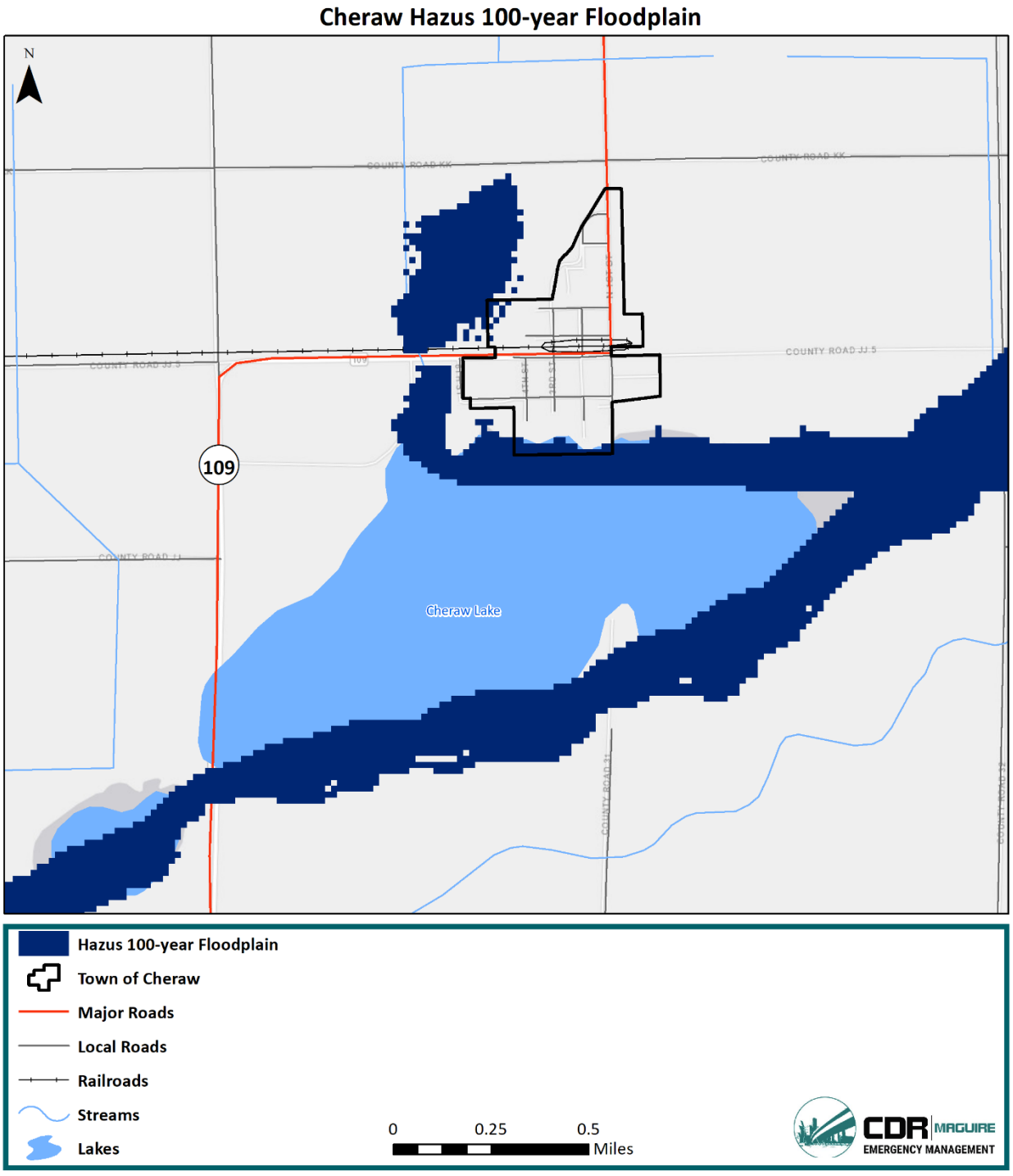


Figure 6-113 Cheraw 100-year Floodplain



Previous Occurrences

In total, there have been 29 recorded flooding events in the County from 1886 to 2019.[141] Of these, 16 were labeled as flash floods and 13 as floods. Twenty-three of these events occurred near La Junta, three near Fowler, one near Manzanola, one near Rocky Ford, and one near Swink, and two in unincorporated County near Brandon. A total of 13 deaths have been recorded, all from the 6/1/1921 event in and near La Junta, where a reported 13 people drowned. Damages from these events were reported at $15,594,000, with the majority ($15 million) from the 6/17/1965 event impacting La Junta and surrounding areas. These damages include agricultural losses and damages to urban and transportation facilities. Other recorded impacts from these events include evacuations from La Junta, water rescues, and road damages/closures.

Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below. A description of all previous occurrences can be found in Appendix C.

Table 6-78 Flooding Events in Otero County from 2014 to 2019

Date	Location	Flood Type	Description
9/16/2013	Fowler	Flood	The runoff across the Pikes Peak Region sent a flood wave down Fountain Creek and adjacent drainages into the Arkansas River. The flood wave traveled down Fountain Creek and the Arkansas River through Pueblo County on the 12th through the 14th. It then continued down the Arkansas River through Otero County on the 15th through the 17th. The river flooding that occurred was mostly minor, mainly affecting agricultural lands. The Oxford Ditch in Otero County overflowed on to rural roads due to high flows in the Arkansas River on the 16th. Additionally, some low lying residential lands and part of Highway 194 east of La Junta flooded on the 17th. No fatalities or major property damage to structures occurred.
9/16/2013	La Junta	Flood	The Arkansas River went above flood stage in the La Junta area, flooding some roads near the river.
7/12/2014	North La Junta	Flash Flood	Numerous roads and low lying areas experienced flash flooding central Otero County, including the La Junta and Swink areas, and arroyo watersheds in the south-central portions of the county. Highways 109 and 50 were closed for several hours.
7/12/2014	La Junta	Flood	Heavy rain caused a brief rise above flood stage on the Arkansas River at La Junta. Minor agricultural flooding occurred.
7/13/2014	La Junta	Flood	The Arkansas River at La Junta briefly went above flood stage causing minor agricultural flooding.
7/15/2014	La Junta	Flood	The Arkansas River at La Junta briefly went above flood stage causing minor agricultural flooding.

[141] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; LPC

Date	Location	Flood Type	Description
7/18/2014	La Junta	Flood	The Arkansas River at La Junta went just above flood stage, causing minor agricultural flooding.
8/10/2014	(LHX) La Junta Airport	Flash Flood	Heavy rain caused flash flooding across the North La Junta area and northward toward Cheraw.
5/8/2015	La Junta	Flash Flood	Severe storms brought some flooding, damaging winds, hail up to the size of golf balls, and a brief tornado in Otero County.
5/23/2015	Swink	Flash Flood	The Highway 50 underpass was flooded with around 12 inches of water near Swink.
5/31/2016	Fowler	Flash Flood	Strong storms produced heavy rain and flooding of roadways to depths greater than 6 inches along US Highway 50 and on streets in Manzanola and Rocky Ford.
6/12/2016	(LHX) La Junta Airport	Flash Flood	Heavy rain caused runoff from hills south of US Highway 50 near the Otero County Bent County line. Water was over a foot deep and washed vehicles off the highway.
7/25/2016	Manzanola	Flash Flood	Heavy rain caused flash flooding of roadways and low spots, including US Highway 50.
7/23/2018	La Junta	Flash Flood	Heavy rain caused US Highway 50 to close in La Junta due to flash flooding, according to the State Patrol.

NFIP Information

Otero County joined the NFIP on August 19, 1985. There are currently 48 policies in force in Otero County. There is currently $6,097,700 of flood insurance in force in the County. There have been 76 flood insurance claims, totaling $1,182,086 in claims paid. The County's FIRM is current as of 8/19/1985.

The City of Rocky Ford joined the NFIP on June 3, 1980. There are currently no policies in force. There have been four flood insurance claims, totaling $25,803 in claims paid. The City's FIRM is current as of 6/3/1980.

The City of La Junta joined the NFIP on December 1, 1982. There are currently 12 policies in force in the City. There is currently $2,112,300 of flood insurance in force in the City. There have been 31 flood insurance claims, totaling $490,576 in claims paid. The City's FIRM is current as of 12/1/1982. There are nine repetitive loss buildings in La Junta, as described in the table below.

Table 6-79 La Junta Repetitive Loss Information

RL Buildings (total)	4
RL Buildings (insured)	1
RL Losses (total)	9
RL Losses (insured)	3
RL Payments (total) -Building -Contents	$169,219.40 -$105,893.52 -$63,325.88
RL Payments (insured) -Building -Contents	$33,606.28 -$30,465.15 -$3,141.13

The Town of Manzanola has no special flood hazard areas and no policies.

The Towns of Fowler, Swink, and Cheraw do not participate in the NFIP.

Probability

Based on 29 recorded flooding events in the County from 1886 to 2019, there is a 22% annual chance of flood occurrence in the County, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County and north of La Junta. As demonstrated in the previous occurrences and NFIP data, the City of La Junta is particularly vulnerable to flooding damages. Damages throughout the County can include (but are not limited to) rural and urban structures, roads, and crops/agricultural flooding. Flooding can also cause injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Otero County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100-year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. While not as accurate as official flood maps, these floodplain boundaries are available for use in GIS and could be valuable to Otero County, given it has not been digitally mapped by the National Flood Insurance Program. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

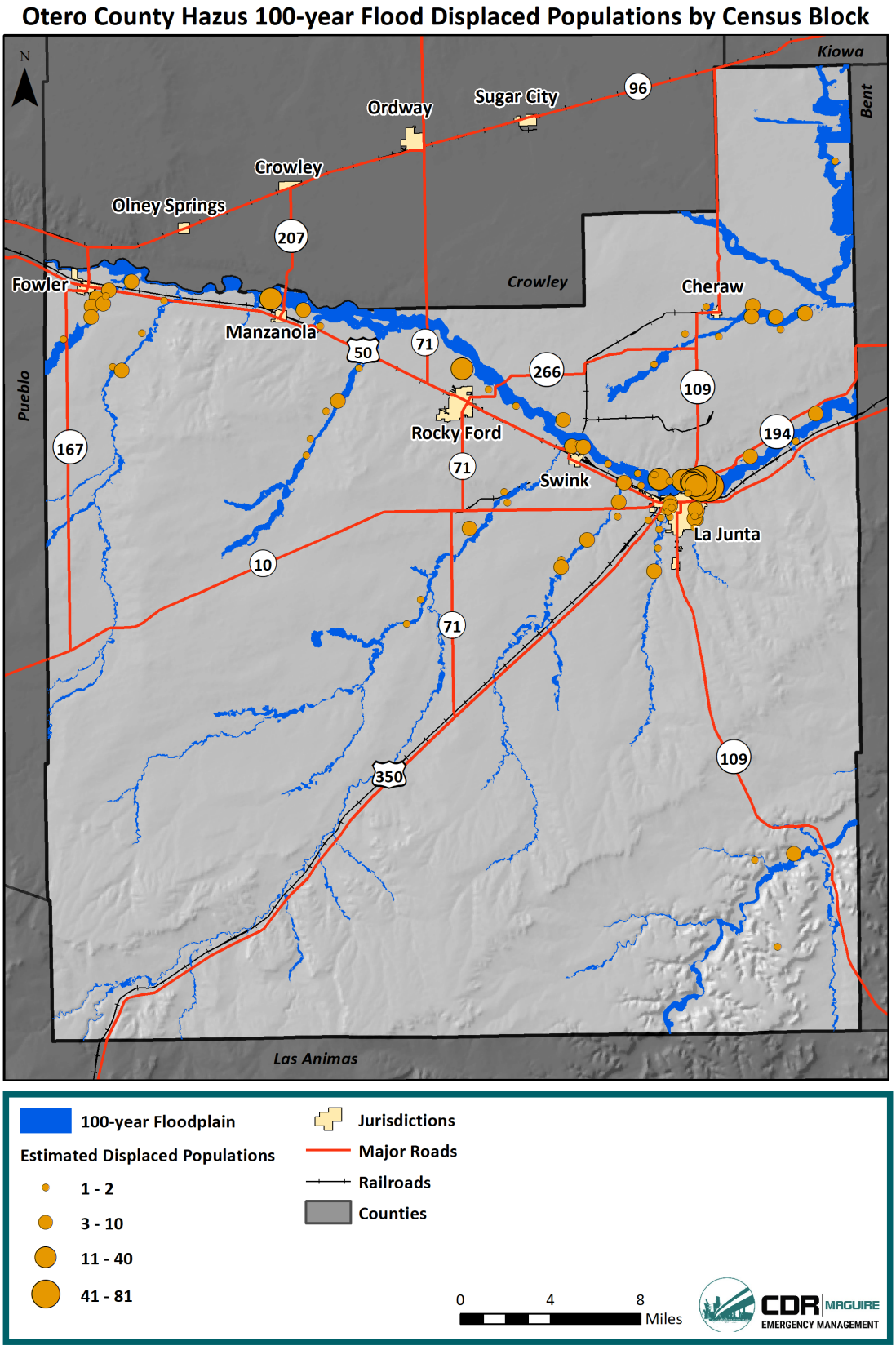
Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building

inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhanced (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, about 119 buildings would be at least moderately damaged by a county-wide 100-year flood. This is over 68% of the total number of buildings in the scenario. There are two buildings estimated to be completely destroyed. The model estimates 227 households (or 682 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. The areas with the majority of displaced populations are in or near the jurisdictions, in particular La Junta. Of the total displaced populations, 375 people are estimated to seek temporary shelter in public shelters. Figure 6-114 shows locations of displaced populations by Census Block.

Figure 6-114 Otero County Hazus 100-year Flood Displaced Populations



The total economic loss estimated for the flood is $29.27 million, which represents 9.62% of the total replacement value of the scenario buildings. Total economic losses are a combination of direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The majority of economic losses resulted from direct building losses, which were estimated at $29.20 million. Business interruption losses were estimated at $70,000. Residential occupancies made up 75.61% of the total loss.

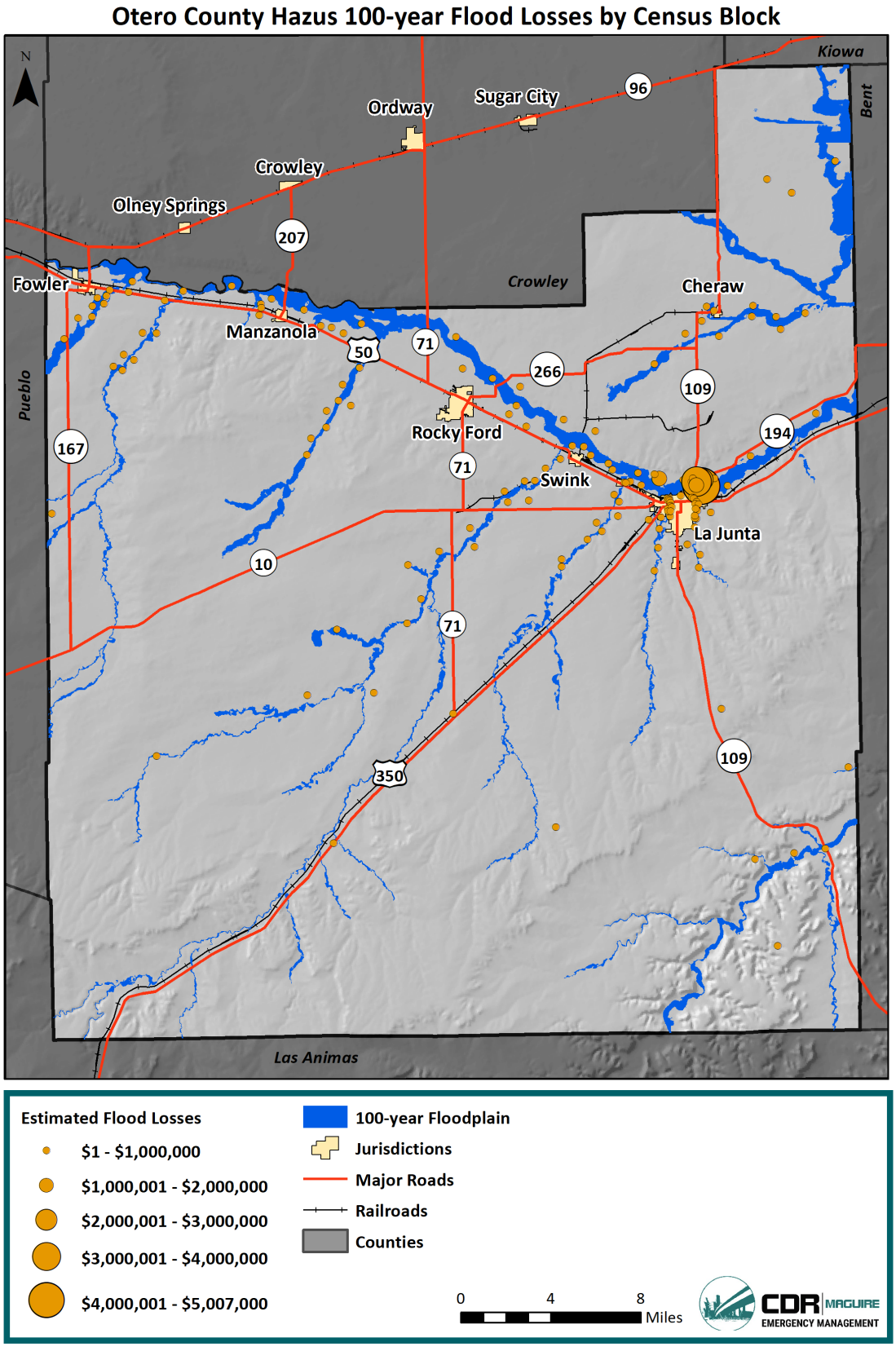
Additionally, the model estimates that a total of 2,063 tons of debris will be generated. Of the total amount, Finishes comprises 77% of the total, Structure comprises 9% of the total, and Foundation comprises 13%. If the debris tonnage is converted into an estimated number of truckloads, it will require 83 truckloads (25 tons/truck) to remove the debris generated by the flood.

Figure 6-115 shows total economic losses from this event for the County ($29.27 million). The highest flood losses are projected to occur in north La Junta, but all jurisdictions experience some losses. GIS was used to estimate losses by jurisdiction, shown in Table 6-80. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall magnitude of flood losses in and surrounding each jurisdiction.

Table 6-80 Otero County Hazus Estimated Flood Losses by Jurisdiction

Jurisdiction	Estimated 100-year Flood Losses
Cheraw	$42,000
Fowler	$100,000
La Junta	$4,581,000
Manzanola	$797,000
Rocky Ford	$414,000
Swink	$198,000
Unincorporated County	$23,133,000
Total	**$29,265,000**

Figure 6-115 Otero County Hazus 100-year Flood Losses



In addition to the potential losses estimated by Hazus, there have been $1,542,703 in recorded losses in Otero County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $27,064 in annual losses to Otero County from flooding.

Land Use and Development

Regulating new development and continued participation in the NFIP can help reduce the risk of flooding to new structures. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

6.10.9. Severe Weather: Thunderstorms/Lightning/Hail

Previous Occurrences

Thunderstorm

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 102 thunderstorm wind events have occurred in Otero County from 1955 to 2019. Of these events, 39 were recorded in La Junta, four in Cheraw, seven in Fowler, three in Manzanola, four in Rocky Ford, one in Swink, and 44 in unincorporated County or unidentified. The highest recorded wind gust was 93 mph, which occurred on 5/16/1995 at the La Junta airport. Overall, these storms caused $257,000 in property damages and one death. The death occurred during a microburst on 6/12/2016 near La Junta that flipped over a 30-foot trailer home and killed the male occupant. The most damaging event occurred on 6/26/2007 near La Junta, causing $80,000 in recorded damages. The event is described below.

> An intense thunderstorm wind gust occurred on County Road R, hitting a ranch. Major damage occurred to a 50-foot long shed, which damaged a truck inside. Debris from the shed was thrown several hundred feet to the east. Other farm equipment sustained damage as well. Several corrals were destroyed.

Table 6-81 summarizes this information by jurisdiction, and Table 6-82 describes thunderstorm wind events that have occurred since the 2014 Southeast Region Hazard Mitigation Plan.

Table 6-81 Otero County Thunderstorm Wind Events Summary Table

Jurisdiction	# Events	# Deaths	# Injuries	Damages
La Junta	39	1	0	$161,000
Cheraw	4	0	0	$0
Fowler	7	0	0	$11,000
Manzanola	3	0	0	$0
Rocky Ford	4	0	0	$50,000
Swink	1	0	0	$0
Unincorporated County	44	0	0	$35,000
Totals	102	1	0	$257,000

Table 6-82 Recent Thunderstorm Wind Events in Otero County

Date	Location	Deaths	Injuries	Damages	Description
5/26/2016	Rocky Ford	0	0	$0	Severe storms produced hail up to the size of half dollars and damaging severe winds in Kiowa County. One-foot diameter branches ripped off a tree.
5/31/2016	La Junta (Airport)	0	0	$0	Severe storms produced hail up to the size of quarters in El Paso County, severe winds in Otero and Bent Counties, and flash flooding.
6/12/2016	Swink	0	0	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/12/2016	La Junta (Airport)	1	0	$10,000	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/25/2016	La Junta (Airport)	0	0	$0	Severe storms produced damaging winds, in some cases over 70 mph.
7/23/2016	La Junta (Airport)	0	0	$0	A severe storm produced damaging winds across Otero and Prowers Counties.
7/24/2016	La Junta (Airport)	0	0	$0	A severe storm produced a severe wind gust at the La Junta Airport.
7/28/2016	La Junta (Airport)	0	0	$0	Description unavailable
Totals	**Count: 8**	**1**	**0**	**$10,000**	

Lightning

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in Colorado.[142] Otero County averages 5,900 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009-2018) and fourth in the nation for number of lightning fatalities (years 1959-2017).[143]

[142] https://www.weather.gov/pub/lightningCgCountyColorado
[143] https://www.weather.gov/pub/Colorado_ltg_ranking

The NCEI Storm Events Database reports on the number of damaging or significant lighting events. In Otero County there has been five recorded damaging lightning events, listed below. No events have occurred since the 2014 Southeast Colorado Hazard Mitigation Plan.

Table 6-83 Otero County Lightning Events

Date	Location	Deaths	Injuries	Damages	Description
9/25/1996	Swink	1	0	$0	Juan Galaviz, 31, was struck and killed by lightning while working in an onion field southwest of the town of Swink.
7/21/2001	La Junta	0	0	$3,000	A lightning strike burned up a transformer and caused 4 wells to stop working for 2 days in the La Junta area.
8/13/2004	Rocky Ford	0	0	$4,000	A lightning strike caused a haystack to catch fire.
9/8/2005	Rocky Ford	1	0	$0	A 36-year old man was struck and killed by lightning while work outside on a farm.
8/16/2007	La Junta	0	0	$10,000	Lightning strikes causes small fires in a few buildings.
Totals	**Count: 5**	**2**	**0**	**$17,000**	

Hail

According to the NCEI Storm Events Database, there have been 197 recorded hail events in Otero County from 1955 through 2017. These events are summarized in Table 6-84. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. The largest recorded magnitude hail was 4.5 inches, occurring on 6/23/1987 (no further information is available). The most damaging event occurred on 10/11/1997 near La Junta, causing $50,000 in recorded damages. Overall, these events caused $70,000 in recorded damages.

Table 6-84 Otero County Previous Hail Events, 1955-2017

Jurisdiction	# Events	Max Magnitude	# Deaths	# Injuries	Damages
La Junta	42	2.75	0	0	$60,000
Cheraw	19	2.5	0	0	$0
Fowler	17	2.0	0	0	$0
Manzanola	16	2.0	0	0	$0
Rocky Ford	35	2.75	0	0	$0
Swink	12	2.75	0	0	$10,000
Unincorporated County	56	4.5	0	0	$0
Totals	**197**	**4.5**	**0**	**0**	**$70,000**

Table 6-85 shows hail events since the 2014 Southeast Colorado Hazard Mitigation Plan and Figure 6-116 shows all previous hail events on a map. It is evident the entire County is vulnerable to hail events.[144]

Table 6-85 Otero County Recent Hail Events

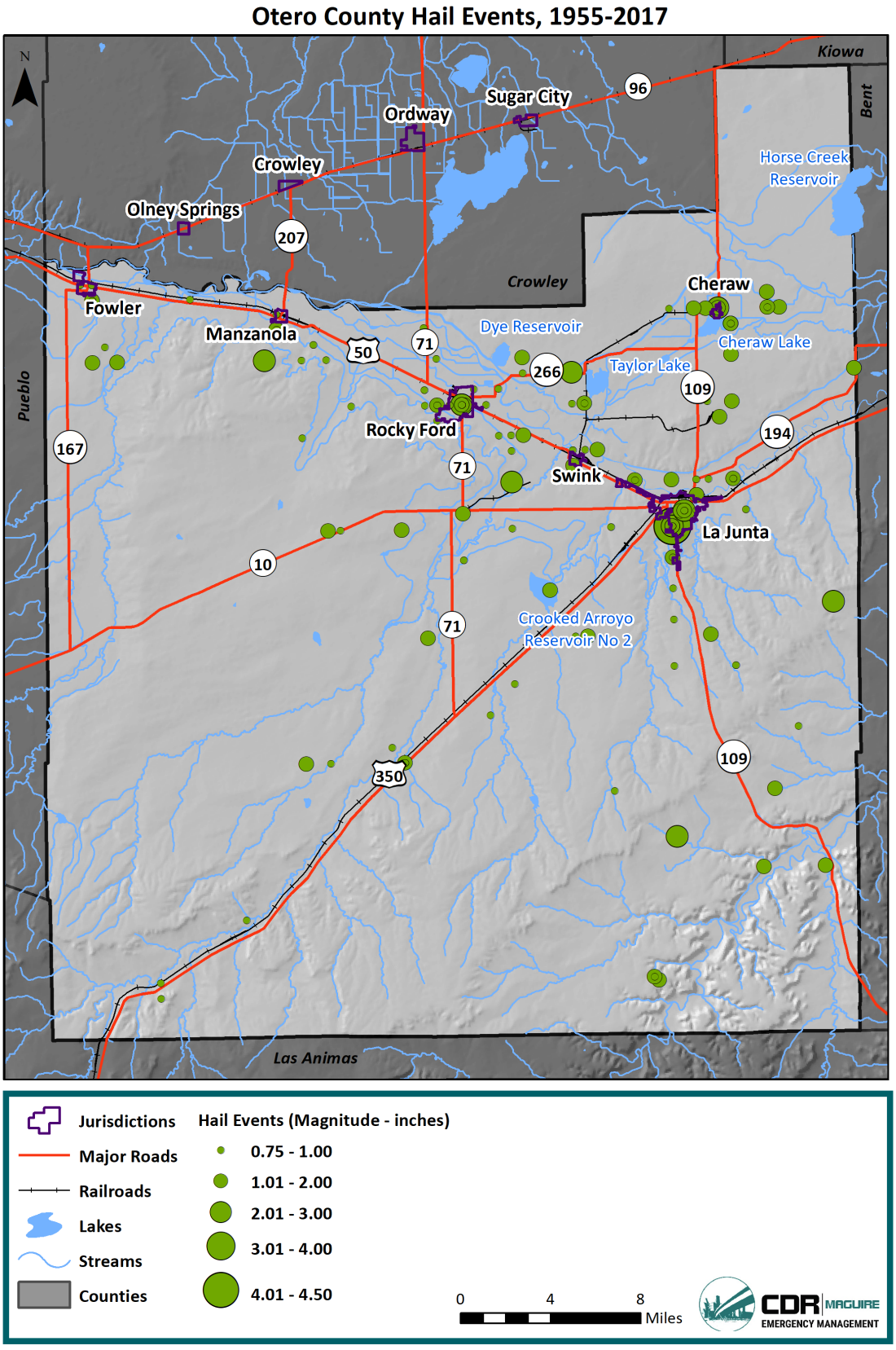
Date	Location	Magnitude (inches)	Damages	Description
5/8/2015	La Junta Airport	1.5	$0	Severe storms brought some flooding, damaging winds, hail up to the size of golf balls, and a brief tornado in Otero County.
5/9/2015	Swink	1	$0	Description unavailable
8/7/2015	North La Junta	1	$0	A few severe storms produced hail up to the size of half dollars across Otero and Bent Counties.
8/17/2015	Rocky Ford	0.88	$0	Severe storms produced hail up to the size of tennis balls in and around Peyton, as well as wind gusts in excess of 60 mph.
5/26/2016	Rocky Ford	1	$0	Description unavailable
6/12/2016	Manzanola	1	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/12/2016	Rocky Ford	1.75	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/12/2016	North La Junta	1	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/12/2016	Rocky Ford	0.88	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.
6/12/2016	La Junta Airport	1.75	$0	Severe storms produced hail up to the size of golf balls and severe wind gusts. A man was killed in northeast Otero County when severe winds flipped his trailer home.

[144] NOAA Storm Prediction Center, SVRGIS; https://www.spc.noaa.gov/gis/svrgis/

Date	Location	Magnitude (inches)	Damages	Description
5/8/2017	Fowler	1	$0	A number of severe storms produced hail up to the size of golf balls, and locally heavy rain. The supercell storm on Greenhorn Mountain brought golf ball size hail and a brief tornado at 11,300 feet ASL.
5/8/2017	Manzanola	0.88	$0	A number of severe storms produced hail up to the size of golf balls, and locally heavy rain. The supercell storm on Greenhorn Mountain brought golf ball size hail and a brief tornado at 11,300 feet ASL.
5/9/2017	Manzanola	1	$0	A few marginally severe storms occurred, one producing a brief landspout near Brandon in Kiowa County.
5/10/2017	Higbee	1.75	$0	Numerous strong to severe storms occurred, producing hail up to the size of golf balls and strong winds. Areas of very heavy rain occurred across portions of Custer, Pueblo, Otero, Bent, and Prowers Counties. The Junkins burn scar was especially hard hit, with 3 to 6 inches of rain, causing a significant flash flood along North Creek into the Beulah Valley. There were numerous road washouts in western Pueblo County.
5/27/2017	Cheraw	1.75	$0	Severe storms produced hail up to the size of golf balls from near Walsenburg (Huerfano County) and Cheraw (Otero County).
6/3/2017	La Junta	0.75	$0	A strong storm produced hail up to the size of pennies.
7/26/2017	Higbee	2	$0	A few severe storms produced damaging wind gusts and flash floods.
8/5/2017	La Junta	0.88	$0	A strong storm produced hail up to nickel size.
8/10/2017	Rocky Ford	1	$0	Several severe storms produced damaging hail up to around the size of baseballs.
8/10/2017	Swink	1.25	$0	Several severe storms produced damaging hail up to around the size of baseballs.
8/10/2017	La Junta	1.75	$0	Several severe storms produced damaging hail up to around the size of baseballs.

Date	Location	Magnitude (inches)	Damages	Description
9/23/2017	Cheraw	0.88	$0	A strong storm produced hail up to the size of nickels.
7/29/2018	Fowler	2	$0	Severe thunderstorms impacted southeastern Colorado during the afternoon and evening of the 29th, producing hail up to the size of large apples as well damaging thunderstorm winds which caused tree damage, windows and windshields to be broken as well as damaging and/or destroying sheds. Some of the larger hailstone reports with this event included hail the size of quarters near Brandon, Calhan and Crestone, hail the size of Half Dollars near Fountain as well as hail the size of Ping-Pong Balls near Bristol and Sheridan Lake. Golf Ball hail was reported near Holly, while hail the size of Limes were measured near Fowler, Granada and Ramah. Finally, hail the size of large Apples impact locations near Chivington in Kiowa county.
Totals	**Count: 23**	**Max: 2.0**	**$0**	

Figure 6-116 Otero County Previous Hail Events, 1955-2017



Probability

The probability of annual occurrence for all severe weather events (thunderstorm, lightning, and hail) is 100%, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences from thunderstorm events include infrastructure damage and building damage such as torn off roofs, as well as crop damage. Previous occurrences show events throughout the entire County. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County have similar vulnerabilities, as well as increased risk to crop losses from thunderstorms.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. As demonstrated by previous occurrences, persons recreating or working outdoors during the months of April through September will be most at risk to lightning strikes. Additionally, property and infrastructure damage are possible.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail events. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roof damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Potential Losses

According to SHELDUS, there have been $21,789,245 in damages from severe storms from 1960 to 2017 (2017 dollars) in the County. This equates to $382,267 in annual damages. According to the NCEI data, La Junta has experienced the most in losses from thunderstorm events, however the entire County is susceptible. Overall, the most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

Recorded damages from lightning in the County equate to $17,000 since 1996. Losses have been in the form of property damages as well as deaths. Lightning occurs frequently every spring through fall in the County, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

According to SHELDUS, there have been $22,146,424 in damages from hail from 1960 to 2017 (2017 dollars). This equates to $388,533 in annual damages. This is the highest amount of losses from any SHELDUS-reported hazard for the County. Similar to other thunderstorm hazards, the entire County is vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

Land Use and Development

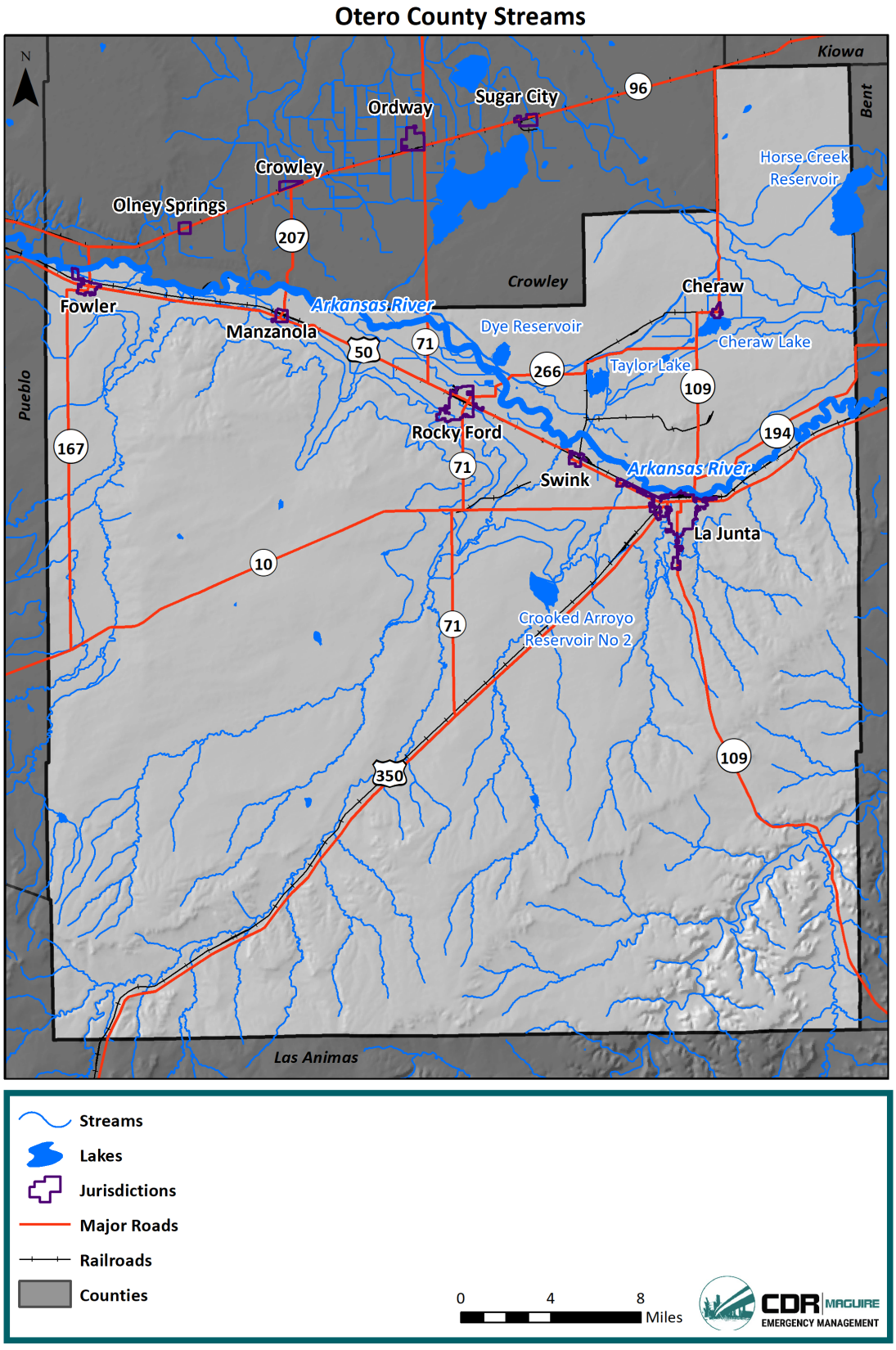
Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

6.10.10. Stream Bank Erosion/Stability

Location

Figure 6-117 shows streams in Otero County. All of these areas are vulnerable to erosion. Stream bank erosion along the Arkansas River is an issue in Otero County.

Figure 6-117 Streams in Otero County



Previous Occurrences

There are no specific erosion events recorded for Otero County. However, although there are no specific incidents reported, erosion along the Arkansas River has been an ongoing occurrence for the County.

Overall, erosion events are likely underreported, and this does not mean that erosion is not taking place. According to the 2018 Colorado Hazard Mitigation Plan, the Colorado Water Conservation Board (CWCB) is creating pilot erosion hazard maps as a component of the RiskMAP flood mapping program. This information should be utilized to further assess the erosion hazard in Otero County when available.

Probability

Streambank erosion is a natural process and will continue to occur in the future. Problematic occurrences were rated as likely by the LPC.

Vulnerability Assessment

Inventory Exposed/Impacts

Stream bank erosion is a natural process, but acceleration of this natural process leads to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects. Local interests have, with limited finances, sought for many years to provide protection from reoccurring floods on the Arkansas River. A major stumbling block in the quest for flood protection has been the aggradation of the streambed. Aggradation of the Arkansas River has been and continues to be a major problem from Pueblo to the Colorado-Kansas state line. In addition to aggradation, there is concern of an increasingly serious flood threat in the County caused by heavy plant growth in the riverbed which retards flows and results in deposition of silt and decreased channel capacity.

Erosion can result in minor inconveniences or major destruction of property and infrastructure. Severe erosion removes the earth from beneath bridges, roads, and foundations of structures adjacent to streams. The deposition of material can block culverts, aggravate flooding, destroy crops and lawns by burying them, and reduce the capacity of water reservoirs as the deposited materials displace water, and cause overall degradation of the water supply.[145]

Riverine erosion has many consequences including land and development loss. It can also affect river sedimentation and degrade channel navigation. Other problems include water quality reduction due to high sediment loads, native aquatic habitat losses, damage to public utilities (roads, bridges and dams), and increased maintenance, prevention, and control costs. Sedimentation of streams degrades habitat essential for many aquatic organisms. Erosion and deposition can also increase risk of pollution of surface waters, as nutrients and pesticides from agricultural and residential uses are more easily carried off the surface by runoff.

Additionally, burn scar areas from wildfires are at a higher risk to erosion due to the lack of vegetation as well as changes to the physical condition of the soil.

Potential Losses

No loss information is available for the stream bank erosion hazard in Otero County. The greatest potential losses from stream bank erosion would likely be direct damages to infrastructure, as well as

[145] 2018 Colorado Hazard Mitigation Plan

damages from an increased flooding risk where erosion has occurred. Erosion can deposit sediment into streams and reservoirs, increasing flooding risk as well as requiring costly remediation.

Land Use and Development

Human activities greatly influence the rate and extent of erosion and deposition. Stripping the land surface of vegetation, altering natural drainages, and rearranging the earth through construction of highways, subdivision development, farmland preparation, and modification of drainage channels for water control projects are significant factors in increased erosion and deposition.

6.10.11. Tornadoes

Previous Occurrences

According to the NCEI, from 1950 through 2019, there have been 26 recorded tornadoes in Otero County. These tornadoes resulted in $160,750 in recorded property damages. The strongest magnitude event was an F2 tornado that occurred on 10/20/1953 that caused $2,500 in damages. The most damaging tornado during this time period was on 10/11/1997 near La Junta that caused $75,000 in damages. This event moved out of open country southwest of the Higbee Valley and struck several ranches just north of the Purgatoire River on Road 804. At about 8:45 p.m. the tornado struck three ranches about three miles southwest of Higbee. Some barns were destroyed, and roofs were ripped off others. Horse trailers, windmills, feed troughs, hay feeders, water tanks, grain storage bins were destroyed. Many large cottonwood trees were broken off or uprooted. The tornado ripped through the northwest side of Higbee, and one horse perished from injuries due to flying debris there. The tornado then moved northeast through open ranch country for another five miles, with the only known damage being two downed power poles. Table 6-86 summarizes the recorded tornado events in Otero County and La Junta (there are no events reported for the other communities). It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. Examples of damages recorded during these events include, damaged roofs and buildings, downed power poles, equipment/machinery damage, livestock damage, and windmill damage.

Table 6-86 Summary of Tornadoes in Otero County, 1950-2019

Jurisdiction	# Events	# Deaths	# Injuries	Damages
La Junta	6	0	0	$125,000
Otero County	20	0	0	$35,750
Totals	**26**	**0**	**0**	**$160,750**

Tornadoes that have occurred since the 2014 Southeast Region Hazard Mitigation Plan are described in Table 6-87 below.

Table 6-87 Recent Tornadoes in Otero County

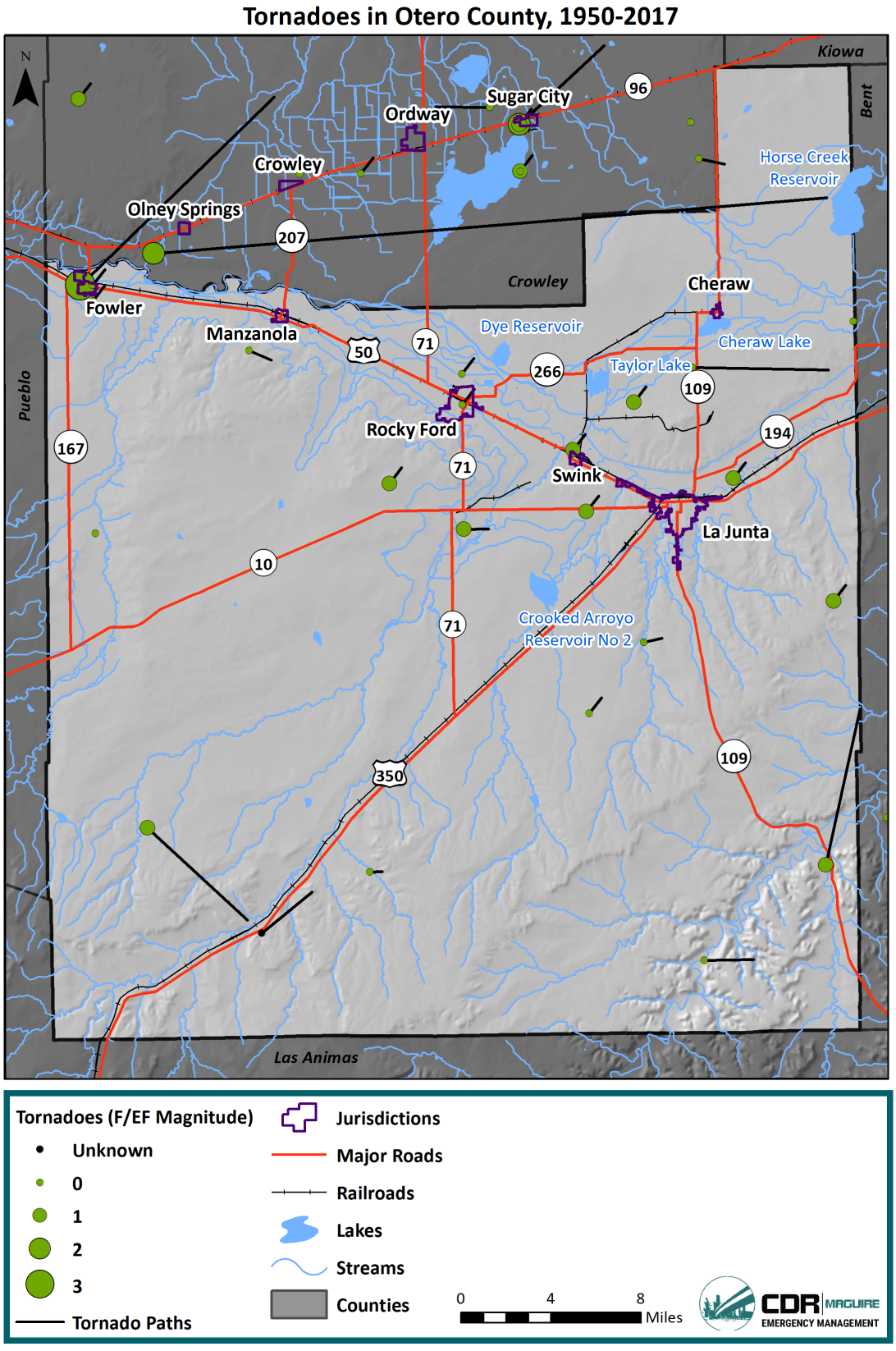
Date	Location	Mag	Injuries	Damages	Description
6/11/2011	Timpas	EF0	0	$0	A landspout tornado developed on the west edge of a thunderstorm and moved eastward. There was no damage.
6/4/2013	Higbee	EF0	0	$0	The tornado caused no known damage.
6/17/2013	(LHX) La Junta Airport	EF0	0	$0	A tornado occurred over open country from the north edge of the La Junta

Date	Location	Mag	Injuries	Damages	Description
					Airport to a point just north of State Highway 194 north of Bents Fort, causing no damage.
5/8/2015	La Junta	EF0	0	$0	A short-lived tornado occurred over open country and caused no damage.
5/18/2017	Timpas	EFU	0	$0	A tornado was witnessed by storm chasers and an off-duty NWS employee. The tornado caused no damage from which the NWS could assign an EF-scale rating.
6/19/2018	La Junta	EF0	0	$0	A delayed review and report of a landspout south of La Junta 4 miles south of La Junta, Colorado. No damage was noted with this landspout. Pictures were sent to a local broadcast meteorologist and was virtually undetectable via radar. There was a Tornado Watch for this event, the watch number was #191.
Totals	**Count: 6**		**0**	**$0**	

Additionally, Figure 6-118 shows tornadoes and tornado paths in Otero County as documented by the NOAA Storm Prediction Center.[146]

[146] https://www.spc.noaa.gov/gis/svrgis/

Figure 6-118 Otero County Tornadoes



Probability

Based on previous occurrences in Otero County, there is a 38% chance that a tornado will happen every year, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Historical evidence shows that Otero County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. Previous occurrences show tornadoes in each jurisdiction. However, it cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)
- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Otero County, 7% of the housing units are mobile homes.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

NCEI historical loss information shows $160,750 in losses, of which the majority are reported near La Junta. The most vulnerable areas in the County to high losses are jurisdictions that have more buildings and people, as well as agricultural land and mobile homes in unincorporated parts of the County.

SHELDUS reports $568,201 in damages from tornadoes in Otero County from 1960 to 2017. This equates to $9,968 in annual damages. Of these damages, $174,714 are crop damages and $393,486 are property damages, indicating both agricultural areas and structures are vulnerable to this hazard.

Land Use and Development

Tornadoes can impact any location in the County; therefore, all new development and populations may be impacted by a tornado. Building codes can help reduce the risk to structures and people from tornado impacts.

6.10.12. Wildfire

Location

For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.[147]

Burn probability for the County is mapped in Figure 6-119. Throughout the County, the burn probability is largely moderate. It is the lowest along the Arkansas River running west to east in the northern part of the County.

[147] CSFS, 2017 CO-WRA Final Report

Figure 6-119 Otero County Burn Probability

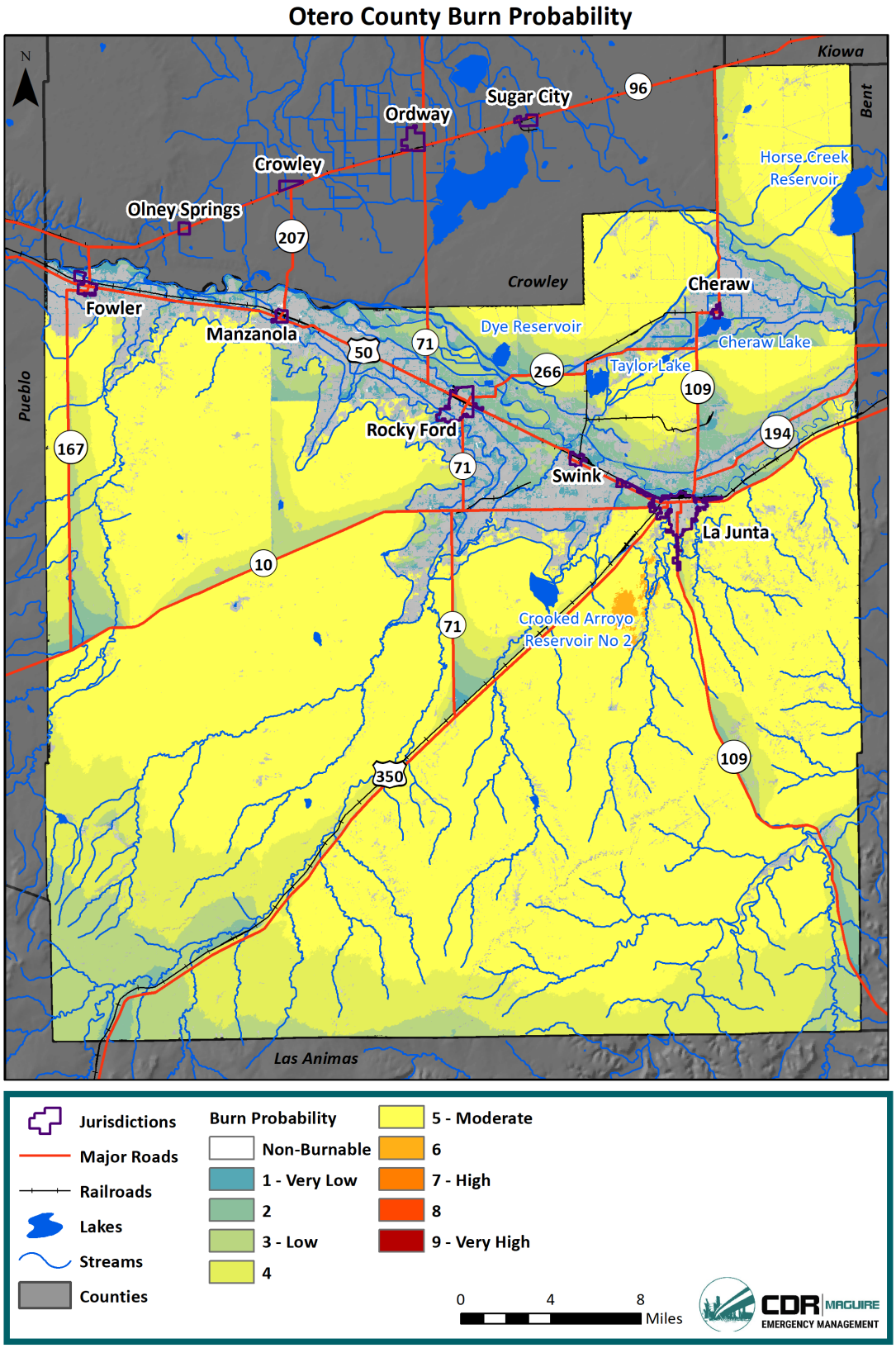
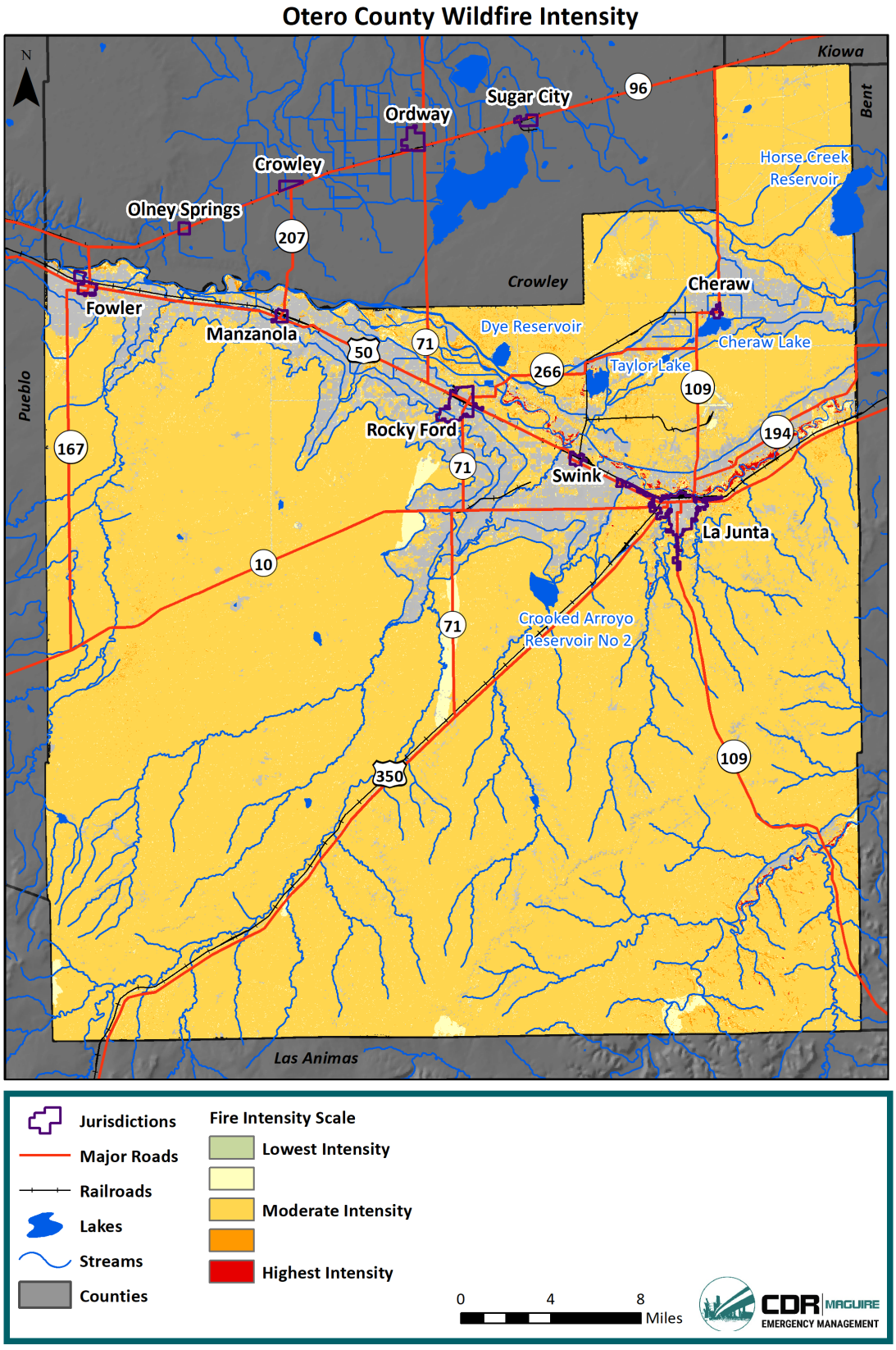


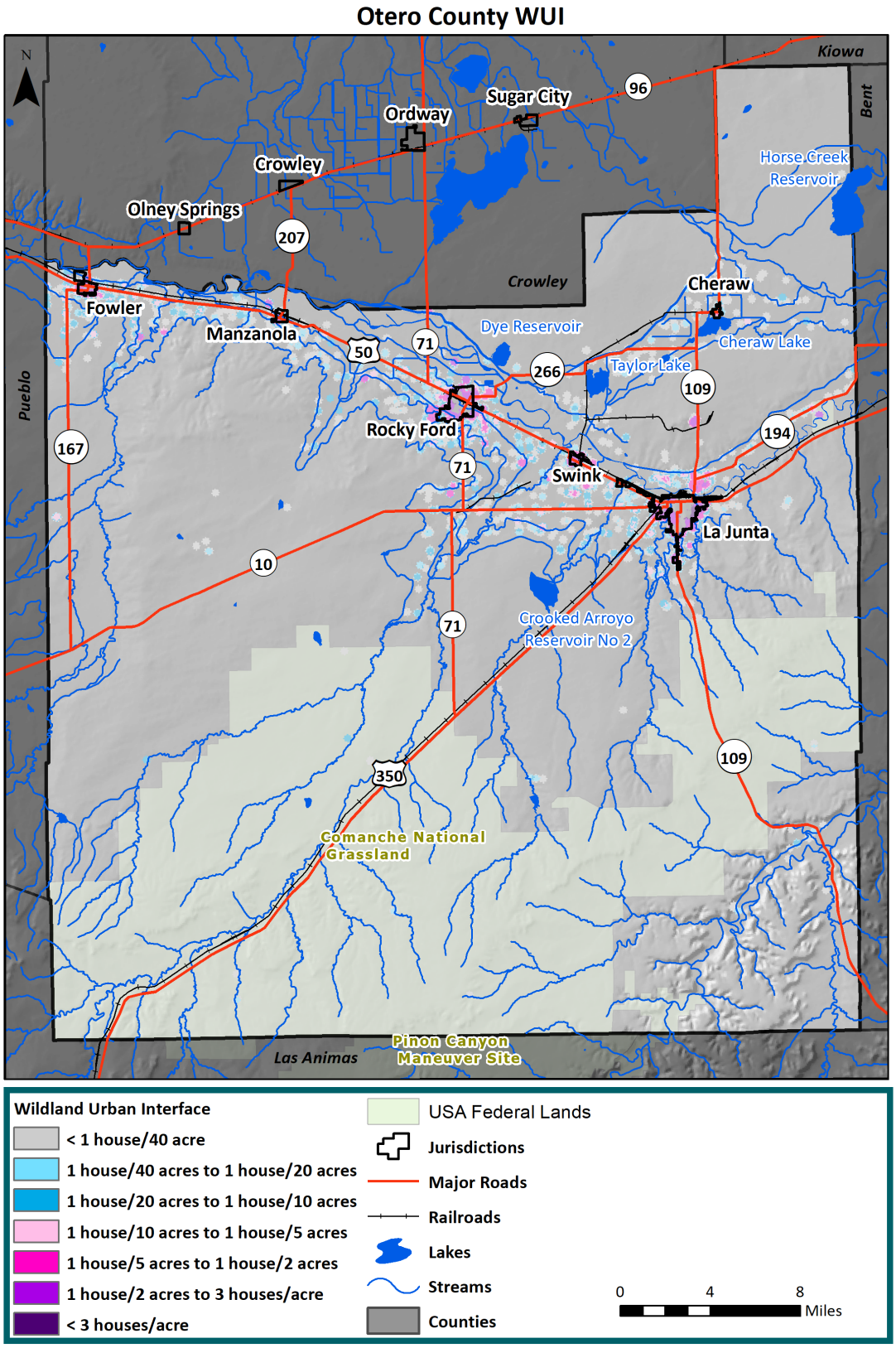
Figure 6-120 show the wildfire intensity for Otero County. Much of the County has moderate wildfire intensity. There are pockets of higher intensity, particularly along the Arkansas River, although this area was rated the lowest in terms of burn probability.

Figure 6-120 Otero County Wildfire Intensity



Overall, the Otero County WUI is largely concentrated around the jurisdictions, with the highest densities around Rocky Ford, Swink, and La Junta. There are very little WUI areas in the southern portion of the County. Figure 6-121 show WUI locations throughout the County in addition to federal land ownership.

Figure 6-121 Otero County Wildland-Urban Interface



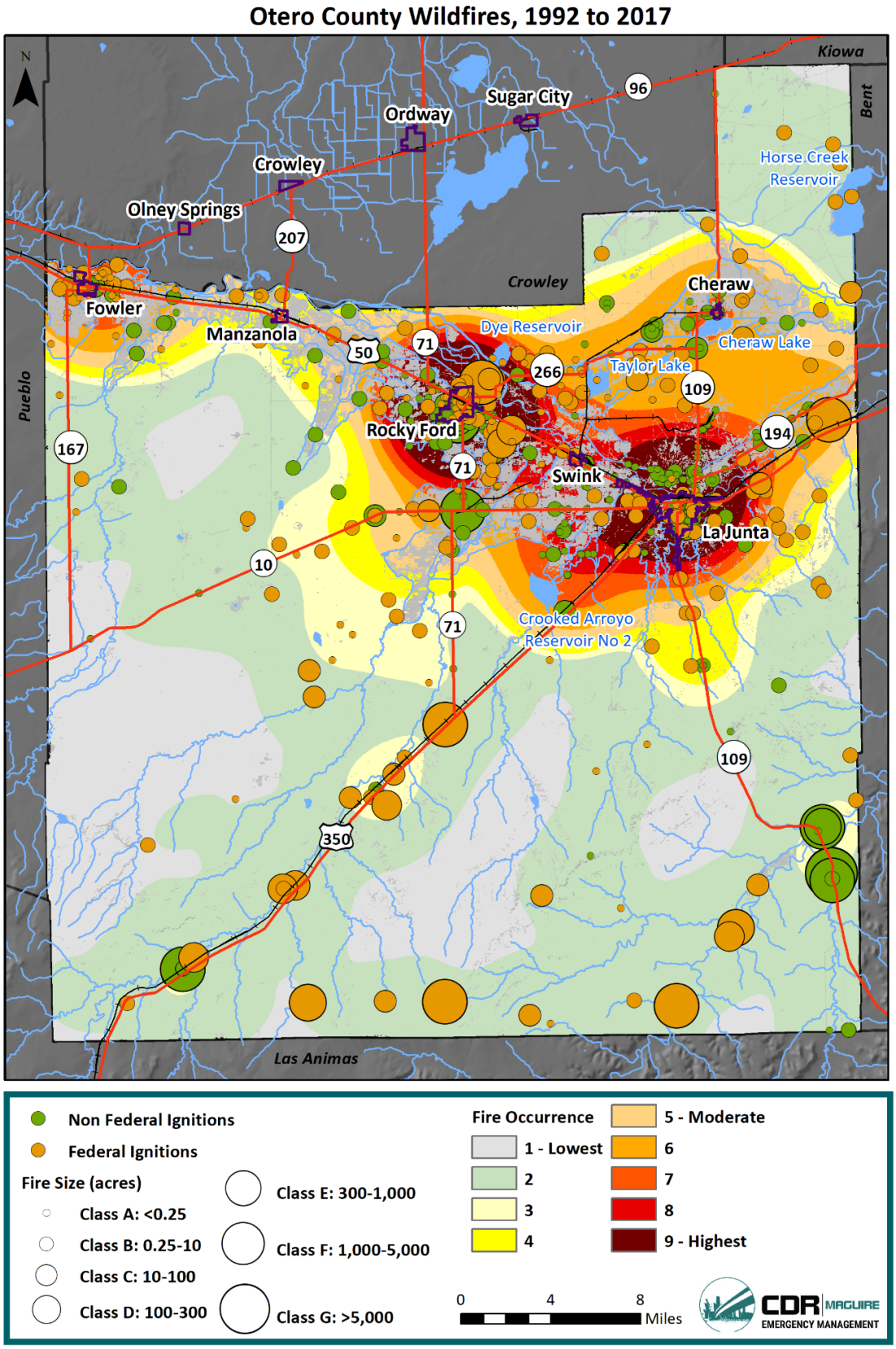
Previous Occurrences

According to the CO-WRA data, there have been 251 wildfires on federal lands from 1992 to 2015. Of these fires, 88 have been Class A (one-fourth acre or less), 134 Class B (1/4 to 10 acres), 15 Class C (10 to 100 acres), 7 Class D (100 to 300 acres), 2 Class E (300 to 1,000 acres), and 5 Class F (1,000 to 5,000 acres). Additionally, of these wildfires, 19 have been lightning-caused, 24 human-caused (including arson, campfire, debris burning, equipment use, fireworks, and smoking), 1 from a powerline, 3 from the railroad, 22 miscellaneous, and 182 missing or unidentified.

Additionally, there have been 559 non-federal wildfires from 2009 to 2017. Of these fires, 400 have been Class A, 138 Class B, 12 Class C, 1 Class D, 1 Class E, 6 Class F, and 1 Class G. Information regarding the cause of the wildfire is not available for non-federal fires.

Figure 6-122 shows these previous wildfires within Otero County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident there have been wildfires throughout the entire County, with the most occurrences along the Rocky Ford to La Junta corridor. However, although this area has the highest concentration of previous occurrences, the southern portion of the County has experienced many larger wildfires as well.

Figure 6-122 Otero County Previous Wildfires



Notable wildfires since the 2014 Southeast Region Hazard Mitigation Plan are described below.

June 30, 2019 – The Smith Canyon Fire occurred south of La Junta and burned approximately 100 acres. No homes or structures were damaged.

November 24, 2018 – The Timber Fire burned approximately 500 acres near County Road MM.5 and County Road 33. No structures were damaged, but heavy black soot was visible in the area.

July 21, 2018 – Multiple brush fires were sparked by lightning north of La Junta.

Probability

Based on all of the available previous occurrence data, there have been 813 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the Otero County CWPP, the following are areas of highest wildfire concern for the County:

- The communities and all development near the communities including but not limited to the La Junta Industrial Park, various feed lots, 109 Feeders, La Junta Livestock, Winters Livestock, North La Junta, North La Junta Water District, the KOA Campground, Muth Welding, John Deere Implement, the various business districts along Hwy 50 corridor, and local community cemeteries;
- The recreational areas including but not limited to the National Park Service Bent's Old Fort National Historic Site, the United States Forest Service Comanche Grassland sites, the various Bureau of Land Management parcels, the State Wildlife Areas under the Colorado Parks and Wildlife, and the local community high use areas like Rocky Ford's Crystal Lake, and Cheraw Lake;
- The railroad/high-use travel corridors in the county;
- The Arkansas River watershed/tributaries and irrigation canals/ditches/laterals for water quality.

The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

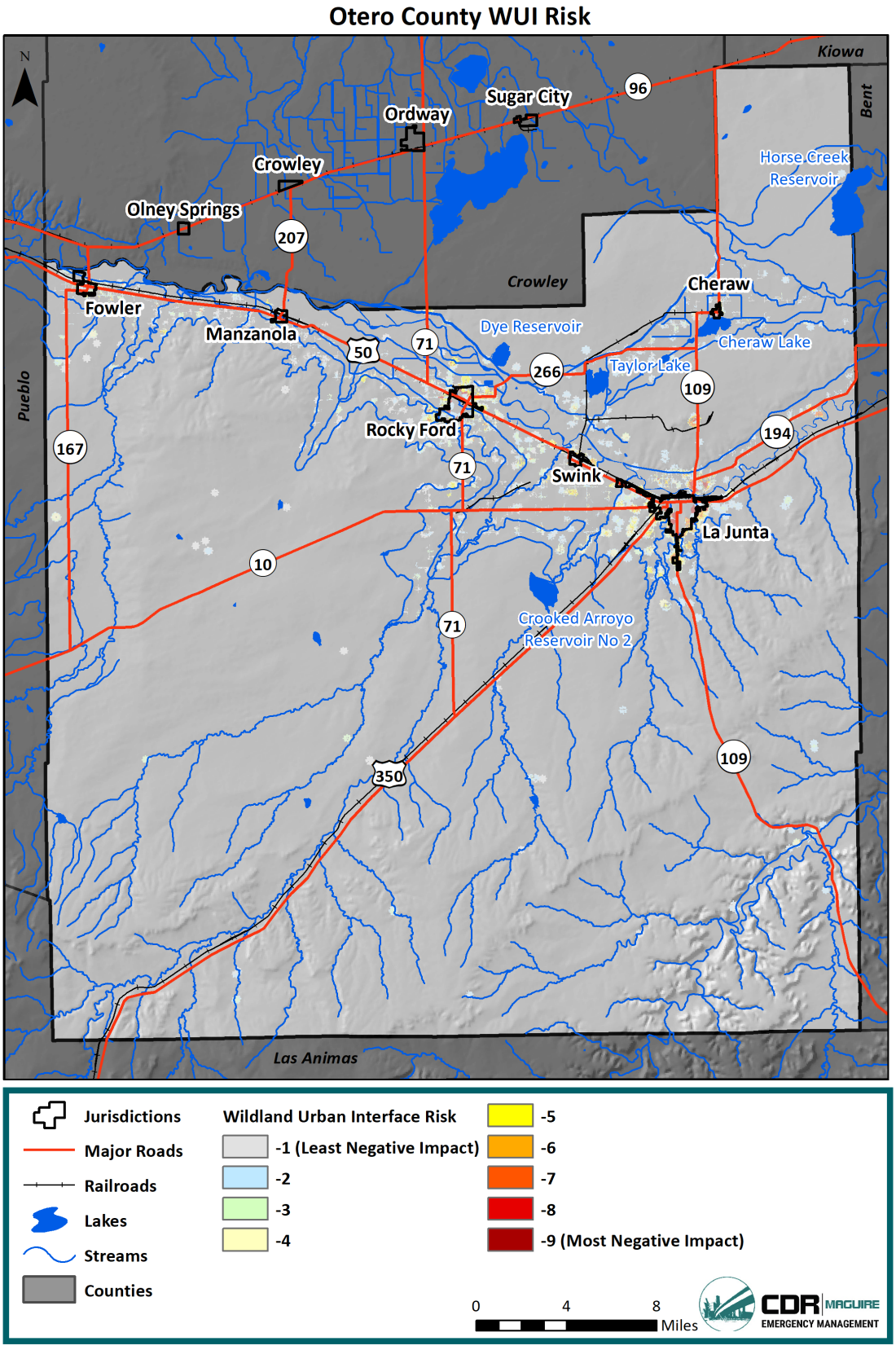
Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

Potential impacts are further assessed by utilizing the CO-WRA data to visualize different components of wildfire risk throughout the County.

Figure 6-123 shows the WUI risk in the County. The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.[148] According to the CSFS, 65% of the population in Otero County lives within the WUI. The majority of the County's WUI is in low to moderate negative impact areas. However, small portions, mostly around each jurisdiction, are in higher negative impact WUI areas.

[148] 2017 CO-WRA

Figure 6-123 Otero County WUI Risk



Potential Losses

The best available recorded losses from wildfire in the County are from the SHELDUS database, which records $34,317 in losses from 1960 to 2017 (2017 dollars). This equates to $891 in annual losses. This is likely a low estimate and losses from wildfires can be substantial. Wildfires can impact structures, infrastructure, crops, and livestock as well as cause injuries and fatalities. Additionally, as with other parts of the western United States, the number of wildfires and acres burned in the Great Plains has increased and is projected to continue to increase. From 1985 to 1994, there were an average of 33 fires per year on the plains. From 2005 to 2014, that average soared to 117 per year, an increase of almost 350%.[149] Causes of this increase are cited as previous fire suppression, more people living in the WUI, need for more education for property owners, and climate change. For example, many residents have created windbreaks by planting fast growing trees like red cedar and ash juniper close to their houses, inadvertently creating a source of fuel that is particularly volatile during prolonged periods of little to no rain. With this trend, wildfire losses will likely continue to grow in the County.

All jurisdictions are at risk to losses from wildfire. Structures in WUI areas as well as agricultural land and rural infrastructure in areas with higher wildfire probability and intensity are at the risk to highest losses.

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of "living" wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

6.10.13. Windstorms

Previous Occurrences

According to the NCEI database, there have been 37 recorded high wind events in Otero County from 2003 to 2019. Within this database, wind events are reported at an NWS Zone level, so it is not possible to derive jurisdictional data (Otero County is one zone). In Otero County, many of the high wind events are associated with winter storms or thunderstorms, but stand-alone high wind events are also common. The highest recorded magnitude event took place on 3/13/2019 with gusts up to 89 mph. this event is described below:

> An extremely powerful low pressure system (setting records for lowest pressure measurements in Colorado) developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.

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[149] Kiowa County Independent, http://kiowacountyindependent.com/news/1052-great-plains-new-wildfire-frontier

No deaths or injuries were recorded in the NCEI database. A total of $100,000 in damages were recorded from a single event on 6/15/2006. Damages reported include power failures, downed trees and limbs, and a peeled off section of a store roof. There were also power outages from Rocky Ford to Swink, as well as a few semi-trailers were blown over in La Junta. At Cheraw, several outbuildings were damaged, and power poles were damaged as well. Through the rest of southeast Colorado, there was only minor damage to outbuildings. Additionally, SHELDUS reports $4,325,425 in damages from wind events from 1960 to 2017 (2017 dollars). No further details are available with the SHELDUS data. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below.

Table 6-88 Otero County Recent Wind Events

Date	Description
3/18/2014	Winds gusting in excess of 70 mph were measured over portions of southern Colorado. Some of the higher reported wind gusts were 59 mph at Schriever AFB (El Paso County)...NWS Pueblo (Pueblo County) and near Cheraw (Otero County)...60 to 64 mph wind gusts were recorded near Springfield (Baca County)...Peterson AFB (El Paso County...65 to 70 mph wind gusts impacted locations near Campo and Two Buttes (Baca County)...and a 75 mph wind gust was measured near Yoder (El Paso County).
4/29/2014	A strong upper level storm system over the upper Midwest generated wind gusts in excess of 60 mph across the southeast plains. Widespread low visibility prompted a Dust Storm Warning.
11/16/2015	A vigorous storm system produced wind gusts near 80 mph across sections of southern Colorado. Some of the higher reported wind gusts included...58 to 68 mph in Colorado City and Blende (Pueblo County)...in Fountain and Security (El Paso County)...in Cheraw (Otero County)...in Lamar (Prowers County)...and 70 to 78 mph in Campo and west of Two Buttes (Baca County).
3/23/2016	A intense weather system produced strong to high winds across many sections of southern Colorado. Wind gusts in the 58 mph to 69 mph range were reported across several locations for which there were high wind warnings. In addition, wind gusts between 70 and 80 mph were also observed across portions of El Paso and Pueblo Counties.
12/25/2016	A strong upper level jet stream moving across Colorado generated strong to high winds from the eastern mountains into and through the southeast plains of Colorado. Widespread wind gusts between 60 and 70 mph occurred across the lower elevations. Winds gusted in excess of 75 mph across the eastern mountains and down the adjacent lee slopes. Despite the high winds, widespread damage did not occur.
3/6/2017	A vigorous weather system generated high winds across many portions of southern Colorado. Some of the higher reported wind gusts included: near 60 mph at Florence (Fremont County) and Lamar (Prowers County), 60 to 70 mph near Two Buttes (Baca County), Cheraw (Otero County), Walsenburg and La Veta (Huerfano County), Wetmore (Custer County), and Hoehne (Las Animas County), 70 to 80 mph at Colorado City (Pueblo County), and around 85 mph near La Veta Pass ((Costilla County) and Swissvale (Fremont County).
3/24/2017	A potent winter storm produced snow and high winds across in I-25 corridor and plains. Some of the higher reported wind gusts included: near 60 mph at Cheraw (Otero County) and Colorado Springs, Fountain, Truckton, Peterson AFB (El Paso County), 60 to 70 mph near Colorado City (Pueblo County), La Veta (Huerfano County), Thatcher

Date	Description
	and Hoehne (Las Animas County), Springfield (Baca County), Finally, wind gusts of around 75 mph were observed near Campo (Baca County) and Blende (Pueblo County).
4/13/2018	A passing storm system produced winds, gusting to around 80 mph at times over sections of southern Colorado. Wind gusts between 58 mph and 65 mph were realized near Two Buttes, Truckton, the Lamar Airport, the Colorado Springs Airport and the Air Force Academy. Wind gusts between 66 mph and 70 mph were recorded at the La Junta airport while a 76 mph wind gust was measured near Springfield. Finally, a wind gust that clocked 79 mph occurred near Campo.
4/17/2018	An intense storm system produced strong winds in excess of 80 mph at times over large sections of southern Colorado. Some of the highest reported wind gusts with this event included wind gusts between 58 mph and 64 mph near Holly, Weston, Westcreek, Sargents, Florence, Truckton, Del Norte, Gardner, Monument, Penrose, Springfield, San Miguel, Wetmore, the Royal Gorge, the Fort Carson Airport and the Air Force Academy. Wind gusts between 65 and 69 mph were observed near Creed, San Isabel, Blende, Canon City, Two Buttes, Walsenburg, La Veta Pass as well as the Alamosa, Colorado Springs, Pueblo and Trinidad airports. Wind gusts between 70 and 79 mph were noted near Colorado City, Swissvale, La Veta Pass, Wagon Wheel Gap, the Pikes Peak Summit and the La Junta and Lamar airports. In addition, a wind gust of 85 mph was measured near Wolf Creek Pass.
11/24/2018	A storm system produced winds, gusting to 80 mph at times over portions of southern Colorado. Wind gusts between 58 mph and 65 mph were recorded near Walsenburg, Springfield, Hoehne, Sargents, Cheraw, Peterson Air Force Base, Lamar and Fountain. Wind gusts between 66 mph and 70 mph were measured near Weston and the Air Force Academy. Finally, a wind gust that clocked 80 mph was realized near the Pikes Peak summit.
12/12/2018	A storm system produced winds, gusting to around 65 mph at times over sections of southeastern Colorado. A wind gust of 58 mph was measured 4 miles to the south of Cheraw, while a wind gust of 64 mph was measured 4 miles to the southwest of Campo.
3/13/2019	An extremely powerful low pressure system(setting records for lowest pressure measurements in Colorado)developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.
Total	**12**

Probability

Based on 37 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

There is little information to indicate damages from wind events. Mitigation measures, such as "Living Snow Fences" (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Potential Losses

SHELDUS reports $4,325,425 in damages from wind events from 1960 to 2017 (2017 dollars). This equates to $75,884 in annual damages. It is difficult to determine details on losses since the SHELDUS data does not provide loss or damage information. However, it is evident that losses can be expected in Otero County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

6.10.14. Winter Storms

Location

The entire County is subject to winter storm events. Otero County averages approximately 26 inches of snow per year.

Previous Occurrences

According to the NCEI database, there have been 17 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2005 to 2019. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information (Otero County is one zone). No damages, deaths, or injuries were reported with these events. However, SHELDUS reports $3,831,097 in damages from 29 events. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below. Notable winter storm events that impacted Otero County prior to the 2014 Southeast Region Hazard Mitigation Plan are described in Appendix C.

Table 6-89 Winter Storm Events in Otero County, 2014-2019

Date	Type	Description
2/3/2014	Winter Storm	An intensifying storm system across southeast Colorado generated heavy snow in combination with gusty northerly winds at times. Generally, around 6 inches accumulated across the warning area in the southeast counties. Lesser amounts occurred outside the warning area...including...4 to 5 inches near Pueblo Reservoir and Beulah (Pueblo County), Monument and Colorado Springs (El Paso County), Trinidad (Las Animas County), La Junta and Cheraw (Otero County). Finally, 12 inches of snow was measured at Wolf Creek Pass in Mineral county.
2/21/2015	Winter Storm	A vigorous winter storm system impacted large portions of southern Colorado with significant snow and gusty winds. Some reported snow amounts included 6 to 10 inches at Colorado Springs (El Paso County)...Woodland Park (Teller County)...Pueblo and Pueblo West (Pueblo County)...Salida (Chaffee County)...Texas Creek (Fremont County)...Crestone (Saguache County) and Alamosa. Eleven to 15 inches graced Monument and the Air Force Academy (El Paso County)...Penrose (Fremont County)...Walsenburg (Huerfano County)...Poncha Springs (Chaffee County)...while 16 to 20 inches of snow was measured near Beulah and Colorado City (Pueblo County)...Rosita (Custer County) and Monarch Pass (Chaffee County). Twenty to 26 inches was noted near Westcliffe (Custer County)...Rye (Pueblo County) and Maysville (Chaffee County)...while 39 inches covered Wolf Creek Pass (Mineral County).
1/14/2017	Winter Storm	A Pacific storm system generated gusty winds and heavy snow to southern Colorado, especially over the higher terrain. Some of the higher reported snow totals included: 6 to 9 inches near the Spanish Peaks and Walsenburg (Huerfano County), Rye and Beulah (Pueblo County), Monte Vista (Rio Grande County), Leadville (Lake County), Kim, Hoehne, Trinidad (Las Animas County), Maysville (Chaffee County), and 17 inches near Monarch Pass (Chaffee County).
4/29/2017	Winter Storm	A vigorous late Spring storm impacted many sections of southern Colorado with impressive snow amounts in combination with gusty winds and localized snow drifts around 5 feet in combination with many downed tree limbs. Some of the higher reported snow totals with this event included six to nine inches of snow near Leadville, Salida, the Air Force Academy, Lamar, Woodland Park, La Junta, Texas Creek, Pueblo, Rocky Ford and Maysville. Ten to fifteen inches of snow was noted near WestCliffe, Manzanola, Walsenburg, Black Forest, Calhan, Pueblo West, Monument, Avondale, Springfield and

Date	Type	Description
		Blende. 15 to 20 inches of snow graced the communities of Wetmore, Pritchett and Holly. 23 inches of snow was measured near Beulah. An impressive 25 to 30 inches of snow covered the communities of Rye, Colorado City and Two Buttes, while a whopping 39 inches of snow impacted San Isabel.
2/22/2019	Winter Storm	A slow moving snow storm generated widespread snow, heavy at times over many portions of southern Colorado. Some of the higher reported snow totals with this event included six inches of snow near Creede, Monument, Florissant, Palmer Lake and Rye. Seven inches of snow graced locations near Buena Vista, Cascade, Hillside, Rosita, Westcliffe, Colorado City, Texas Creek and Beulah. Eight inches of snow was observed near South Fork, Colorado Springs and Manitou Springs. Locations near the Spanish Peaks, Black Forest and San Isabel recorded nine to ten inches of snow with this event, while Wolf Creek Pass was inundated with 40 inches of snow with this storm system.
3/13/2019	Blizzard	A blizzard termed a “bomb cyclone” impacted much of Colorado’s Front Range and Eastern Plains. To qualify as a "bomb cyclone," an area of low pressure must drop at least 24 millibars in 24 hours or less. A Barometric pressure reading of 970.4 mb recorded in Lamar on March 13 is the lowest reading ever recorded in the State. The blizzard produced 80-90 mph winds, stranded people on impassable roadways, and caused power outages throughout the Region.
Total: 6		

Probability

Utilizing the 17 reported NCEI events from 2005-2019, there is a 100% chance of a winter storm event occurring annually in Otero County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

Vulnerability Assessment

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard profiled in Section 4.10.5.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe

snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County's elderly population is a potentially vulnerable demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $3,831,097 (2017 dollars) in total losses from winter weather events. This equates to $67,212 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code (for those areas with building codes) should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services. Areas without building codes should consider adopting and enforcing some type of building code.

6.10.15. Cyber Hazards

Previous Occurrences

Across the southeast region, there have been two reported events where counties paid ransomware.

Probability

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

Vulnerability Assessment

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have

significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

Land Use and Development

If population increases in the County, more people are exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

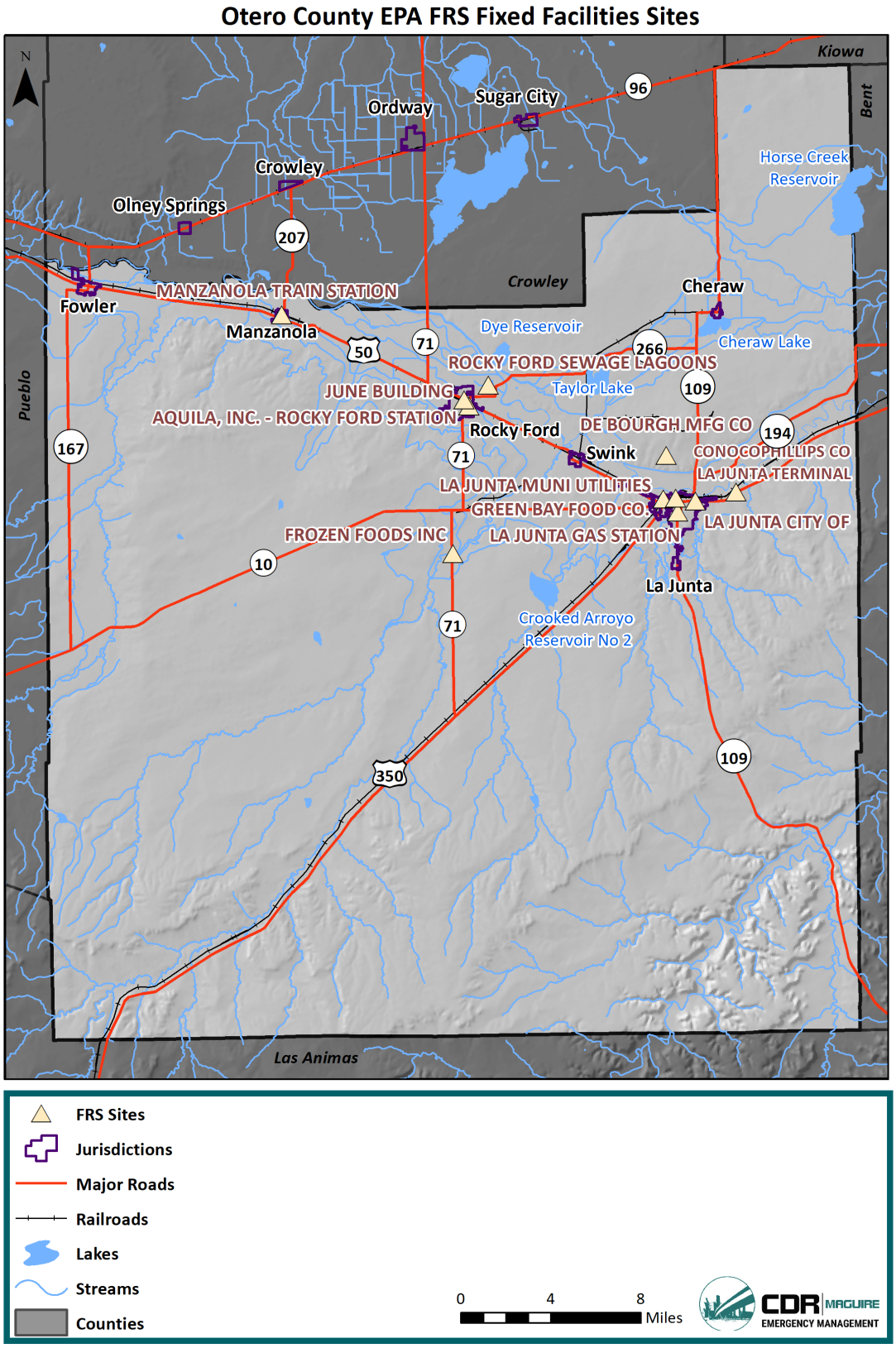
6.10.16. Hazardous Materials Release

Location

Locations of fixed facilities in Otero County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.[150] Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Otero County has 11 fixed facilities that could result in a hazmat release, as shown in Figure 6-124.

[150] https://iaspub.epa.gov/sor_internet/registry/facilreg/home/basicinformation/

Figure 6-124 Otero County EPA Fixed Facility Sites



For transportation related incidents, in Otero County Highways 10 and 50 are designated Hazardous Materials Routes by CDOT. Additionally, Highways 350 and 109 are designated Gasoline, Diesel Fuel, and Liquified Petroleum Gas Routes. The AT & SF Railroad also runs through Otero County following Highways 50 and 350. These areas could be more likely sources of transportation related hazmat incidents.

Previous Occurrences

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 6-90 below. There has been a total of 20 incidents from 1971 to July 2019, totaling $66,317 in damages. Eleven of these events have been highway related and nine rail. Of these events, 17 have been recorded near La Junta, two near Rocky Ford, and one near Swink.

Table 6-90 Otero County Previous Hazmat Events

Date	City	Hospital Injuries	Non-hospital Injuries	Damages	Mode of Transportation	Description
10/17/2018	La Junta	0	0	$0	Highway	During unloading the hose popped off the ground fitting spilling about 15 gallons of Unleaded gasoline.
7/13/2012	Swink	0	0	$0	Highway	Event# 34166 Spill - 3 Gals-Overflow from Customer's Tank. The driver was finishing up the unloading process into the customer's tank. Tank's venting system wasn't working properly and somehow built up too much pressure. The customer's plastic dome lid came off and allowed approx 3 gals of product to spill. Customer cleaned up the spill. Dome lid was put back on. It was snap and lock. No damage to dome lid. No further issues.
11/1/2009	La Junta	0	0	$57,500	Highway	Truck loaded propane at the conoco phillips pipeline @ app. 5:30am. After leaving the pipeline truck travelled about 5 miles west on highway 50 enroute to his destination. The driver felt his front tire drop off the pavement and the softer soil caused the truck to be pulled to the right and into the barrow ditch where it overturned. Although there was no leakage of product

Date	City	Hospital Injuries	Non-hospital Injuries	Damages	Mode of Transportation	Description
						due to the potential danger traffic was rerouted to frontage roads of hwy 50 the entire hwy & frontage roads were initially closed for less than 1 hour after which the frontage roads re-opened.
4/9/2004	Rocky Ford	0	0	$7,700	Rail	Bnsf train derailed its three rear cars after traversing a broken (detail fracture) stock rail at mainline switch. Shpx206716 derailed overturned & top protective housing cover sheared-off. Product escaped from the vacuum relief valve (vrv) that was unable to hold back liquid pressure. Also mud forced under the weather cap depressed vrv spring allowing product to escape. Bnsf responders cleared mud from vrv prying weather cap up & vrv reseated stopping product release. Tank car uprighted & remaining product to be transferred to another tank car. Spilled product that didn't evaporate was remediated. Colorado highway patrol evacuated three nearby households. One household was allowed to return by 0030 hrs. Mdt with the other two by 0230 hrs. Mdt on 4/10.
4/13/2000	La Junta	0	0	$232	Rail	Bnsf conductor resecuring tarp on gondola that had been blown loose by wind forces reported that particle dust had blown on his clothes. Tarp was resecured & car continued to destination. No personal injury reported from this incident.
2/17/1999	Rocky Ford	0	0	$360	Highway	While delivering freight driver noticed a smell in trailer. An investigation revealed two cartons were leaking. The

Date	City	Hospital Injuries	Non-hospital Injuries	Damages	Mode of Transportation	Description
						cartons were recoup and over packed into a dot approved salvage drum and the shipper was notified.
1/10/1995	La Junta	0	0	$15	Rail	Tank car noticed by switch crew to be leaking (by odor). Atsf responders assessed car and determined two sources of release. B end liquid valve was not seating properly and permitted seepage. Packing material was replaced; however valve appeared to be defective account product getting in to stem area with valve closed. Valve was tagged for repair. Gaging rod packing was leaking. Not tightened to correct leak. Shipper was notified to handle with loading crews.
6/1/1994	La Junta	0	0	$210	Rail	Residue only tank car was to be used for transloading from another tank car found leaking. Atsf responders determined source to be from gauge rod packing gland nut. Packing gland nut was tightened to stop release. Car was sent to home shop for repacking.
5/31/1994	La Junta	1	0	$0	Rail	Tank car found to be releasing vapor from protective housing area while in yard. Atsf responders determined cause to be a release of product at a fitting in the protective housing. Aar pueblo personnel made first entry and found leaking safety relief valve. All attempts to seat the valve failed. Car was off loaded to trucks then reloaded into another rail car. Product was reduced to ^0 psi but with increased ambient temperature vapor release resumed. Atsf personnel removed and replaced safety

Date	City	Hospital Injuries	Non-hospital Injuries	Damages	Mode of Transportation	Description
						relief valve then sent car to home shop. Injury was to an employee alleging inhalation of vapor after car was emptied.
3/2/1993	La Junta	0	0	$190	Highway	Tank was inside building out of view. Our driver was signalled to start pumping. When he did end of hose blew off spilling product into concrete containment area. Spilled product was pumped into slop tank.
1/27/1993	La Junta	0	0	$10	Rail	Tank car found to be leaking product from manway area. Atsf responder found manway gasket to be out of position. Gasket was repositioned correctly and manway resecured car sides wiped. No apparent ground contamination at this location.
9/24/1990	La Junta	0	0	$100	Highway	Our tractor/trailer unit was loaded with approximately 5000 gallons of glycol ether em for delivery to phillips 66 company in commerce city colo. With a stop-off at there plant site in la junta colo for the off loading of 1000 gallons of the product into there storage tank. This appeared to be a new installation as there was still paint on the site glass gauge. Our driver was operating his tractor pump and the company operator was to tell our driver when the storage tank was full and we would shut down the pumping. The site glass had a reading of 0 to 48 inches and the shift foreman had told his operator to stop the pumping when the gauge read 39 inches of product. The operator failed to tell the driver when the product

Date	City	Hospital Injuries	Non-hospital Injuries	Damages	Mode of Transportation	Description
						reached the 39 inch mark and before the product filled the tank the manhole dome lid on the storage tank started leaking product down the side of the tank with an estimated spill of five gallons of product. It was later determined that the manhole cover had never been tightened down and this allowed the product to escape the tank. The product was cleaned up by the company operator and put into waste containers provided.
3/10/1988	La Junta	0	0	$0	Highway	Description unavailable
10/7/1986	La Junta	0	0	$0	Rail	Description unavailable
4/7/1982	La Junta	0	0	$0	Highway	Description unavailable
9/13/1980	La Junta	0	0	$0	Rail	Description unavailable
11/22/1976	La Junta	0	0	$0	Highway	Description unavailable
2/13/1976	La Junta	0	1	$0	Rail	Description unavailable
8/15/1972	La Junta	0	0	$0	Highway	Description unavailable
6/28/1971	La Junta	0	0	$0	Highway	Description unavailable
Total: 20		**1**	**1**	**$66,317**		

There have not been any significant fixed facilities hazmat incidents in Otero County.

Probability

Based on 20 previous occurrences from 1971 to 2019, there is a 42% chance of annual occurrence of a hazmat incident in Otero County, equating to a likely probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

Vulnerability Assessment

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Otero County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a risk to accidents that may lead to releases. Populations near the highway are at a higher risk to transportation related hazmat incidents. Highways with designated hazardous materials or gasoline, diesel fuel, and

liquified petroleum gas routes pass all jurisdictions in the County except for Cheraw. Fixed Facility releases are less common in the County, however, there is still potential for a release. Fixed facilities are located in La Junta, Rocky Ford, Manzanola, and parts of unincorporated County, increasing the risk of a release in the communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

In addition, Bent's Old Fort Historic Site management consider the main threats to the Park from hazardous materials to be from spillage from the railroad which has a right of way on the south side of the Park, and from an accidental spill from Conoco Philips transfer station on the east side of La Junta. Currently there is no closer access to the river between La Junta and the National Park which means any accident that might occur from that plant wouldn't be stopped until it got to the Park's western boundary.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Otero County has experienced $66,317 in damages from hazmat incidents from 1971 to July 2019, equating to $2,210 in annual losses.

Land Use and Development

Future development in the County would increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

6.10.17. Pandemic and Zoonotic Diseases

Previous Occurrences

Pandemic Influenza

There were four acknowledged pandemics in the twentieth century and one in the twenty-first century. It is likely these pandemics impacted Otero County.

- **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.
- **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.
- **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.

- **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.

Hantavirus

From 1993 (when the disease was first reported by CDPHE) and December 2018, there have not been any reported case of hantavirus in Otero County. However, hantavirus is typically found in rural areas like Otero County, so the County is still vulnerable to the virus. Statewide during this timeframe, there have been 115 cases, with 41 of those ending in a fatality.[151]

Plague

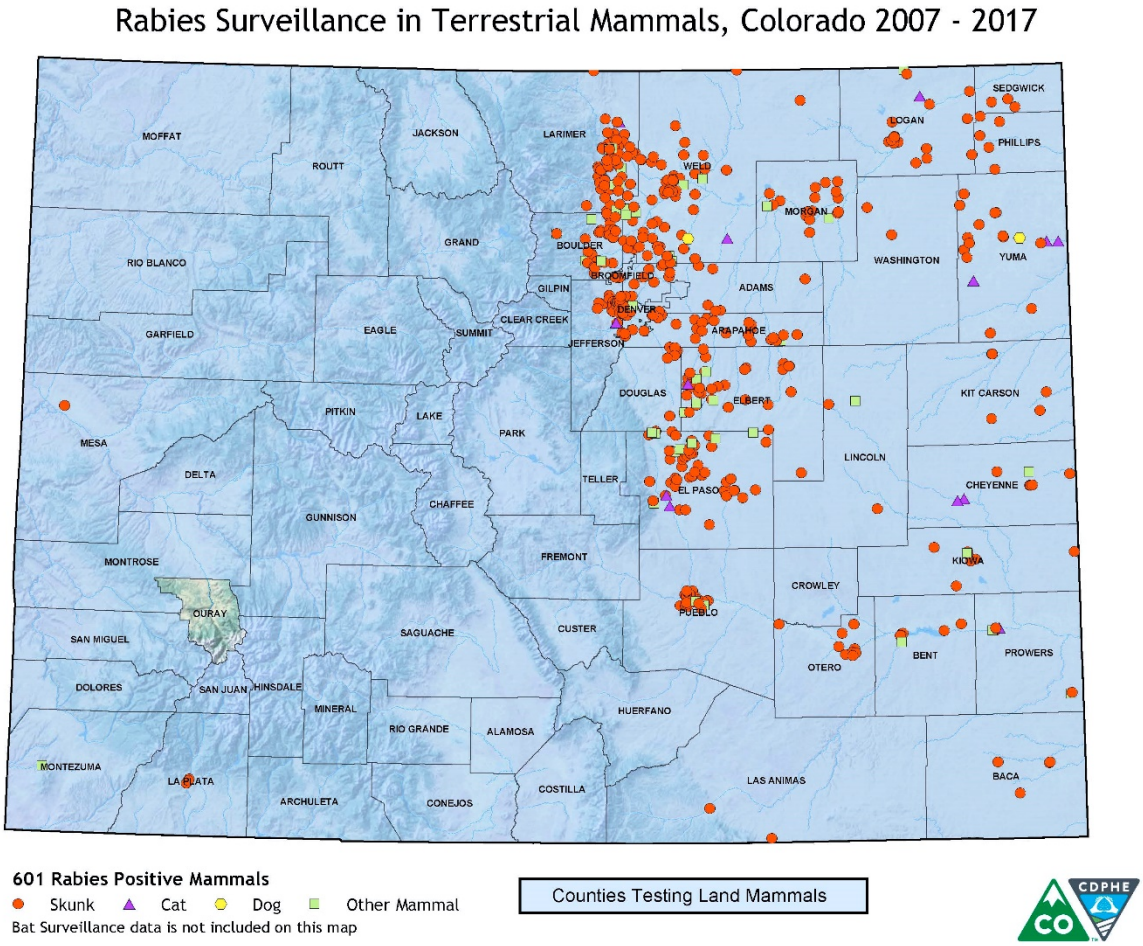
The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Otero County.

Rabies

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. Figure 6-125 shows rabies-positive terrestrial mammals during this time period, with several reports in Otero County.

[151] CDPHE; https://docs.google.com/document/d/1BBBKElU9sUHKKXVh93anVcOnouyISJ2AgNExlkb3MmE/pub

Figure 6-125 Colorado Rabies Positive Mammals



Tularemia

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Otero County.

West Nile Virus

According to the CDPHE, in Otero County there have been 64 cases of West Nile virus from 2002-2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.[152]

Probability

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

[152] https://www.cdc.gov/westnile/statsmaps/cumMapsData.html

Vulnerability Assessment

Inventory Exposed/Impacts

Pandemic Influenza

The total County population of 18,370 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Otero County population, approximately 5,511 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Zoonotic Diseases

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock, which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Otero County, 19.3% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to be significantly impacted by this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

6.11. Prowers County Risk Assessment

6.11.1. Hazard Summary Risk Ranking

Hazards were ranked for each jurisdiction based on the results of this HIRA, LPC input, and public perception of risk. The overall ranks were derived by assigning each jurisdiction a value of 1 (low), 2 (medium), or 3 (high) for each hazard for: the probability of an event occurring, the potential impact of the hazard on property/structures/economy, and the potential impact of the hazard on people. The results were summed for each hazard and jurisdiction to create an overall rank. A summed score of four or less equates to a "low" ranking, five to six equates to a "medium" ranking, and seven or greater equates a "high" ranking. The results are shown in the following figures below. Those hazards ranked as "low" were determined by the LPC to not be a focus of this plan's overall mitigation strategy, therefore earthquake and civil unrest are not further assessed for Prowers County. Although not formally adopting this plan, the Towns of Granada, Hartman, Holly, and Wiley contributed their risk ranking through this planning process.

Table 6-91 Prowers County Risk Ranking

Prowers County	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	3	2	7	H
Dam and Levee Failure	2	2	2	6	M
Drought	2	2	2	6	M
Earthquake	1	2	1	4	L
Extreme Cold	3	3	2	8	H
Extreme Heat	1	3	2	6	M
Flooding	2	3	2	7	H
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	2	2	5	M
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	2	2	2	6	M
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	3	2	7	H
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

Table 6-92 Lamar Risk Ranking

Lamar	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	3	3	8	H
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	3	5	M

Table 6-93 Granada Risk Ranking

Granada	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	3	2	7	H
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	2	3	2	7	H
Tornado	2	2	2	6	M
Wildfire	2	2	2	6	M
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H

Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	2	3	2	7	H
Pandemic and Zoonotic Disease	1	1	2	4	L

Table 6-94 Holly Risk Ranking

Holly	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	1	2	1	4	L
Pandemic and Zoonotic Disease	1	1	2	4	L

Table 6-95 Wiley Risk Ranking

Wiley	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L

Wiley	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Tornado	2	2	2	6	M
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	1	2	1	4	L
Pandemic and Zoonotic Disease	1	1	2	4	L

Table 6-96 Hartman Risk Ranking

Hartman	Probability (of losses)	Potential Impact (economic)	Potential Impact (people)	Score	Risk Rank
Ag Infestation	2	2	2	6	M
Dam and Levee Failure	2	2	2	6	M
Drought	3	3	2	8	H
Earthquake	1	2	1	4	L
Extreme Cold	3	1	2	6	M
Extreme Heat	1	3	2	6	M
Flooding	2	2	2	6	M
Severe Weather	3	3	3	9	H
Stream Bank Erosion	1	1	1	3	L
Tornado	2	2	2	6	M
Wildfire	2	3	3	8	H
Windstorm	3	3	3	9	H
Winter Storm	3	3	3	9	H
Civil Unrest	1	1	1	3	L
Cyber Hazards	2	2	2	6	M
Hazmat Release	1	2	1	4	L
Pandemic and Zoonotic Disease	1	1	2	4	L

6.11.2. Agricultural Infestation

Previous Occurrences

Due to the regional nature of this hazard, see Section 4.5.3.

Vulnerability Assessment

Inventory Exposed/Impacts

Crops and rangeland in Prowers County are the primary concern with an agricultural infestation. Agriculture is an important aspect of Prowers County's economy. According to the 2017 USDA Census of Agriculture, Prowers County has 472 farms totaling 1,011,291 acres. The estimated market value of agricultural products sold is $310,045,000. An agricultural infestation could impact the livelihood of residents in the County. A noxious weed infestation could also directly impact jurisdictions through time and resources spent on controlling the infestation.

Economic impacts specific to the City of Lamar would not be direct, as it would be for the rest of the County, but the indirect impacts to the overall economy would also greatly affect this municipality.

Potential Losses

Losses from this hazard are primarily agricultural related. Without robust previous occurrence data, it is difficult to quantify potential losses. According to the USDA Risk Management Agency, Prowers County has experienced $93,907 in crop indemnity payments due to insects from 1991 to 2018. This equates to $3,478 in annual losses. Secondary losses include trickle-down impacts to local business from lack of revenue during economic hardships in the agricultural community. Losses specific to the jurisdiction would be related to the cost of control of the infestation.

Land Use and Development

Any future agricultural endeavor in the County is vulnerable to the impacts of this hazard. Population change and related structural development are not impacted by or directly impact this hazard, however, a recent increase in hemp production in the County can alter the way agricultural infestations impact the County.

6.11.3. Dam and Levee Failure

Location

Dams

According to the Colorado Division of Water Resources, Dam Safety, as of May 2019, there are 12 jurisdictional dams in Prowers County. A jurisdictional dam is a dam creating a reservoir with a capacity of more than 100 acre-feet, or creates a reservoir with a surface area in excess of 20 acres at the high-water line, or exceeds 10 feet in height measured vertically from the elevation of the lowest point of the natural surface of the ground where that point occurs along the longitudinal centerline of the dam up to the crest of the emergency spillway of the dam.[153] Two of these dams are significant hazard, one low hazard, one is considered No Public Hazard (NPH), and eight are considered No Hazard. The two significant hazard dams all have an Emergency Action Plan (EAP). These dams are listed in Table 6-97.

Table 6-97 Jurisdictional Dams in Prowers County

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Butte	Two Butte Creek	Holly	N	Not Required	

[153] https://data.colorado.gov/Water/DWR-Dam-Safety-Jurisdictional-Dam/mgjv-xmr5

Dam Name	Stream	Downstream Town	Hazard Class	EAP	EAP Date
Clay Creek	Clay Creek	Granada	N	Not Required	
Creaghe	Arkansas River	Lamar	N	Not Required	
Durkee	Rattlesnake Creek	Lamar	N	Not Required	
Fort Lyon Control Basin	Arkansas River	Granada	Significant	Yes	3/29/2016
Horse Creek	Wild Horse Creek	Holly	N	Not Required	
Romer West Horse Creek	Wild Horse Creek	Holly	N	Not Required	
Saylor-Nowells	Arkansas River	Lamar	N	Not Required	
Thurston Lake	Arkansas River	Lamar	Significant	Yes	3/19/2016
Wood			N	Not Required	
Cottonwood #1	Cottonwood Creek	Granada	NPH	Not Required	
Colorado Beef	Riverview Ditch	Lamar	Low	Not Required	

Additionally, there are 22 non-jurisdictional dams in the County. A non-jurisdictional dam is a dam creating a reservoir with a capacity of 100 acre-feet or less and a surface area of 20 acres or less and with a height measured as defined in Rules 4.2.5.1 and 4.2.19 of 10 feet or less.[154] These dams are listed along with the stream they are located on (if available) below.

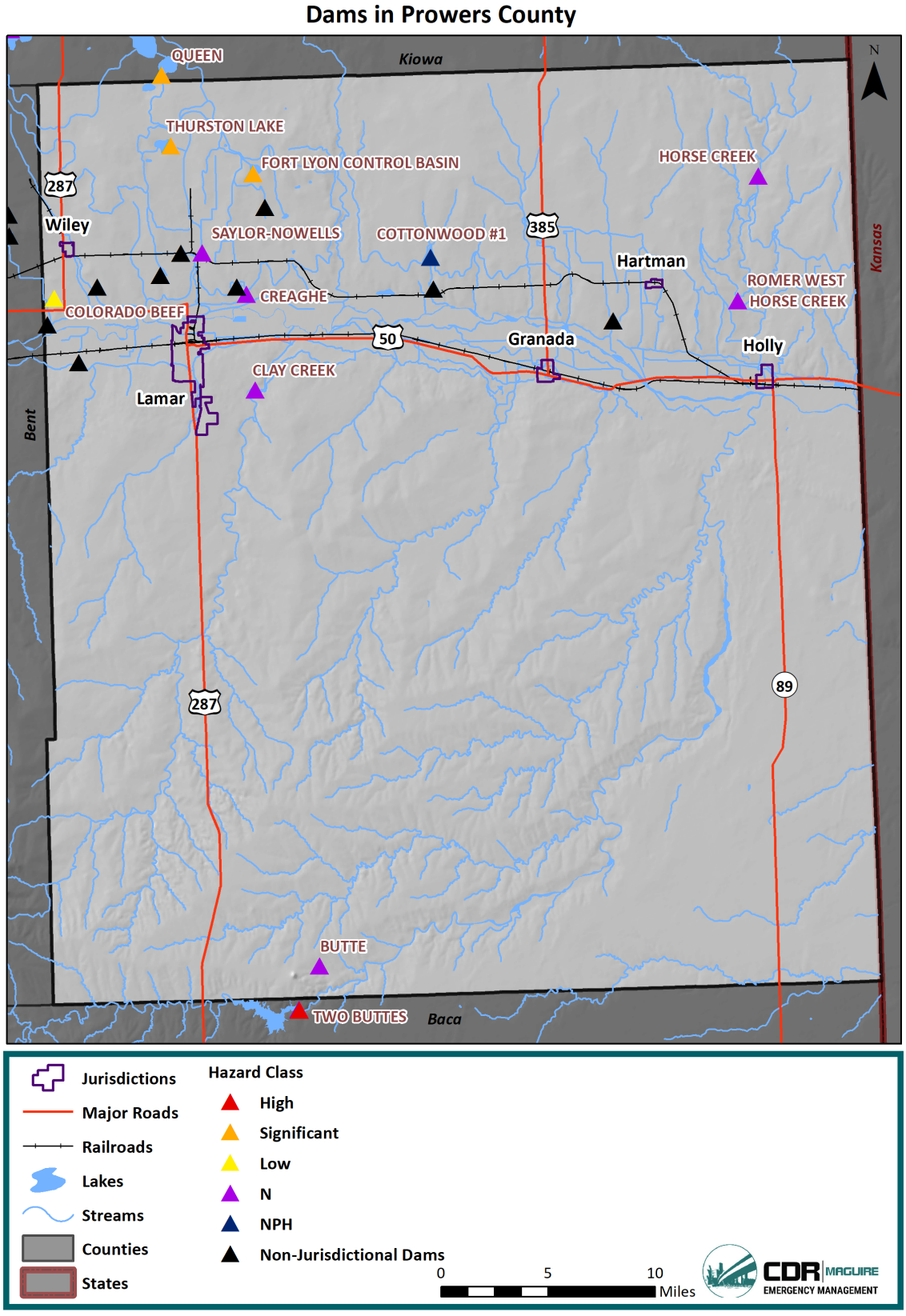
- Cottonwood #2 (Cottonwood Creek)
- Sunny Brook (Arkansas River)
- Floyd Verhoeff (Arkansas River)
- Colorado Beef Evaporation Cell #1 (Riverview Ditch)
- Sutphin (Vista Del Rio Ditch)
- Janalyn Coen Regulating NJ
- John Reed No. 2
- Home Pond
- Ausmus Pond
- Wollert #1 Nj Dam
- Wollert #2
- Reifschneider No. 2
- Souders
- Sneller No. 2
- Z Tempel #1

[154] https://data.colorado.gov/Water/DWR-Dam-Safety-Non-Jurisdictional-Dam/6smc-zj6j

- Wiley Head Stabilization Pond Dam
- Judy Reyher Pond Dam
- Henderson Dam
- Woller No. 1 Head Stabilization Pond Dam
- Harvey No. 1
- Dechant #1 Dam
- Seufer No. 1

These dams are mapped in Figure 6-126 below.

Figure 6-126 Dams in Prowers County



Lastly, there are 58 livestock water tank and erosion control dams in the County. These structures include all reservoirs built after April 17, 1941, on watercourses which the state engineer has determined to be "normally dry" and having a capacity of not more than ten acre-feet and a vertical height not exceeding fifteen feet from the bottom of the channel to the bottom of the spillway.[155]

Levees

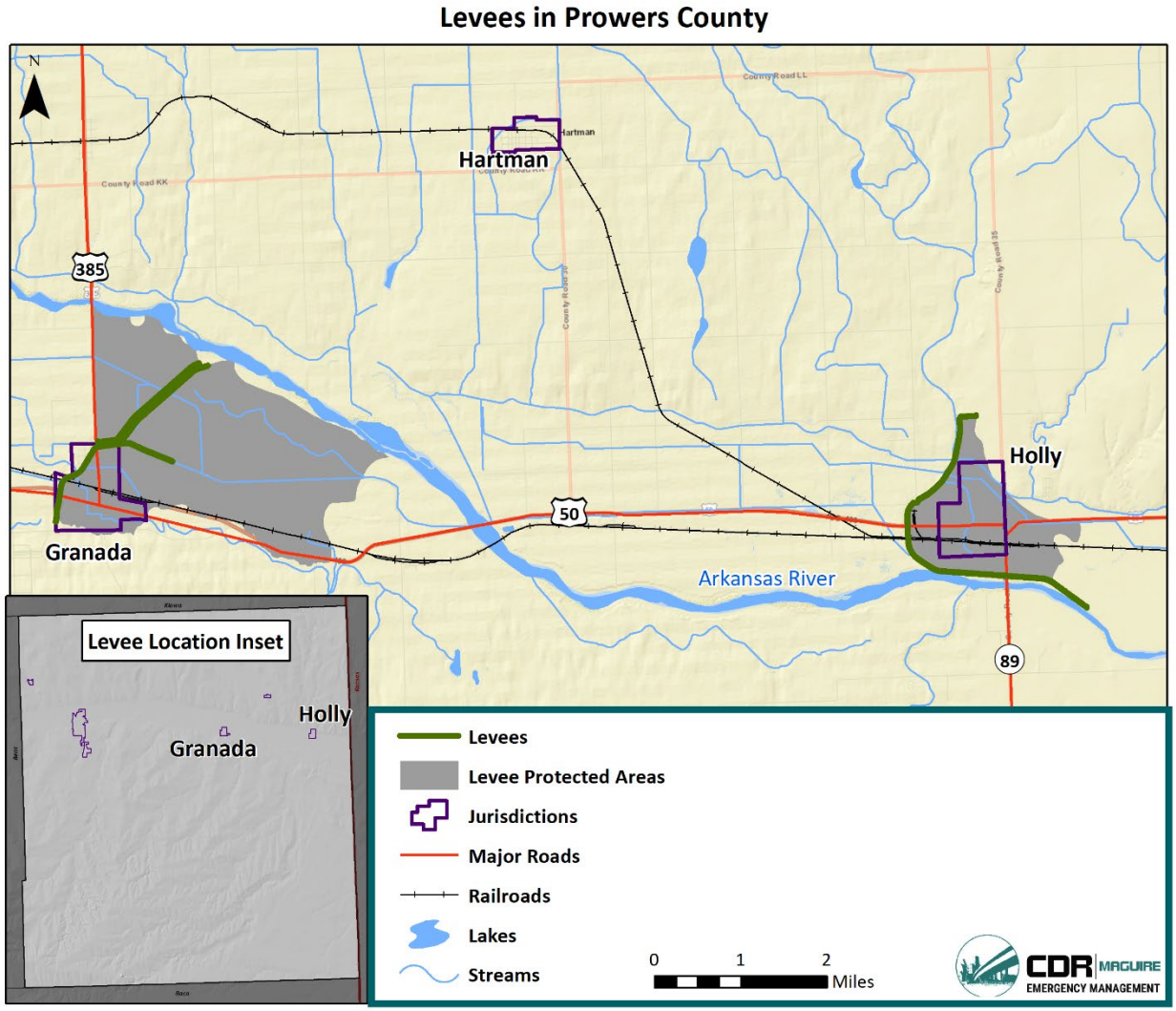
There are four documented levee systems in Prowers County, listed in Table 6-98 and mapped in Figure 6-127 below, and two levees documented from the previous Plan[156] It should be noted smaller levees or embankments would not be captured in this inventory.

Table 6-98 Prowers County Levees

Levee Name	Flooding Source	Owner	FEMA Levee Certified	Date Built	FIRM Panel(s)	Level of Protection	In USACE Database?
Granada Right	-	Town of Granada	No	1980	08099C0383C 08099C0385C 08099C0425C	-	Yes
Granada Left	-	Town of Granada	No	1980	08099C0383C 08099C0385C	-	Yes
Granada Right Fork		Town of Granada	No	1980	08099C0383C 08099C0385C 08099C0387C 08099C0395C 08099C0379C		
Holly, Wild Horse Canyon and Arkansas River	Wild Horse Creek, Two Butte Creek, and Arkansas River	City of Holly	Yes	1981	08099C0417C 08099C0436C 08099C0428C 08099C0409C	100 year	Yes

[155] https://data.colorado.gov/Water/DWR-Livestock-Water-Tank-and-Erosion-Control-Dams/r2rp-ecjb
[156] National Levee Database

Figure 6-127 Prowers County Levees



Previous Occurrences

There has been one dam failure event in Prowers County, described below.

Clay Creek, 1965: In June 1965, a flood occurred on Clay Creek in Prowers County, which overtopped an earthen dam being constructed by the Colorado Game, Fish, and Parks Commission. Although the dam did not fail, it did divert floodwater into an adjacent drainage. The subsequent damage and death from this flood resulted in an important legal controversy known as the Barr Case. This case was finally decided in 1972 by the Colorado Supreme Court, which recognized the concept of probable maximum flood as a predictable and foreseeable standard for spillway design purposes.[157]

[157] 2018 Colorado State Hazard Mitigation Plan

Probability

Although there has not been many significant dam or levee failures in Prowers County, with 34 dams in the County and levees protecting Granada and Holly, the risk of a failure remains. Based on this assessment, the probability is rated as occasional, or between 1% and 10% annual probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Dam failures can result in downstream flooding. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Three factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of downstream development and infrastructure; and the nature of the terrain between the dam and the downstream development. A dam failure event can dislodge trees and boulders, carrying them downstream into developed areas. Inundation areas for high hazard dams are available through Colorado Dam Safety. These areas are mapped in Appendix F (FOUO). Based on this data, Two Buttes dam, located in Baca County, puts the southern portion of the County along Two Buttes Creek all the way up to the Town of Holly at risk of inundation from a dam failure event.

A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety would depend on the warning time and the resources available to notify and evacuate the public and could include major loss of life and potentially catastrophic damage to roads, bridges, and homes. Associated water quality and health concerns could also be an issue.

No Prowers County dams were included in the Colorado Dam Safety social vulnerability, population at risk, or Colorado high hazard dam release analyses.

Similar to dam failure, a levee failure can result in downstream flooding, impacting the population and structures intended to be protected by the levee. The populations and structures in the identified levee protected areas in and around Granada and Holly are at the highest risk to levee failure. According to the National Levee Database, the Granada Left Levee protects one structure, with a population of two; the Granada Right Levee protects 255 structures and 547 people. This puts 256 structures and 549 people at risk in or near Granada. The Holly, Wild Horse Canyon and Arkansas River Levee protects 656 structures and 930 people, putting these structures and people at risk in the event of a failure in and near Holly. This levee has gone through a formal risk assessment by the USACE in 2017, and it was determined to have an overall low risk to public safety.

The City of Lamar will not be directly impacted by any dam failure events.

Potential Losses

With little previous occurrences, annual losses are difficult to quantify. Overall, losses from a dam failure will vary based on the dam involved, warning time, and time of day, but the potential exists for property losses into the billions and multiple deaths and injuries. The Town of Holly as well as unincorporated County along Two Buttes Creek are at risk to losses from inundation from a failure of Two Buttes dam, and overall.

The significant hazard dams in the County do have Emergency Action Plans (EAPs), which can help to reduce losses in the event of a failure.

In addition, the Towns of Granada and Holly are at the highest risk to levee failure in the County. According to the National Levees Database, the Granada Left Levee protects $240,000 in property value

and the Granada Right Levee protects $74.6 million in property value. This puts $74,840,000 at risk near Granada.

The Holly, Wild Horse Canyon and Arkansas River Levee protects $127 million in property value, putting these properties at risk in the event of a failure. It should be noted these are worst case scenario losses. It was noted in the Holly, Wild Horse Canyon and Arkansas River Levee risk assessment that flooding would likely be limited to two feet.

Land Use and Development

It is important that communities in the County keep the dam failure hazard in mind when permitting new development, particularly downstream of the high and significant hazard dams present in each county. There are numerous low hazard dams in the County. These could become significant or high hazard dams if development occurs below or downstream of them.

6.11.4. Drought

Location

All of Prowers County is susceptible to drought. With the majority land area in the County used for agricultural purposes, the County has significant exposure to this hazard.

Previous Occurrences

Previous occurrences of drought can be measured in several ways. For this Plan, previous occurrences were determined by reviewing: precipitation averages over time to identify periods with precipitation amounts below the long-term average, U.S. Drought Monitor records/current conditions, and drought disaster declarations.

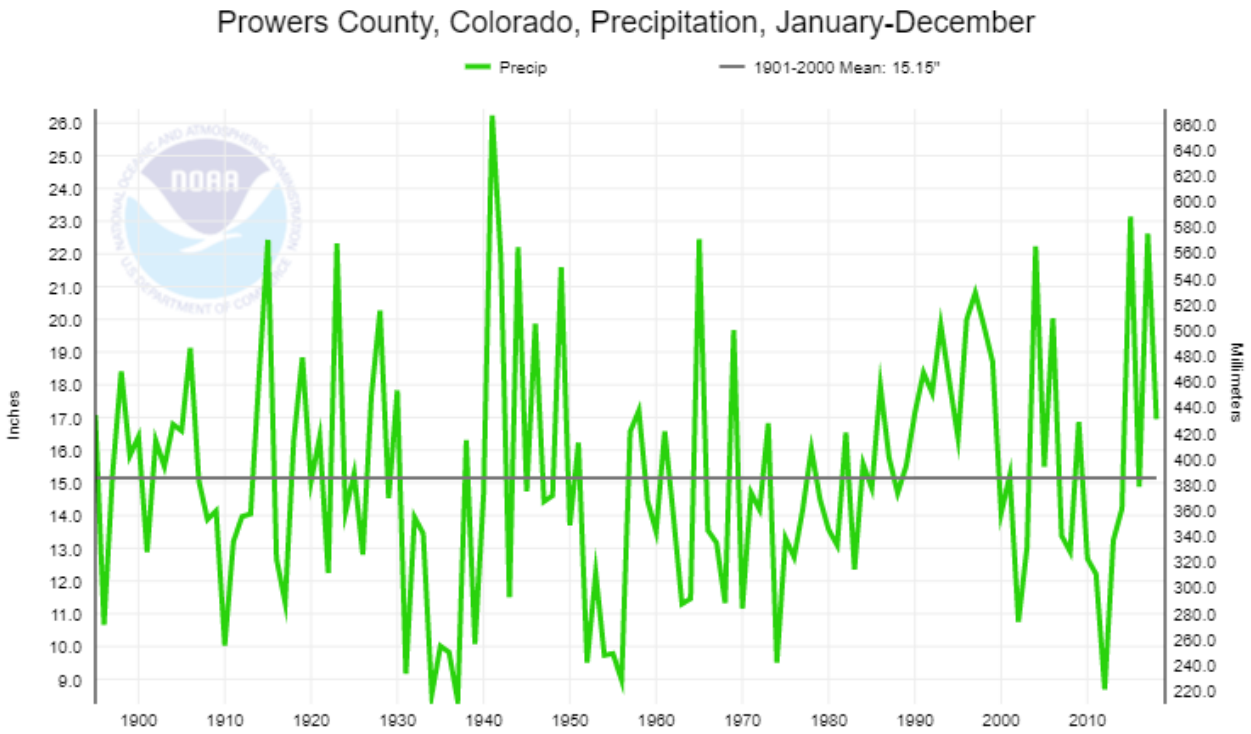
Drought conditions based on precipitation deficits are described in Table 6-99, indicating the top five years of precipitation deficit departure from the long-term average of 15.15 inches. Precipitation deficits are also shown in Figure 6-128. It is evident precipitation deficits have occurred throughout history in Prowers County, particularly in the 1930s, 1950s and 2012. The year 2018, which was a notably dry year in much of Colorado, did not result in a precipitation deficit in Prowers County.[158]

Table 6-99 Precipitation Deficits 1895-2019

1901-2000 Precipitation Average	Year	Total Precipitation	Deficit
15.15 in.	1937	8.34 in.	6.81 in.
15.15 in.	1934	8.54 in.	6.61 in.
15.15 in.	2012	8.69 in.	6.46 in.
15.15 in.	1956	8.97 in.	6.18 in.
15.15 in.	1931	9.17 in.	5.98 in.

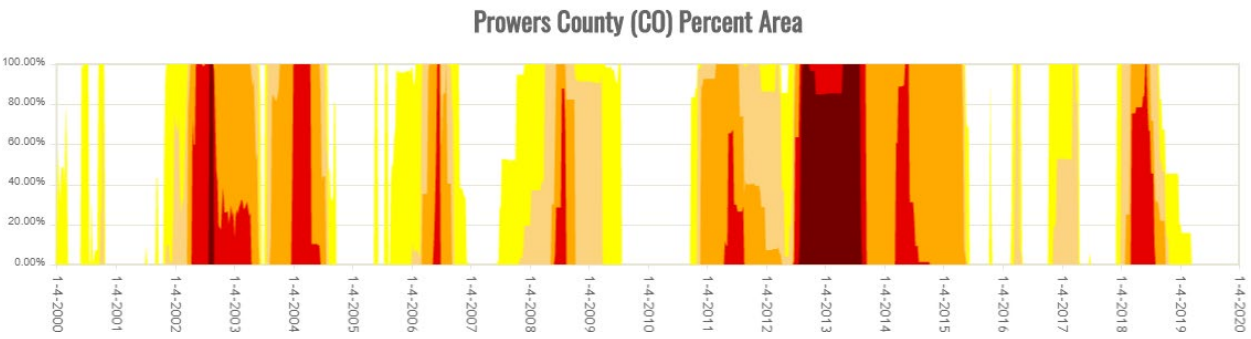
[158] NOAA National Centers for Environmental information, Climate at a Glance: County Time Series, published May 2019, retrieved on July 19, 2019 from https://www.ncdc.noaa.gov/cag/

Figure 6-128 Precipitation Deficits 1895-2016



Drought conditions based on U.S. Drought Monitor records are shown in Figure 6-129.[159] Based on this data, the most severe drought conditions during this timeframe occurred from approximately 2012 to 2014. For parts of 2012 and 2013, 100% of the County was experiencing exceptional (D4) drought conditions. Other notable periods of drought during this time period was approximately 2002 to 2005, 2006, 2008, 2011, and 2018. There has been some level of drought in the County nearly every year since 2000.

Figure 6-129 Prowers County Previous Droughts



[159] https://droughtmonitor.unl.edu/Data/Timeseries.aspx for Kiowa County

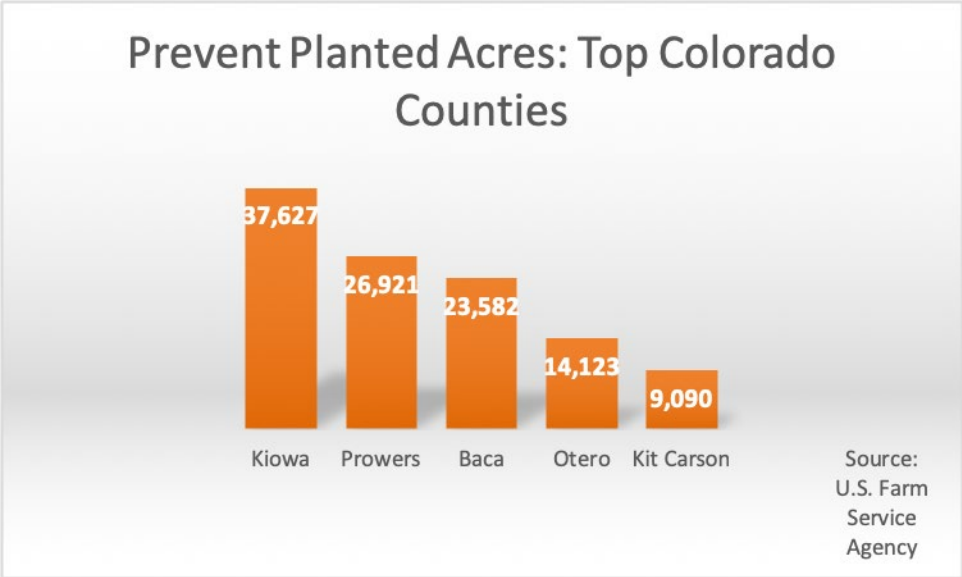
Lastly, there have been 13 drought disaster declarations that have impacted Prowers County from 1977 to 2018 (see

Table 6-1-Disaster Declaration Summary).

Recent droughts are described below.

2018: Drought in 2018 impacted the entire State of Colorado. Low winter snowpack was the main cause of dry conditions across the State. By August 2018, much of southeast Colorado, including all of Prowers County, was experiencing severe (D2) or extreme (D3) drought conditions. In Prowers County, these conditions impacted farmers as well as heightened wildfire concerns. In southeastern Colorado, Baca, Kiowa, Otero and Prowers counties had, in total, tens of thousands of acres that went unplanted due to fears that the crops would fail, otherwise known as "prevent planted" acres. Figure 6-130 shows the top counties in the State with prevent planted acres due to the 2018 drought. Prowers County placed second, with 26,921 acres.[160]

Figure 6-130 Prevent Planted Acres due to 2018 Drought



In the past, even losses of many thousands of acres have cost agricultural communities hundreds of millions of dollars. Fortunately, soil moisture from prior year precipitation was adequate to offset the worst impacts of drought to the agricultural community in Prowers County. Additionally, drought conditions improved dramatically during the spring of 2019, also helping to ease the impact of the 2018 drought. The 2018 drought did lead to declaring Prowers County as a Primary county in a USDA Secretarial Natural Disaster designation for drought.

2012: After being hit with drought in 2011, the southeastern portion of Colorado experienced its second consecutive year of severe drought conditions in 2012. The 2012 drought impacted the entire State of Colorado, with the state reporting 98,086 failed agricultural acres and 124,461 prevented planting acres.[161] During this time 100% of Prowers County was experiencing exceptional (D4) drought conditions. Additionally, 2012 was the third driest year in terms of precipitation deficit since 1895. The

[160] https://www.krcc.org/post/drought-puts-pinch-southern-colorado-agriculture
[161] https://climate.colostate.edu/pdfs/drought_2012.pdf

2012 drought lead to declaring all Southeast Region counties as Primary counties in a USDA Secretarial Natural Disaster designation for drought.

As of July 2019, no part of Prowers County is experiencing drought.

See Appendix C for details regarding previous drought events prior to the 2014 Southeast Hazard Mitigation Plan.

Probability

Drought is a normal part of Colorado's climate and will continue to persist in the future. According to the 2018 Colorado State Hazard Mitigation Plan, historical analysis of precipitation shows short duration droughts occur somewhere in Colorado nine of out ten years (McKee et al., 1999). However, severe, widespread multiyear droughts are much less common.

For the purposes of this Plan, the number of drought disaster declarations for each County is utilized to determine the probability of drought. This allows for a consistent measurement for determining drought conditions that negatively impact the Southeast Region. In Prowers County, there have been 13 drought disaster declarations from 1977 to 2018, equating to a 32% annual chance of drought occurrence, or a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in Colorado are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Drought conditions can also cause soil to compact, increasing an area's susceptibility to flooding, and reduce vegetation cover, which exposes soil to wind and erosion. Additionally, drought conditions can increase the County's risk to wildfire. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Water supply issues for municipal, industrial, and domestic needs will be a concern for the entire County during droughts. Most of the County's water resources come from ground water, surface water reservoir storage, and the Arkansas River. Vulnerability to low flows on the Arkansas River, which drains from the Rocky Mountains, increases with consecutive winters of below average snowpack.

Agriculture is a large part of the Prowers County economy and is vulnerable to the impacts of drought. According to the 2017 USDA Census of Agriculture, Prowers County has 472 farms totaling 1,011,291 acres. The estimated market value of agricultural products sold is $310,045,000. These assets are at risk to drought impacts. According to the Colorado Drought Plan – Visualization Story Map, the agriculture sector is the most vulnerable sector to drought in Prowers County, with a vulnerability score of 3.3, which is above the State average of 2.4.[162]

The National Drought Mitigation Center reports on location-specific drought impacts from 2009 to May 2019. In Prowers County, during this time period, there has been 78 reported impacts. The most impacts (30) were categorized as "agriculture," followed by plants and wildlife (16 impacts), and relief, response,

[162] CWCB, State Drought Planning; https://lynker.maps.arcgis.com/apps/MapSeries/index.html?appid=8b8a995c2574439cbef10088a08d12ae

and restrictions (15 impacts). Examples of recorded impacts from the 2018 drought include ranchers sending cows to feedlots or early weaning calves, fallow or prevent planted fields, and fire restrictions.

Economic impacts specific to the City of Lamar would not be directly caused by drought, as it would be for the rest of the County, but the indirect impacts to the overall economy would also greatly affect this municipality.

Potential Losses

The largest potential losses in Prowers County are related to drought's impact on agriculture. Agriculture is a primary driver of the economy in Prowers County, and droughts causing major economic impacts to crops and cattle could also trickle into the rest of the economy in the County. All jurisdictions and unincorporated County are impacted by drought events due to the connected nature of agriculture, water use, and the economy in the County.

Based on SHELDUS data from 1960 to 2017, Prowers County has experienced $4,533,293 in crop losses from drought (2017 dollars). This equates to $79,531 in annual losses. No property damages were recorded in SHELDUS.

Land Use and Development

An increase in population and development can put additional strain on water resources during a drought. If new development occurs, it is important to ensure adequate water supply for municipal, industrial, and agricultural uses during both normal and drought conditions. Additionally, new hemp processing facilities in the County may be impacted by drought differently than traditional agriculture.

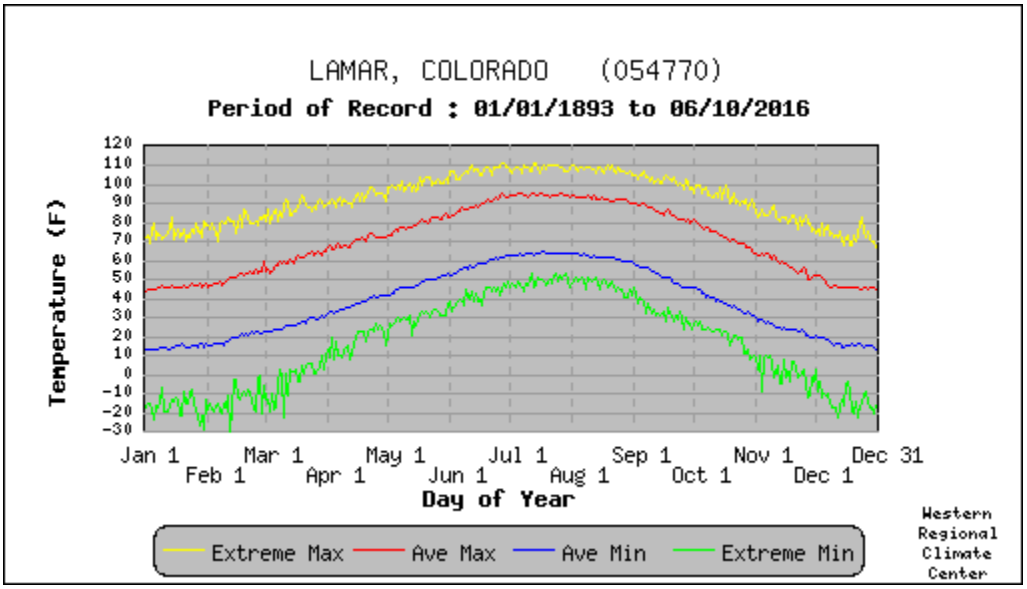
6.11.5. Extreme Temperatures: Extreme Cold

Location

Extreme cold temperatures can impact the entire County. Figure 6-131 shows the extreme temperature highs and lows for Lamar. The lowest recorded temperature from this data is -30 degrees.[163]

[163] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html

Figure 6-131 Temperature Extremes in Lamar, Colorado - Cold



Previous Occurrences

In a region known for extremely cold weather, exacerbated by high winds, temperature extremes and particularly severe cold present a danger to the inhabitants of the County. Surprisingly, the NCEI database reflects no extreme cold or extreme wind-chill events in the County between 1996 and 2019. The 2018 State Hazard Mitigation Plan does record the following events that affected the southeast plains, which likely includes Prowers County. No new extreme cold events have occurred since the 2014 Southeast Region Hazard Mitigation Plan in Prowers County.

January 17-18, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -30°F to -50°F were recorded.

February 1-4, 1996 - In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

March 24-25, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -40°F were recorded.

December 25-26, 1996 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -2°F to -35°F were recorded.

January 11-16, 1997 – In southeast Colorado, cold temperatures combined with high winds resulted in extreme wind chill. Wind chills of -25°F to -50°F were recorded.

Probability

Extreme cold temperatures occur yearly in Prowers County; therefore, they have a highly likely probability of occurrence. However, extreme cold events that cause damages or injuries are less likely to occur.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme cold impacts in Prowers County was available during the development of this Plan. The primary concern with extreme cold temperatures is for impacts to human life. Exposure to extreme cold can cause conditions such as hypothermia and frost bite, which can be deadly. The elderly population in the planning area is most vulnerable to temperature extremes. In Prowers County, 17% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme cold.

Impacts to structures from extreme cold can affect the supporting mechanisms or systems of a community's infrastructure. For example, when extreme cold is coupled with high winds or ice storms, power lines may be downed, resulting in an interruption in the transmission of that power shutting down electric furnaces, which may lead to frozen pipes in homes and businesses.

Additionally, extremely cold temperatures can have negative impacts on crops, particularly if there is no snow on the ground or they cause an early or late season freeze. Prowers County has 472 farms totaling 1,011,291 acres. The estimated market value of agricultural products sold is $310,045,000. Extreme cold has the potential to negatively impact the agricultural economy in the County.

Impacts specific to the City of Lamar would not vary from those of the County. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

Losses may include damages from frozen pipes as well as impacts to human health/loss of life due to extreme cold. All populations in the County are at risk to extreme cold, and unincorporated County is also at risk to crop losses from extreme cold.

Based on USDA Risk Management Agency Data, Otero County has experienced $8,319,312 in insured indemnity amounts from 1991 through 2018 due to cold winters, frost, or freeze.[164] This equates to $308,122 in annual losses.

There is not enough recorded damage data to include an annualized loss estimate for other damages associated with extreme cold.

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme cold. New development may also be impacted by scenarios such as burst pipes.

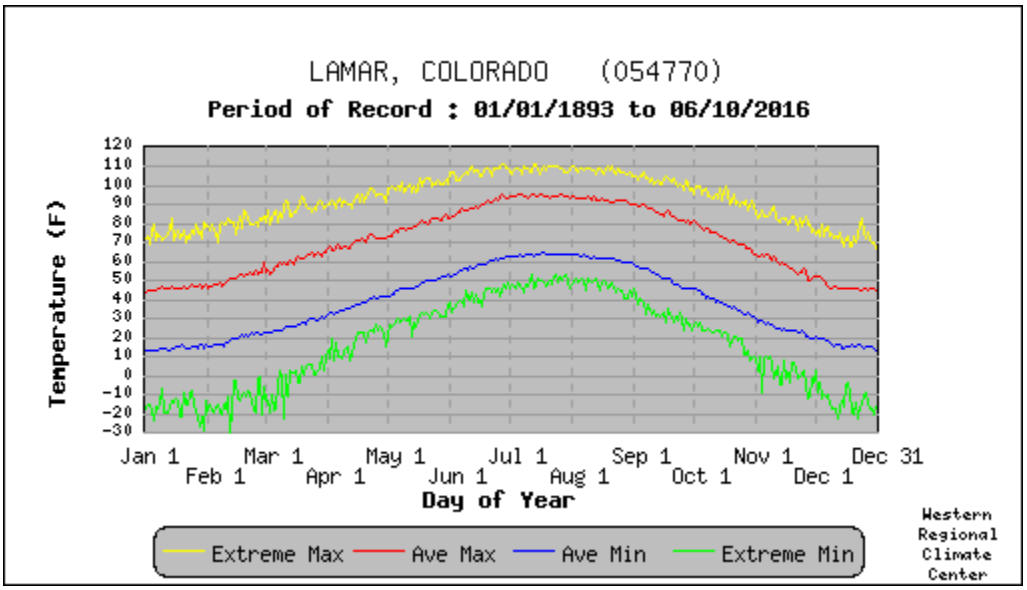
[164] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

6.11.6. Extreme Temperatures: Extreme Heat

Location

Extreme heat can impact the entire County. Figure 6-132 shows the extreme temperature highs and lows for Lamar. The highest recorded temperature in this data is 111 degrees.[165] Across the County, maximum temperatures routinely break 100 degrees during the summer months.

Figure 6-132 Temperature Extremes in Lamar, Colorado - Heat



Previous Occurrences

The NCEI Storm Events Database does not report any extreme heat events in the County. The 2018 Colorado Hazard Mitigation Plan reports the number of days above 90, 95, and 100 degrees, as well as number of heat waves from 1981 to 2017. Based on this data Prowers County has experienced 2,483, 1,337, and 370 days above 90, 95, and 100 degrees, respectively. Additionally, the County has experienced 264 heat waves during this time period. This places Prowers County third in the State for number of days above 90 degrees from 1981 to 2017, as well as fourth in the State for number of heat waves during this time period.

One possible explanation for the lack of reported extreme heat events may be that the humidity of the eastern plains is very low (compared to the rest of the nation), but that the highest temperatures in the State occur in this region. This indicates that while many hot days in the planning area fall in the 'danger' or 'extreme danger' area of the heat index, the low humidity may make the heat feel less uncomfortable on the population. It is possible; therefore, that the population may not notice the effects of extreme heat on themselves until serious injury occurs.[166]

[165] Western Regional Climate Center; https://wrcc.dri.edu/summary/Climsmco.html
[166] Colorado Climate Center

Probability

Based on the climate of Prowers County and the number of days over 90 degrees from 1981 to 2017, extreme heat events are expected to occur yearly, and are considered highly likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Limited data on extreme heat impacts in Prowers County was available during the development of this Plan. However, the primary impact of extreme heat is on people rather than structures. The elderly population in the County is most vulnerable to temperature extremes. In Prowers County, 17% of the population is 65 or older. However, many residents of southeast Colorado are self-sufficient and accustomed to rural living and the climate extremes that are part of the territory. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat. Additionally, people who frequently work, recreate outside, or participate in sporting events outside are also vulnerable to extreme heat. This group of people should take extra precaution during physical activity on extreme heat days.

Extreme heat can have secondary impacts on the supporting mechanisms or systems of a community's infrastructure. For example, when high amounts of utilization are imposed on the power system due to extremely hot temperatures, it can cause an interruption in the transmission of that power, shutting down air conditioning capabilities or refrigeration that can lead to spoiled foods, etc. Additionally, extreme heat has the potential to impact the integrity of transportation infrastructure, causing issues such as softening roads and expanding railroad tracks.

Extreme heat can also impact crops through secondary effects such as decreased soil moisture as well as directly through heat stress. Prowers County has 472 farms totaling 1,011,291 acres. The estimated market value of agricultural products sold is $310,045,000. Extreme heat has the potential to negatively impact the agricultural economy in the County.

Additionally, extreme heat can worsen wildfire conditions, particularly when combined with high winds. Extreme heat can also lead to or exacerbate drought conditions.

Impacts specific to the City of Lamar would not vary from those of the County. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

There is no recorded damage information for extreme heat in Prowers County. The most severe losses from extreme heat are related to human health from heat related illness. However, losses from secondary hazards, such as wildfire, could be significant. All populations in each jurisdiction are at risk to extreme heat, and unincorporated County is also at risk to crop losses from extreme heat.

Based on USDA Risk Management Agency Data, Prowers County has experienced $7,456,483 in insured indemnity amounts from 1991 through 2018 due to heat.[167] This equates to $276,166 in annual losses.

[167] https://www.rma.usda.gov/SummaryOfBusiness/CauseOfLoss

Land Use and Development

If development occurs and population grows, more people are at risk to the impacts of extreme heat.

6.11.7. Flooding

Location

The following figures show the 100-year floodplain in Prowers County and its jurisdictions based on FEMA's DFIRM data.[168] The FEMA flood hazard maps indicate that there are areas of 1% annual chance (100-year flood) in the County. However, it should be noted that flooding outside of the FEMA designated flood areas is possible. For example, a more severe event, such as one greater than the 100-year flood, could easily exceed the boundaries shown. In addition, flash flooding is possible throughout the planning area. The 100-year floodplain largely follows the Arkansas River and major tributaries. The floodplain passes through Granada, Lamar, Wiley, and unincorporated County, as well as near Holly. The Town of Hartman is not impacted by the 100-year floodplain.

[168] FEMA National Flood Hazard Layer (NFHL); retrieved 10/14/2019

Figure 6-133 Prowers County FEMA 100-year Floodplain

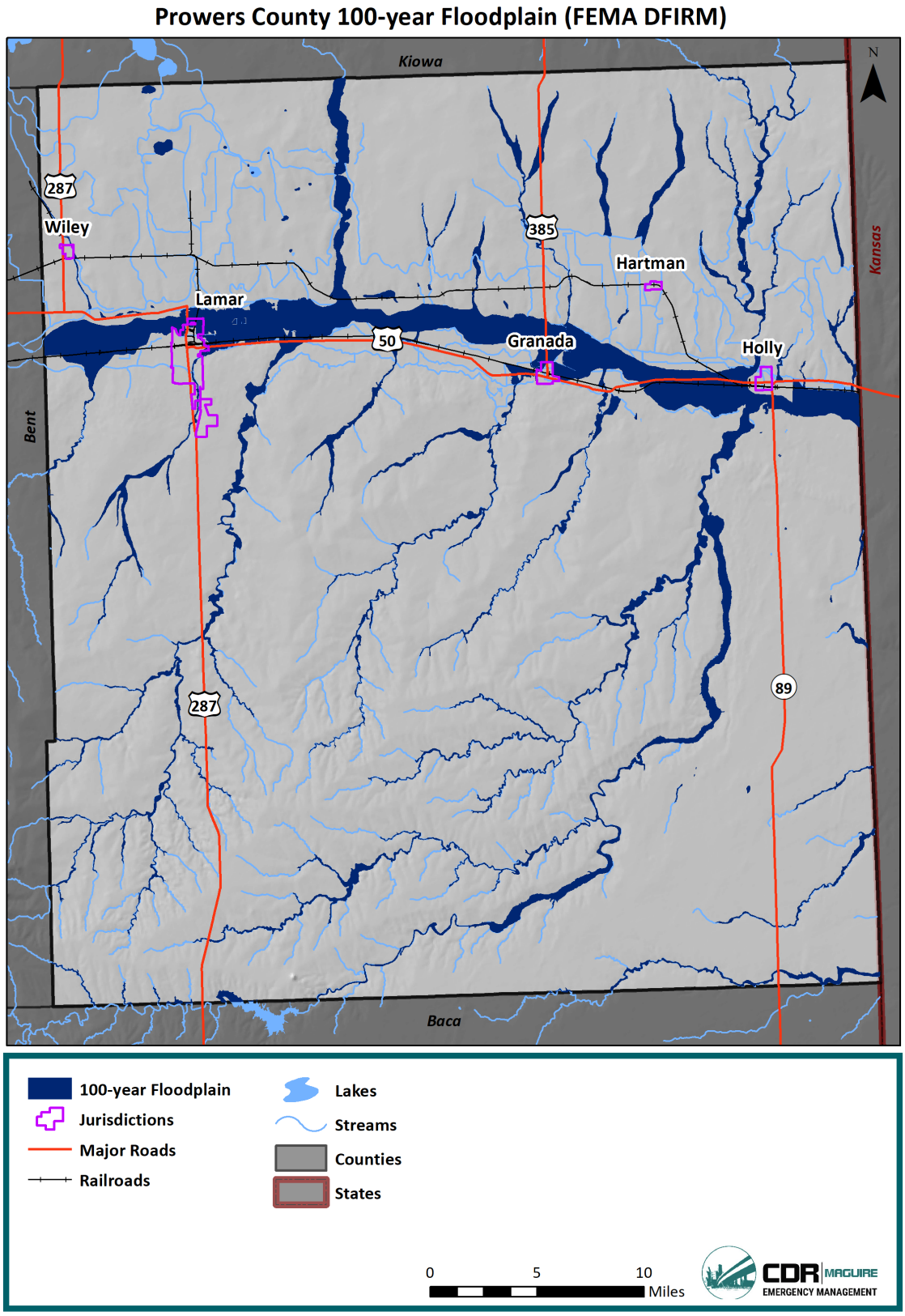


Figure 6-134 Granada FEMA 100-year Floodplain

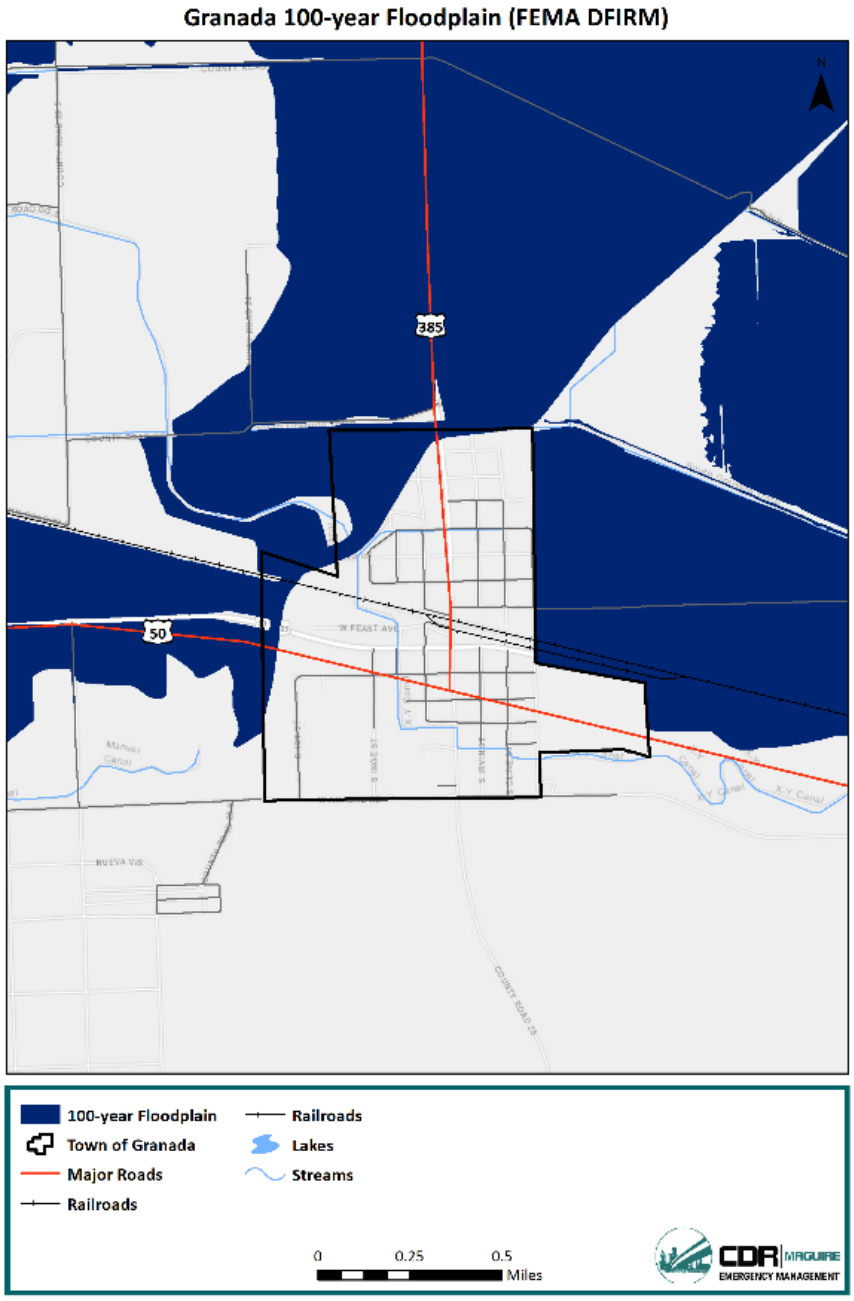


Figure 6-135 Holly FEMA 100-year Floodplain

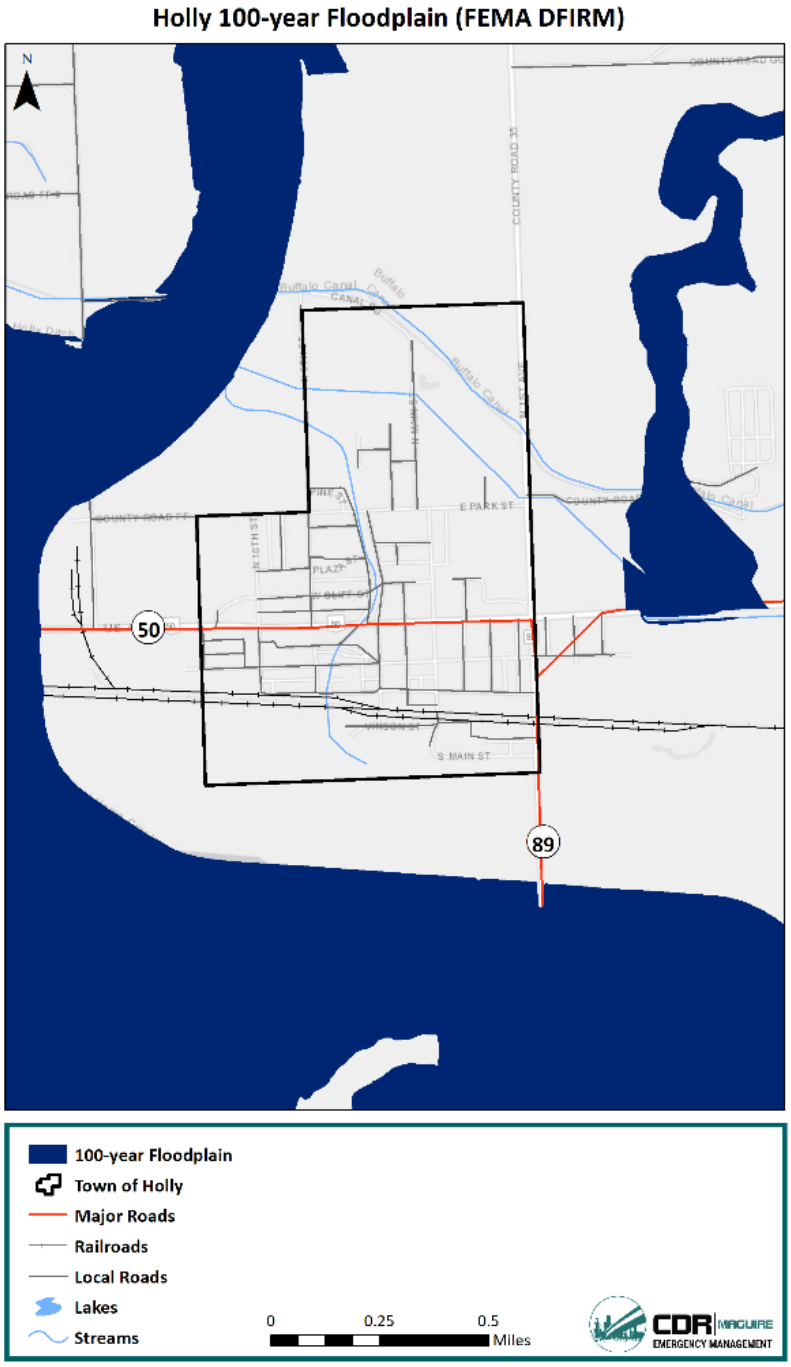


Figure 6-136 Lamar FEMA 100-year Floodplain

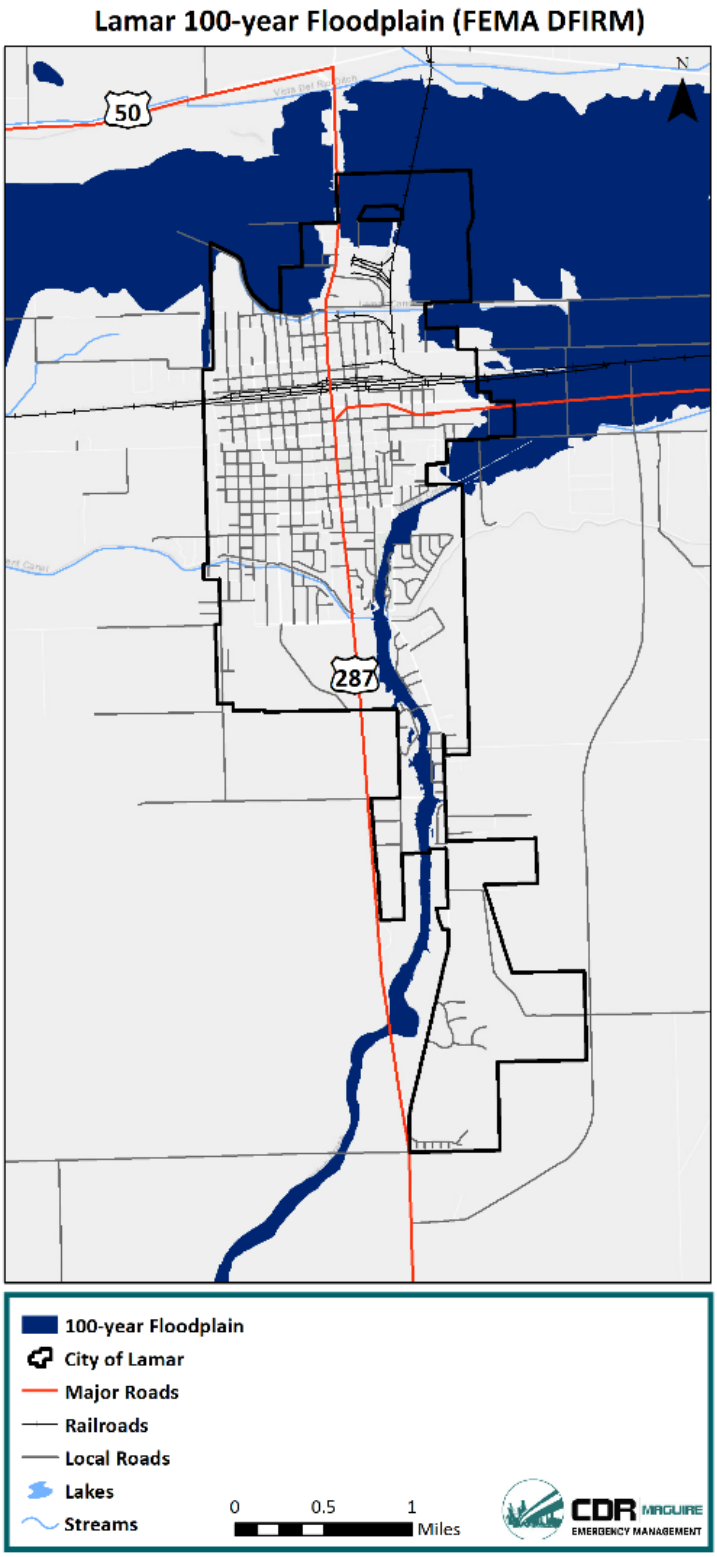
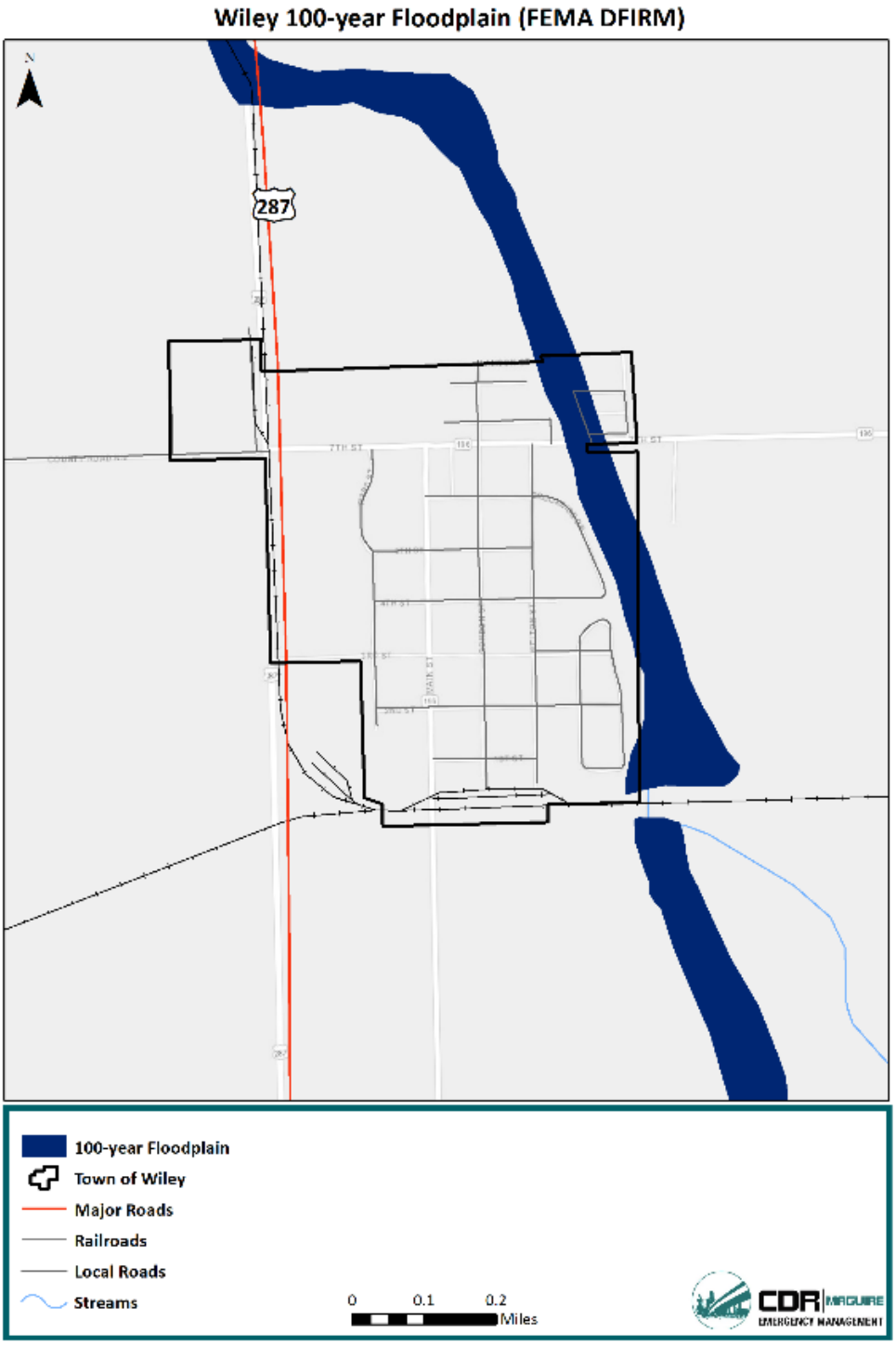


Figure 6-137 Wiley FEMA 100-year Floodplain



Previous Occurrences

In total, there have been 27 recorded flooding events in the County from 1965 to 2019.[169] Of these, 23 were labeled as flash floods and four as floods. One of these events occurred near Granada, two near Holly, 17 near Lamar, four near Wiley, and two in unincorporated County near Bristol. An event occurring in June 1965 impacted multiple parts of the County, resulting in significant flooding in Holly, Granada, and unincorporated County. No deaths or injuries were reported. Damages from these events were reported at $70,000, although this is likely a very low estimate. The June 1965 event alone was estimated to cause $15 million in damages, although these damages were not confined to Prowers County. Overall, the damages include agricultural losses, roadway damages, and flooding of buildings.

Flooding events in the County since the 2014 Southeast Region Hazard Mitigation Plan are described below. A description of all previous occurrences can be found in Appendix C.

Table 6-100 Flooding Events in Prowers County from 2014 to 2019

Date	Location	Flood Type	Damages	Description
7/12/2014	Lamar	Flash Flood	$0	Heavy rain caused flash flooding of county roads and US Highway 50 east of Lamar.
7/13/2014	Lamar	Flood	$0	The Arkansas River at Lamar briefly went above flood stage causing minor agricultural flooding.
7/26/2014	Lamar Airport	Flash Flood	$0	Strong, slow moving storms produced heavy rain and flash flooding across portions of Bent, Baca, and Prowers Counties. Many roads were flooded and washed out.
7/29/2014	Wiley	Flash Flood	$0	Strong storms with heavy rain caused flash flooding in the northwest part of the county. Numerous roads were flooded with washouts reported.
7/30/2014	Lamar	Flood	$0	The Arkansas River at Lamar went above flood stage, causing minor agricultural flooding.
5/24/2015	Lamar	Flash Flood	$0	Severe storms produced heavy rain and large hail which flooded roadways southeast of Lamar.
7/14/2015	Lamar	Flash Flood	$0	Street flooding to a depth of greater than six inches was reported across Lamar.
8/16/2015	Lamar Airport	Flash Flood	$0	Heavy rain caused water greater than 6 inches deep on city streets in Lamar and surrounding county roads. In addition, Buffalo Canal was flooded, as well as town streets in and around Granada and Holly.
8/17/2015	Wiley	Flash Flood	$0	Many county roads and city streets were flooded to a depth of greater than 6 inches across Lamar and surrounding areas.
7/23/2018	Lamar	Flash Flood	$0	A strong thunderstorm accumulated 12-18 inches of standing water over Main Street in Lamar, Colorado. The road was closed down.

[169] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; LPC

Date	Location	Flood Type	Damages	Description
7/23/2018	Bristol	Flash Flood	$0	Heavy rain caused flooding over County Road 19 5 miles west of Bristol.
Totals	**Count: 11**		**$0**	

NFIP Information[170]

Prowers County joined the NFIP on July 1, 1986. There are currently 28 policies in force in Prowers County. There is currently $4,575,100 of flood insurance in force in the County. There have been four flood insurance claims, totaling $13,584 in claims paid. The County's FIRM is current as of 4/19/2016, which is an update from the 2014 Southeast Region HMP.

The City of Lamar joined the NFIP on November 17, 1982. There are currently 26 policies in force in the City. There is currently $5,603,500 of flood insurance in force in the City. There have been nine flood insurance claims, totaling $ 6,746.63 in claims paid. The City's DFIRM is current as of 4/19/2016, which is an update from the 2014 Southeast Region HMP.

The Town of Granada joined the NFIP on September 24, 1984. There are currently six policies in force in the Town. There is currently $2,600,000 of flood insurance in force in the Town. There have been no flood insurance claims. The Town's DFIRM is current as of 4/19/2016, which is an update from the 2014 Southeast Region HMP.

The Town of Holly joined the NFIP on May 20, 1983. There are currently two policies in force in the Town. There is currently $490,000 of flood insurance in force in the Town. There have been no flood insurance claims. The Town's FIRM is current as of 4/19/2016, which is an update from the 2014 Southeast Region HMP.

The Town of Wiley joined the NFIP on October 6, 2000. There is currently one policy in force in the Town. There is currently $89,000 of flood insurance in force in the Town. There has been one flood insurance claim, totaling $6,705.47. The Town's FIRM is current as of 4/19/2016, which is an update from the 2014 Southeast Region HMP.

There are no repetitive loss or severe repetitive loss properties in the County or jurisdictions.

Probability

Based on 27 floods from 1965 to 2019, there is a 50% annual chance of flood occurrence in the County, equating to a likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Floods can cause substantial damage to infrastructure across the County. Areas with significant floodplains are primarily located in unincorporated County, Granada, Lamar, and Wiley. Areas surrounding Holly also contain significant floodplains, although the floodplain is not located in the Town itself. Damages in unincorporated areas can include (but are not limited to) rural structures, roads, and

[170] State of Colorado Department of Natural Resources

crops. As demonstrated in the previous occurrences, issues such as flooded and washed out roads, agricultural damage, and structural flooding can occur in/near the jurisdictions and unincorporated County. The Town of Hartman is largely not impacted by flooding. However, much of the County is vulnerable to this hazard. Flooding can also cause evacuations, as seen in the June 1965 event, as well as injury and death to populations in the County.

Potential Losses

Planning level flood loss estimates were conducted by county for the 2018 Colorado State Hazard Mitigation Plan using Hazus-MH (Hazus) software. This data was utilized for incorporation into this Plan. Hazus is FEMA's GIS-based natural hazard loss estimation software. The Hazus flood model results include analysis for Prowers County, modeling streams draining a 10 square mile minimum drainage area, using 30 meter (1 arc second) Digital Elevation Models (DEM). Hydrology and hydraulic processes utilize the DEMs, along with flows from USGS regional regression equations and stream gauge data, to determine reach discharges and to model the floodplain. Losses are then calculated using Hazus national baseline inventories (buildings and population) at the census block level, in addition to critical infrastructure sited at the local level.

Hazus produces a flood polygon and flood-depth grid that represents the 100-year floodplain. The 100-year floodplain represents a flood that has a 1% chance of being equaled or exceeded in any single year. Hazus generated damage estimates are directly related to depth of flooding and are based on FEMA's depth-damage functions. For example, a two-foot flood generally results in about 20% damage to a structure (which translates to 20% of the structure's replacement value). The Hazus flood analysis results provide number of buildings impacted, estimates of the building repair costs, and the associated loss of building contents and business inventory. Building damage can cause additional losses to a community as a whole by restricting the building's ability to function properly. Income loss data accounts for losses such as business interruption and rental income losses as well as the resources associated with damage repair and job and housing losses.

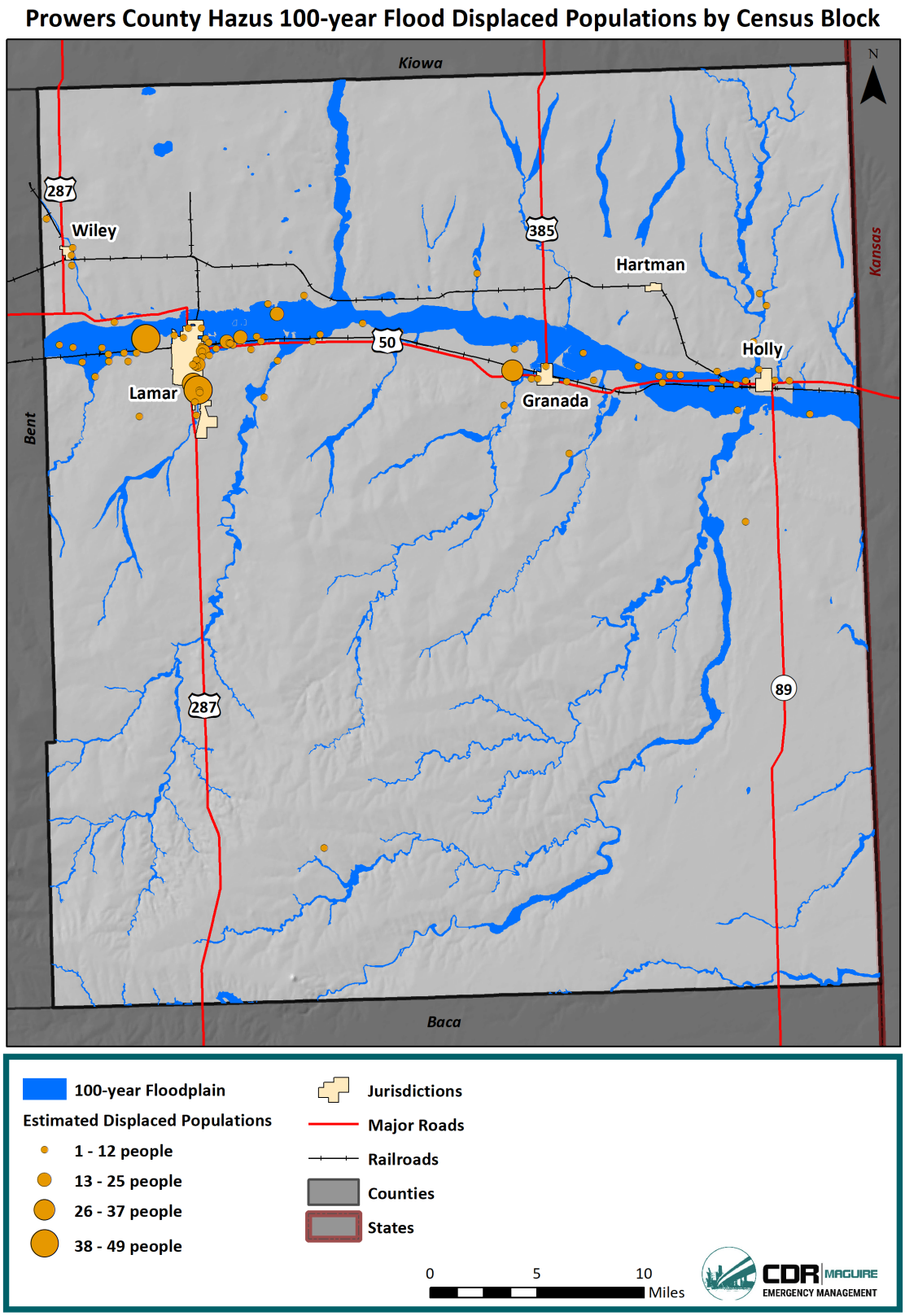
Potential losses derived from Hazus used default national databases and may contain inaccuracies; loss estimates should be used for planning level applications only. The damaged building counts generated are susceptible to rounding errors and are likely the weakest output of the model due to the use of census blocks for analysis. In rural communities, census blocks are large and often sparsely populated or developed, which may create inaccurate loss estimates. Hazus assumes population and building inventory to be evenly distributed over a census block; flooding may occur in a small section of the census block where there are not actually any buildings or people, but the model assumes that there is damage to that block. In addition, excessive flood depths may occur due to problems with a DEM or when modeling lake flooding. Errors in the extent and depth of the floodplain may also be present from the use of 30-meter digital elevation models. Hazus Enhance (Level II) analyses based on local building inventory, higher resolution terrain models, and Digital Flood Insurance Rate Maps (DFIRMs) could be used in the future to refine and improve the accuracy of the results.

Maps and Results

According to the Hazus model output, about 12 buildings would be at least moderately damaged by a county-wide 100-year flood. There are an estimated two buildings that will be completely destroyed. The model estimates 165 households (or 496 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. The areas with the majority of displaced populations are in or near Lamar, Granada, and Wiley, as well as along the

Arkansas River. Of the total displaced populations, 207 people are estimated to seek temporary shelter in public shelters. Figure 6-138 shows locations of displaced populations by Census Block.

Figure 6-138 Prowers County Hazus 100-year Flood Displaced Populations



The total economic loss estimated for the flood is $20.97 million, which represents 7.75% of the total replacement value of the scenario buildings. Total economic losses are a combination of direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The majority of economic losses resulted from direct building losses, which were estimated at $20.86 million. Business interruption losses were estimated at $110,000. Residential occupancies made up 46.71% of the total loss.

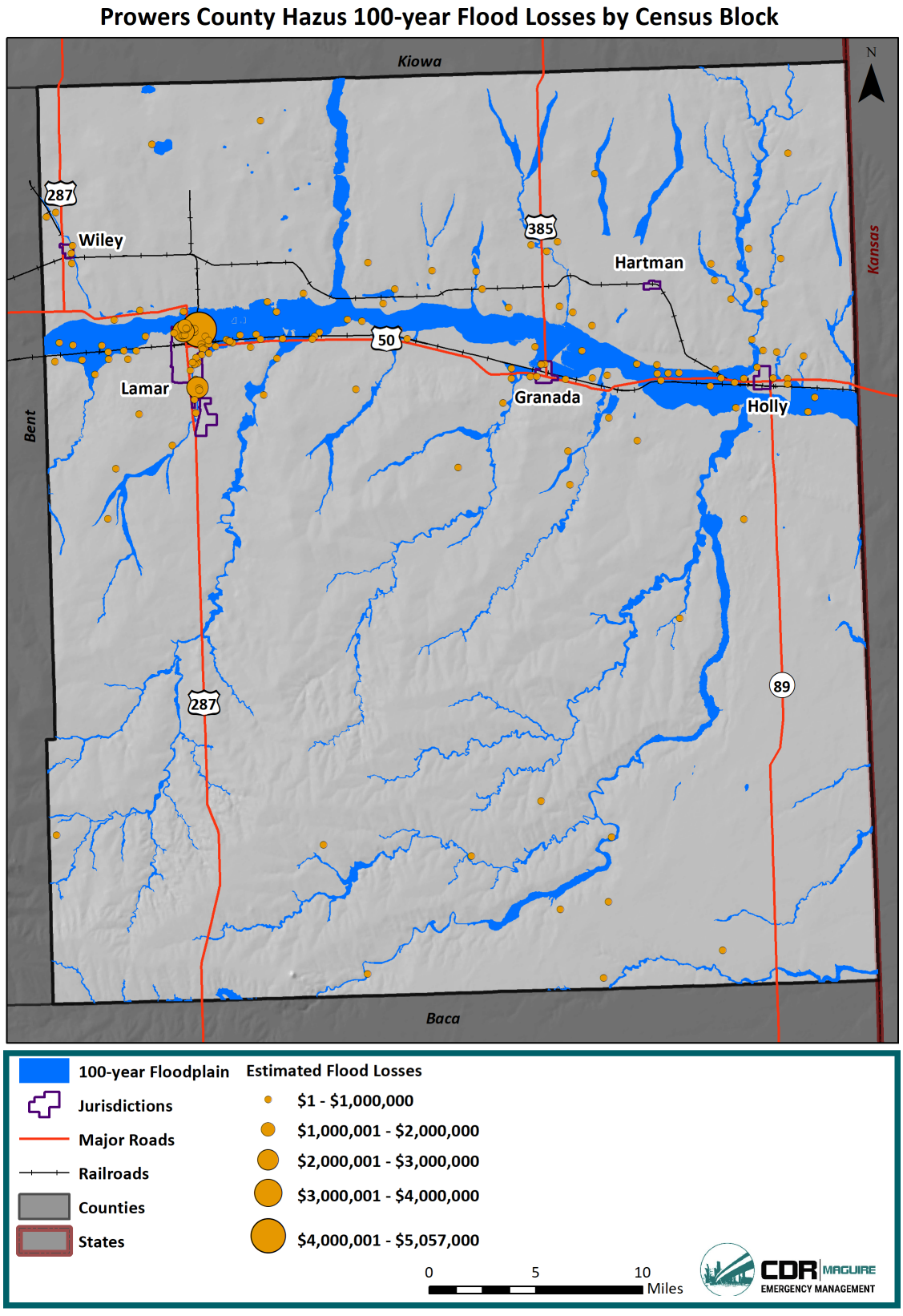
Additionally, the model estimates that a total of 992 tons of debris will be generated. Of the total amount, Finishes comprises 49% of the total, Structure comprises 22% of the total, and Foundation comprises 29%. If the debris tonnage is converted into an estimated number of truckloads, it will require 40 truckloads (25 tons/truck) to remove the debris generated by the flood.

Figure 6-139 shows total economic losses from this event for the County ($20.97 million). The highest flood losses are projected to occur near Lamar, with unincorporated County, Wiley, Granada, and Holly also experiencing losses. GIS was used to estimate losses by jurisdiction, shown in Table 6-101. It should be noted this is an approximate analysis since Census Blocks do not line up exactly with jurisdictional boundaries. However, this analysis can help differentiate the overall magnitude of flood losses in and surrounding each jurisdiction.

Table 6-101 Prowers County Hazus 100-year Flood Losses

Jurisdiction	Estimated 100-year Flood Losses
Granada	$342,000
Lamar	$15,359,000
Holly	$26,000
Wiley	$50,000
Hartman	$0
Unincorporated County	$5,190,000
Total	**$20,967,000**

Figure 6-139 Prowers County Hazus 100-year Flood Losses



In addition to the potential losses estimated by Hazus, there have been $31,717,907 in recorded losses in Prowers County from 1960-2017 (2017 dollars), according to SHELDUS. This equates to $556,454 in annual losses to Prowers County from flooding. This is the highest amount of losses in the County from all SHELDUS-reported hazards.

Land Use and Development

Regulating new development can and continued participation in the NFIP can help reduce the risk of new structures from flooding. In addition to land-use planning, zoning, and codes applicable to new development, flood mitigation measures can include structural and non-structural measures to address susceptibility of existing structures. Flood mitigation measures such as acquisition, relocation, elevation-in-place, wet/dry flood proofing, and enhanced storm drainage systems all have the potential to effectively reduce the impact of flood in the County.

6.11.8. Severe Weather: Thunderstorms/Lightning/Hail

Previous Occurrences

Thunderstorm

Previous occurrences of thunderstorms are tracked as thunderstorm wind events. According to the NCEI Storm Events Database, a total of 111 thunderstorm wind events have occurred in Prowers County from 1955 to 2019, summarized by jurisdiction in Table 6-102 below. The highest recorded wind gust was 100 mph, which occurred on 7/15/2016 near Hartman. This event severely damaged a house, outbuildings, and grain storage bins causing $70,000 in recorded damages. Overall, these storms caused $365,500 in property damage. The most damaging event occurred on 8/9/2010 near Holly, causing $80,000 in recorded damages. The event is described below.

> South of Holly, a powerful microburst flipped over five center pivot irrigation systems both west and east of Highway 89. Two grain bins were destroyed and one severely damaged. Several vehicles at houses just north of the grain bins had their windows blown out, and a camper trailer was toppled on its side. Twenty power poles had to be replaced along County Road DD west of Highway 89 around a mile south of Holly.

Table 6-103 describes thunderstorm wind events that have occurred since the 2014 Southeast Region Hazard Mitigation Plan.

Table 6-102 Prowers County Thunderstorm Wind Events Summary Table

Jurisdiction	# Events	# Deaths	# Injuries	Damages
Granada	4	0	0	$5,000
Hartman	3	0	0	$70,500
Holly	15	0	0	$120,000
Lamar	54	0	0	$117,000
Wiley	12	0	0	$53,000
Unincorporated County	23	0	0	$0
Totals	**111**	**0**	**0**	**$365,500**

Table 6-103 Recent Thunderstorm Wind Events in Prowers County

Date	Location	Deaths	Injuries	Damages	Description
5/2/2015	Wiley	0	0	$0	Description unavailable
7/14/2015	Lamar	0	0	$5,000	Damage to tree limbs and power poles occurred across Lamar.
8/16/2015	Granada	0	0	$5,000	A few power lines were downed around Granada.
8/16/2015	Holly	0	0	$10,000	Power lines were downed around Holly.
8/16/2015	Lamar	0	0	$5,000	A few power lines were downed around Lamar.
8/17/2015	Lamar (Airport)	0	0	$0	Description unavailable
6/13/2016	Lamar (Airport)	0	0	$0	Description unavailable
6/13/2016	Holly	0	0	$0	Description unavailable
7/15/2016	Hartman	0	0	$70,000	A house, outbuildings and grain storage bins were severely damaged. The residents were briefly trapped in a storm cellar.
7/15/2016	Lamar (Airport)	0	0	$0	Description unavailable
7/23/2016	Wiley	0	0	$0	A large tree had a 12-inch diameter limb broken off.
9/4/2016	Lamar (Airport)	0	0	$0	Description unavailable
9/4/2016	Wiley	0	0	$50,000	Four power poles were knocked down, a semi-trailer was blown over, and an irrigation pivot was destroyed.
9/6/2016	Lamar (Airport)	0	0	$0	Description unavailable
7/25/2017	Lamar	0	0	$0	A few trees were snapped off and uprooted.
5/18/2018	Lamar (Airport)	0	0	$0	Description unavailable
6/28/2018	Lamar (Airport)	0	0	$0	Description unavailable
7/2/2018	Lamar (Airport)	0	0	$0	Description unavailable
7/29/2018	Granada	0	0	$0	US 50 closed near Granada due to fallen tree blocking all lanes.
8/3/2018	Lamar (Airport)	0	0	$0	A severe thunderstorm generated a 58 mph wind gust near Lamar during the afternoon of the 3rd.

Date	Location	Deaths	Injuries	Damages	Description
4/20/2019	Lamar (Airport)	0	0	$0	Lamar Airport, KLAA, gusted to 81 MPH as a strong rain shower passed overhead. No lightning was detected with the shower.
Totals	**Count: 21**	**0**	**0**	**$145,000**	

Lightning

Tracking lightning events is not simple. The NCEI database reports only 641 events for the entire State since 1996, indicating that these events are vastly underreported. The National Weather Service in Pueblo reports the average number of cloud-to-ground lightning strikes per county per year in Colorado.[171] Prowers County averages 7,200 cloud-to-ground lightning strikes per year. Colorado is ranked 19th in the nation with respect to the number of Cloud-to-Ground (CG) lightning flashes (2009-2018) and fourth in the nation for number of lightning fatalities (years 1959-2017).[172]

The NCEI Storm Events Database reports on the number of damaging or significant lighting events. In Prowers County there has only been one recorded damaging lightning event. The event occurred on 9/23/1998 near Lamar. One person died and three others were injured while working at a hog farm when lightning struck. The person was carrying a metal object when the lightning struck and died at the scene. The other three men were airlifted to a Denver area hospital for burns and residual tingling sensation. No events have occurred since the 2014 Southeast Colorado Hazard Mitigation Plan.

Hail

According to the NCEI Storm Events Database, there have been 302 recorded hail events in Prowers County from 1955 through 2017. These events are summarized in Table 6-104. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. The largest recorded magnitude hail was 3.75 inches, occurring on 5/16/1999 near Wiley. The most damaging event occurred on 5/29/2001 near Lamar, causing $5,000,000 in recorded damages when the thunderstorms that spawned seven tornadoes west of Lamar brought giant hail between golf ball and baseball size to Lamar. Overall, these events caused $5,830,050 in recorded damages.

Table 6-104 Prowers County Previous Hail Events, 1955-2017

Jurisdiction	# Events	Max Magnitude	# Deaths	# Injuries	Damages
Granada	34	2.75	0	0	$20,050
Hartman	15	1.0	0	0	$0
Holly	67	3.5	0	0	$5,000
Lamar	94	3.0	0	0	$5,805,000
Wiley	30	3.75	0	0	$0
Unincorporated County	62	2.75	0	0	$0
Totals	**302**	**3.75**	**0**	**0**	**$5,830,050**

[171] https://www.weather.gov/pub/lightningCgCountyColorado
[172] https://www.weather.gov/pub/Colorado_ltg_ranking

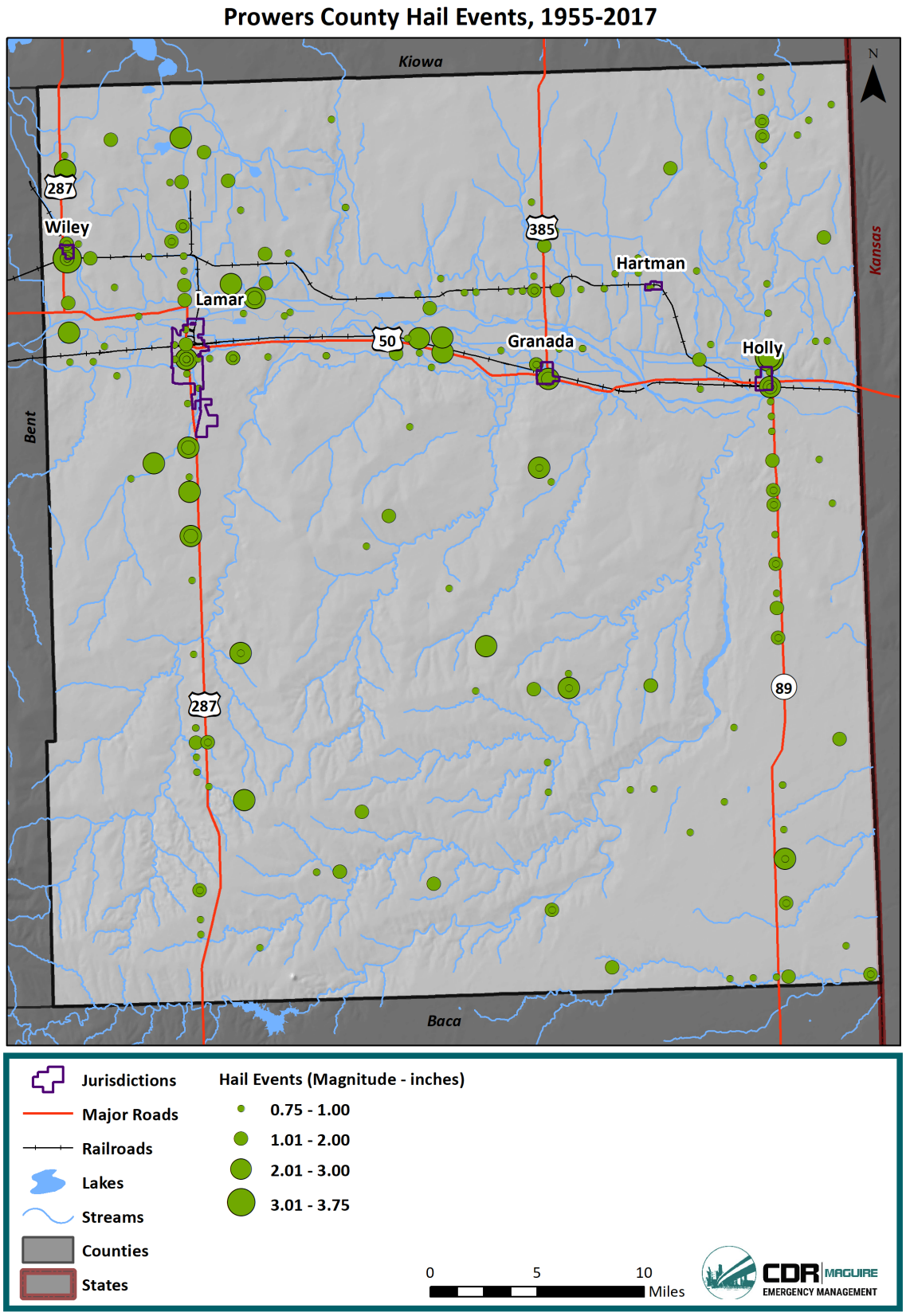
Table 6-105 shows hail events since the 2014 Southeast Colorado Hazard Mitigation Plan and Figure 6-140 shows all previous hail events on a map. It is evident the entire County is vulnerable to hail events.[173]

Table 6-105 Prowers County Recent Hail Events

Date	Location	Magnitude (inches)	Damages	Description
4/23/2015	Holly	1.75	$0	Description unavailable
5/24/2015	Lamar (Airport)	2	$0	Description unavailable
5/24/2015	Lamar	2.75	$0	Description unavailable
5/24/2015	Granada	1.75	$0	Description unavailable
6/11/2015	Wiley	2	$0	Description unavailable
6/11/2015	Bristol	2.25	$0	Description unavailable
6/11/2015	Lamar	2	$0	Description unavailable
6/11/2015	Bristol	2.5	$0	Description unavailable
6/11/2015	Granada	2.5	$0	Description unavailable
7/18/2015	Lamar	0.75	$0	Description unavailable
6/27/2016	Bristol	0.75	$0	Description unavailable
6/27/2016	Granada	1	$0	Description unavailable
5/10/2017	Lamar (Airport)	0.88	$0	Description unavailable
5/10/2017	Wiley	1.25	$0	Description unavailable
5/10/2017	Holly	1	$0	Description unavailable
6/25/2017	Bristol	1	$0	Description unavailable
6/29/2017	Wiley	2.75	$0	Description unavailable
6/29/2017	Holly	1.5	$0	Description unavailable
6/29/2017	Lamar (Airport)	1.5	$0	Description unavailable
8/10/2017	Wiley	1	$0	Description unavailable
8/10/2017	Lamar	3	$0	Description unavailable
8/13/2017	Granada	2.75	$20,000	Wind-driven hail broke windows of vehicles and houses.
6/22/2018	Bristol	1.75	$0	Description unavailable
6/22/2018	Holly	1.5	$0	Description unavailable
7/29/2018	Bristol	2.75	$0	Several windows and windshields broken due to hail and wind.
7/29/2018	Granada	2	$0	Two windows broken due to hail and wind. Also, widespread tree damage.
7/29/2018	Holly	1.75	$0	Description unavailable
5/4/2019	Hartman	1	$0	One inch hail was reported by the public.
5/26/2019	Lamar (Airport)	1	$0	Large hail reported by public south of Lamar, CO.
Totals	**Count: 29**	**Max: 3.0**	**$20,000**	

[173] NOAA Storm Prediction Center, SVRGIS; https://www.spc.noaa.gov/gis/svrgis/

Figure 6-140 Prowers County Previous Hail Events, 1955-2017



Probability

The probability of annual occurrence for all severe weather events (thunderstorm, lightning, and hail) is 100%, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Thunderstorms producing winds, hail, and lightning are a common occurrence in the County between early spring and late fall. Reported damages from previous occurrences from thunderstorm events include infrastructure damage and building damage such as torn off roofs, as well as crop damage. Previous occurrences show events throughout the entire County, although the most events were recorded near Lamar. Jurisdictions are most vulnerable to property damage as well as injuries and fatalities from thunderstorm events. Unincorporated County have similar vulnerabilities, as well as increased risk to crop losses from thunderstorms.

Given the lightning statistics for Colorado and the region, the entire County is at risk and is vulnerable to the effects of lightning. As demonstrated by previous occurrences, persons recreating or working outdoors during the months of April through September will be most at risk to lightning strikes. Additionally, property and infrastructure damage are possible.

Based on previous occurrences and frequency of hail events, the entire County is also at risk to hail events. Again, the most events were recorded near Lamar, but all jurisdictions are at risk. Similar to thunderstorm damages, the jurisdictions are most susceptible to property damages, such as broken windows, roof damages, and outbuildings and vehicles damaged or destroyed; as well as injuries and fatalities. Hail can also cause significant crop damage in unincorporated County.

Additionally, thunderstorms can produce locally heavy rain and high winds, which may result in crop damage and localized flooding. Lightning can also cause wildfires, which could lead to significant losses.

Impacts specific to the City of Lamar would not vary from those of the County, but they may be multiplied by the City's denser development. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

According to SHELDUS, there have been $5,941,825 in damages from severe storms from 1960 to 2017 (2017 dollars) in the County. This equates to $104,242 in annual damages. According to the NCEI data, Holly and Lamar have experienced the most in losses from thunderstorm events, however the entire County is susceptible. Overall, the most damages would likely take place in more populated areas, such as the jurisdictions, although high wind from thunderstorms can also damage crops.

Although no recorded monetary losses from lightning events, one event did cause a death and three injuries in the County. Lightning occurs frequently every spring through fall in the County, so each jurisdiction is equally at risk to losses from this hazard in the future. Additionally, lightning is a leading cause of wildfire, which could cause significant losses in the County.

According to SHELDUS, there have been $17,046,522 in damages from hail from 1960 to 2017 (2017 dollars). This equates to $299,061 in annual damages. According to the NCEI data, the vast majority of damages were recorded in Lamar, but, similar to other thunderstorm hazards, the entire County is

vulnerable to losses from hail. Hail occurring in more populated areas, such as the jurisdictions, would likely cause the most damages. However, crops could also suffer significantly from hail damage.

Land Use and Development

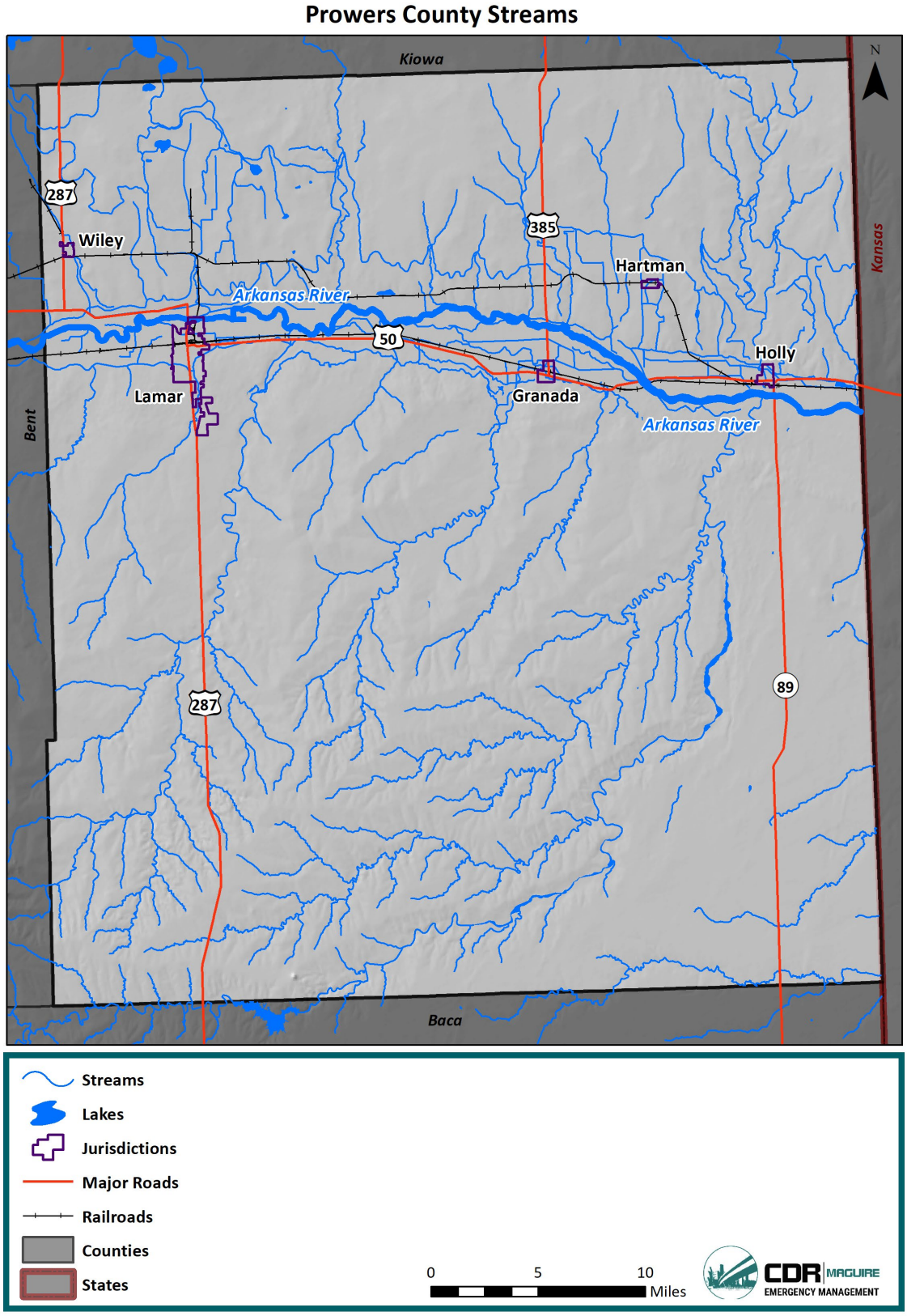
Due to the frequency of severe weather in the County, all new development and populations may be impacted by severe weather. Building codes can help reduce the risk to structures from severe weather impacts.

6.11.9. Stream Bank Erosion/Stability

Location

Figure 6-141 shows streams in Prowers County. All of these areas are vulnerable to erosion. Additionally, stream bank erosion along the Arkansas River is an issue in Prowers County, and the LPC noted that the Town of Granada is at a higher risk to erosion.

Figure 6-141 Streams in Prowers County



Previous Occurrences

There are no specific erosion events recorded for Prowers County. However, although there are no specific incidents reported, erosion along the Arkansas River has been an ongoing occurrence for the County.

Overall, erosion events are likely underreported, and this does not mean that erosion is not taking place. According to the 2018 Colorado Hazard Mitigation Plan, the Colorado Water Conservation Board (CWCB) is creating pilot erosion hazard maps as a component of the RiskMAP flood mapping program. This information should be utilized to further assess the erosion hazard in Prowers County when available.

Probability

Streambank erosion is a natural process and will continue to occur in the future. Problematic occurrences were rated as likeley by the LPC.

Vulnerability Assessment

Inventory Exposed/Impacts

Stream bank erosion is a natural process, but acceleration of this natural process leads to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects. Local interests have, with limited finances, sought for many years to provide protection from reoccurring floods on the Arkansas River. A major stumbling block in the quest for flood protection has been the aggradation of the streambed. Aggradation of the Arkansas River has been and continues to be a major problem from Pueblo to the Colorado-Kansas state line. In addition to aggradation, there is concern of an increasingly serious flood threat in the County caused by heavy plant growth in the riverbed which retards flows and results in deposition of silt and decreased channel capacity.

Erosion can result in minor inconveniences or major destruction of property and infrastructure. Severe erosion removes the earth from beneath bridges, roads, and foundations of structures adjacent to streams. The deposition of material can block culverts, aggravate flooding, destroy crops and lawns by burying them, and reduce the capacity of water reservoirs as the deposited materials displace water, and cause overall degradation of the water supply.[174]

Riverine erosion has many consequences including land and development loss. It can also affect river sedimentation and degrade channel navigation. Other problems include water quality reduction due to high sediment loads, native aquatic habitat losses, damage to public utilities (roads, bridges and dams), and increased maintenance, prevention, and control costs. Sedimentation of streams degrades habitat essential for many aquatic organisms. Erosion and deposition can also increase risk of pollution of surface waters, as nutrients and pesticides from agricultural and residential uses are more easily carried off the surface by runoff.

Additionally, burn scar areas from wildfires are at a higher risk to erosion due to the lack of vegetation as well as changes to the physical condition of the soil.

Impacts specific to the City of Lamar would not vary from those of the County.

[174] 2018 Colorado Hazard Mitigation Plan

Potential Losses

No loss information is available for the stream bank erosion hazard in Prowers County. The greatest potential losses from stream bank erosion would likely be direct damages to infrastructure, as well as damages from an increased flooding risk where erosion has occurred. Erosion can deposit sediment into streams and reservoirs, increasing flooding risk as well as requiring costly remediation.

Land Use and Development

Human activities greatly influence the rate and extent of erosion and deposition. Stripping the land surface of vegetation, altering natural drainages, and rearranging the earth through construction of highways, subdivision development, farmland preparation, and modification of drainage channels for water control projects are significant factors in increased erosion and deposition.

6.11.10. Tornadoes

Previous Occurrences

According to the NCEI, from 1950 through 2019, there have been 81 recorded tornadoes in Prowers County. These tornadoes resulted in 2 deaths, 17 injuries, and $5,600,280 in recorded property damages. The strongest magnitude (and most damaging) event was an EF3 tornado that occurred on 3/28/2007 near Holly and caused over $4 million in damages, two deaths, and nine injuries. This tornado resulted in a State disaster declaration. The following text describes this event:

- The tornado, which struck Holly, rural northeast Prowers County, and rural southeast Kiowa County, had a maximum rating of EF3. The path width reached a maximum of around 900 yards in extreme northeast Prowers County. Prior to this, as the tornado moved through Holly, the path width was around 600 feet. Over 200 residences and other buildings were affected or destroyed. Two people were killed and nine others were injured. The damage path was around 28 miles long, extending into Kiowa County. The last substantial damage with the tornado was 12 miles north of Holly in northeast Prowers County, where a ranch sustained high end EF3 damage.

Table 6-106 summarizes the recorded tornado events in Prowers County and its jurisdictions. It should be noted that the locations are approximate, and some events may report the closest jurisdiction rather than the exact location. Examples of damages recorded during these events include, damaged roofs and buildings, downed power poles, downed radio tower, equipment/machinery damage, livestock/crop damage, and power outages.

Table 6-106 Summary of Tornadoes in Prowers County, 1950-2019

Jurisdiction	# Events	# Deaths	# Injuries	Damages
Granada	7	0	0	$55,000
Hartman	2	0	0	$0
Holly	4	2	9	$4,000,000
Lamar	23	0	7	$1,160,000
Wiley	5	0	0	$0
Unincorporated County	40	0	1	$385,280
Totals	**81**	**2**	**17**	**$5,600,280**

Recent tornadoes are described in Table 6-107 below.

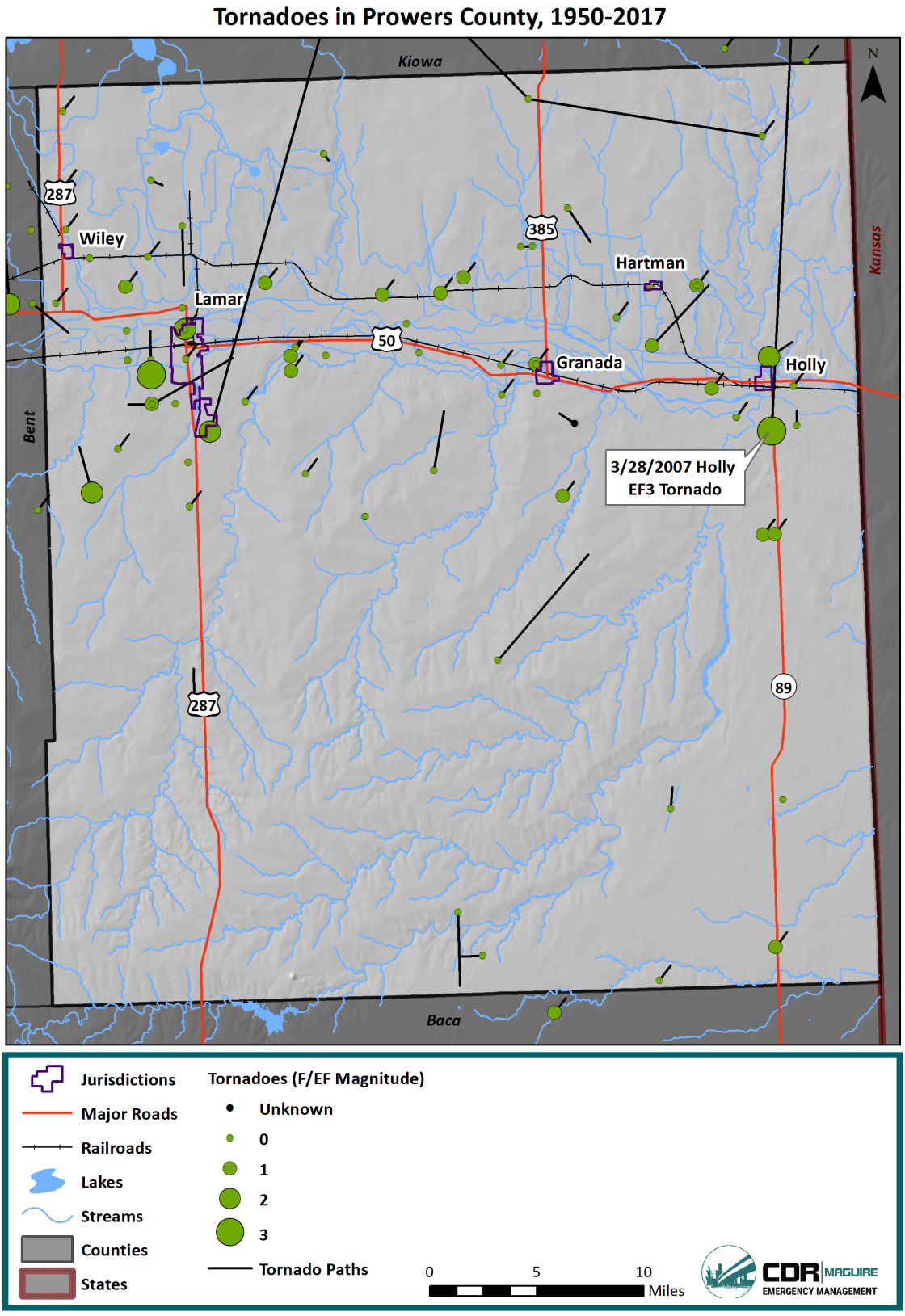
Table 6-107 Recent Tornadoes in Prowers County

Date	Location	Mag	Injuries	Damages	Description
7/15/2010	Lamar	EF0	0	$10,000	A brief tornado brought down a 200-foot tall radio tower on the KLMR property.
5/24/2011	Lamar	EF0	0	$0	A landspout tornado occurred in a field and caused no damage.
4/27/2012	Lamar	EF2	7	$1,000,000	This long-track tornado began southeast of Lamar and damaged an electrical substation along county road EE. A power outage in the Lamar area lasted for over 12 hours. Two communication towers were downed, and four dwellings were destroyed. A hog farm was struck with 18 hog barns destroyed. There were no hogs on the farm at the time.
6/14/2012	Holly	EF0	0	$0	A slow-moving landspout tornado occurred over a wheat field and caused no damage, although it can very close to hitting a fleeing wheat combine. Two other weaker landspout tornadoes occurred simultaneously within a mile of the aforementioned landspout tornado.
5/8/2013	Bristol	EF0	0	$0	Landspout occurred over open country and caused no damage.
7/25/2013	Granada	EF0	0	$0	The tornado occurred over open country and caused no known damage.
7/14/2014	Lamar	EF0	0	$0	A brief landspout tornado occurred across open country and caused no damage.
4/12/2017	Granada	EFU	0	$0	A brief landspout tornado was witnessed by a trained spotter. The tornado caused no damage from which the NWS could assign an EF-scale rating.

Additionally, Figure 6-142 shows tornadoes and tornado paths in Prowers County as documented by the NOAA Storm Prediction Center.[175]

[175] https://www.spc.noaa.gov/gis/svrgis/

Figure 6-142 Prowers County Previous Tornadoes



Probability

Based on previous occurrences in Prowers County, there is a 100% chance that a tornado will happen every year, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Historical evidence shows that Prowers County is vulnerable to tornado activity. This hazard can result from severe thunderstorm activity or may occur separately due to changing weather conditions. Previous occurrences show tornadoes in each jurisdiction. However, it cannot be predicted where a tornado may touch down, so all existing and future buildings, facilities, and populations are considered to be exposed to this hazard and could potentially be impacted. Potential tornado impacts are presented by tornado severity in Table 6-11 (Extent subsection) and summarized below:

- Human death or injury
- Livestock death or injury
- Crop and farm damage
- Property damage (torn off roofs, blown out windows)
- Blown mobile homes and unanchored structures (sheds, campers, etc.)
- Vegetative debris (downed trees and limbs)
- Power outage
- Driving hazard (overturned tractor trailers and flying debris)
- Vehicular damage
- Water contamination
- Fire following gas leaks
- Critical facility damage
- Associated hail, lightning, strong winds

Mobile homes are particularly vulnerable to this hazard. In Prowers County, 13.1% of the housing units are mobile homes.

Impacts specific to the City of Lamar would not vary from those of the County, but they may be multiplied by the City's denser development. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

Future property and crop losses can be expected, and a single event is capable of causing substantial damage. Additionally, deaths and injuries will continue to be a potential impact from tornadoes. The availability of sheltered locations such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters all help minimize tornado impacts. The population needs to be aware of how to seek shelter during a tornado and avoid behaviors or decisions that place them in greater danger. Additionally, the National Weather Service issues tornado watches (conditions are favorable for a tornado) and warnings (a tornado has been sighted or indicated by weather radar nearby) to reduce risk of tornado impacts on the public.

NCEI historical loss information shows $5,600,280 in losses, of which the majority ($4 million) are from the 3/28/2007 event near Holly. However, there have been multiple events that have caused damages

in the County. The most vulnerable areas in the County to high losses are jurisdictions that have more buildings and people, as well as agricultural land and mobile homes in unincorporated parts of the County.

SHELDUS reports $10,728,214 in damages from tornadoes in Prowers County from 1960 to 2017 (2017 dollars). This equates to $188,214 in annual damages. Of these damages, $174,714 are crop damages and $10,553,500 are property damages, indicating both agricultural areas and structures are vulnerable to this hazard.

Land Use and Development

Tornadoes can impact any location in the County; therefore, all new development and populations may be impacted by a tornado. Building codes can help reduce the risk to structures and people from tornado impacts.

6.11.11. Wildfire

Location

For the purposes of this Plan, the location of the wildfire hazard is analyzed in three ways based on the 2017 Colorado Wildfire Risk Assessment (CO-WRA), including

1. Wildfire burn probability, defined as the probability of a wildfire burning a specified point or area. Burn probability is the combination of numerous individual fire growth potential simulations to create an overall fire growth potential map.
2. Wildfire intensity, defined as a quantitative measure of the potential level of intensity of a wildfire. Conventional fire behavior analysis outputs include two measures of fire intensity; flame length and fireline intensity. Both are used in the CO-WRA.
3. Location of the WUI.[176]

Burn probability for the County is mapped in Figure 6-143. The burn probability is the highest in central and western portions of the County. Areas of moderate/high probabilities surround the City of Lamar.

[176] CSFS, 2017 CO-WRA Final Report

Figure 6-143 Prowers County Burn Probability

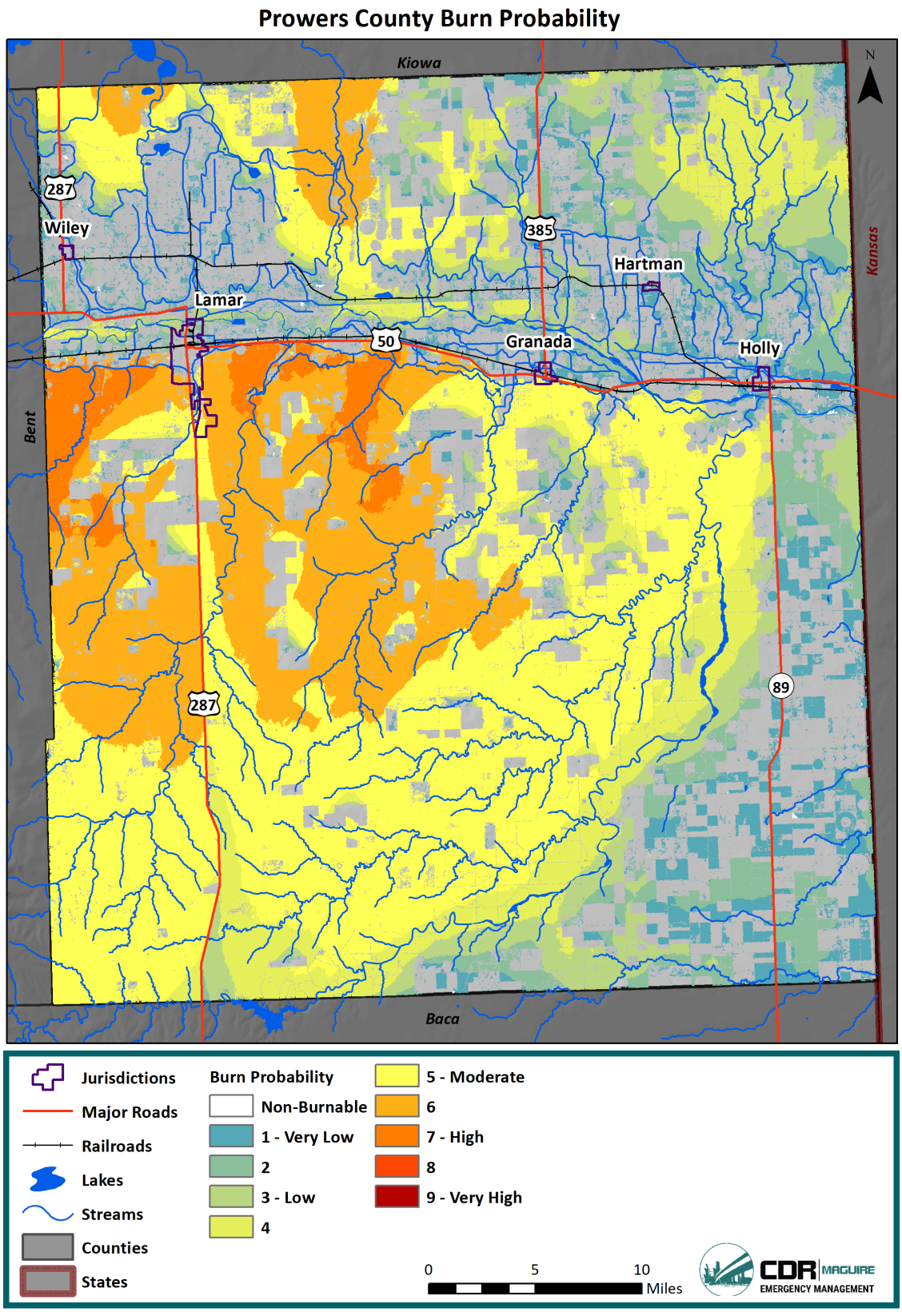
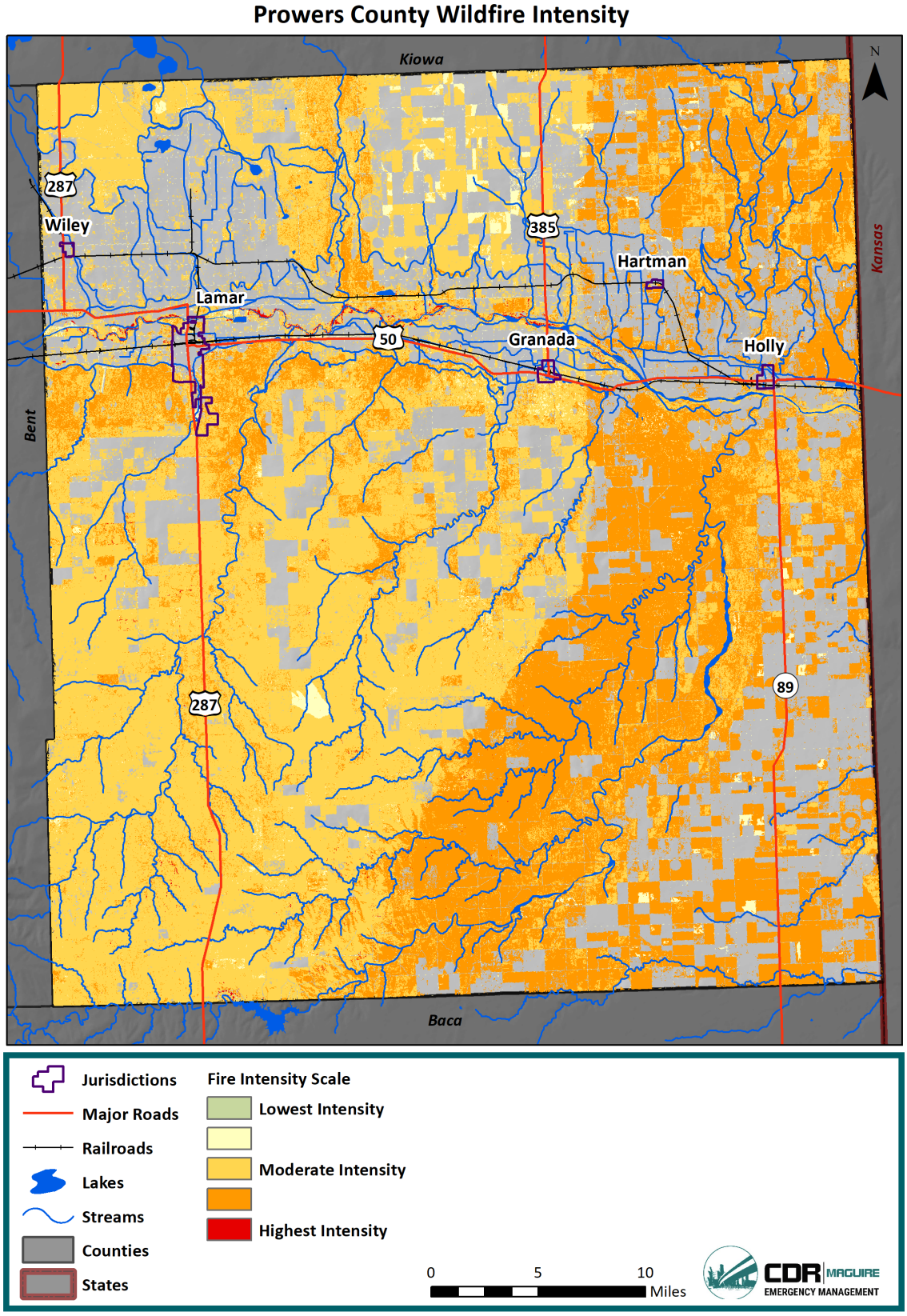


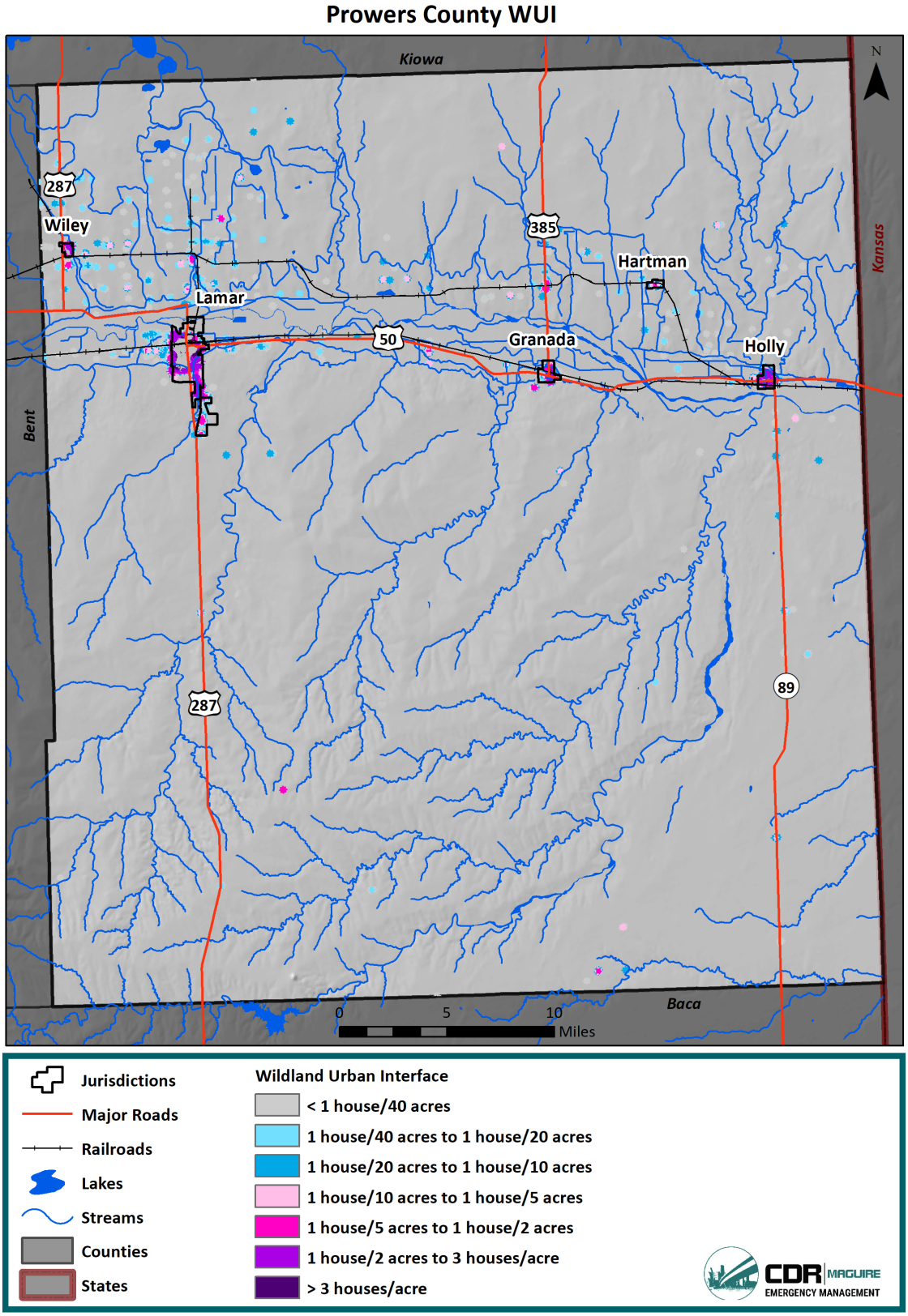
Figure 6-144 show the wildfire intensity for Prowers County. Much of the County has moderate to high wildfire intensity. The eastern portion of the County experiences higher wildfire intensity overall.

Figure 6-144 Prowers County Wildfire Intensity



Overall, the Prowers County WUI is largely concentrated around the jurisdictions. There are very little WUI areas in the southern portion of the County. Figure 6-145 shows WUI locations throughout the County. Note: there are no federally-owned lands in Prowers County.

Figure 6-145 Prowers County Wildland-Urban Interface



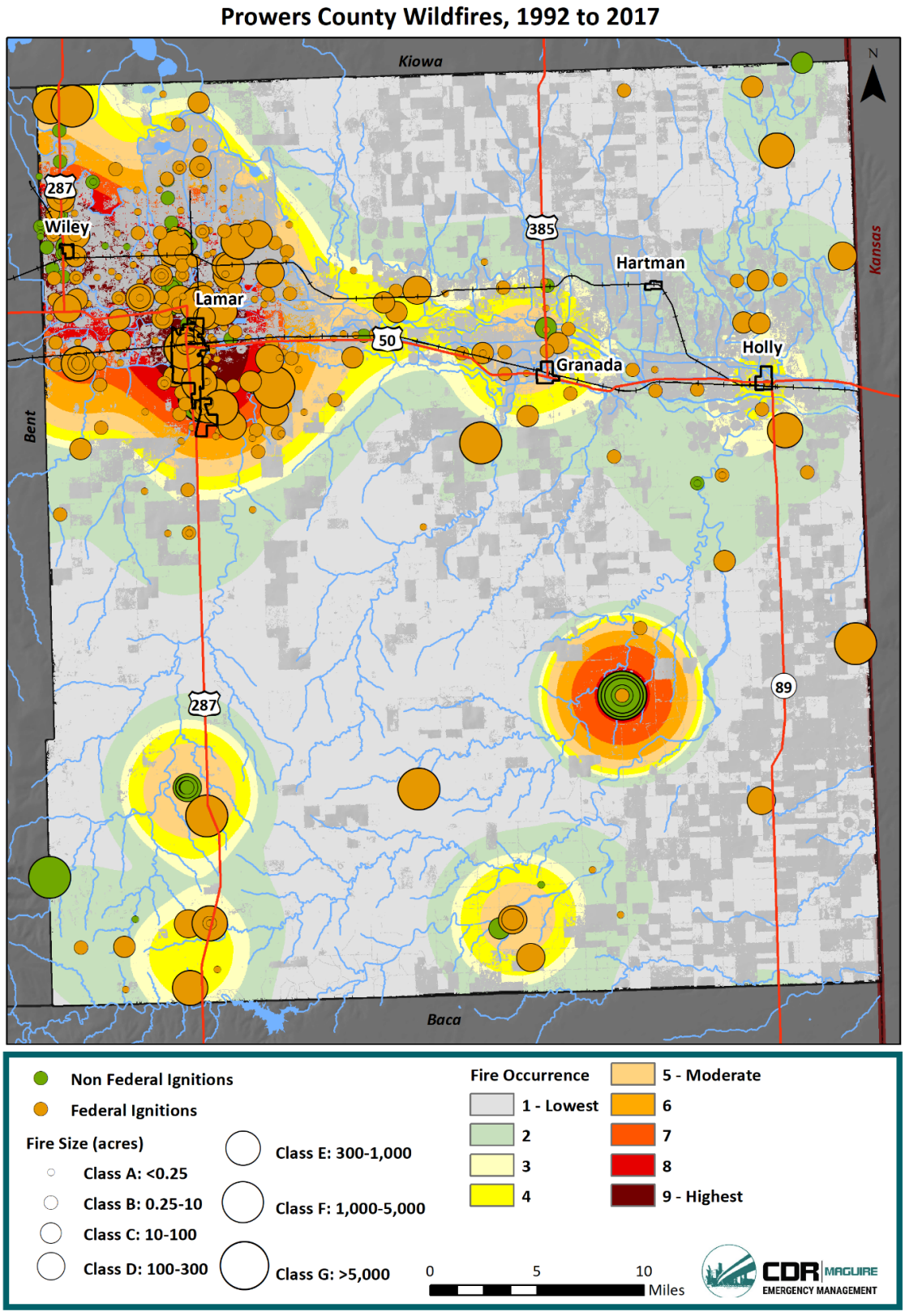
Previous Occurrences

According to the CO-WRA data, there have been 439 wildfires on federal lands from 1992 to 2015. Of these fires, 226 have been Class A (one-fourth acre or less), 123 Class B (1/4 to 10 acres), 43 Class C (10 to 100 acres), 26 Class D (100 to 300 acres), 13 Class E (300 to 1,000 acres), and 8 Class F (1,000 to 5,000 acres). Additionally, of these wildfires, 22 have been lightning-caused, 176 human-caused (including arson, campfire, debris burning, equipment use, children, and smoking), 17 miscellaneous, and 224 missing or unidentified.

Additionally, there have been 203 non-federal wildfires from 2009 to 2017. Of these fires, 75 have been Class A, 96 Class B, 18 Class C, 6 Class D, 4 Class E, 2 Class F, and 1 Class G. Information regarding the cause of the wildfire is not available for non-federal fires.

Figure 6-146 shows these previous wildfires within Prowers County on a map. The previous fire events are overlayed on a fire occurrence layer that demonstrates fire ignition density derived from previous occurrences to easily visualize where the most fires have occurred in the County. It is evident there have been wildfires throughout the entire County, with the most occurrences near Lamar and Wiley in the northwest portion of the County.

Figure 6-146 Prowers County Previous Wildfires



Notable wildfires since the 2014 Southeast Region Hazard Mitigation Plan are described below.

June 2018 - Two fires broke out on the southeast Colorado plains Friday afternoon, June 15th. The first burned 148 acres of uncut wheat just south of the Hixson Farms along Highway 287 (about seven miles south of Lamar). One structure was in danger of igniting and fire-fighting crews altered their response to deal with the situation, preventing any damage to the home. Residents were evacuated and were able to return within twenty minutes of leaving. A second fire ignited one-half mile south of Gobblers Knob Rest Stop also along Highway 287. Three acres of grass were burned. A county-wide fire ban was also enacted during this time.[177]

Probability

Based on all of the available previous occurrence data, there have been 644 wildfires in the County from 1992 through 2019. This equates to a 100% chance of a wildfire every year, or a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

Wildfires in the County have the potential to be both a public safety issue and contribute to property losses. According to the Prowers County CWPP, the following are areas of highest wildfire concern for the County:

> Prowers County's highest concern areas are the communities and all development near the communities; the recreational areas; the railroad/high-use travel corridors in the County; and the Arkansas River watershed for water quality.

The vulnerability of structures in rural areas is exacerbated due to the lack of hydrants in these areas for firefighting and the distance required for firefighting vehicles and personnel to travel to respond. In addition, structures along the WUI where wild fuel loads are in close proximity to structures are at increased risk.

Wildland/grassland fires seem to increase with drought and with the increase of no-till farming due to less moisture available in the air, in the ground, and in the plants. This can be attributed to both drought and the absence of irrigation. There also is an apparent increase in fires in areas where the CRP has prohibited grazing on lands enrolled in the program. In this instance, there is little else to stunt the growth of weeds, which in turn, provide fuel for fires.

Potential impacts are further assessed by utilizing the CO-WRA data to visualize different components of wildfire risk throughout the County.

Figure 6-147 shows the WUI risk in the County. The WUI risk indicates a rating of the potential impact of a wildfire on people and their homes in the WUI.[178] According to the CSFS, 61% of the population in Prowers County lives within the WUI. The majority of the County's WUI is in low to moderate negative impact areas. However, small portions, mostly around each jurisdiction, are in higher negative impact WUI areas.

WUI risk in the City of Lamar is the highest across the entire County. This is mainly caused by the City's denser development and increased physical interface with wildfire.

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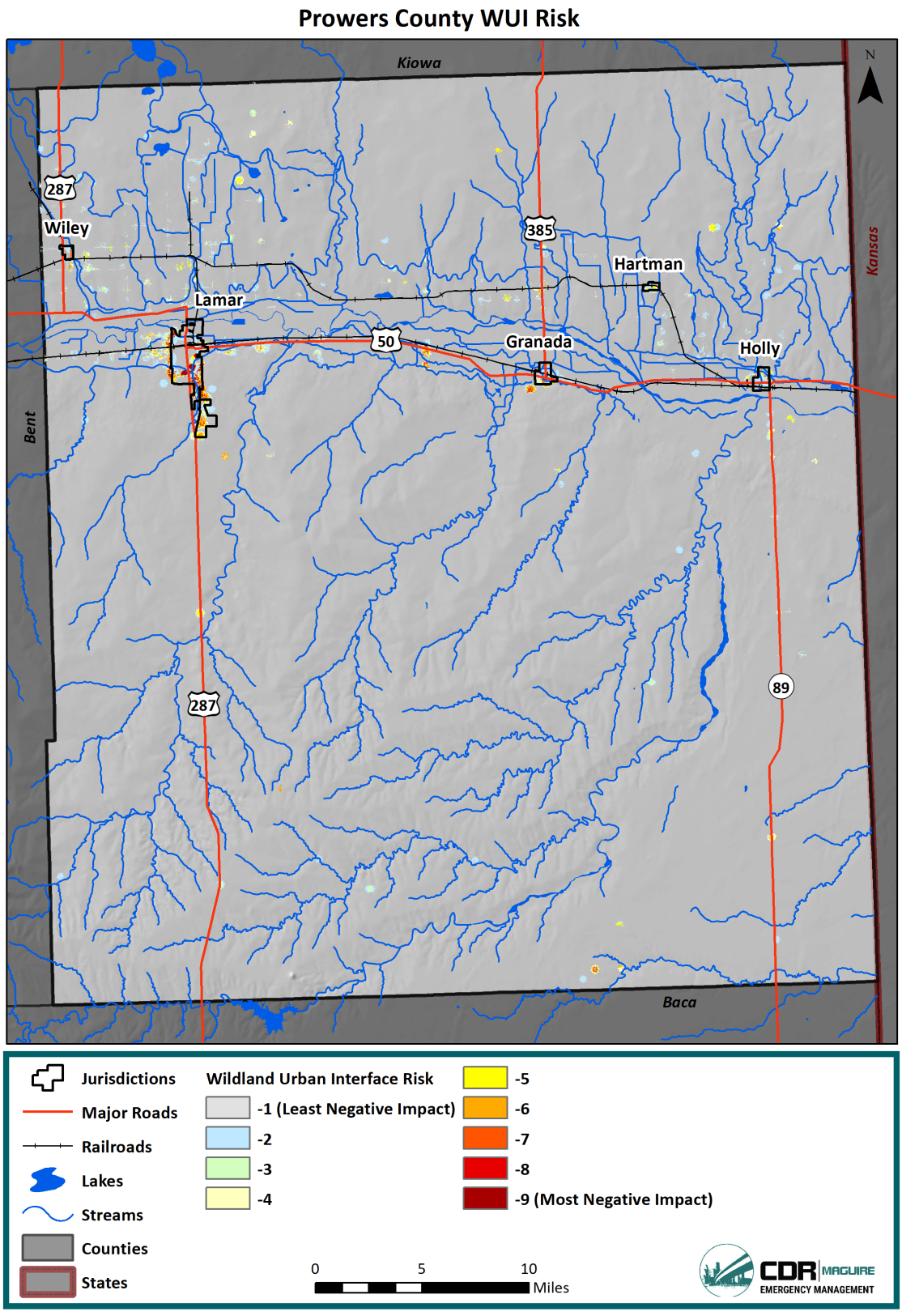
[177] https://theprowersjournal.com/2018/06/unknown-cause-of-fires-along-highway-287/; accessed August 2019
[178] 2017 CO-WRA

Figure 6-147 Prowers County WUI Risk



Potential Losses

The best available recorded losses from wildfire in the County are from the SHELDUS database, which records $18,559 in losses from 1960 to 2017 (2017 dollars). This equates to $325 in annual losses. This is likely a low estimate and losses from wildfires can be substantial. Wildfires can impact structures, infrastructure, crops, and livestock as well as cause injuries and fatalities. Additionally, as with other parts of the western United States, the number of wildfires and acres burned in the Great Plains has increased and is projected to continue to increase. From 1985 to 1994, there were an average of 33 fires per year on the plains. From 2005 to 2014, that average soared to 117 per year, an increase of almost 350%.[179] Causes of this increase are cited as previous fire suppression, more people living in the WUI, need for more education for property owners, and climate change. For example, many residents have created windbreaks by planting fast growing trees like red cedar and ash juniper close to their houses, inadvertently creating a source of fuel that is particularly volatile during prolonged periods of little to no rain. With this trend, wildfire losses will likely continue to grow in the County.

All jurisdictions are at risk to losses from wildfire. Structures in WUI areas as well as agricultural land and rural infrastructure in areas with higher wildfire probability and intensity are at the risk to highest losses.

Land Use and Development

Limited development trends in the County should not greatly increase exposure or vulnerability to wildfires. However, increased development in the WUI areas may create a greater risk to wildfire. Adherence to sound construction standards and defensible space practices would limit vulnerability of new development to wildfire. If chosen as a mitigation measure, the planting of "living" wind breaks around existing or new homes and buildings should be set back far enough to limit wildfire vulnerability.

6.11.12. Windstorms

Previous Occurrences

According to the NCEI database, there have been 40 recorded high wind events in Prowers County from 2003 to 2019. Within this database, wind events are reported at an NWS Zone level, so it is not possible to derive jurisdictional data (Prowers County is one zone). In Prowers County, many of the high wind events are associated with winter storms or thunderstorms, but stand-alone high wind events are also common. The highest recorded magnitude event took place on 3/13/2019 with gusts up to 82 mph. this event is described below:

> An extremely powerful low pressure system (setting records for lowest pressure measurements in Colorado) developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.

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[179] Kiowa County Independent, http://kiowacountyindependent.com/news/1052-great-plains-new-wildfire-frontier

No damages, deaths, or injuries were recorded in the NCEI database. However, SHELDUS reports $5,514,375 in damages from wind events from 1960 to 2017 (2017 dollars). No further details are available with the SHELDUS data. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below.

Table 6-108 Prowers County Recent Wind Events

Date	Description
3/18/2014	Winds gusting in excess of 70 mph were measured over portions of southern Colorado. Some of the higher reported wind gusts were 59 mph at Schriever AFB (El Paso County)...NWS Pueblo (Pueblo County) and near Cheraw (Otero County)...60 to 64 mph wind gusts were recorded near Springfield (Baca County)...Peterson AFB (El Paso County...65 to 70 mph wind gusts impacted locations near Campo and Two Buttes (Baca County)...and a 75 mph wind gust was measured near Yoder (El Paso County).
4/27/2014	Across the far southeast plains...a strong upper level disturbance produced severe, damaging wind gusts and low visibilities due to blowing dust. Vehicle accidents occurred (five cars and two semi-trailers), as well as downed trees and roof damage.
4/29/2014	A strong upper level storm system over the upper Midwest generated wind gusts in excess of 60 mph across the southeast plains. Widespread low visibility prompted a Dust Storm Warning.
12/23/2014	A storm system generated high winds across the I-25 corridor and southeast plains of Colorado. The highest reported wind gusts include 58 mph near Falcon (El Paso County...61 mph near Springfield and 71 mph near Campo (Baca County).
11/16/2015	A vigorous storm system produced wind gusts near 80 mph across sections of southern Colorado. Some of the higher reported wind gusts included...58 to 68 mph in Colorado City and Blende (Pueblo County)...in Fountain and Security (El Paso County)...in Cheraw (Otero County)...in Lamar (Prowers County)...and 70 to 78 mph in Campo and west of Two Buttes (Baca County).
3/23/2016	A intense weather system produced strong to high winds across many sections of southern Colorado. Wind gusts in the 58 mph to 69 mph range were reported across several locations for which there were high wind warnings. In addition, wind gusts between 70 and 80 mph were also observed across portions of El Paso and Pueblo Counties.
12/25/2016	A strong upper level jet stream moving across Colorado generated strong to high winds from the eastern mountains into and through the southeast plains of Colorado. Widespread wind gusts between 60 and 70 mph occurred across the lower elevations. Winds gusted in excess of 75 mph across the eastern mountains and down the adjacent lee slopes. Despite the high winds, widespread damage did not occur.
3/6/2017	A vigorous weather system generated high winds across many portions of southern Colorado. Some of the higher reported wind gusts included: near 60 mph at Florence (Fremont County) and Lamar (Prowers County), 60 to 70 mph near Two Buttes (Baca County), Cheraw (Otero County), Walsenburg and La Veta (Huerfano County), Wetmore (Custer County), and Hoehne (Las Animas County), 70 to 80 mph at Colorado City (Pueblo County), and around 85 mph near La Veta Pass ((Costilla County) and Swissvale (Fremont County).
3/24/2017	A potent winter storm produced snow and high winds across in I-25 corridor and plains. Some of the higher reported wind gusts included: near 60 mph at Cheraw (Otero County) and Colorado Springs, Fountain, Truckton, Peterson AFB (El Paso County), 60

Date	Description
	to 70 mph near Colorado City (Pueblo County), La Veta (Huerfano County), Thatcher and Hoehne (Las Animas County), Springfield (Baca County), Finally, wind gusts of around 75 mph were observed near Campo (Baca County) and Blende (Pueblo County).
4/13/2018	A passing storm system produced winds, gusting to around 80 mph at times over sections of southern Colorado. Wind gusts between 58 mph and 65 mph were realized near Two Buttes, Truckton, the Lamar Airport, the Colorado Springs Airport and the Air Force Academy. Wind gusts between 66 mph and 70 mph were recorded at the La Junta airport while a 76 mph wind gust was measured near Springfield. Finally, a wind gust that clocked 79 mph occurred near Campo.
4/17/2018	An intense storm system produced strong winds in excess of 80 mph at times over large sections of southern Colorado. Some of the highest reported wind gusts with this event included wind gusts between 58 mph and 64 mph near Holly, Weston, Westcreek, Sargents, Florence, Truckton, Del Norte, Gardner, Monument, Penrose, Springfield, San Miguel, Wetmore, the Royal Gorge, the Fort Carson Airport and the Air Force Academy. Wind gusts between 65 and 69 mph were observed near Creed, San Isabel, Blende, Canon City, Two Buttes, Walsenburg, La Veta Pass as well as the Alamosa, Colorado Springs, Pueblo and Trinidad airports. Wind gusts between 70 and 79 mph were noted near Colorado City, Swissvale, La Veta Pass, Wagon Wheel Gap, the Pikes Peak Summit and the La Junta and Lamar airports. In addition, a wind gust of 85 mph was measured near Wolf Creek Pass.
11/24/2018	A storm system produced winds, gusting to 80 mph at times over portions of southern Colorado. Wind gusts between 58 mph and 65 mph were recorded near Walsenburg, Springfield, Hoehne, Sargents, Cheraw, Peterson Air Force Base, Lamar and Fountain. Wind gusts between 66 mph and 70 mph were measured near Weston and the Air Force Academy. Finally, a wind gust that clocked 80 mph was realized near the Pikes Peak summit.
3/13/2019	An extremely powerful low pressure system(setting records for lowest pressure measurements in Colorado)developed over southern Colorado and created impressive wind gusts across many southern Colorado locations. Some of the highest reported wind gusts with this event included 58 to 65 mph wind gusts near the communities of Falcon, Weston, Saguache, Walsenburg, Palmer Lake, Pueblo and Boone. A 69 mph wind gust was recorded near Aguilar. 70 to 74 mph wind gusts were recorded near Crowley, Weston and Springfield. A 78 mph wind gust was noted at Blende, while 80 to 84 mph wind gusts were measured near Black Forest and Lamar respectively. Locations near Truckton realized wind gusts of 85 mph with this event, while Cheraw experienced a wind gust of 89 mph. Finally, an incredible wind gust of 96 mph was measured in Colorado Springs.
Total	**13**

Probability

Based on 40 recorded high wind events from 2003 to 2019, there is a 100% chance of an event occurring annually, equating to a highly likely probability.

Vulnerability Assessment

Inventory Exposed/Impacts

High winds are primarily a public safety and economic concern. Windstorms can cause damage to structures and power lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered.

Impacts from high winds include:

- Erosion (soil loss)
- Dry land farming seed loss,
- Windblown weeds, such as tumbleweed
- Power line impacts and economic losses from power outages
- Occasional building damage, primarily to roofs

There is little information to indicate damages from wind events. Mitigation measures, such as "Living Snow Fences" (and traditional snow fences) have been established to protect roadways and/or farmsteads from wind-blown snow. Conversely, the frequent windmills that dot the landscape use the prevailing winds to capture the power of the wind to pump groundwater for livestock.

Campers, mobile homes, barns, and sheds and their occupants are particularly vulnerable as windstorm events in the region can be sufficient in magnitude to overturn these lighter structures. Livestock that may be contained in these structures may be injured or killed, causing economic harm to the rancher who owns both the structure and the livestock. Overhead power lines are vulnerable and account for the majority of historical damages. State highways can be vulnerable to high winds and dust storms, where high profile vehicles may be overturned by winds and lowered visibility can lead to multi-car accidents. Additionally, high winds on hot, dry days can lead to dangerous fire conditions, and high winds during a wildfire can increase the rate of spread and intensity of the fire.

Impacts specific to the City of Lamar would not vary from those of the County, but they may be multiplied by the City's denser development.

Potential Losses

SHELDUS reports $5,514,375 in damages from wind events from 1960 to 2017 (2017 dollars). This equates to $96,743 in annual damages. It is difficult to determine details on losses since the SHELDUS data does not provide loss or damage information. However, it is evident that losses can be expected in Prowers County from wind events. All jurisdictions are vulnerable to losses from these events.

Land Use and Development

Future development projects should consider windstorm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Limited development trends in the County are not expected to increase vulnerability to the hazard.

6.11.13. Winter Storms

Location

The entire County is subject to winter storm events. Prowers County averages approximately 25 inches of snow per year.

Previous Occurrences

According to the NCEI database, there have been 20 recorded blizzard, winter storm, winter weather, heavy snow, or ice storm events from 2005 to 2019. The NCEI events are reported by zone, so it is difficult to derive jurisdictional information (Prowers County is one zone). No damages, deaths, or injuries were reported with these events. However, SHELDUS reports $15,613,651 in damages from 28 events. Events since the 2014 Southeast Region Hazard Mitigation Plan are described below. Notable winter storm events that impacted Prowers County prior to the 2014 Southeast Region Hazard Mitigation Plan are described in Appendix C.

Table 6-109 Winter Storm Events in Prowers County, 2014-2019

Date	Type	Description
2/3/2014	Winter Storm	An intensifying storm system across southeast Colorado generated heavy snow in combination with gusty northerly winds at times. Generally, around 6 inches accumulated across the warning area in the southeast counties. Lesser amounts occurred outside the warning area...including...4 to 5 inches near Pueblo Reservoir and Beulah (Pueblo County), Monument and Colorado Springs (El Paso County), Trinidad (Las Animas County), La Junta and Cheraw (Otero County). Finally, 12 inches of snow was measured at Wolf Creek Pass in Mineral county.
2/21/2015	Winter Storm	A vigorous winter storm system impacted large portions of southern Colorado with significant snow and gusty winds. Some reported snow amounts included 6 to 10 inches at Colorado Springs (El Paso County)...Woodland Park (Teller County)...Pueblo and Pueblo West (Pueblo County)...Salida (Chaffee County)...Texas Creek (Fremont County)...Crestone (Saguache County) and Alamosa. Eleven to 15 inches graced Monument and the Air Force Academy (El Paso County)...Penrose (Fremont County)...Walsenburg (Huerfano County)...Poncha Springs (Chaffee County)...while 16 to 20 inches of snow was measured near Beulah and Colorado City (Pueblo County)...Rosita (Custer County) and Monarch Pass (Chaffee County). Twenty to 26 inches was noted near Westcliffe (Custer County)...Rye (Pueblo County) and Maysville (Chaffee County)...while 39 inches covered Wolf Creek Pass (Mineral County).
11/17/2015	Winter Storm	A vigorous storm system produced heavy snow in combination with strong winds and deep snow drifts to many sections of southern Colorado. Some of the higher reported snow amounts and snow drifts from this event are as follows...12 to 14 inches near Walsenburg (Huerfano County) and Aguilar (Las Animas County) with 3 foot drifts...16 inches with 3 foot drifts near Branson (Las Animas County)...18 inches with 5 foot drifts 10 miles to the west-northwest of Kim (Las Animas County)...18 inches near Springfield (Baca County) and near the Spanish Peaks (Huerfano County)...20 inches near Monument (El Paso County) with 4 foot drifts...and 20 to 22 inches near Woodland Park (Teller County)...Trinidad (Las Animas County) and the summit of Wolf Creek Pass (Mineral County). I-25 was closed for a time south of Walsenburg, as well as US Highway 160 in Baca and Las Animas Counties, and US Highway 287 in Prowers and Baca Counties. People were stranded on US Highway 287 south of Lamar, and had to be rescued.

Date	Type	Description
12/13/2015	Winter Storm	A storm system generated snow, heavy at times, across to portions of southern Colorado. Wind whipped snow occurred across the far eastern plains in portions of Kiowa and Las Animas Counties, and all of Prowers and Baca Counties causing major impacts. Elsewhere, heavier snow totals included...6 inches at Monarch Pass and Buena Vista (Chaffee County)...7 inches near Leadville (Lake County)...9 inches at the summit of Wolf Creek Pass (Mineral County)...Salida (Chafee County) and near Westcliffe (Custer County) and 12 inches at Maysville (Chaffee County).
1/14/2017	Winter Storm	A Pacific storm system generated gusty winds and heavy snow to southern Colorado, especially over the higher terrain. Some of the higher reported snow totals included: 6 to 9 inches near the Spanish Peaks and Walsenburg (Huerfano County), Rye and Beulah (Pueblo County), Monte Vista (Rio Grande County), Leadville (Lake County), Kim, Hoehne, Trinidad (Las Animas County), Maysville (Chaffee County), and 17 inches near Monarch Pass (Chaffee County).
4/29/2017	Winter Storm	A vigorous late Spring storm impacted many sections of southern Colorado with impressive snow amounts in combination with gusty winds and localized snow drifts around 5 feet in combination with many downed tree limbs. Some of the higher reported snow totals with this event included six to nine inches of snow near Leadville, Salida, the Air Force Academy, Lamar, Woodland Park, La Junta, Texas Creek, Pueblo, Rocky Ford and Maysville. Ten to fifteen inches of snow was noted near WestCliffe, Manzanola, Walsenburg, Black Forest, Calhan, Pueblo West, Monument, Avondale, Springfield and Blende. 15 to 20 inches of snow graced the communities of Wetmore, Pritchett and Holly. 23 inches of snow was measured near Beulah. An impressive 25 to 30 inches of snow covered the communities of Rye, Colorado City and Two Buttes, while a whopping 39 inches of snow impacted San Isabel.
12/26/2018	Winter Storm	A storm system produced snow, heavy at times in combination with strong winds across portions of the far southeastern Colorado. Three inches of snow was recorded near the community of Two Buttes. In addition to the snow, wind gusts between 58 and 63 mph were recorded near Lamar, Springfield and Campo respectively.
2/22/2019	Winter Storm	A slow moving snow storm generated widespread snow, heavy at times over many portions of southern Colorado. Some of the higher reported snow totals with this event included six inches of snow near Creede, Monument, Florissant, Palmer Lake and Rye. Seven inches of snow graced locations near Buena Vista, Cascade, Hillside, Rosita, Westcliffe, Colorado City, Texas Creek and Beulah. Eight inches of snow was observed near South Fork, Colorado Springs and Manitou Springs. Locations near the Spanish Peaks, Black Forest and San Isabel recorded nine to ten inches of snow with this event, while Wolf Creek Pass was inundated with 40 inches of snow with this storm system.
3/13/2019	Blizzard	A blizzard termed a “bomb cyclone” impacted much of Colorado’s Front Range and Eastern Plains. To qualify as a "bomb cyclone," an area of low pressure must drop at least 24 millibars in 24 hours or less. A Barometric

Date	Type	Description
		pressure reading of 970.4 mb recorded in Lamar on March 13 is the lowest reading ever recorded in the State. The blizzard produced 80-90 mph winds, stranded people on impassable roadways, and caused power outages throughout the Region.
Total: 9		

Probability

Utilizing the 20 reported NCEI events from 2005-2019, there is a 100% chance of a winter storm event occurring annually in Prowers County, equating to a highly likely probability. Although they may not all be damaging events, winter weather occurs every year in the County.

Vulnerability Assessment

Inventory Exposed/Impacts

All jurisdictions in the County are vulnerable to winter storm impacts. The threat to public safety is typically the greatest concern when it comes to impacts of winter storms. But these storms can also impact the local economy by disrupting transportation and commercial activities. Winter storms are occasionally severe enough to overwhelm snow removal efforts, transportation, livestock management, and business and commercial activities. The Region can experience high winds and drifting snow during winter storms that can occasionally isolate individuals and entire communities and lead to serious damage to livestock populations and crops. Winter storms contribute directly to the extreme cold hazard profiled in Section 4.11.4.

Travelers on highways in the County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions.

Previous occurrences yielded significant impacts from this hazard in the past. Structural losses to buildings are possible and structural damage from winter storms in Colorado have resulted from severe snow loads on rooftops. Older buildings are more at risk, as are buildings with large flat rooftops (often found in public buildings such as schools). The County's elderly population is a potentially vulnerable demographic during severe winter storms. Smaller communities prevalent in the region may become isolated during winter storm events. Persons that choose to live in these areas are generally self-sufficient, or should be, as government and emergency services may be limited during a severe winter storm.

Another common impact of blizzards and severe winter storms on the County is power loss. The weight of heavy continued snowfall and/or ice accumulating on power lines often brings them to the ground causing service disruptions for thousands of customers. This can cause a loss of community water and sewer services, as well as the supply of gasoline, as these services almost always require electrical pumps. In addition, prolonged power outages can mean loss of food to grocery stores, large facilities that provide feeding services (such as prisons, hospitals and nursing homes), and restaurants.

Winter storms can be particularly hard on herds of cattle in the County. Severe storms can strand herds in remote areas. Lengthy blizzards or particularly deep snow can leave cattle without feed from ranchers. Snow cover removes grass and vegetation as a food source. Large blizzards can cause large losses of cattle, leaving ranchers monetarily impacted.

Impacts specific to the City of Lamar would not vary from those of the County, but they may be multiplied by the City's denser development. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

Based on SHELDUS data, from 1960 to 2017 there has been $15,613,651 (2017 dollars) in total losses from winter weather events. This equates to $273,923 in annual losses. Losses can be expected in all jurisdictions. Municipalities will most likely experience losses in the form of structure/infrastructure damages, and rural parts of the County can experience significant crop and livestock losses as well as structure/infrastructure losses. Impact to travel can be significant across the County. Injuries and fatalities are possible throughout the County as well.

Land Use and Development

Future residential or commercial buildings built to code (for those areas with building codes) should be able to withstand snow loads from severe winter storms. As development and populations increase, more people will be exposed to the winter storm hazard, therefore increasing pressure on local government snow removal and emergency services. Areas without building codes should consider adopting and enforcing some type of building code.

4.11.13. Cyber Hazards

Previous Occurrences

Across the southeast region, there have been two reported events where counties paid ransomware.

Probability

Although there have been very few previous occurrences, ransomware attacks are becoming more common, particularly geared towards local governments. Therefore, the probability of occurrence is determined to be possible.

Vulnerability Assessment

Inventory Exposed/Impacts

Cyber attacks can impact government operations, release sensitive information, and impact critical facilities. Society is dependent on technology for day to day operations, and a major attack could have significant and widespread impacts. Additionally, a cyber attack could interfere with emergency response activities in the event of a disaster. An attack may also reduce the public's trust in the government.

Impacts specific to the City of Lamar would not vary from those of the County, but the potential may be greater as it is the County seat and largest municipality in Prowers County.

Potential Losses

It is difficult to predict potential losses without much previous occurrence data. However, as mentioned above, losses could vary significantly based on the event. Losses could be occurred through paying an attacker. Additionally, a large-scale attack could cause economic losses if services are impacted through an attack.

Land Use and Development

As population increases in the County, more people are exposed to the impacts of a potential cyber-hazard. However, with lack of significant population growth in the County, land use and development are not projected to impact this hazard.

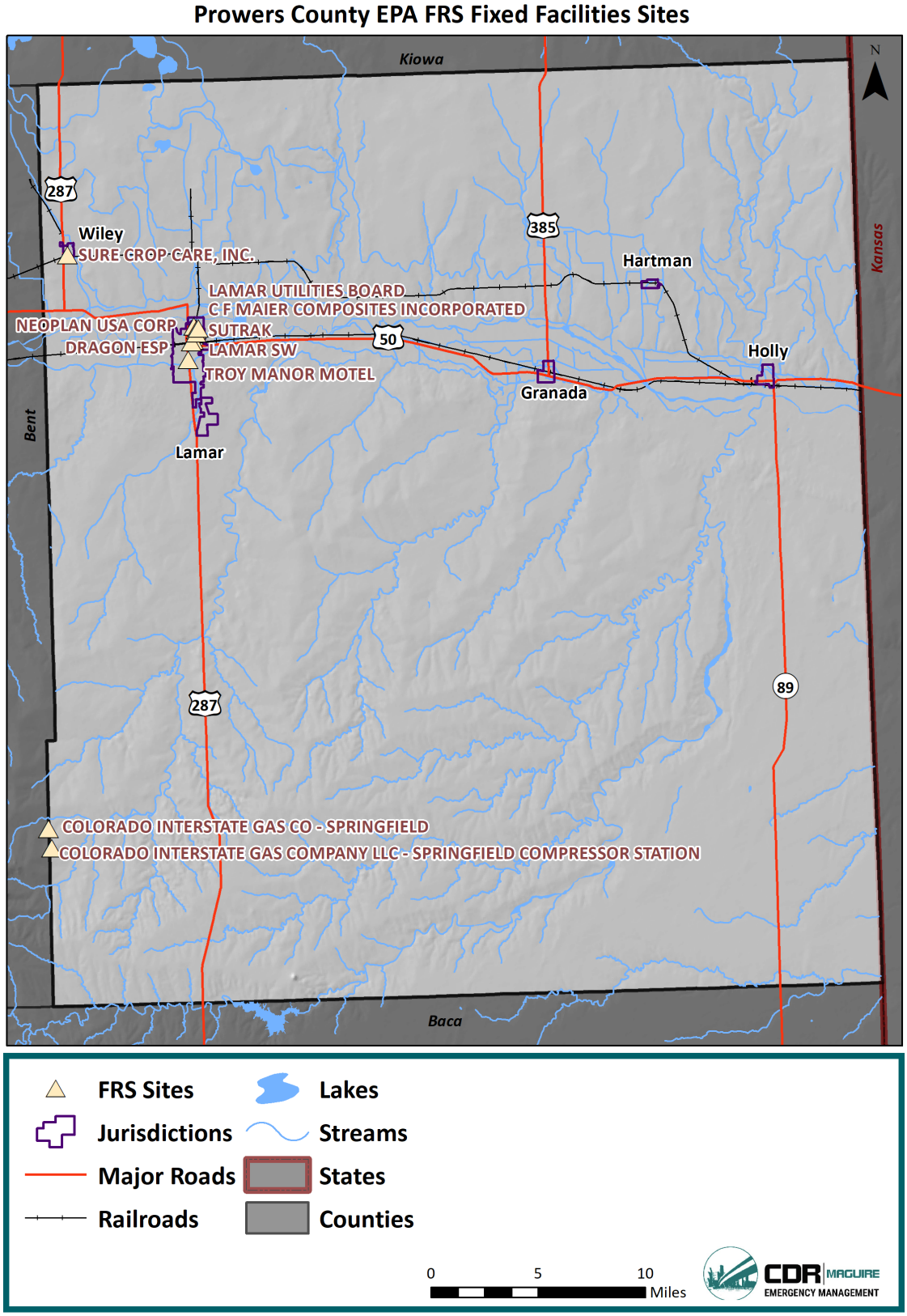
4.11.14. Hazardous Materials Release

Location

Locations of fixed facilities in Prowers County were determined by utilizing the EPA Facility Registry Service (FRS) database. The FRS provides access to a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest.[180] Facilities that are regulated for hazardous materials, hazardous waste, toxic releases, etc. are listed under the FRS. According to this source, Prowers County has 10 fixed facilities that could result in a hazmat release, as shown inFigure 6-148.

[180] https://iaspub.epa.gov/sor_internet/registry/facilreg/home/basicinformation/

Figure 6-148 Prowers County EPA Fixed Facility Sites



For transportation related incidents, in Prowers County Highways 50 and 287 are designated Hazardous Materials Routes by CDOT. Additionally, Highway 385 is a designated Gasoline, Diesel Fuel, and Liquified Petroleum Gas Route. The AT & SF Railroad also runs through Prowers County. These areas could be more likely sources of transportation related hazmat incidents.

Previous Occurrences

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) tracks transportation related hazardous materials spills and occurrences. Incidents are described in Table 6-110 below. There has been a total of 21 incidents from 1973 to July 2019, totaling $293,583in damages. Twenty of these events have been highway related and one rail. Of these events, 20 have been recorded near Lamar and one near Holly.

Table 6-110 Prowers County Previous Hazmat Events

Date	City	Non-hospital Injuries	Damages	Mode of Transportation	Description of Events
6/4/2016	Lamar	0	$0	Highway	During transit there was a drum that was not secured and shifted causing a pallet to puncture the drum and product was released. Facility personnel utilized absorbents to recover product and placed into a container for disposal.
3/8/2014	Lamar	0	$5,000	Highway	A driver of a Landstar flat bed noticed upon inspection of his load that one of the poly totes had a puncture towards the top corner. The driver stated that it appeared that only a minimal amount of material was released due to the material sloshing around in the tote during shipment. The material spread no further than the actual outside body of the tote. Contractors arrived on scene and transferred the material to a replacement tote.
9/2/2012	Lamar	0	$13,832	Highway	Incident Background: On September 2 2012 at approximately 6:00 am CDT a tractor-trailer operated by CRST was involved in a roll-over incident. As a result the cargo shifted releasing an undetermined amount of herbicide paint and ink inside the trailer. Emergency Response: On September 2 2012 at approximately 11:26 AM CDT Mr. Lee Copblentz with CRST retained Cura Emergency Services (CES) to manage the cleanup operations within the trailer. The CES incident manager contacted Officer Jason Brandy with the Colorado State Patrol Hazmat Patrol to gain additional

Date	City	Non-hospital Injuries	Damages	Mode of Transportation	Description of Events
					information about the release. Based on available information the CES incident manager dispatched a crew from Belfor Environmental to assess the site and perform the corrective actions. Regulatory Notification: The release was contained to the interior of the trailer. No sensitive receptors were impacted; therefore no state regulatory notification was necessary. Additionally on September 2 2012 at approximately 11:35 am CDT onsite Colorado State Patrol Hazmat Patrol personnel Mr. Jason Bandy advised the CES incident manager no regulatory notification would be necessary. Corrective Actions: Belfor personnel met with Mr. Bandy. Crews donned the proper PPE to make entry into the trailer. Belfor personnel collected and containerized all damaged or leaking herbicide containers into (3) three 55-gallon poly drums for transport and disposal. Damaged and leaking containers of ink and paint were collected and containerized into (14) fourteen 55-gallon drums for transport and disposal. Once all damaged and leaking products were removed from the trailer crews deployed granular absorbents to the trailer's surfaces to solidify any free-standing product. All spent absorbents were collected and containerized into (1) one 55-gallon drum. Belfor personnel wiped all impacted surfaces of the trailer with absorbent pads until no visual or olfactory evidence of ink paint or herbicide could be observed at the site. The trailer was then up righted and towed from the area. With the site returned to pre-spill conditions Belfor personnel demobilized from the site.
6/9/2008	Lamar	0	$206,441	Highway	Driver went off of shoulder on hwy 287 in Lamar, CO at mm69. He over corrected rolling the tractor & trailer. The tractor trailer ended up right and across both lanes of traffic. The

Date	City	Non-hospital Injuries	Damages	Mode of Transportation	Description of Events
					cylinders on the trailer contained residual acetylene gas. 215 approx. Cylinders came off the trailer during the rollover. Some of the cylinder values were knocked off causing the residual acetylene to ignite. The driver got out of the truck was checked out at Prowers medical center with bruising only & was released. The residual acetyle gas burned off from the cylinders without further incident.
7/6/2004	Lamar	0	$0	Highway	See hmone report a040344
2/7/2003	Lamar	0	$55,500	Highway	Due to icy road conditions the driver skidded onto the soft shoulder of the road lost control of his vehicle which caused the trailer to turn over. The resulting load shift damaged a number of containers spilling product inside the trailer. Under supervision of the highway patrol the spill was remediated on-site by cems the undamaged product moved to another trailer and removed. The resulting waste will be incinerated at an epa approved facility.
8/7/2002	Lamar	0	$8,000	Highway	Packages were loaded at sea level and shipped to high altitude causing pressure to build in container containers then overflow because they were overloaded. Product then spilled out. Acid ate flooring causing damage.
5/29/2002	Lamar	0	$10	Highway	Our shipper installs an overfill probe at time of loading in washout. After load is on shipper removes probe & reinstalls washout cap cap was not as tight as it could have been. When leak was discovered cap was retightened and load continued without further incident. Amount of product lost was minute no clean-up required.
5/5/1998	Holly	0	$350	Highway	Driver was required to pump off product into an above ground tank. A brand new roper pump had been installed on his truck and this was the first time the pump was used. When the driver engaged the pump the pump started pumping backwards and pumped product out through the inlet valve and not through the discharge

Date	City	Non-hospital Injuries	Damages	Mode of Transportation	Description of Events
					valve causing approx 150 gallons of diesel fuel to spill into a trough located next to the above ground tank. The driver turned the pump off and notified the customer who cleaned up the spill.
7/7/1996	Lamar	0	$4,450	Highway	One drum leaked enroute from casper to Denver and drum was overpacked at Denver. At Lamar. Two more drums were found to be leaking and smith riedel was called to contain and overpack two drums. All 3 overpacked drums were forwarded to consignee. Statement from bob wiegand - Denver safety supv.
9/30/1989	Lamar	0	$0	Highway	Description unavailable
7/17/1989	Lamar	0	$0	Highway	Description unavailable
10/24/1984	Lamar	0	$0	Highway	Description unavailable
5/24/1984	Lamar	0	$0	Highway	Description unavailable
9/2/1981	Lamar	1	$0	Highway	Description unavailable
11/11/1977	Lamar	0	$0	Highway	Description unavailable
10/25/1977	Lamar	0	$0	Highway	Description unavailable
3/5/1976	Lamar	0	$0	Highway	Description unavailable
10/20/1973	Lamar	0	$0	Highway	Description unavailable
10/14/1973	Lamar	0	$0	Rail	Description unavailable
8/4/1973	Lamar	0	$0	Highway	Description unavailable
Total: 21		**1**	**$293,583**		

There have not been any significant fixed facilities hazmat incidents in Prowers County.

Probability

Based on 21 previous occurrences from 1973 to 2019, there is a 46% chance of annual occurrence of a hazmat incident in Prowers County, equating to a likely probability. It is most probable for a transportation related incident to occur over a fixed facility incident.

Vulnerability Assessment

Inventory Exposed/Impacts

People and the environment are at the highest risk to hazmat incidents in Prowers County. As demonstrated by previous occurrences, drivers transporting hazardous materials are at a risk to accidents that may lead to releases. Populations near the highway are at a higher risk to transportation related hazmat incidents. Highways with designated hazardous materials or gasoline, diesel fuel, and liquified petroleum gas routes pass all jurisdictions in the County except for Hartman. Fixed Facility releases are less common in the County, however, there is still potential for a release. Fixed facilities are located in Lamar, Wiley, and in unincorporated County near the border of Bent County, increasing the

risk of a release in the communities. Additionally, a release can significantly impact natural resources such as surface water, groundwater, and soil. Remediation for environmental impacts can be a costly expense.

Impacts specific to the City of Lamar would not vary from those of the County, but they may be multiplied by the City's denser development and location along major transportation routes.

Potential Losses

Losses from a hazmat incident can come in the form of direct impacts and response as well as ongoing clean up after the incident. Additionally, a hazmat incident can cause injuries or death to nearby populations. Prowers County has experienced $293,583 in damages from hazmat incidents from 1973 to July 2019, equating to $6,382 in annual losses.

Land Use and Development

Future development in the County would increase the number of people exposed to possible hazardous materials incidents. Continued training for emergency response personnel, as well as the implementation of reverse 911 systems, can greatly reduce risks to people in spill zones. Continued public education to the risks and amount of hazardous materials either fixed in or traveling through the County will also reduce risks to public safety.

4.11.15. Pandemic and Zoonotic Diseases

Previous Occurrences

Pandemic Influenza

There were four acknowledged pandemics in the twentieth century and one in the twenty-first century. It is likely these pandemics impacted Prowers County.

- **1918-19 Spanish flu (H1N1)**—This flu is estimated to have sickened 20-40% of the world's population. Over 20 million people lost their lives. Between September 1918 and April 1919, 500,000 Americans died. The flu spread rapidly; many died within a few days of infection, others from secondary complications. The attack rate and mortality were highest among adults 20-50 years old; the reasons for this are uncertain.
- **1957-58 Asian flu (H2N2)**—This virus was quickly identified due to advances in technology, and a vaccine was produced. Infection rates were highest among school children, young adults, and pregnant women. The elderly had the highest rates of death. A second wave developed in 1958. In total, there were about 70,000 deaths in the United States. Worldwide deaths were estimated between 1 and 2 million.
- **1968-69 Hong Kong flu (H3N2)**—This strain caused approximately 34,000 deaths in the United States and more than 700,000 deaths worldwide. It was first detected in Hong Kong in early 1968 and spread to the United States later that year. Those over age 65 were most likely to die. This virus returned in 1970 and 1972 and still circulates today.
- **2009-2010 Swine flu (H1N1)**—This flu strain was first detected in the U.S. in California in April 2009. It was identified as H1N1 but was not the exact strain that appeared in 1918. Worldwide health response quickly ramped up in April in preparation for a pandemic. All 50 U.S. states reported cases of 2009 H1N1 by June 19, 2009. This strain caused 14,286 deaths worldwide and 2,117 laboratory-confirmed deaths in the U.S. according to the CDC. In Baca County, there was one confirmed death from the Swine Flu.

Hantavirus

From 1993 (when the disease was first reported by CDPHE) and December 2018, there have been one reported case of hantavirus in Prowers County. However, hantavirus is typically found in rural areas like Prowers County, so the County is still vulnerable to the virus. Statewide during this timeframe, there has been 115 cases, with 41 of those ending in a fatality.[181]

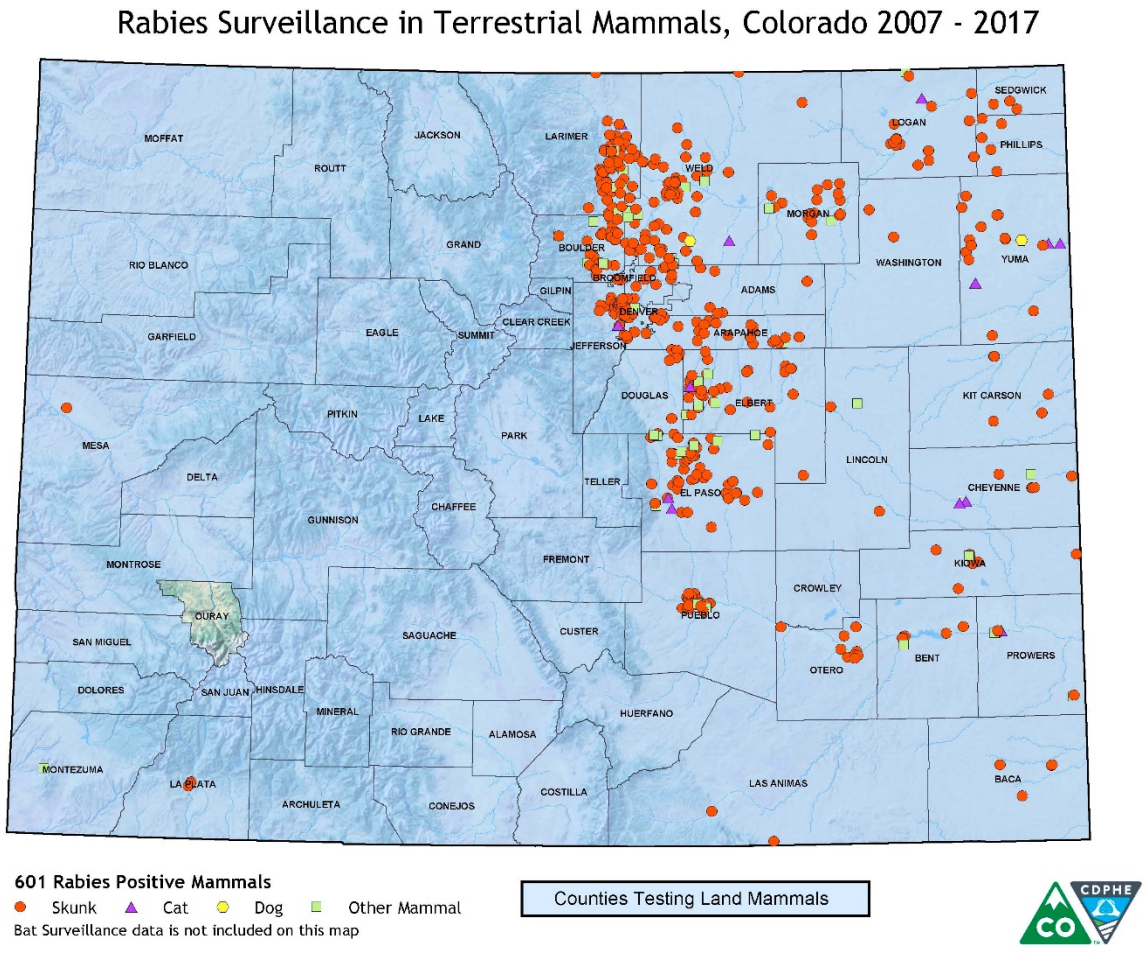
Plague

The CDPHE reported that between 2005 and 2017, 20 cases of human plague have been documented in Colorado, none in Prowers County.

Rabies

Rabies is tested in wild and domestic animals across the State, including bats, skunks, other wildlife, and domestic animals. The CDPHE reports on positive-tested animals since 2007. Figure 6-149 shows rabies-positive terrestrial mammals during this time period, with several reports in Prowers County.

Figure 6-149 Colorado Rabies Positive Mammals



[181] CDPHE; https://docs.google.com/document/d/1BBBKElU9sUHKKXVh93anVcOnouyISJ2AgNExlkb3MmE/pub

Tularemia

According to the CDPHE, there were 88 cases of tularemia statewide from 2012-2017. None of these cases occurred in Prowers County.

West Nile Virus

According to the CDPHE, in Otero County there have been 86 cases of West Nile virus from 2002-2018. Since 2002, Colorado has experienced 5,409 cases of West Nile virus, and has one of the highest incident rates of West Nile virus in the nation.[182]

Probability

Similar to infestations, the calculation for future occurrence of the diseases profiled here must first be considered in light of circumstances. The diseases are naturally occurring in the populations of animals which always reside in the County. In addition, this plan examines when these diseases manifest in severe injury or fatalities among humans. Given these assumptions, the likelihood of future occurrence is likely.

Vulnerability Assessment

Inventory Exposed/Impacts

Pandemic Influenza

The total County population of 12,004 could potentially be exposed to a pandemic flu outbreak. According to the Colorado Department of Public Health and Environment's Internal Emergency Response Implementation Plan, susceptibility to the pandemic influenza virus strain will be universal, and the disease affect approximately 30% of the State's overall population.

Illness rates will be highest among school-age children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak. In a severe pandemic, it is expected that absenteeism may reach 40% due to illness, the need to care for ill family members, and fear of infection.

The number of hospitalizations and deaths will depend on the virulence of the virus. Risk groups cannot be predicted with certainty. During the annual influenza season, infants, the elderly, the chronically ill, and pregnant women are usually at higher risk. But, in contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

If a pandemic event affected 30% of the Prowers County population, approximately 3,601 people in the County could become ill. Local medical staff and resources would be quickly overwhelmed. Public fear and anxiety could cause some panic behaviors. The more densely populated areas of the County as well as schools and hospitals would likely be more susceptible to the spread of the flu. It is difficult to quantify potential losses any further.

Impacts specific to the City of Lamar would not vary from those of the County, but they may be multiplied by the City's denser development.

Zoonotic Diseases

[182] https://www.cdc.gov/westnile/statsmaps/cumMapsData.html

The primary concern with zoonotic diseases is the impacts to human health. Zoonotic diseases can cause severe illness or death in populations. Additionally, zoonotic diseases can impact domestic livestock, which can negatively affect the agriculture economy of the County. Due to the rural nature of the County, the populations will continue to be exposed to animals that carry zoonotic diseases.

People who work or recreate outside are at a higher risk to West Nile virus, although the whole population of the County is at risk. According to the CDPHE, people of any age can get West Nile virus. However, the elderly are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants are also at greater risk for serious illness. In Prowers County, 16.7% of residents are 65 years or older. These age groups are more vulnerable to the severe impacts of West Nile virus.

Impacts specific to the City of Lamar would not vary from those of the County. Economic impacts to the agricultural sector will not have as large of a direct effect on the City, but the indirect impacts to the overall economy could also greatly affect this municipality.

Potential Losses

Losses associated with pandemic influenza and zoonotic diseases in this profile are primarily the impact to people, causing sickness and death. Additionally, pandemic flu can have a direct economic impact through costs such as response costs (hospitalizations, drug costs, etc.) and an indirect economic impact such as loss of productivity at work/school. Additionally, livestock infected with zoonotic diseases can cause economic losses to the agriculture industry. With a lack of recorded losses in the County, it is assumed all jurisdictions are at equal risk to losses.

Land Use and Development

Future development is not expected to be significantly impacted by this hazard, though population growth in each county could increase exposure to West Nile Virus and pandemic flu, and increase the ability of each disease to be transmitted among the population of the County. If the median age of County residents continues to increase, vulnerability to pandemic and zoonotic diseases may increase, due to the fact that these diseases are more deadly to senior citizens.

APPENDIXES

7. Appendix A: Local Planning Committee / Meeting Sign-in Sheets and Agendas

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Baca	Rex	Allen	Fire Chief		Walsh
Baca	Spike	Ausmus	Commissioner		
Baca	Everett	Brisendine	EM Backup		
Baca	Rick	Butler	Commissioner		
Baca	Dennis	Carlson		Public Works	Walsh
Baca	Bill	Carwin		Schools	Pritchett
Baca	Cecelia	Deen		Southeast Colorado Hospital	
Baca	Corey	Doss		Schools	Vilas
Baca	David	Engel		Southeast Colorado Hospital	
Baca	Leroy	England	Fire Chief		
Baca	Elissa	Forgey	PIO		
Baca	Shiloh	Freed	Commissioner		
Baca	Dean	George	Dispatch Director	Law Enforcement	
Baca	Jessami	Graham	Public Health Director	Public Health	
Baca	Lars	Grahn	Fire Chief		
Baca	Chris	Griffin	Under Sheriff	Law Enforcement	
Baca	Mark	Hall	SECPA District Manager	SECPA	
Baca	Richard	Hargrove		RE-2 Schools	Springfield
Baca	Plainsman	Herald			
Baca	Rita	Hetrick		Walsh Healthcare	
Baca	Stephanie	Hund		Schools	Walsh
Baca	Mike	Ingle		Public Works	Springfield
Baca	Colby	Jenkins	Walsh Chief	Law Enforcement/Walsh Healthcare	Walsh
Baca	Nikki	Johnson		Schools	Campo
Baca	Kyle	Lasley		Schools	
Baca	Jennifer	Leathers	EM	Baca County OEM	
Baca	Jared	Leathers	Elkhart COOP Manager		
Baca	Matty	Manly		Southeast Colorado Hospital	
Baca	Katrina	Martin	Springfield Chief	Law Enforcement	Springfield

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Baca	Vic	McGinnis		Public Works	Springfield
Baca	Bob	Morrow	Coroner	Law Enforcement	
Baca	Aaron	Olivieri	Regional Trainer		
Baca	Lynn	Orebaugh	Fire Chief		
Baca	Steve	Sanchez		Southeast Colorado Hospital	
Baca	Aaron	Shiplett	Sheriff	Law Enforcement	
Baca	Marcus	Stegman	Fire Chief		
Baca	Kim	Tate		Walsh Medical Clinic	
Baca	Chris	Westphal	Fire Chief		
Baca	Laura	Wilson		Southeast Colorado Hospital	
Baca	Cherilyn	Wittler	EMS Director	Southeast Colorado Hospital	
Baca				Public Works	Pritchett
Baca				Public Works	Springfield
Baca				Public Works	Two Buttes
Baca				Public Works	Campo
Baca				Public Works	Walsh
Bent	Ron	Clodfelter		Las Animas Light and Power	Las Animas
Bent	Jim	Collins	Mayor		Las Animas
Bent	Calvin	Fiek	County Administrator		
Bent	Elsie	Goines	Superintendent	Las Animas School District	Las Animas
Bent	Clay	Hasser	Fire Chief	Hasty Mclave Fire Dept	
Bent	Kim	Macdonnell	Bent County Comissioner		
Bent	Chuck	Netherton	Bent County Comissioner		
Bent	John	Palomino		Chief Security Core Civic	
Bent	Jim	Pryor	Fire Chief		Las Animas
Bent	Jake	Six		Bent County Sheriff	
Bent	John	Spano	Ambulance Director		
Bent	Rick	Stwalley	EM		
Bent	Jean	Sykes	Bent County Comissioner		
Bent	Omer	Tamir	Director	Bent County Public Health	

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Crowley	John	Reitan		Note: All LPC communications managed through County EM	
Kiowa	Mandy	Adamson		Eads Consumer Supply	Eads
Kiowa	Tina	Adamson	Administrator	Kiowa County	
Kiowa	Connie	Brase		Southeast Mental Health	
Kiowa	Jimmy	Brown	County Coroner	Brown Funeral Home	
Kiowa	Van	Brown, Jr.	Director	Town of Eads Public Works	Eads
Kiowa	Renay	Crain		Emergency Prepardness, Kiowa County Hospital District	
Kiowa	Delton	Eikenberg			
Kiowa	JoLynn	Idler		Prowers/Kiowa County Public Health	Prowers, Kiowa
Kiowa	Zach	Kopasz	Director	Kiowa County Fire Protection District	
Kiowa	Char	Korrell		Kiowa County Hospital District	
Kiowa	Shane	Lessenden		Haswell Fire Department	Haswell
Kiowa	AJ	McCracken	District Fire Chief	Kiowa County Fire Protection District	
Kiowa	Michelle	Nelson	Mayor	Town of Haswell	Haswell
Kiowa	Donald	Oswald	Kiowa County Commissioner		
Kiowa	Jan	Richards	Director	KCEDF	
Kiowa	Terry	Riley	Vice President	Kiowa County Fire Protection District	
Kiowa	Howard (Butch)	Robertson	Kiowa County Commissioner		
Kiowa	Roger	Saffer	Owner	Saffer Spraying	
Kiowa	Richard	Scott	Kiowa County Commissioner		
Kiowa	Joe	Shields	Mayor	Town of Eads	Eads
Kiowa	Glenn	Smith	Superintendent	Kiowa County School District RE-1	
Kiowa	Bret	Smith	Field Investigator	Colorado Humane Society	
Kiowa	Rick	Spady	Foreman	Road and Bridge	

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Kiowa	Jay	Specht	President	Kiowa County Fire Protection District	
Kiowa	Kris	Stokke			
Kiowa	Eunice	Weber	Director	Kiowa County Ambulance Service	
Kiowa	Jerry	Weber	Mayor	Town of Sheridan Lake	Sheridan Lake
Kiowa	Teresa	Witte		Kiowa County OEM	
Kiowa	Tim	Wolf		Haswell Fire Department	Haswell
Kiowa			Sheriff		
Kiowa			Sheriff		
Kiowa				Eads Fire Department	Eads
Kiowa				Kiowa County Public Health	
Kiowa					
Otero	Tim	Bates			
Otero	Danny	Chavez	EM		
Otero	Jim	Collins			
Otero	Brad	Davidson		La Junta Fire	La Junta
Otero	Joey	Gacnik			La Junta
Otero	Ray	Gonzales			Rocky Ford
Otero	Su	Korbitz		OCHD	
Otero	Janell	Maier	Regional Epi		
Otero	Shawn	Mobley	Otero County Sheriff	Otero County	
Otero	Tracy	Nelson			
Otero	Lex	Nichols			
Otero	Rick	Ritter		Otero County Health Department	
Otero	Matt	Thompson			
Prowers	Karen	Bryant	Chief Operating Officer	Prowers Medical Center	
Prowers	Jeremy	Burkhart	Chief	Lamar Fire and Ambulance	Lamar
Prowers	Wendy	Buxton Andrade	Chairperson	BOCC Chairperson	
Prowers	Allen	Campbell	Mayor	Town of Wiley	Wiley
Prowers	Trevor	Choat	Supervisor	Prowers County E911	
Prowers	Ron	Cook	Commisisoner	BOCC Commissioner	
Prowers	Lenha	Dakavia		Lamar Estates	

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Prowers	Mark	Dorenkamp	Road and Bridge Supervisor	Prowers Coutny Road and Bridge	
Prowers	Dave	Eastin	Superintendant	Wiley School District	Wiley
Prowers	Sam	Fief	Prowers County Sheriff	Prowers County	
Prowers	Anthony	Garcia	Mayor	Town of Holly	Holly
Prowers	Dareen	Glover	Operation Director	Prowers Area Transit	
Prowers	Tom	Grasmick	Commissioner	BOCC Commissioner	
Prowers	Austin	Hazen	Chief	Holly Fire District	Holly
Prowers	Terri	Hertick	Director	Holly Ambulance Service	Holly
Prowers	Michelle	Hiigel	Administrator	Prowers County Land Use	
Prowers	Meagan	Hillman	Public Health Director	Prowers County Public Health/Kiowa County Public Health	Prowers, Kiowa
Prowers	Houssin	Hourieh	Superintendant	Lamar Light and Power	Lamar
Prowers	Ty	Kemp	Superintendant	Granada School District	Granada
Prowers	Mindy	Maestas			
Prowers	Pat	Mason	Director	City of Lamar Street and Sanitation	Lamar
Prowers	Christa	Mayhew	Operations Supervisor	Atmos Energy	
Prowers	Lanie	Meyers-Mireles	Director	Prowers County Human Services	
Prowers	Kyle	Miller	Chief	Lamar Police Department	Lamar
Prowers	Dana	Musick	Chief	Granada Fire Department	Granada
Prowers	Glenn	Otto	Mayor	Town of Granada	Granada
Prowers	Amy	Pierce	Administrator	Holly Nursing Care Center	
Prowers	Kelly	Roesch	Extension Agent	CSU Extension Service	
Prowers	Francis	Song		public	
Prowers	John	Sutherland	Administrator	City of Lamar	Lamar
Prowers	Dave	Tecklenburg	Superintendant	Lamar School District RE-2	Lamar
Prowers	Staffon	Warn	EM		
Prowers	Kyle	Woodard	Chief	Wiley Fire Protection District	Wiley
Prowers	Sam	Zordel	Sheriff	Prowers County Sheriff	
Prowers				Fresenius Medical Care Lamar Dialysis	

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Support Org.	Travis	Black		Division of Wildlife	State
Support Org.	Bert	Brady		CDOT	State
Support Org.	Jerry	Casebolt	Regional EM	SECAHR	SE Region
Support Org.	Bill	Cochel	Chief Operating Officer	Southeast Colorado Power Association	
Support Org.	Thomas	Eikenberry		USFS	Federal
Support Org.	Riley	Frazee	Southeast Region Field Manager	State of Colorado DHSEM	DHSEM
Support Org.	Patricia	Gavelda			DHSEM
Support Org.	Susan	Hansen		Natural Resource Conservation Service	Federal
Support Org.	Dan	Kirmer		State Parks	State
Support Org.	Tim	Knabenshu	Captain	CSP	State
Support Org.	Tim	Knabenshue	CSP Captain	Colorado State Patrol	State
Support Org.	John	Linn		USFS	Federal
Support Org.	Larry	Long	DFPC	USFS	Federal
Support Org.	Brian	Marsh	DOW		State
Support Org.	Neil	Mauch		Colorado Dept of Transportation	State
Support Org.	Julian	Mondragon		CDOT	State
Support Org.	Dennis	Pearson			State
Support Org.	Chris	Pryor	Trooper, Hazmat Division	Colorado State Patrol	State
Support Org.	Larry	Sanchez		CDOT	State
Support Org.	TJ	Steinbrunn	CSP Hazmat	Colorado State Patrol	State
Support Org.	Jonathon	Tague		USCORPS Engineers John Martin Dam	Federal
Support Org.	Mark	Thompson			DHSEM

County	First Name	Last Name	Title	Agency/Organization	Jurisdiction /Org
Support Org.	Karl	Zimmermann		National Parks Service	Federal
Support Org.	TJ		Technician	CSP Haz Mat	State

Southeast Region – Hazard Mitigation Plan

Pre Kick-Off Webinar (Steering Committee)

When: 1:00-2:00 MDT – May 1, 2019

Where: Webinar (https://cdrmaguire.zoom.us/j/923285673) – Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 923 285 673)

Invitees: jleathers@bacacountyco.gov; rick.stwalley@bentcounty.net; john.reitan@crowleycounty.net; twittedem@gmail.com; em@oterogov.org; staffon.warn@prowerscounty.net; riley.frazee@state.co.us; jerry.casebolt@secahr.com; Mark Thompson <markw.thompson@state.co.us>; Patricia Gavelda <patricia.gavelda@state.co.us>; Mike Garner and Lisa Clay (CDR Maguire)

Agenda:

1. Welcome & Introductions
2. Project Scope & Schedule
3. Roles & Responsibilities
4. Local Planning Committee (LPC)
5. Current HMP
6. Hazards to Profile
7. Recent Hazard Events
8. Recent Community Planning
9. Best Available Data
10. Local Planning Team
11. Public Involvement Strategy
12. Questions / Concerns / Other Topics

Post Meeting Action Items for Steering Committee:

A. Best Available Data / Recent Community Plans
B. LPC Participants
C. Public Involvement Input

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Name (Original Name)	User Email	Join Time	Leave Time	Duration (Minutes)
Michael Garner	Michael.ga	5/1/2019 12:43	5/1/2019 13:58	75
Call-In User_1		5/1/2019 12:44	5/1/2019 12:44	1
17208749508		5/1/2019 12:45	5/1/2019 13:58	73
Lisa Clay	lisa.clay@c	5/1/2019 12:48	5/1/2019 13:58	71
Riley’s iPhone		5/1/2019 12:52	5/1/2019 13:01	9
Staffon Warn		5/1/2019 12:53	5/1/2019 13:58	66
17195102388		5/1/2019 12:53	5/1/2019 13:58	65
17196884701		5/1/2019 12:54	5/1/2019 13:58	64
Jerry		5/1/2019 12:56	5/1/2019 13:58	63
17193833035		5/1/2019 12:56	5/1/2019 13:58	62
John		5/1/2019 12:56	5/1/2019 13:58	63
dchavez		5/1/2019 12:56	5/1/2019 13:58	62
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17192675207		5/1/2019 12:58	5/1/2019 13:58	60
17195290471		5/1/2019 13:00	5/1/2019 13:58	59
Baca Baca County EM		5/1/2019 13:00	5/1/2019 13:58	59
Mark Thompson		5/1/2019 13:01	5/1/2019 13:58	57
Riley’s iPhone		5/1/2019 13:02	5/1/2019 13:58	57
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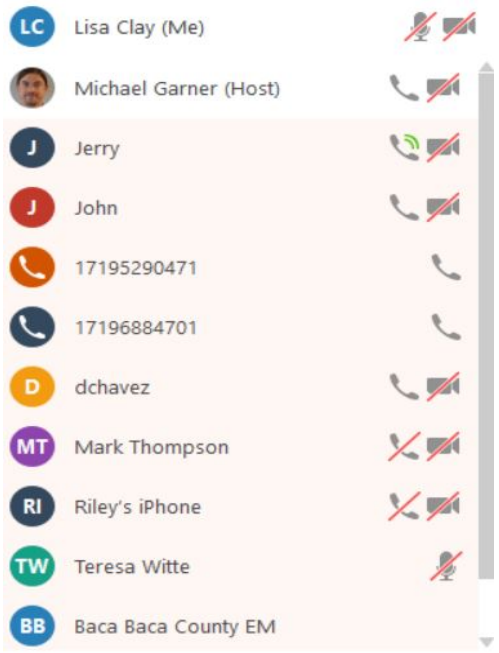
17194382288		5/1/2019 13:23	5/1/2019 13:30	8
Teresa Witte		5/1/2019 13:30	5/1/2019 13:58	29
17194382288		5/1/2019 13:35	5/1/2019 13:58	24
Riley’s iPhone		5/1/2019 13:58	5/1/2019 13:58	1



Southeast Region – Hazard Mitigation Plan

Kick-Off Workshop 1 of 2 (Local Planning Committee)

When: 10:30-12:00 MDT – July 22, 2019

Where: Otero County Courthouse, 13 W. 3rd St., Room 107, La Junta |Webinar (https://cdrmaguire.zoom.us/j/190523848) – Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 190 523 848)

Invitees: See sign in sheet

Agenda:

1. Welcome & Introductions
2. Project Scope & Schedule
3. Roles & Responsibilities
4. Local Planning Committee (LPC)
5. Current HMP
6. Hazards to Profile
7. Recent Hazard Events
8. Recent Community Planning
9. Mitigation Capabilities
10. Best Available Data
11. Mitigation Capabilities
12. Public Involvement Strategy
13. Questions / Concerns / Other Topics

Post Meeting Action Items for Steering Committee:

A. Best Available Data / Recent Community Plans
B. LPC Participants
C. Mitigation Capabilities Input
D. Public Involvement Input

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Southeast Region – Hazard Mitigation Plan

Kick-Off Workshop 2 of 2 (Local Planning Committee)

When: 2:00-3:30 MDT – July 22, 2019

Where: 2206 Saddle Club Drive, Prowers County Home Ec Building, Lamar|Webinar (https://cdrmaguire.zoom.us/j/905372421) – Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 905 372 421)

Invitees: See sign in sheet

Agenda:

1. Welcome & Introductions
2. Project Scope & Schedule
3. Roles & Responsibilities
4. Local Planning Committee (LPC)
5. Current HMP
6. Hazards to Profile
7. Recent Hazard Events
8. Recent Community Planning
9. Mitigation Capabilities
10. Best Available Data
11. Mitigation Capabilities
12. Public Involvement Strategy
13. Questions / Concerns / Other Topics

Post Meeting Action Items for Steering Committee:

A. Best Available Data / Recent Community Plans
B. LPC Participants
C. Mitigation Capabilities Input
D. Public Involvement Input

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Southeast Region – Hazard Mitigation Plan
Workshop #1 (Local Planning Commitee)
July 22, 2019

First	Last	Representing	Email	Sign In	In-Kind (1-way - drive time & miles travelled [if not Federal
Mandy	Adamson	Eads Consumer Supply			
Tina	Adamson	Kiowa County	kiowaco100@gmail.com		
Rex	Allen		walshfd05@gmail.com		
Spike	Ausmus		sausmus@bacacountyco.gov		
Tim	Bates		tbates5088@yahoo.com		
Travis	Black	Division of Wildlife	travis.black@state.co.us		
Bert	Brady	CDOT	william.brady@state.co.us		
Connie	Brase	Southeast Mental Health	cbrase@semhs.org		
Everett	Brisendine		everettw9@gmail.com		
Jimmy	Brown	Brown Funeral Home	jimmy@brownfuneraldirectors.com		
Van	Brown, Jr.	Town of Eads Public Works	townofeads10@gmail.com		
Karen	Bryant	Prowers Medical Center	karen.bryant@prowersmedical.com		
Jeremy	Burkhart	Lamar Fire and Ambulance	jeremy.burkhart@ci.lamar.co.us		
Rick	Butler		rbutler@bacacountyco.gov		
Wendy	Buxton Andrade	BOCC Chairperson	wandrade@prowerscounty.net		
Allen	Campbell	Town of Wiley	wileytown@centurytel.net		
Dennis	Carlson	Public Works	walshsuper@gmail.com		
Bill	Carwin	Schools	bill.carwin@pritchettre3.org		
Jerry	Casebolt	SECAHR	jerry.casebolt@secahr.com		
Danny	Chavez		em@oterogov.org		
Trevor	Choat	Prowers County E911	trevor.choat@ci.lamar.co.us		
Jessami	Claunch	Public Health	jcaddick@bacacountyco.gov		
Ron	Clodfelter	Las Animas Light and Power	lapower.rc@gmail.com		
Bill	Cochel	Southeast Colorado Power Association	billc@secpa.com		
Colby	~~Cogburn~~ Jenkins	Law Enforcement/Walsh Health care	walshpdw1@yahoo.com		
Jim	Collins				
Jim	Collins		jtcollins5252@gmail.com		
Ron	Cook	BOCC Commissioner	rcook@prowerscounty.net		
Renay	Crain	Emergency Prepardness, Kiowa County Hospital District	renay.crain@kchd.org		
Lenha	Dakavia	Lamar Estates	lenha@dakavia.com		
Cecelia	Deen	Southeast Colorado Hospital	cdeen@sechosp.org		
Mark	Dorenkamp	Prowers Coutny Road and Bridge	mark.dorenkamp@prowerscounty.net		
Corey	Doss	Schools	corey.doss@vilasre5.us		
Dave	Eastin	Wiley School District	dave.eastin@wileyschool.org		
Delton	Eikenberg		delton8960@yahoo.com		
Thomas	Eikenberry	USFS	teikenberry@fs.fed.us		
Daveid	Engel	Southeast Colorado Hospital	dengel@sechosp.org		

Southeast Region – Hazard Mitigation Plan
Workshop #1 (Local Planning Commitee)
July 22, 2019

First	Last	Representing	Email	Sign In	In-Kind (1-way - drive time & miles travelled [if not Federal
Leroy	England		ldenglandj8@gmail.com		
Calvin	Fiek		bent.admin@bentcounty.net		
Elissa	Forgey		eforgey@bacacountyco.gov		
Riley	Frazee	State of Colorado DHSEM	riley.frazee@state.co.us		
Shiloh	Freed		sfreed@bacacountyco.gov		
Joey	Gacnik		jgacnik@ci.la-junta.co.us		
Anthony	Garcia	Town of Holly	clerk@townofholly.com		
Patricia	Gavelda		patricia.gavelda@state.co.us		
Dean	George	Law Enforcement	dgeorge@bacasheriff.us		
Dareen	Glover	Prowers Area Transit	dglover@prowerscounty.net		
Elsie	Goines	Las Animas School District	elsie.goines@la-schools.net		
Ray	Gonzales		rgonzales@ci.rocky-ford.co.us		
Lars	Grahn		blackknight_42@hotmail.com		
Tom	Grasmick	BOCC Commissioner	tgrasmick@prowerscounty.net		
Chris	Griffin	Law Enforcement	cgriffin@bacasheriff.us		
Mark	Hall	SECPA	markh@secpa.com		
Susan	Hansen	Natural Resource Conservation Service	susan.hansen@co.usda.gov		
Richard	Hargrove	Schools	richard.hargrove@spre4.org		
Clay	Hasser	Hasty Mclave Fire Dept	mchasty@cminet.net		
Austin	Hazen	Holly Fire District	hollyfiredept@hotmail.com		
Plainsman	Herald		plainsmanherald@gmail.com		
Terri	Hertick	Holly Ambulance Service	terihetrick@hotmail.com		
Rita	Hetrick	Walsh Healthcare	rita.hetrick@walshhealthcarecenter.com		
Michelle	Hiigel	Prowers County Land Use	mhiigel@prowerscounty.net		
Meagan	Hillman	Prowers Coutny ~~Nursing~~ Public Health/Kiowa Pub health	pcphdirector@prowerscounty.net		
Houssin	Hourieh	Lamar Light and Power	hhourieh@lamarlp.com		
Stephanie	Hund	Schools	s.hund@walsheagles.com		
JoLynn	Idler	Prowers/Kiowa County Public Health	jidler@prowerscounty.net		
Mike	Ingle	Public Works	mingle@springfieldco.gov		
Nikki	Johnson	Schools	nikki.johnson@campok12.org		
Ty	Kemp	Granada School District	ty.kemp@granadaschools.org		
Dan	Kirmer	State Parks	dan.kirmer@state.co.us		
Tim	Knabenshu	CSP	tim.knabenshue@state.co.us		
Tim	Knabenshue	Colorado State Patrol	tim.knabenshue@state.co.us		
Zach	Kopasz	Kiowa County Fire Protection District	zachnkatie@yahoo.com		
Char	Korrell	Kiowa County Hospital District	char.korrell@kchd.org		
Kyle	Lasley	Schools	kyle.lasley@spre4.org		

Southeast Region – Hazard Mitigation Plan
Workshop #1 (Local Planning Commitee)
July 22, 2019

First	Last	Representing	Email	Sign In	In-Kind (1-way - drive time & miles travelled [if not Federal
Jared	Leathers		jared.coop@elkhart.com		
Shane	Lessenden	Haswell Fire Department	spds_livestock@hotmail.com		
John	Linn	USFS	johnlinn@fs.fed.us		
Larry	Long	USFS	johnlinn@fs.fed.us		
Kim	Macdonnell		kim.macdonnell@bentcounty.net		
Mindy	Maestas		mmaestas@prowerscounty.net		
Janell	Maier		seepi@oterogov.org		
Matty	Manly	Southeast Colorado Hospital	mmanly@sechosp.org		
Brian	Marsh		brian.marsh@state.co.us		
Katrina	Martin	Law Enforcement	kmartin@springfieldco.gov		
Pat	Mason	City of Lamar Street and Sanitation	pat.mason@ci.lamar.co.us		
Neil	Mauch	Colorado Dept of Transportation	neil.mauch@state.co.us		
Christa	Mayhew	Atmos Energy	Christa.mayhew@atmosenergy.com		
AJ	McCracken	Kiowa County Fire Protection District	kcfpdmccracken@gmail.com		
Vic	McGinnis	Public Works	vmcginnis@springfieldco.gov		
Lanie	Meyers-Mireles	Prowers County Human Services	dssdirector@prowerscounty.net		
Kyle	Miller	Lamar Police Department	kyle.miller@ci.lamar.co.us		
Julian	Mondragon	CDOT	julian.mondragon@state.co.us		
Bob	Morrow	Law Enforcement	17mdoc@gmail.com		
Dana	Musick	Granada Fire Department	natalie.musick@gmail.com		
Michelle	Nelson	Town of Haswell	agrolady@yahoo.com		
Tracy	Nelson		tnelson430@aol.com		
Chuck	Netherton		chuck.netherton@bentcounty.net		
Lex	Nichols		lnichols@oterogov.org		
Aaron	Olivieri		seepr@ocphd.org		
Lynn	Orebaugh		lynn_orebaugh@hotmail.com		
Donald	Oswald		oswaldunald_18@yahoo.com		
Glenn	Otto	Town of Granada	granadaclerk@outlook.com		
John	Palomino	Chief Security Core Civic	john.palomino@cca.com		
Dennis	Pearson		dennis.pearson@state.co.us		
Amy	Pierce	Holly Nursing Care Center	lcathcart@vivage.com		
Jim	Pryor		Pryorjim@hotmail.com		
Chris	Pryor	Colorado State Patrol	chris.pryor@state.co.us		
John	Reitan		john.reitan@crowleycounty.net		
Jan	Richards	KCEDF	kcedf@kcedfonline.org		
Terry	Riley	Kiowa County Fire Protection District	terry6363@gmail.com		
Rick	Ritter		rritter@oterogov.org		

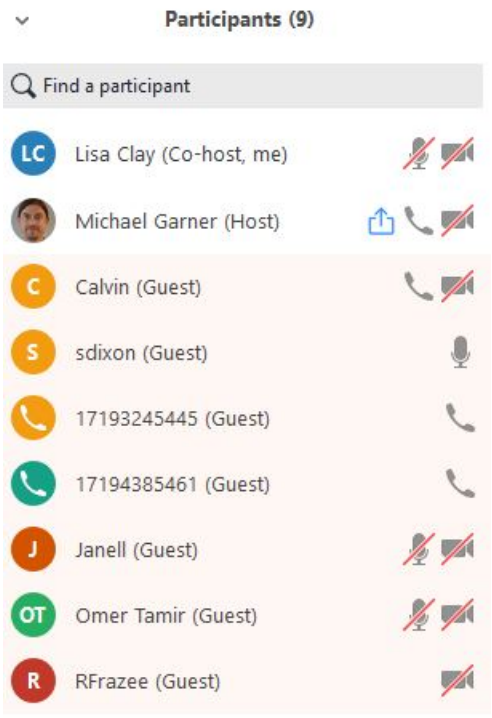
Southeast Region – Hazard Mitigation Plan
Workshop #1 (Local Planning Commitee)
July 22, 2019

First	Last	Representing	Email	Sign In	In-Kind (1-way - drive time & miles travelled [if not Federal
Howard (Butch)	Robertson		hbrob51@gmail.com		
Kelly	Roesch	CSU Extension Service	kelly.roesch@colostate.edu		
Roger	Saffer	Saffer Spraying	safferspray@hotmail.com		
Larry	Sanchez	CDOT	larry.sanchez@state.co.us		
Steve	Sanchez	Southeast Colorado Hospital	ssanchez@sechosp.org		
Richard	Scott		rsscott@fairpoint.net		
Joe	Shields	Town of Eads	josephshields@hotmail.com		
Aaron	Shiplett	Law Enforcement	ashiplett@bacasheriff.us		
Jake	Six	Bent County Sheriff	Jsix@bentsheriff.com		
Bret	Smith	Colorado Humane Society	bsmith@coloradohumane.org		
Glenn	Smith	Kiowa County School District RE-1	glenn.smith@eadseagles.org		
Rick	Spady	Road and Bridge	kcshaswell@yahoo.com		
John	Spano		John.spano@bentcounty.net		
Jay	Specht	Kiowa County Fire Protection District	jdsmsfamily@hotmail.com		
Marcus	Stegman		stegmangws11@gmail.com		
TJ	Steinbrunn	Colorado State Patrol	thomas.steinbrunn@state.co.us		
TJ	Steinbrunn	CSP Haz Mat	thomas.steinbrunn@state.co.us		
Kris	Stokke		stokkris@yahoo.com		
Rick	Stwalley		rick.stwalley@bentcounty.net		
John	Sutherland	City of Lamar	john.sutherland@ci.lamar.co.us		
Jean	Sykes		Jean.sykes@bentcounty.net		
Jonathon	Tague	USCORPS Engineers John Martin Dam	jonathan.b.tague@usace.army.mil		
Omer	Tamir	Bent County Public Health	director@bentcph.org		
Kim	Tate	Walsh Medical Clinic	walshmedclinic@gmail.com		
Dave	Tecklenburg	Lamar School District RE-2	dave.tecklenburg@lamarschools.org		
Matt	Thompson		matt@fowlerfire.org		
Mark	Thompson	DHSEM	markw.thompson@state.co.us		
Staffon	Warn		staffon.warn@prowerscounty.net		
Eunice	Weber	Kiowa County Ambulance Service	eunice.weber@kchd.org		
Jerry	Weber	Town of Sheridan Lake	jfweber57@yahoo.com		
Chris	Westphal		peepers6@hotmail.com		
Laura	Wilson	Southeast Colorado Hospital	lwilson@sechosp.org		
Cherilyn	Wittler	Southeast Colorado Hospital	cengland@sechosp.org		
Tim	Wolf	Haswell Fire Department	twolf373@gmail.com		
Kyle	Woodard	Wiley Fire Protection District	k-woodard@hotmail.com		
Karl	Zimmermann	National Parks Service			
Sam	Zordel	Prowers County Sheriff	szordel@prowerscounty.net		
Sam	Fief	Prowers county Sheriff	SFief@prowerscounty.net		

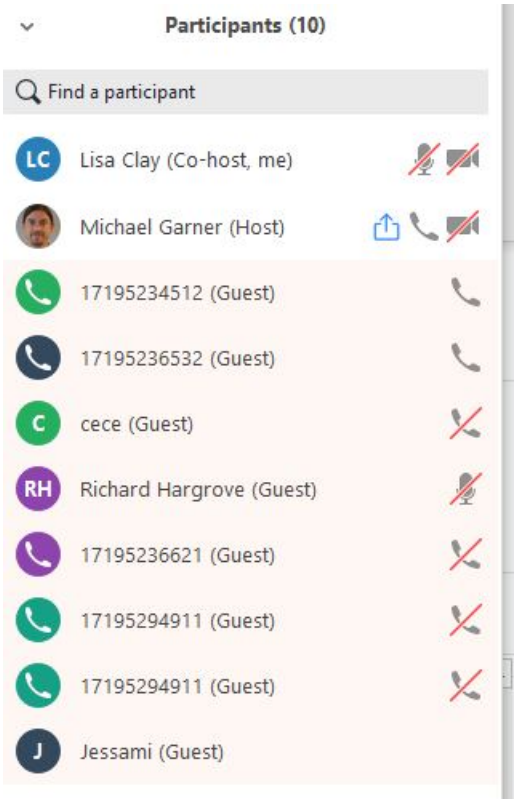
Southeast Region – Hazard Mitigation Plan
Workshop #1 (Local Planning Commitee)
July 22, 2019

First	Last	Representing	Email	Sign In	In-Kind (1-way - drive time & miles travelled lif not Federal
Shawn	Mobley	Otero County Sheriff's	smobley@oterogov.org		
Liz	Ritter	Otero County Health Dep	liz.ritter@state.co.us		
Teresa	Witte	Kiowa Co. OEM	twittedem@gmail.com	TW	
Jennifer	Leathers	Baca Co. OEM	jleathers@bacacountyco.gov		

La Junta Phone Participants:



Lamar Phone Participants:



BACA COUNTY
EMERGENCY MANAGEMENT

LEPC/STAKEHOLDER MEETING

Tuesday, July 30, 2019
12:00 p.m.
Baca County EOC Classroom

Agenda

1. Hazard Mitigation Plan
2. Recent Fire, Decon Exercise
3. Scheduled Trainings/Table Open!

SAVE THE DATE: AUGUST 16
FULL SCALE EXERCISE

Meal: Chicken Alfredo, Garlic Bread & Salad

EMERGENCY MANAGEMENT
Baca County

< For Hazard Mitigation Planning Partners >

LEPC/STAKEHOLDERS MEETING

7/30/2019	EOC CLASSROOM

Name	Entity	Phone	E-Mail
Larry Long	DFAC	719 351 0994	lawrence.long@state.co.us
Jessami Claunch	BCPHA	(719)563-0980	jclaunch@bacacountyco.gov
Chris Pryor	Colo State Patrol Hazmat	719-428-8503	chris.pryor@state.co.us
Ashcom Shiplett	BCSO	719 353 1678	ashiplett@bacasheriff.us
Tom Eikenberry	USFS	719 353-2372	thomas.eikenberry@usda.gov
Katrina Martin	S.P.D.	719-353-2512	Kmartin@springfieldco.gov
LeRoy England	CFD	719 353 1506	leroyandj3@gmail.com
Shiloh Freed	Baca Comm	719 353-1569	sfreed@bacacountyco.gov
Kyle Lasley	SHS	719-529-9030	Kyle.Lasley@Spree4.org
Tim Anderson	First Baptist Church	719 529-0085	tim.Pastor@outlook.com
Jona Mills	BCDHS	719-523-4131	Jona.Mills@State.co.us
Janell Maier	SE Reg Epi	719-383-2340	seepi@acphd.org
Kris Stokke	SE Reg Planning PH	719-688-4464	stokkecontractor@gmail.com
Spike Ausmus	Baca comm	719-529-0181	sausmus@bacacountyco.gov

Name	Entity	Phone	E-Mail
Rick Butler	Commissioner	719 523 3202	RButler@bacacounty co.gov
Cheryl Sanchez	Baca Economic Development	719 688 0664	Bacaed@bacacounty.co.gov
Seth Odette	PCPHE Environmental H.S.	719 688 1224	sodette@prowerscounty.net
Chris Westphal	SPVFD	719-529-9043	cwesphal20@outlook.com
Shannen Mason	BacaDHS	719-529-0683	Shannon.Mason@State.co.us
Dave Engel	SECHD	719 523 4501	dengel@sechosp.org
Kevin Johnson	SECH EMS		ems3@sechosp.org
Cherilyn Witter	SECH EMS	719-353-1509	cengland@sechosp.org

Southeast Region – Hazard Mitigation Plan

Meeting #2 - 1 of 2 (Local Planning Committee)

When: 9:00-11:00 AM MDT – November 1st, 2019

Where: Webinar (https://cdrmaguire.zoom.us/j/859346231) – Audio: Join through your computer (Zoom) or Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 859 346 231)

Invitees: See calendar invite

Agenda:

1. Hazard Mitigation Planning Review
2. Risk Assessment Summary
3. Capability Assessment
4. Mitigation Strategy
5. Mitigation Actions / Projects
6. Public Involvement
7. Action Items

Post Meeting Action Items for Steering Committee:

A. Continue local discussions relating to this project
B. Begin identifying new mitigation actions / projects
C. Public survey dissemination
D. Review of Risk Assessment chapter

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Southeast Region – Hazard Mitigation Plan

Meeting #2 - 2 of 2 (Local Planning Committee)

When: 10:00-12:00 AM MDT – November 4th, 2019

Where: Webinar (https://cdrmaguire.zoom.us/j/648198347) – Audio: Join through your computer (Zoom) or Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 648 198 347)

Invitees: See calendar invite

Agenda:

1. Hazard Mitigation Planning Review
2. Risk Assessment Summary
3. Capability Assessment
4. Mitigation Strategy
5. Mitigation Actions / Projects
6. Public Involvement
7. Action Items

Post Meeting Action Items for Steering Committee:

A. Continue local discussions relating to this project
B. Begin identifying new mitigation actions / projects
C. Public survey dissemination
D. Review of Risk Assessment chapter

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Southeast Region – Hazard Mitigation Plan

Meeting #2 - 1 of 2 (Local Planning Committee)

When: 9:00-11:00 AM MDT – November 1st, 2019

Where: Webinar (https://cdrmaguire.zoom.us/j/859346231) – Audio: Join through your computer (Zoom) or Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 859 346 231)

Notes:

1. Attendees:
    a. Staffon Warn: Prowers County
    b. Rick Ritter: Crowley/Otero Public Health
    c. Jeremy Burkhart – Lamar Fire
    d. David Engel – Southeast Colorado Hospital, Baca County
    e. Jo Lynn Idler – Prowers/Kiowa Public Health
    f. Dennis Carlson – Town of Walsh
    g. Riley Frazee – State

Southeast Region – Hazard Mitigation Plan

Meeting #2 - 2 of 2 (Local Planning Committee)

When: 10:00-12:00 AM MDT – November 4th, 2019

Where: Webinar (https://cdrmaguire.zoom.us/j/648198347) – Audio: Join through your computer (Zoom) or Conference Call (US: +1 669 900 6833 or +1 408 638 0968 \ Meeting ID: 648 198 347)

Notes:

2. Attendees:
    a. John Reitan- Prowers County EM
    b. Renay Crain – Kiowa County hospital district
    c. Teresa Witte – Kiowa County EM
    d. Rick Stwalley – Bent County EM
    e. Mark Thompson – DHSEM
    f. Jennifer leathers – Baca County EM
    g. Dan Kirmer – Colorado Parks and Wildlife – State Parks
    h. Omer Tamir – Bent County Public Health
    i. Larry Long - Colorado Division of Fire Prevention and Control. (Battalion Chief for the Southern Plains Region)

Southeast Region – Hazard Mitigation Plan

Meeting #3 - 1 of 2 (Local Planning Committee)

When: 10:00 AM-12:00 PM MDT – January 22nd, 2020

Where: La Junta EOC (LJFD), 601 Colorado Ave.

Invitees: See calendar invite

Agenda:

1. Welcome & Introductions
2. Project Overview
3. 2015 Mitigation Action / Project Review
4. Plan Maintenance / Implementation
5. Plan Integration
6. Mitigation Strategy Inputs
7. Mitigation Strategy – Goals & Objectives
8. Mitigation Strategy – New Actions / Projects
9. Funding Resources

Post Meeting Action Items for the Local Planning Team:

- Finalize new Mitigation Actions / Projects
- Finalize past Mitigation Actions / Projects reporting
- Public Review and Comment

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Southeast Region – Hazard Mitigation Plan

Meeting #3 - 2 of 2 (Local Planning Committee)

When: 2:00-4:00 PM MDT – January 22nd, 2020

Where: 2206 Saddle Club Drive, Prowers County Home Ec Building, Lamar;

Invitees: See calendar invite

Agenda:

1. Welcome & Introductions
2. Project Overview
3. 2015 Mitigation Action / Project Review
4. Plan Maintenance / Implementation
5. Plan Integration
6. Mitigation Strategy Inputs
7. Mitigation Strategy – Goals & Objectives
8. Mitigation Strategy – New Actions / Projects
9. Funding Resources

Post Meeting Action Items for the Local Planning Team:

- Finalize new Mitigation Actions / Projects
- Finalize past Mitigation Actions / Projects reporting
- Public Review and Comment

Questions, Comments, Concerns? – Contact project manager Mike Garner at any point throughout the planning process: 303.710.9498 | Michael.Garner@CDRMaguire.com

Southeast Region – Hazard Mitigation Plan
Workshop #3 (Local Planning Commitee)
January 22, 2020

First	Last	Representing	Email	Sign In
Mandy	Adamson	Eads		
Tina	Adamson	Kiowa County	kiowaco100@gmail.com	
Rex	Allen	Walsh	walshfd05@gmail.com	
Spike	Ausmus	Baca County	sausmus@bacacountyco.gov	
Tim	Bates		tbates5088@yahoo.com	
Travis	Black	State		
Travis	Black	State	travis.black@state.co.us	
Bert	Brady	State	william.brady@state.co.us	
Connie	Brase		cbrase@semhs.org	
Everett	Brisendine		everettw9@gmail.com	
Jimmy	Brown	Kiowa County	jimmy@brownfuneraldirectors.com	
Van	Brown, Jr.	Eads	townofeads10@gmail.com	
Karen	Bryant		karen.bryant@prowersmedical.com	
Jeremy	Burkhart	Lamar	jeremy.burkhart@ci.lamar.co.us	[signature]
Rick	Butler	Baca County	rbutler@bacacountyco.gov	
Wendy	Buxton Andrade	Prowers County	wandrade@prowerscounty.net	
Allen	Campbell	Wiley	wileytown@centurytel.net	
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8. Appendix B: Public Involvement Plan

CDR MAGUIRE
EMERGENCY MANAGEMENT

Southeast Region – Hazard Mitigation Plan

Public Involvement Plan

Overview: This Public Involvement Plan (PIP) for the Southeast Region Hazard Mitigation Plan (HMP) outlines the approach to engage communities and stakeholders. As the planning process and plan are guided by public and stakeholder input and the Local Planning Committee (LPC), this document provides direction for engagement activities, tools, and schedule.

This engagement plan outlines the public outreach goals, activities, venues, and County / LPC / CDR Maguire team responsibilities that seek to keep citizens informed throughout the planning process, gather feedback at critical points, and create local champions. Every effort will be made to encourage meaningful public involvement throughout the process by involving interested parties early, frequently, and effectively.

Objectives: Outreach efforts are critical to the development of a successful Mitigation Strategy, formulated as part of this HMP project. Our team will focus on creating a community-supported strategy, clearly defining the problems the HMP is trying to solve, and methodically identifying the range of potential solutions and tradeoffs so that informed decisions can be made. The process will:

- Ensure the public has an opportunity to shape the planning for the community and the goals for the future.
- Foster collaboration among local and regional agencies, organizations, and stakeholders.
- Utilize multiple mediums for outreach to engage the greatest possible range of participants and perspectives, including those who have been previously under-represented.
- Create an opportunity for smaller communities and districts to have a vision for their individual communities.
- Strengthen a foundation for ongoing dialogue, collaborative learning and planning for communities.

Tools: A broad range of techniques, events, and tools can be used to engage, inform, and educate members of the public, stakeholders, and community leaders. Options to consider will be based on each community's input and can include:

- LPC / LEPC meetings
- Social media
- Website
- Surveys
- Newspaper / Radio / TV
- Utility bill insert
- Public postings
- Schools
- Community groups
- Other public events
- Project specific events
- Other tools and resources

Stakeholder Involvement: Ultimately, each community understands how best to involve their residents, businesses, and organizations. Table 1 outlines those specific tools and resources available to be utilized as part of this HMP project. CDR Maguire will develop any necessary content and will share with the LPC.

Table 1 – HMP Community Engagement Tools and Resources

Tool / Resource	Contact	Email / Phone	Web	Type
Baca EM Facebook	Jennifer Leathers	jleathers@bacacountyco.gov	https://www.facebook.com/pages/category/Government-Organization/Baca-County-Emergency-Management-1924436691107049/	Social Media
County Websites	EM's			
County LEPC Meetings	EM's			Meeting
Regional Health Care Coalition	Aaron Olivieri	coloserhcc@gmail.com	Distribution List – Contact Person	Email List
Local Social Media	EM's			
SECAHR Website	Riley Frazee	Riley.frazee@state.co.us	http://www.secahr.com/	Website
Southeast Emergency Preparedness Alliance Facebook	Riley Frazee / Jerry Casebolt	Riley.frazee@state.co.us or Jerry.casebolt@secahr.com	https://www.facebook.com/SEEPAinc/	Social Media
Plainsman Herald		plainsmanherald@gmail.com /(719) 523-6254		Print Media
Bent County Democrat		bcd@ljtdmail.com /(719) 456-1333		Print Media
Kiowa County Independent		(719) 438-2040		Print Media
Kiowa County Press		kiowacountypress@gmail.com /(719) 438-5800		Print Media
La Junta Tribune		publisher@ljtdmail.com / (719) 384-1437		Print Media

Tool / Resource	Contact	Email / Phone	Web	Type
Rocky Ford Gazette		jr@rockyforddailygazette.com /(719) 254-3351		Print Media
Lamar Ledger		cfrost@lamarledger.com/ (719) 336-2266		Print Media
Prowers Journal		(719) 336-9095		Print Media
Pueblo Chieftain		mbialas@chieftain.com; ryans@chieftain.com / (719) 544-3520		Print Media
Colorado Country Life Magazine		mneeley@coloradocountrylife.org/ (303) 455-4111	TX: Springfield Call sign: KTTE Freq: 91.9 FM	Print Media
KTLF Light Praise		lightpraise@ktlf.org/(719) 593-0600	TX: Vilas, Call sign: KTLF Freq: 91.5 FM	Radio Media
KTLF Light Praise		lightpraise@ktlf.org/(719) 593-0600	TX: Walsh, Call sign: KTLF Freq: 89.3 FM	Radio Media
TIGRE 104.9 FM		(719) 253-3777	TX: Olney Spgs Call Sign: KRYE Freq: 104.9 FM	Radio Media
KBLJ Radio		kblj@myhometeamsports.com/ (719) 384-5456	TX: La Junta Call Sign: KBLJ Freq: 1400 AM	Radio Media
KTHN Radio		kblj@myhometeamsports.com/ (719) 384-5456		Radio Media
KECC NPR Radio		psa@krcc.org/ (719) 473-4801	TX: La Junta Call sign: KECC Freq: 89.1 FM	Radio Media
KRKV		bill@theavbridge.com/ (719) 241-0071	TX: La Junta Call sign: KRKV Freq: 107.3 FM	Radio Media
KPHT		nickdonovan@iheartmedia.com/ (719) 545-2080	TX: Rocky Ford Call Sign: KPHT Freq: 95.5 FM	Radio Media
KPCR		(573) 324-2283	TX: Fowler Call Sign: KPCR Freq: 99.3 FM	Radio Media
KLMR		rtownsend@cherrycreekradio.com/ (719) 336-2206	TX: Lamar Call sign: KLMR Freq: 93.5 FM Freq: 920 AM	Radio Media

Tool / Resource	Contact	Email / Phone	Web	Type
KVAY Radio		studio@kvay.com/ (719) 336-8734	TX: Lamar Call sign: KVAY Freq: 105.7 FM	Radio Media
CSN International		1800-357-4226	TX: Lamar Call sign: KAWZ Freq: 90.1 FM	Radio Media
Family Life Radio		1800-776-1070	TX: Lamar Call sign: KWFL Freq: 91.3 FM	Radio Media
KJIL		1866-480-5545; (620) 873-2991/ kjil@kjil.com; psa@kjil.com	TX: Lamar Call sign: KJIL Freq: 91.3 FM	Radio Media
KJIL		1866-480-5545; (620) 873-2991/ kjil@kjil.com; psa@kjil.com	TX: Holly Call sign: KJIL Freq: 88.5 FM	Radio Media
850 KOA		(303) 713-8500	TX: Denver Call sign: KOA Freq: 850 AM	Radio Media
KOAA News 5		news@koaa.com/ (719) 630-3930		Television Media
KKTV 11 News		news@kktv.com/ (719) 578-0000		Television Media
KRDO		news@krdo.com/ (719) 575-6258		Television Media
KXRM Fox 21		news@fox21news.com/ (719) 955-3021		Television Media

Schedule: Aligning stakeholder involvement activities to the overall project schedule and major milestones will allow relevant content to be disseminated in a timely manner. Table 2 on the following page will serve as the outline for future project involvement activities. CDR Maguire will develop any necessary content for these activities and will share with the LPC.

Table 2 - Project Involvement Activities and Schedule

Activity	July	August	Sept-Oct	Nov-Dec	Apr-May '20	Summer 2020
LPC Kick-off Workshop	x					
Initial Public Information Messaging		x				
LPC Risk Assessment (RA) Workshop or Webinar			x			
RA Public Engagement Survey			x			
RA Public Education Messaging			x			
Mitigation Strategy Public Engagement Survey				x		
LPC Mitigation Strategy Workshop				x		
Draft Plan Public Information Messaging					x	
Final Plan Public Information Messaging						x
Community Engagement Tools	**July**	**August**	**Sept-Oct**	**Nov-Dec**	**Apr-May '20**	**Summer 2020**
Social Media		x	x	x	x	x
Online/Print/TV Media		x	x	x	x	x

9. Appendix C: HIRA Appendix

9.1. Region

9.1.1. Drought

Previous Occurrences

Due to the regional nature of drought events, the previous occurrences prior to the 2014 Southeast Region Hazard Mitigation Plan are the same for each County. These events are listed below.

The 1930's Drought – The Dust Bowl drought severely affected much of the United States during the 1930s. Figure 9-1 illustrates the extent of the Dust Bowl as defined by the Soil Conservation Service.

Figure 9-1 Extent of the Dust Bowl



The drought came in three waves, 1934, 1936, and 1939-40, but some regions of the High Plains experienced drought conditions for as many as eight consecutive years. The soil, depleted of moisture, was lifted by the wind into great clouds of dust and sand which were so thick they concealed the sun for several days at a time. They were referred to as "black blizzards." The period itself is known as the dust bowl. The "black blizzards" were caused by sustained drought conditions compounded by years of land management practices that left topsoil susceptible to the forces of the wind.

The agricultural and economic damage devastated residents of the Great Plains. The Dust Bowl drought worsened the already severe economic crises that many Great Plains farmers faced. In the early 1930s, many farmers were trying to recover from economic losses suffered during the Great Depression. To

compensate for these losses, they began to increase their crop yields. High production drove prices down, forcing farmers to keep increasing their production to pay for both their equipment and their land. When the drought hit, farmers could no longer produce enough crops to pay off loans or even pay for essential needs. Even with federal emergency aid, many Great Plains farmers could not withstand the economic impacts of the drought. The agricultural and economic damage devastated residents of the Great Plains.

Many factors contributed to the severe impact of this drought and in its aftermath a better understanding of the interactions between the natural elements (climate, plants, and soil) and human-related elements (agricultural practices, economics, and social conditions) of the Great Plains developed. As a result, farmers adopted new cultivation methods to help control soil erosion in dry land ecosystems; consequently, subsequent droughts in the region have not had the same impact.

The 1950s Drought – During the 1950s, the Great Plains and the southwestern U.S. withstood a five-year drought, and in three of these years, drought conditions stretched coast to coast. The 1950s drought was characterized by both decreased rainfall and excessively high temperatures. The first effects of the drought were felt in the southwestern U.S. in 1950 and by 1953 conditions had spread to Oklahoma, Kansas and Nebraska. By 1954, the drought encompassed a 10-state area reaching from the midwest to the Great Plains, and southward into New Mexico. The area from the Texas panhandle to central and eastern Colorado, western Kansas and central Nebraska experienced severe drought conditions. The drought maintained a stronghold in the Great Plains, reaching a peak in 1956. The drought devastated the region's agriculture, with crop yields in some areas decreased as much as 50%. Excessive temperatures and minimal rainfall scorched grasslands typically used for grazing. With grass scarce, hay prices rose, forcing some ranchers to feed their cattle a mixture of prickly pear cactus and molasses. By the time the drought subsided in 1957, many counties across the region were declared federal drought disaster areas.

The 1977 Drought – During 1976 and 1977, the State experienced record-low stream flows at two-thirds of the major stream gages, records that held until the 2002 drought. Agriculture producers had to incur higher crop production costs due to short water supplies; and numerous municipalities were forced to impose water use restrictions on their customers. The state’s agriculture producers and municipalities received over $110 million in federal drought aid as a result of the 1976-1977 drought.

1994 Drought – On August 1st, in response to extremely arid conditions, the Governor activated, by memorandum, several Task Forces to assess impacts. Significant impacts reported included an increase in wildfires statewide, loss to the winter wheat crops, difficulties with livestock feeding, and impacts to the State’s fisheries.

1996 Drought – July 29th, the Governor issued an Executive Order (D000996) proclaiming a Drought Disaster Emergency Declaration. Baca, Bent, and Kiowa County qualified for USDA Secretarial Disaster Declaration S999.

2002 Drought – According to the 2010 Colorado Drought Mitigation Plan, in 2002 Colorado experienced the worst drought in the State’s history. These conditions were rated ‘exceptional’ by the US Drought Monitor and were the most severe drought experienced in the region since the Dust Bowl. Indeed, based on studies of tree rings and archaeological evidence from aboriginal cultures, the Colorado drought was arguably the worst in the recorded history of the State.

The drought of 2002 had its roots in the autumn of 1999. After a very wet spring and a soggy August, precipitation patterns reversed, and the fall of 1999 was very dry across most of Colorado. The winter of 1999-2000 followed with below average snow fall and above average temperatures, dryness continued into spring and early summer over northeast Colorado and the South Platte watershed and drought conditions quickly emerged. A persistently hot summer with evapotranspiration rates higher than average deteriorated conditions. The 2001 water year, although less extreme continued to trend on the dry side.

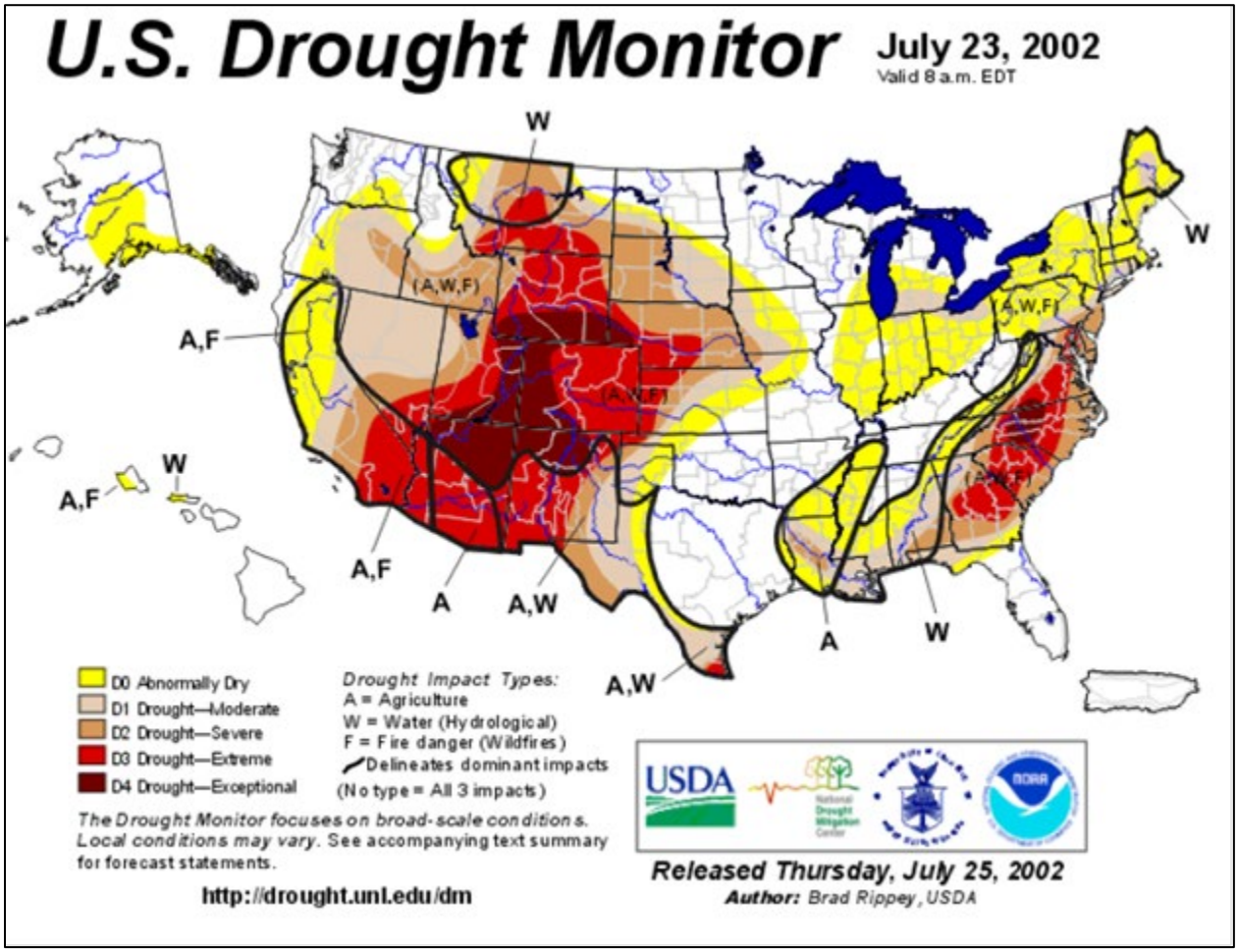
October 2001 weather patterns appeared more favorable as a variety of storm systems crossed the region. However, the storms resulted in little moisture and when the month was over precipitation totaled again less than 50% of average over the majority of the State. November and December brought some snow accumulation, but snow water content remained below average; and January's above average snowfall came down in the Front Range urban corridor and the southeastern plains, contributing very little to overall water supplies. February and March, despite cooler temperatures and numerous storm systems, did not see the copious wet snows that Colorado spring snowstorms typically produce. By the end of March 2002, the statewide snow water equivalent was a mere 52% of average and portions of Colorado's mountains were even further below average.

The spring storms that sometimes dump heavy and widespread precipitation were nonexistent in April and temperatures soared to record highs. In the mountains snow melted or evaporated at an alarming rate. Relative humidity on several afternoons fell to below 10%. Fire danger, which typically stays low to moderate through early June, was already high by mid-April. May was even drier. At a time of year when Colorado's rivers and streams are normally churning with snowmelt runoff, there were only mere glimpses of snowmelt flows. Irrigation water demand was high, and it was soon obvious that supplies would not last through the growing season. Municipalities began to face the possibility that available water supplies might not be sufficient to meet typical summertime demand. Many areas implemented strict water conservation restrictions. Other forest fires erupted, and each new blaze seemed to spread faster than the one before.

June arrived accompanied by relentless summer heat, temperatures routinely climbed above 90 degrees Fahrenheit at lower elevations east and west of the mountains. Vegetation that normally grows lush and tall with spring moisture barely greened up. Relative humidity often dropped to less than 10% and bans on outside burning were enforced statewide. Little or no precipitation fell for the entire month over western Colorado. Winter wheat crop conditions continued rapid deterioration, and ranchers quickly sold or relocated their herds in response to the poor range conditions and high cost of feed. The most severe fires of the season erupted in June, including the Hayman fire southwest of Denver which quickly grew to be the largest documented forest fire in Colorado (217 square miles) on record.

July brought a few changes. Below average precipitation persisted statewide and temperatures were above average for the fourth consecutive month. By late July, the entire state of Colorado was in a serious drought (see Figure 9-2).

Figure 9-2 2002 Drought – Drought Monitor from July 23, 2002[4]



The first several days of August brought some hope for a respite but the monsoon moisture surge was brief. By mid-August, 100°F+ temperatures led media reports to liken conditions to the great Dust Bowl of the 1930s. As the month neared its end, a subtle change in weather patterns brought a round of spring-like thunderstorms loaded with hail and high winds to portions of eastern Colorado. Humid and stormy weather continued into September and for the first time since August 2001, the majority of Colorado received above average rainfall.

[4] National Drought Monitor

9.2. Baca County

9.2.1. Flooding

Previous Occurrences

Table 9-1 describes all previous recorded flooding events in Baca County.[5] No injuries or damages were reported with any events.

Table 9-1 Baca County Previous Flooding Events

Date	Location	Flood Type	Description
June 1965	Two Buttes	Flood	Triggered by rains of over nine inches at Two Buttes and 11 inches near Holly on June 17, the floodwaters of Two Butte Creek reached a peak discharge of 82,600 cfs above Two Buttes Reservoir and increased to 182,000 cfs at the mouth, overtopping the reservoir. Floods devastated the towns of Holly and Granada, and both locales were evacuated as floodwaters inundated the valuable farmlands surrounding the two towns. The floodwaters that hit the town of Holly caused flooding that extended to Great Bend, Kansas.
7/1/1995	Unknown	Flash Flood	2.60 inches of rainfall in a 45-minute period resulted in street flooding and the flooding of an office building. Damage estimates were not given.
6/17/1996	Bartlett	Flash Flood	Over 3 inches of rain fell near Bartlett, flooding Bear Creek and the adjacent roadways. The irrigation controls (watergates) on Bear Creek were damaged due to the flooding.
8/5/1997	Springfield	Flash Flood	Slow moving thunderstorms producing heavy rain totals of two to four inches flooded county roads north of Springfield early in the afternoon.
7/7/1998	Vilas	Flash Flood	Slow moving thunderstorms produced 2 to 6 inches of rainfall across Baca county, causing flooding of low-lying areas, ditches, and roads near the towns of Vilas and Walsh. Water 200 to 300 yards wide was moving across county roads near Vilas, and private homes, basements, and the high school in both Vilas and Walsh were flooded.

[5] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; Planning Team

Date	Location	Flood Type	Description
7/26/1998	Walsh	Flood	Slow moving thunderstorms produced 3 to 5 inches of rain near the town of Walsh. Due to the already saturated ground from previous storms, the heavy rainfall produced flooding in basements and low lying areas in town.
7/5/2002	Springfield	Flash Flood	Very heavy rainfall in excess of six inches caused some flooding of county roads and low areas in the Sand arroyo basin.
7/9/2006	Walsh	Flash Flood	Heavy rains from thunderstorms brought flooding to Baca County. A draw flowing into Sand Arroyo Creek, 3 miles south of Walsh, was filled with fast flowing water and debris 150 yards wide and four feet deep.
7/26/2014	Pritchett	Flash Flood	Strong, slow moving storms produced heavy rain and flash flooding across portions of Bent, Baca, and Prowers Counties. Many roads were flooded and washed out.
7/29/2014	Springfield	Flash Flood	Numerous strong, slow-moving storms caused flash flooding across Kiowa, Bent, Prowers, and Baca Counties.
8/7/2014	Walsh	Flash Flood	A nearly stationary storm produced very heavy rain and flash flooding at low water crossings.

9.2.2. Winter Storms

Previous Occurrences

Notable winter storm events that impacted Baca County prior to the 2014 Southeast Region Hazard Mitigation Plan are described below.

March 2005 - Many sections of southern Colorado experienced an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

December 29, 2006 - Following on the heels of the December 20-22 blizzard, Colorado was subjected to a more severe blizzard starting on December 28th. Heavy snow and blizzard conditions impacted the southeast plains of southern Colorado. Wind gusts exceeded 55 mph, and snow amounts reached up to 48 inches. This caused snow drifts noted as high as 18 feet. The heaviest concentration of snow occurred within the Southeast region of the state (Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers). The area is home to 345,000 head of cattle and calves, 23,500 head of producing sows and 112,000 head of sheep and lambs, all with an estimated value of $500 million. Snow and transportation

difficulties kept ranchers from feeding their cattle. Hay was delivered via air (using Colorado National Guard UH-60 Blackhawk helicopters and a Wyoming National Guard C-130 aircraft) and ground assets. The State of Colorado purchased $12,000 dollars of hay for this effort. Despite these efforts, over 35,000 head of cattle perished during and after the blizzard. Estimated losses were over $3 million. The Colorado Department of Transportation was a critical participant in the southeast region response operations by clearing the road networks. Preliminary estimates for their snow blowing/plowing activities were $7.1 million. Due to the nature of the storm, mass feeding also became a major operation. An example of this was the Salvation Army in Baca County, where they provided 1,155 meals over five and one-half days. They were able to transport food from Denver to the region.

9.3. Bent County

9.3.1. Flooding

Previous Occurrences

Table 9-2 describes all previous recorded flooding events in Bent County.[6] No injuries or quantitative damages were reported with any events.

Table 9-2 Bent County Previous Flooding Events

Date	Location	Flood Type	Description
8/13/1994	Las Animas	Flash Flood	1.31 inches of rain fell in 30 minutes flooding a few basements in Las Animas.
5/1/1999	Bent County	Flood	Flood waters spread east into Bent County on May 1, 1999. Although water levels climbed several feet above flood stage in Bent County, flood damage was confined mainly to roads and agricultural land. The local flood protection levee at Las Animas held back floodwaters and spared the city from severe flooding.
6/7/2001	Ft Lyon	Flash Flood	
8/28/2002	Las Animas	Flash Flood	Heavy rain from severe thunderstorms flooded areas from extreme northeast Bent county to Mud Creek and Caddoa Creek south of highway 50.
6/16/2004	Las Animas	Flash Flood	
8/5/2004	Las Animas	Flash Flood	Very heavy rain from a slow moving thunderstorm resulted in water over 6 inches deep to flow over highway 50 on the Bent-Otero County line.
8/18/2004	Las Animas	Flash Flood	Slow moving thunderstorms caused heavy rain which brought flash flooding to highway 194 just east of the Bent-Otero County line.
7/9/2006	Las Animas	Flash Flood	
2009	Bent County	Flash Flood	The planning team noted flash flooding/stormwater flooding at Highway 96 and County Road GG. This caused closure of sections of the roads due to areas being submerged by water.
7/13/2014	Las Animas	Flood	The Purgatoire River briefly went above flood stage east of Las Animas, causing minor agricultural flooding.
7/13/2014	Las Animas	Flood	The Purgatoire River briefly went above flood stage east of Las Animas, causing minor agricultural flooding.

[6] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; Planning Team

Date	Location	Flood Type	Description
7/15/2014	Las Animas	Flood	The Purgatoire River near Las Animas briefly went above flood stage causing minor agricultural flooding.
7/18/2014	Las Animas	Flood	The Purgatoire River near Las Animas went above flood stage, causing minor agricultural flooding.
7/29/2014	Mc Clave	Flash Flood	Strong storms with heavy rain caused flash flooding in the northeast part of the county. Numerous roads were flooded with washouts reported.
7/1/2016	Las Animas	Flash Flood	A storm produced flash flooding of arroyos and roadways in a rural area of southwest Bent County.
7/28/2017	Las Animas	Flash Flood	Very heavy rain from a thunderstorm produced water in excess of 6 inches on streets in Las Animas and briefly flooded county roads near and south of John Martin Reservoir.
Total: 16			

9.3.2. Winter Storms

Notable winter storm events that impacted Bent County prior to the 2014 Southeast Region Hazard Mitigation Plan are described below.

March 1977 – A blizzard on the plains of Colorado killed nine people.

October 1997 – deep snow cover over parts of the central Rockies and across the high plains of Nebraska, Kansas, and portions of western South Dakota and the panhandles of Oklahoma and Texas. Over two feet of snow fell in the planning area due to the storm.

March 2005 - Many sections of southern Colorado experienced an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

On **December 20, 2006** heavy snow and blizzard conditions occurred over the western southeast plains of southern Colorado. 10 to 15 inches blanketed all six counties in the planning region.

On **December 29, 2006**, following on the heels of the December 20-22 blizzard, Colorado was subjected to a more severe blizzard starting on December 28th. Heavy snow and blizzard conditions impacted the southeast plains of southern Colorado. Wind gusts exceeded 55 mph, and snow amounts reached up to 48 inches. This caused snow drifts noted as high as 18 feet. The heaviest concentration of snow occurred within the Southeast region of the state (Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers). The area is home to 345,000 head of cattle and calves, 23,500 head of producing sows and 112,000 head of sheep and lambs, all with an estimated value of $500 million. Snow and transportation difficulties kept ranchers from feeding their cattle. Hay was delivered via air (using Colorado National

Guard UH-60 Blackhawk helicopters and a Wyoming National Guard C-130 aircraft) and ground assets. The State of Colorado purchased $12,000 dollars of hay for this effort. Despite these efforts, over 35,000 head of cattle perished during and after the blizzard. Estimated losses were over $3 million. The Colorado Department of Transportation was a critical participant in the southeast region response operations by clearing the road networks. Preliminary estimates for their snow blowing/plowing activities were $7.1 million. Due to the nature of the storm, mass feeding also became a major operation. An example of this was the Salvation Army in Baca County, where they provided 1,155 meals over five and one-half days. They were able to transport food from Denver to the region.

During early **February 2008,** a winter storm produced bands of six to ten inches of snow along eastern Colorado and into Kansas and Nebraska. Many severe winter storms were reported across eastern Colorado throughout the early part of 2008. While snow accumulation generally remained below six inches, the snow was often accompanied by freezing rain and drizzle or foggy conditions. This band affected Crowley and Otero Counties. This emphasizes that even smaller-scale storms have a significant impact on the planning region.

On **March 24, 2010**, a winter storm produced localized snow drifts up to 4 feet as well as heavy snow over a large portion of southern Colorado. Between 6 and 14 inches of snow covered the six counties in the planning area.

9.4. Crowley County

9.4.1. Flooding

Previous Occurrences

Table 9-3 describes all previous recorded flooding events in Crowley County.[7] No injuries or deaths were reported with any events. Reported damages resulted in $30,000 in Sugar City from flooding on 8/19/2004.

Table 9-3 Crowley County Previous Flooding Events

Date	Location	Flood Type	Damages	Description
6/6/1997	Ordway	Flash Flood	0	Prolonged and widespread thunderstorm activity produced flooding across many of the highways and roads in Crowley and Otero counties. Highway 50 near La Junta in Otero county was closed due to flooding. Several bridges were either washed out or sustained damage on county roads around La Junta. Highway 96 near Ordway in Crowley county was flooded.
5/1/1999	Crowley County	Flood		The Arkansas River began to flood on April 30, 1999. Flooding problems became quite serious in Otero and Crowley Counties during the day of May 1, 1999.
8/4/1999	Ordway	Flash Flood	0	Heavy rain caused extensive flooding of low lying areas in central Crowley county. No significant property damage was reported.
8/19/2004	Sugar City	Flash Flood	$30,000	Slow moving thunderstorms caused very heavy rain which flooded and closed highway 96 for a time. Several homes were evacuated just east of Sugar City. Residences had water in their basements, in some cases more than four feet deep, which damaged and destroyed personal effects.
7/9/2006	Ordway	Flash Flood	0	
7/25/2016	Crowley	Flash Flood	0	Heavy rain produced flash flooding and high water in the Crowley and Ordway areas.
Total: 6			**$30,000**	

[7] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; Planning Team

9.4.2. Winter Storms

Notable winter storm events that impacted Crowley County prior to the 2014 Southeast Region Hazard Mitigation Plan are described below.

March 1977 – A blizzard on the plains of Colorado killed nine people.

October 1997 – deep snow cover over parts of the central Rockies and across the high plains of Nebraska, Kansas, and portions of western South Dakota and the panhandles of Oklahoma and Texas. Over two feet of snow fell in the planning area due to the storm.

March 2005 - Many sections of southern Colorado experienced an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

On **December 20, 2006** heavy snow and blizzard conditions occurred over the western southeast plains of southern Colorado. 10 to 15 inches blanketed all six counties in the planning region.

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On **March 24, 2010**, a winter storm produced localized snow drifts up to 4 feet as well as heavy snow over a large portion of southern Colorado. Between 6 and 14 inches of snow covered the six counties in the planning area.

9.5. Kiowa County

9.5.1. Flooding

Previous Occurrences

Table 9-4 describes all previous recorded flooding events in Kiowa County.[8] No injuries, deaths, or quantitative damages were reported with any events.

Table 9-4 Kiowa County Previous Flooding Events

Date	Location	Flood Type	Description
7/2/1994	Eads	Flash Flood	Thunderstorms produced flash flooding in Eads (25 miles north of La Junta). Water up to 4 feet deep flooded the underpass at Colorado Highways 96 and 27 in the town.
8/2/1994	Brandon	Flash Flood	1.75 inches of rain fell in the town of Brandon with minor flooding of rural roads and along Highway 96 between the towns of Brandon and Sheridan Lake.
7/1/1998	Haswell	Flash Flood	1.43 inches of rain fell in one hour, causing flooding of Highway 96 and several roads in the town of Haswell.
8/9/1998	Eads	Flash Flood	Slow moving thunderstorms produced heavy rain and hail 1/2 inch diameter in the vicinity of the town of Eads. Doppler radar estimated rainfall rates of 2 inches per hour. Several streets in Eads were flooded, closing them for approximately 1 hour until the flood waters receded, and a viaduct was flooded with several feet of water.
8/5/1999	Sheridan Lake	Flash Flood	Heavy rain caused flooding of low lying areas in rural Kiowa county. The dry wash of Wildhorse Creek flooded, but no significant property damage was reported.
5/24/2005	Brandon	Flash Flood	Flash flooding caused 1 foot of fast flowing water over portions of county road 95.
7/10/2005	Sheridan Lake	Flash Flood	Heavy thunderstorm rains caused roadways to be covered by 1 foot of water with some washouts noted on side roads.
7/29/2014	Eads	Flash Flood	A nearly stationary strong storm produced over 5 inches of rain in and around Eads. Numerous roads and a viaduct were flooded. US Highway 287 was closed for a time.

[8] NCEI Storm Events Database, accessed May 2019; 2014 Southeast Region Hazard Mitigation Plan; Planning Team

Date	Location	Flood Type	Description
7/29/2014	Eads	Flash Flood	Strong storms with heavy rain caused flash flooding in the south central section of the county. Numerous roads were flooded with washouts reported.
7/15/2017	Eads	Flash Flood	The underpass at US Highway 287 and State Highway 96 was flooded with over 2 feet of water. County Road 40 was also flooded.
Total: 10			

9.5.2. Winter Storms

Notable winter storm events that impacted Kiowa County prior to the 2014 Southeast Region Hazard Mitigation Plan are described below.

March 1931 – A blizzard near Eads caused a school bus to become stuck. Tragically, six people died as a result; five were school children, and the bus driver died as well.

October 1946 – A lengthy snowstorm clobbered eastern Colorado with 20- 50 inches of snow and high winds. At least 13 people died. The storm began on Halloween. It rained that evening, then turned into snow the following day. The snow fell steadily for three days, ending up 3-5 feet deep in areas. The storm knocked out phone service. It was a slow process to open roads, taking two weeks to open up from La Junta – school kids out of Arlington couldn't get in for about two weeks as well. Arlington had an extensive feed yard system, still partly in operation in 1946. Following the storm, ranchers brought their cattle to town. 10-15% of herds died in storm, most of the rest brought to Arlington to be trucked out.

March 1977 – A blizzard on the plains of Colorado killed nine people.

October 1997 – deep snow cover over parts of the central Rockies and across the high plains of Nebraska, Kansas, and portions of western South Dakota and the panhandles of Oklahoma and Texas. Over two feet of snow fell in the planning area due to the storm.

March 2005 - Many sections of southern Colorado experienced an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

On **December 20, 2006** heavy snow and blizzard conditions occurred over the western southeast plains of southern Colorado. 10 to 15 inches blanketed all six counties in the planning region.

On **December 29, 2006**, following on the heels of the December 20-22 blizzard, Colorado was subjected to a more severe blizzard starting on December 28th. Heavy snow and blizzard conditions impacted the

southeast plains of southern Colorado. Wind gusts exceeded 55 mph, and snow amounts reached up to 48 inches. This caused snow drifts noted as high as 18 feet. The heaviest concentration of snow occurred within the Southeast region of the state (Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers). The area is home to 345,000 head of cattle and calves, 23,500 head of producing sows and 112,000 head of sheep and lambs, all with an estimated value of $500 million. Snow and transportation difficulties kept ranchers from feeding their cattle. Hay was delivered via air (using Colorado National Guard UH-60 Blackhawk helicopters and a Wyoming National Guard C-130 aircraft) and ground assets. The State of Colorado purchased $12,000 dollars of hay for this effort. Despite these efforts, over 35,000 head of cattle perished during and after the blizzard. Estimated losses were over $3 million. The Colorado Department of Transportation was a critical participant in the southeast region response operations by clearing the road networks. Preliminary estimates for their snow blowing/plowing activities were $7.1 million. Due to the nature of the storm, mass feeding also became a major operation. An example of this was the Salvation Army in Baca County, where they provided 1,155 meals over five and one-half days. They were able to transport food from Denver to the region.

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On **March 24, 2010**, a winter storm produced localized snow drifts up to 4 feet as well as heavy snow over a large portion of southern Colorado. Between 6 and 14 inches of snow covered the six counties in the planning area.

9.6. Otero County

9.6.1. Flooding

Previous Occurrences

Table 9-5 describes all previous recorded flooding events in Otero County. A total of 13 deaths and $15,594,000 in damages have been recorded from these events.

Table 9-5 Otero County Previous Flooding Events

Date	Location	Flood Type	Deaths	Damages	Description
7/20/1886	La Junta	Flash Flood	0	$0	A large flood occurred in the valley below the confluence of the Purgatoire River during the period of July 20-25, 1886. This flood was produced by rainfall with heavy amounts occurring in the vicinity of Las Animas and La Junta. At Las Animas there were 3.36 inches of rainfall on July 24 and 25. At La Junta water reportedly came down the King Arroyo in a 12-foot wave. In Anderson, Arroyo water was at least 20 feet deep and overtopped the AT&SF Railway Bridge

Date	Location	Flood Type	Deaths	Damages	Description
6/1/1921	La Junta, Otero County	Flood	13	$0	Two areas of intense rainfall were observed above Pueblo. One of these was mostly north of the towns of Florence and Canon City. The other was fairly well distributed on both banks of the Arkansas River between Portland and Pueblo. Precipitation in this latter area is reported to have been as much as 11 inches in six hours while in the other area it was reported to have been as much as nine inches in six hours. The rainfall in the upper area was reported to have occurred first so that runoff combined with that below to produce the largest flood of record at Pueblo. The peak discharge of 103,000 cubic feet per second (cfs) occurred at midnight on June 3. Above La Junta the effect of Va11ey storage on peak attrition was obscured by the inflow from tributary streams and the peak discharge at La Junta was 200,000 cubic feet per second. North La Junta was flooded; water was four to six feet deep on Second Street and reached the Otero County Jail. It was reported that 13 persons were drowned although some of the bodies were not found until June 9. Areas in the Huerfano and Purgatoire Rivers and in Timpas, Adobe, and Horse Creek were flooded. Heavy rains occurred on the main stem of the Arkansas River from La Junta to Lamar. Below La Junta tributary inflow was small.

Date	Location	Flood Type	Deaths	Damages	Description
5/17/1955	La Junta	Flood	0	$400,000	During the period of May 17-20, heavy precipitation occurred over the lower mountains and plains of eastern Colorado, northeastern New Mexico and western Kansas. The storm began on the afternoon of May 17 over the entire area and continued through the 19th in New Mexico and Kansas. Major flooding occurred in the Arkansas River watershed from Pueblo to the John Martin Reservoir. The Arkansas River at Pueblo peaked at 11,100 cfs and produced very little flooding. As the flood progressed downstream, the peak increased to 50,000 cfs at La Junta and caused major flood damage to North La Junta. There were 236 residents, five businesses, one school, and one church in the flooded area of North La Junta. Streets and public utilities were heavily damaged as well as individual water supply and sewage disposal systems. A low levee to protect against minor overflows on the Arkansas River was lost and two bridges were damaged. National Guard assisted in the evacuation of 500 to 1,000 people in North La Junta. About 300 residences were flooded in La Junta, eight to 10 blocks on the south side of town flooded. Damages were estimated at $400,000 ($3.3 million in 2010 dollars). A county bridge west of La Junta washed out. The Arkansas River crest at La Junta was 14.2 feet (about 54,000 cfs) at 1:30 p.m on May 20.

Date	Location	Flood Type	Deaths	Damages	Description
6/17/1965	La Junta, Otero County	Flood	0	$15 million	Along the Arkansas River and its tributaries between Pueblo and the John Martin Dam, near the Colorado/Kansas state line, approximately 45,000 acres were flooded. Agricultural losses, as well as damage to transportation and urban facilities, were substantial and amounted to about $15 million. Below Pueblo, north La Junta was severely damaged by floodwaters during June 17-19
5/1/1969	La Junta	Flood	0	$144,000	Flood flows from Anderson Arroyo damaged about 35 residences and businesses in La Junta. This flood also damaged a sanitary sewer line, city streets, farmsteads, croplands and fences. A few head of livestock were lost and some hay was damaged or washed away. The total estimated damages for this flood amounted to $144,000. Some minor damage occurred to the Otero Canal. This canal crosses Anderson Arroyo about five miles upstream from the mouth.
6/6/1997	La Junta	Flash Flood	0	$0	Prolonged and widespread thunderstorm activity produced flooding across many of the highways and roads in Crowley and Otero counties. Highway 50 near La Junta in Otero county was closed due to flooding. Several bridges were either washed out or sustained damage on county roads around La Junta. Highway 96 near Ordway in Crowley county was flooded.

Date	Location	Flood Type	Deaths	Damages	Description
4/30/1999	La Junta	Flood	0	$0	The Arkansas River began to flood on April 30, 1999. Flooding problems became quite serious in Otero and Crowley Counties during the day of May 1, 1999. During the evening of May 1, 1999 through the day of May 2,1999, the flooding reached major proportions from Rocky Ford to La Junta. By the morning of May 2, up to eight feet of water flooded the north La Junta area as the Arkansas River swelled with runoff from the storm in the Pikes Peak region. Rocky Ford experienced flooding and sewer water back up problems, but the area known as North La Junta was most severely affected. In North La Junta, about 300 homes were flooded with water two thirds of the way up doorways and flowing through businesses. Rescues were performed to save the lives of those who refused to leave during evacuations. Many homes and businesses located on the south bank portion of La Junta were also flooded. These areas in south La Junta were primarily affected by storm sewer back up.

Date	Location	Flood Type	Deaths	Damages	Description
7/17/1999	Rocky Ford	Flash Flood	0	$0	Very heavy rain fell in a few hours time from just south of Manzanola to about five miles northwest of Rocky Ford near U.S. Highway 50. The resulting flood closed highway 50 for six hours Saturday morning. Widespread flooding occurred from county roads 11 to 16. Many road washouts were reported and damage occurred to two irrigation canals. A residence was destroyed by two foot deep flood waters. The railroad just south of highway 50 was undermined when the trestle abutments washed away. No firm damage amounts were available as of late September.
6/29/2003	La Junta	Flash Flood	0	$0	Thunderstorms with very heavy rainfall produced some flash flooding in the vicinity of La Junta...especially southern areas. Water reached the doorsteps of some resident's homes while arroyo's were running at and even occasionally over their banks.
8/5/2004	La Junta	Flash Flood	0	$0	Very heavy rain from a slow moving thunderstorm resulted in water over 6 inches deep to flow over highway 50 on the Bent-Otero County line.
8/18/2004	La Junta	Flash Flood	0	$0	Slow moving thunderstorms produced very heavy rain and flash flooding on highways 94, 50, and 194.

Date	Location	Flood Type	Deaths	Damages	Description
7/9/2006	La Junta	Flash Flood	0	$0	Rainfall amounts of 2 to 3 inches in one hour's time fell on already saturated ground in Pueblo County as well as several other counties in southeast Colorado. Numerous creeks, arroyos and low water crossings flooded with fast flowing water and debris. The heavy rain also caused flooding of roads in Pueblo West and over portions of I-25, prompting numerous water rescues. As the heavy rains continued eastward, flooding problems then spread east across portions of Crowley, Otero and Bent Counties, leaving behind additional closed roads, including US Highway 50 in La Junta, Highway 194 near Las Animas and numerous county roads around Ordway.
5/24/2007	La Junta	Flood	0	$0	Heavy rain across southeast Colorado caused the Arkansas River to rise less than one foot above flood stage for nearly two days at La Junta. Agricultural flooding occurred and no structures were damaged.
6/26/2007	Fowler	Flash Flood	0	$50,000	A complex of strong to severe thunderstorms produced very heavy rain which flooded low areas and basements from Fowler to Rocky Ford.

Date	Location	Flood Type	Deaths	Damages	Description
9/16/2013	Fowler	Flood	0	$0	The runoff across the Pikes Peak Region sent a flood wave down Fountain Creek and adjacent drainages into the Arkansas River. The flood wave traveled down Fountain Creek and the Arkansas River through Pueblo County on the 12th through the 14th. It then continued down the Arkansas River through Otero County on the 15th through the 17th. The river flooding that occurred was mostly minor, mainly affecting agricultural lands. The Oxford Ditch in Otero County overflowed on to rural roads due to high flows in the Arkansas River on the 16th. Additionally, some low lying residential lands and part of Highway 194 east of La Junta flooded on the 17th. No fatalities or major property damage to structures occurred.
9/16/2013	La Junta	Flood	0	$0	The Arkansas River went above flood stage in the La Junta area, flooding some roads near the river.
7/12/2014	North La Junta	Flash Flood	0	$0	Numerous roads and low lying areas experienced flash flooding central Otero County, including the La Junta and Swink areas, and arroyo watersheds in the south-cental portions of the county. Highways 109 and 50 were closed for several hours.
7/12/2014	La Junta	Flood	0	$0	Heavy rain caused a brief rise above flood stage on the Arkansas River at La Junta. Minor agricultural flooding occurred.
7/13/2014	La Junta	Flood	0	$0	The Arkansas River at La Junta briefly went above flood stage causing minor agricultural flooding.
7/15/2014	La Junta	Flood	0	$0	The Arkansas River at La Junta briefly went above flood stage causing minor agricultural flooding.

Date	Location	Flood Type	Deaths	Damages	Description
7/18/2014	La Junta	Flood	0	$0	The Arkansas River at La Junta went just above flood stage, causing minor agricultural flooding.
7/18/2014	La Junta	Flood	0	$0	The Arkansas River at La Junta went above flood stage, causing minor agricultural flooding.
8/10/2014	(Lhx)La Junta Arpt	Flash Flood	0	$0	Heavy rain caused flash flooding across the North La Junta area and northward toward Cheraw.
5/8/2015	La Junta	Flash Flood	0	$0	Severe storms brought some flooding, damaging winds, hail up to the size of golf balls, and a brief tornado in Otero County.
5/23/2015	Swink	Flash Flood	0	$0	The Highway 50 underpass was flooded with around 12 inches of water near Swink.
5/31/2016	Fowler	Flash Flood	0	$0	Strong storms produced heavy rain and flooding of roadways to depths greater than 6 inches along US Highway 50 and on streets in Manzanola and Rockyford.
6/12/2016	(Lhx)La Junta Arpt	Flash Flood	0	$0	Heavy rain caused runoff from hills south of US Highway 50 near the Otero County Bent County line. Water was over a foot deep and washed vehicles off the highway.
7/25/2016	Manzanola	Flash Flood	0	$0	Heavy rain caused flash flooding of roadways and low spots, including US Highway 50.
7/23/2018	La Junta	Flash Flood	0	$0	Heavy rain caused US Highway 50 to close in La Junta due to flash flooding, according to the State Patrol.
Total: 29			**13**	**$15.6 million**	

9.6.2. Winter Storms

Previous Occurrences

Significant winter storm events prior to the 2014 Southeast Region Hazard Mitigation Plan are described below.

October 1946 – A lengthy snowstorm clobbered eastern Colorado with 20- 50 inches of snow and high winds. At least 13 people died. The storm began on Halloween. It rained that evening, then turned into snow the following day. The snow fell steadily for three days, ending up 3-5 feet deep in areas. The storm knocked out phone service. It was a slow process to open roads, taking two weeks to open up from La Junta – school kids out of Arlington couldn't get in for about two weeks as well. Arlington had an extensive feed yard system, still partly in operation in 1946. Following the storm, ranchers brought their cattle to town. 10-15% of herds died in storm, most of the rest brought to Arlington to be trucked out.

March 1977 – A blizzard on the plains of Colorado killed nine people.

October 1997 – deep snow cover over parts of the central Rockies and across the high plains of Nebraska, Kansas, and portions of western South Dakota and the panhandles of Oklahoma and Texas. Over 2 feet of snow fell in the planning area due to the storm.

March of 2005 went out like a lion over many sections of southern Colorado as an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

On December 20, 2006 heavy snow and blizzard conditions occurred over the western southeast plains of southern Colorado. 10 to 15 inches blanketed all six counties in the planning region.

On December 29, 2006, following on the heels of the December 20-22 blizzard, Colorado was subjected to a more severe blizzard starting on December 28th. Heavy snow and blizzard conditions impacted the southeast plains of southern Colorado. Wind gusts exceeded 55 mph, and snow amounts reached up to 48 inches. This caused snow drifts noted as high as 18 feet. The heaviest concentration of snow occurred within the Southeast region of the state (Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers). The area is home to 345,000 head of cattle and calves, 23,500 head of producing sows and 112,000 head of sheep and lambs, all with an estimated value of $500 million. Snow and transportation difficulties kept ranchers from feeding their cattle. Hay was delivered via air (using Colorado National Guard UH-60 Blackhawk helicopters and a Wyoming National Guard C-130 aircraft) and ground assets. The State of Colorado purchased $12,000 dollars of hay for this effort. Despite these efforts, over 35,000 head of cattle perished during and after the blizzard. Estimated losses were over $3 million. The Colorado Department of Transportation was a critical participant in the southeast region response operations by clearing the road networks. Preliminary estimates for their snow blowing/plowing activities were $7.1 million. Due to the nature of the storm, mass feeding also became a major operation. An example of this was the Salvation Army in Baca County, where they provided 1,155 meals over five and one-half days. They were able to transport food from Denver to the region.

During early February 2008, a winter storm produced bands of six to ten inches of snow along eastern Colorado and into Kansas and Nebraska. Many severe winter storms were reported across eastern Colorado throughout the early part of 2008. While snow accumulation generally remained below six inches, the snow was often accompanied by freezing rain and drizzle or foggy conditions. This band

affected Crowley and Otero Counties This emphasizes that even smaller-scale storms have a significant impact on the planning region.

On March 24, 2010, a winter storm produced localized snow drifts up to 4 feet as well as heavy snow over a large portion of southern Colorado. Between 6 and 14 inches of snow covered the six counties in the planning area.

9.7. Prowers County

9.7.1. Flooding

Previous Occurrences

Table 9-6 describes all previous recorded flooding events in Prowers County.

Table 9-6 Prowers County Previous Flooding Events

Date	Location	Flood Type	Damages	Description
June 1965	County	Flood	$0	Along the Arkansas River and its tributaries between Pueblo and the John Martin Dam, near the Colorado/Kansas state line, approximately 45,000 acres were flooded. Agricultural losses, as well as damage to transportation and urban facilities, were substantial and amounted to about $15 million. Below Pueblo, north La Junta was severely damaged by floodwaters during June 17-19. Although all water from the upstream area was stored in the John Martin Reservoir, serious flooding began less than three miles downstream. The flood below the dam was much more severe than the flood between Pueblo and the John Martin Dam; illustrating the limitations of a single flood-control structure. Over 220,000 acres of rural, urban, waste, and woodland lands were flooded between the John Martin Dam and Great Bend, Kansas. Outstanding floods occurred on June 17 on the south-bank tributaries of the Arkansas. Wolf Creek flooded the town of Granada. Triggered by rains of over nine inches at Two Buttes and 11 inches near Holly on June 17, the floodwaters of Two Butte Creek reached a peak discharge of 82,600 cfs above Two Buttes Reservoir and increased to 182,000 cfs at the mouth, overtopping the reservoir. Floods devastated the towns of Holly and Granada, and both locales were evacuated as floodwaters inundated the valuable farmlands surrounding the two towns. The floodwaters that hit the town of Holly caused flooding that extended to Great Bend, Kansas.
5/25/1996	Lamar	Flood	$0	Strong thunderstorms moved across the northern portions of Prowers county the night of the 25th and into the early morning hours of the 26th. An 8 mile stretch of Highway 196 was water-covered, and normally dry washes were

Date	Location	Flood Type	Damages	Description
				running full. Rainfall reports ranged from 2 1/4 inches in Lamar to 4 3/4 inches 20 miles south of the town of Holly.
7/30/1996	Lamar	Flash Flood	$0	Nearly 3 inches of rain fell on an already saturated ground, creating widespread flooding of small streams in the vicinity of Lamar. Williams and Clay creeks went out of their banks, and lowland flooding was reported in downtown Lamar.
7/29/1997	Wiley	Flash Flood	$0	Heavy rains from thunderstorms produced flooding of roads and low spots around the town of Wiley in Prowers county and flooding of county roads around the town of Prowers in Bent county.
8/13/1997	Lamar	Flash Flood	$0	A thunderstorm brought very heavy rain on already saturated soil that flooded many county roads and city streets and low spots to depths of one to two feet.
7/24/1998	Lamar	Flash Flood	$0	Scattered thunderstorms produced rainfall rates of 1 to 2 inches per hour over previously saturated ground. At least 6 inches of water was reported flowing across parts of highway 196 northwest of Lamar.
7/5/2002	Lamar	Flash Flood	$0	Very heavy rainfall in excess of six inches caused flash flooding of Wolf Creek...Granada Creek and Plum Creek drainage basins in central Prowers county. A bridge over Wolf Creek just north of Granada was damaged. No dollar amount to fix the bridge was available at this time.
8/28/2002	Wiley	Flash Flood	$0	Over four inches of rain, and large hail, caused flooding of roadways and a few houses.
8/28/2002	Lamar	Flash Flood	$50,000	Heavy rain from severe thunderstorms caused flash flooding from the Willow Creek drainage basin in Lamar southward. A rental store sustained heavy flood damage between 7:30 p.m. and 8:00 p.m., as water was up to three feet deep on the property. A local golf course was closed because bridges and crossings over the creek were washed out. The greens suffered hail damage. Mud was deep in many streets on the south and east sides of Lamar in the Willow Creek drainage. Parts of highway 287, south of Lamar, were closed due to high water.
6/9/2004	Lamar	Flash Flood	$0	Water washed over county road 8 and TT road.

Date	Location	Flood Type	Damages	Description
6/20/2004	Lamar	Flash Flood	$0	Flash flooding occurred along highway 196 between Lamar and Bristol due to heavy thunderstorm rains.
7/28/2004	Holly	Flash Flood	$0	Two to 5 inches of rain in only a few hours caused several inches of water to flow over roadways as well numerous road washouts...mainly 3 to 10 miles south and southwest of Holly.
9/24/2004	Holly	Flash Flood	$0	Heavy thunderstorm rains caused flooding of Horse Creek and West Wildhorse Creek.
6/26/2007	Lamar	Flash Flood	$20,000	An area of strong to severe thunderstorms produced very heavy rain in and around Lamar. Many streets were covered by at least 6 inches of water.
8/22/2007	Granada	Flash Flood	$0	Heavy rain from nearly stationary thunderstorms brought ponding of water over six inches deep to the Granada area in Prowers County.
7/31/2010	Bristol	Flash Flood	$0	Flowing water more than six inches deep occurred on Highway 196 between Bristol and County Road 19. The intersection of Highway 196 and Highway 385 was closed due to the flooding.
7/12/2014	Lamar	Flash Flood	$0	Heavy rain caused flash flooding of county roads and US Highway 50 east of Lamar.
7/13/2014	Lamar	Flood	$0	The Arkansas River at Lamar briefly went above flood stage causing minor agricultural flooding.
7/26/2014	Lamar Arpt	Flash Flood	$0	Strong, slow moving storms produced heavy rain and flash flooding across portions of Bent, Baca, and Prowers Counties. Many roads were flooded and washed out.
7/29/2014	Wiley	Flash Flood	$0	Strong storms with heavy rain caused flash flooding in the northwest part of the county. Numerous roads were flooded with washouts reported.
7/30/2014	Lamar	Flood	$0	The Arkansas River at Lamar went above flood stage, causing minor agricultural flooding.
5/24/2015	Lamar	Flash Flood	$0	Severe storms produced heavy rain and large hail which flooded roadways southeast of Lamar.
7/14/2015	Lamar	Flash Flood	$0	Street flooding to a depth of greater than six inches was reported across Lamar.
8/16/2015	Lamar Arpt	Flash Flood	$0	Heavy rain caused water greater than 6 inches deep on city streets in Lamar and surrounding county roads. In addition, Buffalo Canal was

Date	Location	Flood Type	Damages	Description
				flooded, as well as town streets in and around Granada and Holly.
8/17/2015	Wiley	Flash Flood	$0	Many county roads and city streets were flooded to a depth of greater than 6 inches across Lamar and surrounding areas.
7/23/2018	Lamar	Flash Flood	$0	A strong thunderstorm accumulated 12-18 inches of standing water over Main Street in Lamar, Colorado. The road was closed down.
7/23/2018	Bristol	Flash Flood	$0	Heavy rain caused flooding over County Road 19 5 miles west of Bristol.
Totals	**Count: 27**		**$70,000**	

9.7.2. Winter Storms

Previous Occurrences

Significant winter storm events prior to the 2014 Southeast Region Hazard Mitigation Plan are described below.

March 1977 – A blizzard on the plains of Colorado killed nine people.

October 1997 – deep snow cover over parts of the central Rockies and across the high plains of Nebraska, Kansas, and portions of western South Dakota and the panhandles of Oklahoma and Texas. Over 2 feet of snow fell in the planning area due to the storm.

March of 2005 went out like a lion over many sections of southern Colorado as an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

On December 20, 2006 heavy snow and blizzard conditions occurred over the western southeast plains of southern Colorado. 10 to 15 inches blanketed all six counties in the planning region.

On December 29, 2006, following on the heels of the December 20-22 blizzard, Colorado was subjected to a more severe blizzard starting on December 28th. Heavy snow and blizzard conditions impacted the southeast plains of southern Colorado. Wind gusts exceeded 55 mph, and snow amounts reached up to 48 inches. This caused snow drifts noted as high as 18 feet. The heaviest concentration of snow occurred within the Southeast region of the state (Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers). The area is home to 345,000 head of cattle and calves, 23,500 head of producing sows and 112,000 head of sheep and lambs, all with an estimated value of $500 million. Snow and transportation difficulties kept ranchers from feeding their cattle. Hay was delivered via air (using Colorado National Guard UH-60 Blackhawk helicopters and a Wyoming National Guard C-130 aircraft) and ground assets. The State of Colorado purchased $12,000 dollars of hay for this effort. Despite these efforts, over 35,000 head of cattle perished during and after the blizzard. Estimated losses were over $3 million. The

Colorado Department of Transportation was a critical participant in the southeast region response operations by clearing the road networks. Preliminary estimates for their snow blowing/plowing activities were $7.1 million. Due to the nature of the storm, mass feeding also became a major operation. An example of this was the Salvation Army in Baca County, where they provided 1,155 meals over five and one-half days. They were able to transport food from Denver to the region.

During early February 2008, a winter storm produced bands of six to ten inches of snow along eastern Colorado and into Kansas and Nebraska. Many severe winter storms were reported across eastern Colorado throughout the early part of 2008. While snow accumulation generally remained below six inches, the snow was often accompanied by freezing rain and drizzle or foggy conditions. This band affected Crowley and Otero Counties. This emphasizes that even smaller-scale storms have a significant impact on the planning region.

On March 24, 2010, a winter storm produced localized snow drifts up to 4 feet as well as heavy snow over a large portion of southern Colorado. Between 6 and 14 inches of snow covered the six counties in the planning area.

10. Appendix D: Jurisdictional Plan Adoptions

"Baca County, Colorado
in the
Ports to Plains Corridor Connecting Mexico to Canada"

BACA COUNTY
COLORADO

Resolution No. 2020-15

A RESOLUTION ADOPTING SOUTHEAST COLORADO
ALL-HAZARDS REGION REGIONAL HAZARD MITIGATION PLAN

WHEREAS, Baca County, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP), hereinafter referred to as "the Plan"; and

WHEREAS, the Southeast Colorado All-Hazards Region Regional HMP has been prepared in accordance with Federal Emergency Management Agency (FEMA) requirements at 44 C.F.R. 201.6; and,

WHEREAS, Baca County is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of County Commissioners of Baca County has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Baca County, Colorado, adopts the Southeast Colorado All-Hazards Region Regional HMP as this jurisdiction's Multi-HMP, and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 13th day of August 2020.

BOARD OF COUNTY COMMISSIONERS
BACA COUNTY, COLORADO

Glen R. Ausmus

Glen R. Ausmus
Chairman

ATTEST:

Sharon Dubois

Sharon Dubois
Clerk and Recorder

Resolution No. 2020-9-14

A RESOLUTION ADOPTING SOUTHEAST COLORADO ALL-HAZARDS REGION REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Campo, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP); and

WHEREAS, the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the Town of Campo is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of Trustees has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees that the Town of Campo adopts the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 14th day of September 20 20 .

Coantha Johnson

Coantha Johnson, Mayor
Board of Trustees

ATTEST:

Cassie Bachman

Cassie Bachman, Town Clerk

Resolution No. 2020-3

A RESOLUTION ADOPTING SOUTHEAST COLORADO ALL-HAZARDS REGION REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Pritchett, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP); and

WHEREAS, the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the Town of Pritchett is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of Trustees has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees that the Town of Pritchett adopts the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 8th day of September, 2020.

Al Payne

Al Payne, Mayor

Reva Phillips

ATTEST: Reva Phillips, Town Clerk

Resolution No. 20-16

A RESOLUTION ADOPTING SOUTHEAST COLORADO ALL-HAZARDS REGION REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Springfield, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP); and

WHEREAS, the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the Town of Springfield is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of Trustees has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees that the Town of Springfield adopts the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 10th day of September, 2020.

Tyler Gibson, Mayor
Board of Trustees

Donald Steerman
Attorney

ATTEST:

Tammy Newman
Town Clerk

Resolution No. 2020-_____

A RESOLUTION ADOPTING SOUTHEAST COLORADO ALL-HAZARDS REGION REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Two Buttes, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP); and

WHEREAS, the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the Town of Two Buttes is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of Trustees has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees that the Town of Two Buttes adopts the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 8 day of September 2020.

Rod Steinmetz
Rod Steinmetz, Mayor
Board of Trustees

ATTEST:

Donna Wood
Donna Wood, Town Clerk

A RESOLUTION ADOPTING 2020 SOUTHEAST COLORADO

REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Vilas, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the 2020 Southeast Colorado Regional Hazard Mitigation Plan (HMP); and

WHEREAS, the 2020 Southeast Colorado Regional Hazard Mitigation Plan (HMP) has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the Town of Vilas is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of Trustees has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees that the Town of Vilas adopts the 2020 Southeast Colorado Regional Hazard Mitigation Plan (HMP) as this jurisdiction's Multi-Hazard Mitigation Plan and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 8th day of September, 2020.

Attest:

Lisa Byrne, Mayor	9/8/20 Date
Rusty Allen, Public Trustee	9/8/20 Date
Clif Hair, Public Trustee	9-8-20 Date
Billie Freiberger, Public Trustee	9/8/2020 Date
— NOT PRESENT — Ethan T. Eubanks, Public Trustee	— Date
Patricia Hebberd, Public Trustee	9-8-2020 Date
— NOT PRESENT — Charley Rife, Public Trustee	— Date

Resolution No. 2020-05

A RESOLUTION ADOPTING SOUTHEAST COLORADO ALL-HAZARDS REGION REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Walsh, with the assistance from Baca County Office of Emergency Management, has gathered information and prepared the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP); and

WHEREAS, the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the Town of Walsh is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, The Board of Trustees has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees that the Town of Walsh adopts the Southeast Colorado All-Hazards Region Regional Hazard Mitigation Plan (HMP) as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

MOVED, PASSED AND ADOPTED this 14th day of September, 2020.

Don Lohrey, Mayor
Board of Trustees

ATTEST:

Donna Packard Dawson, Town Clerk

RESOLUTION NO. 2020-12

A RESOLUTION TO ADOPT THE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, Bent County with the assistance from Riley Frazee, has gathered information and prepared the Southeast Region Hazard Mitigation Plan; and,

WHEREAS, the Southeast Region Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, Bent County is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, the Bent County Board of County Commissioners has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Board of County Commissioners that Bent County adopts the Southeast Region Hazard Mitigation Plan as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

APPROVED AND ADOPTED this 22nd day of October, 2020 at the meeting of the Bent County Board of County Commissioners.

Jean Sykes
JEAN SYKES, Chairwoman

Chuck Netherton
CHUCK NETHERTON, Commissioner

Kim MacDonnell
KIM MACDONNELL, Commissioner

ATTEST:

Lynda G Moss
LYNDA G. MOSS, County Clerk and Recorder

RESOLUTION NO. 2020-7892

RESOLUTION ADOPTING THE 2020 SOUTHEAST COLORADO REGIONAL HAZARD MITIGATION PLAN

WHEREAS, Crowley County, with the assistance from Synergy Disaster Recovery, has gathered information and prepared the Southeast Colorado Regional Hazard Mitigation Plan; and,

WHEREAS, the Southeast Colorado Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, Crowley County is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, the Board of Crowley County Commissioners has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the Board of Crowley County Commissioners that Crowley County adopts the 2020 Southeast Colorado Regional Hazard Mitigation Plan as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED AND APPROVED THIS 17th day of August, 2020.

ATTEST:

Melinda Carter, Clerk & Recorder

CROWLEY COUNTY CLERK SEAL COLORADO

BOARD OF COUNTY COMMISSIONERS
COUNTY OF CROWLEY, COLORADO

Blaine Arbuthnot, Chairman

T. E. Allumbaugh, Commissioner

Roy Elliott, Commissioner

RESOLUTION No. 2020-04

A RESOLUTION TO ADOPT THE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, *Kiowa County*, with the assistance from *Riley Frazee*, has gathered information and prepared the Southeast Region Hazard Mitigation Plan; and,

WHEREAS, the Southeast Region Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, *Kiowa County* is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, *Kiowa County* has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by *the Kiowa County Board of Commissioners* that *Kiowa County* adopts the Southeast Region Hazard Mitigation Plan as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED this 29th day of October, 2020 at the meeting of the *Kiowa County Board of County Commissioners.*

Richard Scott, Chairman

Howard "Butch" Robertson, Commissioner

Donald Oswald, Commissioner

ATTEST:

Delisa Weeks, County Clerk & Recorder

STATE OF COLORADO)
) ss.
County of Otero)

At a Regular Meeting of the Board of County Commissioners for Otero County, Colorado, held at the Courthouse in La Junta, Colorado, on the 31st day of August, A.D., 2020, there were present:

☑ Keith Goodwin, Chairman
☑ Jim Baldwin, Commissioner
☑ John Hostetler, Commissioner
☑ Lynda Scott, Clerk to the Board
☑ Amy White-Tanabe, County Administrator

when the following proceedings were had and done, to-wit:

Resolution #2020-10

A RESOLUTION ADOPTING THE "SOUTHEAST COLORADO REGIONAL HAZARD MITIGATION PLAN, COMPREHENSIVE UPDATE, 2020" AS OTERO COUNTY'S MULTI-HAZARD MITIGATION PLAN.

WHEREAS, Baca County, Colorado, Bent County, Colorado, Crowley County, Colorado, Kiowa County, Colorado, Otero County, Colorado, and Prowers County, Colorado, with the professional planning assistance from CDR Maguire/Synergy Disaster Recovery has gathered information and prepared the "Southeast Colorado Regional Hazard Mitigation Plan, Comprehensive Update, 2020"; and

WHEREAS, the "Southeast Colorado Regional Hazard Mitigation Plan, Comprehensive Update, 2020" has been prepared in accordance with FEMA requirements found at 44 C.F.R. 201.6; and

WHEREAS, Otero County, Colorado, is a local unit of government that has afforded its citizens an opportunity to comment and provide input in the Plan including, but not limited to, the actions in the Plan; and

WHEREAS, Otero County, Colorado, has reviewed the Plan, desires to adopt the Plan and affirms that the Plan will be updated no less than every five years;

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the County of Otero, Colorado, that:

1. Otero County, Colorado, adopts the attached "Southeast Colorado Regional Hazard Mitigation Plan, Comprehensive Update, 2020" as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

Adopted this 31st day of August, 2020.

ATTEST:

County Clerk

OTERO COUNTY SEAL COLORADO

BOARD OF COUNTY COMMISSIONERS OF OTERO COUNTY, STATE OF COLORADO:

Keith Goodwin, Chairman

Jim Baldwin

John Hostetler

Resolution No. 2020-10

RESOLUTION 2020-32

WHEREAS, Prowers County with the assistance from Synergy Disaster Solutions, has gathered information and prepared the Southeast Region Hazard Mitigation Plan and,

WHEREAS, the Southeast Region Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, Prowers County is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, Prowers County has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by Prowers County that Prowers County adopts the Southeast Region Hazard Mitigation Plan as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED this 25th day of August, 2020

Wendy Buxton-Andrade

Wendy Buxton-Andrade, Chair

ATTEST:

Thomas Grasmick

Thomas Grasmick, Vice-Chair

Jana Coen

Jana Coen, County Clerk

Ron Cook

Ron Cook, Commissioner

U.S. Department of Homeland Security
Region VIII
Denver Federal Center, Building 710
P.O. Box 25267
Denver, CO 80225-0267

FEMA

R8-MT

December 29, 2020

Baca County Commissioners
741 Main Street #1
Springfield, CO 81073

Bent County Commissioners
P.O. Box 350
Los Animas, CO 81054

Crowley County Commissioners
603 Main Street
Suite 2
Ordway, CO 81063

Kiowa County Commissioners
1305 North Goff Street
Eads, CO 81036

Otero County Commissioners
13 West Third Street
Room 212
La Junta, CO 81050

Prowers County Commissioners
301 South Main Street #215
Lamar, CO 81052

Dear County Commissioners:

We are pleased to announce the approval of the Southeast Colorado Regional Hazard Mitigation Plan as meeting the requirements of the Stafford Act and Title 44 Code of Federal Regulations 201.6 for a local hazard mitigation plan. The plan approval extends to The Counties of Baca, Bent, Crowley, Kiowa, Otero, and Prowers, and the Towns of Campo, Pritchett, Springfield, Two Buttes, Vilas, and Walsh.

The jurisdictions are hereby eligible for FEMA Hazard Mitigation Assistance grant programs. All requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular programs under which the application is submitted. Approved mitigation plans may be eligible for points under the National Flood Insurance Program Community Rating System.

The plan is approved through December 28, 2025. A local jurisdiction must revise its plan and resubmit it for approval within five years to continue to be eligible for mitigation project grant funding. We have provided recommendations for the next plan update on the enclosed Plan Review Tool.

We wish to thank the jurisdictions for participating in the process and commend your continued commitment to mitigation planning. Please contact Steve Boand, State Hazard Mitigation Officer, Colorado Department of Emergency Services, at steven.boand@state.co.us or (303) 915-6063 with any questions on the plan approval or mitigation grant programs.

Sincerely,

Jeanine D. Petterson
Mitigation Division Director

Enclosure
cc: Steve Boand, State Hazard Mitigation Officer, Colorado Department of Homeland Security and Emergency Management

LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: Southeast Colorado Region	**Title of Plan:** Southeast Colorado Regional Hazard Mitigation Plan	**Date of Plan:** 4/16/20
Local Point of Contact: Jerry Casebolt	**Address:** Bent County OEM 725 Bent Ave. P.O. Box 350 Las Animas, CO 81054	
Title: Southeast Region Homeland Security Coordinator		
Agency: Southeast Colorado All Hazards Region (SECAHR)		
Phone Number: 719-353-2695	**E-Mail:** jerry.casebolt@secahr.com	

State Reviewer: Patricia L. Gavelda Mark W. Thompson	**Title:** DHSEM Local Hazard Mitigation Planning Program Manager; Mitigation Planning Specialist	**Date:** 5/26/2020; 7/1/2020

FEMA Reviewer: Emily Alvarez Logan Sand	**Title:** Community Planner Community Planner	**Date:** 7/14/2020 7/21/2020
Date Received in FEMA Region VIII	7/1/2020	
Plan Not Approved		
Plan Approvable Pending Adoption	7/21/2020	
Plan Approved	12/29/2020	

SECTION 1:
MULTI-JURISDICTION SUMMARY SHEET

MULTI-JURISDICTION SUMMARY SHEET									
#	Jurisdiction Name	Jurisdiction Type	Jurisdiction Contact	Email	Requirements Met (Y/N)				
					A. Planning Process	B. HIRA	C. Mitigation Strategy	D. Update Rqtms.	E. Adoption Resolution
1	Baca County	County	Jennifer Leathers	jleathers@bacacountyco.gov	Y	Y	Y	Y	Y
2	Town of Campo	Town	Cassie Bachman	townofcampo@yahoo.com	Y	Y	Y	Y	Y
3	Town of Pritchett	Town	Reva Phillips	Randy_reva@hotmail.com	Y	Y	Y	Y	Y
4	Town of Springfield	Town	Merna McGinnis	mmcginnis@springfieldco.gov	Y	Y	Y	Y	Y
5	Town of Two Buttes	Town	Donna Wood	Town2buttes@gmail.com	Y	Y	Y	Y	Y
6	Town of Vilas	Town	Lisa Byrne	townofvilascolorado@gmail.com	Y	Y	Y	Y	Y
7	Town of Walsh	Town	Donna Dawson	townofwalsh@gmail.com	Y	Y	Y	Y	Y
8	Bent County	County	Rick Stwalley	rick.stwalley@bentcounty.net	Y	Y	Y	Y	Y
9	Crowley County	County	John Reitan	john.reitan@crowleycounty.net	Y	Y	Y	Y	Y
10	Kiowa County	County	Shellie Engelhardt	sengelhardtoem@gmail.com	Y	Y	Y	Y	Y
11	Otero County	County	Danny Chavez	em@oterogov.org	Y	Y	Y	Y	Y
12	Prowers County	County	Staffon Warn	staffon.warn@prowerscounty.net	Y	Y	Y	Y	Y
13	City of Lamar	City	Jeremy Burkahart	jeremy.burkhart@ci.lamar.co.us	Y	Y	Y	Y	N

SECTION 2:
REGULATION CHECKLIST

REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or	Met	Not Met
ELEMENT A. PLANNING PROCESS			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Chapter 3; Appendix A	X	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §))	Chapter 3; Appendix A	X	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Chapter 3.3.1 – Public Involvement; Appendix B	X	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Chapter 3.3.1 – Review and Incorporation of Existing Planning Mechanisms; Chapter 6 footnotes	X	
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Chapter 4.4 – Continued Public Involvement	X	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Chapter 4	X	
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	Chapter 6.5, Chapter 6.6 - 6.11 (Location sub-section [where applicable]), Appendix C (where applicable)	X	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Chapter 6.5, Chapter 6.6 - 6.11 (Previous Occurrences & Probability sub-sections [where applicable]), Appendix C (where applicable)	X	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Chapter 6, Chapter 9 – Appendix C (where applicable), Appendix E (FOUO), Appendix F (FOUO)	X	

REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or	Met	Not Met
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Chapter 6.6 - 6.11 (Flooding section > NFIP Information)	X	
ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Chapter 2.3	X	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Chapter 2.4, Chapter 6.6 - 6.11 (Flooding section > NFIP Information)	X	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Chapter 2.2	X	
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Chapter 2.6	X	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Chapter 2.6.2, 2.6.3	X	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Chapter 4.5	X	
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION			

REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or	Met	Not Met
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3)) A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within five (5) years in order to continue to be eligible for mitigation project grant funding.	Chapter 5.4, Chapter 6.6 - 6.11 (Land Use and Development sub-section within each hazard section)	X	
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Chapter 2.5	X	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Chapter 2.6.1	X	
ELEMENT D: REQUIRED REVISIONS			
ELEMENT E. PLAN ADOPTION			
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	*Chapter 10 - Appendix D (pending)*	N/A	
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	*Chapter 10 - Appendix D (pending)*	X	
ELEMENT E: REQUIRED REVISIONS			
OPTIONAL: HIGH HAZARD POTENTIAL DAM RISKS			
HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for high hazard potential dams?	Chapter 6, Section 6.5.4; Chapter 6, County HIRA's	X	
HHPD2. Did Element B3 (risk assessment) address HHPDs?	Chapter 6, Section 6.5.4; Chapter 6, County HIRA's	X	
HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?	Chapter 6, Section 6.5.4; Chapter 6, County HIRA's	X	
HHPD4. Did Element C4-C5 (mitigation actions) address HHPDs prioritize mitigation actions to reduce vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?			X

REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or	Met	Not Met
REQUIRED REVISIONS			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 3:
PLAN ASSESSMENT

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

Strengths:

- Great to see the survey results discussed and incorporated into the plan. Community engagement is vital to having an effective planning process. It is also equally important to demonstrate to the community that their voices were heard and their input was valued and captured in the plan.
- Section 4.4 provides a transparent and detailed methodology for how the public will continue to be engaged. Great job including this information. Continue to think through this and build out the discussion for the next update. How did this go? What worked? What didn't work? Again, well done!

Opportunities for Improvement:

- The *Review and Incorporation of Existing Planning Mechanism*s section, while succinct, would benefit from additional details. While the Plan includes footnotes for other documents, reports, etc., that were incorporated, it is likely that there is missed context by only including a list of the "primary documents and technical resources reviewed and used." For the next update, it will be important to develop detailed narrative around why and how these documents and technical resources were incorporated.
- Section 4.5 is vague in describing what "relevant government decision-making process or mechanisms" the Plan will be integrated into, where feasible. For the next update, consider demonstrating that other decision-making processes', or mechanisms' timelines, feasibility, and level of appropriateness have been assessed. In other words, please provide more narrative that goes beyond the boiler plate language to include the specific local mechanisms/processes have been assessed for feasibility to integrate risk reduction and hazard mitigation. Build out this conversation to ensure it doesn't get overlooked as integrating information and processes is a key component of mitigation planning.

Element B: Hazard Identification and Risk Assessment

Strengths:

- Overall, the Plan does a great job defining key terms such as extent, vulnerability, and probability. Section 6.5.1 does a great job setting the stage for the rest of the Hazard Profiles and Risk Assessment.
- Table 6-2 Hazards Profiled helps to support the narrative and provides a great snapshot between differences/similarities of profiled hazards between the 2014 Plan, the 2019 Plan, and the 2018 CO State Plan.
- Table 6-1 Hazard Ranking provides a great snapshot of hazard ranks in each county.

Opportunities for Improvement:

- The Plan could benefit from having a summary of vulnerability for each hazard/county in the form of problem statements. This would help tie the results of the Risk Assessment to the mitigation actions and explain why each action was chosen. Consider developing problem/vulnerability statements, or something similar for the next update. Information about developing problem statements may be found in *FEMA's Local Mitigation Planning Handbook*, under Task 5 – Conduct a Risk Assessment (Summarize Vulnerability, p. 5-19).

Element C: Mitigation Strategy

Strengths:

- The mitigation actions are, overall, comprehensive and well thought out. Excellent job to put the mitigation strategy at the front of the plan, just after the introduction. This allows the reader to easily see the resulting determination of mitigation projects without having to scour through a large plan.

Opportunities for Improvement:

- Section 2.3, Capabilities Assessment, provides a great snapshot of the various types of capabilities throughout the Southeast Region. For the next update, consider adding narrative to build out the capabilities discussion. For example, how do these capabilities impact the Region's ability to mitigate? Are there reasons why some capabilities do or do not exist? How does a certain capability (or lack thereof) impact the community's vulnerability? It would be helpful to have narrative in this section that connects the dots.
- Section 2.5 Past Action Reporting does a good job describing the status of past actions and includes necessary context. It is a little confusing that the explanation of priority comes after this table and thus leaves the question- were these ranked with the same criteria or is the rank in the table from the 2014 plan? If those two ranking criteria are different, how do they differ?

Element D: Plan Review, Evaluation, and Implementation (Plan Updates Only)

Strengths:

- Throughout the Plan, it is clear how it differs from the 2014 Plan. Great job demonstrating how priorities and mitigation efforts compare between then and now.

Opportunities for Improvement:

- As Colorado continues to grow, and drought remains a high-priority hazard for the Southeast Region, consider incorporating the State's water plan in the next Plan update. The Water Plan includes a blueprint for bringing water back to several counties in the Southeast Region. Some communities have already experienced impacts and/or issues that stem from the "buying and drying" of finite water resources. As the demand for water intensifies, it would be strategic for the Southeast Region to build out this discussion further.

B. Resources for Implementing Your Approved Plan

FEMA FUNDING SOURCES

Hazard Mitigation Grant Program (HMGP). The HMGP is a post-disaster mitigation program. It is made available to states by FEMA after each Federal disaster declaration. The HMGP can provide up to 75 percent funding for hazard mitigation measures. The HMGP can be used to fund cost-effective projects that will protect public or private property in an area covered by a federal disaster declaration or that will reduce the likely damage from future disasters. Examples of projects include acquisition and demolition of structures in hazard prone areas, flood-proofing or elevation to reduce future damage, minor structural improvements and development of state or local standards. Applicants who are eligible for the HMGP are state and local governments, certain nonprofit organizations or institutions that perform essential government services, and Indian tribes and authorized tribal organizations. Individuals or homeowners cannot apply directly for the HMGP; a local government must apply on their behalf. Applications are submitted to your state and placed in rank order for available funding and submitted to FEMA for final approval. Eligible projects not selected for funding are placed in an inactive status and may be considered as additional HMGP funding becomes available. More information: https://www.fema.gov/hazard-mitigation-grant-program

Building Resilient Infrastructure and Communities (BRIC) Grant Program. The BRIC program supports states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency: https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities

Rehabilitation of High Hazard Potential Dams (HHPD) Grant Program. This program provides technical, planning, design, and construction assistance in the form of grants for rehabilitation of eligible high hazard potential dams. For more information, please visit: https://www.fema.gov/emergency-managers/risk-management/dam-safety/grants#hhpd

Flood Mitigation Assistance (FMA) Grant Program. FMA provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP. The FMA is funded annually; no federal disaster declaration is required. Only NFIP insured homes and businesses are eligible for mitigation in this program. Funding for FMA is very limited and, as with the HMGP, individuals cannot apply directly for the program. Applications must come from local governments or other eligible organizations. The federal cost share for an FMA project is 75 percent. At least 25 percent of the total eligible costs must be provided by a non-federal source. Of this 25 percent, no more than half can be provided as in-kind contributions from third parties. FMA funds are distributed from FEMA to the state. More information: https://www.fema.gov/flood-mitigation-assistance-grant-program

Fire Management Assistance Grant (FMAG) Program. The FMAG program provides grants to states, tribal governments and local governments for the mitigation, management and control of any fire burning on publicly (non-federal) or privately owned forest or grassland that threatens such destruction as would constitute a major disaster. The grants are made in the form of cost sharing with the federal share being 75 percent of total eligible costs. Grant approvals are made within 1 to 72 hours from time of request. More information: http://www.fema.gov/fire-management-assistance-grant-program

Hazard Mitigation Grant Program (HMGP) Post Fire Grant Program. FEMA's Hazard Mitigation Grant Program (HMGP) has Post Fire assistance available to help communities implement hazard mitigation measures after wildfire disasters. States, federally-recognized tribes and territories affected by fires resulting in an Fire Management Assistance Grant (FMAG) declaration on or after October 5, 2018, are eligible to apply. More information: https://www.fema.gov/grants/mitigation/post-fire

Fire Prevention and Safety (FP&S) Grants. FP&S Grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and reduce injury and prevent death. Eligibility includes fire departments, national, regional, state, and local organizations, Native American tribal organizations, and/or community organizations recognized for their experience and expertise in fire prevention and safety programs and activities. Private non-profit and public organizations are also eligible. Interested applicants are advised to check the website periodically for announcements of grant availability: https://www.fema.gov/welcome-assistance-firefighters-grant-program

OTHER MITIGATION FUNDING SOURCES

Grant funding is available from a variety of federal and state agencies for training, equipment, and hazard mitigation activities. Several of these programs are described below.

Program 15.228: Wildland Urban Interface Community and Rural Fire Assistance. This program is designed to implement the National Fire Plan and assist communities at risk from catastrophic wildland fires. The program provides grants, technical assistance, and training for community programs that develop local capability, including: Assessment and planning, mitigation activities, and community and homeowner education and action; hazardous fuels reduction activities, including the training, monitoring or maintenance associated with such hazardous fuels reduction activities, on federal land, or on adjacent nonfederal land for activities that mitigate the threat of catastrophic fire to communities and natural resources in high risk areas; and, enhancement of knowledge and fire protection capability of rural fire districts through assistance in education and training, protective clothing and equipment purchase, and mitigation methods on a cost share basis.

Secure Rural Schools and Community Self-Determination Act - Title III- County Funds. The Self-Determination Act has recently been reauthorized and now includes specific language regarding the Firewise Communities program. Counties seeking funding under Title III must use the funds to perform work under the Firewise Communities program. Counties applying for Title III funds to implement Firewise activities can assist in all aspects of a community's recognition process,

including conducting or assisting with community assessments, helping the community create an action plan, assisting with an annual Firewise Day, assisting with local wildfire mitigation projects, and communicating with the state liaison and the national program to ensure a smooth application process. Counties that previously used Title III funds for other wildfire preparation activities such as the Fire Safe Councils or similar would be able to carry out many of the same activities as they had before. However, with the new language, counties would be required to show that funds used for these activities were carried out under the Firewise Communities program. For more information, click here.

Community Planning Assistance for Wildfire. Established in 2015 by Headwaters Economics and Wildfire Planning International, Community Planning Assistance for Wildfire (CPAW) works with communities to reduce wildfire risks through improved land use planning. CPAW is a grant-funded program providing communities with professional assistance from foresters, planners, economists and wildfire risk modelers to integrate wildfire mitigation into the development planning process. All services and recommendations are site-specific and come at no cost to the community. More information: http://planningforwildfire.org/what-we-do/

Urban and Community Forestry (UCF) Program. A cooperative program of the U.S. Forest Service that focuses on the stewardship of urban natural resources. With 80 percent of the nation's population in urban areas, there are strong environmental, social, and economic cases to be made for the conservation of green spaces to guide growth and revitalize city centers and older suburbs. UCF responds to the needs of urban areas by maintaining, restoring, and improving urban forest ecosystems on more than 70 million acres. Through these efforts the program encourages and promotes the creation of healthier, more livable urban environments across the nation. These grant programs are focused on issues and landscapes of national importance and prioritized through state and regional assessments. Information: http://www.fs.fed.us/managing-land/urban-forests/ucf

Western Wildland Urban Interface Grants. The National Fire Plan (NFP) is a long-term strategy for reducing the effects of catastrophic wildfires throughout the nation. The Division of Forestry's NFP Program is implemented within the Division's Fire and Aviation Program through the existing USDA Forest Service, State & Private Forestry, State Fire Assistance Program.

Congress has provided increased funding assistance to states through the U.S. Forest Service State and Private Forestry programs since 2001. The focus of much of this additional funding was mitigating risk in WUI areas. In the West, the State Fire Assistance funding is available and awarded through a competitive process with emphasis on hazard fuel reduction, information and education, and community and homeowner action. This portion of the National Fire Plan was developed to assist interface communities manage the unique hazards they find around them. Long-term solutions to interface challenges require informing and educating people who live in these areas about what they and their local organizations can do to mitigate these hazards.

The 10-Year Comprehensive Strategy focuses on assisting people and communities in the WUI to moderate the threat of catastrophic fire through the four broad goals of improving prevention and suppression, reducing hazardous fuels, restoring fire-adapted ecosystems, and promoting community assistance. The Western States Wildland Urban Interface Grant may be used to apply for

financial assistance towards hazardous fuels and educational projects within the four goals of: improved prevention, reduction of hazardous fuels, and restoration of fire-adapted ecosystems and promotion of community assistance. More information: https://www.westernforesters.org/wui-grants

U.S. Fish & Wildlife Service, Rural Fire Assistance Grants. Each year, the U.S. Fish & Wildlife Service (FWS) provides Rural Fire Assistance (RFA) grants to neighboring community fire departments to enhance local wildfire protection, purchase equipment, and train volunteer firefighters. Service fire staff also assist directly with community projects. These efforts reduce the risk to human life and better permit FWS firefighters to interact and work with community fire organizations when fighting wildfires. The Department of the Interior (DOI) receives an appropriated budget each year for an RFA grant program. The maximum award per grant is $20,000. The DOI assistance program targets rural and volunteer fire departments that routinely help fight fire on or near DOI lands. More information: http://www.fws.gov/fire/living_with_fire/rural_fire_assistance.shtml

U.S. Bureau of Land Management, Community Assistance Program. BLM provides funds to communities through assistance agreements to complete mitigation projects, education and planning within the WUI. More information: https://www.blm.gov/services/financial-assistance-and-grants

NOAA Office of Education Grants. The Office of Education supports formal, informal and non-formal education projects and programs through competitively awarded grants and cooperative agreements to a variety of educational institutions and organizations in the United States. More information: http://www.noaa.gov/office-education/grants

NRCS Environmental Quality Incentives Program (EQIP). The Environmental Quality Incentives Program, administered through the NRCS, is a cost-share program that provides financial and technical assistance to agricultural producers to plan and implement conservation practices that improve soil, water, plant, animal, air and related natural resources on agricultural land and non-industrial private forestland. Owners of land in agricultural or forest production or persons who are engaged in livestock, agricultural or forest production on eligible land and that have a natural resource concern on that land may apply to participate in EQIP. Eligible land includes cropland, rangeland, pastureland, non-industrial private forestland and other farm or ranch lands. EQUIP is another funding mechanism for landowner fuel reduction projects. More information: https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/

U.S. Department of Agriculture, Community Facilities Loans and Grants. Provides grants (and loans) to cities, counties, states and other public entities to improve community facilities for essential services to rural residents. Projects can include fire and rescue services; funds have been provided to purchase fire-fighting equipment for rural areas. No match is required. More information: http://www.usda.gov/wps/portal/usda/usdahome?navid=GRANTS_LOANS

General Services Administration, Sale of Federal Surplus Personal Property. This program sells property no longer needed by the federal government. The program provides individuals,

businesses and organizations the opportunity to enter competitive bids for purchase of a wide variety of personal property and equipment. Normally, there are no restrictions on the property purchased. More information: http://www.gsa.gov/portal/category/21045

Hazardous Materials Emergency Preparedness Grants. Grant funds are passed through to local emergency management offices and HazMat teams having functional and active LEPC groups. More information: http://www.phmsa.dot.gov/hazmat/grants

U.S. Department of Homeland Security. Enhances the ability of states, local and tribal jurisdictions, and other regional authorities in the preparation, prevention, and response to terrorist attacks and other disasters, by distributing grant funds. Localities can use grants for planning, equipment, training and exercise needs. These grants include, but are not limited to areas of Critical Infrastructure Protection Equipment and Training for First Responders, and Homeland Security Grants.

Community Development Block Grants (CDBG). The U.S. Department of Commerce administers the CDBG program which are intended to provide low and moderate-income households with viable communities, including decent housing, as suitable living environment, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, planning, and administration. Public improvements may include flood and drainage improvements. In limited instances, and during the times of "urgent need" (e.g. post disaster) as defined by the CDBG National Objectives, CDBG funding may be used to acquire a property located in a floodplain that was severely damaged by a recent flood, demolish a structure severely damaged by an earthquake, or repair a public facility severely damaged by a hazard event. CDBG funds can be used to match FEMA grants. More Information: https://www.hud.gov/program_offices/comm_planning/cdbg

Building Blocks for Sustainable Communities. The EPA Office of Sustainable Communities sometimes offers grants to support activities that improve the quality of development and protect human health and the environment. When these grants are offered, they will always be announced on www.grants.gov. More information: https://www.epa.gov/smartgrowth/building-blocks-sustainable-communities#2016

OTHER RESOURCES

FEMA: Grant Application Training. Each year, FEMA partners with the State on training courses designed to help communities be more successful in their applications for grants. Contact your State Hazard Mitigation Officer for course offering schedules. Example Courses:

- Unified Hazard Mitigation Grant Assistance Application Development Course
- Benefit Cost Analysis (BCA) Course

FEMA: Community Assistance Visit. It may be appropriate to set up a Community Assistance Visit with FEMA to provide technical assistance to communities in the review and/or updating of their

floodplain ordinances to meet the new model ordinance. Consider contacting your State NFIP Coordinator for more information.

FEMA: Building Science. The Building Science branch develops and produces multi-hazard mitigation publications, guidance materials, tools, technical bulletins, and recovery advisories that incorporate the most up-to-date building codes, floodproofing requirements, seismic design standards, and wind design requirements for new construction and the repair of existing buildings. To learn more, visit: https://www.fema.gov/building-science

EPA: Smart Growth in Small Towns and Rural Communities. EPA has consolidated resources just for small towns and rural communities to help them achieve their goals for growth and development while maintaining their distinctive rural character. To learn more, visit: https://www.epa.gov/smartgrowth/smart-growth-small-towns-and-rural-communities

EPA: *Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities.* The EPA released guidance on how to mitigate natural disasters specifically for water and wastewater utilities. For more information, visit: https://www.epa.gov/waterutilityresponse/hazard-mitigation-natural-disasters

National Integrated Drought Information System. The National Drought Resilience Partnership may provide some additional resources and ideas to mitigate drought hazards and increase awareness of droughts. Visit: https://www.drought.gov/drought/what-nidis/national-drought-resilience-partnership.

Beyond the Basics: Best Practices in Local Mitigation Planning. The product of a 5-year research study where the Costal Hazards Center and the Center for Sustainable Community Design analyzed local mitigation plans to assess their content and quality. The website features numerous examples and best practices that were drawn from the analyzed plans. Visit: http://mitigationguide.org/

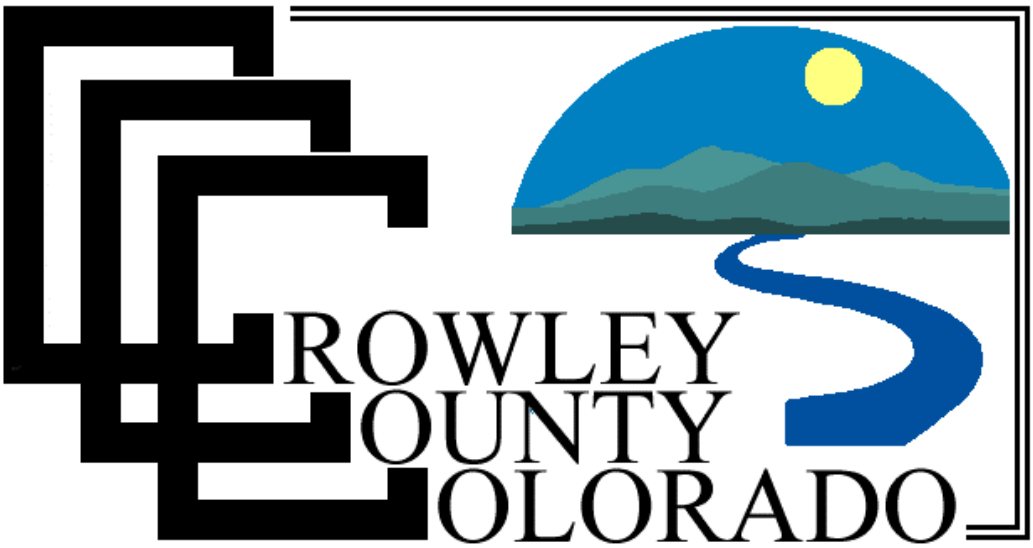
STAR Community Rating System. Consider measuring your mitigation success by participating in the STAR Community Rating System. Local leaders can use the STAR Community Rating System to assess how sustainable they are, set goals for moving ahead and measure progress along the way. To get started, go to http://www.starcommunities.org/get-started

Flood Economics. The Economist Intelligence Unit analyzed case studies and state-level mitigation data in order to gain a better understanding of the economic imperatives for investment in flood mitigation. To learn more, visit: http://floodeconomics.com/

Headwaters Economics. Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions in the West. To learn more, visit: https://headwaterseconomics.org/

COMPREHENSIVE EMERGENCY MANAGEMENT PLAN (CEMP)

PREVENTION ELEMENT



2021

Prevention Annex

I. INTRODUCTION

Prevention activities are paramount to the overall ability for Crowley County to intervene emerging threats and hazards from occurring in our community. The purpose of this document is to assist in the coordination of prevention activities in Crowley County by internal and external response partners.

II. GENERAL

A. The Crowley County Division of Emergency Management will be responsible for providing interagency and emergency response communication and coordination on prevention activities taken in Crowley County.

B. Crowley County's Division of Emergency Management will provide internal and external partners with the capabilities to coordinate information and logistics when executing prevention activities.

C. The County will coordinate its prevention activities with its municipalities and State agencies by the following methods:

- The municipalities will have representatives acting as liaisons to coordinate the cities' efforts with the County.

- State agencies may provide information through intelligence bulletins, threat assessments, alert networks, surveillance programs and other sources to the Division of Emergency Management for coordination with local partnering agencies.

- Intelligence information on prevention activities will be forwarded to the State of Colorado and partners through the use of Situation Reports, Flash Reports, and Incident Action Plan documents.

D. Crowley County's Division of Emergency Management coordinates prevention activities with hazards identified in the Local Mitigation plan that have methods or tactics for prevention. While not all hazards identified can be prevented, it is important to note those in which prevention activities occur, the responsible agency for the prevention activities, and the procedures for how the prevention activities take place. This Annex focuses on the preventable hazards identified in the Hazard Mitigation Plan.

E. Prevention activities are not limited to the identified hazards that impact large geographical or highly populated areas. Prevention activities are effective for the avoidance of consequences from less frequently occurring and less destructive dangers, such as road and highway safety, tornado and severe weather safety, and stranger danger awareness.

F. Each partner agency with identified prevention activities is responsible for the evaluation, maintenance and revision of the procedures used for each identified preventable hazard.

III. MONITORING

A. The Division of Emergency Management in coordination with internal and external partners actively monitor information sharing pathways for emerging threats and hazards.

B. Sources in which the monitoring occurs comes from open government networks, secure intelligence networks, fusion centers and other trusted external stakeholders.

C. Once a threat or hazard is recognized, the Division of Emergency Management receives the information and determines if additional stakeholders should begin prevention activities. Due to the nature of the threats and hazards, some information may be determined to be confidential and only shared with key stakeholders who have a valid need to know.

D. Upon the decision of stakeholder involvement, notifications are made to such individuals who represent agencies with prevention implementation procedures. Some agencies may receive notification for information-only purposes.

The chart below indicates the hazards identified by the Hazard identification and Risk Assessment (HIRA) in which emergency response partners have identified major alert networks and surveillance programs utilized to monitor each hazard. While this list is comprehensive it is not all inclusive for each hazard. Additionally, the agency responsible for providing information as part of the prevention program is noted to assist in information gathering.

Hazard	Responsible Party	Alert networks and Surveillance
Active Shooter / Lone Wolf	Sheriff's Office	Receive See Something, Say Something reports Receive Credible Threat Analysis reports
Civil Disturbance	Sheriff's Office	Receive See Something, Say Something reports Receive Credible Threat Analysis reports
Critical Infrastructure Disruption	Public Works	Receive reports from industry & public
Fire	Local Fire Departments	Monitor KBDI Index Receive Colorado Forest Service Reports
Flooding	Emergency Management	Receive National Weather Service Bulletins Monitor local meteorology reports Monitor local river gauges
Hazardous Materials	Local Fire Departments	Receive State Watch Office announcement Receive EMNet reports Receive corporate reporting (Tier II)
Heat Wave/Drought	Emergency Management	Receive National Weather Service bulletin Receive local meteorology reports
Inadequate Water Supply and/or Contamination	Local Water Providers	Receive reports from public Receive reports from local water treatment facilities Receive reports from local health department

Land Erosion/Expansive Soils	Environmental Department	Receive reports from public/property owners Receive reports from response partners
Major Transportation Incidents	Department of Transportation (DOT)	Receive report from CDOT Receive report from BNSF Receive report from Air Traffic Controllers/FAA
Mass Exodus/Immigration	Immigration & Customs Enforcement (ICE)	Receive report from response partners
Public Health Threat	Department of Public Health & Environment	Receive reports from Center for Disease Control Receive reports from CDPHE Receive Health Alert Network (HAN) Notifications
Terrorism / WMD	Sheriff's Office	Receive See Something, Say Something reports Receive Credible Threat Analysis reports
Thunderstorms / Lightning / Tornadoes	Emergency Management	Receive National Weather Service Bulletins Monitor local meteorology reports Monitor lightning detection software
Winter Storm / Freeze	Emergency Management	Receive National Weather Service Bulletins Monitor local meteorology reports

IV. PREVENTION ACTIVITIES

CROWLEY COUNTY DIVISION OF EMERGENCY MANAGEMENT

A. If it is determined that prevention activities are necessary, the Division of Emergency Management will coordinate such activities with the responsible agency in accordance with noted procedures. When county resources are required, Crowley County will notify representatives from the primary agency or agencies of each Emergency Support Function (ESF).

B. As prevention activities occur, it will be the responsibility for the primary agency to report information back to the Division of Emergency Management for inclusion in reports to stakeholders and further evaluation of additional partner agency involvement.

The chart below indicates the hazards in which emergency response partners have a role in prevention. While not all hazards could be prevented, it is important to highlight the existing processes and procedures that may play a role when an increased threat is recognized.

Hazard	Responsible Party	Prevention Procedure
Active Shooter / Lone Wolf	Sheriff's Office	See Something, Say Something Campaign Active Shooter Awareness Training
Civil Disturbance	Sheriff's Office	See Something, Say Something Campaign

		Increased security at key locations
Critical Infrastructure Disruption	Public Works	Not preventable
Fire	Local Fire Departments	Fire inspection programs Fire Prevention Public Education Programs Municipal burn bans enacted Controlled burns by Division of Forestry Encourage registration to social media outlets Encourage registration to mass notification system
Flooding	Emergency Management	Encourage registration to social media outlets Encourage registration to mass notification system
Hazardous Materials	Local Fire Departments	Encourage registration to social media outlets Encourage registration to mass notification system
Heat Wave/Drought	Emergency Management	Encourage registration to social media outlets Encourage registration to mass notification system
Inadequate Water Supply and/or Contamination	Local Water Providers	Encourage registration to social media outlets Encourage registration to mass notification system Increase Department of Health prevention activities
Land Erosion/Expansive Soils	Environmental Department	Not preventable
Major Transportation Incidents	Department of Transportation (DOT)	Encourage registration to social media outlets Encourage registration to mass notification system
Mass Exodus/Immigration	Immigration & Customs Enforcement (ICE)	Not Preventable
Public Health Threat	Department of Health (DOH)	Encourage registration to social media outlets Encourage registration to mass notification system Healthcare Coalition meetings
Terrorism / WMD	Sheriff's Office	See Something, Say Something Campaign
Thunderstorms / Lightning / Tornadoes	Emergency Management	Encourage registration to social media outlets Encourage registration to mass notification system

		Implement lightning safety policy with Parks and Recreation Department
Winter Storm / Freeze	Emergency Management	Encourage registration to social media outlets Encourage registration to mass notification system

IV. PREVENTION ACTIVITY LEVELS

The chart below indicates the appropriate levels of prevention for the previously identified preventable hazards. If it is determined that increased levels of prevention activities are necessary, the Division of Emergency Management will coordinate such activities with the responsible agency in accordance with procedures.

Hazard	Level of Prevention	Prevention Procedure
Active Shooter / Lone Wolf	Monitor	• Work with CIAC, law enforcement, and various sources for threat detection • Conduct routine surveillance monitoring of community morbidity and mortality • Identify appropriate local data sources
	Communicate	• Identify expressed and detected threats through above procedures • Use threat classification to determine the credibility, scope, and currency of the threat • Determine threat conditions and carry out associated protective measures
	Act	• Determine whether additional resources are needed from other law enforcement agencies, state office, or CIAC, and make recommendations for their deployment and tasking • Decide whether and how to carry out intensified surveillance • Decide on method of data collection for surveillance • Coordinate additional protective measures with law enforcement agencies to protect against loss of life, damage to critical infrastructure, and civil unrest
Civil Disturbance	Monitor	• Receive and evaluate forecasts and reports that indicate a potential for civil unrest. • Confirm as necessary and pursue further information and guidance from local law enforcement agencies, federal law enforcement agencies, or other qualified agencies.
	Communicate	• Estimate the nature and scope of outside assistance that may be required. • Inventory communications capabilities between essential facilities and the EOC. • Augment as necessary/feasible. Design an Incident Action Plan and Communications Plan. • Receive reports of problems and confirm as soon as possible. • Establish liaison with appropriate State and Federal agencies.
	Act	• If the situation warrants, publicize emergency public information to promote public safety and vigilance. • Alert staff personnel of impending location assignments. • Maintain an alert or standby of personnel as necessary. • Inventory, protect, and distribute firefighting & emergency medical equipment. • Place on stand-by specialty teams to support and respond to events. • Contact/activate volunteer organizations such as the Red Cross, if necessary.
Fire	Monitor	• Monitor United States Drought Monitor
	Communicate	• When levels reach 500, communicate with County Administration to encourage adherence to fire restrictions
	Act	• Enforce fire restrictions in accordance with Crowley County Ordinance Section 15-34

Prevention Annex

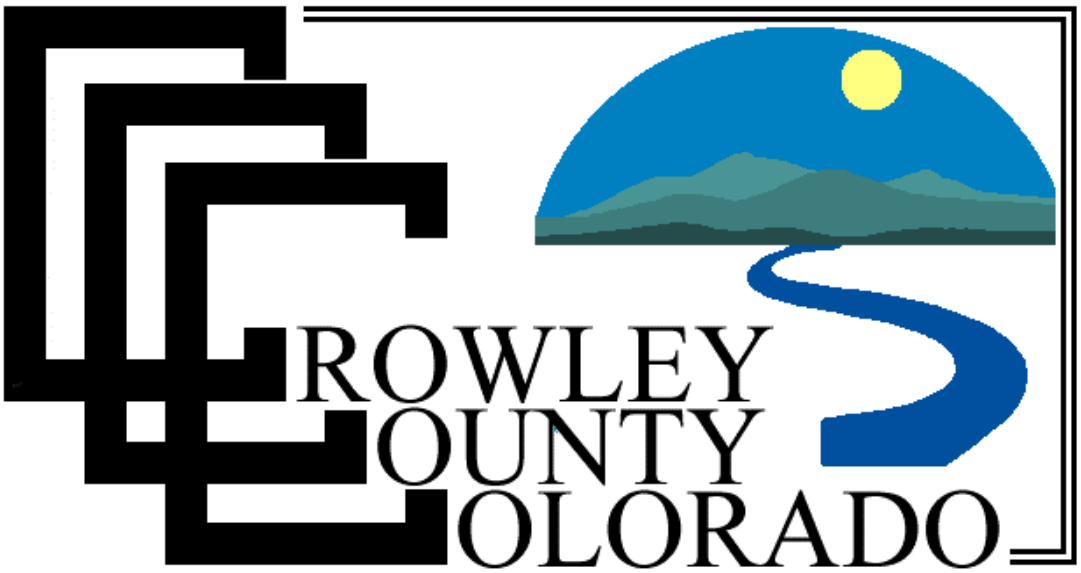
		• Conduct public outreach activities to inform the public of the fire restrictions
Flooding	Monitor	• Deploy notification systems listed in Flood Response Plan • At lower levels, close parks/adjacent land and release public-facing advisories • Conduct routine annual/biannual inspections
	Communicate	• Establish road closures in affected areas and institute no wake zones • Provide reverse calling, media, and social media information to homes threatened by flooding • Monitor roads and deploy appropriate signage • Implement Public Works Maintenance Activities
	Act	• Close effected main roads and create detours through neighboring counties, as needed • Establish, maintain, and advertise sandbag distribution locations throughout affected areas • Implement Public Works Storm water Clearing Procedures
Hazardous Materials	Monitor	• Receive State Watch Office announcement • Receive EMNet reports • Receive corporate reporting (Tier II)
	Communicate	• Estimate the nature and scope of outside assistance that may be required. • Inventory communications capabilities between essential facilities and the EOC. • Augment as necessary/feasible. Design an Incident Action Plan and Communications Plan. • Receive reports of problems and confirm as soon as possible.
	Act	• Encourage registration to social media outlets • Encourage registration to mass notification system • Encourage residents to avoid impacted area • Encourage residents to monitor media for evacuation or shelter in place instructions
Heat Wave/Drought	Monitor	• Monitor United States Drought Monitor • Monitor NWS Heat Indices
	Communicate	• Communicate with municipal fire districts to support burn bans • Communicate with media and social media to promote heat-related illness safety, specifically to the most vulnerable populations
	Act	• Support municipal burn bans

		• Encourage registration to mass notification system
Inadequate Water Supply and/or Contamination	Monitor	• Receive reports from public • Receive reports from local water treatment facilities • Receive reports from local health department
	Communicate	• Estimate the nature and scope of outside assistance that may be required. • Inventory communications capabilities between essential facilities and the EOC. • Augment as necessary/feasible. Design an Incident Action Plan and Communications Plan. • Receive reports of problems and confirm as soon as possible.
	Act	• Encourage registration to social media outlets • Encourage registration to mass notification system • Increase Department of Health prevention activities
Major Transportation Incidents	Monitor	• Receive reports from public • Receive reports from local water treatment facilities • Receive reports from local health department
	Communicate	• Estimate the nature and scope of outside assistance that may be required. • Inventory communications capabilities between essential facilities and the EOC. • Augment as necessary/feasible. Design an Incident Action Plan and Communications Plan. • Receive reports of problems and confirm as soon as possible.
	Act	• Encourage registration to social media outlets • Encourage registration to mass notification system • Encourage residents to avoid impact area
Public Health Threat	Monitor	• Strict personal hygiene and hand washing • Education in personal hygiene is critical for public and health care personnel • Vaccination for seasonal influenza is recommended, although it is usually not protective against strains responsible for pandemics, it can decrease the risk of re-assortment between the novel strain and currently circulating strains. Healthcare personnel should be immunized annually to prevent absenteeism during epidemics and pandemics • Influenza-like outbreaks and laboratory-confirmed influenza A cases are required to be reported to local health authorities in order to maintain an adequate surveillance level and a rapid response for preventing further spread • Maintaining an adequate supply of antiviral drugs would be desirable in order to treat high-risk patients and first responders
	Communicate	• Conduct enhanced public information outreach to vulnerable populations • Ensure vulnerable populations are reached via alternate outreach methods • Conduct informational sessions as needed for specific affected/at risk areas • Support partner efforts in outreach to spread awareness of prevention methods • If needed, establish a hotline for concerned individuals to receive additional information
	Act	• Manage the infection and attempt to control or isolate all cases

		• Continue to promote personal awareness
Terrorism/WMD	Monitor	• Work with CIAC, law enforcement, and various sources for threat detection • Conduct routine surveillance monitoring of community morbidity and mortality • Identify appropriate local data sources • See Terrorism Annex for routine training, threat detection, and classification procedures
	Communicate	• Identify expressed and detected terroristic threats through above procedures • Use threat classification to determine the credibility, scope, and currency of the threat • Determine threat conditions and carry out associated protective measures
	Act	• Determine whether additional resources are needed from other CHDs, state office, or CDC, and make recommendations for their deployment and tasking • Decide whether and how to carry out intensified surveillance • Decide on method of data collection for surveillance • Coordinate additional protective measures with law enforcement agencies to protect against loss of life, damage to critical infrastructure, and civil unrest
Thunderstorms / Lightning / Tornadoes	Monitor	• Receive National Weather Service Bulletins • Monitor local meteorology reports • Monitor lightning detection software
	Communicate	• Estimate the nature and scope of outside assistance that may be required. • Inventory communications capabilities between essential facilities and the EOC. • Augment as necessary/feasible. Design an Incident Action Plan and Communications Plan. • Receive reports of problems and confirm as soon as possible.
	Act	• Encourage registration to social media outlets • Encourage registration to mass notification system • Implement lightning safety policy with Parks and Recreation Department
Winter Storm / Freeze	Monitor	• Receive National Weather Service Bulletins • Monitor local meteorology reports
	Communicate	• Estimate the nature and scope of outside assistance that may be required. • Inventory communications capabilities between essential facilities and the EOC. • Augment as necessary/feasible. Design an Incident Action Plan and Communications Plan.
	Act	• Receive reports of problems and confirm as soon as possible. • Encourage registration to social media outlets • Encourage registration to mass notification system

APPENDIX 1

ACRONYMS & DEFINITIONS



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ACRONYMS

For the purposes of the CEMP, in accordance with NIMS, the following acronyms apply:

AEOC	Alternate Emergency Operations Center
AHCA	Agency For Health Care Administration
ALF	Assisted Living Facility
APWA	American Public Works Association
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
ARL	Advanced Recovery Liaison
A-Team	Advance Team
BFE	Base Flood Elevation
BOCC	Board of County Commissioners
BNICE	Biological, Nuclear, Incendiary, Chemical, Explosive
CAA	Clean Air Act
CAO	Chief Administrative Officer
CAP	Civil Air Patrol
CBI	Colorado Bureau of Investigations
CBRNE	Chemical, Biological, Radiological, Nuclear, Explosives
CCNC	Consolidated Communications Network of Colorado
CDBG	Community Development Block Grant
CDC	Centers for Disease Control
CEMA	Colorado Emergency Management Association
CEMP	Comprehensive Emergency Management Plan
CEO	Chief Elected Official/Chief Executive Officer
CEPPO	Chemical Emergency Preparedness and Prevention Office
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERT	Community Emergency Response Teams
CFR	Code of Federal Regulations
CISD	Critical Incident Stress Debriefing
CMT	Crisis Management Team
CO	Colorado
COG	Continuity of Government
CoM	Consequence Management
CONG	Colorado National Guard
CrM	Crisis Management
CRS	Community Rating System
CRS	Colorado Revised Statutes
CRT	Community Relations Team
CS	Comfort Station

CSFC	Colorado State Fire Chiefs Association
DA	Damage Assessment
DAC	Disaster Assistance Center
DAT	Damage Assessment Team
DEM	Division of Emergency Management
DFO	Disaster Field Office
DFCO	Deputy Federal Coordinating Officer
DHS	Department of Homeland Security
DHSEM	Division of Homeland Security & Emergency Management
DMAT	Disaster Medical Assistance Team
DMORT	Disaster Mortuary Response Team
DOC	Department Operations Center
DOC	Department of Corrections
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice
DOLA	Department of Local Affairs
DOT	Department of Transportation
DPS	Department of Public Safety
DRC	Disaster Recovery Center
DRM	Disaster Recovery Manager
DSCO	Deputy State Coordinating Officer
DTRS	Digital Trunked Radio System
DUA	Disaster Unemployment Assistance
E-911	Enhanced 911
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECC	Emergency Communications Center
EDICS	Emergency Deployable Interoperability Communications System
EM	Emergency Management
EMAC	Emergency Management Assistance Compact
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ERT	Emergency Response Team
ESATCOM	Emergency Satellite Communications System
ESF	Emergency Support Function
FAX	Facsimile
FBI	Federal Bureau of Investigations
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FHMO	Federal Hazard Mitigation Officer
FMAP	Flood Mitigation Assistance Program

FMHO	Federal Hazard Mitigation Officer
FRERP	Federal Radiological Emergency Response Plan
FRP	Federal Response Plan
FRPTIA	Federal Response Plan Terrorism Incident Annex
FSE	Full-Scale Exercise
GAR	Governor's Authorized Representative
GIS	Geographic Information System
GSA	General Services Administration
HA	Hazards Analysis
HSPD-5	Homeland Security Presidential Directive-5
HAZMAT	Hazardous Material
HMGP	Hazard Mitigation Grant Program
HNAT	Human Needs Assessment Team
IA	Individual Assistance
IAP	Incident Action Plan
IC	Incident Commander
IC or UC	Incident Command or Unified Command
ICP	Incident Command Post
ICS	Incident Command System
ICT	Incident Command Team
IFG	Individual and Family Grant
IMS	Incident Management System
IMT	Incident Management Team
INF	Immediate Needs Funding
IPZ	Ingestion Pathway Zone
IRT	Intergovernmental Relations Team
JIC	Joint Information Center
JIS	Joint Information System
JOC	Joint Operations Center
JCE	Joint Coordinating Element
JMMO	Joint Medical Mobilization Office
JTF	Joint Task Force
LEPC	Local Emergency Planning Committee
LMS	Local Hazard Mitigation Strategy
LNO	Liaison Officer
LSA	Logistical Staging Area
LTR	Long Term Recovery
LZ	Landing Zone
MARS	Mitigation and Recovery Section DHSEM
MAC	Multi-Agency Coordination
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding

MRE	Meal, Ready-to-Eat
NAWAS	National Warning System
NBCA	Nuclear Biological Chemical Agent
NCC	National Coordinating Center
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NDMOC	National Disaster Medical Operations Center
NDMS	National Disaster Medical System
NEPA	National Environmental Policy Act
NFDA	National Funeral Directors Association
NFIP	National Flood Insurance Program
NGB	National Guard Bureau
NGO	Nongovernmental Organization
NHPA	National Historic Preservation Act
NIMS	National Incident Management System
NRC	Nuclear Regulatory Commission
NRCS	National Resource Conservation Service
NRP	National Response Plan
NRT	Nuclear Response Team
NSEP	National Security Emergency Preparedness
NTC	National Tele registration Center
NTSB	National Transportation Safety Board
NWS	National Weather Service
PA	Public Assistance
PAC	Public Assistance Coordinator
PAO	Public Assistance Officer
PDA	Preliminary Damage Assessment
PDAT	Preliminary Damage Assessment Team
PDD-39	Presidential Decision Directive 39, "United States Policy on Counter- terrorism"
PDM	Pre-Disaster Mitigation
PIO	Public Information Officer
PL	Public Law
PNP	Private, Non-Profit
PO	Purchase Order/Officer
POD	Point of Distribution
PW	Project Worksheet
RACES	Radio Amateur Civil Emergency Services (not in local area)
RC	Recovery Center
RCP	Regional Oil and Hazardous Substances Pollution Contingency Plan
RD	Regional Director
RDSTF	Regional Domestic Security Task Force
REACT	Radio Emergency Associated Communications Team
RIAT	Rapid Impact Assessment Team
RIC	Recovery Information Center
ROC	Regional Operations Center

RRC	Regional Recovery Center
RRT	Rapid/Regional Response Team
SAR	Search and Rescue
SBA	Small Business Administration
SCO	State Coordinating Officer
SEOC	State Emergency Operations Center
SEOP	State Emergency Operations Plan
SFHA	Special Flood Hazard Areas
SITREP	Situation Report
SNS	Special Needs Shelter
SO	Safety Officer
SOG	Standard Operating Guidelines
SOP	Standard Operating Procedure
SSMT	State Shelter Manager Team
STARC	State Area Command
SWP	State Warning Point
TBD	To Be Determined
TH	Temporary Housing
THO	Temporary Housing Officer
TTX	Tabletop Exercise
UC	Unified Command
USACE	United Stated Army Corps of Engineers
UHF	Ultra High Frequency
UN	Unmet Needs
USAF	United States Air Force
USAR	Urban Search and Rescue
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USPHS	United States Public Health Service
VHF	Very High Frequency
VOAD	Volunteer Organizations Active in Disasters
VOLAG	Voluntary Agent
VSA	Volunteer Staging Area
VRC	Volunteer Reception Center
WTP	Water Treatment Plant
WMD	Water Management District

Definitions

Activation Level III: Monitoring Phase:	Operating under normal conditions and monitoring the situation. Notification shall be made to the appropriate local agencies, municipalities and the Emergency Support Functions (ESFs) who would need to take action as part of their everyday responsibilities. Crowley County Emergency Management, as well as personnel from Emergency Communications Center (ECC), if needed, staffs the Emergency Operations Center (EOC).
Activation Level II: Limited Activation	Operating under standby conditions while preparing for conditions of possible danger. The EOC is staffed by Public Safety personnel and selected Emergency Support Function (ESF) representatives.
Activation Level I: Full Scale Activation	A catastrophe or accident that requires an all-call response. All primary and support agencies under this CEMP are notified. Division of Emergency Management personnel, Emergency Support Function (ESF) personnel and others staff the EOC as appropriate.
Advisory:	A National Weather Service message giving storm location, intensity, movement, and precautions to be taken.
Agency:	A division of government with a specific function offering a particular kind of assistance. In ICS, agencies are defined either as jurisdictional (having statutory responsibility for incident management) or as assisting or cooperating (providing resources or other assistance).
Agency Representative:	A person assigned by a primary, assisting, or cooperating state, local, or tribal government agency or private entity that has been delegated authority to make decisions affecting that agency's or organization's participation in incident management activities following appropriate consultation with the leadership of that agency.
Area Command (Unified Area Command):	An organization established (1) to oversee the management of multiple incidents that are each being handled by an ICS organization or (2) to oversee the management of large or multiple incidents to which several Incident Management Teams have been assigned. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources according to priorities, ensure that incidents are properly managed, and ensure that objectives are met, and strategies followed. Area Command becomes Unified Area Command when incidents are multijurisdictional. Area Command may be established at an emergency operations center facility or at some location other than an incident command post.
Assessment:	The evaluation and interpretation of measurements and other information to provide a basis for decision-making.
Assignments:	Tasks given to resources to perform within a given operational period that are based on operational objectives defined in the IAP.
Assistant:	Title for subordinates of principal Command Staff positions. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions. Assistants may also be assigned to unit leaders.

Assisting Agency:	An agency or organization providing personnel, services, or other resources to the agency with direct responsibility for incident management. See also Supporting Agency.
Available Resources:	Resources assigned to an incident, checked in, and available for a mission assignment, normally located in a Staging Area.
Branch:	The organizational level having functional or geographical responsibility for major aspects of incident operations. A branch is organizationally situated between the section and the division or group in the Operations Section, and between the section and units in the Logistics Section. Branches are identified by the use of roman numerals or by functional area.
Basic Plan	Describes the various types of emergencies that are likely to occur in Crowley County. It further provides procedures for disseminating warnings, coordinating response, ordering evacuations, opening shelters, and for determining, assessing, and reporting the severity and magnitude of such emergencies. This establishes the concept under which the County and municipal governments will operate during response, recovery and mitigation to natural, technological and man-made disasters.
Burn Sites	Open area identified for the collection and open burning of disaster caused debris.
Catastrophic Disaster	A disaster that will require massive State and Federal assistance, including immediate military involvement.
Chain of Command:	A series of command, control, executive, or management positions in hierarchical order of authority.
Clearance Time	The amount of time is based on the number of people required to evacuate, the number of vehicles that may be used, the suitability of the roads (capacity, elevation, location, etc.) and then any special evacuation considerations such as medical facilities and people with special needs.
Comprehensive Emergency Management Plan (CEMP)	The CEMP establishes uniform policy and procedures for the effective coordination of response, recovery, and mitigation to natural, technological, and man-made disasters.
County Warning Point	Is the location that the State will contact in case of an emergency. The 24-hour County Warning Point is operated through the Crowley County Sheriff's Office in Ordway,Colorado.
Check-In:	The process through which resources first report to an incident. Check-in locations include the incident command post, Resources Unit, incident base, camps, staging areas, or directly on the site.
Chief:	The ICS title for individuals responsible for management of functional sections: Operations, Planning, Logistics, Finance/Administration, and Intelligence (if established as a separate section).
Command:	The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

Command Staff:	In an incident management organization, the Command Staff consists of the Incident Command and the special staff positions of Public Information Officer, Safety Officer, Liaison Officer, and other positions as required, who report directly to the Incident Commander. They may have an assistant or assistants, as needed.
Common Operating Picture:	A broad view of the overall situation as reflected by situation reports, aerial photography, and other information or intelligence.
Communications Unit:	An organizational unit in the Logistics Section responsible for providing communication services at an incident or an EOC. A Communications Unit may also be a facility (e.g., a trailer or mobile van) used to support an Incident Communications Center.
Cooperating Agency:	An agency supplying assistance other than direct operational or support functions or resources to the incident management effort.
Coordinate:	To advance systematically an analysis and exchange of information among principals who have or may have a need to know certain information to carry out specific incident management responsibilities.
Crowley County Sheriff's Office (CCSO)	A separate constitutional agency of Crowley County. The Sheriff is the Chief Law Enforcement Officer for the county and will act as ESF 16 and will command all Law Enforcement activities in support of Emergency Operations.
Deputy:	A fully qualified individual who, in the absence of a superior, can be delegated the authority to manage a functional operation or perform a specific task. In some cases, a deputy can act as relief for a superior and, therefore, must be fully qualified in the position. Deputies can be assigned to the Incident Commander, General Staff, and Branch Directors.
Disaster Recovery Center (DRC)	Locations set-up for victims to apply for State and Federal assistance programs for which they may be eligible.
Disaster Field Office (DFO)	Is established in or near the designated area to support State and Federal response and recovery operations. The DFO houses the Federal Coordinating Officer (FCO) and the Emergency Response Team (ERT), and where possible, the State Coordinating Officer (SCO) and support staff.
Dispatch:	The ordered movement of a resource or resources to an assigned operational mission or an administrative move from one location to another.
Distribution Centers	Locations where in-kind donations of food, water, and other supplies received from the Resource Staging Centers will be distributed to residents. Distribution Centers may be located in parking lots or open fields in the disaster area, as close to victims as possible.
Division:	The partition of an incident into geographical areas of operation. Divisions are established when the number of resources exceeds the manageable span of control of the Operations Chief. A division is located within the ICS organization between the branch and resources in the Operations Section.

Emergency:	Absent a Presidentially declared emergency, any incident(s), human-caused or natural, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.
Emergency Operations Centers (EOCs):	The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, county, city, tribal), or some combination thereof.
Emergency Operations Plan:	The "steady-state" plan maintained by various jurisdictional levels for responding to a wide variety of potential hazards.
Emergency Public Information:	Information that is disseminated primarily in anticipation of an emergency or during an emergency. In addition to providing situational information to the public, it also frequently provides directive actions required to be taken by the general public.
Emergency Response Provider:	Includes state, local, and tribal emergency public safety, law enforcement, emergency response, emergency medical (including hospital emergency facilities), and related personnel, agencies, and authorities. See Section 2 (6), Homeland Security Act of 2002, Pub. L. 107-296, 116 Stat. 2135 (2002). Also known as Emergency Responder.
Evacuation:	Organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.
Event:	A planned, nonemergency activity. ICS can be used as the management system for a wide range of events, e.g., parades, concerts, or sporting events.
Federal:	Of or pertaining to the Federal Government of the United States of America.
Field Hospitals/Emergency Clinics	Those sites where DMATS (Disaster Medical Assistance Teams) or local hospitals/physicians may set-up temporary emergency clinics to provide emergency medical care in the disaster area. The locations are established to supplement the pre-existing medical network.
Forward Command	The Command Post set-up near the emergency/disaster site, the Forward Command Incident Commander runs the scene and coordinates with the EOC.
Function:	Function refers to the five major activities in ICS: Command, Operations, Planning, Logistics, and Finance/Administration. The term function is also used when describing the activity involved, e.g., the planning function. A sixth function, Intelligence, may be established, if required, to meet incident management needs.

General Staff:	A group of incident management personnel organized according to function and reporting to the Incident Commander. The General Staff normally consists of the Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Administration Section Chief.
Group:	Established to divide the incident management structure into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. Groups, when activated, are located between branches and
Hazard:	Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome.
Hazard Mitigation	Is the process of potential improvements that would reduce or remove the hazard vulnerability.
Host Shelter	A facility that is relatively safe and provides essential support services. Host Shelters do not have to meet the guidelines in ARC 4496.
Hurricane	A tropical weather system characterized by pronounced rotary circulation with a constant minimum wind speed of 74 miles per hour (64 knots) that is usually accompanied by rain, thunder and lightning, and storm surge. Hurricanes often spawn tornadoes.
Hurricane Eye	The roughly circular area of comparatively light winds and fair weather at the center of a hurricane. Eyes are usually 25-30 miles in diameter. The area around the eye is called the wall cloud. (Do not go outdoors while the eye is passing, the full intensity of the storm will reoccur in minutes.)
Hurricane Landfall	The point and time during which the eye of the hurricane passes over the shoreline. After passage of the calm eye, hurricane winds begin again with the same intensity as before but from the opposite direction.
Hurricane Season	The six-month period from June 1st through November 30th is considered to be the hurricane season
Hurricane Warning	Is issued by the National Hurricane Center 24 hours before hurricane conditions (winds greater than 74 mph) are expected. If the hurricane path changes quickly, the warning may be issued 10 to 18 hours or less, before the storm makes landfall. A warning will also identify where dangerously high water and waves are forecast even though winds may be less than hurricane force.
Hurricane Watch	Issued by the National Hurricane Center when a hurricane threatens, the watch covers a specified area and time period. A hurricane watch indicates hurricane conditions are possible, usually within 24-36 hours. When a watch is issued, listen for advisories, and be prepared to take action if advised to do so.
Incident:	An occurrence or event, natural or human-caused, that requires an emergency response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.

Incident Action Plan:	An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods.
Incident Command Post (ICP):	The field location at which the primary tactical-level, on-scene incident command functions are performed. The ICP may be collocated with the incident base or other incident facilities and is normally identified by a green rotating or flashing light.
Incident Command System (ICS):	A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.
Incident Commander (IC):	The individual responsible for all incident activities, including the development of strategies and tactics, the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.
Incident Management Team (IMT):	The IC and appropriate Command and General Staff personnel assigned to an incident.
Incident Objectives:	Statements of guidance and direction necessary for selecting appropriate strategy(s) and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow strategic and tactical alternatives.
Individual Assistance	Is provided to individuals and private business in the form of grants and low interest loans by the Federal government.
Initial Action:	The actions taken by those responders first to arrive at an incident site.
Initial Response:	Resources initially committed to an incident.
Intelligence Officer:	The intelligence officer is responsible for managing internal information, intelligence, and operational security requirements supporting incident management activities. These may include information security and operational security activities, as well as the complex task of ensuring that sensitive information of all types (e.g., classified information, law enforcement sensitive information, proprietary information, or export-controlled information) is handled in a way that not only safeguards the information, but also ensures that it gets to those who need access to it to perform their missions effectively and safely.

Joint Information Center (JIC):	A facility established to coordinate all incident-related public information activities. It is the central point of contact for all news media at the scene of
	the incident. Public information officials from all participating agencies should collocate at the JIC.
Joint Information System (JIS):	Integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, timely information during crisis or incident operations. The mission of the JIS is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending, and executing public information plans and strategies on behalf of the IC; advising the IC concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.
Jurisdiction:	A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., city, county, tribal, State, or Federal boundary lines) or functional (e.g., law enforcement, public health).
Liaison:	A form of communication for establishing and maintaining mutual understanding and cooperation.
Liaison Officer:	A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies.
Local Government:	A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; an Indian tribe or authorized tribal organization, or in Alaska a Native village or Alaska Regional Native Corporation; a rural community, unincorporated town or village, or other public entity. See Section 2 (10), Homeland Security Act of 2002, Pub.L. 107-296, 116 Stat. 2135 (2002).
Local State of Emergency	May be declared by the Board of County Commissioners, when normal community functions are, or may be severely disrupted, Crowley County requires outside assistance, or as deemed necessary.
Logistics Section:	The section responsible for providing facilities, services, and material support for the incident.
Long Term Recovery Period	May begin within a week of the disaster impact and may continue for years. Long-term recovery activities include on-going human service delivery; rebuilding the economy, infrastructure, and housing; implementation of hazard mitigation projects; and, funds recovery.
Major Disaster:	any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, tribes, local governments, and disaster relief organizations in alleviating the damage,

	loss, hardship, or suffering caused thereby."
Management by Objective:	A management approach that involves a four-step process for achieving the incident goal. The Management by Objectives approach includes the following: establishing overarching objectives; developing and issuing assignments, plans, procedures, and protocols; establishing specific, measurable objectives for various incident management functional activities and directing efforts to fulfill them, in support of defined strategic objectives; and documenting results to measure performance and facilitate corrective action.
Mandatory Evacuation Order	The governor may issue an order for mandatory evacuation when there is a definite threat of life safety under Colorado Revised Statute 24-33.5-704(7)(e)
Mass Feeding Sites	Temporary locations strategically placed near the disaster area where residents can go for a meal. Food may also be distributed to take home from these locations.
Minor Disaster	A disaster that is likely to be within the response capabilities of local government and result in only minimal need for State or Federal assistance.
Mitigation:	The activities designed to reduce or eliminate risks to persons or property or to lessen the actual or potential effects or consequences of an incident. Mitigation measures may be implemented prior to, during, or after an incident. Mitigation measures are often informed by lessons learned from prior incidents. Mitigation involves ongoing actions to reduce exposure to, probability of, or potential loss from hazards. Measures may include zoning and building codes, floodplain buyouts, and analysis of hazard-related data to determine where it is safe to build or locate temporary facilities. Mitigation can include efforts to educate governments, businesses, and the public on measures they can take to reduce loss and injury.
Mobilization:	The process and procedures used by all organizations-state, local, and tribal-for activating, assembling, and transporting all resources that have been requested to respond to or support an incident.
Multiagency Coordination Entity:	A multiagency coordination entity functions within a broader multiagency coordination system. It may establish the priorities among incidents and associated resource allocations, deconflict agency policies, and provide strategic guidance and direction to support incident management activities.
Multiagency Coordination Systems:	Multiagency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration, and information coordination. The components of multiagency coordination systems include facilities, equipment, emergency operation centers (EOCs), specific multiagency coordination entities, personnel, procedures, and communications. These systems assist agencies and organizations to fully integrate the subsystems of the NIMS.
Multijurisdictional Incident:	An incident requiring action from multiple agencies that each have jurisdiction to manage certain aspects of an incident. In ICS, these incidents will be managed under Unified Command.

Mutual-Aid Agreement:	Written agreement between agencies and/or jurisdictions that they will assist one another on request, by furnishing personnel, equipment, and/or expertise in a specified manner.
National:	Of a nationwide character, including the state, local, and tribal aspects of governance and policy.
National Disaster Medical System:	A cooperative, asset-sharing partnership between the Department of Health and Human Services, the Department of Veterans Affairs, the Department of Homeland Security, and the Department of Defense. NDMS provides resources for meeting the continuity of care and mental health services requirements of the Emergency Support Function 8 in the Federal Response Plan.
National Incident Management System:	A system mandated by HSPD-5 that provides a consistent nationwide approach for state, local, and tribal governments; the private-sector, and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among state, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.
National Response Plan:	A plan mandated by HSPD-5 that integrates Federal domestic prevention, preparedness, response, and recovery plans into one all-discipline, all-hazards plan.
NFIP Flood Zones	Areas designated by the National Flood Insurance Program (NFIP) as being vulnerable to velocity and/or freshwater flooding based on the 100- and 500-year storms. Flood Zones include inland areas.
Nongovernmental Organization:	An entity with an association that is based on interests of its members, individuals, or institutions and that is not created by a government but may work cooperatively with government. Such organizations serve a public purpose, not a private benefit. Examples of NGOs include faith-based charity organizations and the American Red Cross.
Operational Period:	The time scheduled for executing a given set of operation actions, as specified in the Incident Action Plan. Operational periods can be of various lengths, although usually not over 24 hours.
Operations Section:	The section responsible for all tactical incident operations. In ICS, it normally includes subordinate branches, divisions, and/or groups.
Personnel Accountability:	The ability to account for the location and welfare of incident personnel. It is accomplished when supervisors ensure that ICS principles and processes are functional and that personnel are working within established incident management guidelines.
Planning Meeting:	A meeting held as needed prior to and throughout the duration of an incident to select specific strategies and tactics for incident control operations and for service and support planning. For larger incidents, the

	planning meeting is a major element in the development of the Incident Action Plan (IAP).
Planning Section:	Responsible for the collection, evaluation, and dissemination of operational information related to the incident, and for the preparation and documentation of the IAP. This section also maintains information on the current and forecasted situation and on the status of resources assigned to the incident.
Preparedness:	The range of deliberate, critical tasks and activities necessary to build, sustain, and improve the operational capability to prevent, protect against, respond to, and recover from domestic incidents. Preparedness is a continuous process. Preparedness involves efforts at all levels of government and between government and private-sector and nongovernmental organizations to identify threats, determine vulnerabilities, and identify required resources. Within the NIMS, preparedness is operationally focused on establishing guidelines, protocols, and standards for planning, training and exercises, personnel qualification and certification, equipment certification, and publication management.
Preparedness Organizations:	The groups and fora that provide interagency coordination for domestic incident management activities in a nonemergency context. Preparedness organizations can include all agencies with a role in incident management, for prevention, preparedness, response, or recovery activities. They represent a wide variety of committees, planning groups, and other organizations that meet and coordinate to ensure the proper level of planning, training, equipping, and other preparedness requirements within a jurisdiction or area.
Prevention:	Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and, as appropriate, specific law enforcement operations aimed at deterring, preempting, interdicting, or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.
Primary Agency	Each ICS/ESF is headed by a primary agency that has been selected based on its expertise, authorities, resources and capabilities.
Private Sector:	Organizations and entities that are not part of any governmental structure. It includes for-profit and not-for-profit organizations, formal and informal structures, commerce and industry, and private voluntary organizations (PVO).
Probability	The likelihood that a threat will harm an asset with some severity of consequences (see Risk)
Processes:	Systems of operations that incorporate standardized procedures, methodologies, and functions necessary to provide resources effectively and efficiently. These include resource typing, resource ordering and

	tracking, and coordination.
Public Information Officer:	A member of the Command Staff responsible for interfacing with the public and media or with other agencies with incident-related information requirements.
Public Assistance	Is the reimbursement and emergency assistance provided to State and local governments and private non-profit entities from the Federal government.
Publications Management:	The publications management subsystem includes materials development, publication control, publication supply, and distribution. The development and distribution of NIMS materials is managed through this subsystem. Consistent documentation is critical to success, because it ensures that all responders are familiar with the documentation used in a particular incident regardless of the location or the responding agencies involved.
Qualification and Certification:	This subsystem provides recommended qualification and certification standards for emergency responder and incident management personnel. It also allows the development of minimum standards for resources expected to have an interstate application. Standards typically include training, currency, experience, and physical and medical fitness.
Radio Emergency Associated Communications Team (REACT)	A volunteer group of amateur radio operators, who may be activated by the Crowley County Division of Emergency Management, to provide communications support in times of emergency.
Reception Area:	This refers to a location separate from staging areas, where resources report in for processing and out- processing. Reception Areas provide accountability, security, situational awareness briefings, safety awareness, distribution of IAPs, supplies and equipment, feeding, and bed down.
Recommended Evacuation	Will be issued when it is determined that the hazard may cause discomfort to residents and minimal damage to property, but it is not expected to threaten life safety.
Recovery:	The development, coordination, and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private-sector, nongovernmental, and public-assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental, and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents.
Recovery Plan:	A plan developed by a State, local, or tribal jurisdiction with assistance from responding Federal agencies to restore the affected area.
Red Cross Service Centers	Provide direct services, to victims needing long-term recovery assistance, primarily through the use of vouchers for food, clothing, personal items, furnishings, and rental assistance.
Regional Recovery Center (RRC)	The location where all resources from outside of the area will be directed for redistribution to County Resource Staging Center as requested. The RRC is known by many other names.

Resources:	Personnel and major items of equipment, supplies, and facilities available or potentially available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an EOC.
Resource Staging Centers (RSC)	Locations in the County where supply donations and volunteers will be received from the Regional Recovery Center for re-distribution to County distribution points. RSCs may be used as distribution points. Supplies may also be warehoused at the RSC if space permits.
Resource Management:	Efficient incident management requires a system for identifying available resources at all jurisdictional levels to enable timely and unimpeded access to resources needed to prepare for, respond to, or recover from an incident. Resource management under the NIMS includes mutual-aid agreements; the use of special state, local, and tribal teams; and resource mobilization protocols.
Resources Unit:	Functional unit within the Planning Section responsible for recording the status of resources committed to the incident. This unit also evaluates resources currently committed to the incident, the effects additional responding resources will have on the incident, and anticipated resource needs.
Response:	Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice.
Risk	Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence as determined by its likelihood and the associated consequences. (Risk = Threats x Vulnerability x Impact)
Safety Officer:	A member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations and for developing measures for ensuring personnel safety.

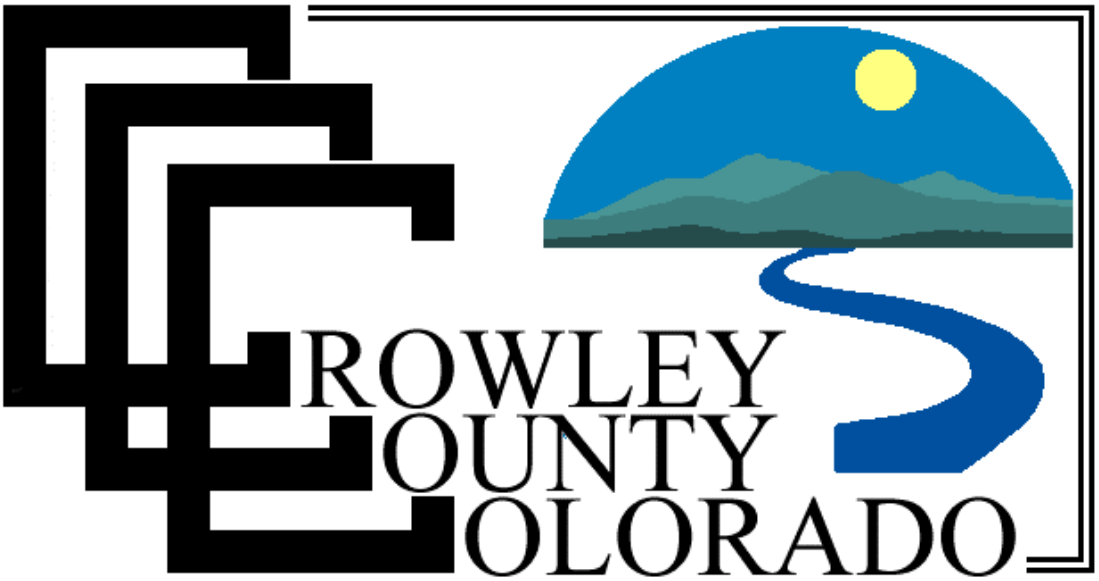
Section:	The organizational level having responsibility for a major functional area of incident management, e.g., Operations, Planning, Logistics, Finance/Administration, and Intelligence (if established). The section is organizationally situated between the branch and the Incident Command.
Security Checkpoints	Those locations where all traffic will be stopped to check for identification in order to determine access to the disaster area.
Severity	Referring to the intensity of an event. If vulnerability is high, severity will be high.
Shelters	Temporary emergency shelters activated prior to or after a disaster impact, operated during the disaster and closed as soon as residents can be returned to their homes or relocated to long term shelters or temporary housing areas.
Shelter-In-Place	Means that residents will be advised to remain in their homes with the windows closed and all open- air circulation systems turned off.
Short-Term Recovery Period	May begin immediately after the disaster impact and continues for approximately six months. The Short-Term Recovery Period includes the implementation of both individual assistance programs, through Disaster Recovery Centers (DRC) and Red Cross Service Centers, and public assistance programs through damage survey teams and forms-completion. Other short-term activities include sheltering (hotels/motels, mobile homes, tent cities, etc.), on-going human service delivery, debris removal, contractor licensing, permitting and inspections.
Span of Control:	The number of individuals a supervisor is responsible for, usually expressed as the ratio of supervisors to individuals. (Under the NIMS, an appropriate span of control is between 1:3 and 1:7.)
Special Needs Population Program	The program through which impaired persons who need special assistance in times of emergency are registered, evacuated, and sheltered.
Staging Area:	Location established where resources can be placed while awaiting a tactical assignment. The Operations Section manages Staging Areas.
Standard Operating Guidelines	A set of instructions having the force of a directive, covering those features of operations which lend themselves to a definite or standardized procedure without loss of effectiveness
State:	When capitalized, refers to any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any possession of the United States. See Section 2 (14), Homeland Security Act of 2002, Pub. L. 107-296, 116 Stat. 2135 (2002).
Statewide State of Emergency	Is issued by the Governor when an emergency/disaster is eminent or has occurred. States of emergencies normally encompass specific geographic or threatened areas.
Strategic:	Strategic elements of incident management are characterized by continuous long-term, high-level planning by organizations headed by elected or other

	senior officials. These elements involve the adoption of long-range goals and objectives, the setting of priorities; the establishment of budgets and other fiscal decisions, policy development, and the application of measures of performance or effectiveness.
Strike Team:	A set number of resources of the same kind and type that have an established minimum number of personnel.
Strategy:	The general direction selected to accomplish incident objectives set by the IC.
Supporting Technologies:	Any technology that may be used to support the NIMS is included in this subsystem. These technologies include orthophoto mapping, remote automatic weather stations, infrared technology, and communications, among various others.
Support Agency	Agency in support of one or more ICS Functional sections based on their resources and capabilities to support the functional area.
Task Force:	Any combination of resources assembled to support a specific mission or operational need. All resource elements within a Task Force must have common communications and a designated leader.
Technical Assistance:	Support provided to State, local, and tribal jurisdictions when they have the resources but lack the complete knowledge and skills needed to perform a required activity (such as mobile-home park design and hazardous material assessments).
Temporary Housing Area	Where tents or mobile home units may be set-up for residents to live in before they are able to return to their own homes or they find a new home.
Temporary Debris Storage Area	Park, open area or landfill space where debris will be held after debris clearance until it can be moved to a landfill, incinerator, or other appropriate disposal location.
Terrorism:	Under the Homeland Security Act of 2002, terrorism is defined as activity that involves an act dangerous to human life or potentially destructive of critical infrastructure or key resources and is a violation of the criminal laws of the United States or of any State or other subdivision of the United States in which it occurs and is intended to intimidate or coerce the civilian population or influence a government or affect the conduct of a government by mass destruction, assassination, or kidnapping. See Section 2 (15), Homeland Security Act of 2002, Pub. L. 107-296, 116 Stat. 2135 (2002).
Threat:	An indication of possible violence, harm, or danger.
Tools:	Those instruments and capabilities that allow for the professional performance of tasks, such as information systems, agreements, doctrine, capabilities, and legislative authorities.
Tornadoes:	Are formed by severe thunderstorms, most frequently in the spring and summer. A tornado can travel for miles along the ground, lift, and suddenly change direction and strike again.
Tornado Watch	A watch is issued when weather conditions are favorable to the formation of

	tornadoes, for example during severe thunderstorms. During a Tornado Watch, keep an eye on the weather and be prepared to take shelter immediately if conditions worsen.
Traffic Control Points	Key intersections on the road network where we anticipate needing personnel to physically control traffic flow.
Tribal:	Any Indian tribe, band, nation, or other organized group or community, including any Alaskan Native Village as defined in or established pursuant to the Alaskan Native Claims Settlement Act (85 stat. 688) [43 U.S.C.A. and 1601 et seq.], that is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.
Tropical Storm	An area of low pressure with a definite eye and counter clockwise winds of 39- 74 mph. A tropical storm may strengthen to hurricane force in a short period of time.
Tropical Storm Warnings	Issued by the National Hurricane Center when winds of 55- 73 mph (48- 63 knots) are expected.
Type:	A classification of resources in the ICS that refers to capability. Type 1 is generally considered to be more capable than Types 2, 3, or 4, respectively, because of size; power; capacity; or, in the case of incident management teams, experience and qualifications.
Unaffiliated Volunteers	Volunteers that are not associated with any recognized disaster response agency, but possess valuable training, skills and experience to assist in the recovery of the community
Unified Area Command:	A Unified Area Command is established when incidents under an Area Command are multijurisdictional. (See Area Command.)
Unified Command:	An application of ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC, often the senior person from agencies and/or disciplines participating in the UC, to establish a common set of objectives and strategies and a single IAP.
Unit:	The organizational element having functional responsibility for a specific incident planning, logistics, or finance/administration activity.
Unity of Command:	The concept by which each person within an organization reports to one and only one designated person. The purpose of unity of command is to ensure unity of effort under one responsible commander for every objective.
Volunteer:	For purposes of the NIMS, a volunteer is any individual accepted to perform services by the lead agency, which has authority to accept volunteer services, when the individual performs services without promise, expectation, or receipt of compensation for services performed. See, e.g., 16 U.S.C. 742f(c) and 29 CFR 553.101.
Volunteer Reception Center	Provides a specific location, staffed by skilled volunteer managers capable of screening, interviewing and referring citizens in a professional manner. Documentations of volunteer permits a dollar value to be placed on donated

	services, contributing to required matching funds for reimbursement purposes.
Vulnerability	Degree to which something is susceptible to negative consequences as a result of an event.

APPENDIX 2
AUTHORITIES AND REFERENCES



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Colorado Disaster Emergency Act

The Colorado Disaster Emergency Act (recently revised under 24.33.5-700, *et seq.*, C.R.S.) outlines State and local government responsibilities in addition to the Governor's authority during a disaster. The Act gives specific instruction to local governments regarding emergency management. The Act includes:

- The responsibilities and authority of the Governor with respect to emergency management, including the creation of the Governor's Disaster Emergency Council and the disaster declaration process
- The creation of the State Office of Emergency Management and describes the duties and responsibilities of this Office to assist in the protection of Colorado citizens
- The local and interjurisdictional duties and responsibilities for disaster agencies and services. Specifically, this section of the Act states that each county shall maintain a disaster agency or participate in a local or interjurisdictional disaster agency. Specific municipalities may also be required to have a disaster agency as outlined by this statute. All counties shall cooperate with the disaster agencies of municipalities situated within its borders but shall not have jurisdiction within a municipality having its own disaster agency. Each political subdivision that does not have a disaster agency and has not made arrangements to secure or participate in the services of an agency shall have an elected official designated as liaison officer to facilitate the cooperation and protection of that political subdivision for disaster prevention, protection, mitigation, response, and recovery.
- The provisions for local disaster emergencies--specifically designating the authority to declare, the timelines to follow, and the reporting requirements

Duties of the Sheriff with Regard to Emergency Management

24-32-2222. County sheriff - local government - local emergency planning committee - memorandum of understanding with volunteer organizations: This statute states that any county sheriff, the director of any local government, any local emergency planning committee, or any State agency may develop and enter into a memorandum of understanding with one or more volunteer organizations to assist the county sheriff, local government, local emergency planning committee, or State agency in providing services in the event of a disaster. It outlines the various items that should be included in any MOU.

30-10-516. Sheriffs to preserve peace - command aid: This statute states that it is the duty of the sheriffs, undersheriffs, and deputies to keep and preserve the peace in their respective counties, and to quiet and suppress all affrays, riots, and unlawful assemblies and insurrections. For that purpose, and for the service of process in civil or criminal cases, and in apprehending or securing any person for felony or breach of the peace, they, and every coroner, may call to their aid such a person such person of their county as they may deem necessary.

Hazardous Substances – Designated Emergency Response Authority

29-22-102. Hazardous Substance Incidents – Response Authorities – Designation: This statute provides for the designation of emergency response authorities (DERA) for hazardous substance incidents. Once designated, a DERA is responsible for providing and maintaining the capability for emergency response to a hazardous materials incident occurring within its jurisdiction. A DERA may provide and maintain that capability directly, or through mutual aid and other agreements. Though circumstances may arise where the identification of a DERA may be difficult, those circumstances should be few and unique. The identification of a DERA can normally be determined by relying on the following general principles:

1. Where a spill/discharge actually occurs will determine the DERA. Where the events leading to the spill/discharge began is not relevant.

2. The Colorado State Patrol is the DERA for spills/discharges that occur within the boundaries of any publicly maintained highway not within a municipality's corporate limits.

3. For spills/discharges that occur within the limits of a town, city, or city and county, the fire department is ordinarily the DERA. That designation should be done by ordinance or resolution. In the absence of such action the fire department is the DERA by default. However, another entity may be designated the DERA by ordinance or resolution.

4. Except for those spills/discharges that occur within the boundaries of any publicly maintained highway or within the limits of a municipality, the sheriff is ordinarily the DERA. That designation should be done by ordinance or resolution. In the absence of such action the county sheriff is the DERA by default. However, another entity may be designated the DERA by ordinance or resolution.

Note: By agreement, the Colorado State Patrol is not the DERA for spills/discharges occurring within the boundaries of publicly maintained highways in Arapahoe, Larimer, and Mesa counties.

5. Spills/discharges occurring on private property are the responsibility of the property owner, who must either notify the pertinent DERA (municipal or county) and coordinate a response or effect a response independently.

Full statute references for all statutes in this guide can be found at:
http://www.michie.com/colorado/lpext.dll?f=templates&fn=main-h.htm&cp=

These statutes are subject to change each year with legislative changes. Therefore, it is important to keep up to date with proposed legislation and new laws governing emergency management activities.

Governor's Executive Order 2011-005

Establishing a Policy to Enhance the Relationship between State and Local Government

For many years the State government has imposed an ever-increasing number of legal requirements on local governments without regard to the costs such requirements impose on already-strained local budgets, and without providing additional funding to enable local governments to comply. Local governments continue to face difficulties such as funding, complexity, and delay in securing flexibility and approvals regarding State requirements. Local governments should have more flexibility to design solutions to problems without excessive interference or oversight or unnecessary regulation, from State government. In addition, local governments should not be expected to implement laws and regulations without the funding necessary to do so. In order to assist local governments in effectively complying with such requirements, this executive order gives direction to State agencies on consulting and working with local governments before imposing new regulations or other obligations.

Other Emergency Management Statutes

The following provides information of Colorado Revised Statutes regarding general emergency management topics.

2-3-1501. Legislative declaration: This statute states that in the event of an emergency epidemic or disaster in the state, the general assembly must be prepared to respond to the emergency epidemic or disaster and have a plan for ensuring the continuation of its operations in order to assist in the protection of the health, safety, and welfare of the public.

2-3-1503. Legislative emergency preparedness, response, and recovery committee - creation - membership - duties: This statute created a legislative emergency preparedness,

response, and recovery committee. The legislative committee was tasked with developing a plan for the response by, and continuation of operations of, the general assembly and the legislative service agencies in the event of an emergency epidemic or disaster. The legislative committee may recommend legislation pertaining to the preparedness, response, and recovery by, and continuation of operations of, the general assembly and the legislative service agencies in the event of an emergency epidemic or disaster. In the event of an emergency epidemic or disaster that the Governor declares to be a disaster emergency, the legislative committee shall convene as rapidly and as often as necessary to advise the speaker of the house of representatives, the president of the senate, and the legislative service agencies regarding reasonable and appropriate measures to be taken by the general assembly and the legislative service agencies to respond to the emergency epidemic or disaster and protect the public health, safety, and welfare. The legislative committee shall communicate, cooperate, and seek advice and assistance from the council, the division, the department, and the GEEERC in responding to the emergency epidemic or disaster.

8-40-202. Employee: This statute defines an employee in the context of an emergency or disaster and outlines the liability and worker's compensation requirements. This includes the definition of a volunteer acting in the service of an emergency services agency, including special districts and Civil Air Patrol volunteers.

13-21-108.3. Architects, building code officials, professional engineers, and professional land surveyors rendering assistance during emergency or disaster - qualified immunity from civil liability: This statute describes that a licensed architect, a building code official, a professional licensed engineer, or a professional licensed land surveyor who voluntarily and without compensation provides architectural, damage assessment, engineering, or surveying services, respectively, at the scene of an emergency shall not be liable for any personal injury, wrongful death, property damage, or other loss caused by an act or omission of the architect, building code official, engineer, or surveyor in performing such services.

15-10-106.5. Petition to determine cause and date of death resulting from disaster - body unidentifiable or missing: This statute states that if the occurrence of a disaster has been declared by proclamation of the Governor, and it appears that a person has died as a direct result, but the remains have not been located or are unidentifiable, the coroner, sheriff, or district attorney for the county in which any part of such disaster occurred, the spouse, next of kin, or public administrator for such county, or, 30 days after the disaster was declared, any other person, may apply to the coroner of such county asking that the coroner determine the cause, manner, and date of death of the alleged decedent. The statute further outlines the details of such application and the information needed in an affidavit that is attached to the application.

17-24-124. Inmate disaster relief program - legislative declaration: This statute outlines the establishment of the inmate disaster relief program. The program created inmate disaster relief crews composed of inmates from minimum restrictive or minimum security facilities, who can be utilized during disasters and emergencies, including fighting forest fires, helping with flood relief, and assisting in the prevention of or clean up after other natural or human-caused disasters. An inmate disaster relief crew may be utilized by the State, local, or federal governmental agencies that apply to the division for assistance.

24-32-2303. State Liability: This statute outlines the legal liabilities for the State of Colorado. All legal liabilities for damages, not only to property under the provisions of the constitution of the State of Colorado but also for death or injury to any person, except a civil defense worker regularly enrolled and acting as such, caused by acts done or attempted under the color of the "Colorado Disaster Emergency Act," in a bona fide attempt to comply therewith, shall be the obligation of the State of Colorado. Permission is given for suits against the State for recovery of compensation in that behalf, and for the indemnification of any person appointed and regularly enrolled as a civilian defense worker while actually engaged in civil defense duties or as a member of any agency of the State or political subdivision thereof engaged in civilian defense activity, or such person's

dependents, as an aspect of damage done to such person's private property, or judgment against such person for acts done in good faith attempts. The foregoing shall not be construed to result in indemnification in any case of willful misconduct, gross negligence, or bad faith on the part of any agent of civilian defense. Should the United States government or any agency thereof, in accordance with any federal statute, rule, or regulation, provide for the payment of damages to property or for death or injury as provided for in this section, then and in that event, there shall be no liability or obligation whatsoever upon the part of the State of Colorado for any such damage, death, or injury for which the United States government assumes liability.

24-32-2304. Recovery for personal injury: This statute states that the recovery for the injury or death of persons appointed and regularly enrolled in a civil defense organization as contemplated by the "Colorado Disaster Emergency Act," while actually engaged in civil defense duties shall be limited to the provisions of the "Workers' Compensation Act of Colorado," articles 40 to 47 of title 8, C.R.S. If such persons are regularly employed by the State of Colorado or its political subdivisions, and, if such persons are volunteer civil defense workers, shall be limited as otherwise provided by statute. The provisions in this statute shall not affect the right of any person to receive benefits or compensation to which such person might be entitled under any workers' compensation or pension law or any act of congress

24-32-2605. Immunity: This statute explains that no State commission or agency or county or municipal agency, including local emergency planning committees, citizen corps councils, fire protection districts, and volunteer fire, ambulance, or emergency service and rescue groups, nor their officers, officials, directors, employees, or volunteers, when engaged in emergency planning, service, or response activities regarding a hazardous material release, threat of release, or act of terrorism, shall be liable for the death of or injury to any person or for the loss of or damage to property or the environment resulting from the hazardous material release, threat of release, or act of terrorism, except for willful and wanton acts or omissions. The statute outlines specifics for this immunity.

24.33.5-1102 Emergency Relief: This statute states that in the event of an emergency, the Governor may provide assistance to save lives and to protect property and public health and safety. He/she may direct State agencies to provide technical assistance and advisory personnel to the affected State and local governments in giving:

- Aid in the performance of essential community services
- Warning of further risks and hazards
- Public information and assistance in health and safety measures
- Technical advice on management and control, and reduction of immediate threats to public health and safety
- Assistance in the distribution of medicine, food, and other consumable supplies or emergency assistance.

24-32-2504. Temporary housing for disaster victims: This statute states that whenever the Governor has proclaimed a disaster emergency under the laws of this state or the president of the United States has declared an emergency or a major disaster to exist in this state, the Governor is authorized:

a. To enter into purchase, lease, or other arrangements with any agency of the United States for temporary housing units to be occupied by disaster victims and to make such units available to any political subdivision of the state;

b. To assist any political subdivision of the state, which is the locus of temporary housing for disaster victims to acquire sites necessary for such temporary housing and to do all things required to prepare such sites to receive and utilize temporary housing units.

24-33.5-1105. Debris removal: This statute outlines the provisions for debris removal after a disaster and what the Governor's office and State government is allowed to do for the disaster area.

24-33.5-1106. Grants to individuals: This statute states that whenever the president of the United States, at the request of the Governor, has declared a major disaster to exist in this state, the Governor is authorized to accept a grant from the federal government to fund such financial assistance, subject to such terms and conditions as may be imposed upon the grant. The Governor is also authorized to make financial grants to meet disaster-related necessary expenses or serious needs of individuals or families adversely affected by a major disaster, which cannot otherwise adequately be met from other means of assistance, which grants shall not exceed $5,000 in the aggregate to an individual or family in any single major disaster declared by the president.

24-33.5-1107. Community Loans: This statute is similar to the one above, but it gives provisions for federal loans for disasters instead of grants.

24-77-104. State Emergency Reserve – Creation – Declaration of Emergency: This statute requires the State to establish a State emergency reserve for declared emergencies. The State emergency reserve shall be no less than three percent of State fiscal year spending minus annual bonded debt service. The State emergency reserve shall consist of such monies as are annually designated by the general assembly in the general appropriation bill or by separate bill to constitute said emergency reserve. Provisions for the expenditure of the monies in this fund are outlined in this statute.

28-3-104. Commander in Chief – Staff: This statute outlines that the Governor shall be the commander in chief of the military forces except so much thereof as may be in the actual service of the United States and may employ the same for the defense or relief of the state, the enforcement of its laws, the protection of life and property therein, and the implementation of the Emergency Management Assistance Compact; for service in a national special security event or in situations involving imminent danger of emergency or disaster; and for the training of the military forces for all appropriate state missions.

Wildfire Statutes

13-21-105. Damages from fire set in woods or prairie - treble damages during drought conditions: This statute outlines that if any person sets fire to any woods or prairie so as to damage any other person, such person shall make satisfaction for the damage to the party injured, to be recovered in an action before any court of competent jurisdiction. If a state of emergency or disaster due to drought has been declared by the Governor at the time a person knowingly sets fire to any woods or prairie such person may be held liable for damages to any injured party. This statute does not apply to any open burning conducted in the course of agricultural operations or to any State, municipal, or county fire management operations. Additionally, this does not apply to any other person seeking to conduct other prescribed or controlled fires such as grassland, forest, or habitat management activities, if such person has first obtained written authority from the State forester.

24-33.5-1220. Emergency Fire Fund: This statute outlines the creation and management of the Emergency Fire Fund (EFF), which can be used for the purpose of preventing and suppressing forest and wildland fires. The fund is administered by the Division of Fire Prevention and Control.

24-33.5-1221. State Responsibility Determined: This statute outlines the state's financial responsibilities for managing forest and wildland fires in specific geographic areas of the state. The management of fires in all other areas is primarily the responsibility of local and federal agencies, as appropriate.

24-33.5-1222. Cooperation by Counties: This statute states that the board of county commissioners, in their discretion, cooperate and coordinate with the governing bodies of organized fire districts, fire departments, and municipal corporations; with private parties; with other counties; with the Director, with the United States secretary of the interior; with the US secretary of agriculture; and with an agency of the United States Government in the management and prevention of forest fires.

24-33.5.1223. Sheriffs to Enforce: This statute outlines the sheriff's authorization to enforce all State forest fire laws.

24-33.5-1226. Wildfire Emergency Response Fund (WERF) - creation - wildfire preparedness fund - creation: This statute created the Wildfire Emergency Response Fund, which is administered by the Division of Fire Prevention and Control (DFPC). The DFPC shall use the monies in the wildfire emergency response fund to provide funding or reimbursement for:

a. The first aerial tanker flight or the first hour of a firefighting helicopter to a wildfire at the request of any county sheriff, municipal fire department, or fire protection district; and

b. The employment of wildfire hand crews to fight a wildfire for the first two days of a wildfire at the request of any county sheriff, municipal fire department, or fire protection district, with a preference for the use of wildfire hand crews from the inmate disaster relief program created in section 17-24-124, C.R.S.

The DFPC may also use the monies in the wildfire preparedness fund to provide funding or reimbursement for the purchase of fire shelters by volunteer fire departments in order to comply with applicable federal requirements. The statute further outlines that to effectively implement the provisions of this section and to provide recommendations to the Governor related to use of the disaster emergency fund, the State forester, a representative of the county sheriffs of Colorado, a representative of the Colorado State Fire Chiefs' Association, the director of the Office of Emergency Management, and the adjutant general or his or her designee shall collaborate to develop a wildfire preparedness plan designed to address the following:

- The amount of aerial firefighting resources necessary for the State of Colorado at times of high and low wildfire risk;
- The availability of appropriate aerial firefighting equipment and personnel at times of high fire risk to respond to a wildfire;
- The availability of State wildfire engines and staffing of the engines at different levels of wildfire risk;
- The availability of State inmate wildfire hand crews at different levels of wildfire risk; and
- A process for ordering and dispatching aerial firefighting equipment and personnel that is consistent with, and supportive of, the statewide mobilization plan prepared pursuant to section 24-33.5-1210, C.R.S.

Procedures governing the development, adoption, or implementation of community wildfire protection plans by county governments are specified in section 30-15-401.7, C.R.S. Nothing in this section shall be construed to affect the provisions of section 30-15-401.7, C.R.S.

29-20-105.5. Intergovernmental cooperation - intergovernmental agreements to address wildland fire mitigation - legislative declaration: This statute was enacted for the purpose of authorizing and requiring intergovernmental cooperation between a county and any local governments that own land areas located within the county to mitigate the harm caused by forest land or wildland fires affecting such contiguous land areas in the interest of protecting the public health and safety. Because of the likely threat that wildland fires may cross territorial boundaries, particularly if cooperative fire mitigation policies are not established and maintained, protecting the public from the dangers of such fires, especially fires occurring in wildland-urban interface areas, is a matter of statewide concern.

29-22.5-103. Wildland fires - general authority and responsibilities: This statute outlines the responsibilities of the chief of the fire department in each fire protection district and his/her responsibilities for the management of wildland fires that occur within the boundaries of his/her district and that are within the capability of the fire district to control or extinguish. Specifically, the statute outlines when a fire protection district may transfer duties or responsibilities to the county sheriff, and the financial considerations for such a transfer. Additionally, this statute states that the sheriff is the fire warden of the county and is responsible for the planning for, and the coordination of, efforts to suppress wildfires occurring in the unincorporated area of the county outside the boundaries of a fire protection district or that exceed the capabilities of the fire protection district to control or extinguish in accordance with the provisions of section 30-10-513, C.R.S.

29-22.5-104. County Wildfire Preparedness Plan: This statute states that the sheriff of each county may develop, and update as necessary, a wildfire preparedness plan for the unincorporated area of the county in cooperation with any fire district with jurisdiction over such unincorporated area. The statue outlines the details of each section of the plan.

Colorado Healthy Forests and Vibrant Communities Act of 2009

23-31-312. Community wildfire protection plans - county governments - guidelines and criteria - legislative declaration – definitions: Community wildfire protection plans, or CWPPs, are authorized and defined in section 101 of Title I of the federal "Healthy Forests Restoration Act of 2003," Pub.L. 108-148, referred to in this section as "HFRA." Title I of HFRA authorizes the secretaries of agriculture and the interior to expedite the development and implementation of hazardous fuel reduction projects on federal lands managed by the United States forest service and the bureau of land management when these agencies meet certain conditions. HFRA emphasizes the need for federal agencies to work collaboratively with local communities in developing hazardous fuel reduction projects, placing priority on treatment areas identified by the local communities themselves in a CWPP. The wildland-urban interface area is one of the identified property areas that qualify under HFRA for the use of this expedited environmental review process.

This act describes the development of CWPPs, assisting local communities in clarifying and refining their priorities for the protection of life, property, and critical infrastructure in its wildland-urban interface area. By enacting this section, the general assembly intends to facilitate and encourage the development of CWPPs in counties with fire hazard areas in their territorial boundaries and to provide more statewide uniformity and consistency with respect to the content of CWPPs in counties needing protection against wildfires.

23-31-313. Healthy forests - vibrant communities - funds created: This statute outlines the duties of the Colorado State Forest Service in the development and implementation of Community Wildfire Protection Plans (CWPPs). Additionally, this statute outlines how the CSFS will help communities address the urgent need to reduce wildfire risks by supporting implementation of risk mitigation treatments that focus on protecting lives, homes, and essential community infrastructure, and by improving inventory and monitoring of forest conditions, including watershed restoration and economic recovery. As part of this statute, the Healthy Forests and Vibrant Communities Fund was created in the State treasury. By executive order or proclamation, the

Governor may access and designate monies in the healthy forests and vibrant communities fund for healthy forests and vibrant communities activities.

32-18-109. Wildfire mitigation measures - private land – reimbursement: This statute states that any landowner who performs wildfire mitigation measures on his or her land in a district in any year may request reimbursement from the district, in an amount not to exceed 50 percent of the landowner's direct costs of performing the wildfire mitigation measures in that year or $10,000, whichever is less. The statute outlines the provisions for these requests for reimbursement.

Flood Response Fund

37-60-123.2. Flood Response Fund – Created: This statute outlines the creation of the flood response fund established in the State treasury. The board is authorized to provide funding for flood preparedness and for response and recovery activities following flood events and disasters. The monies in the response fund are hereby continuously appropriated to the board for flood response purposes, including, but not limited to, the immediate availability of funds for aerial photography of flooded areas, flood documentation and identification of specific hazards, evaluations and revisions of floodplain designations, flood forecasting and preparation, and development of disaster and recovery mitigation plans. All interest derived from the investment of monies in the response fund shall be credited to the Colorado Water Conservation Board construction fund. Any balance remaining in the response fund at the end of any fiscal year shall remain in the fund.

Drought Mitigation Planning

37-60-126.5. Drought mitigation planning - programs - relationship to state assistance: As used in this section, unless the context otherwise requires, "drought mitigation" means the planning and implementation of actions and programs used in periods of unusual water scarcity, with a combination of actions and programs taken before a drought to reduce the occurrence and severity of water supply shortages, and actions and programs taken during a drought to manage water supplies and water demand appropriately. This statute states that programs shall be developed to provide technical assistance to covered entities and other State or local governmental entities in the development of drought mitigation plans.

Volunteers

13-21-113.7. Immunity of volunteer firefighters, incident management teams, and their employers or organizations - definitions - legislative declaration: This statute states that a volunteer firefighter who, in good faith, takes part in firefighting efforts or provides emergency care, rescue, assistance, or recovery services at the scene of an emergency, any incident management team, and any person who, in good faith, commands, directs, employs, sponsors, or represents any such volunteer firefighter or incident management team shall not be liable for civil damages as a result of an act or omission by such volunteer firefighter, incident management team, or other person in connection with the emergency; except that this exemption shall not apply to grossly negligent, willful, wanton, or reckless acts or omissions.

24-33.5-822. County Sheriff – local government – local emergency planning committee – memorandum of understanding with volunteer organizations: This statute states that any county sheriff, the director of any local government, any local emergency planning committee, or any State agency may develop and enter into a memorandum of understanding with one or more volunteer organizations to assist the county sheriff, local government, local emergency planning committee, or State agency in providing services in the event of a disaster. The statute further outlines the information that should be included in such memoranda of understanding, the duration of the agreement and the provision for amending the agreement.

24-33.5-823. Qualified Volunteer Organization List – Creation – Nomination of Organizations: This statute states that any volunteer who is associated with a qualified volunteer organization pursuant to this section may be eligible to receive the protections and benefits specified in this part 22 and in article 10 of this title. The executive director of the department or the executive director's designee shall create and maintain a list of volunteer organizations that shall be known as the "qualified volunteer organization list." Any county sheriff, local government, local emergency planning committee, or State agency may nominate a volunteer organization with which it enters into a memorandum of understanding pursuant to section 24-32-2222 to be included on the qualified volunteer organization list created.

24-33.5-824. Volunteers - provision of emergency services - protections - benefits: This statute outlines the provisions for volunteer protections. A volunteer is deemed to be a qualified volunteer if:

a. The volunteer is a member of a volunteer organization that enters into a memorandum of understanding with a county sheriff, local government, local emergency planning committee, or State agency pursuant to section 24-32-2222;

b. The volunteer organization of which the volunteer is a member is included on the qualified volunteer organization list created and maintained by the department pursuant to section 24-32-2223;

c. The volunteer is called to service through the volunteer organization under the authority of the county sheriff, local government, local emergency planning committee, or State agency to volunteer in a disaster.

24-33.5-825. Qualified volunteers - leave of absence - private employees: This statute outlines provisions for volunteers employed by private employers who are called into service by a volunteer organization for a disaster. The statute entitles volunteers to a leave of absence from the qualified volunteer's employment, other than employment of a temporary nature, for the time when the qualified volunteer is serving. The leave shall not exceed a total of 15 work days in any calendar year, and the leave shall be allowed only if the volunteer is called into service for a disaster and provides proof that he or she is a qualified volunteer pursuant to section 24-32-2224 (2). This will be a leave without pay and shall not affect the qualified volunteer's rights to vacation, sick leave, bonus, advancement, or other employment benefits or advantages relating to and normally to be expected for the qualified volunteer's particular employment. An employer shall not be required to provide leave pursuant to this section to more than 20 percent of the employer's employees on any work day. Additionally, the employer shall not be required to allow leave pursuant to this section for any employee designated as an essential employee. An "essential employee" means an employee who the employer deems to be essential to the operation of the employer's daily enterprise, whose absence would likely cause the employer to suffer economic injury, or whose duties include assisting in disaster recovery for the employer.

Resource Management

24-33.5-705.3. Statewide All-Hazards Resource Database: This statute outlines the duties and responsibilities of the Office of Emergency Management for the development and the maintenance of a centralized computer database that includes a comprehensive listing of all-hazards response resources located within Colorado.

24-33.5-705.4. All-Hazards Resource Mobilization System – creation: This statute states that the Office of Emergency Management shall prepare a statewide mobilization plan to provide for the allocation and deployment of firefighting, emergency medical, and urban search and rescue resources in the event of a disaster or local incident that requires more resources than those available under any existing inter-jurisdictional or mutual aid agreement. The mobilization plan created pursuant to this section shall be developed in coordination with appropriate federal, State,

and local government agencies. The plan shall include mobilization procedures and may include provisions for reimbursement of costs and shall address liability issues.

Emergency Management Assistance Compact

24-60-2902. Compact approved and ratified: This statute outlines the Governor's authorization to enter into the Emergency Management Assistance Compact (EMAC). The purpose of this compact is to provide for mutual assistance among states entering into this compact in managing any emergency disaster that is duly declared by the Governor of the affected state, whether arising from natural disaster, technological hazard, human-caused disaster, civil emergency aspects of resource shortages, community disorders, insurgency, or enemy attack. This compact shall also provide for mutual cooperation in emergency-related exercises, testing, or other training activities using equipment and personnel simulating performance of any aspect of the giving and receiving of aid by party states or subdivisions of party states during emergencies, such actions occurring outside actual declared emergency periods. Mutual assistance in this compact may include the use of the states' National Guard forces, either in accordance with the National Guard Mutual Assistance Compact or by mutual agreement between or among states. The articles within this compact outline the implementation of the compact, utilization of resources, state responsibilities, required plans and reviews, requests for assistance, interstate evacuation and reception of citizens, liability, limitations of aid, compensation, reimbursement, and supplementary agreements.

Public Health and Medical Services

25-1-108. Powers and Duties of State Board of Health: This statute outlines the duties of the State Board of Health. Specifically related to emergency management, the statute outlines orders, rules, and regulations the board of health may issue or enforce for public health emergencies and disasters, including the following entities:

- Hospitals
- Other acute care facilities
- County, district, and municipal public health agencies
- Trauma centers
- Area trauma advisory councils, managed care organizations

25-1.5-107. Pandemic Influenza – Purchase of Antiviral Therapy – Definitions: This statute allows the Department of Public Health and Environment to enter into partnerships with one or more authorized purchasers to purchase antiviral therapy in order to acquire a ready supply or stockpile of antiviral drugs in the event of an epidemic emergency, including pandemic influenza. If an entity wishes to purchase antiviral therapy through the department, the entity shall notify the department of its intent and shall demonstrate to the department, in a form and manner determined by the department, that the entity satisfies the criteria of an authorized purchaser. Upon a determination that an entity is an authorized purchaser, the department shall seek approval from the United States Department of Health and Human Services for the purchase of antiviral therapy by the authorized purchaser. Any purchase of antiviral therapy shall be approved by the United States Department of Health and Human Services, and antiviral therapy shall be stored and used in accordance with State and federal requirements.

25-3.5-704. Statewide Emergency Medical and Trauma Care System – Development and Implementation – Duties of Department – Rules Adopted by Board: This statute outlines the provisions for the development, implementation, and monitoring of the statewide emergency medical and trauma care system in accordance with the provisions of this statute and with rules

adopted by the State board. The board shall adopt rules for the statewide emergency medical and trauma care system, including, but not limited to the following:

a. Minimum services in rendering patient care: These rules ensure the appropriate access through designated centers to the following minimum services:

I. Prehospital care;

II. Hospital care;

III. Rehabilitative care;

IV. Injury prevention;

V. Disaster medical care;

VI. Education and research; and

VII. Trauma communications.

b. **Transport protocols:** The board shall set forth trauma transport protocols, which include but are not limited to a requirement that a facility that receives an injured person provide the appropriate available care, which may include stabilizing an injured person before transferring that person to the appropriate facility based on the person's injury. These rules ensure that when the most appropriate trauma facility for an injured person is not easily accessible in an area, that person will be transferred as soon as medically feasible to the nearest appropriate facility, which may be in or out of the state.

c. **Regional emergency medical and trauma advisory councils:** These rules provide for the implementation of regional emergency medical and trauma system plans that describe methods for providing the appropriate service and care to persons who are ill or injured in areas included under a regional emergency medical and trauma system plan. The statute outlines various provisions for these plans.

d. **Designation of facilities:** The designation rules provide that every facility in this state required to be licensed in accordance with article 3 of this title and that receives ambulance patients shall participate in the statewide emergency medical and trauma care system. Each such facility shall submit an application to the department requesting designation as a specific level trauma facility or requesting non-designation status. A facility that is given non-designated status shall not represent that it is a designated facility, as prohibited in section 25-3.5-707.

e. **Communications system:** The communications system rules require that a regional emergency medical and trauma system plan ensure citizen access to emergency medical and trauma services through the 9-1-1 telephone system or its local equivalent and that the plan include adequate provisions for care.

f. **Statewide trauma registry:** The registry rules require the department (CDPHE) to establish and oversee the operation of a statewide trauma registry. The rules shall allow for the provision of technical assistance and training to designated facilities within the various trauma areas in connection with requirements to collect, compile, and maintain information for the statewide central registry.

g. **Public information, education, and injury prevention:** The department and county, district, and municipal public health agencies may operate injury prevention programs, but the public information, education, and injury prevention rules shall require the department and county, district,

and municipal public health agencies to consult with the State and regional emergency medical and trauma advisory councils in developing and implementing area and state-based injury prevention and public information and education programs including, but not limited to, a pediatric injury prevention and public awareness component. In addition, the rules shall require that regional emergency medical and trauma system plans include a description of public information and education programs to be provided for the area.

h. **Continuing quality improvement system (CQI):** These rules require the department to oversee a continuing quality improvement system for the statewide emergency medical and trauma care system.

i. **Trauma care for pediatric patients:** The trauma care for pediatric patient rules shall provide for the improvement of the quality of care for pediatric patients.

Federal Legislation

Executive Order 12127

President Carter's 1979 executive order merged many of the separate disaster-related responsibilities into FEMA. Among other agencies, FEMA absorbed the Federal Insurance Administration, the National Fire Prevention and Control Administration, the National Weather Service Community Preparedness Program, the Federal Preparedness Agency of the General Services Administration, and the Federal Disaster Assistance Administration activities from HUD. Civil defense responsibilities were also transferred to the new agency from the Defense Department's Defense Civil Preparedness Agency. FEMA began development of an Integrated Emergency Management System with an all-hazards approach that included "direction, control and warning systems which are common to the full range of emergencies from small isolated events to the ultimate emergency - war."

In 1993, President Clinton nominated James L. Witt as the new FEMA director. Witt became the first agency director with experience as a State emergency manager. He initiated sweeping reforms that streamlined disaster relief and recovery operations, insisted on a new emphasis regarding preparedness and mitigation, and focused agency employees on customer service.

In 2001, President George W. Bush appointed Joe M. Allbaugh as the director of FEMA. Within months, the terrorist attacks of Sept. 11 focused the agency on issues of national preparedness and homeland security, and tested the agency in unprecedented ways. The agency coordinated its activities with the newly formed Office of Homeland Security, and FEMA's Office of National Preparedness was given responsibility for helping to ensure that the nation's first responders were trained and equipped to deal with weapons of mass destruction.

Billions of dollars of new funding were directed to FEMA to help communities face the threat of terrorism. Just a few years past its 20th anniversary, FEMA was actively directing its "all-hazards" approach to disasters toward homeland security issues. In March 2003, FEMA joined 22 other federal agencies, programs, and offices in becoming the Department of Homeland Security. The new department, headed by Secretary Tom Ridge, brought a coordinated approach to national security from emergencies and disasters—both natural and man-made.

On October 4, 2006, President George W. Bush signed into law the Post-Katrina Emergency Reform Act. The act significantly reorganized FEMA, provided it substantial new authority to remedy gaps that became apparent in the response to Hurricane Katrina in August 2005 (the most devastating natural disaster in U.S. history), and included a more robust preparedness mission for FEMA.

As it has for almost 30 years, FEMA's mission remains to lead America to prepare for, prevent and mitigate against, respond to, and recover from disasters with a vision of “A Nation Prepared.”

Presidential Policy Directive 8 (PPD 8)

This directive, signed on March 30, 2011, is aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters. It is also aimed at facilitating an integrated, all-of-Nation, capabilities-based approach to preparedness. PPD 8 outlines the development of a national preparedness goal that identifies the core capabilities necessary for preparedness and a national preparedness system to guide activities that will enable the Nation to achieve the goal. The system will allow the Nation to track the progress of our ability to build and improve the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats that pose the greatest risk to the security of the Nation.

PPD 8 outlines the development of a National Preparedness System, building and sustaining partnerships, the development of a National Preparedness Report, and the roles and responsibilities of the heads of all executive departments with regard to national preparedness.

Homeland Security Presidential Directive 5 (HSPD 5)

Homeland Security Presidential Directive 5 was signed on February 28, 2003, to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system (NIMS).

Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288) *(As Amended)*

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288. This Act constitutes the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and FEMA programs. The Stafford Act is designed to bring an orderly and systemic means of federal natural disaster assistance for state and local governments in carrying out their responsibilities to aid citizens. Congress's intention was to encourage states and localities to develop comprehensive disaster preparedness plans, prepare for better intergovernmental coordination in the face of a disaster, encourage the use of insurance coverage, and provide federal assistance programs for losses due to a disaster.

Congress amended the Stafford Act by passing the Disaster Mitigation Act of 2000, and again in 2006 with the Pets Evacuation and Transportation Standards Act.

For more information: http://www.fema.gov/pdf/about/stafford_act.pdf

Disaster Mitigation Act of 2000 (DMA 2000)

The Disaster Mitigation Act of 2000 (Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for state, local, and Indian Tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state, local, and Indian Tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a state mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans. DMA 2000 also established a new requirement for local mitigation plans and authorized up to 7 percent of HMGP funds available to a state for development of state, local, and Indian Tribal mitigation plans.

Pets Evacuation and Transportation Standards Act

On October 6, 2006, the PETS Act was signed into law, amending Section 403 of the Stafford Act. Section 403, as amended by the PETS Act, authorizes FEMA to provide rescue, care, shelter, and essential needs for individuals with household pets and service animals, and to the household pets and animals themselves following a major disaster or emergency. In order to qualify for FEMA funding, a city or state is required to submit a plan detailing its disaster preparedness program. The PETS Act requires that the state and local emergency preparedness authorities include how they will accommodate households with pets or service animals when presenting these plans to the FEMA.

Environmental Protection Agency Laws and Regulations

Local Emergency Planning Commission (EPCRA Sections 301-303)

Emergency Planning and Community Right-to-Know Act (EPCRA) establishes requirements for federal, state, and local governments; Indian Tribes; and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. Working with facilities, states and communities can use the information to improve chemical safety and protect public health and the environment.

EPCRA was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered death or serious injury from the accidental release of methyl isocyanate. To reduce the likelihood of such a disaster in the United States, Congress imposed requirements on both states and regulated facilities.

- **Sections 301 to 303. Emergency Planning:** Local governments are required to prepare chemical emergency response plans and to review plans at least annually. State governments are required to oversee and coordinate local planning efforts. Facilities that maintain Extremely Hazardous Substances (EHSs) on-site in quantities greater than corresponding Threshold Planning Quantities (TPQs) must cooperate in emergency plan preparation.

- **Section 304. Emergency Notification:** Facilities must immediately report accidental releases of EHS chemicals and "hazardous substances" in quantities greater than corresponding Reportable Quantities (RQs) defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to State and local officials. Information about accidental chemical releases must be available to the public.

- **Sections 311 and 312. Community Right-to-Know Requirements:** Facilities manufacturing, processing, or storing designated hazardous chemicals must make Material Safety Data Sheets (MSDSs) describing the properties and health effects of these chemicals available to State and local officials and local fire departments. Facilities must also report, to State and local officials and local fire departments, inventories of all on-site chemicals for which MSDSs exist. Information about chemical inventories at facilities and MSDSs must be available to the public.

- **Section 313. Toxics Release Inventory:** Facilities must complete and submit a Toxic Chemical Release Inventory Form annually for each of the more than 600 Toxic Release Inventory (TRI) chemicals that are manufactured or otherwise used above the applicable threshold quantities.
- **Section 322 Trade Secrets:** Facilities are allowed to withhold the specific chemical identity from the reports filed under sections 303, 311, 312 and 313 of EPCRA if the facilities submit a claim with substantiation to EPA.

More Information can be found at: http://www.epa.gov/osweroe1/lawsregs.htm

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites

- Provided for liability of persons responsible for releases of hazardous waste at these sites

- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response.

- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious but not immediately life-threatening. These actions can be conducted only at sites listed on EPA's National Priorities List (NPL).

More Information can be found at: http://www.epa.gov/osweroe1/lawsregs.htm

Superfund Amendments and Reauthorization Act (SARA)

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA reflected EPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program. SARA:

- Stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites
- Required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations
- Provided new enforcement authorities and settlement tools
- Increased state involvement in every phase of the Superfund program
- Increased the focus on human health problems posed by hazardous waste sites
- Encouraged greater citizen participation in making decisions on how sites should be cleaned up
- Increased the size of the trust fund to $8.5 billion

SARA also required EPA to revise the Hazard Ranking System (HRS) to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List (NPL).

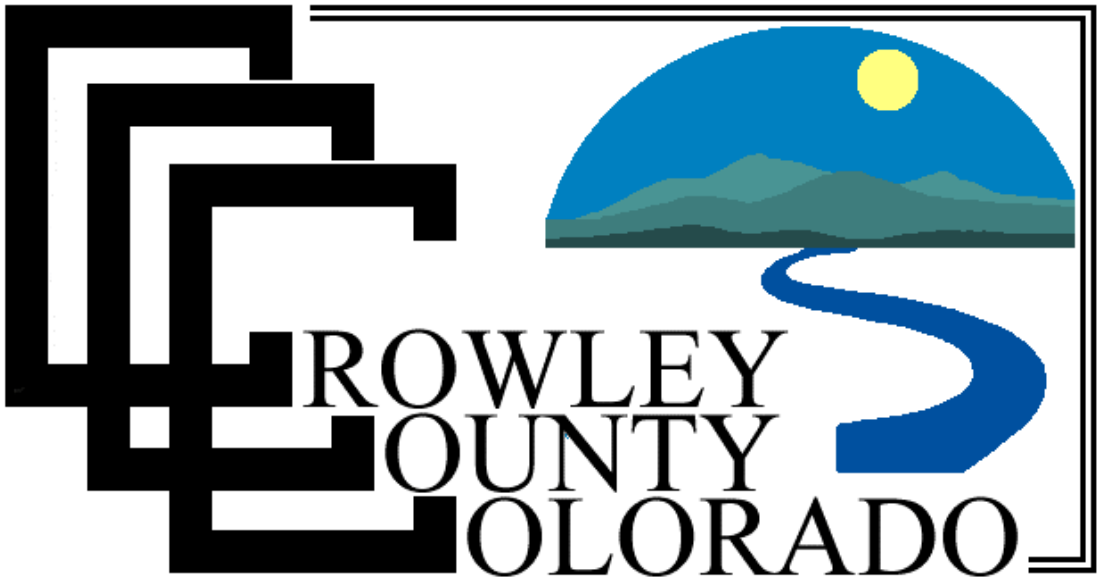
Title III of this act, known as the Emergency Planning and Community Right to Know Act, establishes a community's right to information on what hazardous chemicals are used, stored, produced, or released from local industries. It also provides a framework for emergency planning in the event of the release of chemicals including:

- Emergency planning and training
- Emergency release notification
- Hazardous chemical inventory
- Toxic chemical release inventory
- Hazardous materials management plans.

More Information can be found at: http://www.epa.gov/osweroe1/lawsregs.htm

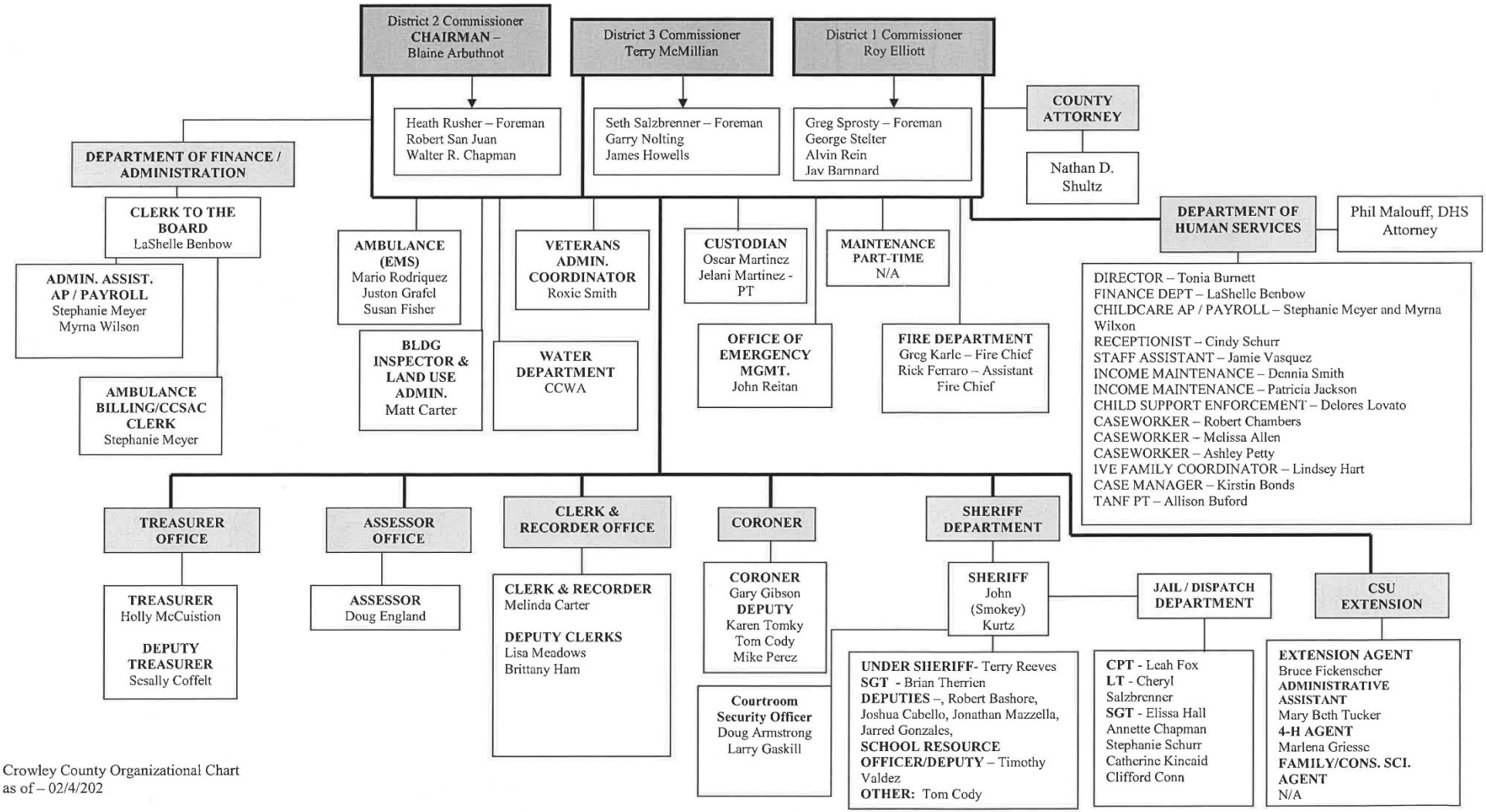
APPENDIX 3

ORGANIZATIONAL CHARTS



2021

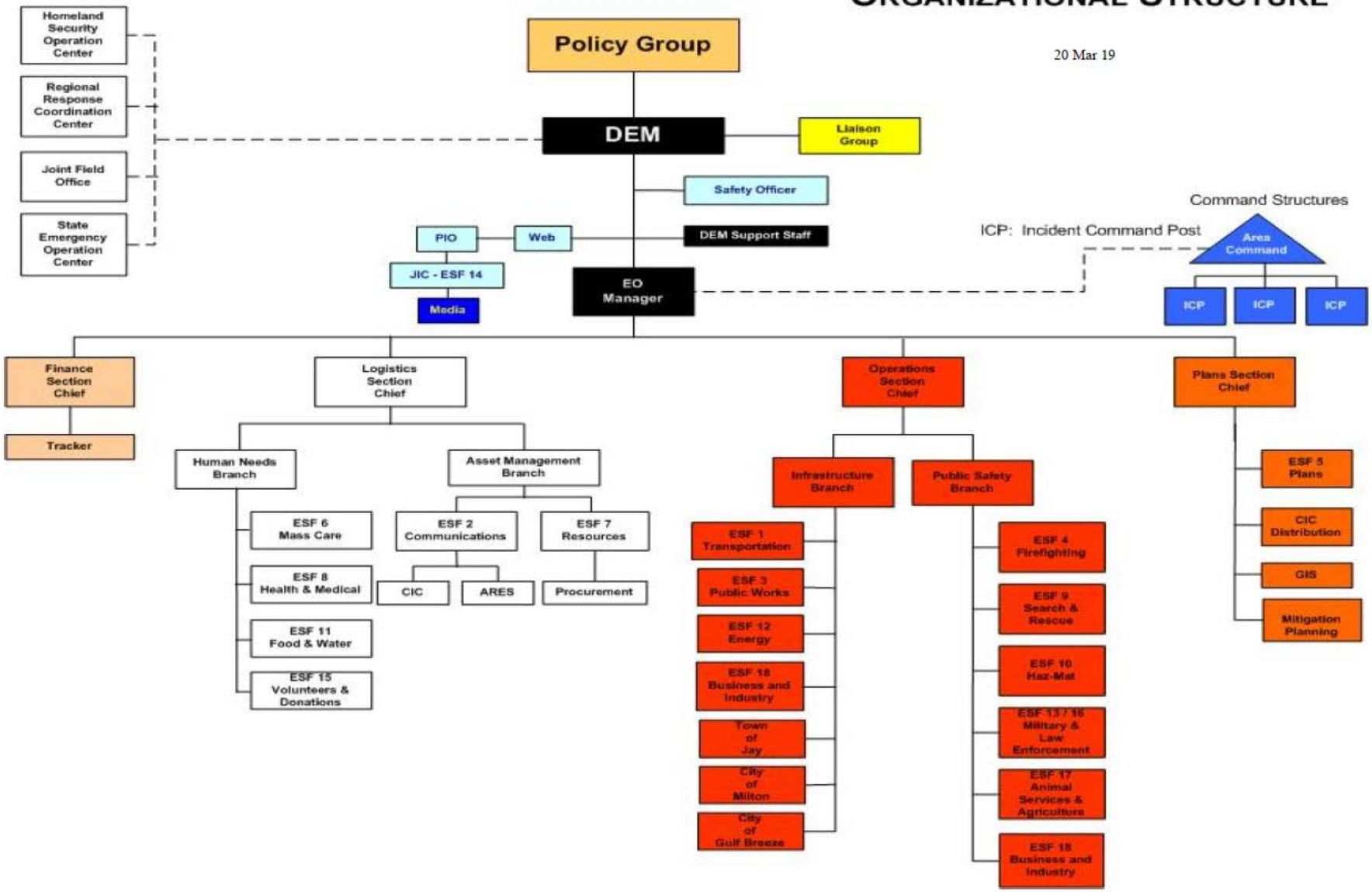
CROWLEY COUNTY BOARD OF COUNTY COMMISSIONERS



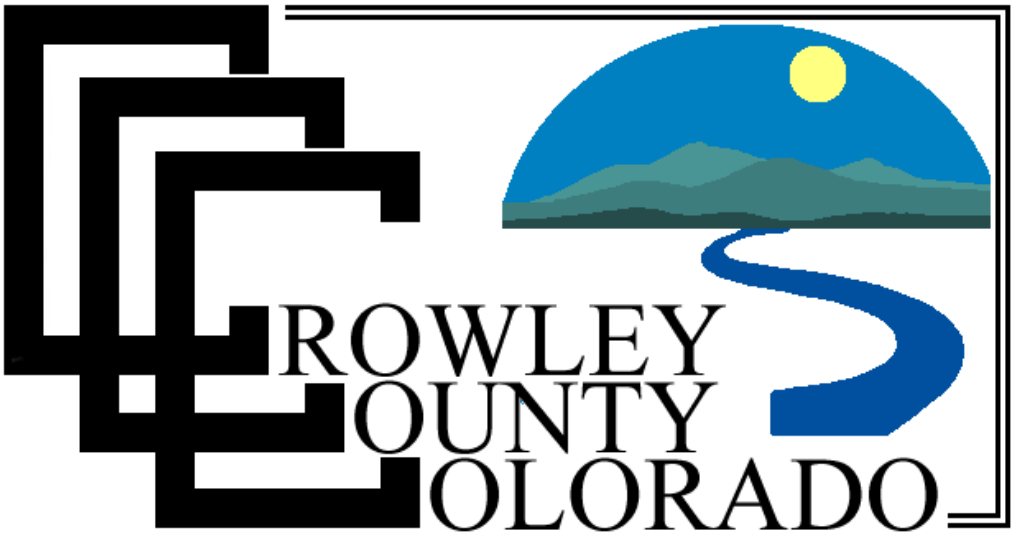
Crowley County Organizational Chart
as of – 02/4/202

EMERGENCY OPERATIONS CENTER ORGANIZATIONAL STRUCTURE

20 Mar 19



APPENDIX 4
MAPS



2021

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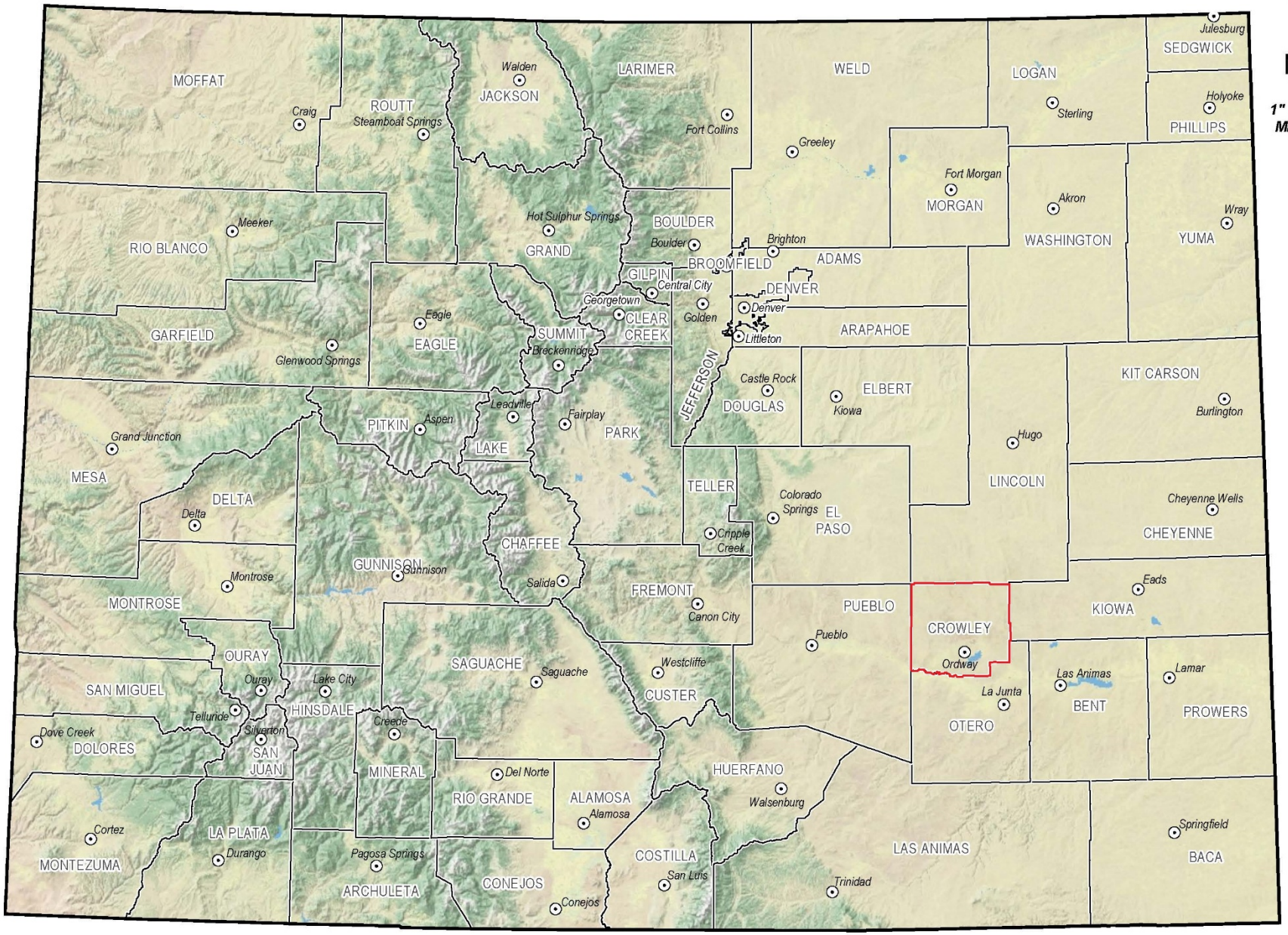
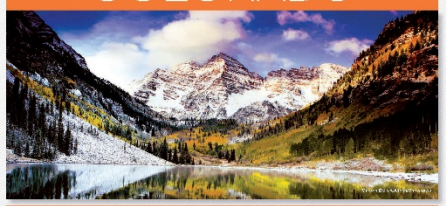


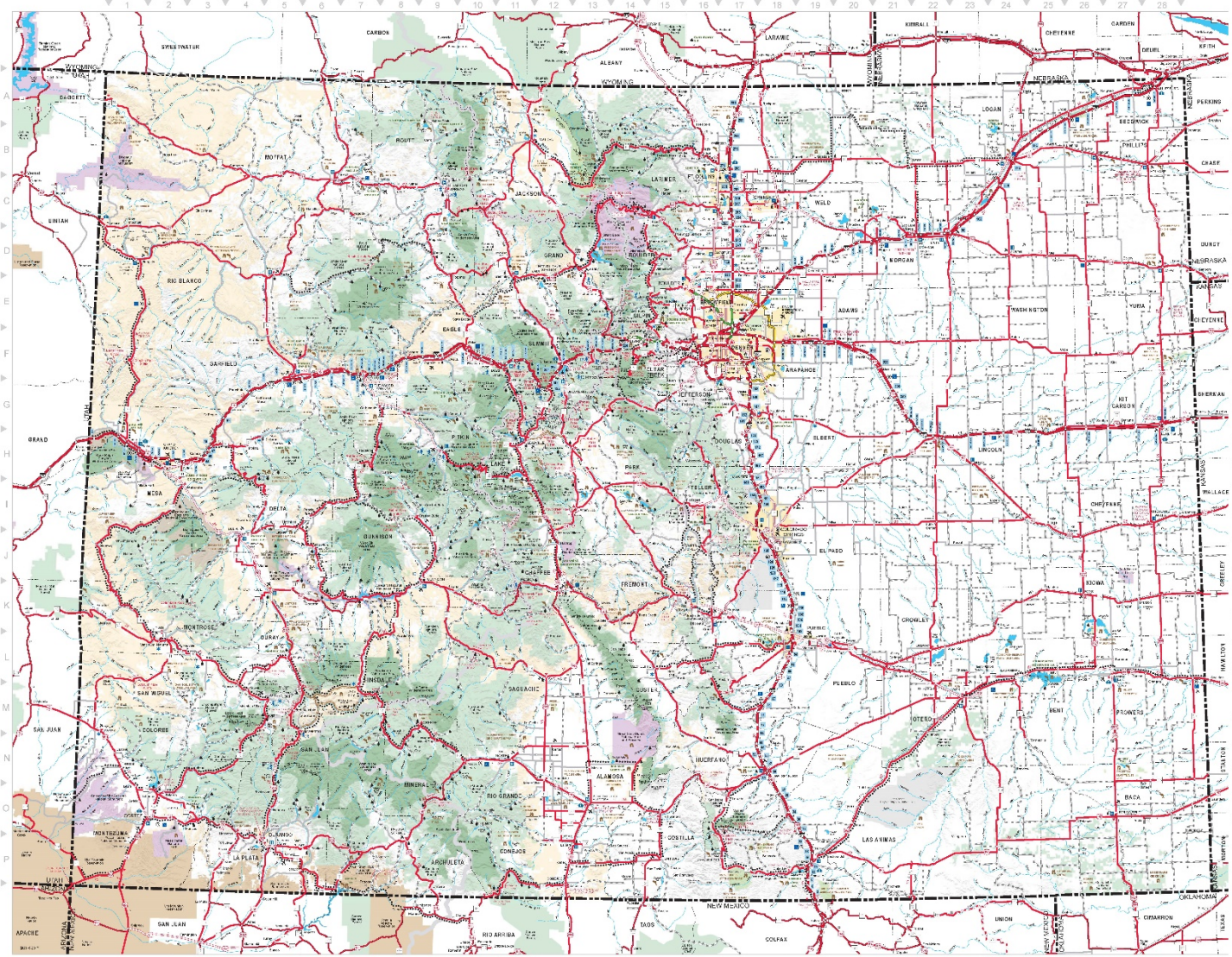
Data Source: CDOT 2019
Published: December 2020
www.codot.gov

Colorado Counties

COLORADO
Department of Transportation

COLORADO





LEGEND

COLORADO TOPO

Mt. Elbert	14433	E-1	Mt. Sneffels	14150	G-6		
Mt. Massive	14421	F-1	Capitol Peak	14130	F-4		
Mt. Harvard	14420	E-1	Pikes Peak	14110	J-3		
Blanca Peak	14345	F-3	Snowmass Mtn.	14092	F-4		
La Plata Peak	14336	E-1	Mt. Eolus	14083	G-6		
Uncompahgre Peak	14309	F-2	Windom Peak	14082	G-6		
Crestone Peak	14294	F-3	Challenger Point	14081	H-4		
Mt. Lincoln	14286	E-1	Mt. Columbia	14073	E-1		
Castle Peak	14279	E-2	Missouri Mountain	14067	E-1		
Grays Peak	14278	F-1	Humboldt Peak	14064	H-4		
Mt. Antero	14269	F-2	Mt. Bancroft	14060	E-1		
Torreys Peak	14267	F-1	Conundrum Peak	14060	F-2		
Quandary Peak	14271	E-1	Broken Hand Peak	14048	F-3		
Mt. Evans	14264	F-1	Handies Peak	14048	G-6		
Longs Peak	14255	F-1	Crestone Needle	14197	H-3		
Mt. Wilson	14246	G-6	Ellingwood Peak	14042	H-3		
Mt. Democrat	14238	E-1	Redcloud Peak	14034	G-6		
Mt. Sherman	14234	E-1	North Eolus	14039	G-6		
Redcloud Peak	14034	G-6	Sunshine Peak	14001	G-6		
Pyramid Peak	14025	H-3	Peak 1	14000	E-1		
North Maroon Peak	14019	F-4	Mt. Princeton	14197	E-1		
Wilson Peak	14017	G-6	Mt. Belford	14197	E-1		
Wetterhorn Peak	14015	G-6	Crestone Peak	14294	F-3		
San Luis Peak	14014	G-6	Kit Carson Peak	14171	F-3		
Huron Peak	14003	E-1	Tabeguache Mtn.	14155	F-2		
Mt. of the Holy Cross	14005	F-4	Mt. Oxford	14153	E-1		
Sunshine Peak	14001	G-6	El Diente Peak	14159	G-6		
			Mt. Wilson	14246	G-6		

MOUNTAIN PASSES

Berthoud	11315	E-1	37 Miles West of I-25
Cameron	10046	G-2	20 Miles West of I-25
Cow Creek	9700	F-2	15 Miles West of I-25
Cochetopa	9941	G-3	
Dotsero	6965	E-3	35 Miles East of I-70
Dotsero Cutoff	6965	E-3	35 Miles East of I-70
Eisenhower	11158	E-1	60 Miles West of I-25
Gore	9527	F-1	
Hoosier	11541	F-1	
Independence	12095	G-2	
Kenosha	11841	E-1	45 Miles West of I-25
La Manga	9239	F-3	
Lizard Head	10222	G-6	
Loveland	11990	E-1	
McClure	8760	G-3	
Monarch	11312	F-2	
Molas Divide	10910	G-6	
Mt. Evans Rd.	12830	F-1	
Mt. Goliath Natural Area	11539	F-1	
Muddy	8771	F-2	
North La Veta	9115	F-3	
North Park	8100	F-1	
Ophir	10158	G-6	
Owl Creek	9086	G-3	
Pass Creek	9346	F-3	
Pitkin	9267	G-3	
Poncha	9010	F-3	
Red Mountain	11018	G-6	
Rollins	8323	E-1	
Slumgullion	11361	G-6	
Spring Creek	11907	F-2	
Squaw	8307	E-1	
Tennessee	10424	F-1	
Tin Cup	12154	F-2	
Trout Creek	9346	F-3	
Vail	10666	E-2	
Wilkerson	8760	E-1	
Wolcott Creek	8297	E-2	
Wolf Creek	10857	G-3	

SKI AREAS

1	Arapahoe Basin	E-1
2	Aspen Highlands	H-3
3	Aspen Mountain	H-3
4	Beaver Creek	F-3
5	Breckenridge	G-2
6	Buttermilk	H-3
7	Copper Mountain	G-2
8	Crested Butte	F-3
9	Eldora	E-2
10	Howelsen	C-2
11	Keystone	F-2
12	Loveland	F-1
13	Monarch	G-3
14	Powderhorn	H-4
15	Purgatory	H-5
16	Sheridan Mountain	G-6
17	Ski Cooper	G-2
18	Snowmass	H-3
19	Snowmass	H-3
20	Steamboat	C-2
21	Sunlight	G-2
22	Telluride	H-5
23	Vail	F-3
24	Winter Park	E-2
25	Wolf Creek	G-3

NATIONAL PARKS, MONUMENTS & CONSERVATION AREAS

Dinosaur National Monument
Black Canyon of the Gunnison National Park
Bent's Old Fort
Canyons of the Ancients National Monument
Chimney Rock National Monument
Curecanti National Recreation Area
Dominguez-Escalante National Conservation Area
Florissant Fossil Beds National Monument
Great Sand Dunes National Park & Preserve
Gunnison Gorge National Conservation Area
Hovenweep National Monument
Mesa Verde National Park
Rocky Mountain National Park
Yucca House National Monument

STATE PARKS

Arkansas Headwaters
Eastlake
Golden Gate Canyon
Chatfield
Cherry Creek
Cheyenne Mountain
Crawford
Delaware Flats
Eleven Mile
Elkhead Reservoir
Harvey Gap
Highline Lake
Jackson Lake
Jarvis Creek
Lathrop
Lone Mesa
Ludlow
Lyons
Mancos
Mueller
Navajo
North Sterling
Ohuro
Paonia
Pearl Lake
Pike
Rifle Falls
Rifle Gap
Roxborough
Spinney Mountain
Stagecoach
Staunton
Steamboat Lake
Sweitzer Lake
Trinidad
Vega
Yampa River

See reverse side for National Wildlife Refuges & Areas

Colorado Tourism Office
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511 Travel Info

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Arriba 1000 E-3
Aspen 5914 H-3
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Black Hawk 200 E-2
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Boone 350 E-3
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Branson 500 E-3
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Brighton 27147 E-1
Broadmoor 1000 E-3
Brookside 1000 E-3
Brush 5000 E-1
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Burlington 3500 E-3
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Campo 200 E-3
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Crowley 200 F-3
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Delta 5000 G-3
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Dinosaur 500 C-2
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Longmont 71000 E-1
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Sugar Loaf 100 E-2
Sunbeam 100 E-3
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Thornton 82384 E-1
Timnath 1000 E-1
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Windsor 5000 E-1
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Yampa 500 C-2
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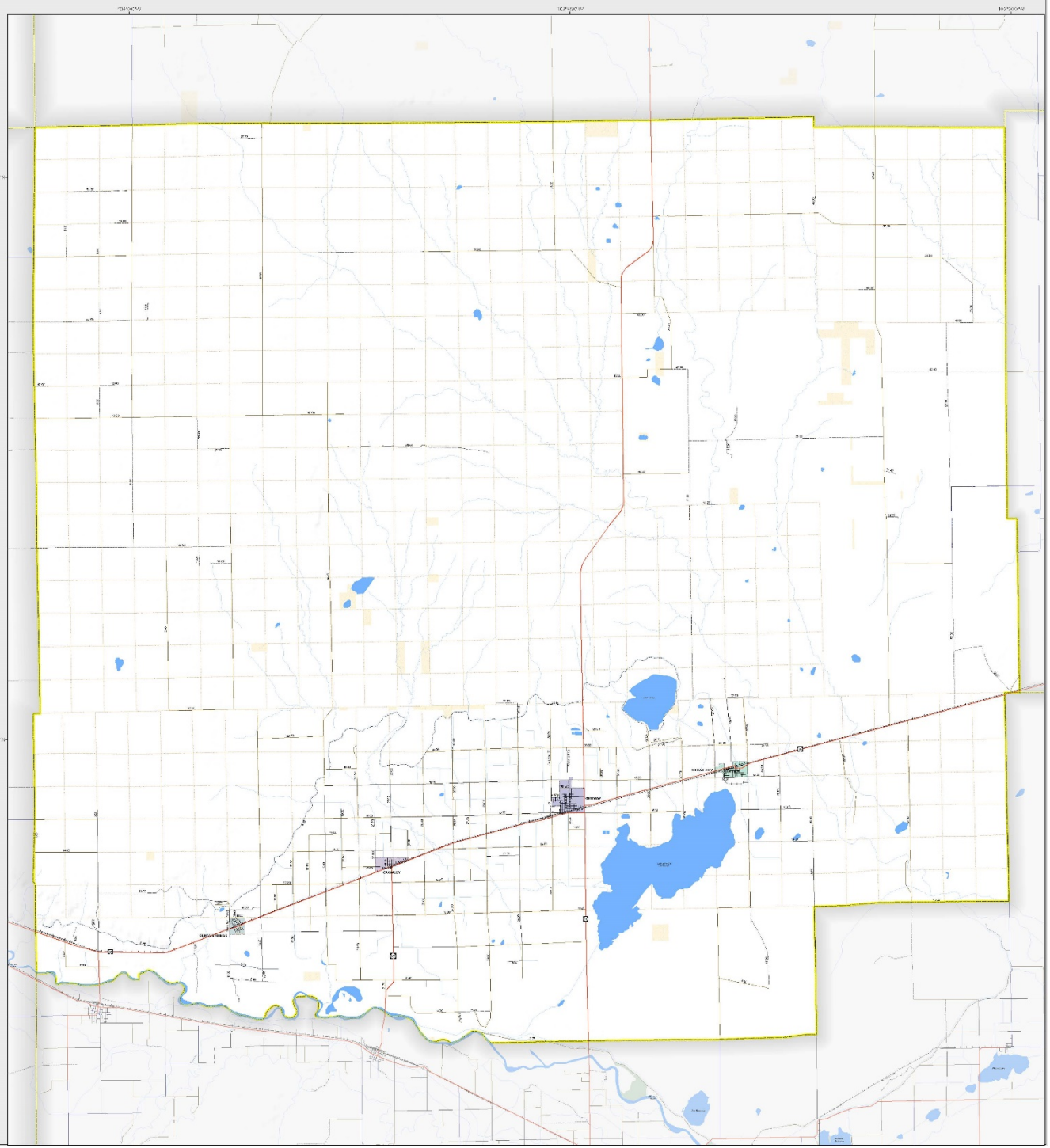
CROWLEY COUNTY



- Highways

Local Roads

- Paved
- Gravel
- Bladed
- Urban Area Streets

Base Data

- City Limits
- County
- Township Lines (PLSS)
- Lakes
- Rivers/Streams
- Railroads

Land Classification

- Public Lands
- State Lands
- National or State Forest
- National Parks/Monuments
- Indian Reservations
- Military/Federal
- Wilderness Areas

0 1 2 Miles

State of Colorado



COLORADO
Department of Transportation

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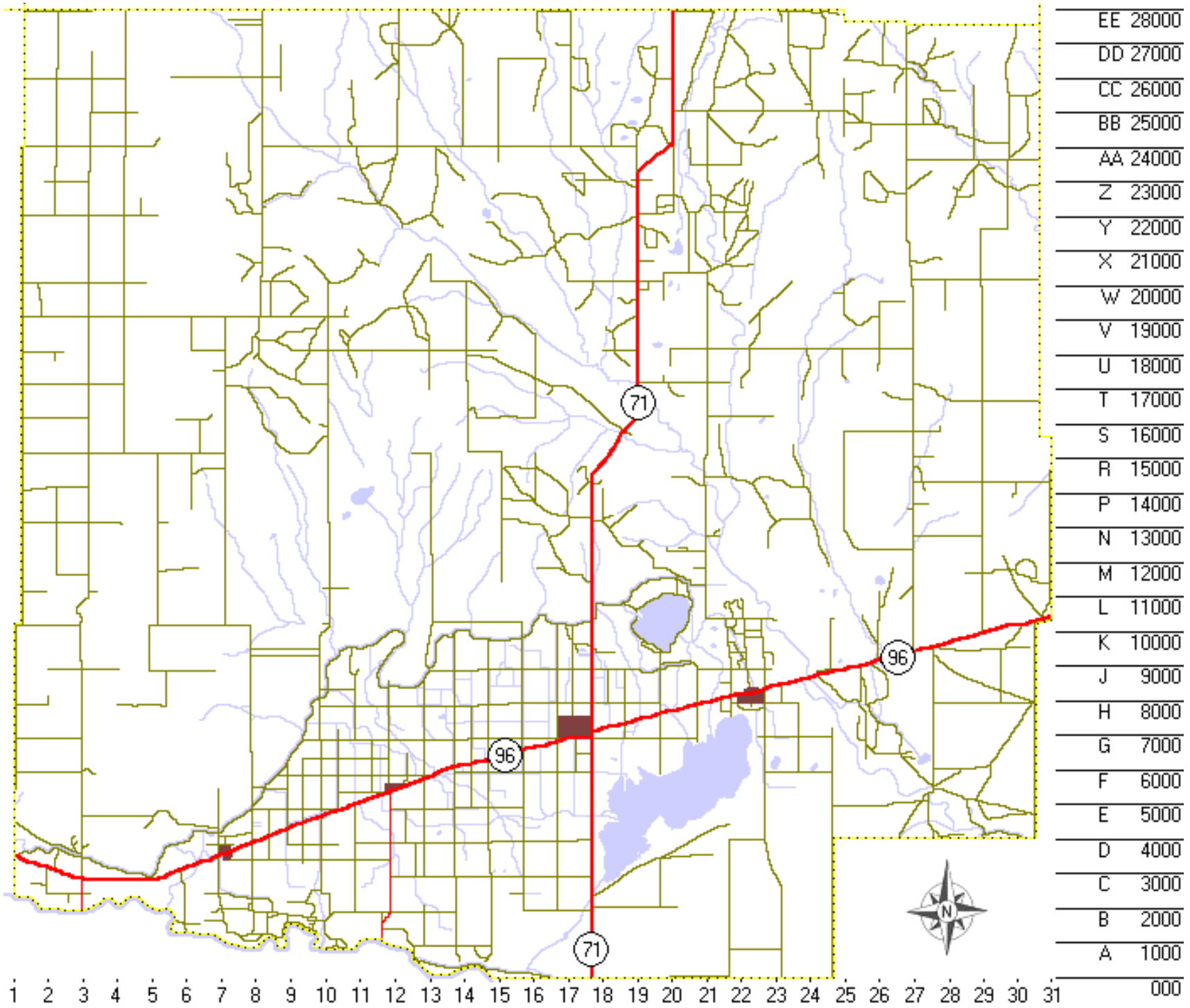
Produced 7/7/2020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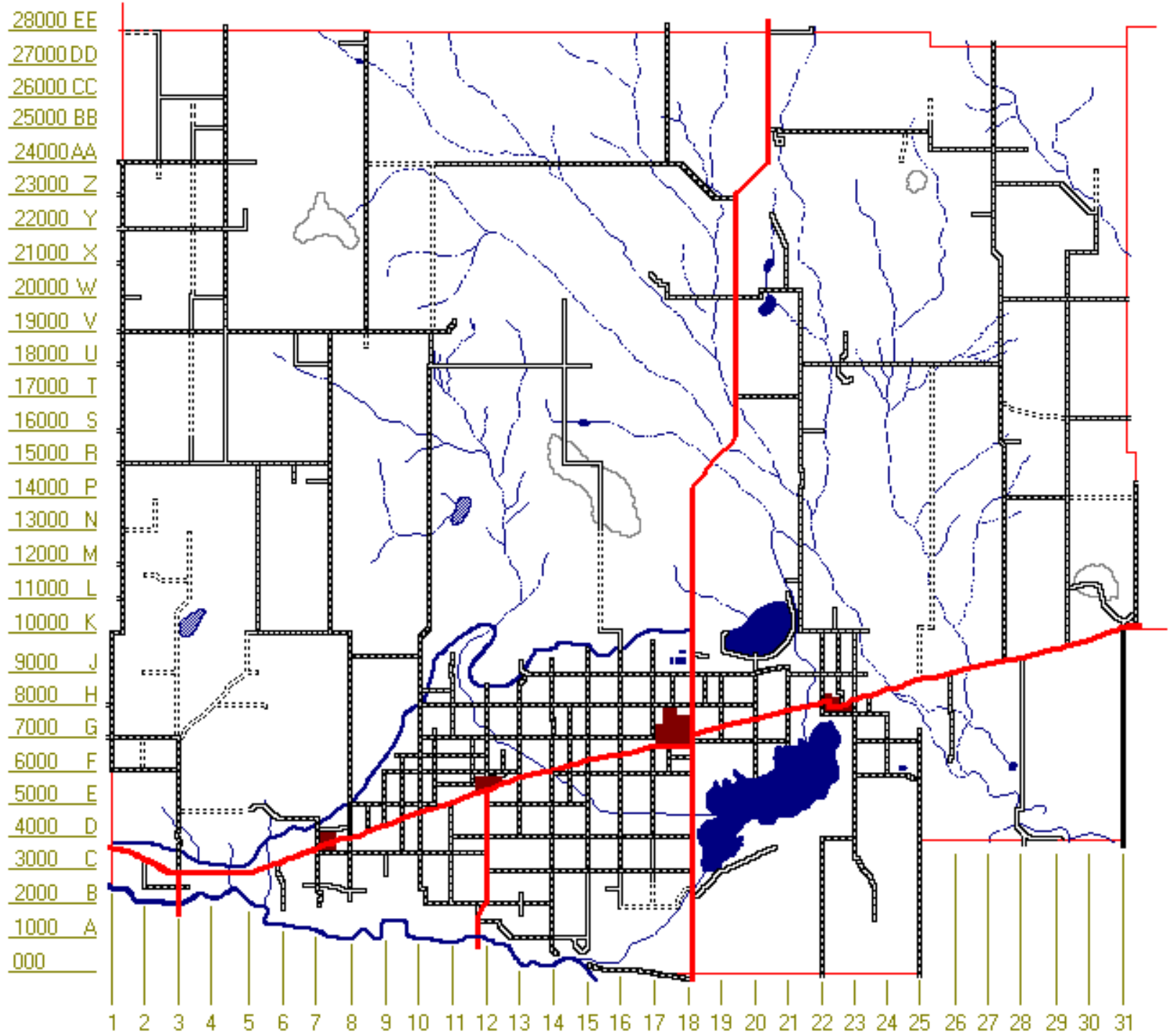
N 13000
M 12000
L 11000
K 10000
J 9000
H 8000
G 7000
F 6000
E 5000
D 4000
C 3000
B 2000
A 1000
000
71
96
96
71
N
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31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27000 DD
26000 CC
25000 BB
24000 AA
23000 Z
22000 Y
21000 X
20000 W
19000 V
18000 U
17000 T
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14000 P
13000 N
12000 M
11000 L
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9000 J
8000 H
7000 G
6000 F
5000 E
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3000 C
2000 B
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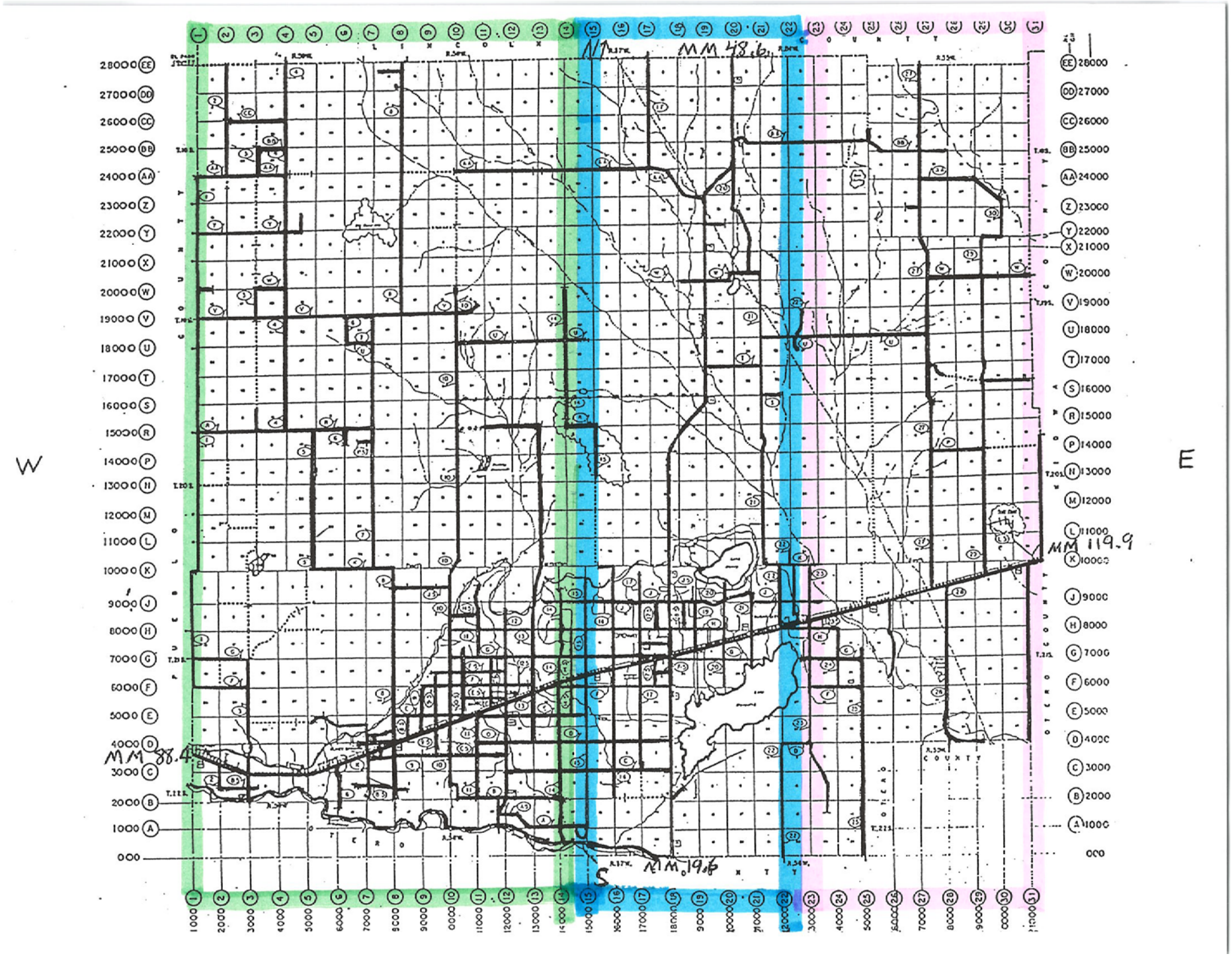
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Crowley County Fire Protection and Response Areas



DISTRICT BOUNDARIES MAPS

Fire District Boundaries:

Dist. 1 – (Crowley/Olney Springs) Pueblo County Line (Ln. 1) West to Ln. 14 East.

Ordway Fire – Ln 14 on the West to Ln 23 on the East.

Sugar City – Ln. 23 (West) to County Line (Ln. 31) on the East.

Fowler Rural Fire District does cover a small portion into Crowley County on the West from The River Bridge (South) on Hwy 167 to Rd. F (North via Ln. 3)

Road and Bridge:

District 1 – Pueblo County Line (Ln. 1) West to Ln. 13 on the East.

District 2 – Ln. 13 West to Ln. 20 on the East

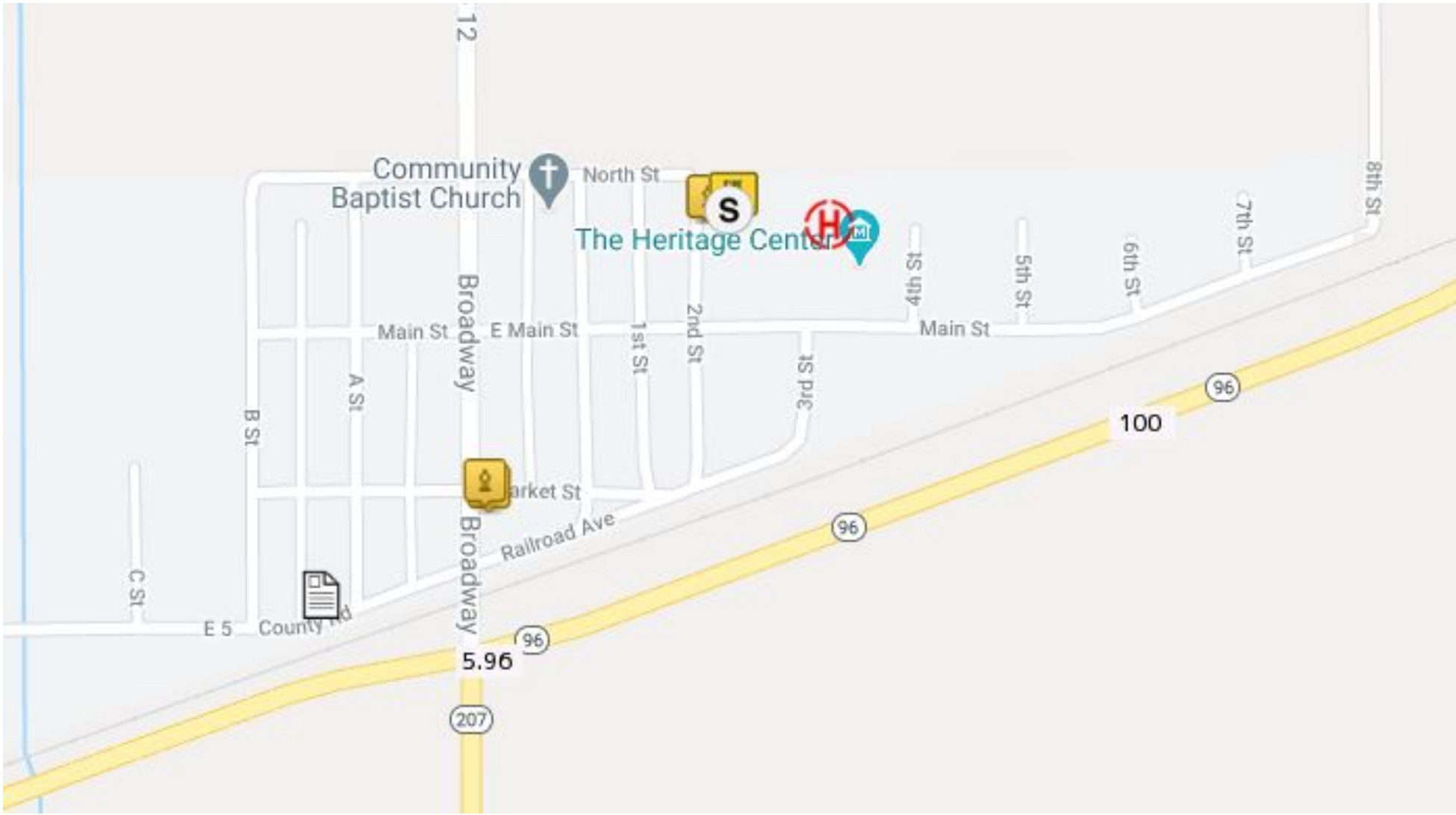
District 3 – Ln. 20 on the West to Ln. 31 (Kiowa County Line)

All Districts run from the Otero County Line to the Lincoln County Line North to South.

Town of Crowley Street Map



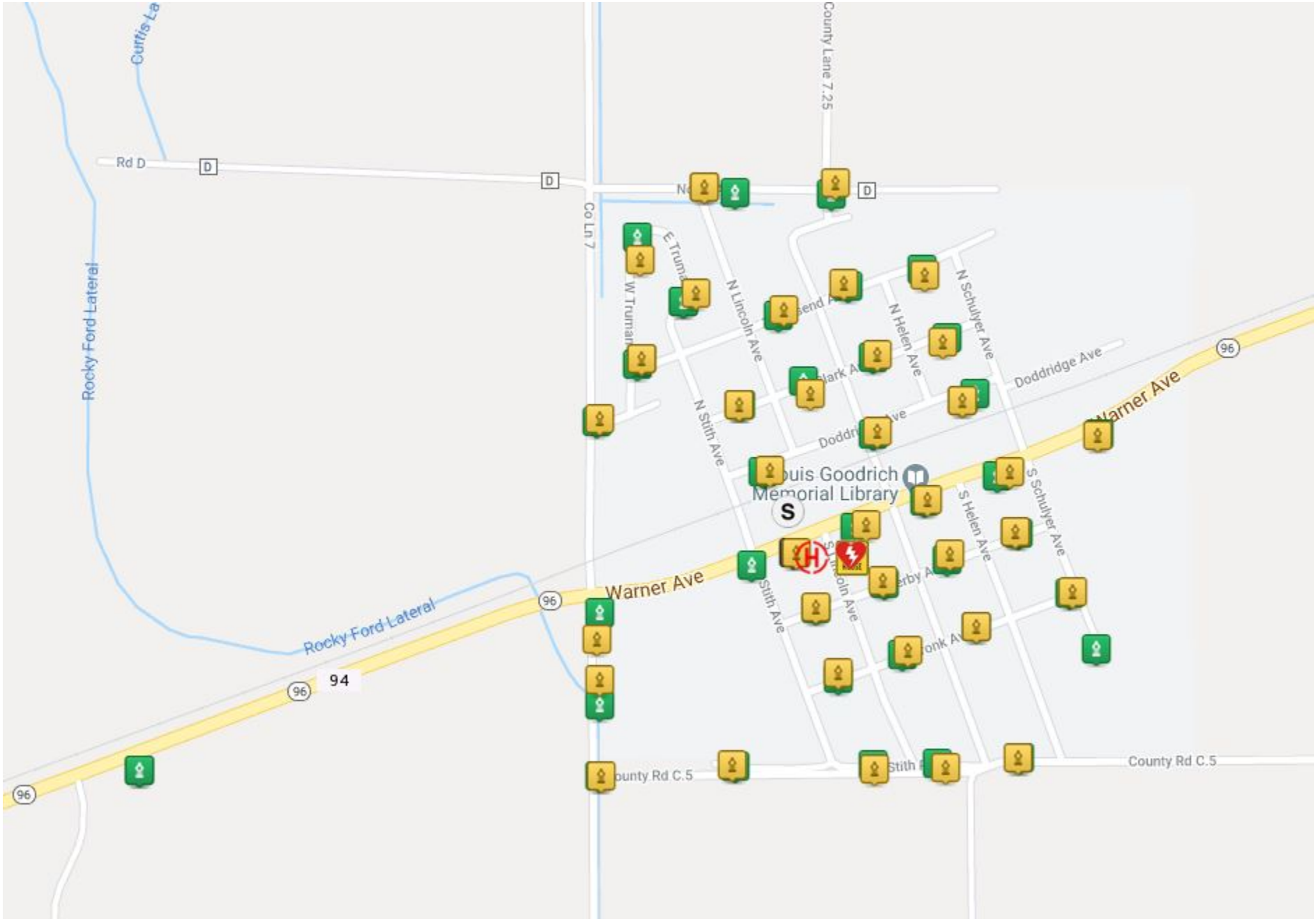
Town of Crowley IamResponding Map with Markers



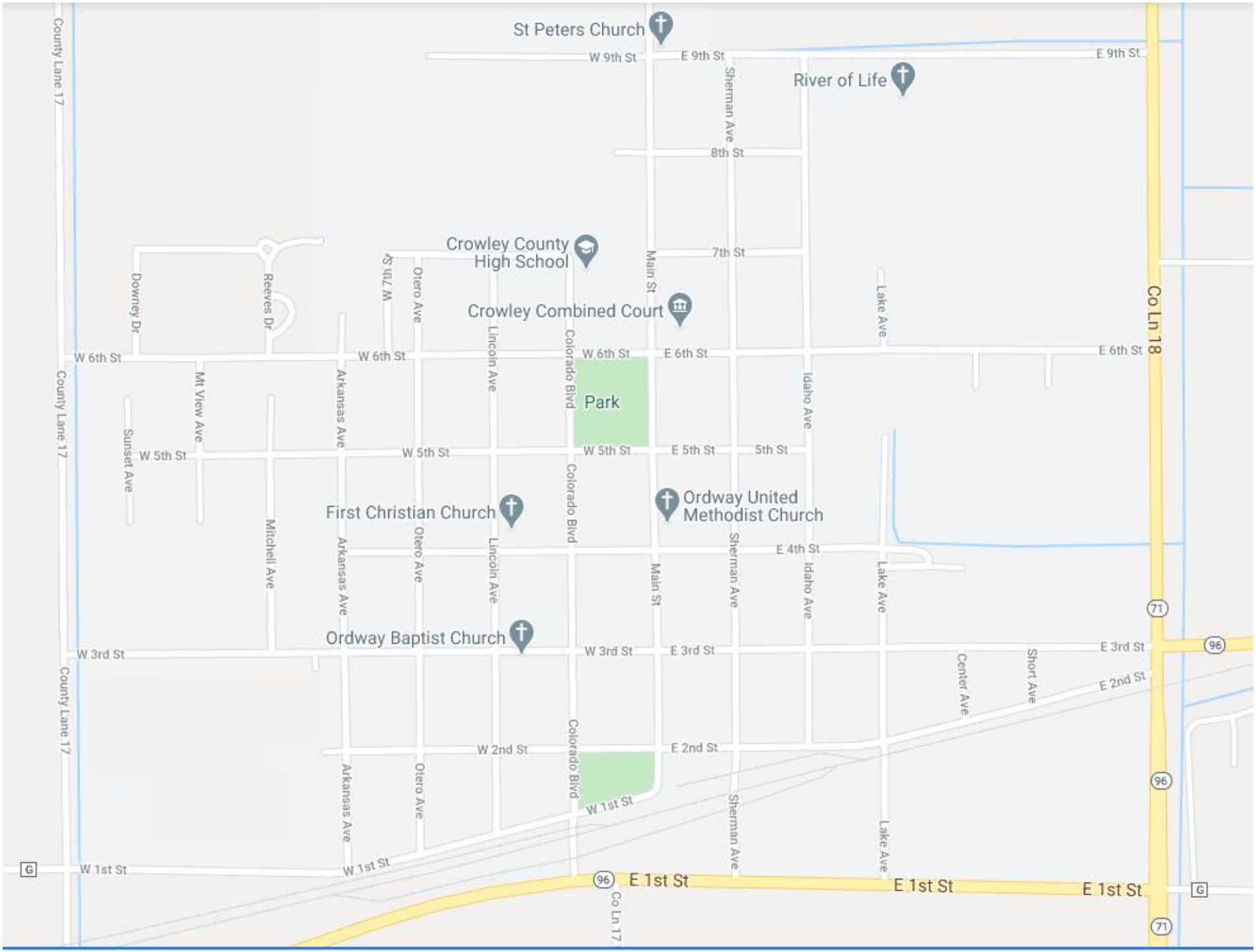
Town of Olney Springs Street Map



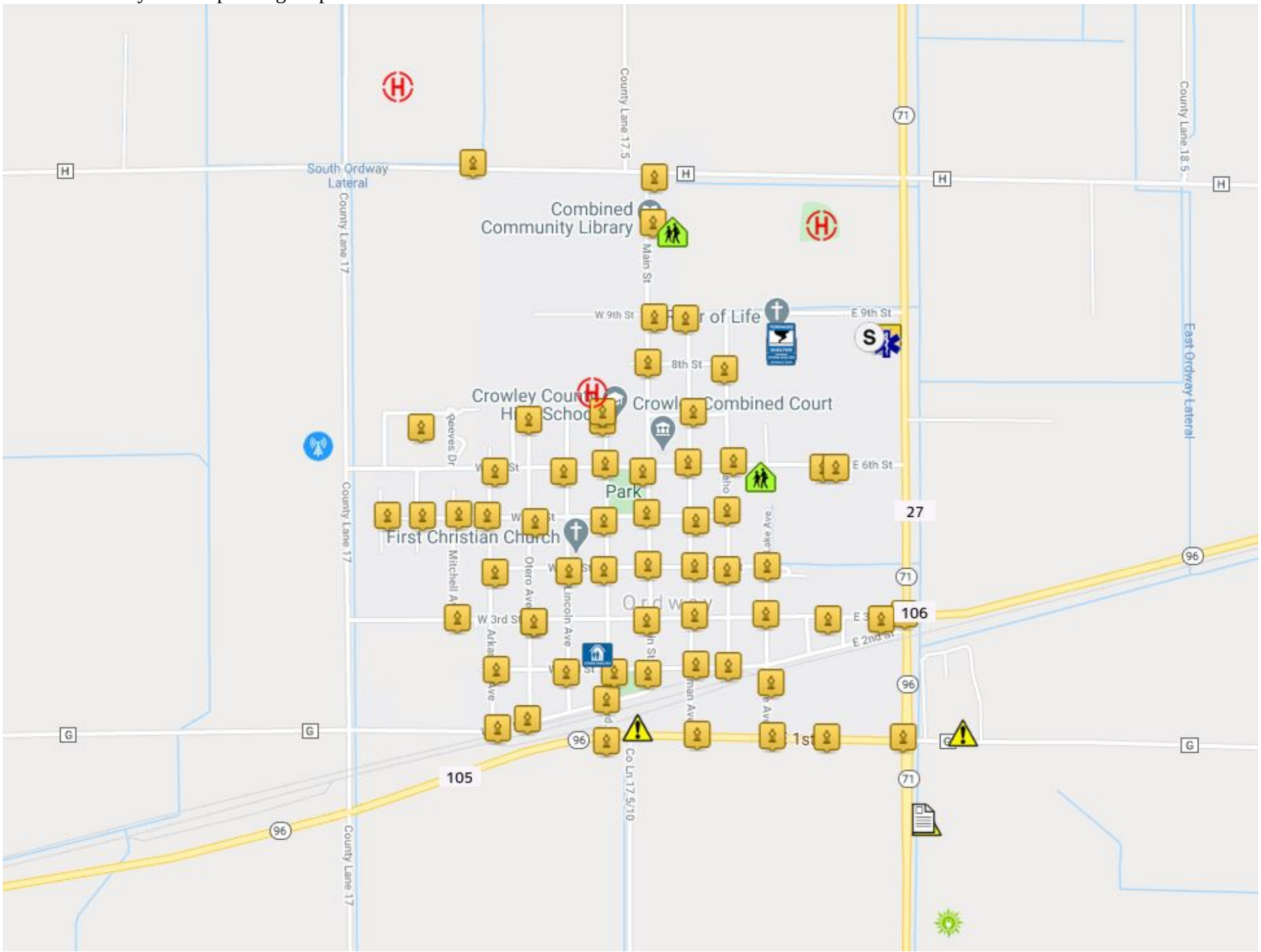
Town of Olney Springs IamResponding Map with Markers



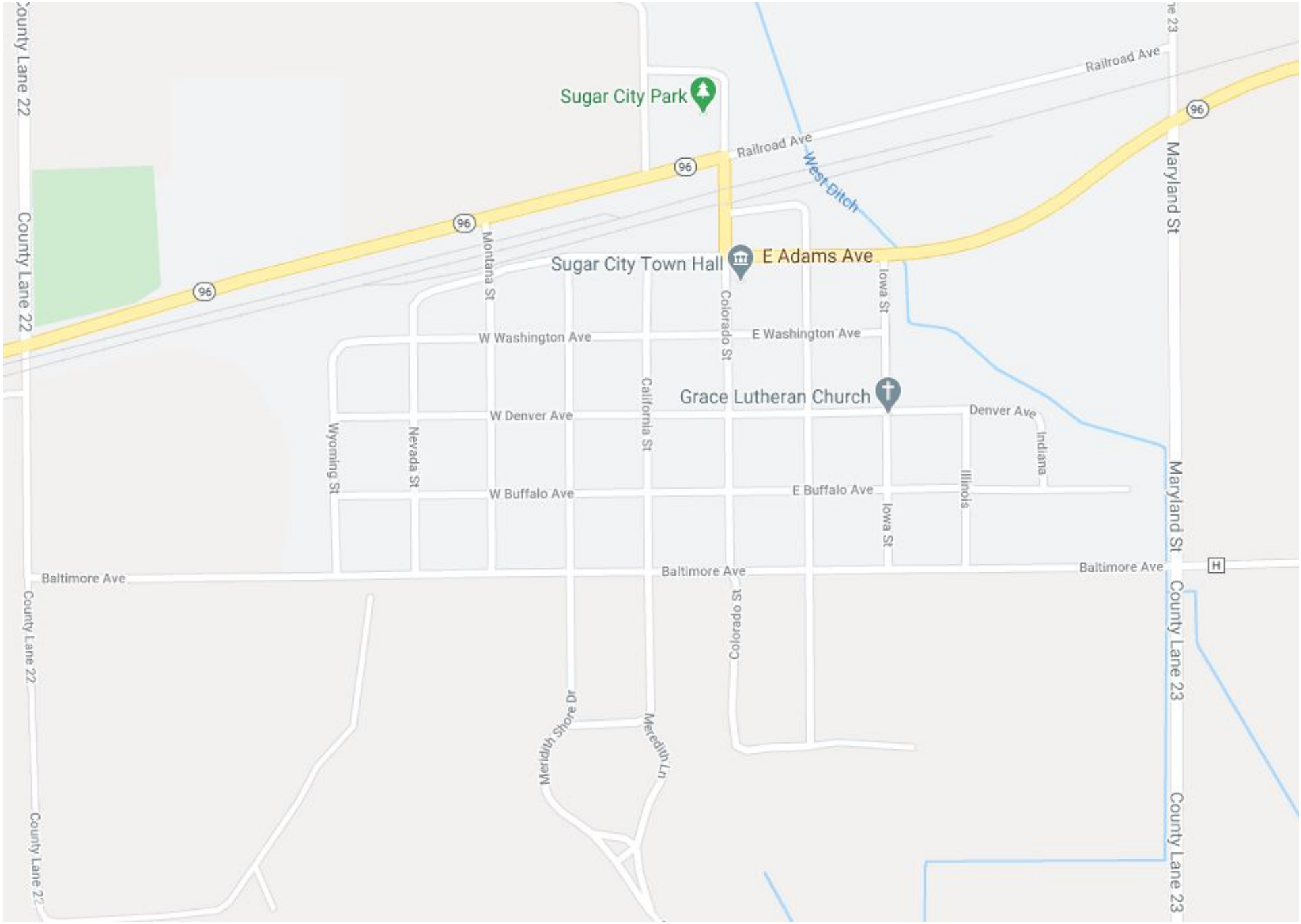
Town of Ordway Street Map



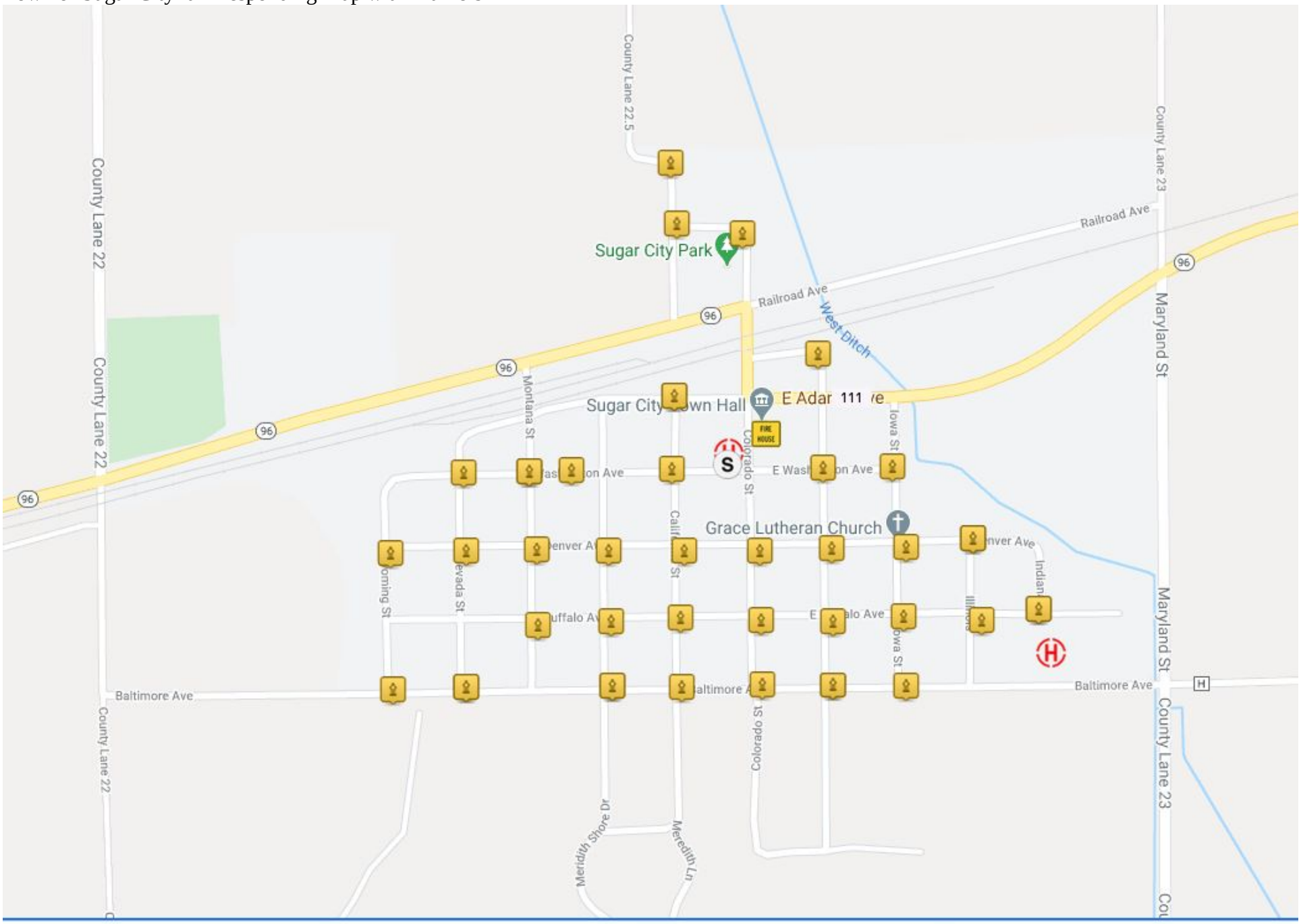
Town of Ordway IamResponding Map with Markers



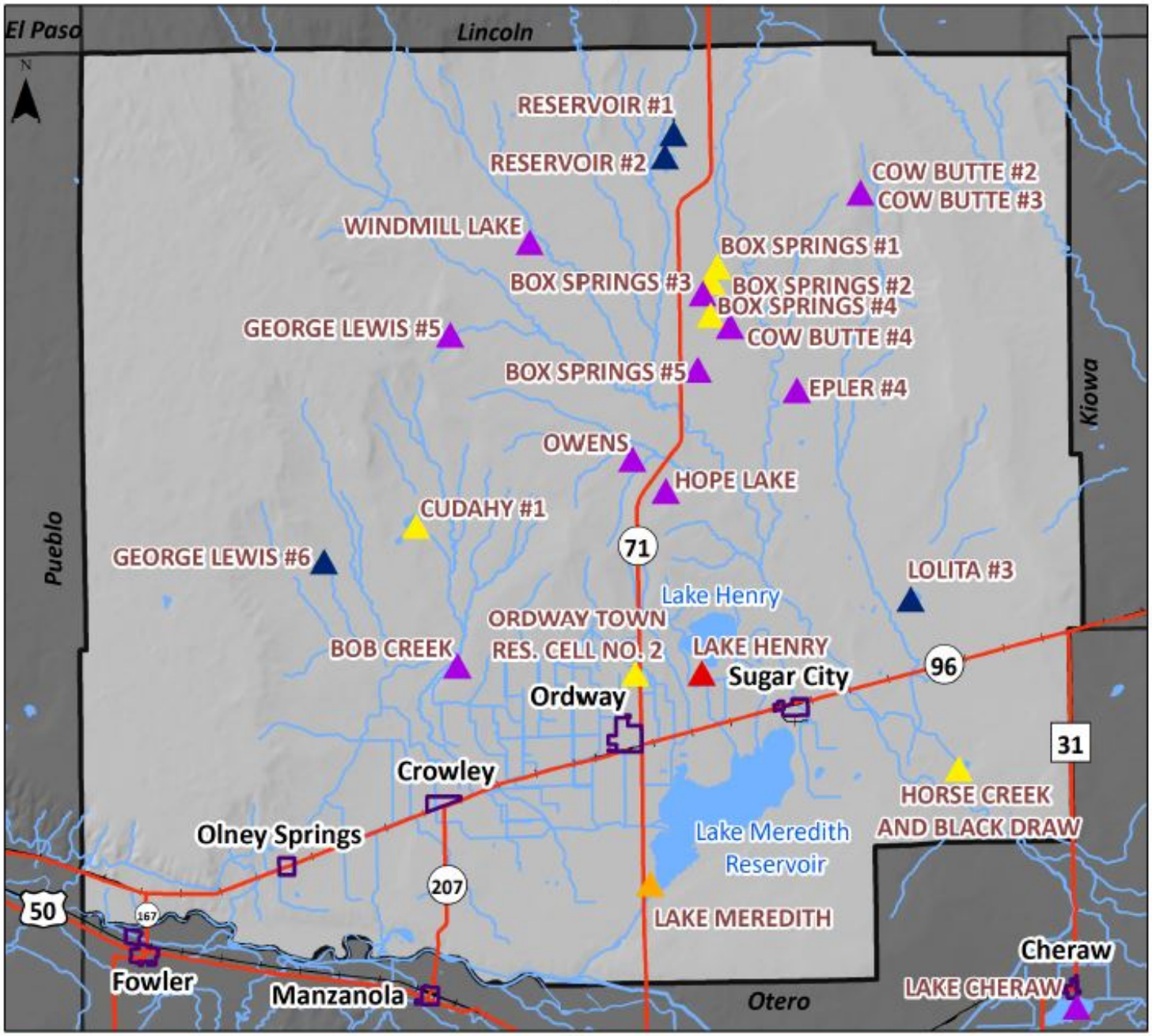
Town of Sugar City Street Map



Town of Sugar City IamResponding Map with Markers



Dams in Crowley County



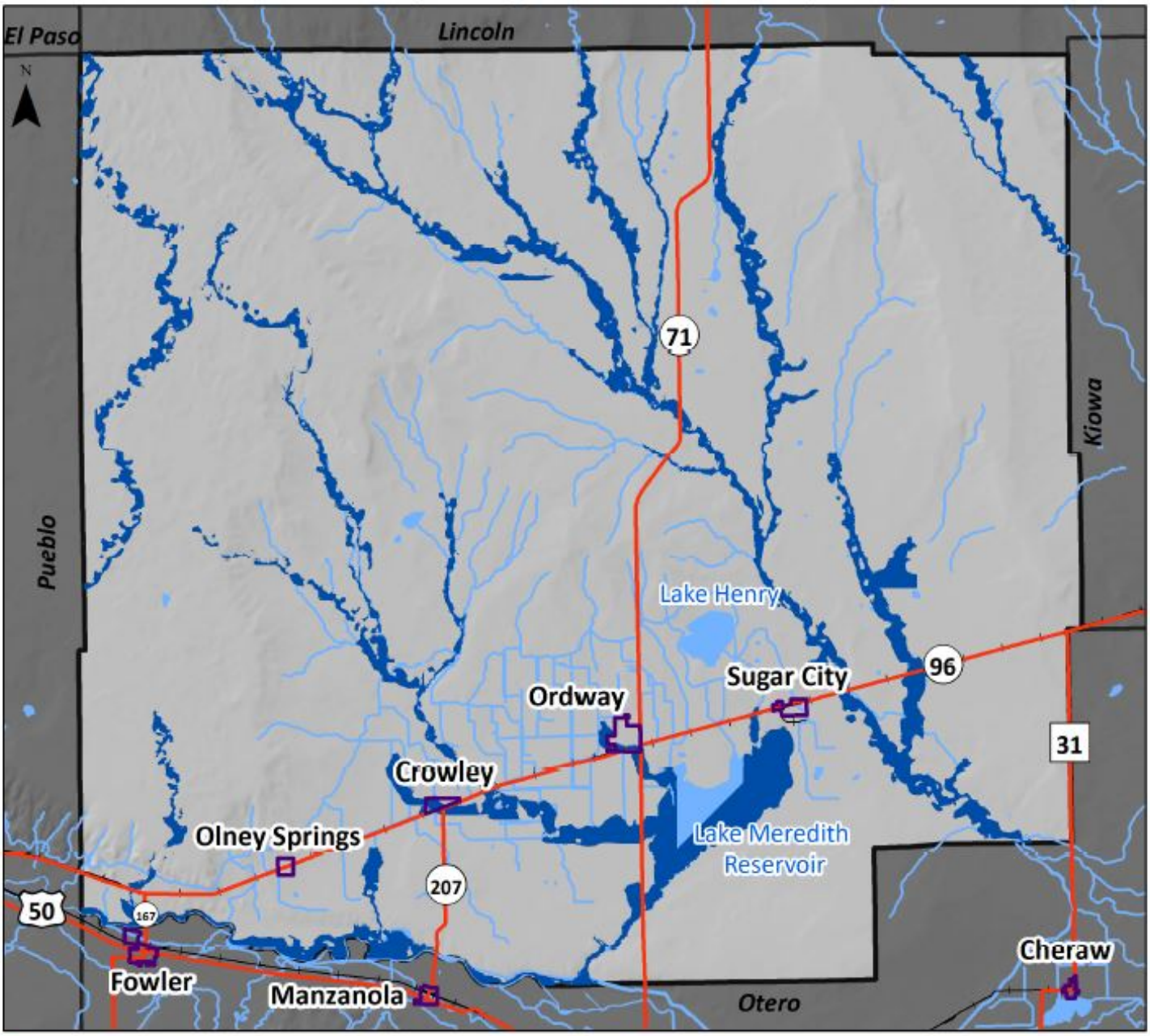
Jurisdictions
Major Roads
Railroads
Lakes
Streams
Counties

Hazard Class
High
Significant
Low
N
NPH

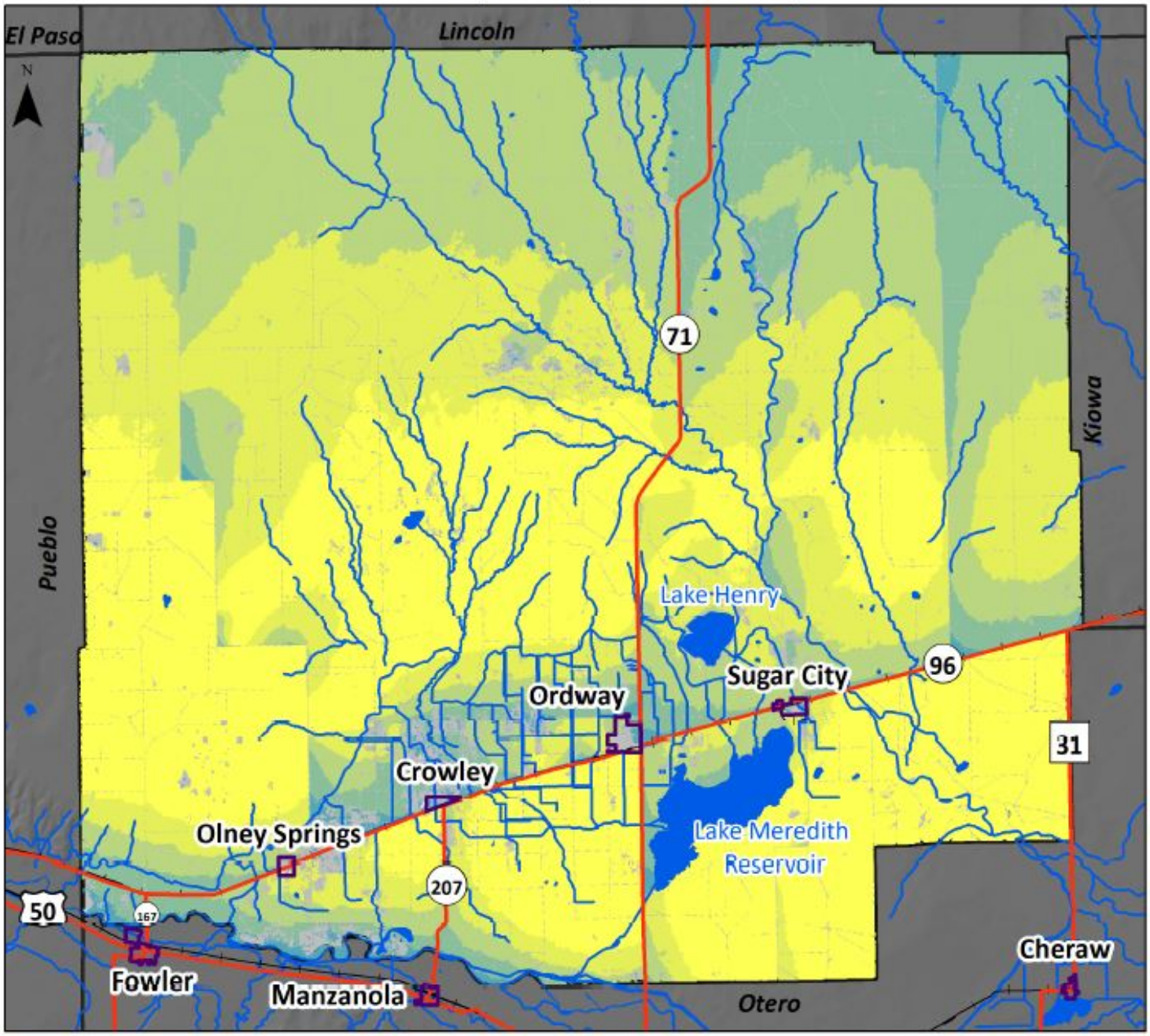
0 4 8 Miles

CDR MAGUIRE EMERGENCY MANAGEMENT

Crowley County Hazus 100-Year Floodplain



Crowley County Burn Probability

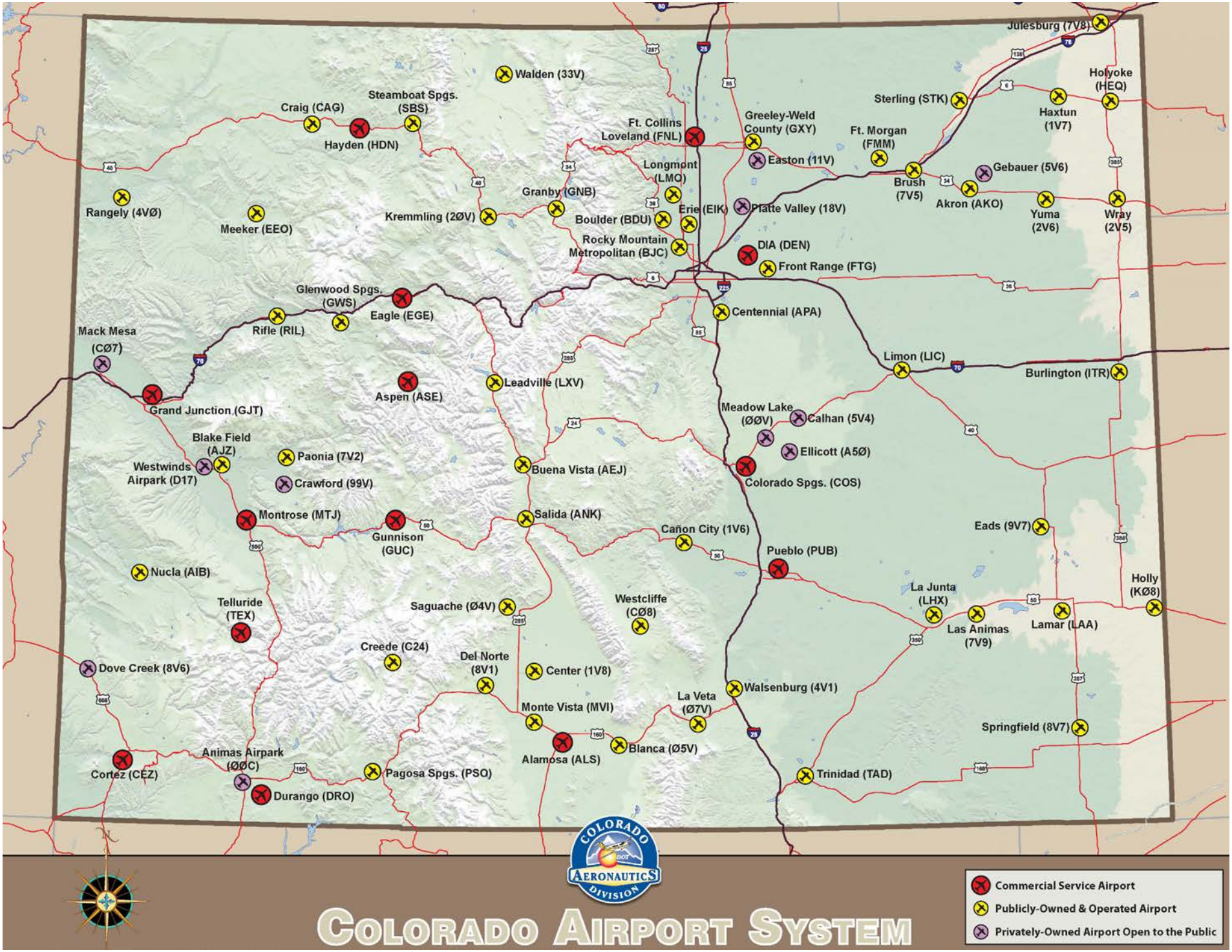


Jurisdictions
Major Roads
Railroads
Lakes
Streams
Counties

Burn Probability
Non-Burnable
1 - Very Low
2
3 - Low
4
5 - Moderate
6
7 - High
8
9 - Very High

0 4 8 Miles

CDR MAGUIRE EMERGENCY MANAGEMENT


Julesburg (7V8)
Holyoke (HEQ)
Sterling (STK)
Haxtun (1V7)
Walden (33V)
Steamboat Spgs. (SBS)
Craig (CAG)
Hayden (HDN)
Ft. Collins Loveland (FNL)
Greeley-Weld County (GXY)
Ft. Morgan (FMM)
Easton (11V)
Gebauer (5V6)
Brush (7V5)
Akron (AKO)
Yuma (2V6)
Wray (2V5)
Longmont (LMO)
Granby (GNB)
Rangely (4VØ)
Meeker (EEO)
Kremmling (2ØV)
Boulder (BDU)
Erie (EIK)
Platte Valley (18V)
Rocky Mountain Metropolitan (BJC)
DIA (DEN)
Front Range (FTG)
Glenwood Spgs. (GWS)
Eagle (EGE)
Rifle (RIL)
Centennial (APA)
Mack Mesa (CØ7)
Limon (LIC)
Burlington (ITR)
Aspen (ASE)
Leadville (LXV)
Grand Junction (GJT)
Meadow Lake (ØØV)
Calhan (5V4)
Blake Field (AJZ)
Ellicott (A5Ø)
Paonia (7V2)
Westwinds Airpark (D17)
Buena Vista (AEJ)
Crawford (99V)
Colorado Spgs. (COS)
Montrose (MTJ)
Salida (ANK)
Gunnison (GUC)
Cañon City (1V6)
Eads (9V7)
Pueblo (PUB)
Nucla (AIB)
Holly (KØ8)
La Junta (LHX)
Telluride (TEX)
Saguache (Ø4V)
Westcliffe (CØ8)
Las Animas (7V9)
Lamar (LAA)
Creede (C24)
Dove Creek (8V6)
Del Norte (8V1)
Center (1V8)
Walsenburg (4V1)
La Veta (Ø7V)
Monte Vista (MVI)
Springfield (8V7)
Animas Airpark (ØØC)
Alamosa (ALS)
Blanca (Ø5V)
Cortez (CEZ)
Pagosa Spgs. (PSO)
Trinidad (TAD)
Durango (DRO)
COLORADO DOT AERONAUTICS DIVISION
COLORADO AIRPORT SYSTEM
Commercial Service Airport
Publicly-Owned & Operated Airport
Privately-Owned Airport Open to the Public

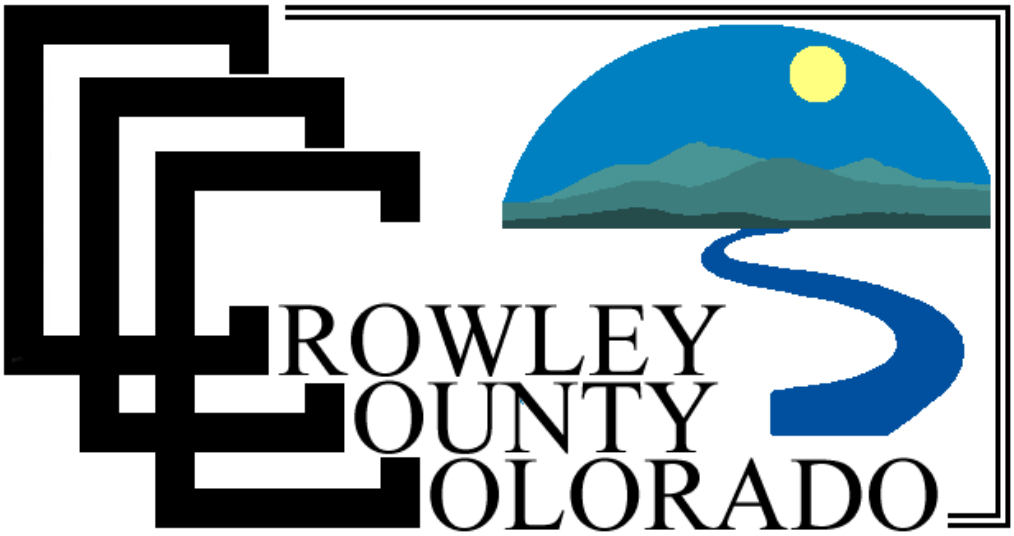
Arkansas Valley Correctional Facility Satellite Image



Crowley County Correctional Facility Satellite Image



APPENDIX 5
FORMS



2021

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DECLARATION OF STATE OF EMERGENCY

Pursuant to Crowley County Comprehensive Emergency Plan and Colorado Revised Statutes, and based on the following findings, Crowley County Commission Hereby declares a State of Emergency

1. A meeting of the Board of County Commissioners cannot be convened in time to address the exigencies of _____.

2. As of ____:____MDT, a State of Emergency is hereby proclaimed in and for Crowley County, Colorado

3. All County officials are hereby authorized to carry out all functions necessary, including ordering evacuations, to implement the Comprehensive Emergency Plan and all other emergency measures necessary during the State of Emergency.

Done on this _____day of _____, 20____.

By: _____
Chairman
Crowley County Commissioner

RESOLUTION NO. 20___ - _____

CROWLEY COUNTY DISASTER DECLARATION

RESOLUTION DECLARING LOCAL DISASTER

WHEREAS, the Crowley County Emergency Manager has advised the Board of County Commissioners of Crowley County ("the Board") of a disaster (as that term is defined in Part 701 of Article 33.5 of Title 24 C.R.S.) currently present in the unincorporated area of Crowley County, to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from _____ requiring emergency action to avert danger or damage which occurred on _____ __, 20___ (inclusive period of incident); and

WHEREAS, the Chairman of the Board _____ signed a Disaster Declaration on _____ __, 20___; and

WHEREAS, the cost and magnitude of responding to and recovery from the impact of the _____ is far in excess of the County's available resources; and

WHEREAS, the Emergency Manager has recommended that the Board declare a local disaster; and

WHEREAS, it would be appropriate and in the interests of the public health and safety, and would further protect property, for the Board to implement said recommendation; and

WHEREAS, pursuant to C.R.S. §24-33.5-709 and the emergency management and operations plans and resolutions of Crowley County, Colorado, the Board is authorized to declare a local disaster.

NOW THEREFORE, BE IT RESOLVED THAT:

1. The Board hereby declares that there is a local disaster in unincorporated area of Crowley County, to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from the _____ requiring emergency action to avert danger or damage.

2. The effect of this declaration of a disaster shall be to activate the response and recovery aspects of any and all applicable local and inter-jurisdictional disaster emergency plans to authorize the furnishing of aid and assistance under such plans.

3. BE IT FURTHER RESOLVED that the Mayors of all towns in Crowley County affected by said disaster are urged to proclaim similar declarations and to cooperate with Crowley County as necessary to cope with this incident.

BE IT FURTHER RESOLVED that this resolution shall be effective upon the date and time given below, and shall remain in effect until rescinded by the Board. True copies will be filed promptly with the Colorado Division of Homeland Security and Emergency Management and the Crowley County Clerk and Recorder, and shall be promptly distributed to the appropriate representatives of the news media.

MOVED, PASSED AND ADOPTED this _____ day of _____, 20____ at _____ ___.M.

BOARD OF COUNTY COMMISISONERS
CROWLEY COUNTY, COLORADO

_____
_____
Chairman

ATTEST:

_____
_____
County Clerk and Recorder

TOWN OF _____DISASTER DECLARATION

RESOLUTION DECLARING LOCAL DISASTER

WHEREAS, _____Town Mayor _____signed a Disaster Declaration on _____ _____, 20___ at ___:___ ___.M.; and

WHEREAS, the Town of _____ is and continues to suffer from a disaster (as that term is defined in part 703(3) of Article 33.5 of Title 24, C.R.S.), to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from a snow blizzard and requiring emergency action to avert danger or damage, which occurred as a result of a _____ on _____, 20___ and

WHEREAS, it would be appropriate and in the interests of the public health and safety, and would further protect property, for the Board of Trustees to renew the Disaster Declaration made by Mayor _____ on _____ ___, 20___ and for the board to declare a local disaster; and

WHEREAS, pursuant to C.R.S. § 24-33.5-709 and the emergency management plans and resolutions the Board is authorized to declare a local disaster.

NOW THEREFORE IT BE RESOLVED THAT:

1. The Board of Trustees hereby declares that there is a local disaster in the Town of _____, to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property, resulting from _____ requiring emergency action to avert danger or damage.

2. The effect of this Declaration of Disaster shall be to activate the response and recovery aspects of any and all applicable local and inter-jurisdictional disaster emergency plans and to authorize the furnishing of aid and assistance under such plans.

BE IT FURTHER RESOLVED that this resolution shall be effective upon the date and time given below, and shall remain in effect until rescinded by the Board. True copies will be filed promptly with the Colorado Division of Emergency Management and the Town Clerk, and shall be promptly distributed to the appropriate representatives of the news media.

MOVED, PASSED AND ADOPTED this _____ day of _____, 20___ at ____:___ ___.M.

BOARD OF TRUSTEES
TOWN OF _____, COLORADO

_____
_____
Mayor

ATTEST:

_____
_____
Town Clerk

CROWLEY COUNTY BOARD OF COMMISSIONERS

EVACUATION ORDER

Pursuant to the Crowley County Comprehensive Emergency Management Plan, and Colorado Revised Statutes and based on the following findings the Crowley County Commission hereby issues the following evacuation order:

As of ____:____AM/PM, MDT, this date an evacuation order is issued for necessary emergency measures.

The evacuation order is being issued for all residents _____
_____
_____.

This evacuation order is being issued to prevent the loss of life, and property. The evacuation is due to _____.

Issued on this ____day of _____, 20___.

By: _____
Chairman

MISSION ASSIGNMENT ORDER FORM

County of Crowley

Incident Name/Number _____Mission Assignment number _____
Date/Time _____Other Tracking number _____
Requestor _____Telephone number _____

☐ Supporting Documentation Attached (to include cost estimates)

Priority Level	☐ Urgent	☐ Immediate	☐ Routine
Description of Task:			
Mission Assignment Approved _____		Date Time _____	
Accepting Official/Agency _____		Date Time _____	
Address		Fax	
Phone		Other	
E-Mail			
Report/deliver to who/where/when			
Comments (use back or separate page for additional space) **Emergency Support Function (ESF) _____ assigned**			
☐ Cannot complete Assignment ☐ Assignment completed			

NOTE: Mission assignment task status will be discussed at each EOC briefing, until completed/cancelled.

Copies provided to:

_____ Documentation unit _____ (Other) _____
_____ Logistics Branch _____ (Other) _____
_____ ROSS Team _____ (Other) _____
_____ Planning Branch _____ (Other) _____
_____ Admin/Finance Branch _____ (Other) _____

INSTRUCTIONS

The purpose of the MISSION ASSIGNMENT ORDER FORM is three-fold:

1. To create a formal process of requesting resources (personnel, equipment, supplies, etc) during either the response or recovery phase of an emergency or disaster. As history has demonstrated, events can rapidly grow. Instead of using scraps of paper, this form can be used to keep track of what resources were requested, by when, and the resource status. This has a benefit especially during shift changes or as personnel are demobilized/mobilized into various positions where the oncoming personnel can quickly review what is transpiring.
2. To provide a paper trail of all actions taken during the incident. This is critical if federal reimbursements are being requested.
3. After each incident an after action report is to be compiled to further document the actions taken. This form can assist in that process.

Incident Name/Number	Must be consistent throughout the event
Mission Assignment number	Starts with the year followed by a logical sequence (ie. 2006-001)
Date/Time	Date and time (MST) request received
Other Tasking number	(Optional) Circumstances may dictate the use of another number as reference
Requester	Name and agency requesting resource
Telephone number	Contact information
Supporting documentation	Whatever is appropriate for this request (ie. Maps, photos, invoices, etc
Priority Levels	
Urgent	Needed within 4 hours
Immediate	Needed within 12 hours
Routine	Needed within 24 hours

Description of Task A clear, concise, statement of the capability that is needed. This should include any incidental functions (for example: need hauling capability to include a 2 ton wench along with two operators). Because everyone may not be fully knowledgeable of the inherent support a resource would need, those would be included here as well, such as fuel - oil needs, ready access to 220 electricity, etc.

Mission Assignment approved	Signature required by the Operations Branch Chief/Deputy or the SEOC Manager/Deputy
Date/Time	Self explanatory
Accepting Official/Agency	Signature required by the agency that is being tasked to provide the resource
Date/Time	Self explanatory
Contact information	Self explanatory
Report/deliver to who/when/when	Where is the resource to be delivered? Should be to a named individual
Comments	Shows which ESF this resource order is assigned to. Space for any additional comments as necessary.
Cannot complete assignment	Sometimes circumstances change where an agency initially believes they can fulfill the request, but find out later they cannot. If it cannot, then a reassessment is done regarding the need for the resource or the determination is made to task a different agency.
Assignment completed	Self explanatory
Copies	Highlights who else should receive copies of this form to help mitigate the possibility of multiple requests for the same item, by the same agency, for the same mission.

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

COUNTY EOC ASSESSMENT REPORT

Jurisdiction / County	Incident Name:	Report Date:	Report Time:

Incident Location / Address	Type of Incident

LIFE SAFETY AND LIFELINE STATUS

# of People Affected	Fatalities	Injured	# of Displaced	# of Sheltered	# of Evacuated

STRUCTURES IMPACTED			**CURRENT WEATHER**	
	# Destroyed/Damaged	**# Threatened**	Wind Speed	
Residential			Wind Direction	
Commercial			Temperature	
Other			Relative Humidity	

Facilities Status: ***Status of Lifelines:***

O= Operational ; N=Nonoperational

Fire Stations / Locations	**O**	**N**		**O**	**N**
			Electrical Power Systems		
			Natural Gas Distribution Systems		
			Fuel Distribution Systems		
			Water Systems		
Law Enforcement Stations / Locations			Wastewater Systems		
			Food Distribution Systems		
			800 Mhz. DTRS		
PSAP / Dispatch Centers Locations			VHF System		
			UHF System		
EOC Locations			Low Band System		
			ARES		
Local Government Locations			RACES		
			Telephone System Hardline		

			Status of Lifelines:	O	N
			Internet Provider System		
			Bus Transit System		
Public Works / Utility yards			Rail Transit System		
			Railroad		
			Airport(s)		
			Emergency Snow Routes		
Hospitals / Medical Facility Locations			Reverse Telephone Alert System		
			Outdoor Warning System		
Mass Care Facilities					
Schools					

Television and Radio Stations			Status of Lifelines:	O	N
Other Locations					

SHELTER LOCATIONS		OCCUPANCY	
Location 1			
Location 2			
Location 3			
Location 4			
Location 5			

IMMINENT HAZARDS	
Refinery / bulk storage/ pipeline facilities (List)	
Dams and levees	
Hazardous materials facilities	
Other	

CURRENT ACTIONS

ESF-1 TRANSPORTATION

ESF-2 COMMUNICATIONS

ESF-3 ROAD & BRIDGE / PUBLIC WORKS
ESF-4 FIREFIGHTING
ESF-5 EMERGENCY MANAGEMENT
ESF-6 MASS CARE / SHELTERING / HUMAN SERVICES
ESF-7 RESOURCE MANAGEMENT
ESF-8 PUBLIC HEALTH & MEDICAL SERVICES
ESF-9 SEARCH AND RESCUE

ESF-10 OIL & HAZARDOUS MATERIALS RESPONSE
ESF-11 AGRICULTURE AND NATURAL RESOURCES (EXTENSION AGENT)
ESF-12 ENERGY
ESF-13 PUBLIC SAFETY / LAW ENFORCEMENT
ESF-14 LONG TERM COMMUNITY RECOVERY AND MITIGATION
ESF-15 EXTERNAL AFFAIRS / PUBLIC INFORMATION
SERVICE ORGANIZATION SUPPORT

Prepared by:		Telephone Number:
Email address:		

Please submit the EOC Assessment Report by the most expedient available means to the Regional Field Manager.

RELEASE AND HOLD HARMLESS
FORM C-6-2

The undersigned hereby releases and holds harmless _____, its officers, employees, and agents from any and all liability or damage, including but not limited to, injury or death, resulting from my requested visit to my place of residence or business.

I understand that homes/businesses have been impacted by the Disaster and may be unsafe. Roads may have been damaged or destroyed; therefore, any travel is potentially hazardous.

The undersigned is a leaseholder, renter, property owner, property manager, business owner, contractor, or insurance adjustor. Access shall be permitted only under the terms and conditions as specified by _____.

PLEASE READ CAREFULLY BEFORE SIGNING.

OWNER/RENTER

_____	_____	_____
(Printed Name)	(Signature)	(Date)

_____
(Local Address)

WITNESS

_____	_____	_____
(Printed Name)	(Signature)	(Date)

WITNESS

_____	_____	_____
(Printed Name)	(Signature)	(Date)

REQUEST FOR PERMANENT RESIDENCY AND RELEASE
FORM C-6-3

I Desire to return on a permanent basis to my residence. I Understand that:

Water, sewer, power, and telephone utilities are or may be non existent
Roads are or may be damaged.
Emergency services may be impeded in their response due to road conditions.
Homes and businesses may be unsafe

Access for permanent residency will be authorized starting _____. All Permanent residents must make provisions to collect garbage and dispose of it in dumpsters or at designated disposal sites. Generators cannot be connected to electrical systems because such connections could cause a fire in the residence or business or harm utility workers who are repairing the power system.

To assist law enforcement in knowing which residents may be occupied, a sign to that affect will be posted in the property or residence.

The undersigned hereby releases and holes harmless Crowley County, State of Colorado, and the United States Government, their respective officers, employees and agents from any and all liability or damage including by not limited to injury or death resulting or arising from my requested visit to said property.

The undersigned is a home or business owner or leaseholder or renter. Residing in said residence shall be permitted only under the terms and conditions specified by Crowley County.

PLEASE READ CAREFULLY BEFORE SIGNING.

OWNER/RENTER

_____	_____	_____
(Printed Name)	(Signature)	(Date)

_____
(Local Address)

WITNESS

_____	_____	_____
(Printed Name)	(Signature)	(Date)

WITNESS

_____	_____	_____
(Printed Name)	(Signature)	(Date)

INDEPENDENT CONTRACTOR SERVICE AGREEMENT

This Independent Contractor Service Agreement (the "Agreement") dated as of _____, 20___, is between _____ ("_____") by and through its _____ ("_____") and _____, [a sole proprietorship,] [a general partnership,] [a limited partnership in which _____ is a general partner,] [a _____ corporation] doing business as _____ (the "Contractor")

RECITALS

A. The _____ has accepted the proposal of Contractor for the Services subject to the execution of this Agreement by Contractor

B. _____ and Contractor intend by this Agreement to outline the terms and conditions under which the Services shall be provided.

TERMS AND CONDITIONS

Therefore, _____ and Contractor agree as follows:

1. The Services shall be provided in accordance with the terms of the Proposal, a copy of which is attached hereto. To the extent that the provisions of the Proposal and this Agreement are in conflict the terms of this Agreement shall control.

2. Contractor shall provide and complete the Services in a workmanlike fashion no later than _____, 20___. Contractor hereby warrants that it has the workforce, training, experience and ability necessary to properly complete the Services within the time period set forth above.

3. Payment for the Services shall be due only after the Services are completed to _____ satisfaction and Contractor has submitted an invoice for the amount due complete with the Contractor's taxpayer identification number or social security number. _____ shall pay Contractor within 30 days after an invoice in proper form is submitted to _____. However, _____ shall have the right to publish notice of final payment pursuant to C.R.S. § 38-26-107 and to comply with the provisions of that statute.

4. Contractor is and shall remain an independent contractor and not an employee of _____. All persons used by Contractor to perform the services shall be employees of Contractor and shall not be deemed employees of _____. At all times while the Services are being rendered by Contractor, Contractor shall maintain Colorado worker's compensation coverage in the minimum amounts required by statute for all workers used by Contractor to provide the Services whether or not such workers are paid any compensation by Contractor for such work. Neither the contractor nor any employee of Contractor shall be entitled to unemployment benefits through the _____ and the Contractor shall be obligated to pay any federal or state income taxes due with respect to any sum payable by

_____ hereunder. At all times while the Services are being rendered by Contractor, Contractor shall maintain commercial general liability coverage pending bodily injury and property damage coverage with a combined single limit of at least $1,000,000 and a deductible of not more than $1,000. Such insurance shall provide that it may not be cancelled without 30 days prior written notice to _____. Prior commencement of the Services, Contractor shall cause _____to be named as an additional insured and shall provide _____ with evidence acceptable to _____, that the insurance required by this Section 4 is in full force and effect.

5. In accordance with the laws of Colorado, Colorado labor shall be employed to perform the Services to the extent of not less than eighty percent (80%) of each type or class of labor in the several classifications of skilled and common labor employed to perform the Services. The term "Colorado labor" shall mean any person who has been a bona fide resident of the State of Colorado for a period of not less than one (1) year.

   The selection of materials and equipment for the work shall be in accordance with the laws of Colorado which read substantially as follows:

   > "Preference is hereby given to Colorado labor and to supplies, materials, and provisions produced, manufactured, or grown in Colorado, quality being equal to articles offered by competitors outside of the State."

6. This Agreement is subject to provisions of the Illegal Aliens-Public Contracts for Service Act (the "Act") found at C.R.S. § 8-17.5-101 *et seq*. As used in this provision, the following definitions shall apply: (1) "Basic Pilot Program" means the Basic Pilot Employment Verification Program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, that is administered by the United States Department of Homeland Security; (2) "Department" means the Colorado Department of Labor and Employment; and (3) "Executive Director" means the Executive Director of the Department of Labor and Employment.

   Contractor shall comply with the provisions of the Act. Specifically, Contractor shall not:

   (1) knowingly employ or contract with an illegal alien to perform work under the Agreement; or
   (2) Enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

Additionally, Contractor represents that Contractor has verified or attempted to verify through participation in the Basic Pilot Program that Contractor does not employ an illegal aliens and, if Contractor has not been accepted into the Basic Pilot Program prior to entering into this Agreement, Contractor shall apply to participate in the Basic Pilot Program every three months until Contractor is accepted or the work under this Agreement has not been completed whichever occurs first. This requirement shall not be applicable if the Basic Pilot Program has been discontinued. Contractor shall not use the

Basic Pilot Program procedures to undertake pre-employment screening of job applicants while work under this Agreement is being done.

If Contractor obtains actual knowledge that any of its subcontractors performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall:

(1) Notify the Subcontractor and _____, within three days of discovery of such fact, that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
(2) Terminate the subcontract with the subcontractor if, within three days of receiving the notice required by subpart (1) above, the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor need not terminate the subcontract with the subcontractor if, during such three days, the subcontractor provides information establishing that the subcontractor has no knowingly employed or contracted with an illegal alien.

Contractor shall comply with any reasonable request by the Department made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

If Contractor violates any of the provisions of this section, _____ shall have the right to terminate the Agreement for breach of contract and, in such case; Contractor shall be liable to _____ for all actual and consequential damages incurred by _____ as a result of such breach and termination of this Agreement.

7. In the event either party to this Agreement brings suit to enforce or interpret any portion of this Agreement, the party substantially prevailing in such action shall be entitled to recover all costs incurred in such action, including without limitation reasonable attorney's fees. Any action brought in connection with this Agreement or the Services shall be brought only in the District Court, Crowley County, Colorado or the Crowley County Court which shall also be the proper place for trial of any such action.

8. This agreement shall be binding on and inure to the benefit of the parties hereto, their respective successors and assigns, and shall not be deemed to be for the benefit of or enforceable by any third party. This Agreement, together with the Proposal, constitutes the entire agreement between the parties concerning the Services and may not be amended except by a written document executed by both parties hereto. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Colorado without reference to choice of laws rules.

_____

By:_____
_____,Chairman

ATTEST:

_____
_____,Witness

CONTRACTOR

By: _____

Title: _____

AGREEMENT FOR SERVICES

THIS AGREEMENT is made and entered into this _____day of _____, 20___, by and between CROWLEY COUNTY, COLORADO, (herinafter referred to as "Crowley"), and _____, (herinafter referred to as "_____").

WITNESSETH:

WHEREAS, a disaster emergency has arisen in Crowley, resulting in greater demands than the personnel and equipment of that jurisdiction can handle; and

WHEREAS, it is in the best interest of Crowley that it may have access to services and equipment from _____ to assist it in responding to the disaster emergency needs by supplementing their own resources and _____ is willing to assist and make available resources to Crowley.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. _____ agrees to provide _____with personnel to operate said equipment to Crowley for a period of _____(__) days for _____ beginning on _____ __, 20___ and effective through _____ __, 20___.

2. Crowley further agrees to provide fuel for the equipment and lodging and meals for the _____ personnel over the _____ (__) day period.

3. Both Crowley and _____waive all claims and causes of action against each other for compensation, damage, personnel injury or death occurring as a consequence, direct or indirect, of the performance of this agreement, to the extent permitted by, and without waiving any protection or other provisions of the Colorado Government Immunity Act.

4. No performance under this Agreement by personnel of Crowley or _____, shall in any respect alter or modify the status of officers, agents, or employees of the respective jurisdictions for the purpose of worker's compensation or their benefits or entitlements, pensions, levels or types of training, internal discipline, certification, or rank procedures, methods, or categories, or for any purpose, or condition or requirement of employment. _____ shall remain responsible for processing any worker's compensation claims filed by their own resources.

IN WITNESS WHEREOF, the parties have entered into this Agreement the day and year first above written.

_____

By _____
Director

CROWLEY COUNTY, COLORADO

By_____

Chair, Board of County Commissioners

ATTEST:

_____

Clerk and Recorder

INTERGOVERNMENTATL AGREEMENT

THIS AGREEMENT is made and entered into this _____day of _____, 20___, by and between _____, (hereinafter referred to as "_____"), and _____, (hereinafter referred to as "_____").

WITNESSETH:

WHERAS, intergovernmental agreements provide functions or services, including the sharing of costs of services or functions, by political subdivisions of the State of Colorado are authorized by C.R.S. § 29-1-203 C.R.S.; and

WHEREAS, a disaster emergency has arisen in _____, resulting in greater demands than the personnel and equipment of that jurisdiction can handle; and

WHEREAS, it is in the best interest of _____ that it may have access to services and equipment from _____ to assist it in responding to the emergency disaster needs by supplementing their own resources and _____ is willing to assist and make available its resources to _____.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. _____ aggress to provide _____ and personnel to operate said equipment to _____for a period of _____(___) days for _____ beginning on _____ ___, 20___ and effective through _____ ___, 20___.

2. In Consideration for these services, _____agrees to reimburse _____ at a rate of $_____ per hour for labor and equipment. _____ further agrees to provide fuel for the equipment and lodging and meals for _____ personnel over the _____(___) day period. _____ shall extend reasonable cooperation to assist _____ in effective _____.

3. Both _____ and _____ waive all claims and causes of action against each other for compensation, damage, personnel injury or death occurring as a consequence, direct or indirect, of the performance of this Agreement, to extend permitted by, and without waiving any protections or other provisions of the Colorado Governmental Immunity Act.
4. No performance under this Agreement by personnel of either jurisdiction hereto, shall in any respect alter or modify the status of officers, agents, or employees of the respective jurisdictions for purposes of worker's compensation or their benefits or entitlements, pension, levels or types of training, internal discipline, certification, or rank procedures, methods, or categories, or for any purpose, or condition or requirement of employment. Worker's Compensation coverage shall be as structured in C.R.S § 29-5-109, if the request meets the requirements of C.R.S. § 29-5-103 through 108, otherwise the claim shall be processed as if it were generated by any other work assignment within _____.

_____ shall remain responsible for processing any worker's compensation claims filed by their own resources.

IN WITNESS WHEREOF, the parties have entered into this Agreement the day and year first written above.

_____

By: _____
Director,

_____

By: _____
Director,

EMERGENCY EQUIPMENT SHIFT TICKET

Contractors as well as Government Employees shall use the Emergency Equipment Shift Ticket to Track Machine. The Contractor and Employees shall turn a shift ticket into their supervisor daily or as directed.

- Please print. Use pen only.
- An "Emergency Equipment Shift Ticket" must be completed each time work is done during the disaster period. The issuing agent is responsible for completing the form about the equipment. Be sure to complete all blocks and sign.
- Supervisor is responsible to check for accuracy and if in agreement, sign for commodity received.
- Issuing agent gives agent green "receiving agency copy" after both agents have signed.
- At end of shift, issuing agent gives finance pink copy and blue copy.
- Issuing agent retains goldenrod copy.
- The white "ordering office file copy" is retained in the book. Upon issuing agent's demobilization or when the book is complete, the book must be turned in to finance.

EMERGENCY EQUIPMENT SHIFT TICKET

NOTE: The responsible Government Officer will update this form each day or shift and make initial and final equipment inspections.

1. AGREEMENT NUMBER		2. CONTRACTOR *(name)*
3. INCIDENT OR PROJECT NAME	4. INCIDENT NUMBER	5. OPERATOR *(name)*
6. EQUIPMENT MAKE	7. EQUIPMENT MODEL	8. OPERATOR FURNISHED BY ☐ CONTRACTOR ☐ GOVERNMENT
9. SERIAL NUMBER	10. LICENSE NUMBER	11. OPERATING SUPPLIES FURNISHED BY ☐ CONTRACTOR (wet) ☐ GOVERNMENT (dry)

12. DATE MO/DAY/YR	13. EQUIPMENT USE				14. REMARKS *(released, down time and cause, problems, etc.)*
	START	STOP	HOURS/DAYS/MILES (circle one) WORK	SPECIAL	
					15. EQUIPMENT STATUS ☐ a. Inspected and under agreement ☐ b. Released by Government ☐ c. Withdrawn by Contractor
					16. INVOICE POSTED BY *(Recorder's initials)*

17. CONTRACTOR'S OR AUTHORIZED AGENT'S SIGNATURE	18. GOVERNMENT OFFICER'S SIGNATURE	19. DATE SIGNED

NSN 7540-01-119-5628
50297-102

OPTIONAL FORM 297 (Rev. 7-90)
USDA/USDI

EMERGENCY EQUIPMENT FUEL AND OIL ISSUE

INSTRUCTIONS

- Please print. Use pen only.
- An "Emergency Equipment Fuel and Oil Issue" must be completed each time an issue is made for fuel or oil commodity.
- The issuing agent is responsible for completing the form about the equipment that is receiving the fuel or oil commodity. Be sure to complete all blocks and sign.
- Receiving agent is responsible to check for accuracy and if in agreement, sign for commodity received.
- Issuing agent gives agent green "receiving agency copy" after both agents have signed.
- At end of shift, issuing agent gives finance pink (2) and blue copies.
- Issuing agent retains goldenrod copy.
- The white "ordering office file copy" is retained in the book. Upon issuing agent's demobilization or when the book is complete, the book must be turned in to finance.

EMERGENCY EQUIPMENT FUEL AND OIL ISSUE *SEE COVER FOR INSTRUCTIONS.*					
INCIDENT OR PROJECT NAME	OWNER OF EQUIPMENT: ☐ Contractor ☐ Government Name				
AGREEMENT NUMBER	TYPE OF EQUIPMENT	LICENSE OR IDENTIFICATION NUMBER			
COMMODITY *(circle appropriate items)* REGULAR GAS UNLEADED GAS DIESEL	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
OIL OTHER *(specify)*					
DATE AND TIME ISSUED	REMARKS			TOTAL	
ISSUING AGENT'S SIGNATURE	PRINT NAME AND TITLE				
RECEIVING AGENT'S SIGNATURE	PRINT NAME AND TITLE				
POSTED TO EQUIPMENT INVOICE *(FINANCE USE ONLY): INITIALS*	*DATE*				

NSN 7540-01-317-7366
50304-101

PRINTED ON RECYCLED PAPER

OPTIONAL FORM 304 (7-90)
USDA/USDI

DAILY HAUL RECORD

For _____, _____20____

Ticket #	Time	Truck #	Capacity	% Load	Actual	Eligible	Comments

ATTACHMENT
LOAD TICKET

LOAD TICKET			
TICKET NUMBER:			
CONTRACT NUMBER			
CONTRACTOR			
DATE:			
DEBRIS QUANTITY			
Truck No:		**Capacity (CY):**	
Load size (CY)		**Tons:**	
Truck Driver:			
DEBRIS CLASSIFICATION			
	Burnable		
	Non-Burnable		
	Mixed		
	Other		
LOCATION			
Name of County or City			
Section/Area		**Dump Site**	
	Time		**Inspector**
Loading			
Dumping			
Eligible (Y/N):	Original: Finance Section Yellow: Contractor Pink: Driver Gold: FEMA		

TRUCK PLACARD

Company Name

Truck Number

Cubic Yards

Inspected by and Date

KEY DECISION LOG	INCIDENT:
	START DATE:

The Key Decision Log is utilized to document important incident decisions. This process encourages policy level collaboration with Incident Command Staff in an effort to identify accomplishments and best practices for incident management purposes.

WHO DATE TIME	KEY DECISION	RISKS	ALTERNATIVES	REASONING	COST		AA/IC
					IMMEDIATE	LONG TERM	

DFPC MULTI-MISSION AIRCRAFT REQUEST ORDER FORM - 2016

TO ORDER MMA AIRCRAFT

CALL CSP DISPATCH @ 303-279-8855 and ask for DFPC DUTY OFFICER

Request Date: _____ **Request Time:** _____

MISSION REQUESTED			
Date Needed		Time Needed	
Incident Type	☐ Wildfire ☐ Other-Specify:	Incident Name	
Mission Profile Requested	☐ Color & Infrared Sensor Specific Needs: ☐ Perimeter ☐ Spot Fires ☐ Fire Location/Detection		
	☐ All Hazard		
	☐ Point to Point Transportation		

MISSION REQUESTOR INFORMATION (Sheriff, Fire Chief, FMO etc.)	
Requestor Name, Title and Agency	Requestor Phone, Email and/or Radio Frequency

INCIDENT CONTACT INFORMATION			
Name		Phone Number	
Incident Position			
Ground Contact Name		Radio Frequency	
Air Contact Name		Radio Frequency	

INTELLIGENCE REPORTING INSTRUCTIONS **(Specify what intel, to who/where, and how you want it sent from the plane to ground)**

INCIDENT LOCATION INFORMATION					
County					
General Location					
Latitude (**specify format**)					
Longitude (**specify format**)					
Bearing		Distance		From	

OTHER INCIDENT AIRSPACE INFORMATION	
Other Known Aerial Hazards	
Special Use Airspace	
Military Training Route	
Military Operations Area	

Rev. 2/22/16

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

State of Colorado
Consequence Complexity Analysis v.7

REPORT SUBMITTED BY:	LOCAL SIGNATURE:	REPORT DATE/TIME: 00/00/2020 00:00MST
INCIDENT NAME:	INCIDENT TYPE:	
REGION:	COUNTY:	(VGxWF=TP) (TP SUM=TOTAL)

Ranking Element	Value of "0"	Value of "1"	Value of "3"	Value of "5"	Value Given	Weight Factor	Total Points
First Responder Safety	N/A	Low exposure with minimal hazardous conditions which are easily mitigated	Moderate exposure with several hazardous conditions which require specific strategies to mitigate	High exposure with many hazardous conditions which require multiple or complex strategies to mitigate	0	5	0
Public Safety	N/A	Low exposure with minimal hazardous conditions which are easily mitigated through community contact; routine operational conditions	Moderate exposure with several hazardous conditions which require specific strategies to mitigate; community impacts are probable; some management efforts underway	High exposure with many hazardous conditions which require multiple or complex strategies to mitigate; community impacts are imminent; significant management efforts underway	0	5	0
Evacuations	N/A	Low number of manditory or pre evacuations occurring; evacuation and sheltering planning underway; limited and localized area	Moderate number of manditory evacuations occurring; pre evacuations are ongoing; animal evacuations occuring; sheltering operations; low density population area	High number of manditory evacuations occurring; pre evacuations are ongoing; animal evacuations occuring; unable to sustain sheltering operations; high density population area	0	4	0
Incident Stabilization	N/A	Low risk of incident expansion, complexity increase, and/or escaping established perimeter; limited incident management and stabilization effort required	Moderate risk of incident expansion, complexity increase, and/or escaping established perimeter; active incident management and stabilization effort required	High risk of incident expansion, complexity increase, and/or escaping established perimeter; aggressive incident management and stabilization effort required; expansion is imminent	0	4	0
Current Organizational Performance	N/A	Current organization performing within expectations and span of control; can develop and implement an Incident Action Plan	Current organization begining to see overhead extended and pushing the limits of span of control; struggling to develop and/or implement an Incident Action Plan	Current organization overhead extended or exceeds span of control; Incident requires multiple branches, groups, divisions or specialized operations; unable to develop and/or implement an Incident Action Plan	0	4	0
Anticipated Resource Needs	N/A	Low time commitment; initial response; mutual aid; no specialized resources are required; limited State support; 0-72 hours	Moderate time commitment; extended response; mutual aid expended; specialized resources are required; State resource management engaged; 4-6 days	High time commitment; extended operational periods; mutual aid expended;several specialized resources are required; State resource management highly engaged; 7 or more days	0	4	0
Special and/or Night Operations	N/A	Low quantity of special and/or night operations are occuring; Activities limited to monitoring and security; no specialized resources are deployed	Moderate quantity of special and/or night operations are occuring; night operations do not equate to the level of day operations; specialized resources are deployed which require specific strategies and/or overhead	High quantity of special and/or night operations are occuring; ongoing life safety response activity; specialized resources are deployed which require specific strategies and/or overhead	0	4	0
Impacted Jurisdictions	N/A	Incident is contained within one political jurisdiction; agreement on objectives; objectives are relitivly easy to achieve	Several political jurisdictions are directly impacted by incident; some disagreement on objectives; objectives are moderately difficult to achieve	Four or more political jurisdictions are directly impacted by incident; strong disagreement on objectives; several conflicts of interest between exist; objectives are difficult to achieve	0	3	0
Critical Infrastructure and/or Key Resources	N/A	Low number of Local critical infrastructure and/or key resources within or adjacent to the incident; low exposure with minimal hazardous conditions which are easily mitigated	Moderate number of Local and/or State critical infrastructure and/or key resources within or adjacent to the incident; impacts are probable; may require specialized resources; Disaster Assistance individual case management	High number of Local, State and/or National critical infrastructure and/or key resources within or adjacent to the incident; impacts are imminent; will require specialized resources; Disaster Assistance Center is open	0	3	0

Environmental Impact (Air and Water Quality)	N/A	Low exposure with minimal hazardous conditions which are easily mitigated through community contact	Moderate exposure with several hazardous conditions which require specific strategies to mitigate; community impacts are probable; some management efforts underway	High exposure with many hazardous conditions which require multiple or complex strategies to mitigate; community impacts are imminent; significant management efforts underway	0	3	0
Cultural, Hisorical, and Natural Resource Impact	N/A	Low cultural, hisorical and/or natural resource impact to jurisdictions	Moderate cultural, hisorical and/or natural resource impact to jurisdictions; community impacts or loss are probable	High cultural, hisorical and/or natural resource impact to jurisdictions; community impacts or loss are imminent	0	3	0
Social and/or Economic Impact	N/A	Low social and/or economic impact to jurisdictions	Moderate social and/or economic impact to jurisdictions	High social and/or economic impact to jurisdictions	0	2	0
Unmet Needs and/or Donations and Volunteer Management	N/A	Low number of public with current unmet needs that can be managed by local case management	Moderate number of public with current unmet needs that exceeds local ability to manage; Mutual aid support is engaged; State assistance may be required	High number of public with current unmet needs that exceeds local ability to manage; Mutual aid support is extended; State assistance is required	0	2	0
Cost Benefit Analysis	N/A	Values to be protected or treated are less than costs of management actions	Values to be protected or treated are equal to costs of management actions	Values to be protected or treated exceed costs of management actions	0	2	0
Disaster Declaration	N/A	Local disaster declaration has been issued	Significant State assistance is required; no State disaster declaration has been issued	State disaster declaration has been issued; request for Federal assistance is being considered	0	1	0
Media and/or Public Interest	N/A	No significant media interest or public information needs identified outside local area	Media is not present and/or significant increase in Public Information Officer requests for information; press releases are being issued; briefing schedule established	Media is present and/or a significant increase in Public Information Officer requests for information; national media present; sensitive, competing or conflicting messaging; Joint Information Center activated	0	1	0
POINT RANGES		**0 to 100**	**CONSIDER TURNING BACK TO HOME JURISDICTION**		**0**		
		101 to 150	**CONSIDER ORDERING A TYPE III TEAM**				
		151 to 200	**CONSIDER ORDERING A TYPE II TEAM**				
		201 to 250	**CONSIDER ORDERING A TYPE I TEAM**				

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

RAPID NEEDS ASSESSMENTS

Infrastructure Water Treatment	Incident Name	Reporting Unit / Agency
Disaster Number	Date/Time Prepared	Prepared By

Observation Information					
Weather/Temperature					
Agency/Organization					
Survey Method	Aircraft		Windshield		Interview
Location					
Latitude			Longitude		
Type of Area	Urban	Suburban		Rural	Industrial

Waste Water Treatment Plants				
Type of System	Lagoons	Trickling Filter	Activated Sludge	Other

Number of Facilities Affected				Unknown	
Facility Name					
Location					
Extent of Damage	Destroyed	Major Damage		Minor Damage	Operational
Time to Return to Service	Hours	Days	Weeks	Longer	Unknown
Are there interstate systems nearby?	Yes	No	Unknown		
Is power available to the facility?	Yes	No	Unknown		
Is generator power available	Yes	No	Unknown		
Are interceptor sewers operational?	Yes	No	Unknown		
Are lift stations operational?	Yes	No	Unknown		
Do lift stations have bypasses?	Yes	No	Unknown		
Do lift stations have power?	Yes	No	Unknown		
Is generator power available?	Yes	No	Unknown		
Service area of plant					Unknown
Service population of plant					Unknown
Porta-toilets needed	Yes	No	Unknown		
Approximate number needed					Unknown

Remarks/Comments

Summary/Recommendation Statement

Team Leader	Date	Time

Infrastructure Electrical	Incident	Reporting Unit / Agency
Disaster Number	Date/Time Prepared	Prepared By

Observation Information					
Weather/Temperature					
Agency/Organization					
Survey Method	Aircraft		Windshield		Interview
Location					
Latitude					
Type of Area	Urban	Suburban	Rural	Industrial	

Electrical Systems (Generator)					
Type of Systems	Coal-fired	Oil-fired	Nuclear	Gas-fired	Other
Number of facilities affected					Unknown
Facility Name					
Location					
Damage	Destroyed	Major Damage	Minor Damage	Operational	
Time to return to service	Hours	Days	Weeks	Longer	Unknown
Generator power available?	Yes	No	Unknown		
Service area of plant					Unknown
Service population of plant					Unknown

Electrical Systems (Transmission)				
Are power lines down?	Yes	No	Unknown	
How many?				Unknown
Are power poles/towers down?	Yes	No	Unknown	
How many?				Unknown
Damage	All down	Majority down	Few down	Operational
Are substations down?	Yes	No	Unknown	
How many?				Unknown
Damage type	Transformers	Switches	Power lines	Other

Remarks/Comments

Summary/Recommendation Statement

Team Leader	Date	Time

Infrastructure Bridges, Roads, Airports	**Incident**	**Reporting Unit / Agency**
Disaster Number	**Date/Time Prepared**	**Prepared By**

Observation Information					
Weather/Temperature					
Agency/Organization					
Survey Method	Aircraft		Windshield		Interview
Location					
Latitude					
Type of Area	Urban	Suburban	Rural		Industrial
Bridges					
Are bridges open to traffic?	Yes	No	Unknown		
Number of bridges affected					Unknown
Bridge damage	Most destroyed	Major damage	Minor damage		In use
If destroyed, are alternate routes available?	Yes	No	Unknown		
Roads					
Are roads open to traffic?	Yes	No	Unknown		
Number of roads affected					Unknown
Road damage	Most destroyed	Major damage	Minor damage		In use
Airports					
Are airports open to traffic?	Yes	No	Unknown		
Number of airports affected					Unknown
Airport damage	Most destroyed	Major damage	Minor damage		In use
If destroyed are alternate routes available?	Yes	No	Unknown		

If yes, where?	
Estimated distance	

Remarks/Comments

Summary/Recommendation Statement

Team Leader	**Date**	**Time**

Infrastructure Debris Removal, Potable Water	Incident	Reporting Unit / Agency
Disaster Number	Date/Time Prepared	Prepared By

Observation Information					
Weather/Temperature					
Agency/Organization					
Survey Method	Aircraft		Windshield		Interview
Location					
Latitude					
Type of Area	Urban	Suburban	Rural		Industrial

Debris Removal				
Type of Debris (Check the appropriate boxes)				
Shingles	Trees Down < 1 ft. Dia	Utility Poles Down	Wood	Steel
Small Branches	Trees Down > 1 ft. Dia	Power Lines		
Business Signs	Building Components	Other (give description)		

Are there areas where you need emergency access that are covered with debris?	Yes	No	Unknown
Does local jurisdiction have capability to remove debris for emergency access?	Yes	No	Unknown
Have all emergency routes been identified?	Yes	No	Unknown
Estimated debris to be removed tons/cubic yards	Unknown		

Potable Water Systems				
What type of systems?	Wells	Reservoirs	Water plants	Other
Number of facilities affected				Unknown
Facility name				
Location				
Extent of damage	Most destroyed	Major damage	Minor damage	In use
Time to return to service	Hours	Days	Weeks	Longer
Is commercial power available?	Yes	No	Unknown	
Is generator power available?	Yes	No	Unknown	
Service area of facility				Unknown
Service population of facility				Unknown
Has water been contaminated?	Yes	No	Unknown	
Is distribution system operational?	Yes	No	Unknown	
Will water be required (potable)?	Yes	No	Unknown	
How much potable water will be needed (3 gallons/person/day)?				

Remarks/Comments

Summary/Recommendation Statement

Team Leader	Date	Time

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

RAPID NEEDS ASSESSMENTS

Fire/Urban Search and Rescue	Incident	Reporting Unit / Agency
Disaster Number	Date/Time Prepared	Prepared By

Observation Information				
Weather/Temperature				
Agency/Organization				
Survey Method	Aircraft	Windshield		Interview
Location				
Latitude				
Type of Area	Urban	Suburban	Rural	Industrial

Are there fire incidents in progress?	Yes	No	Unknown
Do fire incidents exceed capabilities of available resources?	Yes	No	Unknown
Are there US&R incidents in progress?	Yes	No	Unknown
Need for Fire/US&R resources for other hazard reduction activities?	Yes	No	Unknown
Estimated debris to be removed tons/cubic yards:			Unknown

Incidents in Progress

	Fires				US&R			
Building Type	Attended		Victims		Attended		Victims	
	Yes	No	Yes	No	Yes	No	Trapped	Missing
Commercial								
Industrial								
Health care								
Educational								
Religious								
Apartments								
Houses								
Mobile/Modular								
Hotels/Motels								
Other								
Total								

Resources	Fire				US&R			
	Local		Other		Local		Other	
	Assigned	Available	Assigned	Available	Assigned	Available	Assigned	Available
Personnel								
Apparatus								

Summary/Recommendation Statement

Team Leader	Date	Time

RAPID NEEDS ASSESSMENTS

Mass Care	Incident	Reporting Unit / Agency
Disaster Number	**Date/Time Prepared**	**Prepared By**

Observation Information				
Weather/Temperature				
Agency/Organization				
Survey Method	Aircraft	Windshield		Interview
Location				
Latitude				
Type of Area	Urban	Suburban	Rural	Industrial

Shelter							
Number of Shelters Open		Estimated Population in Shelters					
Number of Shelters which need structural surveys:							
Number of Shelters Closed		Due to Damage		Due to Population Demand			
Number of Shelters without	First Aid Support		Communications		Security		
Food Prep Capabilities		Less than a 3 day food supply		Less than a 3 day water supply		Power	

Adequate Staffing (Agency Specific)

Unmet needs – Estimated number and locations

Food/Feeding							
Number of Fixed Feeding Facilities (not counting shelters)							
Hot meal capability		Cold meal capability		Local food stock available		YES	NO
Estimated number of days		Adequacy of Staffing					
Status of Food Retailers and Wholesalers							

Unmet needs – Estimated number and locations

Immediate Lifesaving Actions

Summary/Recommendation Statement

Team Leader	Date	Time

Health and Medical	Incident	Reporting Unit / Agency
Disaster Number	**Date/Time Prepared**	**Prepared By**

Observation Information											
Weather/Temperature											
Agency/Organization											
Survey Method	Aircraft			Windshield			Interview				
Location											
Latitude											
Type of Area	Urban		Suburban		Rural		Industrial				
Population Information											
Total population		Unknown	Total hospitals		Unknown	Total hospital beds		Unknown			
Hospital System Status											
Number of hospitals fully operational		Unknown	Number of emergency departments accepting patients		Unknown						
Number of inpatients		Unknown	Number of hospital beds		Unknown						
Number of patients to be evacuated		Unknown	Ambulatory		Unknown	Non-ambulatory		Unknown			
Primary Care Clinic Status (Public/Private)											
Number of primary care clinics		Unknown	Number of operational primary care clinics		Unknown						
Outpatient Pharmacy System Status											
Number of outpatient pharmacies		Unknown	Number of operational outpatient pharmacies		Unknown						
Nursing Home System Status											
Number of nursing homes/special care facilities		Unknown	Number of residents		Unknown						
Number of residents requiring evacuation		Unknown	Number of non-ambulatory residents requiring evacuation		Unknown						
Pre-hospital Emergency Medical Service (EMS) Status											
% of EMS systems operational		Unknown	Is the number of ambulances in operation sufficient?		YES NO	Unknown					
Is the radio dispatch system working?	YES NO	Are roads passable?	YES NO	Are EMTs available for duty?	YES NO						

Personnel Shortfalls

Accessibility of Services

Summary/Recommendation Statement

Team Leader	Date	Time

Hazardous Materials	Incident	Reporting Unit / Agency
Disaster Number	**Date/Time Prepared**	**Prepared By**

Observation Information				
Weather/Temperature				
Agency/Organization				
Survey Method	Aircraft	Windshield		Interview
Location				
Latitude				
Type of Area	Urban	Suburban	Rural	Industrial
Release Information Source				
Highway	Air Transport	Railway	Vessel	Pipeline
Offshore	UST	AST	Unknown	Fixed Facility
Name of Fixed Facility				
Other				
Material Type				
Hazardous Substance	Oil	Radiological	Unknown	Other:
Estimated Quantity				
Catastrophic	Major	Minor	Unknown	
Media Affected				
Air	Land	Water	Unknown	
Water Body				
Responders Present:	YES	NO	Unknown	
If yes, whom				
Release Contained	YES	NO	Unknown	
If yes, whom				

Summary/Recommendation Statement

Priority **High** **Low**

Team Leader	Date	Time

Request/Task Assignment			
Incident Name:	Date/Time:	Initial Tracking #	Assigned Tracking#

Request/Task Details
Mission Name:
Detailed Description:

Resource/Overhead Details: (circle one)		
Resource/Overhead #1		
Kind	Type	Qty.
Resource/Overhead #2		
Kind	Type	Qty.
Resource/Overhead #3		
Kind	Type	Qty.
Resource/Overhead #4		
Kind	Type	Qty.
Resource/Overhead #5		
Kind	Type	Qty.

f. Requested Reporting:			
Reporting Location (Staging Area)	g. Local Order Number	h. Date Needed	i. Time needed
Address/Location:	Latitude:	Longitude:	Map Label:

Communications		
Contact	Frequency	Tone

Suggested Source(s) of Supply – POC phone number if known and suitable substitutes.

Originating Position	Originator Name

POC Name:	POC Phone:	POC Email:

Priority (circle one):				
Life Safety-Immediate/4hrs	Priority/12hrs	Routine/24hrs	Long Term/96hrs	Extended/over 96hrs

Due by: (Date & Time)	Time Completed: (Date & Time)

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National Incident Management System Incident Command System

September 2010

FEMA

ICS Forms

NATIONAL INCIDENT MANAGEMENT SYSTEM
INCIDENT COMMAND SYSTEM

ICS FORMS BOOKLET
FEMA 502-2

September 2010

INTRODUCTION TO ICS FORMS

The National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet, FEMA 502-2, is designed to assist emergency response personnel in the use of ICS and corresponding documentation during incident operations. This booklet is a companion document to the NIMS ICS Field Operations Guide (FOG), FEMA 502-1, which provides general guidance to emergency responders on implementing ICS. This booklet is meant to complement existing incident management programs and does not replace relevant emergency operations plans, laws, and ordinances. These forms are designed for use within the Incident Command System, and are not targeted for use in Area Command or in multiagency coordination systems.

These forms are intended for use as tools for the creation of Incident Action Plans (IAPs), for other incident management activities, and for support and documentation of ICS activities. Personnel using the forms should have a basic understanding of NIMS, including ICS, through training and/or experience to ensure they can effectively use and understand these forms. These ICS Forms represent an all-hazards approach and update to previously used ICS Forms. While the layout and specific blocks may have been updated, the functionality of the forms remains the same. It is recommended that all users familiarize themselves with the updated forms and instructions.

A general description of each ICS Form's purpose, suggested preparation, and distribution are included immediately after the form, including block-by-block completion instructions to ensure maximum clarity on specifics, or for those personnel who may be unfamiliar with the forms.

The ICS organizational charts contained in these forms are examples of how an ICS organization is typically developed for incident response. However, the flexibility and scalability of ICS allow modifications, as needed, based on experience and particular incident requirements.

These forms are designed to include the essential data elements for the ICS process they address. The use of these standardized ICS Forms is encouraged to promote consistency in the management and documentation of incidents in the spirit of NIMS, and to facilitate effective use of mutual aid. In many cases, additional pages can be added to the existing ICS Forms when needed, and several forms are set up with this specific provision. The section after the ICS Forms List provides details on adding appendixes or fields to the forms for jurisdiction- or discipline-specific needs.

It may be appropriate to compile and maintain other NIMS-related forms with these ICS Forms, such as resource management and/or ordering forms that are used to support incidents. Examples of these include the following Emergency Management Assistance Compact (EMAC) forms: REQ-A (Interstate Mutual Aid Request), Reimbursement Form R-1 (Interstate Reimbursement Form), and Reimbursement Form R-2 (Intrastate Reimbursement Form).

ICS FORMS LIST

This table lists all of the ICS Forms included in this publication.

Notes:

- In the following table, the ICS Forms identified with an asterisk (*) are typically included in an IAP.
- Forms identified with two asterisks (**) are additional forms that could be used in the IAP.
- The other ICS Forms are used in the ICS process for incident management activities, but are not typically included in the IAP.
- The date and time entered in the form blocks should be determined by the Incident Command or Unified Command. Local time is typically used.

ICS Form #:	Form Title:	Typically Prepared by:
ICS 201	**Incident Briefing**	Initial Incident Commander
***ICS 202**	**Incident Objectives**	Planning Section Chief
***ICS 203**	**Organization Assignment List**	Resources Unit Leader
***ICS 204**	**Assignment List**	Resources Unit Leader and Operations Section Chief
***ICS 205**	**Incident Radio Communications Plan**	Communications Unit Leader
****ICS 205A**	**Communications List**	Communications Unit Leader
***ICS 206**	**Medical Plan**	Medical Unit Leader (reviewed by Safety Officer)
ICS 207	**Incident Organization Chart** *(wall-mount size, optional 8½" x 14")*	Resources Unit Leader
****ICS 208**	**Safety Message/Plan**	Safety Officer
ICS 209	**Incident Status Summary**	Situation Unit Leader
ICS 210	**Resource Status Change**	Communications Unit Leader
ICS 211	**Incident Check-In List** *(optional 8½" x 14" and 11" x 17")*	Resources Unit/Check-In Recorder
ICS 213	**General Message** *(3-part form)*	Any Message Originator
ICS 214	**Activity Log** *(optional 2-sided form)*	All Sections and Units
ICS 215	**Operational Planning Worksheet** *(optional 8½" x 14" and 11" x 17")*	Operations Section Chief
ICS 215A	**Incident Action Plan Safety Analysis**	Safety Officer
ICS 218	**Support Vehicle/Equipment Inventory** *(optional 8½" x 14" and 11" x 17")*	Ground Support Unit
ICS 219-1 to ICS 219-8, ICS 219-10 *(Cards)*	**Resource Status Card (T-Card)** *(may be printed on cardstock)*	Resources Unit
ICS 220	**Air Operations Summary Worksheet**	Operations Section Chief or Air Branch Director
ICS 221	**Demobilization Check-Out**	Demobilization Unit Leader
ICS 225	**Incident Personnel Performance Rating**	Supervisor at the incident

ICS FORM ADAPTION, EXTENSION, AND APPENDIXES

The ICS Forms in this booklet are designed to serve all-hazards, cross-discipline needs for incident management across the Nation. These forms include the essential data elements for the ICS process they address, and create a foundation within ICS for complex incident management activities. However, the flexibility and scalability of NIMS should allow for needs outside this foundation, so the following are possible mechanisms to add to, extend, or adapt ICS Forms when needed.

Because the goal of NIMS is to have a consistent nationwide approach to incident management, jurisdictions and disciplines are encouraged to use the ICS Forms as they are presented here – unless these forms do not meet an organization's particular incident management needs for some unique reason. If changes are needed, the focus on essential information elements should remain, and as such the spirit and intent of particular fields or "information elements" on the ICS Forms should remain intact to maintain consistency if the forms are altered. Modifications should be clearly indicated as deviations from or additions to the ICS Forms. The following approaches may be used to meet any unique needs.

ICS Form Adaptation

When agencies and organizations require specialized forms or information for particular kinds of incidents, events, or disciplines, it may be beneficial to utilize the essential data elements from a particular ICS Form to create a more localized or field-specific form. When this occurs, organizations are encouraged to use the relevant essential data elements and ICS Form number, but to clarify that the altered form is a specific organizational adaptation of the form. For example, an altered form should clearly indicate in the title that it has been changed to meet a specific need, such as "ICS 215A, Hazard Risk Analysis Worksheet, Adapted for Story County Hazmat Program."

Extending ICS Form Fields

Particular fields on an ICS Form may need to include further breakouts or additional related elements. If such additions are needed, the form itself should be clearly labeled as an adapted form (see above), and the additional sub-field numbers should be clearly labeled as unique to the adapted form. Letters or other indicators may be used to label the new sub-fields (if the block does not already include sub-fields).

Examples of possible field additions are shown below for the ICS 209:

- Block 2: Incident Number.
  - Block 2A (adapted): Full agency accounting cost charge number for primary authority having jurisdiction.
- Block 29: Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.).
  - Block 29A (adapted): Indicate specific wildland fire fuel model number.

Creating ICS Form Appendixes

Certain ICS Forms may require appendixes to include additional information elements needed by a particular jurisdiction or discipline. When an appendix is needed for a given form, it is expected that the jurisdiction or discipline will determine standardized fields for such an appendix and make the form available as needed.

Any ICS Form appendixes should be clearly labeled with the form name and an indicator that it is a discipline- or jurisdiction-specific appendix. Appendix field numbering should begin following the last identified block in the corresponding ICS Form.

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

4. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment)**:**

5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command)**:** Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

7. Current and Planned Objectives:

8. Current and Planned Actions, Strategies, and Tactics:

Time:	Actions:

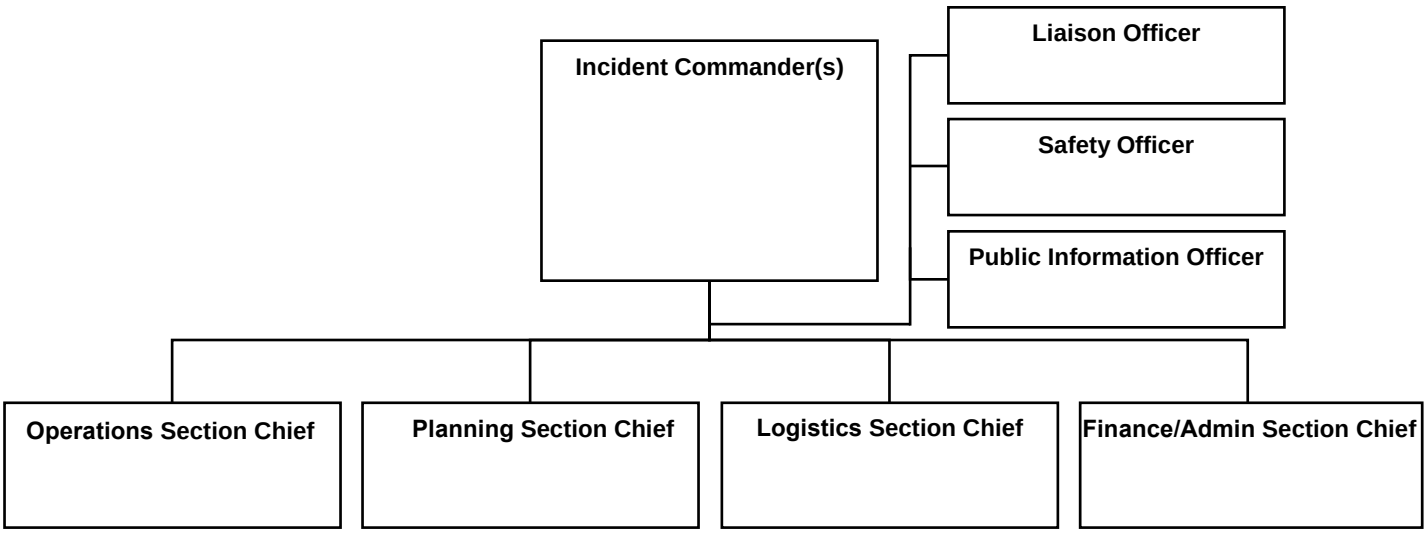
6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

9. Current Organization (fill in additional organization as appropriate)**:**



6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

10. Resource Summary:

Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

ICS 201
Incident Briefing

Purpose. The Incident Briefing (ICS 201) provides the Incident Commander (and the Command and General Staffs) with basic information regarding the incident situation and the resources allocated to the incident. In addition to a briefing document, the ICS 201 also serves as an initial action worksheet. It serves as a permanent record of the initial response to the incident.

Preparation. The briefing form is prepared by the Incident Commander for presentation to the incoming Incident Commander along with a more detailed oral briefing.

Distribution. Ideally, the ICS 201 is duplicated and distributed before the initial briefing of the Command and General Staffs or other responders as appropriate. The "Map/Sketch" and "Current and Planned Actions, Strategies, and Tactics" sections (pages 1–2) of the briefing form are given to the Situation Unit, while the "Current Organization" and "Resource Summary" sections (pages 3–4) are given to the Resources Unit.

Notes:

- The ICS 201 can serve as part of the initial Incident Action Plan (IAP).
- If additional pages are needed for any form page, use a blank ICS 201 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Date/Time Initiated** • Date, Time	Enter date initiated (month/day/year) and time initiated (using the 24-hour clock).
4	**Map/Sketch** (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment)	Show perimeter and other graphics depicting situational status, resource assignments, incident facilities, and other special information on a map/sketch or with attached maps. Utilize commonly accepted ICS map symbology. If specific geospatial reference points are needed about the incident's location or area outside the ICS organization at the incident, that information should be submitted on the Incident Status Summary (ICS 209). North should be at the top of page unless noted otherwise.
5	**Situation Summary and Health and Safety Briefing (**for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.	Self-explanatory.
6	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
7	**Current and Planned Objectives**	Enter the objectives used on the incident and note any specific problem areas.

Block Number	Block Title	Instructions
8	**Current and Planned Actions, Strategies, and Tactics** • Time • Actions	Enter the current and planned actions, strategies, and tactics and time they may or did occur to attain the objectives. If additional pages are needed, use a blank sheet or another ICS 201 (Page 2), and adjust page numbers accordingly.
9	**Current Organization** (fill in additional organization as appropriate) • Incident Commander(s) • Liaison Officer • Safety Officer • Public Information Officer • Planning Section Chief • Operations Section Chief • Finance/Administration Section Chief • Logistics Section Chief	• Enter on the organization chart the names of the individuals assigned to each position. • Modify the chart as necessary, and add any lines/spaces needed for Command Staff Assistants, Agency Representatives, and the organization of each of the General Staff Sections. • If Unified Command is being used, split the Incident Commander box. • Indicate agency for each of the Incident Commanders listed if Unified Command is being used.
10	**Resource Summary**	Enter the following information about the resources allocated to the incident. If additional pages are needed, use a blank sheet or another ICS 201 (Page 4), and adjust page numbers accordingly.
	• Resource	Enter the number and appropriate category, kind, or type of resource ordered.
	• Resource Identifier	Enter the relevant agency designator and/or resource designator (if any).
	• Date/Time Ordered	Enter the date (month/day/year) and time (24-hour clock) the resource was ordered.
	• ETA	Enter the estimated time of arrival (ETA) to the incident (use 24-hour clock).
	• Arrived	Enter an “X” or a checkmark upon arrival to the incident.
	• Notes (location/ assignment/status)	Enter notes such as the assigned location of the resource and/or the actual assignment and status.

INCIDENT OBJECTIVES (ICS 202)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:

3. Objective(s):

4. Operational Period Command Emphasis:

General Situational Awareness

5. Site Safety Plan Required? Yes ☐ No ☐

Approved Site Safety Plan(s) Located at:

6. Incident Action Plan (the items checked below are included in this Incident Action Plan)**:**

☐ ICS 203	☐ ICS 207	Other Attachments:
☐ ICS 204	☐ ICS 208	☐ _____
☐ ICS 205	☐ Map/Chart	☐ _____
☐ ICS 205A	☐ Weather Forecast/Tides/Currents	☐ _____
☐ ICS 206		☐ _____

7. Prepared by: Name: _____ Position/Title: _____ Signature: _____

8. Approved by Incident Commander: Name: _____ Signature: _____

ICS 202	**IAP Page** _____	Date/Time: _____

ICS 202
Incident Objectives

Purpose. The Incident Objectives (ICS 202) describes the basic incident strategy, incident objectives, command emphasis/priorities, and safety considerations for use during the next operational period.

Preparation. The ICS 202 is completed by the Planning Section following each Command and General Staff meeting conducted to prepare the Incident Action Plan (IAP). In case of a Unified Command, one Incident Commander (IC) may approve the ICS 202. If additional IC signatures are used, attach a blank page.

Distribution. The ICS 202 may be reproduced with the IAP and may be part of the IAP and given to all supervisory personnel at the Section, Branch, Division/Group, and Unit levels. All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 202 is part of the IAP and can be used as the opening or cover page.
- If additional pages are needed, use a blank ICS 202 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident. If needed, an incident number can be added.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Objective(s)**	Enter clear, concise statements of the objectives for managing the response. Ideally, these objectives will be listed in priority order. These objectives are for the incident response for this operational period as well as for the duration of the incident. Include alternative and/or specific tactical objectives as applicable. Objectives should follow the SMART model or a similar approach: **S**pecific – Is the wording precise and unambiguous? **M**easurable – How will achievements be measured? **A**ction-oriented – Is an action verb used to describe expected accomplishments? **R**ealistic – Is the outcome achievable with given available resources? **T**ime-sensitive – What is the timeframe?
4	**Operational Period Command Emphasis**	Enter command emphasis for the operational period, which may include tactical priorities or a general weather forecast for the operational period. It may be a sequence of events or order of events to address. This is not a narrative on the objectives, but a discussion about where to place emphasis if there are needs to prioritize based on the Incident Commander's or Unified Command's direction. Examples: Be aware of falling debris, secondary explosions, etc.
	General Situational Awareness	General situational awareness may include a weather forecast, incident conditions, and/or a general safety message. If a safety message is included here, it should be reviewed by the Safety Officer to ensure it is in alignment with the Safety Message/Plan (ICS 208).
5	**Site Safety Plan Required?** Yes ☐ No ☐	Safety Officer should check whether or not a site safety plan is required for this incident.
	Approved Site Safety Plan(s) Located At	Enter the location of the approved Site Safety Plan(s).

Block Number	Block Title	Instructions
6	**Incident Action Plan** (the items checked below are included in this Incident Action Plan): ☐ ICS 203 ☐ ICS 204 ☐ ICS 205 ☐ ICS 205A ☐ ICS 206 ☐ ICS 207 ☐ ICS 208 ☐ Map/Chart ☐ Weather Forecast/ Tides/Currents Other Attachments:	Check appropriate forms and list other relevant documents that are included in the IAP. ☐ ICS 203 – Organization Assignment List ☐ ICS 204 – Assignment List ☐ ICS 205 – Incident Radio Communications Plan ☐ ICS 205A – Communications List ☐ ICS 206 – Medical Plan ☐ ICS 207 – Incident Organization Chart ☐ ICS 208 – Safety Message/Plan
7	**Prepared by** • Name • Position/Title • Signature	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
8	**Approved by Incident Commander** • Name • Signature • Date/Time	In the case of a Unified Command, one IC may approve the ICS 202. If additional IC signatures are used, attach a blank page.

ORGANIZATION ASSIGNMENT LIST (ICS 203)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Incident Commander(s) and Command Staff:	
IC/UCs	
Deputy	
Safety Officer	
Public Info. Officer	
Liaison Officer	

4. Agency/Organization Representatives:	
Agency/Organization	Name

5. Planning Section:	
Chief	
Deputy	
Resources Unit	
Situation Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

6. Logistics Section:	
Chief	
Deputy	
Support Branch	
Director	
Supply Unit	
Facilities Unit	
Ground Support Unit	
Service Branch	
Director	
Communications Unit	
Medical Unit	
Food Unit	

7. Operations Section:		
Chief		
Deputy		
Staging Area		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Air Operations Branch		
Air Ops Branch Dir.		

8. Finance/Administration Section:	
Chief	
Deputy	
Time Unit	
Procurement Unit	
Comp/Claims Unit	
Cost Unit	

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 203 | **IAP Page** _____ | Date/Time: _____

ICS 203
Organization Assignment List

Purpose. The Organization Assignment List (ICS 203) provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit. It is used to complete the Incident Organization Chart (ICS 207) which is posted on the Incident Command Post display. An actual organization will be incident or event-specific. **Not all positions need to be filled.** Some blocks may contain more than one name. The size of the organization is dependent on the magnitude of the incident, and can be expanded or contracted as necessary.

Preparation. The Resources Unit prepares and maintains this list under the direction of the Planning Section Chief. Complete only the blocks for the positions that are being used for the incident. If a trainee is assigned to a position, indicate this with a "T" in parentheses behind the name (e.g., "A. Smith (T)").

Distribution. The ICS 203 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 203 serves as part of the IAP.
- If needed, more than one name can be put in each block by inserting a slash.
- If additional pages are needed, use a blank ICS 203 and repaginate as needed.
- ICS allows for organizational flexibility, so the Intelligence/Investigations Function can be embedded in several different places within the organizational structure.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Incident Commander(s) and Command Staff** • IC/UCs • Deputy • Safety Officer • Public Information Officer • Liaison Officer	Enter the names of the Incident Commander(s) and Command Staff. Label Assistants to Command Staff as such (for example, "Assistant Safety Officer"). For all individuals, use at least the first initial and last name. For Unified Command, also include agency names.
4	**Agency/Organization Representatives** • Agency/Organization • Name	Enter the agency/organization names and the names of their representatives. For all individuals, use at least the first initial and last name.
5	**Planning Section** • Chief • Deputy • Resources Unit • Situation Unit • Documentation Unit • Demobilization Unit • Technical Specialists	Enter the name of the Planning Section Chief, Deputy, and Unit Leaders after each position title. List Technical Specialists with an indication of specialty. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.

Block Number	Block Title	Instructions
6	**Logistics Section** • Chief • Deputy **Support Branch** • Director • Supply Unit • Facilities Unit • Ground Support Unit **Service Branch** • Director • Communications Unit • Medical Unit • Food Unit	Enter the name of the Logistics Section Chief, Deputy, Branch Directors, and Unit Leaders after each position title. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
7	**Operations Section** • Chief • Deputy • Staging Area **Branch** • Branch Director • Deputy • Division/Group **Air Operations Branch** • Air Operations Branch Director	Enter the name of the Operations Section Chief, Deputy, Branch Director(s), Deputies, and personnel staffing each of the listed positions. For Divisions/Groups, enter the Division/Group identifier in the left column and the individual's name in the right column. Branches and Divisions/Groups may be named for functionality or by geography. For Divisions/Groups, indicate Division/Group Supervisor. Use an additional page if more than three Branches are activated. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
8	**Finance/Administration Section** • Chief • Deputy • Time Unit • Procurement Unit • Compensation/Claims Unit • Cost Unit	Enter the name of the Finance/Administration Section Chief, Deputy, and Unit Leaders after each position title. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
9	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

ASSIGNMENT LIST (ICS 204)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	3. Branch: Division: Group: Staging Area:

4. Operations Personnel: Name Contact Number(s)

Operations Section Chief: _____

Branch Director: _____

Division/Group Supervisor: _____

5. Resources Assigned:		# of Persons	Contact (e.g., phone, pager, radio frequency, etc.)	Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information
Resource Identifier	Leader			

6. Work Assignments:

7. Special Instructions:

8. Communications (radio and/or phone contact numbers needed for this assignment)**:**

Name/Function	Primary Contact: indicate cell, pager, or radio (frequency/system/channel)
/	
/	
/	
/	

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 204
Assignment List

Purpose. The Assignment List(s) (ICS 204) informs Division and Group supervisors of incident assignments. Once the Command and General Staffs agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The ICS 204 is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202), Operational Planning Worksheet (ICS 215), and the Operations Section Chief. It must be approved by the Incident Commander, but may be reviewed and initialed by the Planning Section Chief and Operations Section Chief as well.

Distribution. The ICS 204 is duplicated and attached to the ICS 202 and given to all recipients as part of the Incident Action Plan (IAP). In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 204 details assignments at Division and Group levels and is part of the IAP.
- Multiple pages/copies can be used if needed.
- If additional pages are needed, use a blank ICS 204 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Branch** **Division** **Group** **Staging Area**	This block is for use in a large IAP for reference only. Write the alphanumeric abbreviation for the Branch, Division, Group, and Staging Area (e.g., "Branch 1," "Division D," "Group 1A") in large letters for easy referencing.
4	**Operations Personnel** • Name, Contact Number(s) – Operations Section Chief – Branch Director – Division/Group Supervisor	Enter the name and contact numbers of the Operations Section Chief, applicable Branch Director(s), and Division/Group Supervisor(s).
5	**Resources Assigned**	Enter the following information about the resources assigned to the Division or Group for this period:
	• Resource Identifier	The identifier is a unique way to identify a resource (e.g., ENG-13, IA-SCC-413). If the resource has been ordered but no identification has been received, use TBD (to be determined).
	• Leader	Enter resource leader's name.
	• # of Persons	Enter total number of persons for the resource assigned, including the leader.
	• Contact (e.g., phone, pager, radio frequency, etc.)	Enter primary means of contacting the leader or contact person (e.g., radio, phone, pager, etc.). Be sure to include the area code when listing a phone number.
5 (continued)	• Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information	Provide special notes or directions specific to this resource. If required, add notes to indicate: (1) specific location/time where the resource should report or be dropped off/picked up; (2) special equipment and supplies that will be used or needed; (3) whether or not the resource received briefings; (4) transportation needs; or (5) other information.

Block Number	Block Title	Instructions
6	**Work Assignments**	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
7	**Special Instructions**	Enter a statement noting any safety problems, specific precautions to be exercised, dropoff or pickup points, or other important information.
8	**Communications** (radio and/or phone contact numbers needed for this assignment) • Name/Function • Primary Contact: indicate cell, pager, or radio (frequency/system/channel)	Enter specific communications information (including emergency numbers) for this Branch/Division/Group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics. In light of potential IAP distribution, use sensitivity when including cell phone number. Add a secondary contact (phone number or radio) if needed.
9	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name:	2. Date/Time Prepared: Date: Time:	3. Operational Period: Date From: Date To: Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks

5. Special Instructions:

6. Prepared by (Communications Unit Leader)**:** Name: _____ Signature: _____

ICS 205	**IAP Page** _____	Date/Time: _____

ICS 205
Incident Radio Communications Plan

Purpose. The Incident Radio Communications Plan (ICS 205) provides information on all radio frequency or trunked radio system talkgroup assignments for each operational period. The plan is a summary of information obtained about available radio frequencies or talkgroups and the assignments of those resources by the Communications Unit Leader for use by incident responders. Information from the Incident Radio Communications Plan on frequency or talkgroup assignments is normally placed on the Assignment List (ICS 204).

Preparation. The ICS 205 is prepared by the Communications Unit Leader and given to the Planning Section Chief for inclusion in the Incident Action Plan.

Distribution. The ICS 205 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit. Information from the ICS 205 is placed on Assignment Lists.

Notes:

- The ICS 205 is used to provide, in one location, information on all radio frequency assignments down to the Division/Group level for each operational period.
- The ICS 205 serves as part of the IAP.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Date/Time Prepared**	Enter date prepared (month/day/year) and time prepared (using the 24-hour clock).
3	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
4	**Basic Radio Channel Use**	Enter the following information about radio channel use:
	Zone Group	
	Channel Number	Use at the Communications Unit Leader's discretion. Channel Number (Ch #) may equate to the channel number for incident radios that are programmed or cloned for a specific Communications Plan, or it may be used just as a reference line number on the ICS 205 document.
	Function	Enter the Net function each channel or talkgroup will be used for (Command, Tactical, Ground-to-Air, Air-to-Air, Support, Dispatch).
	Channel Name/Trunked Radio System Talkgroup	Enter the nomenclature or commonly used name for the channel or talk group such as the National Interoperability Channels which follow DHS frequency Field Operations Guide (FOG).
	Assignment	Enter the name of the ICS Branch/Division/Group/Section to which this channel/talkgroup will be assigned.
	RX (Receive) Frequency (N or W)	Enter the Receive Frequency (RX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions. The name of the specific trunked radio system with which the talkgroup is associated may be entered across all fields on the ICS 205 normally used for conventional channel programming information.
	RX Tone/NAC	Enter the Receive Continuous Tone Coded Squelch System (CTCSS) subaudible tone (RX Tone) or Network Access Code (RX NAC) for the receive frequency as the mobile or portable subscriber would be programmed.

Block Number	Block Title	Instructions
4 (continued)	TX (Transmit) Frequency (N or W)	Enter the Transmit Frequency (TX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions.
	TX Tone/NAC	Enter the Transmit Continuous Tone Coded Squelch System (CTCSS) subaudible tone (TX Tone) or Network Access Code (TX NAC) for the transmit frequency as the mobile or portable subscriber would be programmed.
	Mode (A, D, or M)	Enter "A" for analog operation, "D" for digital operation, or "M" for mixed mode operation.
	Remarks	Enter miscellaneous information concerning repeater locations, information concerning patched channels or talkgroups using links or gateways, etc.
5	**Special Instructions**	Enter any special instructions (e.g., using cross-band repeaters, secure-voice, encoders, private line (PL) tones, etc.) or other emergency communications needs). If needed, also include any special instructions for handling an incident within an incident.
6	**Prepared by** (Communications Unit Leader) • Name • Signature • Date/Time	Enter the name and signature of the person preparing the form, typically the Communications Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).

COMMUNICATIONS LIST (ICS 205A)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Basic Local Communications Information:

Incident Assigned Position	Name (Alphabetized)	Method(s) of Contact (phone, pager, cell, etc.)

4. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 205A | **IAP Page** _____ | Date/Time: _____

ICS 205A
Communications List

Purpose. The Communications List (ICS 205A) records methods of contact for incident personnel. While the Incident Radio Communications Plan (ICS 205) is used to provide information on all radio frequencies down to the Division/Group level, the ICS 205A indicates all methods of contact for personnel assigned to the incident (radio frequencies, phone numbers, pager numbers, etc.), and functions as an incident directory.

Preparation. The ICS 205A can be filled out during check-in and is maintained and distributed by Communications Unit personnel. This form should be updated each operational period.

Distribution. The ICS 205A is distributed within the ICS organization by the Communications Unit, and posted as necessary. All completed original forms must be given to the Documentation Unit. If this form contains sensitive information such as cell phone numbers, it should be clearly marked in the header that it contains sensitive information and is not for public release.

Notes:

- The ICS 205A is an optional part of the Incident Action Plan (IAP).
- This optional form is used in conjunction with the ICS 205.
- If additional pages are needed, use a blank ICS 205A and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Basic Local Communications Information**	Enter the communications methods assigned and used for personnel by their assigned ICS position.
	• Incident Assigned Position	Enter the ICS organizational assignment.
	• Name	Enter the name of the assigned person.
	• Method(s) of Contact (phone, pager, cell, etc.)	For each assignment, enter the radio frequency and contact number(s) to include area code, etc. If applicable, include the vehicle license or ID number assigned to the vehicle for the incident (e.g., HAZMAT 1, etc.).
4	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

MEDICAL PLAN (ICS 206)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Medical Aid Stations:

Name	Location	Contact Number(s)/Frequency	Paramedics on Site?
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

4. Transportation (indicate air or ground)**:**

Ambulance Service	Location	Contact Number(s)/Frequency	Level of Service
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS

5. Hospitals:

Hospital Name	Address, Latitude & Longitude if Helipad	Contact Number(s)/ Frequency	Travel Time		Trauma Center	Burn Center	Helipad
			Air	Ground			
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

6. Special Medical Emergency Procedures:

☐ Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.

7. Prepared by (Medical Unit Leader)**:** Name: _____ Signature: _____

8. Approved by (Safety Officer)**:** Name: _____ Signature: _____

ICS 206	IAP Page _____	Date/Time: _____

ICS 206
Medical Plan

Purpose. The Medical Plan (ICS 206) provides information on incident medical aid stations, transportation services, hospitals, and medical emergency procedures.

Preparation. The ICS 206 is prepared by the Medical Unit Leader and reviewed by the Safety Officer to ensure ICS coordination. If aviation assets are utilized for rescue, coordinate with Air Operations.

Distribution. The ICS 206 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). Information from the plan pertaining to incident medical aid stations and medical emergency procedures may be noted on the Assignment List (ICS 204). All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 206 serves as part of the IAP.
- This form can include multiple pages.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Medical Aid Stations**	Enter the following information on the incident medical aid station(s):
	• Name	Enter name of the medical aid station.
	• Location	Enter the location of the medical aid station (e.g., Staging Area, Camp Ground).
	• Contact Number(s)/Frequency	Enter the contact number(s) and frequency for the medical aid station(s).
	• Paramedics on Site? ☐ Yes ☐ No	Indicate (yes or no) if paramedics are at the site indicated.
4	**Transportation** (indicate air or ground)	Enter the following information for ambulance services available to the incident:
	• Ambulance Service	Enter name of ambulance service.
	• Location	Enter the location of the ambulance service.
	• Contact Number(s)/Frequency	Enter the contact number(s) and frequency for the ambulance service.
	• Level of Service ☐ ALS ☐ BLS	Indicate the level of service available for each ambulance, either ALS (Advanced Life Support) or BLS (Basic Life Support).

Block Number	Block Title	Instructions
5	**Hospitals**	Enter the following information for hospital(s) that could serve this incident:
	• Hospital Name	Enter hospital name and identify any predesignated medivac aircraft by name a frequency.
	• Address, Latitude & Longitude if Helipad	Enter the physical address of the hospital and the latitude and longitude if the hospital has a helipad.
	• Contact Number(s)/ Frequency	Enter the contact number(s) and/or communications frequency(s) for the hospital.

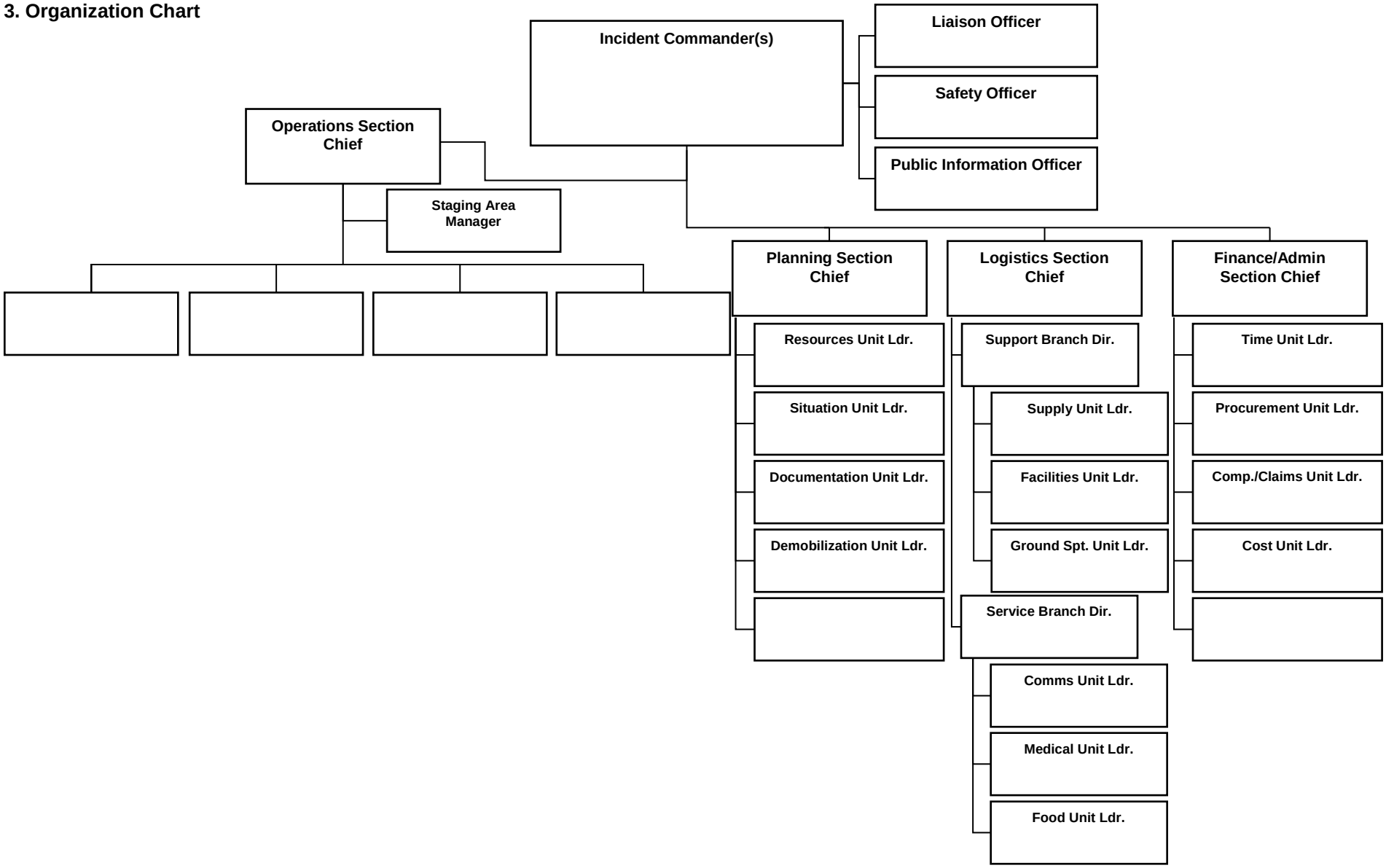
	• Travel Time
	  • Air
	  • Ground
		Enter the travel time by air and ground from the incident to the hospital.

	• Trauma Center ☐ Yes Level:_____	Indicate yes and the trauma level if the hospital has a trauma center.
	• Burn Center ☐ Yes ☐ No	Indicate (yes or no) if the hospital has a burn center.
	• Helipad ☐ Yes ☐ No	Indicate (yes or no) if the hospital has a helipad. Latitude and Longitude data format need to compliment Medical Evacuation Helicopters and Medical Air Resources
6	**Special Medical Emergency Procedures**	Note any special emergency instructions for use by incident personnel, including (1) who should be contacted, (2) how should they be contacted; and (3) who manages an incident within an incident due to a rescue, accident, etc. Include procedures for how to report medical emergencies.
	☐ Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.	Self explanatory. Incident assigned aviation assets should be included in ICS 220.
7	**Prepared by** (Medical Unit Leader) • Name • Signature	Enter the name and signature of the person preparing the form, typically the Medical Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).
8	**Approved by** (Safety Officer) • Name • Signature • Date/Time	Enter the name of the person who approved the plan, typically the Safety Officer. Enter date (month/day/year) and time reviewed (24-hour clock).

INCIDENT ORGANIZATION CHART (ICS 207)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Organization Chart



ICS 207	IAP Page ___	4. Prepared by: Name:_____ Position/Title: _____ Signature: _____ Date/Time: _____

ICS 207
Incident Organization Chart

Purpose. The Incident Organization Chart (ICS 207) provides a **visual wall chart** depicting the ICS organization position assignments for the incident. The ICS 207 is used to indicate what ICS organizational elements are currently activated and the names of personnel staffing each element. An actual organization will be event-specific. The size of the organization is dependent on the specifics and magnitude of the incident and is scalable and flexible. Personnel responsible for managing organizational positions are listed in each box as appropriate.

Preparation. The ICS 207 is prepared by the Resources Unit Leader and reviewed by the Incident Commander. Complete only the blocks where positions have been activated, and add additional blocks as needed, especially for Agency Representatives and all Operations Section organizational elements. For detailed information about positions, consult the NIMS ICS Field Operations Guide. The ICS 207 is intended to be used as a wall-size chart and printed on a plotter for better visibility. A chart is completed for each operational period, and updated when organizational changes occur.

Distribution. The ICS 207 is intended to be **wall mounted** at Incident Command Posts and other incident locations as needed, and is not intended to be part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 207 is intended to be **wall mounted** (printed on a plotter). Document size can be modified based on individual needs.
- Also available as 8½ x 14 (legal size) chart.
- ICS allows for organizational flexibility, so the Intelligence/Investigative Function can be embedded in several different places within the organizational structure.
- Use additional pages if more than three branches are activated. Additional pages can be added based on individual need (such as to distinguish more Division/Groups and Branches as they are activated).

Block Number	Block Title	Instructions
1	**Incident Name**	Print the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Organization Chart**	• Complete the incident organization chart. • For all individuals, use at least the first initial and last name. • List agency where it is appropriate, such as for Unified Commanders. • If there is a shift change during the specified operational period, list both names, separated by a slash.
4	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

SAFETY MESSAGE/PLAN (ICS 208)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan:

4. Site Safety Plan Required? Yes ☐ No ☐

Approved Site Safety Plan(s) Located At:

5. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 208	IAP Page _____	Date/Time: _____

ICS 208
Safety Message/Plan

Purpose. The Safety Message/Plan (ICS 208) expands on the Safety Message and Site Safety Plan.

Preparation. The ICS 208 is an optional form that may be included and completed by the Safety Officer for the Incident Action Plan (IAP).

Distribution. The ICS 208, if developed, will be reproduced with the IAP and given to all recipients as part of the IAP. All completed original forms must be given to the Documentation Unit.

Notes:
- The ICS 208 may serve (optionally) as part of the IAP.
- Use additional copies for continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan**	Enter clear, concise statements for safety message(s), priorities, and key command emphasis/decisions/directions. Enter information such as known safety hazards and specific precautions to be observed during this operational period. If needed, additional safety message(s) should be referenced and attached.
4	**Site Safety Plan Required?** Yes ☐ No ☐	Check whether or not a site safety plan is required for this incident.
	Approved Site Safety Plan(s) Located At	Enter where the approved Site Safety Plan(s) is located.
5	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

SITE SAFETY AND CONTROL PLAN ICS 208 HM	1. Incident Name:	2. Date Prepared:	3. Operational Period: Time:

Section I. Site Information

4. Incident Location:

Section II. Organization

5. Incident Commander:	6. HM Group Supervisor:	7. Tech. Specialist - HM Reference:
8. Safety Officer:	9. Entry Leader:	10. Site Access Control Leader:
11. Asst. Safety Officer - HM:	12. Decontamination Leader:	13. Safe Refuge Area Mgr:
14. Environmental Health:	15.	16.

17. Entry Team: (Buddy System) Name:	PPE Level	18. Decontamination Element: Name:	PPE Level
Entry 1		Decon 1	
Entry 2		Decon 2	
Entry 3		Decon 3	
Entry 4		Decon 4	

Section III. Hazard/Risk Analysis

19. Material:	Container type	Qty.	Phys. State	pH	IDLH	F.P.	I.T.	V.P.	V.D.	S.G.	LEL	UEL

Comment:

Section IV. Hazard Monitoring

20. LEL Instrument(s):	21. O_2 Instrument(s):
22. Toxicity/PPM Instrument(s):	23. Radiological Instrument(s):

Comment:

Section V. Decontamination Procedures

24. Standard Decontamination Procedures:	YES: ☐	NO: ☐

Comment:

Section VI. Site Communications

25. Command Frequency:	26. Tactical Frequency:	27. Entry Frequency:

Section VII. Medical Assistance

28. Medical Monitoring:	YES: ☐	NO: ☐	29. Medical Treatment and Transport In-place:	YES: ☐	NO: ☐

Comment:

Section VIII. Site Map

30. Site Map:



Weather ☐ Command Post ☐ Zones ☐ Assembly Areas ☐ Escape Routes ☐ Other ☐

Section IX. Entry Objectives

31. Entry Objectives:

Section X. SOP S and Safe Work Practices

32. Modifications to Documented SOP s or Work Practices:	YES: ☐	NO: ☐

Comment:

Section XI. Emergency Procedures

33. Emergency Procedures:

Section XII. Safety Briefing

34. Asst. Safety Officer - HM Signature:	Safety Briefing Completed (Time):
35. HM Group Supervisor Signature:	36. Incident Commander Signature:

INSTRUCTIONS FOR COMPLETING THE SITE SAFETY AND CONTROL PLAN
ICS 208 HM

A Site Safety and Control Plan must be completed by the Hazardous Materials Group Supervisor and reviewed by all within the Hazardous Materials Group prior to operations commencing within the Exclusion Zone.

Item Number	Item Title	Instructions
1.	Incident Name/Number	Print name and/or incident number.
2.	Date and Time	Enter date and time prepared.
3.	Operational Period	Enter the time interval for which the form applies.
4.	Incident Location	Enter the address and or map coordinates of the incident.
5 - 16.	Organization	Enter names of all individuals assigned to ICS positions. (Entries 5 & 8 mandatory). Use Boxes 15 and 16 for other functions: i.e. Medical Monitoring.
17 - 18.	Entry Team/Decon Element	Enter names and level of PPE of Entry & Decon personnel. (Entries 1 - 4 mandatory buddy system and back-up.)
19.	Material	Enter names and pertinent information of all known chemical products. Enter UNK if material is not known. Include any which apply to chemical properties. (Definitions: ph = Potential for Hydrogen (Corrosivity), IDLH = Immediately Dangerous to Life and Health, F.P. = Flash Point, I.T. = Ignition Temperature, V.P. = Vapor Pressure, V.D. = Vapor Density, S.G. = Specific Gravity, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit)
20 - 23.	Hazard Monitoring	List the instruments which will be used to monitor for chemical.
24.	Decontamination Procedures	Check NO if modifications are made to standard decontamination procedures and make appropriate Comments including type of solutions.
25 - 27.	Site Communications	Enter the radio frequency(ies) which apply.
28 - 29.	Medical Assistance	Enter comments if NO is checked.
30.	Site Map	Sketch or attach a site map which defines all locations and layouts of operational zones. (Check boxes are mandatory to be identified.)
31.	Entry Objectives	List all objectives to be performed by the Entry Team in the Exclusion Zone and any parameters which will alter or stop entry operations.
32 - 33.	SOP s, Safe Work Practices, and Emergency Procedures	List in Comments if any modifications to SOP s and any emergency procedures which will be affected if an emergency occurs while personnel are within the Exclusion Zone.
34 - 36.	Safety Briefing	Have the appropriate individual place their signature in the box once the Site Safety and Control Plan is reviewed. Note the time in box 34 when the safety briefing has been completed.

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:			2. Incident Number:	
*3. Report Version (check one box on left): ☐ Initial Rpt # (if used): ☐ Update ☐ Final	*4. Incident Commander(s) & Agency or Organization:		5. Incident Management Organization:	*6. Incident Start Date/Time: Date: _____ Time: _____ Time Zone: _____
7. Current Incident Size or Area Involved (use unit label – e.g., "sq mi," "city block"):	8. Percent (%) Contained _____ Completed _____	*9. Incident Definition:	10. Incident Complexity Level:	*11. For Time Period: From Date/Time: _____ To Date/Time: _____

Approval & Routing Information

*12. Prepared By: Print Name: _____ ICS Position: _____ Date/Time Prepared: _____	*13. Date/Time Submitted: Time Zone:
*14. Approved By: Print Name: _____ ICS Position: _____ Signature: _____	*15. Primary Location, Organization, or Agency Sent To:

Incident Location Information

*16. State:	*17. County/Parish/Borough:	*18. City:
19. Unit or Other:	*20. Incident Jurisdiction:	21. Incident Location Ownership (if different than jurisdiction):
22. Longitude (indicate format): Latitude (indicate format):	23. US National Grid Reference:	24. Legal Description (township, section, range):
*25. Short Location or Area Description (list all affected areas or a reference point):		26. UTM Coordinates:
27. Note any electronic geospatial data included or attached (indicate data format, content, and collection time information and labels):		

Incident Summary

*28. Significant Events for the Time Period Reported (summarize significant progress made, evacuations, incident growth, etc.):				
29. Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.):				
30. Damage Assessment Information (summarize damage and/or restriction of use or availability to residential or commercial property, natural resources, critical infrastructure and key resources, etc.):	A. Structural Summary	B. # Threatened (72 hrs)	C. # Damaged	D. # Destroyed
	E. Single Residences			
	F. Nonresidential Commercial Property			
	Other Minor Structures			
	Other			

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

***1. Incident Name:**	**2. Incident Number:**

Additional Incident Decision Support Information

***31. Public Status Summary:**	A. # This Reporting Period	B. Total # to Date
C. Indicate Number of Civilians (Public) Below:		
D. Fatalities		
E. With Injuries/Illness		
F. Trapped/In Need of Rescue		
G. Missing *(note if estimated)*		
H. Evacuated *(note if estimated)*		
I. Sheltering in Place *(note if estimated)*		
J. In Temporary Shelters *(note if est.)*		
K. Have Received Mass Immunizations		
L. Require Immunizations *(note if est.)*		
M. In Quarantine		
N. Total # Civilians (Public) Affected:		

***32. Responder Status Summary:**	A. # This Reporting Period	B. Total # to Date
C. Indicate Number of Responders Below:		
D. Fatalities		
E. With Injuries/Illness		
F. Trapped/In Need of Rescue		
G. Missing		
H. Sheltering in Place		
I. Have Received Immunizations		
J. Require Immunizations		
K. In Quarantine		
N. Total # Responders Affected:		

33. Life, Safety, and Health Status/Threat Remarks:

35. Weather Concerns (synopsis of current and predicted weather; discuss related factors that may cause concern)**:**

***34. Life, Safety, and Health Threat Management:**	A. Check if Active
A. No Likely Threat	☐
B. Potential Future Threat	☐
C. Mass Notifications in Progress	☐
D. Mass Notifications Completed	☐
E. No Evacuation(s) Imminent	☐
F. Planning for Evacuation	☐
G. Planning for Shelter-in-Place	☐
H. Evacuation(s) in Progress	☐
I. Shelter-in-Place in Progress	☐
J. Repopulation in Progress	☐
K. Mass Immunization in Progress	☐
L. Mass Immunization Complete	☐
M. Quarantine in Progress	☐
N. Area Restriction in Effect	☐
	☐
	☐
	☐
	☐

36. Projected Incident Activity, Potential, Movement, Escalation, or Spread and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes:

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

37. Strategic Objectives (define planned end-state for incident)**:**

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:	2. Incident Number:

Additional Incident Decision Support Information *(continued)*

38. Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond. Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident-related potential economic or cascading impacts.

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

39. Critical Resource Needs in 12-, 24-, 48-, and 72-hour timeframes and beyond to meet critical incident objectives. List resource category, kind, and/or type, and amount needed, in priority order:

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

40. Strategic Discussion: Explain the relation of overall strategy, constraints, and current available information to:

1) critical resource needs identified above,
2) the Incident Action Plan and management objectives and targets,
3) anticipated results.

Explain major problems and concerns such as operational challenges, incident management problems, and social, political, economic, or environmental concerns or impacts.

41. Planned Actions for Next Operational Period:

42. Projected Final Incident Size/Area (use unit label – e.g., "sq mi")**:**

43. Anticipated Incident Management Completion Date:

44. Projected Significant Resource Demobilization Start Date:

45. Estimated Incident Costs to Date:

46. Projected Final Incident Cost Estimate:

47. Remarks (or continuation of any blocks above – list block number in notation)**:**

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

1. Incident Name:	2. Incident Number:

Incident Resource Commitment Summary

48. Agency or Organization:	49. **Resources** (summarize resources by category, kind, and/or type; show # of resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box)**:**																					50. **Additional Personnel** not assigned to a resource**:**	51. **Total Personnel** (includes those associated with resources – e.g., aircraft or engines – *and* individual overhead)**:**
52. Total Resources																							

53. Additional Cooperating and Assisting Organizations Not Listed Above:

ICS 209, Page ___ of ___	** Required when applicable.*

ICS 209
Incident Status Summary

Purpose. The ICS 209 is used for reporting information on significant incidents. It is not intended for every incident, as most incidents are of short duration and do not require scarce resources, significant mutual aid, or additional support and attention. **T**he ICS 209 contains basic information elements needed to support decisionmaking at all levels above the incident to support the incident. Decisionmakers may include the agency having jurisdiction, but also all multiagency coordination system (MACS) elements and parties, such as cooperating and assisting agencies/organizations, dispatch centers, emergency operations centers, administrators, elected officials, and local, tribal, county, State, and Federal agencies. Once ICS 209 information has been submitted from the incident, decisionmakers and others at all incident support and coordination points may transmit and share the information (based on its sensitivity and appropriateness) for access and use at local, regional, State, and national levels as it is needed to facilitate support.

Accurate and timely completion of the ICS 209 is necessary to identify appropriate resource needs, determine allocation of limited resources when multiple incidents occur, and secure additional capability when there are limited resources due to constraints of time, distance, or other factors. The information included on the ICS 209 influences the priority of the incident, and thus its share of available resources and incident support.

The ICS 209 is designed to provide a "snapshot in time" to effectively move incident decision support information where it is needed. It should contain the most accurate and up-to-date information available at the time it is prepared. However, readers of the ICS 209 may have access to more up-to-date or real-time information in reference to certain information elements on the ICS 209. Coordination among communications and information management elements within ICS and among MACS should delineate authoritative sources for more up-to-date and/or real-time information when ICS 209 information becomes outdated in a quickly evolving incident.

Reporting Requirements. The ICS 209 is intended to be used when an incident reaches a certain threshold where it becomes significant enough to merit special attention, require additional resource support needs, or cause media attention, increased public safety threat, etc. Agencies or organizations may set reporting requirements and, therefore, ICS 209s should be completed according to each jurisdiction or discipline's policies, mobilization guide, or preparedness plans. It is recommended that consistent ICS 209 reporting parameters be adopted and used by jurisdictions or disciplines for consistency over time, documentation, efficiency, trend monitoring, incident tracking, etc.

For example, an agency or MAC (Multiagency Coordination) Group may require the submission of an initial ICS 209 when a new incident has reached a certain predesignated level of significance, such as when a given number of resources are committed to the incident, when a new incident is not completed within a certain timeframe, or when impacts/threats to life and safety reach a given level.

Typically, ICS 209 forms are completed either once daily or for each operational period – in addition to the initial submission. Jurisdictional or organizational guidance may indicate frequency of ICS 209 submission for particular definitions of incidents or for all incidents. This specific guidance may help determine submission timelines when operational periods are extremely short (e.g., 2 hours) and it is not necessary to submit new ICS 209 forms for all operational periods.

Any plans or guidelines should also indicate parameters for when it is appropriate to stop submitting ICS 209s for an incident, based upon incident activity and support levels.

Preparation. When an Incident Management Organization (such as an Incident Management Team) is in place, the Situation Unit Leader or Planning Section Chief prepares the ICS 209 at the incident. On other incidents, the ICS 209 may be completed by a dispatcher in the local communications center, or by another staff person or manager. This form should be completed at the incident or at the closest level to the incident.

The ICS 209 should be completed with the best possible, currently available, and verifiable information at the time it is completed and signed.

This form is designed to serve incidents impacting specific geographic areas that can easily be defined. It also has the flexibility for use on ubiquitous events, or those events that cover extremely large areas and that may involve many jurisdictions and ICS organizations. For these incidents, it will be useful to clarify on the form exactly which portion of the larger incident the ICS 209 is meant to address. For example, a particular ICS 209 submitted during a statewide outbreak of mumps may be relevant only to mumps-related activities in Story County, Iowa. This can be indicated in both the incident name, Block 1, and in the Incident Location Information section in Blocks 16–26.

While most of the "Incident Location Information" in Blocks 16–26 is optional, the more information that can be submitted, the better. Submission of multiple location indicators increases accuracy, improves interoperability, and increases information sharing between disparate systems. Preparers should be certain to follow accepted protocols or standards when entering location information, and clearly label all location information. As with other ICS 209 data, geospatial information may be widely shared and utilized, so accuracy is essential.

If electronic data is submitted with the ICS 209, do not attach or send extremely large data files. Incident geospatial data that is distributed with the ICS 209 should be in simple incident geospatial basics, such as the incident perimeter, point of origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically. Any attached data should be clearly labeled as to format content and collection time, and should follow existing naming conventions and standards.

Distribution. ICS 209 information is meant to be completed at the level as close to the incident as possible, preferably at the incident. Once the ICS 209 has been submitted outside the incident to a dispatch center or MACS element, it may subsequently be transmitted to various incident supports and coordination entities based on the support needs and the decisions made within the MACS in which the incident occurs.

Coordination with public information system elements and investigative/intelligence information organizations at the incident and within MACS is essential to protect information security and to ensure optimal information sharing and coordination. There may be times in which particular ICS 209s contain sensitive information that should not be released to the public (such as information regarding active investigations, fatalities, etc.). When this occurs, the ICS 209 (or relevant sections of it) should be labeled appropriately, and care should be taken in distributing the information within MACS.

All completed and signed original ICS 209 forms MUST be given to the incident's Documentation Unit and/or maintained as part of the official incident record.

Notes:

- To promote flexibility, only a limited number of ICS 209 blocks are typically required, and most of those are required only when applicable.
- Most fields are optional, to allow responders to use the form as best fits their needs and protocols for information collection.
- For the purposes of the ICS 209, responders are those personnel who are assigned to an incident or who are a part of the response community as defined by NIMS. This may include critical infrastructure owners and operators, nongovernmental and nonprofit organizational personnel, and contract employees (such as caterers), depending on local/jurisdictional/discipline practices.
- For additional flexibility only pages 1–3 are numbered, for two reasons:
  - Possible submission of additional pages for the Remarks Section (Block 47), and
  - Possible submission of additional copies of the fourth/last page (the "Incident Resource Commitment Summary") to provide a more detailed resource summary.

Block Number	Block Title	Instructions
***1**	**Incident Name**	**REQUIRED BLOCK.** • Enter the full name assigned to the incident. • Check spelling of the full incident name. • For an incident that is a Complex, use the word "Complex" at the end of the incident name. • If the name changes, explain comments in Remarks, Block 47. • Do not use the same incident name for different incidents in the same calendar year.

Block Number	Block Title	Instructions
2	**Incident Number**	• Enter the appropriate number based on current guidance. The incident number may vary by jurisdiction and discipline. • Examples include: o A computer-aided dispatch (CAD) number. o An accounting number. o A county number. o A disaster declaration number. o A combination of the State, unit/agency ID, and a dispatch system number. o A mission number. o Any other unique number assigned to the incident and derived by means other than those above. • Make sure the number entered is correct. • Do not use the same incident number for two different incidents in the same calendar year. • Incident numbers associated with host jurisdictions or agencies and incident numbers assigned by agencies represented in Unified Command should be listed, or indicated in Remarks, Block 47.
***3**	**Report Version** (check one box on left)	**REQUIRED BLOCK.** • This indicates the current version of the ICS 209 form being submitted. • If only one ICS 209 will be submitted, check BOTH "Initial" and "Final" (or check only "Final").
	☐ Initial	Check "Initial" if this is the first ICS 209 for this incident.
	☐ Update	Check "Update" if this is a subsequent report for the same incident. These can be submitted at various time intervals (see "Reporting Requirements" above).
	☐ Final	• Check "Final" if this is the last ICS 209 to be submitted for this incident (usually when the incident requires only minor support that can be supplied by the organization having jurisdiction). • Incidents may also be marked as "Final" if they become part of a new Complex (when this occurs, it can be indicated in Remarks, Block 47).
	Report # (if used)	Use this optional field if your agency or organization requires the tracking of ICS 209 report numbers. Agencies may also track the ICS 209 by the date/time submitted.
***4**	**Incident Commander(s) & Agency or Organization**	**REQUIRED BLOCK.** • Enter both the first and last name of the Incident Commander. • If the incident is under a Unified Command, list all Incident Commanders by first initial and last name separated by a comma, including their organization. For example: L. Burnett – Minneapolis FD, R. Domanski – Minneapolis PD, C. Taylor – St. Paul PD, Y. Martin – St. Paul FD, S. McIntyre – U.S. Army Corps, J. Hartl – NTSB
5	**Incident Management Organization**	Indicate the incident management organization for the incident, which may be a Type 1, 2, or 3 Incident Management Team (IMT), a Unified Command, a Unified Command with an IMT, etc. This block should not be completed unless a recognized incident management organization is assigned to the incident.

Block Number	Block Title	Instructions
*6	**Incident Start Date/Time**	**REQUIRED.** This is always the start date and time of the incident (not the report date and time or operational period).
	Date	Enter the start date (month/day/year).
	Time	Enter the start time (using the 24-hour clock).
	Time Zone	Enter the time zone of the incident (e.g., EDT, PST).
7	**Current Incident Size or Area Involved** (use unit label – e.g., "sq mi," "city block")	• Enter the appropriate incident descriptive size or area involved (acres, number of buildings, square miles, hectares, square kilometers, etc.). • Enter the total area involved for incident Complexes in this block, and list each sub-incident and size in Remarks (Block 47). • Indicate that the size is an estimate, if a more specific figure is not available. • Incident size may be a population figure rather than a geographic figure, depending on the incident definition and objectives. • If the incident involves more than one jurisdiction or mixed ownership, agencies/organizations may require listing a size breakdown by organization, or including this information in Remarks (Block 47). • The incident may be one part of a much larger event (refer to introductory instructions under "Preparation). Incident size/area depends on the area actively managed within the incident objectives and incident operations, and may also be defined by a delegation of authority or letter of expectation outlining management bounds.
8	**Percent (%) Contained or Completed** (circle one)	• Enter the percent that this incident is completed or contained (e.g., 50%), with a % label. • For example, a spill may be 65% contained, or flood response objectives may be 50% met.
*9	**Incident Definition**	**REQUIRED BLOCK.** Enter a general definition of the incident in this block. This may be a general incident category or kind description, such as "tornado," "wildfire," "bridge collapse," "civil unrest," "parade," "vehicle fire," "mass casualty," etc.
10	**Incident Complexity Level**	Identify the incident complexity level as determined by Unified/Incident Commanders, if available or used.
*11	**For Time Period**	**REQUIRED BLOCK.** • Enter the time interval for which the form applies. This period should include all of the time since the last ICS 209 was submitted, or if it is the initial ICS 209, it should cover the time lapsed since the incident started. • The time period may include one or more operational periods, based on agency/organizational reporting requirements.
	From Date/Time	• Enter the start date (month/day/year). • Enter the start time (using the 24-hour clock).
	To Date/Time	• Enter the end date (month/day/year). • Enter the end time (using the 24-hour clock).

Block Number	Block Title	Instructions
APPROVAL & ROUTING INFORMATION		
***12**	**Prepared By**	**REQUIRED BLOCK.** When an incident management organization is in place, this would be the Situation Unit Leader or Planning Section Chief at the incident. On other incidents, it could be a dispatcher in the local emergency communications center, or another staff person or manager.
	Print Name	Print the name of the person preparing the form.
	ICS Position	The ICS title of the person preparing the form (e.g., "Situation Unit Leader").
	Date/Time Prepared	Enter the date (month/day/year) and time (using the 24-hour clock) the form was prepared. Enter the time zone if appropriate.
***13**	**Date/Time Submitted**	**REQUIRED.** Enter the submission date (month/day/year) and time (using the 24-hour clock).
	Time Zone	Enter the time zone from which the ICS 209 was submitted (e.g., EDT, PST).
***14**	**Approved By**	**REQUIRED.** When an incident management organization is in place, this would be the Planning Section Chief or Incident Commander at the incident. On other incidents, it could be the jurisdiction's dispatch center manager, organizational administrator, or other manager.
	Print Name	Print the name of the person approving the form.
	ICS Position	The position of the person signing the ICS 209 should be entered (e.g., "Incident Commander").
	Signature	Signature of the person approving the ICS 209, typically the Incident Commander. The original signed ICS 209 should be maintained with other incident documents.
***15**	**Primary Location, Organization, or Agency Sent To**	**REQUIRED BLOCK.** Enter the appropriate primary location or office the ICS 209 was sent to apart from the incident. This most likely is the entity or office that ordered the incident management organization that is managing the incident. This may be a dispatch center or a MACS element such as an emergency operations center. If a dispatch center or other emergency center prepared the ICS 209 for the incident, indicate where it was submitted initially.
INCIDENT LOCATION INFORMATION		
• Much of the "Incident Location Information" in Blocks 16–26 is optional, but completing as many fields as possible increases accuracy, and improves interoperability and information sharing between disparate systems. • As with all ICS 209 information, accuracy is essential because the information may be widely distributed and used in a variety of systems. Location and/or geospatial data may be used for maps, reports, and analysis by multiple parties outside the incident. • Be certain to follow accepted protocols, conventions, or standards where appropriate when submitting location information, and clearly label all location information. • Incident location information is usually based on the point of origin of the incident, and the majority of the area where the incident jurisdiction is.		
***16**	**State**	**REQUIRED BLOCK WHEN APPLICABLE.** • Enter the State where the incident originated. • If other States or jurisdictions are involved, enter them in Block 25 or Block 44.

Block Number	Block Title	Instructions
***17**	**County / Parish / Borough**	**REQUIRED BLOCK WHEN APPLICABLE.** • Enter the county, parish, or borough where the incident originated. • If other counties or jurisdictions are involved, enter them in Block 25 or Block 47.
***18**	**City**	**REQUIRED BLOCK WHEN APPLICABLE.** • Enter the city where the incident originated. • If other cities or jurisdictions are involved, enter them in Block 25 or Block 47.
19	**Unit or Other**	Enter the unit, sub-unit, unit identification (ID) number or code (if used), or other information about where the incident originated. This may be a local identifier that indicates primary incident jurisdiction or responsibility (e.g., police, fire, public works, etc.) or another type of organization. Enter specifics in Block 25.
***20**	**Incident Jurisdiction**	**REQUIRED BLOCK WHEN APPLICABLE.** Enter the jurisdiction where the incident originated (the entry may be general, such as Federal, city, or State, or may specifically identify agency names such as Warren County, U.S. Coast Guard, Panama City, NYPD).
21	**Incident Location Ownership** (if different than jurisdiction)	• When relevant, indicate the ownership of the area where the incident originated, especially if it is different than the agency having jurisdiction. • This may include situations where jurisdictions contract for emergency services, or where it is relevant to include ownership by private entities, such as a large industrial site.
22	**22. Longitude** (indicate format)**:** **Latitude** (indicate format)**:**	• Enter the longitude and latitude where the incident originated, if available and normally used by the authority having jurisdiction for the incident. • Clearly label the data, as longitude and latitude can be derived from various sources. For example, if degrees, minutes, and seconds are used, label as "33 degrees, 45 minutes, 01 seconds."
23	**US National Grid Reference**	• Enter the US National Grid (USNG) reference where the incident originated, if available and commonly used by the agencies/jurisdictions with primary responsibility for the incident. • Clearly label the data.
24	**Legal Description** (township, section, range)	• Enter the legal description where the incident originated, if available and commonly used by the agencies/jurisdictions with primary responsibility for the incident. • Clearly label the data (e.g., N 1/2 SE 1/4, SW 1/4, S24, T32N, R18E).
***25**	**Short Location or Area Description** (list all affected areas or a reference point)	**REQUIRED BLOCK.** • List all affected areas as described in instructions for Blocks 16–24 above, OR summarize a general location, OR list a reference point for the incident (e.g., "the southern third of Florida," "in ocean 20 miles west of Catalina Island, CA," or "within a 5 mile radius of Walden, CO"). • This information is important for readers unfamiliar with the area (or with other location identification systems) to be able to quickly identify the general location of the incident on a map. • Other location information may also be listed here if needed or relevant for incident support (e.g., base meridian).
26	**UTM Coordinates**	Indicate Universal Transverse Mercator reference coordinates if used by the discipline or jurisdiction.

Block Number	Block Title	Instructions
27	**Note any electronic geospatial data included or attached** (indicate data format, content, and collection time information and labels)	• Indicate whether and how geospatial data is included or attached. • Utilize common and open geospatial data standards. • WARNING: Do not attach or send extremely large data files with the ICS 209. Incident geospatial data that is distributed with the ICS 209 should be simple incident geospatial basics, such as the incident perimeter, origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically. • NOTE: Clearly indicate data content. For example, data may be about an incident perimeter (such as a shape file), the incident origin (a point), a point and radius (such as an evacuation zone), or a line or lines (such as a pipeline). • NOTE: Indicate the data format (e.g., .shp, .kml, .kmz, or .gml file) and any relevant information about projection, etc. • NOTE: Include a hyperlink or other access information if incident map data is posted online or on an FTP (file transfer protocol) site to facilitate downloading and minimize information requests. • NOTE: Include a point of contact for getting geospatial incident information, if included in the ICS 209 or available and supporting the incident.
INCIDENT SUMMARY		
***28**	**Significant Events for the Time Period Reported** (summarize significant progress made, evacuations, incident growth, etc.)	**REQUIRED BLOCK.** • Describe significant events that occurred during the period being reported in Block 6. Examples include: o Road closures. o Evacuations. o Progress made and accomplishments. o Incident command transitions. o Repopulation of formerly evacuated areas and specifics. o Containment. • Refer to other blocks in the ICS 209 when relevant for additional information (e.g., “Details on evacuations may be found in Block 33”), or in Remarks, Block 47. • Be specific and detailed in reference to events. For example, references to road closures should include road number and duration of closure (or include further detail in Block 33). Use specific metrics if needed, such as the number of people or animals evacuated, or the amount of a material spilled and/or recovered. • This block may be used for a single-paragraph synopsis of overall incident status.
29	**Primary Materials or Hazards Involved** (hazardous chemicals, fuel types, infectious agents, radiation, etc.)	• When relevant, enter the appropriate primary materials, fuels, or other hazards involved in the incident that are leaking, burning, infecting, or otherwise influencing the incident. • Examples include hazardous chemicals, wildland fuel models, biohazards, explosive materials, oil, gas, structural collapse, avalanche activity, criminal activity, etc.
	Other	Enter any miscellaneous issues which impacted Critical Infrastructure and Key Resources.

Block Number	Block Title	Instructions
30	**Damage Assessment Information** (summarize damage and/or restriction of use or availability to residential or commercial property, natural resources, critical infrastructure and key resources, etc.)	• Include a short summary of damage or use/access restrictions/ limitations caused by the incident for the reporting period, and cumulatively. • Include if needed any information on the facility status, such as operational status, if it is evacuated, etc. when needed. • Include any critical infrastructure or key resources damaged/destroyed/ impacted by the incident, the kind of infrastructure, and the extent of damage and/or impact and any known cascading impacts. • Refer to more specific or detailed damage assessment forms and packages when they are used and/or relevant.
	A. Structural Summary	Complete this table as needed based on the definitions for 30B–F below. Note in table or in text block if numbers entered are estimates or are confirmed. Summaries may also include impact to Shoreline and Wildlife, etc.
	B. # Threatened (72 hrs)	Enter the number of structures potentially threatened by the incident within the next 72 hours, based on currently available information.
	C. # Damaged	Enter the number of structures damaged by the incident.
	D. # Destroyed	Enter the number of structures destroyed beyond repair by the incident.
	E. Single Residences	Enter the number of single dwellings/homes/units impacted in Columns 30B–D. Note any specifics in the text block if needed, such as type of residence (apartments, condominiums, single-family homes, etc.).
	F. Nonresidential Commercial Properties	Enter the number of buildings or units impacted in Columns 30B–D. This includes any primary structure used for nonresidential purposes, excluding Other Minor Structures (Block 30G). Note any specifics regarding building or unit types in the text block.
	Other Minor Structures	Enter any miscellaneous structures impacted in Columns 30B–D not covered in 30E–F above, including any minor structures such as booths, sheds, or outbuildings.
	Other	Enter any miscellaneous issues which impacted Critical Infrastructure and Key Resources.

Block Number	Block Title	Instructions
ADDITIONAL INCIDENT DECISION SUPPORT INFORMATION (PAGE 2)		
***31**	**Public Status Summary**	• This section is for summary information regarding incident-related injuries, illness, and fatalities for civilians (or members of the public); see 31C–N below. • Explain or describe the nature of any reported injuries, illness, or other activities in Life, Safety, and Health Status/Threat Remarks (Block 33). • Illnesses include those that may be caused through a biological event such as an epidemic or an exposure to toxic or radiological substances. • NOTE: *Do not estimate any fatality information*. • NOTE: Please use caution when reporting information in this section that may be on the periphery of the incident or change frequently. This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change. • NOTE: Do not complete this block if the incident covered by the ICS 209 is *not directly responsible* for these actions (such as evacuations, sheltering, immunizations, etc.) *even if they are related to the incident*. o Only the authority having jurisdiction should submit reports for these actions, to mitigate multiple/conflicting reports. o For example, if managing evacuation shelters is part of the incident operation itself, do include these numbers in Block 31J with any notes in Block 33. • NOTE: When providing an estimated value, denote in parenthesis: "est." **Handling Sensitive Information** • Release of information in this section should be carefully coordinated within the incident management organization to ensure synchronization with public information and investigative/intelligence actions. • Thoroughly review the "Distribution" section in the introductory ICS 209 instructions for details on handling sensitive information. Use caution when providing information in any situation involving fatalities, and verify that appropriate notifications have been made prior to release of this information. Electronic transmission of any ICS 209 may make information available to many people and networks at once. • Information regarding fatalities should be cleared with the Incident Commander and/or an organizational administrator prior to submission of the ICS 209.
	A. # This Reporting Period	Enter the total number of individuals impacted in each category for this reporting period (since the previous ICS 209 was submitted).
	B. Total # to Date	• Enter the total number of individuals impacted in each category for the entire duration of the incident. • This is a cumulative total number that should be adjusted each reporting period.
	C. Indicate Number of Civilians (Public) Below	• For lines 31D–M below, enter the number of civilians affected for each category. • Indicate if numbers are estimates, for those blocks where this is an option. • Civilians are those members of the public who are affected by the incident, but who are not included as part of the response effort through Unified Command partnerships and those organizations and agencies assisting and cooperating with response efforts.
	D. Fatalities	• Enter the number of *confirmed* civilian/public fatalities. • See information in introductory instructions ("Distribution") and in Block 31 instructions regarding sensitive handling of fatality information.

Block Number	Block Title	Instructions
	E. With Injuries/Illness	Enter the number of civilian/public injuries or illnesses directly related to the incident. Injury or illness is defined by the incident or jurisdiction(s).
***31** (continued)	F. Trapped/In Need of Rescue	Enter the number of civilians who are trapped or in need of rescue due to the incident.
	G. Missing (note if estimated)	Enter the number of civilians who are missing due to the incident. Indicate if an estimate is used.
	H. Evacuated (note if estimated)	Enter the number of civilians who are evacuated due to the incident. These are likely to be best estimates, but indicate if they are estimated.
	I. Sheltering-in-Place (note if estimated)	Enter the number of civilians who are sheltering in place due to the incident. Indicate if estimates are used.
	J. In Temporary Shelters (note if estimated)	Enter the number of civilians who are in temporary shelters as a direct result of the incident, noting if the number is an estimate.
	K. Have Received Mass Immunizations	Enter the number of civilians who have received mass immunizations due to the incident and/or as part of incident operations. Do not estimate.
	L. Require Mass Immunizations (note if estimated)	Enter the number of civilians who require mass immunizations due to the incident and/or as part of incident operations. Indicate if it is an estimate.
	M. In Quarantine	Enter the number of civilians who are in quarantine due to the incident and/or as part of incident operations. Do not estimate.
	N. Total # Civilians (Public) Affected	Enter sum totals for Columns 31A and 31B for Rows 31D–M.
***32**	**Responder Status Summary**	• This section is for summary information regarding incident-related injuries, illness, and fatalities for responders; see 32C–N. • Illnesses include those that may be related to a biological event such as an epidemic or an exposure to toxic or radiological substances directly in relation to the incident. • Explain or describe the nature of any reported injuries, illness, or other activities in Block 33. • NOTE: *Do not estimate any fatality information or responder status information.* • NOTE: Please use caution when reporting information in this section that may be on the periphery of the incident or change frequently. This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change. • NOTE: Do not complete this block if the incident covered by the ICS 209 is *not directly responsible* for these actions (such as evacuations, sheltering, immunizations, etc.) even if they are related to the incident. Only the authority having jurisdiction should submit reports for these actions, to mitigate multiple/conflicting reports. **Handling Sensitive Information** • Release of information in this section should be carefully coordinated within the incident management organization to ensure synchronization with public information and investigative/intelligence actions. • Thoroughly review the "Distribution" section in the introductory ICS 209 instructions for details on handling sensitive information. Use caution when providing information in any situation involving fatalities, and verify that appropriate notifications have been made prior to release of this information. Electronic transmission of any ICS 209 may make information available to many people and networks at once. • Information regarding fatalities should be cleared with the Incident Commander and/or an organizational administrator prior to submission of the ICS 209.

Block Number	Block Title	Instructions
***32** (continued)	A. # This Reporting Period	Enter the total number of responders impacted in each category for this reporting period (since the previous ICS 209 was submitted).
	B. Total # to Date	• Enter the total number of individuals impacted in each category for the *entire duration* of the incident. • This is a *cumulative* total number that should be adjusted each reporting period.
	C. Indicate Number of Responders Below	• For lines 32D–M below, enter the number of responders relevant for each category. • Responders are those personnel included as part of Unified Command partnerships and those organizations and agencies assisting and cooperating with response efforts.
	D. Fatalities	• Enter the number of *confirmed* responder fatalities. • See information in introductory instructions ("Distribution") and for Block 32 regarding sensitive handling of fatality information.
	E. With Injuries/Illness	• Enter the number of incident responders with serious injuries or illnesses due to the incident. • *For responders, serious injuries or illness are typically those in which the person is unable to continue to perform in his or her incident assignment,* but the authority having jurisdiction may have additional guidelines on reporting requirements in this area.
	F. Trapped/In Need Of Rescue	Enter the number of incident responders who are in trapped or in need of rescue due to the incident.
	G. Missing	Enter the number of incident responders who are missing due to incident conditions.
	H.	(BLANK; use however is appropriate.)
	I. Sheltering in Place	Enter the number of responders who are sheltering in place due to the incident. Once responders become the victims, this needs to be noted in Block 33 or Block 47 and handled accordingly.
	J.	(BLANK; use however is appropriate.)
	L. Require Immunizations	Enter the number of responders who require immunizations due to the incident and/or as part of incident operations.
	M. In Quarantine	Enter the number of responders who are in quarantine as a direct result of the incident and/or related to incident operations.
	N. Total # Responders Affected	Enter sum totals for Columns 32A and 32B for Rows 32D–M.
33	**Life, Safety, and Health Status/Threat Remarks**	• Enter any details needed for Blocks 31, 32, and 34. Enter any specific comments regarding illness, injuries, fatalities, and threat management for this incident, such as whether estimates were used for numbers given in Block 31. • This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change. • Evacuation information can be very sensitive to local residents and officials. Be accurate in the assessment. • Clearly note primary responsibility and contacts for any activities or information in Blocks 31, 32, and 34 that may be caused by the incident, but that are being managed and/or reported by other parties. • Provide additional explanation or information as relevant in Blocks 28, 36, 38, 40, 41, or in Remarks (Block 47).

Block Number	Block Title	Instructions
***34**	**Life, Safety, and Health Threat Management**	Note any details in Life, Safety, and Health Status/Threat Remarks (Block 33), and provide additional explanation or information as relevant in Blocks 28, 36, 38, 40, 41, or in Remarks (Block 47). Additional pages may be necessary for notes.
	A. Check if Active	Check any applicable blocks in 34C–P based on currently available information regarding incident activity and potential.
	B. Notes	Note any specific details, or include in Block 33.
	C. No Likely Threat	Check if there is no likely threat to life, health, and safety.
	D. Potential Future Threat	Check if there is a potential future threat to life, health, and safety.
	E. Mass Notifications In Progress	• Check if there are any mass notifications in progress regarding emergency situations, evacuations, shelter in place, or other public safety advisories related to this incident. • These may include use of threat and alert systems such as the Emergency Alert System or a “reverse 911” system. • Please indicate the areas where mass notifications have been completed (e.g., “mass notifications to ZIP codes 50201, 50014, 50010, 50011,” or “notified all residents within a 5-mile radius of Gatlinburg”).
	F. Mass Notifications Completed	Check if actions referred to in Block 34E above have been completed.
	G. No Evacuation(s) Imminent	Check if evacuations are not anticipated in the near future based on current information.
	H. Planning for Evacuation	Check if evacuation planning is underway in relation to this incident.
	I. Planning for Shelter-in-Place	Check if planning is underway for shelter-in-place activities related to this incident.
	J. Evacuation(s) in Progress	Check if there are active evacuations in progress in relation to this incident.
	K. Shelter-In-Place in Progress	Check if there are active shelter-in-place actions in progress in relation to this incident.
	L. Repopulation in Progress	Check if there is an active repopulation in progress related to this incident.
	M. Mass Immunization in Progress	Check if there is an active mass immunization in progress related to this incident.
	N. Mass Immunization Complete	Check if a mass immunization effort has been completed in relation to this incident.
	O. Quarantine in Progress	Check if there is an active quarantine in progress related to this incident.
	P. Area Restriction in Effect	Check if there are any restrictions in effect, such as road or area closures, especially those noted in Block 28.

Block Number	Block Title	Instructions
35	**Weather Concerns** (synopsis of current and predicted weather; discuss related factors that may cause concern)	• Complete a short synopsis/discussion on significant weather factors that could cause concerns for the incident when relevant. • Include current and/or predicted weather factors, and the timeframe for predictions. • Include relevant factors such as: o Wind speed (label units, such as mph). o Wind direction (clarify and label where wind is coming from and going to in plain language – e.g., "from NNW," "from E," or "from SW"). o Temperature (label units, such as F). o Relative humidity (label %). o Watches. o Warnings. o Tides. o Currents. • Any other weather information relative to the incident, such as flooding, hurricanes, etc.
36	**Projected Incident Activity, Potential, Movement, Escalation, or Spread** and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes **12 hours** **24 hours** **48 hours** **72 hours** **Anticipated after 72 hours**	• Provide an estimate (when it is possible to do so) of the direction/scope in which the incident is expected to spread, migrate, or expand during the next indicated operational period, or other factors that may cause activity changes. • Discuss incident potential relative to values at risk, or values to be protected (such as human life), and the potential changes to those as the incident changes. • Include an estimate of the acreage or area that will likely be affected. • If known, provide the above information in 12-, 24-, 48- and 72-hour timeframes, and any activity anticipated after 72 hours.
37	**Strategic Objectives** (define planned end-state for incident)	Briefly discuss the desired outcome for the incident based on currently available information. Note any high-level objectives and any possible strategic benefits as well (especially for planned events).

Block Number	Block Title	Instructions
ADDITIONAL INCIDENT DECISION SUPPORT INFORMATION (continued) **(PAGE 3)**		
38	**Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond.** Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident-related potential economic or cascading impacts. **12 hours** **24 hours** **48 hours** **72 hours** **Anticipated after 72 hours**	Summarize major or significant threats due to incident activity based on currently available information. Include a breakdown of threats in terms of 12-, 24-, 48-, and 72-hour timeframes.

Block Number	Block Title	Instructions
39	**Critical Resource Needs** in 12-, 24-, 48-, and 72-hour timeframes and beyond to meet critical incident objectives. List resource category, kind, and/or type, and amount needed, in priority order: **12 hours** **24 hours** **48 hours** **72 hours** **Anticipated after 72 hours**	• List the specific critical resources and numbers needed, in order of priority. *Be specific as to the need.* • Use plain language and common terminology for resources, and indicate resource category, kind, and type (if available or known) to facilitate incident support. • If critical resources are listed in this block, there should be corresponding orders placed for them through appropriate resource ordering channels. • Provide critical resource needs in 12-, 24-, 48- and 72-hour increments. List the most critical resources needed for each timeframe, if needs have been identified for each timeframe. Listing critical resources by the time they are needed gives incident support personnel a "heads up" for short-range planning, and assists the ordering process to ensure these resources will be in place when they are needed. • More than one resource need may be listed for each timeframe. For example, a list could include: o 24 hrs: 3 Type 2 firefighting helicopters, 2 Type I Disaster Medical Assistance Teams o 48 hrs: Mobile Communications Unit (Law/Fire) o After 72 hrs: 1 Type 2 Incident Management Team • Documentation in the ICS 209 can help the incident obtain critical regional or national resources through outside support mechanisms including multiagency coordination systems and mutual aid. o Information provided in other blocks on the ICS 209 can help to support the need for resources, including Blocks 28, 29, 31–38, and 40–42. o Additional comments in the Remarks section (Block 47) can also help explain what the incident is requesting and why it is critical (for example, "Type 2 Incident Management Team is needed in three days to transition command when the current Type 2 Team times out"). • Do not use this block for noncritical resources.
40	**Strategic Discussion: Explain the relation of overall strategy, constraints, and current available information to:** 1) critical resource needs identified above, 2) the Incident Action Plan and management objectives and targets, 3) anticipated results. **Explain major problems and concerns such as operational challenges, incident management problems, and social, political, economic, or environmental concerns or impacts.**	• Wording should be consistent with Block 39 to justify critical resource needs, which should relate to planned actions in the Incident Action Plan. • Give a short assessment of the likelihood of meeting the incident management targets, given the current management strategy and currently known constraints. • Identify when the chosen management strategy will succeed given the current constraints. Adjust the anticipated incident management completion target in Block 43 as needed based on this discussion. • Explain major problems and concerns as indicated.

Block Number	Block Title	Instructions
41	**Planned Actions for Next Operational Period**	• Provide a short summary of actions planned for the next operational period. • Examples: o "The current Incident Management Team will transition out to a replacement IMT." o "Continue to review operational/ engineering plan to facilitate removal of the partially collapsed west bridge supports." o "Continue refining mapping of the recovery operations and damaged assets using GPS." o "Initiate removal of unauthorized food vendors."
42	**Projected Final Incident Size/Area** (use unit label – e.g., "sq mi")	• Enter an estimate of the total area likely to be involved or affected over the course of the incident. • Label the estimate of the total area or population involved, affected, or impacted with the relevant units such as acres, hectares, square miles, etc. • Note that total area involved may not be limited to geographic area (see previous discussions regarding incident definition, scope, operations, and objectives). Projected final size may involve a population rather than a geographic area.
43	**Anticipated Incident Management Completion Date**	• Enter the date (month/day/year) at which time it is expected that incident objectives will be met. This is often explained similar to incident containment or control, or the time at which the incident is expected to be closed or when significant incident support will be discontinued. • Avoid leaving this block blank if possible, as this is important information for managers.
44	**Projected Significant Resource Demobilization Start Date**	Enter the date (month/day/year) when initiation of significant resource demobilization is anticipated.
45	**Estimated Incident Costs to Date**	• Enter the estimated total incident costs to date for the entire incident based on currently available information. • Incident costs include estimates of all costs for the response, including all management and support activities per discipline, agency, or organizational guidance and policy. • This does not include damage assessment figures, as they are impacts from the incident and not response costs. • If costs decrease, explain in Remarks (Block 47). • If additional space is required, please add as an attachment.
46	**Projected Final Incident Cost Estimate**	• Enter an estimate of the total costs for the incident once all costs have been processed based on current spending and projected incident potential, per discipline, agency, or organizational guidance and policy. This is often an estimate of daily costs combined with incident potential information. • This does not include damage assessment figures, as they are impacts from the incident and not response costs. • If additional space is required, please add as an attachment.

Block Number	Block Title	Instructions
47	**Remarks** (or continuation of any blocks above – list block number in notation)	• Use this block to expand on information that has been entered in previous blocks, or to include other pertinent information that has not been previously addressed. • List the block number for any information continued from a previous block. • Additional information may include more detailed weather information, specifics on injuries or fatalities, threats to critical infrastructure or other resources, more detailed evacuation site locations and number of evacuated, information or details regarding incident cause, etc. • For Complexes that include multiple incidents, list all sub-incidents included in the Complex. • List jurisdictional or ownership breakdowns if needed when an incident is in more than one jurisdiction and/or ownership area. Breakdown may be: o By size (e.g., 35 acres in City of Gatlinburg, 250 acres in Great Smoky Mountains), and/or o By geography (e.g., incident area on the west side of the river is in jurisdiction of City of Minneapolis; area on east side of river is City of St. Paul jurisdiction; river is joint jurisdiction with USACE). • Explain any reasons for incident size reductions or adjustments (e.g., reduction in acreage due to more accurate mapping). • This section can also be used to list any additional information about the incident that may be needed by incident support mechanisms outside the incident itself. This may be basic information needed through multiagency coordination systems or public information systems (e.g., a public information phone number for the incident, or the incident Web site address). • Attach additional pages if it is necessary to include additional comments in the Remarks section.

INCIDENT RESOURCE COMMITMENT SUMMARY (PAGE 4)

- This last/fourth page of the ICS 209 can be copied and used if needed to accommodate additional resources, agencies, or organizations. Write the actual page number on the pages as they are used.
- Include only resources that have been assigned to the incident and that have arrived and/or been checked in to the incident. Do not include resources that have been ordered but have *not* yet arrived.

<u>For summarizing</u>:

- When there are large numbers of responders, it may be helpful to group agencies or organizations together. Use the approach that works best for the multiagency coordination system applicable to the incident. For example,
  - o Group State, local, county, city, or Federal responders together under such headings, or
  - o Group resources from one jurisdiction together and list only individual jurisdictions (e.g., list the public works, police, and fire department resources for a city under that city's name).
- On a large incident, it may also be helpful to group similar categories, kinds, or types of resources together for this summary.

Block Number	Block Title	Instructions
48	**Agency or Organization**	• List the agencies or organizations contributing resources to the incident as responders, through mutual aid agreements, etc. • List agencies or organizations using clear language so readers who may not be from the discipline or host jurisdiction can understand the information. • Agencies or organizations may be listed individually or in groups. • When resources are grouped together, individual agencies or organizations may be listed below in Block 53. • Indicate in the rows under Block 49 how many resources are assigned to the incident under each resource identified. o These can listed with the number of resources on the top of the box, and the number of personnel associated with the resources on the bottom half of the box. o For example: ▪ *Resource:* Type 2 Helicopters… 3/8 (indicates 3 aircraft, 8 personnel). ▪ *Resource:* Type 1 Decontamination Unit… 1/3 (indicates 1 unit, 3 personnel). • Indicate in the rows under Block 51 the total number of personnel assigned for each agency listed under Block 48, including both individual overhead and those associated with other resources such as fire engines, decontamination units, etc.
49	**Resources** (summarize resources by category, kind, and/or type; show # of resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box)	• List resources using clear language when possible – so ICS 209 readers who may not be from the discipline or host jurisdiction can understand the information. o Examples: Type 1 Fire Engines, Type 4 Helicopters • Enter total numbers in columns for each resource by agency, organization, or grouping in the proper blocks. o These can listed with the number of resources on the top of the box, and the number of personnel associated with the resources on the bottom half of the box. o For example: ▪ *Resource:* Type 2 Helicopters… 3/8 (indicates 3 aircraft, 8 personnel). ▪ *Resource:* Type 1 Decontamination Unit… 1/3 (indicates 1 unit, 3 personnel). • <u>NOTE</u>: One option is to group similar resources together when it is sensible to do so for the summary. o For example, do not list every type of fire engine – rather, it may be advisable to list two generalized types of engines, such as “structure fire engines” and “wildland fire engines” in separate columns with totals for each. • <u>NOTE</u>: It is not advisable to list individual overhead personnel individually in the resource section, especially as this form is intended as a summary. These personnel should be included in the Total Personnel sums in Block 51.
50	**Additional Personnel** not assigned to a resource	List the number of *additional* individuals (or overhead) that are not assigned to a specific resource by agency or organization.
51	**Total Personnel** (includes those associated with resources – e.g., aircraft or engines – *and* individual overhead)	• Enter the total personnel for each agency, organization, or grouping in the Total Personnel column. • <u>WARNING</u>: Do not simply add the numbers across! • The number of Total Personnel for each row should include <u>both</u>: o The total number of personnel assigned to each of the resources listed in Block 49, and o The total number of additional individual overhead personnel from each agency, organization, or group listed in Block 50.

Block Number	Block Title	Instructions
52	**Total Resources**	Include the sum total of resources for each column, including the total for the column under Blocks 49, 50, and 51. This should include the total number of *resources* in Block 49, as personnel totals will be counted under Block 51.
53	**Additional Cooperating and Assisting Organizations Not Listed Above**	• List all agencies and organizations that are not directly involved in the incident, but are providing support. • Examples may include ambulance services, Red Cross, DHS, utility companies, etc. • Do not repeat any resources counted in Blocks 48–52, unless explanations are needed for groupings created under Block 48 (Agency or Organization).

RESOURCE STATUS CHANGE (ICS 210)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:

3. Resource Number	**4. New Status** (Available, Assigned, O/S)	**5. From** (Assignment and Status)**:**	**6. To** (Assignment and Status)**:**	**7. Time and Date of Change:**	

8. Comments:

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 210 Date/Time: _____

ICS 210
Resource Status Change

Purpose. The Resource Status Change (ICS 210) is used by the Incident Communications Center Manager to record status change information received on resources assigned to the incident. This information could be transmitted with a General Message (ICS 213). The form could also be used by Operations as a worksheet to track entry, etc.

Preparation. The ICS 210 is completed by radio/telephone operators who receive status change information from individual resources, Task Forces, Strike Teams, and Division/Group Supervisors. Status information could also be reported by Staging Area and Helibase Managers and fixed-wing facilities.

Distribution. The ICS 210 is maintained by the Communications Unit and copied to Resources Unit and filed by Documentation Unit.

Notes:

- The ICS 210 is essentially a message form that can be used to update Resource Status Cards or T-Cards (ICS 219) for incident-level resource management.
- If additional pages are needed, use a blank ICS 210 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Resource Number**	Enter the resource identification (ID) number (this may be a letter and number combination) assigned by either the sending unit or the incident.
4	**New Status** (Available, Assigned, Out of Service)	Indicate the current status of the resource: • Available – Indicates resource is available for incident use immediately. • Assigned – Indicates resource is checked in and assigned a work task on the incident. • Out of Service – Indicates resource is assigned to the incident but unable to respond for mechanical, rest, or personnel reasons. If space permits, indicate the estimated time of return (ETR). It may be useful to indicate the reason a resource is out of service (e.g., "O/S – Mech" (for mechanical issues), "O/S – Rest" (for off shift), or "O/S – Pers" (for personnel issues).
5	**From** (Assignment and Status)	Indicate the current location of the resource (where it came from) and the status. When more than one Division, Staging Area, or Camp is used, identify the specific location (e.g., Division A, Staging Area, Incident Command Post, Western Camp).
6	**To** (Assignment and Status)	Indicate the assigned incident location of the resource and status. When more than one Division, Staging Area, or Camp is used, identify the specific location.
7	**Time and Date of Change**	Enter the time and location of the status change (24-hour clock). Enter the date as well if relevant (e.g., out of service).
8	**Comments**	Enter any special information provided by the resource or dispatch center. This may include details about why a resource is out of service, or individual identifying designators (IDs) of Strike Teams and Task Forces.
9	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT CHECK-IN LIST (ICS 211)

1. Incident Name:	2. Incident Number:	3. Check-In Location (complete all that apply): ☐ Base ☐ Staging Area ☐ ICP ☐ Helibase ☐ Other	4. Start Date/Time: Date: Time:

Check-In Information (use reverse of form for remarks or comments)

5. List single resource personnel (overhead) by agency and name, OR list resources by the following format:							6. Order Request #	7. Date/Time Check-In	8. Leader's Name	9. Total Number of Personnel	10. Incident Contact Information	11. Home Unit or Agency	12. Departure Point, Date and Time	13. Method of Travel	14. Incident Assignment	15. Other Qualifications	16. Data Provided to Resources Unit
State	Agency	Category	Kind	Type	Resource Name or Identifier	ST or TF											

ICS 211	17. Prepared by: Name: _____ Position/Title: _____ Signature: _____ Date/Time: _____

ICS 211
Incident Check-In List

Purpose. Personnel and equipment arriving at the incident can check in at various incident locations. Check-in consists of reporting specific information, which is recorded on the Check-In List (ICS 211). The ICS 211 serves several purposes, as it: (1) records arrival times at the incident of all overhead personnel and equipment, (2) records the initial location of personnel and equipment to facilitate subsequent assignments, and (3) supports demobilization by recording the home base, method of travel, etc., for resources checked in.

Preparation. The ICS 211 is initiated at a number of incident locations including: Staging Areas, Base, and Incident Command Post (ICP). Preparation may be completed by: (1) overhead at these locations, who record the information and give it to the Resources Unit as soon as possible, (2) the Incident Communications Center Manager located in the Communications Center, who records the information and gives it to the Resources Unit as soon as possible, (3) a recorder from the Resources Unit during check-in to the ICP. As an option, the ICS 211 can be printed on colored paper to match the designated Resource Status Card (ICS 219) colors. The purpose of this is to aid the process of completing a large volume of ICS 219s. The ICS 219 colors are:

- 219-1: Header Card – Gray (used only as label cards for T-Card racks)
- 219-2: Crew/Team Card – Green
- 219-3: Engine Card – Rose
- 219-4: Helicopter Card – Blue
- 219-5: Personnel Card – White
- 219-6: Fixed-Wing Card – Orange
- 219-7: Equipment Card – Yellow
- 219-8: Miscellaneous Equipment/Task Force Card – Tan
- 219-10: Generic Card – Light Purple

Distribution. ICS 211s, which are completed by personnel at the various check-in locations, are provided to the Resources Unit, Demobilization Unit, and Finance/Administration Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident.

Notes:

- Also available as 8½ x 14 (legal size) or 11 x 17 chart.
- Use reverse side of form for remarks or comments.
- If additional pages are needed for any form page, use a blank ICS 211 and repaginate as needed.
- Contact information for sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Check-In Location** ☐ Base ☐ Staging Area ☐ ICP ☐ Helibase ☐ Other	Check appropriate box and enter the check-in location for the incident. Indicate specific information regarding the locations under each checkbox. ICP is for Incident Command Post. Other may include…
4	**Start Date/Time** • Date • Time	Enter the date (month/day/year) and time (using the 24-hour clock) that the form was started.

Block Number	Block Title	Instructions
	Check-In Information	Self explanatory.
5	**List single resource personnel (overhead) by agency and name, OR list resources by the following format**	Enter the following information for resources: OPTIONAL: Indicate if resource is a single resource versus part of Strike Team or Task Force. Fields can be left blank if not necessary.
	• State	Use this section to list the home State for the resource.
	• Agency	Use this section to list agency name (or designator), and individual names for all single resource personnel (e.g., ORC, ARL, NYPD).
	• Category	Use this section to list the resource category based on NIMS, discipline, or jurisdiction guidance.
	• Kind	Use this section to list the resource kind based on NIMS, discipline, or jurisdiction guidance.
	• Type	Use this section to list the resource type based on NIMS, discipline, or jurisdiction guidance.
	• Resource Name or Identifier	Use this section to enter the resource name or unique identifier. If it is a Strike Team or a Task Force, list the unique Strike Team or Task Force identifier (if used) on a single line with the component resources of the Strike Team or Task Force listed on the following lines. For example, for an Engine Strike Team with the call sign "XLT459" show "XLT459" in this box and then in the next five rows, list the unique identifier for the five engines assigned to the Strike Team.
	• ST or TF	Use ST or TF to indicate whether the resource is part of a Strike Team or Task Force. See above for additional instructions.
6	**Order Request #**	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline, since several incident numbers may be used for the same incident.
7	**Date/Time Check-In**	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
8	**Leader's Name**	• For equipment, enter the operator's name. • Enter the Strike Team or Task Force leader's name. • Leave blank for single resource personnel (overhead).
9	**Total Number of Personnel**	Enter total number of personnel associated with the resource. Include leaders.
10	**Incident Contact Information**	Enter available contact information (e.g., radio frequency, cell phone number, etc.) for the incident.
11	**Home Unit or Agency**	Enter the home unit or agency to which the resource or individual is normally assigned (may not be departure location).
12	**Departure Point, Date and Time**	Enter the location from which the resource or individual departed for this incident. Enter the departure time using the 24-hour clock.
13	**Method of Travel**	Enter the means of travel the individual used to bring himself/herself to the incident (e.g., bus, truck, engine, personal vehicle, etc.).
14	**Incident Assignment**	Enter the incident assignment at time of dispatch.
15	**Other Qualifications**	Enter additional duties (ICS positions) pertinent to the incident that the resource/individual is qualified to perform. Note that resources should not be reassigned on the incident without going through the established ordering process. This data may be useful when resources are demobilized and remobilized for another incident.

Block Number	Block Title	Instructions
16	**Data Provided to Resources Unit**	Enter the date and time that the information pertaining to that entry was transmitted to the Resources Unit, and the initials of the person who transmitted the information.
17	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

GENERAL MESSAGE (ICS 213)

1. Incident Name (Optional)**:**		
2. To (Name and Position)**:**		
3. From (Name and Position)**:**		
4. Subject:	**5. Date:**	**6. Time**
7. Message:		
8. Approved by: Name: _____ Signature: _____ Position/Title: _____		
9. Reply:		
10. Replied by: Name: _____ Position/Title: _____ Signature: _____		
ICS 213	Date/Time: _____	

ICS 213
General Message

Purpose. The General Message (ICS 213) is used by the incident dispatchers to record incoming messages that cannot be orally transmitted to the intended recipients. The ICS 213 is also used by the Incident Command Post and other incident personnel to transmit messages (e.g., resource order, incident name change, other ICS coordination issues, etc.) to the Incident Communications Center for transmission via radio or telephone to the addressee. This form is used to send any message or notification to incident personnel that requires hard-copy delivery.

Preparation. The ICS 213 may be initiated by incident dispatchers and any other personnel on an incident.

Distribution. Upon completion, the ICS 213 may be delivered to the addressee and/or delivered to the Incident Communication Center for transmission.

Notes:

- The ICS 213 is a three-part form, typically using carbon paper. The sender will complete Part 1 of the form and send Parts 2 and 3 to the recipient. The recipient will complete Part 2 and return Part 3 to the sender.
- A copy of the ICS 213 should be sent to and maintained within the Documentation Unit.
- Contact information for the sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

Block Number	Block Title	Instructions
1	**Incident Name** (Optional)	Enter the name assigned to the incident. This block is optional.
2	**To** (Name and Position)	Enter the name and position the General Message is intended for. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.
3	**From** (Name and Position)	Enter the name and position of the individual sending the General Message. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.
4	**Subject**	Enter the subject of the message.
5	**Date**	Enter the date (month/day/year) of the message.
6	**Time**	Enter the time (using the 24-hour clock) of the message.
7	**Message**	Enter the content of the message. Try to be as concise as possible.
8	**Approved by** • Name • Signature • Position/Title	Enter the name, signature, and ICS position/title of the person approving the message.
9	**Reply**	The intended recipient will enter a reply to the message and return it to the originator.
10	**Replied by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person replying to the message. Enter date (month/day/year) and time prepared (24-hour clock).

RESOURCE REQUEST MESSAGE (ICS 213 RR)

1. Incident Name:	2. Date/Time	3. Resource Request Number:

Requestor

4. Order (Use additional forms when requesting different resource sources of supply.)**:**

Qty.	Kind	Type	Detailed Item Description: (Vital characteristics, brand, specs, experience, size, etc.)	Arrival Date and Time		Cost
				Requested	Estimated	

5. Requested Delivery/Reporting Location:

6. Suitable Substitutes and/or Suggested Sources:

7. Requested by Name/Position:	8. Priority: ☐ Urgent ☐ Routine ☐ Low	9. Section Chief Approval:

Logistics

10. Logistics Order Number:	11. Supplier Phone/Fax/Email:
12. Name of Supplier/POC:	

13. Notes:

14. Approval Signature of Auth Logistics Rep:	15. Date/Time:

16. Order placed by (check box): ☐ SPUL ☐ PROC

Finance

17. Reply/Comments from Finance:

18. Finance Section Signature:	19. Date/Time:

ACTIVITY LOG (ICS 214)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	
3. Name:	**4. ICS Position:**	**5. Home Agency** (and Unit)**:**

6. Resources Assigned:

Name	ICS Position	Home Agency (and Unit)

7. Activity Log:

Date/Time	Notable Activities

8. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

ACTIVITY LOG (ICS 214)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:

7. Activity Log (continuation)**:**

Date/Time	Notable Activities

8. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

ICS 214
Activity Log

Purpose. The Activity Log (ICS 214) records details of notable activities at any ICS level, including single resources, equipment, Task Forces, etc. These logs provide basic incident activity documentation, and a reference for any after-action report.

Preparation. An ICS 214 can be initiated and maintained by personnel in various ICS positions as it is needed or appropriate. Personnel should document how relevant incident activities are occurring and progressing, or any notable events or communications.

Distribution. Completed ICS 214s are submitted to supervisors, who forward them to the Documentation Unit. All completed original forms must be given to the Documentation Unit, which maintains a file of all ICS 214s. It is recommended that individuals retain a copy for their own records.

Notes:

- The ICS 214 can be printed as a two-sided form.
- Use additional copies as continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Name**	Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team).
4	**ICS Position**	Enter the name and ICS position of the individual in charge of the Unit.
5	**Home Agency** (and Unit)	Enter the home agency of the individual completing the ICS 214. Enter a unit designator if utilized by the jurisdiction or discipline.
6	**Resources Assigned**	Enter the following information for resources assigned:
	• Name	Use this section to enter the resource's name. For all individuals, use at least the first initial and last name. Cell phone number for the individual can be added as an option.
	• ICS Position	Use this section to enter the resource's ICS position (e.g., Finance Section Chief).
	• Home Agency (and Unit)	Use this section to enter the resource's home agency and/or unit (e.g., Des Moines Public Works Department, Water Management Unit).
7	**Activity Log** • Date/Time • Notable Activities	• Enter the time (24-hour clock) and briefly describe individual notable activities. Note the date as well if the operational period covers more than one day. • Activities described may include notable occurrences or events such as task assignments, task completions, injuries, difficulties encountered, etc. • This block can also be used to track personal work habits by adding columns such as "Action Required," "Delegated To," "Status," etc.
8	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

OPERATIONAL PLANNING WORKSHEET (ICS 215)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Branch	4. Division, Group, or Other	5. Work Assignment & Special Instructions	6. Resources													7. Overhead Position(s)	8. Special Equipment & Supplies	9. Reporting Location	10. Requested Arrival Time
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
		11. Total Resources Required															14. Prepared by: Name:			
		12. Total Resources Have on Hand															Position/Title:			
		13. Total Resources Need To Order															Signature:			
ICS 215																	Date/Time:			

ICS 215
Operational Planning Worksheet

Purpose. The Operational Planning Worksheet (ICS 215) communicates the decisions made by the Operations Section Chief during the Tactics Meeting concerning resource assignments and needs for the next operational period. The ICS 215 is used by the Resources Unit to complete the Assignment Lists (ICS 204) and by the Logistics Section Chief for ordering resources for the incident.

Preparation. The ICS 215 is initiated by the Operations Section Chief and often involves logistics personnel, the Resources Unit, and the Safety Officer. The form is shared with the rest of the Command and General Staffs during the Planning Meeting. It may be useful in some disciplines or jurisdictions to prefill ICS 215 copies prior to incidents.

Distribution. When the Branch, Division, or Group work assignments and accompanying resource allocations are agreed upon, the form is distributed to the Resources Unit to assist in the preparation of the ICS 204. The Logistics Section will use a copy of this worksheet for preparing requests for resources required for the next operational period.

Notes:

- This worksheet can be made into a wall mount.
- Also available as 8½ x 14 (legal size) and 11 x 17 chart.
- If additional pages are needed, use a blank ICS 215 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Branch**	Enter the Branch of the work assignment for the resources.
4	**Division, Group, or Other**	Enter the Division, Group, or other location (e.g., Staging Area) of the work assignment for the resources.
5	**Work Assignment & Special Instructions**	Enter the specific work assignments given to each of the Divisions/Groups and any special instructions, as required.
6	**Resources**	Complete resource headings for category, kind, and type as appropriate for the incident. The use of a slash indicates a single resource in the upper portion of the slash and a Strike Team or Task Force in the bottom portion of the slash.
	• Required	Enter, for the appropriate resources, the number of resources by type (engine, squad car, Advanced Life Support ambulance, etc.) required to perform the work assignment.
	• Have	Enter, for the appropriate resources, the number of resources by type (engines, crew, etc.) available to perform the work assignment.
	• Need	Enter the number of resources needed by subtracting the number in the "Have" row from the number in the "Required" row.
7	**Overhead Position(s)**	List any supervisory and nonsupervisory ICS position(s) not directly assigned to a previously identified resource (e.g., Division/Group Supervisor, Assistant Safety Officer, Technical Specialist, etc.).
8	**Special Equipment & Supplies**	List special equipment and supplies, including aviation support, used or needed. This may be a useful place to monitor span of control.
9	**Reporting Location**	Enter the specific location where the resources are to report (Staging Area, location at incident, etc.).
10	**Requested Arrival Time**	Enter the time (24-hour clock) that resources are requested to arrive at the reporting location.

Block Number	Block Title	Instructions
11	**Total Resources Required**	Enter the total number of resources required by category/kind/type as preferred (e.g., engine, squad car, ALS ambulance, etc.). A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/ Task Forces in the bottom portion of the slash.
12	**Total Resources Have on Hand**	Enter the total number of resources on hand that are assigned to the incident for incident use. A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/Task Forces in the bottom portion of the slash.
13	**Total Resources Need To Order**	Enter the total number of resources needed. A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/Task Forces in the bottom portion of the slash.
14	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT ACTION PLAN SAFETY ANALYSIS (ICS 215A)

1. Incident Name:	2. Incident Number:

3. Date/Time Prepared:	4. Operational Period:	
Date: Time:	Date From: Time From:	Date To: Time To:

5. Incident Area	6. Hazards/Risks	7. Mitigations

8. Prepared by (Safety Officer)**:** Name: _____ Signature: _____

Prepared by (Operations Section Chief)**:** Name: _____ Signature: _____

ICS 215A Date/Time: _____

ICS 215A
Incident Action Plan Safety Analysis

Purpose. The purpose of the Incident Action Plan Safety Analysis (ICS 215A) is to aid the Safety Officer in completing an operational risk assessment to prioritize hazards, safety, and health issues, and to develop appropriate controls. This worksheet addresses communications challenges between planning and operations, and is best utilized in the planning phase and for Operations Section briefings.

Preparation. The ICS 215A is typically prepared by the Safety Officer during the incident action planning cycle. When the Operations Section Chief is preparing for the tactics meeting, the Safety Officer collaborates with the Operations Section Chief to complete the Incident Action Plan Safety Analysis. This worksheet is closely linked to the Operational Planning Worksheet (ICS 215). Incident areas or regions are listed along with associated hazards and risks. For those assignments involving risks and hazards, mitigations or controls should be developed to safeguard responders, and appropriate incident personnel should be briefed on the hazards, mitigations, and related measures. Use additional sheets as needed.

Distribution. When the safety analysis is completed, the form is distributed to the Resources Unit to help prepare the Operations Section briefing. All completed original forms must be given to the Documentation Unit.

Notes:

- This worksheet can be made into a wall mount, and can be part of the IAP.
- If additional pages are needed, use a blank ICS 215A and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Date/Time Prepared**	Enter date (month/day/year) and time (using the 24-hour clock) prepared.
4	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (24-hour clock) and end date and time for the operational period to which the form applies.
5	**Incident Area**	Enter the incident areas where personnel or resources are likely to encounter risks. This may be specified as a Branch, Division, or Group.
6	**Hazards/Risks**	List the types of hazards and/or risks likely to be encountered by personnel or resources at the incident area relevant to the work assignment.
7	**Mitigations**	List actions taken to reduce risk for each hazard indicated (e.g., specify personal protective equipment or use of a buddy system or escape routes).
8	**Prepared by** (Safety Officer and Operations Section Chief) • Name • Signature • Date/Time	Enter the name of both the Safety Officer and the Operations Section Chief, who should collaborate on form preparation. Enter date (month/day/year) and time (24-hour clock) reviewed.

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET

Frequency Band	Description

Pg No	Channel Configuration	Channel Name/Trunked Radio System Talkgroup	Eligible Users	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode A, D or M	Remarks

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital (e.g. Project 25) or "M" indicating mixed mode. All channels are shown as if programmed in a control station, mobile or portable radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

SUPPORT VEHICLE/EQUIPMENT INVENTORY (ICS 218)

1. Incident Name:	2. Incident Number:	3. Date/Time Prepared: Date: Time:	4. Vehicle/Equipment Category:

5. Vehicle/Equipment Information

Order Request Number	Incident ID No.	Vehicle or Equipment Classification	Vehicle or Equipment Make	Category/ Kind/Type, Capacity, or Size	Vehicle or Equipment Features	Agency or Owner	Operator Name or Contact	Vehicle License or ID No.	Incident Assignment	Incident Start Date and Time	Incident Release Date and Time

ICS 218	6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 218
Support Vehicle/Equipment Inventory

Purpose. The Support Vehicle/Equipment Inventory (ICS 218) provides an inventory of all transportation and support vehicles and equipment assigned to the incident. The information is used by the Ground Support Unit to maintain a record of the types and locations of vehicles and equipment on the incident. The Resources Unit uses the information to initiate and maintain status/resource information.

Preparation. The ICS 218 is prepared by Ground Support Unit personnel at intervals specified by the Ground Support Unit Leader.

Distribution. Initial inventory information recorded on the form should be given to the Resources Unit. Subsequent changes to the status or location of transportation and support vehicles and equipment should be provided to the Resources Unit immediately.

Notes:

- If additional pages are needed, use a blank ICS 218 and repaginate as needed.
- Also available as 8½ x 14 (legal size) and 11 x 17 chart.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Date/Time Prepared**	Enter the date (month/day/year) and time (using the 24-hour clock) the form is prepared.
4	**Vehicle/Equipment Category**	Enter the specific vehicle or equipment category (e.g., buses, generators, dozers, pickups/sedans, rental cars, etc.). Use a separate sheet for each vehicle or equipment category.
5	**Vehicle/Equipment Information**	Record the following information:
	Order Request Number	Enter the order request number for the resource as used by the jurisdiction or discipline, or the relevant EMAC order request number.
	Incident Identification Number	Enter any special incident identification numbers or agency radio identifier assigned to the piece of equipment used only during the incident, if this system if used (e.g., “Decontamination Unit 2,” or “Water Tender 14”).
	Vehicle or Equipment Classification	Enter the specific vehicle or equipment classification (e.g., bus, backhoe, Type 2 engine, etc.) as relevant.
	Vehicle or Equipment Make	Enter the vehicle or equipment manufacturer name (e.g., “GMC,” “International”).
	Category/Kind/Type, Capacity, or Size	Enter the vehicle or equipment category/kind/type, capacity, or size (e.g., 30-person bus, 3/4-ton truck, 50 kW generator).
	Vehicle or Equipment Features	Indicate any vehicle or equipment features such as 2WD, 4WD, towing capability, number of axles, heavy-duty tires, high clearance, automatic vehicle locator (AVL), etc.
	Agency or Owner	Enter the name of the agency or owner of the vehicle or equipment.
	Operator Name or Contact	Enter the operator name and/or contact information (cell phone, radio frequency, etc.).
	Vehicle License or Identification Number	Enter the license plate number or another identification number (such as a serial or rig number) of the vehicle or equipment.
	Incident Assignment	Enter where the vehicle or equipment will be located at the incident and its function (use abbreviations per discipline or jurisdiction).

Block Number	Block Title	Instructions
5 (continued)	Incident Start Date and Time	Indicate start date (month/day/year) and time (using the 24-hour clock) for driver or for equipment as may be relevant.
	Incident Release Date and Time	Enter the date (month/day/year) and time (using the 24-hour clock) the vehicle or equipment is released from the incident.
6	**Prepared by** • Name • Position/Title • Signature	Enter the name, ICS position/title, and signature of the person preparing the form.

ICS 219
Resource Status Card (T-Card)

Purpose. Resource Status Cards (ICS 219) are also known as "T-Cards," and are used by the Resources Unit to record status and location information on resources, transportation, and support vehicles and personnel. These cards provide a visual display of the status and location of resources assigned to the incident.

Preparation. Information to be placed on the cards may be obtained from several sources including, but not limited to:

- Incident Briefing (ICS 201).
- Incident Check-In List (ICS 211).
- General Message (ICS 213).
- Agency-supplied information or electronic resource management systems.

Distribution. ICS 219s are displayed in resource status or "T-Card" racks where they can be easily viewed, retrieved, updated, and rearranged. The Resources Unit typically maintains cards for resources assigned to an incident until demobilization. At demobilization, all cards should be turned in to the Documentation Unit.

Notes. There are eight different status cards (see list below) and a header card, to be printed front-to-back on cardstock. Each card is printed on a different color of cardstock and used for a different resource category/kind/type. The format and content of information on each card varies depending upon the intended use of the card.

- 219-1: Header Card – Gray (used only as label cards for T-Card racks)
- 219-2: Crew/Team Card – Green
- 219-3: Engine Card – Rose
- 219-4: Helicopter Card – Blue
- 219-5: Personnel Card – White
- 219-6: Fixed-Wing Card – Orange
- 219-7: Equipment Card – Yellow
- 219-8: Miscellaneous Equipment/Task Force Card – Tan
- 219-10: Generic Card – Light Purple

Acronyms. Abbreviations utilized on the cards are listed below:

- AOV: Agency-owned vehicle
- ETA: Estimated time of arrival
- ETD: Estimated time of departure
- ETR: Estimated time of return
- O/S Mech: Out-of-service for mechanical reasons
- O/S Pers: Out-of-service for personnel reasons
- O/S Rest: Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
- POV: Privately owned vehicle

Prepared by:
Date/Time:

ICS 219-1 HEADER CARD (GRAY)

Prepared by:
Date/Time:

ICS 219-1 HEADER CARD (GRAY)

ICS 219-1: Header Card

Block Title	Instructions
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:

Leader Name:

Primary Contact Information:

Crew/Team ID #(s) or Name(s):

Manifest: ☐ Yes ☐ No	**Total Weight:**

Method of Travel to Incident:
☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other

Home Base:

Departure Point:

ETD:	**ETA:**

Transportation Needs at Incident:
☐ Vehicle ☐ Bus ☐ Air ☐ Other

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-2 CREW/TEAM (GREEN)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-2 CREW/TEAM (GREEN)

ICS 219-2: Crew/Team Card

Block Title	Instructions
ST/Unit	Enter the State and/or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work
# Pers	Enter total number of personnel associated with the crew/team. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline, since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Crew/Team ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this crew/team (e.g., Air Monitoring Team 2, Entry Team 3).
Manifest ☐ Yes ☐ No	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
Total Weight	Enter the total weight for the crew/team. This information is necessary when the crew/team are transported by charter air.
Method of Travel to Incident ☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of travel the individual used to bring himself/herself to the incident. AOV is "agency-owned vehicle." POV is "privately owned vehicle."
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the crew/team's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the crew/team's estimated time of arrival (using the 24-hour clock) at the incident.

Block Title	Instructions
Transportation Needs at Incident ☐ Vehicle ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of transportation at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the crew/team was ordered to the incident.
Remarks	Enter any additional information pertaining to the crew/team.
BACK OF FORM	
Incident Location	Enter the location of the crew/team.
Time	Enter the time (24-hour clock) the crew/team reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the crew/team's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the crew/team's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Leader Name:
Primary Contact Information:
Resource ID #(s) or Name(s):
Home Base:
Departure Point:

ETD:	**ETA:**

Date/Time Ordered:
Remarks:
Prepared by: **Date/Time:**
ICS 219-3 ENGINE (ROSE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by: **Date/Time:**	
ICS 219-3 ENGINE (ROSE)	

ICS 219-3: Engine Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code & any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for the resource(s).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:

Pilot Name:

Home Base:

Departure Point:

ETD: | **ETA:**

Destination Point:

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-4 HELICOPTER (BLUE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-4 HELICOPTER (BLUE)

ICS 219-4: Helicopter Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include the pilot.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Pilot Name:	Enter pilot's name (use at least the first initial and last name).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.
Destination Point	Use this section to enter the location at the incident where the resource has been requested to report.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	Name:	Position/Title:

Front

Date/Time Checked In:

Name:

Primary Contact Information:

Manifest: ☐ Yes ☐ No	**Total Weight:**

Method of Travel to Incident:
☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other

Home Base:

Departure Point:

ETD:	**ETA:**

Transportation Needs at Incident:
☐ Vehicle ☐ Bus ☐ Air ☐ Other

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-5 PERSONNEL (WHITE CARD)

ST/Unit:	Name:	Position/Title:

Back

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	**Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-5 PERSONNEL (WHITE CARD)

ICS 219-5: Personnel Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
Name	Enter the individual's first initial and last name.
Position/Title	Enter the individual's ICS position/title.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Name	Enter the individual's full name.
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Manifest ☐ Yes ☐ No	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
Total Weight	Enter the total weight for the crew. This information is necessary when the crew are transported by charter air.
Method of Travel to Incident ☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of travel the individual used to bring himself/herself to the incident. AOV is "agency-owned vehicle." POV is "privately owned vehicle."
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the crew's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the crew's estimated time of arrival (using the 24-hour clock) at the incident.
Transportation Needs at Incident ☐ Vehicle ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of transportation at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the crew was ordered to the incident.
Remarks	Enter any additional information pertaining to the crew.
BACK OF FORM	
Incident Location	Enter the location of the crew.
Time	Enter the time (24-hour clock) the crew reported to this location.

Block Title	Instructions
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the crew's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the crew's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked-In:

Pilot Name:

Home Base:

Departure Point:

ETD: **ETA:**

Destination Point:

Date/Time Ordered:

Manufacturer:

Remarks:

Prepared by:

Date/Time:

ICS 219-6 FIXED-WING (ORANGE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-6 FIXED-WING (ORANGE)

ICS 219-6: Fixed-Wing Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include the pilot.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Pilot Name:	Enter pilot's name (use at least the first initial and last name).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.
Destination Point	Use this section to enter the location at the incident where the resource has been requested to report.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Manufacturer	Enter the manufacturer of the aircraft.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:

Leader Name:

Primary Contact Information:

Resource ID #(s) or Name(s):

Home Base:

Departure Point:

ETD: | **ETA:**

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-7 EQUIPMENT (YELLOW)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location: | **Time:**

Status:

☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:

☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:

☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:

☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-7 EQUIPMENT (YELLOW)

ICS 219-7: Equipment Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code & any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this resource.
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Leader Name:
Primary Contact Information:
Resource ID #(s) or Name(s):
Home Base:
Departure Point:

ETD:	**ETA:**

Date/Time Ordered:
Remarks:
Prepared by:
Date/Time:
ICS 219-8 MISCELLANEOUS EQUIPMENT/TASK FORCE (TAN)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by:	
Date/Time:	
ICS 219-8 MISCELLANEOUS EQUIPMENT/TASK FORCE (TAN)	

ICS 219-8: Miscellaneous Equipment/Task Force Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available work day that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code & any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number or name for this resource.
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Leader Name:
Primary Contact Information:
Resource ID #(s) or Name(s):
Home Base:
Departure Point:

ETD:	**ETA:**

Date/Time Ordered:
Remarks:
Prepared by:
Date/Time:
ICS 219-10 GENERIC (LIGHT PURPLE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	**Time:**
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by:	
Date/Time:	
ICS 219-10 GENERIC (LIGHT PURPLE)	

ICS 219-10: Generic Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code & any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this resource.
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:	**3. Sunrise:** **Sunset:**

4. Remarks (safety notes, hazards, air operations special equipment, etc.)**:**	**5. Ready Alert Aircraft:** Medivac: New Incident:	**6. Temporary Flight Restriction Number:** Altitude: Center Point:

7. Personnel:	Name:	Phone Number:
Air Operations Branch Director		
Air Support Group Supervisor		
Air Tactical Group Supervisor		
Helicopter Coordinator		
Helibase Manager		

8. Frequencies:	AM	FM
Air/Air Fixed-Wing		
Air/Air Rotary-Wing – Flight Following		
Air/Ground		
Command		
Deck Coordinator		
Take-Off & Landing Coordinator		
Air Guard		

9. Fixed-Wing (category/kind/type, make/model, N#, base)**:**

Air Tactical Group Supervisor Aircraft:

Other Fixed-Wing Aircraft:

10. Helicopters (use additional sheets as necessary)**:**

FAA N#	Category/Kind/Type	Make/Model	Base	Available	Start	Remarks

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:	**3. Sunrise:** **Sunset:**

12. Task/Mission/Assignment (category/kind/type and function includes: air tactical, reconnaissance, personnel transport, search and rescue, etc.)**:**

Category/Kind/Type and Function	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	Mission Start	Fly From	Fly To

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

ICS 220
Air Operations Summary

Purpose. The Air Operations Summary (ICS 220) provides the Air Operations Branch with the number, type, location, and specific assignments of helicopters and air resources.

Preparation. The ICS 220 is completed by the Operations Section Chief or the Air Operations Branch Director during each Planning Meeting. General air resources assignment information is obtained from the Operational Planning Worksheet (ICS 215), which also is completed during each Planning Meeting. Specific designators of the air resources assigned to the incident are provided by the Air and Fixed-Wing Support Groups. If aviation assets would be utilized for rescue or are referenced on the Medical Plan (ICS 206), coordinate with the Medical Unit Leader and indicate on the ICS 206.

Distribution. After the ICS 220 is completed by Air Operations personnel, the form is given to the Air Support Group Supervisor and Fixed-Wing Coordinator personnel. These personnel complete the form by indicating the designators of the helicopters and fixed-wing aircraft assigned missions during the specified operational period. This information is provided to Air Operations personnel who, in turn, give the information to the Resources Unit.

Notes:

- If additional pages are needed for any form page, use a blank ICS 220 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Sunrise/Sunset**	Enter the sunrise and sunset times.
4	**Remarks** (safety notes, hazards, air operations special equipment, etc.)	Enter special instructions or information, including safety notes, hazards, and priorities for Air Operations personnel.
5	**Ready Alert Aircraft** • Medivac • New Incident	Identify ready alert aircraft that will be used as Medivac for incident assigned personnel and indicate on the Medical Plan (ICS 206). Identify aircraft to be used for new incidents within the area or new incident(s) within an incident.
6	**Temporary Flight Restriction Number** • Altitude • Center Point	Enter Temporary Flight Restriction Number, altitude (from the center point), and center point (latitude and longitude). This number is provided by the Federal Aviation Administration (FAA) or is the order request number for the Temporary Flight Restriction.
7	**Personnel** • Name • Phone Number	Enter the name and phone number of the individuals in Air Operations.
	Air Operations Branch Director	
	Air Support Group Supervisor	
	Air Tactical Group Supervisor	
	Helicopter Coordinator	
	Helibase Manager	

Block Number	Block Title	Instructions
8	**Frequencies** • AM • FM	Enter primary air/air, air/ground (if applicable), command, deck coordinator, take-off and landing coordinator, and other radio frequencies to be used during the incident.
	Air/Air Fixed-Wing	
	Air/Air Rotary-Wing – Flight Following	Flight following is typically done by Air Operations.
	Air/Ground	
	Command	
	Deck Coordinator	
	Take-Off & Landing Coordinator	
	Air Guard	
9	**Fixed-Wing** (category/kind/type, make/model, N#, base)	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance, make/model, N#, and base of air assets allocated to the incident.
	Air Tactical Group Supervisor Aircraft	
	Other Fixed-Wing Aircraft	
10	**Helicopters**	Enter the following information about the helicopter resources allocated to the incident.
	FAA N#	Enter the FAA N#.
	Category/Kind/Type	Enter the helicopter category/kind/type based on NIMS, discipline, or jurisdiction guidance.
	Make/Model	Enter the make and model of the helicopter.
	Base	Enter the base where the helicopter is located.
	Available	Enter the time the aircraft is available.
	Start	Enter the time the aircraft becomes operational.
	Remarks	
11	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
12	**Task/Mission/Assignment** (category/kind/type and function includes: air tactical, reconnaissance, personnel transport, search and rescue, etc.)	Enter the specific assignment (e.g., water or retardant drops, logistical support, or availability status for a specific purpose, support backup, recon, Medivac, etc.). If applicable, enter the primary air/air and air/ground radio frequency to be used. Mission assignments may be listed by priority.
	Category/Kind/Type and Function	
	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	
	Mission Start	
	Fly From	Enter the incident location or air base the aircraft is flying from.
	Fly To	Enter the incident location or air base the aircraft is flying to.

DEMOBILIZATION CHECK-OUT (ICS 221)

1. Incident Name:	2. Incident Number:	
3. Planned Release Date/Time: Date: Time:	**4. Resource or Personnel Released:**	**5. Order Request Number:**

6. Resource or Personnel:

You and your resources are in the process of being released. Resources are not released until the checked boxes below have been signed off by the appropriate overhead and the Demobilization Unit Leader (or Planning Section representative).

LOGISTICS SECTION

	Unit/Manager	Remarks	Name	Signature
☐	Supply Unit			
☐	Communications Unit			
☐	Facilities Unit			
☐	Ground Support Unit			
☐	Security Manager			
☐				

FINANCE/ADMINISTRATION SECTION

	Unit/Leader	Remarks	Name	Signature
☐	Time Unit			
☐				
☐				

OTHER SECTION/STAFF

	Unit/Other	Remarks	Name	Signature
☐				
☐				

PLANNING SECTION

	Unit/Leader	Remarks	Name	Signature
☐				
☐	Documentation Leader			
☐	Demobilization Leader			

7. Remarks:

8. Travel Information:

Room Overnight: ☐ Yes ☐ No

Estimated Time of Departure: _____

Actual Release Date/Time: _____

Destination: _____

Estimated Time of Arrival: _____

Travel Method: _____

Contact Information While Traveling: _____

Manifest: ☐ Yes ☐ No

Number: _____

Area/Agency/Region Notified: _____

9. Reassignment Information: ☐ Yes ☐ No

Incident Name: _____

Incident Number: _____

Location: _____

Order Request Number: _____

10. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 221

Date/Time: _____

ICS 221
Demobilization Check-Out

Purpose. The Demobilization Check-Out (ICS 221) ensures that resources checking out of the incident have completed all appropriate incident business, and provides the Planning Section information on resources released from the incident. Demobilization is a planned process and this form assists with that planning.

Preparation. The ICS 221 is initiated by the Planning Section, or a Demobilization Unit Leader if designated. The Demobilization Unit Leader completes the top portion of the form and checks the appropriate boxes in Block 6 that may need attention after the Resources Unit Leader has given written notification that the resource is no longer needed. The individual resource will have the appropriate overhead personnel sign off on any checked box(es) in Block 6 prior to release from the incident.

Distribution. After completion, the ICS 221 is returned to the Demobilization Unit Leader or the Planning Section. All completed original forms must be given to the Documentation Unit. Personnel may request to retain a copy of the ICS 221.

Notes:

- Members are not released until form is complete when all of the items checked in Block 6 have been signed off.
- If additional pages are needed for any form page, use a blank ICS 221 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Planned Release Date/Time**	Enter the date (month/day/year) and time (using the 24-hour clock) of the planned release from the incident.
4	**Resource or Personnel Released**	Enter name of the individual or resource being released.
5	**Order Request Number**	Enter order request number (or agency demobilization number) of the individual or resource being released.
6	**Resource or Personnel** You and your resources are in the process of being released. Resources are not released until the checked boxes below have been signed off by the appropriate overhead and the Demobilization Unit Leader (or Planning Section representative). • Unit/Leader/Manager/Other • Remarks • Name • Signature	Resources are not released until the checked boxes below have been signed off by the appropriate overhead. Blank boxes are provided for any additional unit requirements as needed (e.g., Safety Officer, Agency Representative, etc.).
	Logistics Section ☐ Supply Unit ☐ Communications Unit ☐ Facilities Unit ☐ Ground Support Unit ☐ Security Manager	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.

Block Number	Block Title	Instructions
6 (continued)	**Finance/Administration Section** ☐ Time Unit	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.
	Other Section/Staff ☐	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.
	Planning Section ☐ Documentation Leader ☐ Demobilization Leader	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.
7	**Remarks**	Enter any additional information pertaining to demobilization or release (e.g., transportation needed, destination, etc.). This section may also be used to indicate if a performance rating has been completed as required by the discipline or jurisdiction.
8	**Travel Information**	Enter the following travel information:
	Room Overnight	Use this section to enter whether or not the resource or personnel will be staying in a hotel overnight prior to returning home base and/or unit.
	Estimated Time of Departure	Use this section to enter the resource's or personnel's estimated time of departure (using the 24-hour clock).
	Actual Release Date/Time	Use this section to enter the resource's or personnel's actual release date (month/day/year) and time (using the 24-hour clock).
	Destination	Use this section to enter the resource's or personnel's destination.
	Estimated Time of Arrival	Use this section to enter the resource's or personnel's estimated time of arrival (using the 24-hour clock) at the destination.
	Travel Method	Use this section to enter the resource's or personnel's travel method (e.g., POV, air, etc.).
	Contact Information While Traveling	Use this section to enter the resource's or personnel's contact information while traveling (e.g., cell phone, radio frequency, etc.).
	Manifest ☐ Yes ☐ No Number	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
	Area/Agency/Region Notified	Use this section to enter the area, agency, and/or region that was notified of the resource's travel. List the name (first initial and last name) of the individual notified and the date (month/day/year) he or she was notified.
9	**Reassignment Information** ☐ Yes ☐ No	Enter whether or not the resource or personnel was reassigned to another incident. If the resource or personnel was reassigned, complete the section below.
	Incident Name	Use this section to enter the name of the new incident to which the resource was reassigned.
	Incident Number	Use this section to enter the number of the new incident to which the resource was reassigned.
	Location	Use this section to enter the location (city and State) of the new incident to which the resource was reassigned.
	Order Request Number	Use this section to enter the new order request number assigned to the resource or personnel.

Block Number	Block Title	Instructions
10	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (using the 24-hour clock).

INCIDENT PERSONNEL PERFORMANCE RATING (ICS 225)

THIS RATING IS TO BE USED ONLY FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT

1. Name:	2. Incident Name:	3. Incident Number:
4. Home Unit Name and Address:	**5. Incident Agency and Address:**	
6. Position Held on Incident:	**7. Date(s) of Assignment:** From: To:	**8. Incident Complexity Level:** ☐1 ☐2 ☐3 ☐4 ☐5
9. Incident Definition:		

10. Evaluation

Rating Factors	N/A	1 – Unacceptable	2	3 – Met Standards	4	5 – Exceeded Expectations
11. Knowledge of the Job/ Professional Competence: Ability to acquire, apply, and share technical and administrative knowledge and skills associated with description of duties. (Includes operational aspects such as marine safety, seamanship, airmanship, SAR, etc., as appropriate.)	☐	Questionable competence and credibility. Operational or specialty expertise inadequate or lacking in key areas. Made little effort to grow professionally. Used knowledge as power against others or bluffed rather than acknowledging ignorance. Effectiveness reduced due to limited knowledge of own organizational role and customer needs. ☐	☐	Competent and credible authority on specialty or operational issues. Acquired and applied excellent operational or specialty expertise for assigned duties. Showed professional growth through education, training, and professional reading. Shared knowledge and information with others clearly and simply. Understood own organizational role and customer needs. ☐	☐	Superior expertise; advice and actions showed great breadth and depth of knowledge. Remarkable grasp of complex issues, concepts, and situations. Rapidly developed professional growth beyond expectations. Vigorously conveyed knowledge, directly resulting in increased workplace productivity. Insightful knowledge of own role, customer needs, and value of work. ☐
12. Ability To Obtain Performance/Results: Quality, quantity, timeliness, and impact of work.	☐	Routine tasks accomplished with difficulty. Results often late or of poor quality. Work had a negative impact on department or unit. Maintained the status quo despite opportunities to improve. ☐	☐	Got the job done in all routine situations and in many unusual ones. Work was timely and of high quality; required same of subordinates. Results had a positive impact on IMT. Continuously improved services and organizational effectiveness. ☐	☐	Maintained optimal balance among quality, quantity, and timeliness of work. Quality of own and subordinates' work surpassed expectations. Results had a significant positive impact on the IMT. Established clearly effective systems of continuous improvement. ☐
13. Planning/ Preparedness: Ability to anticipate, determine goals, identify relevant information, set priorities and deadlines, and create a shared vision of the Incident Management Team (IMT).	☐	Got caught by the unexpected; appeared to be controlled by events. Set vague or unrealistic goals. Used unreasonable criteria to set priorities and deadlines. Rarely had plan of action. Failed to focus on relevant information. ☐	☐	Consistently prepared. Set high but realistic goals. Used sound criteria to set priorities and deadlines. Used quality tools and processes to develop action plans. Identified key information. Kept supervisors and stakeholders informed. ☐	☐	Exceptional preparation. Always looked beyond immediate events or problems. Skillfully balanced competing demands. Developed strategies with contingency plans. Assessed all aspects of problems, including underlying issues and impact. ☐
14. Using Resources: Ability to manage time, materials, information, money, and people (i.e., all IMT components as well as external publics).	☐	Concentrated on unproductive activities or often overlooked critical demands. Failed to use people productively. Did not follow up. Mismanaged information, money, or time. Used ineffective tools or left subordinates without means to accomplish tasks. Employed wasteful methods. ☐	☐	Effectively managed a variety of activities with available resources. Delegated, empowered, and followed up. Skilled time manager, budgeted own and subordinates' time productively. Ensured subordinates had adequate tools, materials, time, and direction. Cost conscious, sought ways to cut waste. ☐	☐	Unusually skilled at bringing scarce resources to bear on the most critical of competing demands. Optimized productivity through effective delegation, empowerment, and follow-up control. Found ways to systematically reduce cost, eliminate waste, and improve efficiency. ☐
15. Adaptability/Attitude: Ability to maintain a positive attitude and modify work methods and priorities in response to new information, changing conditions, political realities, or unexpected obstacles.	☐	Unable to gauge effectiveness of work, recognize political realities, or make adjustments when needed. Maintained a poor outlook. Overlooked or screened out new information. Ineffective in ambiguous, complex, or pressured situations. ☐	☐	Receptive to change, new information, and technology. Effectively used benchmarks to improve performance and service. Monitored progress and changed course as required. Maintained a positive approach. Effectively dealt with pressure and ambiguity. Facilitated smooth transitions. Adjusted direction to accommodate political realities. ☐	☐	Rapidly assessed and confidently adjusted to changing conditions, political realities, new information, and technology. Very skilled at using and responding to measurement indicators. Championed organizational improvements. Effectively dealt with extremely complex situations. Turned pressure and ambiguity into constructive forces for change. ☐
16. Communication Skills: Ability to speak effectively and listen to understand. Ability to express facts and ideas clearly and convincingly.	☐	Unable to effectively articulate ideas and facts; lacked preparation, confidence, or logic. Used inappropriate language or rambled. Nervous or distracting mannerisms detracted from message. Failed to listen carefully or was too argumentative. Written material frequently unclear, verbose, or poorly organized. Seldom proofread. ☐	☐	Effectively expressed ideas and facts in individual and group situations; nonverbal actions consistent with spoken message. Communicated to people at all levels to ensure understanding. Listened carefully for intended message as well as spoken words. Written material clear, concise, and logically organized. Proofread conscientiously. ☐	☐	Clearly articulated and promoted ideas before a wide range of audiences; accomplished speaker in both formal and extemporaneous situations. Adept at presenting complex or sensitive issues. Active listener; remarkable ability to listen with open mind and identify key issues. Clearly and persuasively expressed complex or controversial material, directly contributing to stated objectives. ☐

INCIDENT PERSONNEL PERFORMANCE RATING (ICS 225)

1. Name:	2. Incident Name:	3. Incident Number:

10. Evaluation

Rating Factors	N/A	1 – Unacceptable	2	3 – Met Standards	4	5 – Exceeded Expectations
17. Ability To Work on a Team: Ability to manage, lead and participate in teams, encourage cooperation, and develop esprit de corps.	☐	Used teams ineffectively or at wrong times. Conflicts mismanaged or often left unresolved, resulting in decreased team effectiveness. Excluded team members from vital information. Stifled group discussions or did not contribute productively. Inhibited cross functional cooperation to the detriment of unit or service goals. ☐	☐	Skillfully used teams to increase unit effectiveness, quality, and service. Resolved or managed group conflict, enhanced cooperation, and involved team members in decision process. Valued team participation. Effectively negotiated work across functional boundaries to enhance support of broader mutual goals. ☐	☐	Insightful use of teams raised unit productivity beyond expectations. Inspired high level of esprit de corps, even in difficult situations. Major contributor to team effort. Established relationships and networks across a broad range of people and groups, raising accomplishments of mutual goals to a remarkable level. ☐
18. Consideration for Personnel/Team Welfare: Ability to consider and respond to others' personal needs, capabilities, and achievements; support for and application of worklife concepts and skills.	☐	Seldom recognized or responded to needs of people; left outside resources untapped despite apparent need. Ignorance of individuals' capabilities increased chance of failure. Seldom recognized or rewarded deserving subordinates or other IMT members. ☐	☐	Cared for people. Recognized and responded to their needs; referred to outside resources as appropriate. Considered individuals' capabilities to maximize opportunities for success. Consistently recognized and rewarded deserving subordinates or other IMT members. ☐	☐	Always accessible. Enhanced overall quality of life. Actively contributed to achieving balance among IMT requirements and professional and personal responsibilities. Strong advocate for subordinates; ensured appropriate and timely recognition, both formal and informal. ☐
19. Directing Others: Ability to influence or direct others in accomplishing tasks or missions.	☐	Showed difficulty in directing or influencing others. Low or unclear work standards reduced productivity. Failed to hold subordinates accountable for shoddy work or irresponsible actions. Unwilling to delegate authority to increase efficiency of task accomplishment. ☐	☐	A leader who earned others' support and commitment. Set high work standards; clearly articulated job requirements, expectations, and measurement criteria; held subordinates accountable. When appropriate, delegated authority to those directly responsible for the task. ☐	☐	An inspirational leader who motivated others to achieve results not normally attainable. Won people over rather than imposing will. Clearly articulated vision; empowered subordinates to set goals and objectives to accomplish tasks. Modified leadership style to best meet challenging situations. ☐
20. Judgment/Decisions Under Stress: Ability to make sound decisions and provide valid recommendations by using facts, experience, political acumen, common sense, risk assessment, and analytical thought.	☐	Decisions often displayed poor analysis. Failed to make necessary decisions, or jumped to conclusions without considering facts, alternatives, and impact. Did not effectively weigh risk, cost, and time considerations. Unconcerned with political drivers on organization. ☐	☐	Demonstrated analytical thought and common sense in making decisions. Used facts, data, and experience, and considered the impact of alternatives and political realities. Weighed risk, cost, and time considerations. Made sound decisions promptly with the best available information. ☐	☐	Combined keen analytical thought, an understanding of political processes, and insight to make appropriate decisions. Focused on the key issues and the most relevant information. Did the right thing at the right time. Actions indicated awareness of impact of decisions on others. Not afraid to take reasonable risks to achieve positive results. ☐
21. Initiative Ability to originate and act on new ideas, pursue opportunities to learn and develop, and seek responsibility without guidance and supervision.	☐	Postponed needed action. Implemented or supported improvements only when directed to do so. Showed little interest in career development. Feasible improvements in methods, services, or products went unexplored. ☐	☐	Championed improvement through new ideas, methods, and practices. Anticipated problems and took prompt action to avoid or resolve them. Pursued productivity gains and enhanced mission performance by applying new ideas and methods. ☐	☐	Aggressively sought out additional responsibility. A self-learner. Made worthwhile ideas and practices work when others might have given up. Extremely innovative. Optimized use of new ideas and methods to improve work processes and decisionmaking. ☐
22. Physical Ability for the Job: Ability to invest in the IMT's future by caring for the physical health and emotional well-being of self and others.	☐	Failed to meet minimum standards of sobriety. Tolerated or condoned others' alcohol abuse. Seldom considered subordinates' health and well-being. Unwilling or unable to recognize and manage stress despite apparent need. ☐	☐	Committed to health and well-being of self and subordinates. Enhanced personal performance through activities supporting physical and emotional well-being. Recognized and managed stress effectively. ☐	☐	Remarkable vitality, enthusiasm, alertness, and energy. Consistently contributed at high levels of activity. Optimized personal performance through involvement in activities that supported physical and emotional well-being. Monitored and helped others deal with stress and enhance health and well-being. ☐
23. Adherence to Safety: Ability to invest in the IMT's future by caring for the safety of self and others.	☐	Failed to adequately identify and protect personnel from safety hazards. ☐	☐	Ensured that safe operating procedures were followed. ☐	☐	Demonstrated a significant commitment toward safety of personnel. ☐

24. Remarks:

25. Rated Individual (This rating has been discussed with me)**:**

Signature: _____ Date/Time: _____

26. Rated by: Name: _____ Signature: _____

Home Unit: _____ Position Held on This Incident: _____

ICS 225 Date/Time: _____

ICS 225
Incident Personnel Performance Rating

Purpose. The Incident Personnel Performance Rating (ICS 225) gives supervisors the opportunity to evaluate subordinates on incident assignments. THIS RATING IS TO BE USED ONLY FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT.

Preparation. The ICS 225 is normally prepared by the supervisor for each subordinate, using the evaluation standard given in the form. The ICS 225 will be reviewed with the subordinate, who will sign at the bottom. It will be delivered to the Planning Section before the rater leaves the incident

Distribution. The ICS 225 is provided to the Planning Section Chief before the rater leaves the incident.

Notes:

- Use a blank ICS 225 for each individual.
- Additional pages can be added based on individual need.

Block Number	Block Title	Instructions
1	**Name**	Enter the name of the individual being rated.
2	**Incident Name**	Enter the name assigned to the incident.
3	**Incident Number**	Enter the number assigned to the incident.
4	**Home Unit Address**	Enter the physical address of the home unit for the individual being rated.
5	**Incident Agency and Address**	Enter the name and address of the authority having jurisdiction for the incident.
6	**Position Held on Incident**	Enter the position held (e.g., Resources Unit Leader, Safety Officer, etc.) by the individual being rated.
7	**Date(s) of Assignment** • From • To	Enter the date(s) (month/day/year) the individual was assigned to the incident.
8	**Incident Complexity Level** ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Indicate the level of complexity for the incident.
9	**Incident Definition**	Enter a general definition of the incident in this block. This may be a general incident category or kind description, such as "tornado," "wildfire,", "bridge collapse,", "civil unrest," "parade," "vehicle fire," "mass casualty," etc.
10	**Evaluation**	Enter "X" under the appropriate column indicating the individual's level of performance for each duty listed.
	N/A	The duty did not apply to this incident.
	1 – Unacceptable	Does not meet minimum requirements of the individual element. Deficiencies/Improvements needed must be identified in Remarks.
	2 – Needs Improvement	Meets some or most of the requirements of the individual element. IDENTIFY IMPROVEMENT NEEDED IN REMARKS.
	3 – Met Standards	Satisfactory. Employee meets all requirements of the individual element.

Block Number	Block Title	Instructions
	4 – Fully Successful	Employee meets all requirements and exceeds one or several of the requirements of the individual element.
10	5 – Exceeded Expectations	Superior. Employee consistently exceeds the performance requirements.
11	**Knowledge of the Job/ Professional Competence:**	Ability to acquire, apply, and share technical and administrative knowledge and skills associated with description of duties. (Includes operational aspects such as marine safety, seamanship, airmanship, SAR, etc., as appropriate.)
12	**Ability To Obtain Performance/Results:**	Quality, quantity, timeliness, and impact of work.
13	**Planning/Preparedness:**	Ability to anticipate, determine goals, identify relevant information, set priorities and deadlines, and create a shared vision of the Incident Management Team (IMT).
14	**Using Resources:**	Ability to manage time, materials, information, money, and people (i.e., all IMT components as well as external publics).
15	**Adaptability/Attitude:**	Ability to maintain a positive attitude and modify work methods and priorities in response to new information, changing conditions, political realities, or unexpected obstacles.
16	**Communication Skills:**	Ability to speak effectively and listen to understand. Ability to express facts and ideas clearly and convincingly.
17	**Ability To Work on a Team:**	Ability to manage, lead and participate in teams, encourage cooperation, and develop esprit de corps.
18	**Consideration for Personnel/Team Welfare:**	Ability to consider and respond to others' personal needs, capabilities, and achievements; support for and application of worklife concepts and skills.
19	**Directing Others:**	Ability to influence or direct others in accomplishing tasks or missions.
20	**Judgment/Decisions Under Stress:**	Ability to make sound decisions and provide valid recommendations by using facts, experience, political acumen, common sense, risk assessment, and analytical thought.
21	**Initiative**	Ability to originate and act on new ideas, pursue opportunities to learn and develop, and seek responsibility without guidance and supervision.
22	**Physical Ability for the Job:**	Ability to invest in the IMT's future by caring for the physical health and emotional well-being of self and others.
23	**Adherence to Safety:**	Ability to invest in the IMT's future by caring for the safety of self and others.
24	**Remarks**	Enter specific information on why the individual received performance levels.
25	**Rated Individual** (This rating has been discussed with me) • Signature • Date/Time	Enter the signature of the individual being rated. Enter the date (month/day/year) and the time (24-hour clock) signed.
26	**Rated by** • Name • Signature • Home Unit • Position Held on This Incident • Date/Time	Enter the name, signature, home unit, and position held on the incident of the person preparing the form and rating the individual. Enter the date (month/day/year) and the time (24-hour clock) prepared.

1. Incident Name	2. Operational Period (Date/Time) From: To:	DAILY MEETING SCHEDULE ICS 230-CG

3. Meeting Schedule (Commonly-held meetings are included)

Date/ Time	Meeting Name	Purpose	Attendees	Location
	Unified Command Objectives Meeting	Review/ identify objectives for the next operational period.	Unified Command members	UC Meeting Room
	Command and General Staff meeting	UC Presents direction to Command and General Staff	UC, Command Staff, General Staff, DOCL, SITL	ICP Meeting Room
	Tactics Meeting	Develop primary and alternate strategies/ to meet Incident Objectives for the next Operational Period.	PSC, OPS, LSC, RESL, SITL, SOFR, DOCL, COML, THSP	ICP Meeting Room
	Planning Meeting	Review status and finalize strategies/tactics and assignments to meet Incident Objectives for the next Operational Period and get tacit approval of IAP.	UC, Command Staff, General Staff, SITL, DOCL, THSP	ICP Meeting Room
	Operations Briefing	Present IAP and assignments to the Supervisors / Leaders for the next Operational Period.	IC/UC, Command Staff, General Staff, Branch Directors, Div./Grp Sups., Task Force/ Strike Team Leaders and Unit Leaders	ICP Meeting Room

4. Prepared by: (Situation Unit Leader) **Date/Time**

1. Incident Name:					**INCIDENT OPEN ACTION TRACKER ICS-233 CG**		
2. No.	3. Item	4. For/POC	5. Briefed POC (X)	6. Start Date	7. Status	8. Target Date	9. Actual Date
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Purpose. Open Actions Tracker
1. Is used by the Incident Commander/Unified Command (IC/UC) to assign and track tasks/actions to IMT personnel that do not rise to the level of being an Incident Objective.
2. Is duplicated and provided to Command and General Staff members, giving them the open tasks/actions needing to be completed and a means to track the open tasks/actions they have been assigned.
Note: This form may also be used by Command and General Staff for tracking tasks/actions within a Section/Staff element.

Preparation. The Planning Section Chief (PSC) is responsible for maintaining the Open Actions Tracker for the IC/UC and typically utilizes the Documentation Unit Leader (DOCL) to assist in this forms development and updating. The PSC should ensure all Command and General Staff are prepared to discuss their assigned tasks/actions during the Command and General Staff and Planning Meetings.

Distribution. When completed, the form is duplicated and copies are distributed to the Unified Command and Command and General Staff. It is also posted on a status board located at the ICP. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	No.	Enter number of task in sequential order (1, 2, 3, …).
3.	Item	Enter short descriptive of the task/action to be completed. Tasks/Actions are important to be completed but are not an Incident Objective which are documented on the ICS-202 form.
4.	For/POC	Enter the Point of Contact (POC), the responsible person/section.
5.	Briefed to POC	Enter “X”, when the task/action has been briefed to the POC/responsible person. This is to ensure that tasks/actions identified outside of the POC’s presence (during Unified Command Meeting for example) are briefed to and acknowledged by the identified POC.
6.	Start Date	Enter the date the task/action was initially assigned under “Start Date.”
7.	Status	Enter status of item. For example; “Awaiting LE Gear”, “Update needed”, “Awaiting Feedback”. When the item is completed, the word “completed” is entered and if working in MS Excel, the task is cut and pasted into the worksheet labeled “COMPLETED.”
8.	Target Date	Enter deadline task/action should be completed. In the Excel Worksheet, there is a hidden formula that shows green, yellow and red blocks. When the target date is one day away, the block turns yellow. When it is overdue it turns red. When the block is yellow, it serves as a reminder to the UC/POC that the target date is nearing and the POC needs to complete the task or the target date needs to be updated.
9.	Actual Date	Enter actual date task/action completed.

NOTE: In order to ensure the red and yellow reminders work for new tasks, the user simply copies a task line, inserts it into the worksheet and overtypes the new task information.

INCIDENT PROJECT ORDER NUMBER

RESOURCE ORDER	Initial Date/ Time	2. INCIDENT/ PROJECT NAME				3. INCIDENT/ PROJECT ORDER NUMBER	4. OFFICE REFERENCE NUMBER
5. DESCRIPTIVE LOCATION/ RESPONSE AREA		6. SEC	TWN	RNG	Base MDM	8. INCIDENT BASE/ PHONE NUMBER	9. JURISDICTION/ AGENCY
		7. MAP REFERENCE					10. ORDERING OFFICE
11. AIRCRAFT INFORMATION		LAT				LONG	

BEARING	DISTANCE	BASE OR OMNI	AIR CONTACT	FREQUENCY	GROUND CONTACT	FREQUENCY	RELOAD BASE	OTHER AIRCRAFT/ HAZARDS

12. Request Number	Ordered Date/ Time	From	To	QTY	RESOURCE REQUESTED	Needed Date/ Time	Deliver To	To	From	Time	Agency ID	RESOURCE ASSIGNED	ETD	ETA	RELEASED		Time ETA
															Date	To	

13. ORDER RELAYED					ACTION TAKEN	ORDER RELAYED					ACTION TAKEN
Req. No.	Date	Time	To	From		Req. No.	Date	Time	To	From	

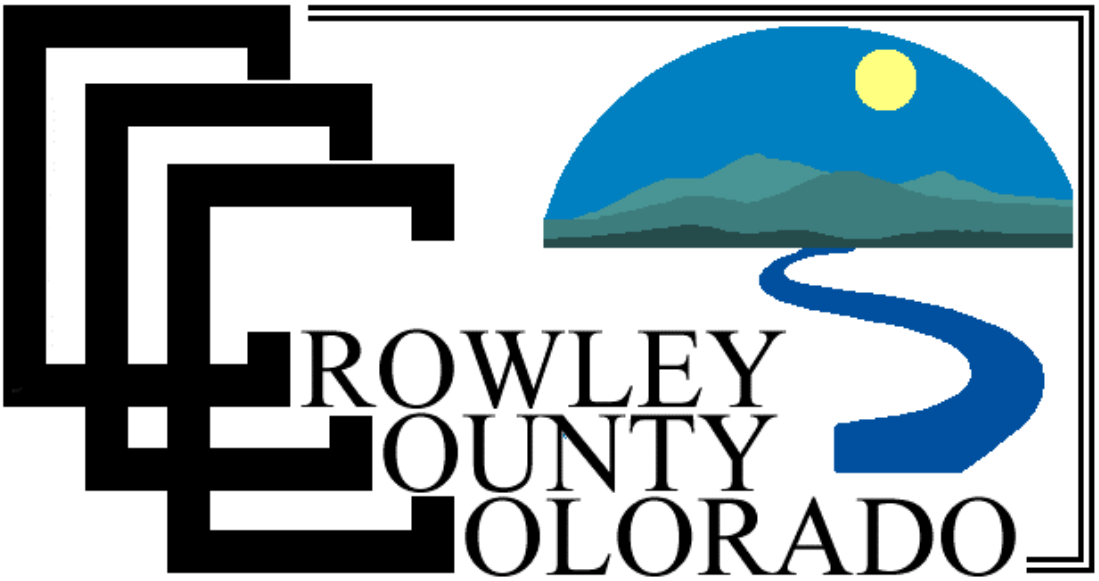
Order No		**RESOURCE ORDER**	2. INCIDENT/ PROJECT NAME	3. INCIDENT/ PROJECT ORDER NUMBER	4. OFFICE REFERENCE NUMBER

12. Request Number	Ordered Date/ Time	From	To	Q T Y	RESOURCE REQUESTED	Needed Date/ Time	Deliver To	To	From	Time	Agency ID	RESOURCE ASSIGNED	ETD	ETA	RELEASED		Time ETA
															Date	To	

ICS 260-2 (7/87) NFES 1470

APPENDIX 9

MUTUAL AID AGREEEMNTS



2021

Southeast Colorado All-Hazards Region Mutual Aid Agreement

2012 Mutual Aid Agreement for Emergency Services

2001 Mutual Aid Agreement for Emergency Services

Colorado State Mutual Aid Agreement

Crowley County/Colorado Department of Corrections MOU

2015 Intergovernmental Agreement to Provide Reciprocity of Ambulance Licensing by the Colorado Counties of Baca, Bent, Crowley, Kiowa, Otero and Prowers

2020 Memorandum of Understanding between Colorado Department of Corrections and Ordway Volunteer Fire Department

2009 Memorandum of Understanding between Colorado Department of Local Affairs, Division of Emergency Management, Colorado Wing Civil Air Patrol (CAP), Colorado Search and Rescue Board, Inc. (CSRB), County Sheriffs of Colorado, Inc. And Commander Air Force Rescue Coordination Center Tyndall Air Force Base Florida

2015 Intergovernmental Agreement for Colorado County Coroners and Medical examiners Mutual Aid and Assistance

2015 Colorado Intergovernmental Agreement for Fire Mutual Aid

Sheriff's Agreement for Short-Term Mutual Aid

Sheriff's Agreement for Long Term Mutual Aid

MUTUAL AID AGREEMENT
FOR
EMERGENCY SERVICES

THIS AGREEMENT made and entered into this 25th day of June, 2012, by and between the Emergency Services Agencies representing, **BACA, BENT, CROWLEY, KIOWA, OTERO and PROWERS** Counties.

WITNESSETH THAT:

WHEREAS, the agencies hereto maintain paid and/or volunteer emergency services, together with personnel and equipment; and

WHEREAS, it is, and will continue to be to the mutual benefit of each of the agencies, to assist the other when necessary in providing additional emergency equipment and personnel for the purpose of delivering emergency services within the boundaries of the other agency, and in turn to receive such assistance; and

NOW THEREFORE, in consideration of the premises and mutual covenants, performances and agreements hereafter set forth, it is mutually understood and agreed between the agencies as follows:

DEFINITIONS:

"Emergency Service Agencies" means any Organization, Department, Special District, Municipality, and/or County that would provide one or all of the following services: Fire Protection, Ambulance Service and Hazardous Material Incident Response.

"Answering Agency" means the agency responding to a request within the boundaries of the Requesting Agency.

"Requesting Agency" means the agency asking for aid under this agreement.

"Coordinator" means the person responsible for the respective agency or his/her and authorized representative.

MUTUAL ASSISTANCE AND AID: Each party hereto agrees to respond to requests for assistance from the other party. The Coordinator of the Answering Agency will determine what personnel and equipment will be sent in each particular situation.

Any request for aid shall include a clear statement of the amount and type of equipment and personnel requested and shall specify the location to which the Answering Agency must respond and check in.

RESPONSE: Each party agrees to respond to calls within the jurisdiction of the other without charge other than as noted below:

Food and Fuel

Upon arrival at the scene of the requesting agency, the answering agency must report to the on-scene coordinator in-charge, to be dispatched as needed.

The answering agency shall be under the immediate supervision and control of the coordinator of the requesting agency.

The answering agency will be released by the requesting agency when the services of the answering agency are no longer needed or when the answering agency is needed within the area for which it normally provides emergency public services.

RESPONSIBILITY/LIABILITY re: PERSONNEL AND EQUIPMENT: Each separate party shall assume full and complete responsibility and liability for its own personnel and equipment during any and all response incidents.

IMMUNITY: The personnel and equipment of each of the agencies, while engaged in performing any mutual aid service, activity or undertaking under the provisions of this agreement, shall have and retain all rights, privileges and immunity of and be deemed to be engaged in service and employment of such agency, notwithstanding that such mutual aid service is being performed in or for that other agency.

WAIVER: Each agency waives all claims against the other agency for compensation for any loss, damage, personal injury or death sustained by personnel, which occurs as a consequence of the performance of this agreement.

EFFECTIVE DATE /TERMINATION: This agreement shall become effective upon the approval and signature by the authorized representatives of the agencies hereto and shall continue until such time as any or all of the agencies gives sixty days advance written notice to the other agencies of the intention to terminate this agreement.

NON-ASSIGNABILITY: This agreement shall be non-assignable by any of the parties without the express written consent of all of the other parties.

INTERPRETATION/ENFORCEMENT: This agreement shall be interpreted and enforced in accordance with the laws of the State of Colorado.

MODIFICATION: No change or modification of this agreement shall be valid unless the same is in writing and signed by all of the parties hereto.

Attachment A: Equipment lists for each County

Attachment B: Contact lists for each County

IN WITNESS WHEREOF, the parties have executed this agreement the day and year first above written.

Adopted this 25th day of June, 2012.

Glen R. "Spike" Ausmus, Chairman
Baca County Board of Commissioners

Bill Long, Chairman
Bent County Board of Commissioners

T.E. (Tobe) Allumbaugh, Chairman
Crowley County Board of Commissioners

Richard Scott, Chairman
Kiowa County Board of Commissioners

Kevin K. Karney, Chairman
Otero County Board of Commissioners

~~Gene Millbrand~~, Chairman, JOE D. MARBLE.
Prowers County Board of Commissioners

Southeastern Colorado

Regional

Mutual

Aid

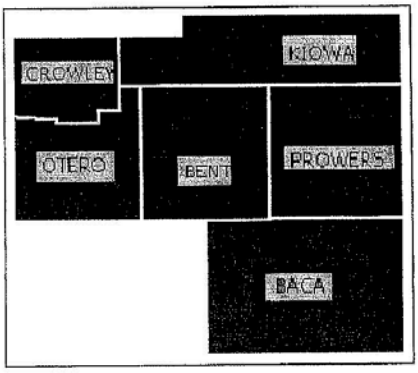
Agreement

For

Emergency Services

Between

Baca, Bent, Crowley, Kiowa, Otero, and Prowers Counties



MUTUAL AID AGREEMENT
FOR
EMERGENCY SERVICES

THIS AGREEMENT, made and entered into this 24th day of May, 2021, by and between the Emergency Services Agencies representing, BACA, BENT, CROWLEY, KIOWA, OTERO AND PROWERS Counties.

WITNESSETH THAT:

WHEREAS, the agencies hereto maintain paid and/or volunteer emergency services, together with personnel and equipment therefore; and

WHEREAS, it is, and will continue to be, to the mutual benefit of each of the agencies, to assist the other when necessary in providing additional emergency equipment and personnel for the purpose of delivering emergency services within the boundaries of the other agency, and in turn to receive such assistance; and

NOW, THEREFORE, in consideration of the premises and mutual covenants, performances and agreements hereafter set forth, it is mutually understood and agreed between the agencies as follows:

1.0 DEFINITIONS:

1.1 "Emergency Service Agencies" means any Organization, Department, Special District, Municipality, and/or County, that would provide one or all of the following services: Fire Protection, Ambulance Service, Hazardous Material Incident Response.

1.2 The agency responding to a request within the boundaries of the other agency is designated as the "answering agency".

1.3 The agency requesting aid under the agreement is designated as the "requesting agency".

1.4 "Coordinator" means the person responsible for the respective service/ company or his/her designated and authorized representative.

2.0 MUTUAL ASSISTANCE AND AID:

2.1 Each of the agencies agree to respond to requests for assistance within the boundaries of the other agency upon request of the requesting coordinator at any and all times, provided that it shall be entirely with the discretion of the coordinator of the answering agency as to what personnel and equipment shall answer such call and whether or not, in any event, such call may be answered consistently with the safety and protection of the citizens and property of the said answering agency.

2.2 Each of the agencies agree to answer calls of the other agency, subject to Approval of each call by the coordinator of the answering agency as set forth in paragraph 2.1 above, without charge therefore, and with the express understanding that personnel and equipment of said answering agency shall be subject only to the liability, workman's compensation, and/or insurance of the answering agency. The equipment and employees of the answering agency shall at all times be under the supervision and control of the coordinator of the requesting agency, or his/her designated assistant.

2.3 Nothing in this agreement shall be construed to create, alter, or delegate the authority of any designated Emergency Response Authority.

3.0 ADDITIONAL PROVISIONS:

3.1 Any request for aid hereunder shall include a clear statement of the Amount and type of equipment and personnel requested, and shall specify the location to which the equipment and personnel are to be dispatched, however, the amount and type of equipment and number of personnel to be furnished shall be determined by a representative of the answering agency.

3.2 The answering agency shall report to the on-scene coordinator in-charge of the requesting agency at the location to which the equipment and personnel is dispatched and shall coordinate all activities with that official. The resources or facilities that are assigned shall be under the immediate supervision of the designated answering agency.

3.3 An answering agency will be released by requesting agency when the services of the answering agency are no longer required or when the answering agency is needed within the area for which it normally provides emergency public services.

3.4 The equipment and personnel of each of the agencies while engaged in performing any mutual aid service, activity or undertaking under the provisions of this Agreement, shall have and retain all rights, privileges and immunity of and be deemed to be engaged in the service and employment of such agency, not withstanding that such mutual aid service is being performed in or for that other agency.

3.5 If at any time the answering agency responds to a mutual aid call where requesting agency is not at the scene, the answering agency will follow their Standard Operating Procedures. However, the answering agency will contact the requesting agency's base for further orders and/or destination site.

3.6 Each agency waives all claims against the other agency for compensation for any loss, damage, personal injury or death sustained by personnel, which occurs as a consequence of the performance of this agreement.

3.7 This agreement shall become effective upon the approval and signature by authorized representatives of the agencies hereto and shall continue until such time as any agency gives sixty (60) days advance written notice to the other agencies of its intention to terminate this Agreement.

3.8 This Agreement may be supplemented with various exhibits to be alphabetically designated in chronological order of adoption and signed by the respective agencies. These exhibits may set forth specific areas of first response, additional protocol areas of first response, additional protocol, and other communications and procedural matters.

END

IN WITNESS WHEREOF, the duly authorized representatives of the respective agencies hereto have hereunto signed these presents of the dates respectively indicated.

BACA COUNTY:

Campo Fire Department	Title	8-30-02 Date
Pritchett Vol. Fire Department	Chief Title	10-26-02 Date
Southeast Colo Hosp. Amb. Service	EMS Director Title	5-22-02 Date
Springfield Fire Department	Fire Chief Title	8-25-02 Date
Two Buttes Vol. Fire Department	Fire Chief Title	7-20-02 Date
Walsh Dist. Hosp. Amb. Service	Walsh EMS Director Title	5-27-02 Date
Walsh Fire Department	Fire Chief Title	6-2-02 Date

BENT COUNTY:

Bent County Ambulance Service	EMS Board Title	12-24-01 Date
Hasty/Mclave Rural Fire Dist.	Chief Title	7-16-01 Date
Las Animas/Bent County Fire Dept.	Chief Title	7-16-01 Date

CROWLEY COUNTY:

Crowley County Ambulance Service	Amb. Director Title	7-7-01 Date
Crowley Fire Department	Chief Title	7-7-01 Date
Olney Springs Fire Department	Chief Title	7-8-01 Date
Ordway Fire Department	Chief Title	7-9-01 Date
Sugar City Fire Department	Chief Title	7-9-01 Date

KIOWA COUNTY:

Eads Fire Department	Fire Chief Title	11/26/02 Date
Kiowa County Ambulance Service	Ambulance Board Director Title	12/10/02 Date
Kiowa County Search and Rescue	County Fire Chief Title	11-26-02 Date

OTERO COUNTY:

Fowler Rural Fire Department	fire chief Title	5-24-01 Date
La Junta Rural Fire Prot. District	FIRE Chief Title	5-24-01 Date
Manzanola Fire Department	FIRE CHIEF Title	5-30-01 Date
Manzanola Quick Response Unit	Chairman Title	5-30-01 Date
Rocky Ford Fire Department	Fire Chief Title	5/31/01 Date

PROWERS COUNTY:

Granada Fire Department	FIRE CHIEF Title	11-13-02 Date
Holly Vol. Fire Department	Fire Chief Title	5-21-02 Date
Holly Ambulance Service	Chief Title	5-21-02 Date
Lamar Fire Department	Fire Chief Title	1/7/2002 Date
Prowers County Fire Department	Fire Chief Title	1/7/2002 Date
Wiley Fire Department	Res Board. Title	12-3-02 Date
Colorado State Patrol	Chief Title	2/4/02 Date

AN INTERGOVERNMENTAL AGREEMENT TO PROVIDE RECIPROCITY OF AMBULANCE LICENSING BY THE COLORADO COUNTIES OF BACA, BENT, CROWLEY, KIOWA, OTERO, AND PROWERS

AGREEMENT entered into the day and year hereinafter set forth by the Counties of Baca, Bent, Crowley, Kiowa, Otero and Prowers in the State of Colorado,

Recitals

The parties hereto wish to enter into an agreement providing for reciprocity of ambulance licensing in their respective Counties, which is intended to provide to the citizens of each County emergency medical and trauma services, and

This Agreement among said Counties is entered into pursuant to Article XIV, Section 18 of the Colorado Constitution and C.R.S. 29-1-203, which provisions provide for government entities to cooperate and contract with one another to provide any lawful governmental function or service, and

This Agreement is also entered into pursuant to the provisions of the Colorado Emergency Medical and Trauma Services Act, C.R.S. 25-3.5-101 et seq.,

NOW THEREFORE, the parties hereto agree as follows:

1. Reciprocal Licensing. The parties agree that a license issued to an ambulance provider by the County in which the ambulance service is based shall be accepted as valid in the other Counties which are parties to this Agreement. Each County shall accept the licensing and inspection procedures as valid as conducted by another County. Each County will grant to such ambulance service reciprocity for the validity of such licensing and ambulance inspection by another County. This will avoid duplication of such licensing and inspection procedures and avoid unnecessary expense for ambulance providers.

2. Proof of Licensing. Each County shall provide notice to the other Counties of licenses issued to ambulance services which are based in that County. Each County agrees to maintain a current list of ambulance service licensees so that the other Counties which are parties to this Agreement will be advised of which licensees are entitled to reciprocity under this Agreement.

3. Multi-County Licensing. This reciprocity agreement is intended to apply to ambulance services which are based in one County, but from time to time are engaged in mutual aid calls and normal transport runs to and from the County in which the ambulance service is based. However, if an ambulance service wishes to do business and be based in more than one County, then such ambulance service provider shall be required to obtain approval from and be licensed in each County in which such provider is based.

4. Term of Agreement. This Agreement shall be valid when approved by all parties to this Agreement, and shall be valid through December 31, 2015. This Agreement shall be automatically renewed on an annual basis. However, any County reserves the right to terminate this Agreement at any time by providing notice of termination to the other Counties upon not less than 30 days prior written notice.

5. Miscellaneous. This Agreement is intended to benefit each County which is a party to this Agreement. There is no private cause of action under this Agreement. No County will be obligated to provide indemnity to any other County. Each County reserves governmental immunity as provided by law. In the event of a public records demand pursuant to the Colorado Open Records Act, the Counties shall cooperate in providing a response to such request. This Agreement may not be assigned by any party to another party without the written consent of all parties to this Agreement. This Agreement shall be interpreted under the laws of the State of Colorado.

BOARD OF COUNTY COMMISSIONERS
BACA COUNTY, COLORADO

Attest:

County Clerk
Date signed: August 31, 2015

BOARD OF COUNTY COMMISSIONERS
BENT COUNTY, COLORADO

Attest:

County Clerk
Date signed: Aug 26, 2015

BOARD OF COUNTY COMMISSIONERS
CROWLEY COUNTY, COLORADO

Attest:

County Clerk
Date signed: 10-09-15, 2015

BOARD OF COUNTY COMMISSIONERS
KIOWA COUNTY, COLORADO

Attest:

County Clerk
Date signed: 09-15-15, 2015

BOARD OF COUNTY COMMISSIONERS
OTERO COUNTY, COLORADO

Attest:

County Clerk
Date signed: October 5, 2015

BOARD OF COUNTY COMMISSIONERS
PROWERS COUNTY, COLORADO

Attest:

County Clerk
Date signed: 10-13-, 2015

Memorandum of Understanding

between

Colorado Department of Corrections

and

Ordway Volunteer Fire Department

THIS AGREEMENT has been made by and between the Ordway Volunteer Fire Department ("Fire Department") and the Colorado Department of Corrections (CDOC), singly referred to as an "Agency" and collectively referred to as "Agencies," This Memorandum of Understanding (MOU) is for the purpose of facilitating emergency response cooperation between the Agencies for the CDOC facilities, buildings, operations, and other properties associated with the Arkansas Valley Correctional Facility;

WHEREAS, CDOC requests Fire Department to provide certain fire prevention, fire suppression, and hazardous materials services to and for the benefit of CDOC, and Fire Department is agreeable to providing fire prevention, fire suppression and hazardous materials services and assistance to CDOC;

WHEREAS, Fire Department has authorities and responsibilities as defined in state statutes, rules, and policy to serve as the responsible Fire Department within the fire district;

WHEREAS, the state of Colorado, acting by and through CDOC, shall remain the authority of jurisdiction under the State Buildings Programs of the Office of the State Architect (OSA), rules, policies, and adopted codes; and

WHEREAS, Fire Department has the statutory authority as the Designated Emergency Response Authority (DERA), the agency that is responsible for all operations related to a hazardous materials incident.

NOW THEREFORE, the Agencies agree as follows:

A. POINT OF CONTACT INFORMATION

1. Ordway Volunteer Fire Department

	Primary Representative	Alternative Contact
Name:	Jesus Hernandez	Norman Clark
Title:	Chief	Asst. Chief
Telephone:	719-267-5230	719-267-5230
Mailing Address:	611 E. 9th St. Ordway, Co. 81063	611 E. 9th St. Ordway, Co. 81063
Email Address:	Jessh8816@gmail.com	N/A

2. **CDOC Contact Information**

	Primary Representative	Alternative Contact
Name:	Sean Pruitt	Michael Montanez
Title:	Warden	Life Safety Coordinator
Telephone:	719-267-5003	719-267-5017
Mailing Address:	12750 Hwy. 96 & Lane 13 Ordway, CO 81034	12750 Hwy. 96 & Lane 13 Ordway, CO 81034
Email Address:	Sean.pruitt@state.co.us	Michael.montanez@state.co.us

3. The Point of Contact (POC) for each Agency, facility, or property shall be as indicated above.

4. Each Agency, without invalidating this MOU, may: (a) assign different representatives; (b) redefine their authorities and responsibilities; and (c) establish such representatives as "designated representative' for the Agency for particular responsibilities. Each Agency shall endeavor to notify the other Agency in a timely manner of such new contact information without the need to formally revise this MOU.

5. **Colorado Department of Corrections Key Personnel**

   a. **Executive Director**

   The Executive Director is the individual with the ultimate authority as representative of CDOC.

   b. **Director of Prison Operations**

   The Director of Prison Operations is the CDOC individual designated as the administrative head and authorized representative for prison operations throughout CDOC.

   c. **Warden**

   The CDOC facility Warden is the individual designated as the administrative head and authorized representative for specific facilities or properties. The Warden has the authority to delegate responsibilities to designated representatives for specific facilities or properties.

   d. **Life Safety Coordinator**

   The Life Safety Coordinator serves under the authority of the Warden for each CDOC facility. The Life Safety Coordinator is responsible for emergency preparedness, fire safety code compliance, and coordination of inspections.

   e. **Facilities Management Services**

   The CDOC Facilities Management Services oversees regulatory agency and code compliance for CDOC facilities and properties, including representation by the OSA Delegate, and the Life Safety Administrator for the CDOC.

   Colorado Department of Corrections
   Facilities Management Services
   1250 Academy Park Loop
   Colorado Springs, CO 80910
   Telephone (general business): (719) 226-4600
   Fax: (719) 226-4605

6. **Fire Department Key Personnel**

   a. **Fire Chief**

   The Fire Chief is the individual with the authority as representative of Fire Department.

   b. **Fire Department Officer in Charge**

   The Fire Department Officer in Charge is the individual with command authority for Fire Department personnel at an emergency incident.

   c. **Inspector**

   An Inspector is an individual certified as Fire Inspector I by the state of Colorado Division of Fire Prevention and Control (or equivalent certification at the discretion of CDOC) who performs inspections of fire prevention and suppression controls as installed or implemented in buildings, facilities, operations, and other properties within the Fire Department's jurisdiction.

7. **Designees**

   Each of the Agencies' Key Personnel and POCs may designate and authorize another person to act, serve, or make decisions in their stead. References to their titles in this MOU shall be deemed to also include their designees.

B. FIRE PREVENTION:

1. Annual Inspections shall be conducted as required by statute, rule, policy, code or standard for CDOC facilities, buildings, operations, and other properties. The CDOC POC may request additional inspections for each facility.
2. The Fire Chief and CDOC POC for each facility shall coordinate the scheduling of inspections at least seventy-two (72) hours prior to the inspection. The inspections may be conducted in the presence of the Fire Chief, at his discretion or at the request of the CDOC POC, or their designated representatives.
3. CDOC shall conduct, or cause to be conducted, such mandated or requested inspections. Inspections shall be conducted by an Inspector certified as Fire Inspector I by the state of Colorado Division of Fire Prevention and Control ("DFPC" or equivalent certification at the discretion of the CDOC).
4. In the event that Fire Department does not have the staff or resources to conduct such inspections, CDOC may, at its sole discretion and expense, contract for inspection services. Fire Department will be notified of such inspections and provided with inspection reports within fourteen (14) calendar days of completion of the inspection, with a copy of the report sent to the Life Safety Coordinator and FMS Life Safety Administrator.
5. CDOC shall conduct, or cause to be conducted, Plan Reviews for all Capital Construction and Controlled Maintenance projects through an approved OSA Plan Review Agent. DFPC shall be the Authority Having Jurisdiction (AHJ) for fire suppression and alarms plan review, permitting, and inspections.
6. Fire Department, as the Local Jurisdiction, shall conduct plan reviews and inspections utilizing the fire code adopted by Fire Department. In the event that Fire Department has not adopted a recognized fire code, the fire code adopted by OSA or DFPC at the time of such plan review or inspection shall be utilized. Fire Department shall complete the Plan Reviews within thirty (30) calendar days of the date of submission. Fire Department shall also conduct inspections of these projects subject to the provisions of this MOU.
7. Testing of fire protection, suppression or alarm systems shall be coordinated by the Life

Safety Coordinator. Testing criteria and methodology shall be based on IFC and NFPA 72 (adopted by OSA and DFPC) at the time of such testing. Fire Department and Life Safety Administrator will be notified of such testing and provided with testing reports.

8. Under the authority of the Warden, the Life Safety Coordinator and the Life Safety Administrator shall be responsible for coordination and scheduling of inspections and distribution of reports and tests to the Agencies as required by statute, rule, policy, and this MOU.

9. Corrective action recommended by Fire Department in plan review or inspection comments shall reference specific fire code provisions, and is subject to OSA and CDOC discretion and the state of Colorado's laws, policies, and rules for funds being appropriated, budgeted, and otherwise made available to CDOC. CDOC shall prepare a written plan of action within thirty (30) days of receipt of plan review or inspection comments regarding specific measures, as determined by OSA and CDOC, to address such corrective action.

C. EMERGENCY FIRE SUPPRESSION:

1. The CDOC staff requesting emergency Fire Department response shall describe the specific fire emergency incident in as much detail as possible.

2. The CDOC facility reporting the emergency shall assign at least one (1) staff member to serve as the Emergency Contact Person for the emergency incident. The Emergency Contact Person shall mobilize at the facility checkpoint or the facility entrance, as applicable, to meet and direct incoming Fire Department equipment and personnel. CDOC staff shall accompany the Fire Department Officer in Charge of the incident to the scene of the emergency incident and act as escort, advisor, and emergency contact person relative to Fire Department access and fire suppression systems.

3. The Fire Department Officer in Charge shall be responsible for all Fire Department operations related to the emergency incident. The Fire Department Officer in Charge shall assess manpower and equipment requirements for all Fire Department operations related to the emergency incident. The Fire Department Officer in Charge shall advise the CDOC Emergency Contact Person of the need to deploy additional equipment and manpower to the scene of the emergency incident. The CDOC Emergency Contact Person shall coordinate escorts for the additional Fire Department equipment and personnel. In the event that additional Fire Department personnel are not transported in Fire Department equipment, including volunteer fire fighters, CDOC shall provide transportation as deemed necessary by CDOC.

4. Fire Department equipment and personnel shall not be expected to deploy and provide emergency response services in a situation that is unsecured from offenders. CDOC security personnel shall, to the extent possible, evacuate offenders from the scene of the emergency incident and the immediate area of the Fire Department equipment and personnel.

5. Following Fire Department deployment and prior to departure from the scene, the Fire Department Officer in Charge shall advise the CDOC POC for each facility of any safety or fire hazard issues related to the emergency incident and Fire Department response.

6. Following the Fire Department deployment, the Fire Department Officer in Charge and the CDOC POC for each facility shall inspect all Fire Department equipment for damage or vandalism. In the event of damage or vandalism, an incident report shall be initiated prior to departure of the affected Fire Department equipment.

D. HAZARDOUS MATERIALS INCIDENTS:

1. The CDOC staff requesting any Fire Department or DERA response shall describe the specific hazardous materials incident including specific hazardous materials substance(s), extent of contamination, and involvement of inhabited areas in as much detail as possible.
2. The CDOC facility shall maintain for use by the DERA and Fire Department a current list of all Material Safety Data Sheets (MSDS) on hazardous materials. CDOC shall ensure this documentation is readily available to CDOC, DERA, and Fire Department staff at the facility location.
3. The Agencies shall coordinate response activities with the DERA.
4. Security and other provisions for "Fire Suppression" listed in paragraphs C.1 through C.6 above shall apply to hazardous materials incidents.

E. FIRE PLANS:

1. The Warden of the CDOC facility shall prepare a Fire Plan including, but not limited to, fire safety and evacuation plans for emergency response and evacuation, and shall provide the Fire Plan to Fire Department on an annual basis for review.
2. CDOC maintains Emergency Operating Plans (EOP) and conducts Emergency Alert Drills (EAD) including periodic training exercises or tests of the EOP. Fire Department, after prior coordination with CDOC, may join in any training exercises.
3. CDOC will endeavor to minimize requests for Fire Department response to non-emergency exercises, unless previously agreed to by the Fire Chief.

F. GENERAL PROVISIONS:

1. **Integration and Formality of Changes**: This MOU is intended to be the complete integration of all understandings between the Agencies unless otherwise stated herein.
   a. With the exception of changes to Point of Contact information per paragraph A above, no prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein by writing. No subsequent notation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a written agreement executed and approved by the appropriate authorities.
   b. Effective upon the final signature and execution of this MOU, all prior agreements or memoranda of understanding on the same subject (fire district services and support) are terminated.
2. **Legal Authority**: The person or persons signing and executing this MOU do hereby warrant and guarantee that they have full authorization to execute this MOU.
3. **Fiscal Obligation by CDOC**: CDOC will execute a commitment voucher prior to the creation of any financial obligation incurred by the CDOC.
4. **Non-Binding Dispute Resolution**: Any failure of either party to perform in accordance with the terms of this MOU shall constitute a breach of the MOU.
   a. Should either party to this MOU object by written notification to the other party, regarding any action carried out or proposed subject to this MOU, the notified party shall respond in writing to the objecting party within fourteen (14) calendar days.
   b. Within fourteen (14) calendar days from the date of the written response, the Agencies, including the POCs, shall convene a meeting to attempt to resolve informally any disputes or alleged breaches concerning performance under this MOU.

c. During the course of dispute resolution, the parties agree to maintain good-faith efforts to perform under the terms of this MOU.

d. The preceding steps shall be completed prior to filing a court action regarding any dispute arising from this MOU, except actions filed by or against a third party.

e. The Agencies will consult during this period to seek agreement on amendments to the MOU, or to take other actions that would avoid termination.

5. **Term and Termination**: This MOU shall become effective upon the approval and signature by the authorized representatives of the agencies hereto, and shall continue until such time as either agency gives thirty (30) days of advance written notice of termination to the other agency. The parties will consult during this period under the provisions of non-binding dispute resolution (above) to seek agreement on amendments or other actions that would avoid termination. The agencies agree to conduct a good faith review of this MOU on or after the five (5) year anniversary of the execution date, without invalidating this MOU.

ACCORDINGLY, the duly authorized representatives of the respective Agencies to this MOU hereby sign and date as indicated below.

Ordway Volunteer Fire Department

By: _____ Manager Emergency Manager Date: 6-10-2020
John Reitan
Authorized Representative Title

Colorado Department of Corrections:

By: _____ Date: _____
Deb Goheen Director, Administration & Finance, CDOC

By: _____ Date: _____
Sean Pruitt Warden, Arkansas Valley Correctional Facility

By: _____ Date: _____
Travis Trani Director of Prisons, CDOC

END OF MEMORANDUM OF UNDERSTANDING

INTERGOVERNMENTAL AGREEMENT FOR EMERGENCY MANAGEMENT

WITNESSETH THAT:

WHEREAS, intergovernmental agreements to provide functions or services, including the sharing of costs of such services or functions, by political subdivisions of the State of Colorado are specifically authorized by Section 29-1-203 C.R.S. (1986) and other sections of the C.R.S.; and

WHEREAS, establishment of an intergovernmental agreement will serve a public purpose and will promote the safety, security, and general welfare of the inhabitants of the jurisdictions; and

WHEREAS, the jurisdictions hereto are each authorized to provide, establish, and maintain disaster emergency services as defined by each jurisdiction; and

WHEREAS, disaster emergencies may arise in one or more of the jurisdictions, resulting in greater demands than the personnel and equipment of that jurisdiction can handle, and

WHEREAS, it is in the best interest of each of the jurisdictions that it may have service of and from the other jurisdictions to assist it in reacting to disaster emergencies; and

WHEREAS, other jurisdictions who provide similar resources may in the future desire to be included in this agreement; and

WHEREAS, it is in the best interests of each of the jurisdictions to have access to emergency resources to supplement their own during an emergency; and

WHEREAS, to receive the resources cited above, it is cost effective for each of the jurisdictions to make available during disaster emergencies, its own resources to other affected jurisdictions.

NOW THEREFORE, IT IS MUTUALLY AGREED by and between each of the signatory jurisdictions as follows:

1. a. This intergovernmental Agreement is promulgated under the provision of Article 1, the relevant portions of Articles 5 and 22, Title 29, and 24-32-2105 C.R.S. The statute shall control in case of conflict between this agreement and the statute. Each and every term, provision, or condition herein is subject to and shall be construed in accordance with the provisions of Colorado law, the Charters of the various jurisdictions, and the ordinances and regulations enacted pursuant thereto.

b. It is understood and agreed by the jurisdictions hereto that if any part, term or provision of this Agreement is by the courts held to be illegal or in conflict with any law of the State of Colorado, or of the United States of America, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the jurisdictions shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

c. All terms and words herein shall have the same definition as provided in Titles 24 and 29 of C.R.S. except as herein otherwise indicated. "Disaster Emergency" shall have the same definition as provided for "Disaster" at 24-32-2103 (1) C.R.S. Where terms and words herein are not so defined they shall have the commonly accepted definition.

2. This Agreement provides for the joint exercise by the jurisdictions of the function or service provided herein, but does not establish a separate legal entity to do so, nor does it constitute any jurisdiction as an agent of any other jurisdiction for any purpose whatsoever. This Agreement shall provide only for sharing of in-kind resources by the jurisdictions.

3. For and in consideration of the promises of each participating jurisdiction, each agrees with the others that in the event there are disaster emergencies in the territory served by one jurisdiction which are beyond the capabilities of that jurisdiction, subject to the limitations herein set forth, will assist the other, by causing and permitting its resources to be used in responding to each disaster emergencies in the other jurisdiction. The need for such assistance shall be determined by the jurisdiction requesting assistance, subject however, to the following limitations:

a. Any of the signatory jurisdictions shall be excused from making their resources available or continuing to make their resources available, to any of the other jurisdictions, in the event of the need of the resources of such jurisdiction within the territorial area of such jurisdiction or any other jurisdiction, or their prior use at any other place. Such decision of availability shall be made by the jurisdiction requested to give mutual aid, and such decision shall be conclusive and in the providing jurisdiction's sole discretion.

b. Mutual aid response by any jurisdiction beyond the political boundary of the responding jurisdiction is hereby deemed to be approved by the respective Executive and Legislative governing bodies of the jurisdictions, and such response shall require no further approval by responsible officials of any jurisdiction, except as provided by the limitations in Article 3 a (above).

4. Each jurisdiction shall, at all times, be responsible for its own costs incurred in the performance of this Agreement, and shall not receive any reimbursement from any other jurisdiction, except for third party reimbursement under Article 7, and except as may be negotiated and agreed to separately, in writing, by both the requesting and receiving jurisdictions.

5. Each jurisdiction waives all claims and causes of action against all of the other jurisdictions for compensation, damage, personal injury or death occurring as a consequence, direct or indirect, of the performance of this agreement, to the extent permitted by, and without waiving any protections or other provisions of, the Colorado Governmental Immunity Act.

6. Each jurisdiction agrees to allow any other governmental jurisdiction defined under Colorado law to join in this Mutual Aid Agreement after formal approval by its governing body and notification by the depository cited in Article 13 of such action to each of the other signatory jurisdictions to this Agreement. Each party who initially executes this agreement delegates to the office of the person executing this agreement, or such other parties as they may further designate in writing, the authority to execute such amendments as may be necessary in the future to accommodate the joinder of new jurisdictions to this Agreement, without change of any other terms or conditions of the Agreement.

7. Each jurisdiction agrees that it will reasonably pursue any legal reimbursement possible, pursuant to state or federal law, for incidents including, but not limited to, hazardous materials incidents, occurring within its jurisdiction, on behalf of all assisting jurisdictions. Upon payment by the responsible entity, and after subtracting the reasonable costs of pursuing and collecting the reimbursement the receiving jurisdiction will distribute the received funds in a fair and equitable manner to assisting jurisdictions, based upon a pro rata share of their documented expenses for the involved incident.

8. Nothing contained in this agreement, and no performance under this Agreement by personnel of the jurisdictions hereto, shall in any respect alter or modify the status of officers, agents, or employees of the respective jurisdictions for purposes of worker's compensation or their benefits or entitlements, pension, levels or types of training, internal discipline, certification, or rank procedures, methods, or categories, or for any purpose, or condition or requirement of employment. Worker's Compensation Coverage shall be as structured in C.R.S. 29-5-109, if the request meets the requirements of C.R.S. 29-5-103 through 108, otherwise the claim shall be processed as if it were generated by any other work assignment within the providing jurisdiction. The providing jurisdiction shall remain responsible for processing any worker's compensation claims filed by their own resources.

9. This Agreement shall be binding upon the successors and assigns of each of the jurisdictions hereto, except that no jurisdiction may assign any of its rights or obligations hereunder, without the prior written consent of two-thirds (2/3) of the other signatory jurisdictions.

10. It is expressly understood and agreed that enforcement of the terms and conditions of the Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the named jurisdictions hereto, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such Agreement. It is the express intention of the named jurisdictions that any person other than the named jurisdictions receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

11. Amendments to this Agreement may be made only upon unanimous consent by all then current signatory jurisdictions. Such consent shall become effective upon its receipt in writing at the depository cited below in Article 13.

12. Any jurisdiction hereto may terminate this Agreement, with or without cause, upon thirty (30) days prior written notice to the signature depository provided below.

13. This Agreement shall be executed by each jurisdiction on a separate signature page. Original signature pages will be held by the Colorado Division of Emergency Management (DEM) or its successor agency, at its offices at 9195 East Mineral Avenue, Suite 200, Centennial, Colorado 80112 or at such other place as DEM shall determine. Copies of signature pages shall be provided and certified by DEM to each party jurisdiction, and such copies shall have the full force and effect as if they were originals. DEM shall provide timely notice to all party jurisdictions of any additions to and withdrawals of party jurisdictions, as well as timely notice of the effective date of any amendment to this Agreement.

As outlined in the foregoing Intergovernmental Agreement, the below designated jurisdiction executes this Agreement on the most recent date indicated below.

JURISDICTION:

_____

By:

_____

Title:

_____

Date:

_____

Approved as to:

_____

By:

_____

Date:

_____

Approved as to:

_____

By:

_____

Date:

_____

OTHER:

ATTEST AS TO
SIGNATURES:_____

Title:

_____

Date:

_____

Intergovernmental Agreement for
Colorado County Coroners and Medical Examiners
Mutual Aid and Assistance

HIS INTERGOVERNMENTAL AGREEMENT (IGA) is made and entered into effective as of the 11th day of September, 2015, AD between each governmental entity, board of county commissioners, and coroner's office in the state of Colorado that adopt and sign this Agreement.

WITNESSETH:

WHEREAS, intergovernmental agreements to provide functions or services, including the sharing of costs of such services or functions, by political subdivisions of the State of Colorado, are specifically authorized by C.R.S. § 29-1-203, and other sections of the Colorado Revised Statutes, and

WHEREAS, the Jurisdictions are each authorized to provide, establish, and maintain disaster emergency services as defined by each Jurisdiction, and

WHEREAS, the Jurisdictions wish to reduce vulnerability of local and regional Jurisdictions to overwhelming loss of life in disaster or epidemic episodes, and

WHEREAS, disaster emergencies may arise in either one, or more than one of the Jurisdictions resulting in greater demands than the personnel and equipment of that/those Jurisdiction(s) can handle.

WHEREAS, it is in the best interest of the Jurisdictions that they may have services of and from other Jurisdictions to assist in reacting to disaster emergencies, and

WHEREAS, it is in the best interests of each of the Jurisdictions to have access to emergency resources to supplement their own during an emergency and in recovery, and

WHEREAS, it is in the best interests of each of the Jurisdictions to plan, prepare, train and exercise for the prompt identification and handling of dead bodies, and

WHEREAS, to receive the resources cited above, it is cost effective for each of the Jurisdictions to make available during disaster emergencies their own resources to other affected Jurisdictions, and each Jurisdiction now wishes to do so pursuant to this Intergovernmental Agreement (IGA), and

WHEREAS, there may be some occasions where a local Jurisdiction may not have coroner/medical examiner services, equipment, or supplies available to them in time of need,

NOW, THEREFORE, based on the foregoing recitals, and in consideration of the foregoing recitals, and in consideration of the mutual agreements contained herein, and subject to the terms and conditions stated herein, the undersigned parties agree as follows:

1. Authority, Validity, Severability, and Jurisdiction.
    A. This IGA is promulgated under the relevant portions of:
        1) The Colorado Disaster Emergency Act was established for the purposes stated in §24-33.5-702, C.R.S. Those purposes include, among other things, authorizing and providing for cooperation in disaster prevention, preparedness, response, and recovery.
        2) Colorado Revised Statue §30-10-606, requires the coroner, in cooperation with law enforcement, to make all proper inquiry in order to determine and cause and

manner of death of any person in his or her jurisdiction who has died under various circumstances. Those circumstances include, but are not limited to: hazardous or contagious disease which may constitute a threat to the health of the general public, unnatural deaths as a result of external influences, violence or injury; deaths resulting from accidents.

B. Statutes shall control in case of conflict between this agreement and statute. Each and every term, provision, or condition herein is subject to and shall be construed in accordance with the provisions of Colorado law, the charters of the Jurisdictions (if applicable), and the ordinances and regulations enacted pursuant hereto.

C. It is understood and agreed by the Jurisdictions hereto that if any part, term or provision of this IGA is by the courts held to be illegal or in conflict with any law of the State of Colorado, or of the United States of America, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the Jurisdictions shall be construed and enforced as if the IGA did not contain the particular part, term, or provision held to be invalid.

D. This IGA provides for the joint exercise by the Jurisdictions of the function or service provided herein, but does not establish a separate legal entity to do so, nor does it constitute either Jurisdiction as an agent for the other Jurisdiction for any purpose whatsoever. This IGA shall provide only for the use of equipment or personnel by Jurisdictions.

E. In keeping with the purposes of state statutes, the agreement is intended to:
   1) Reduce the vulnerability of local government from overwhelming illness and loss of life arising out of a disaster or epidemic.
   2) Prepare for prompt and efficient handling of dead bodies and assistance to local coroners in time of disaster.
   3) Provide for the rapid identification of decedents as a result of disaster; and
   4) Provide for cooperation and coordination of activities relating to preparedness for, mitigation of, response to, and recovery from disaster.
   5) Provide for coverage to a local Jurisdiction should that Jurisdiction's coroner/medical examiner department become temporarily vacant, or is damaged or destroyed.

F. The State of Colorado and the Federal Emergency Management Agency (FEMA) have recognized the importance of local governments coordinating activities relating to disaster mitigation, preparedness, response, and recovery.

G. The counties which have chosen to become parties to this Agreement wish to provide mutual aid and assistance among one another pursuant to the terms and conditions of this Agreement in the event of a local, regional, or State disaster.

2. Definitions.

As used in this Agreement, the following terms have the meanings stated below.

a. "Agreement" means this Emergency Mutual Aid and Assistance Agreement for Colorado County Coroners and Medical Examiners.
b. "Aid and assistance" means and includes personnel, equipment, facilities, services, supplies, and other resources necessary to respond to, mitigate, and recover from the impacts of a disaster, or other temporary inability to handle the numbers of dead.
c. "Authorized representative" means a party's employee or agent who has been authorized in writing by that party to request or to offer to provide aid and assistance under the terms of this agreement. The list of authorized representatives for each party signing this Agreement shall be attached to the executed copy of this Agreement. Any changes by a party to its list of designated authorized representatives shall be made by giving notice of such change pursuant to the provisions in paragraph 19 below.
d. "Mass fatality" means any number of deaths which exceed the capability of the local jurisdiction.
e. "Disaster" means the occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural cause or cause of human origin, including but not limited to fire, flood, earthquake, wind, storm, wave action, hazardous material incident, volcanic activity, epidemic, infestation, explosion, civil disturbance, hostile military or paramilitary action, riot, insurrection, mass casualty in any city, town, or unincorporated area of any county or district in the state.
f. "Emergency epidemic" means cases of an illness or condition, communicable or non-communicable, caused by bioterrorism, pandemic influenza, or novel and highly fatal infectious agents or biological toxins.
g. "Jurisdiction" means a county, district or municipal agency established pursuant to §25-1-506, C.R.S., charged with coordinating all disaster response activities within its jurisdictional boundaries, and includes, without limitation, a county coroner, medical examiner or their deputies.
h. "Mutual Aid Request Form" means that form which is an attachment to this IGA or one which is substantially the same as that attached hereto and entitled MUTUAL AID REQUEST FORM."
i. "Party" means a governmental entity which has adopted and signed this Agreement.
j. "Provider" means a party which has agreed to provide aid and assistance under the terms of this Agreement.
k. "Recipient" means a party which has agreed to accept all or part of the aid and assistance offered by a Provider under the terms of this Agreement.
l. "Resources" means those resources (personnel, equipment and supplies) limited to those specified on the Mutual Aid Request Form.
m. "Requesting Party" means a party which has requested aid and assistance under the terms of this Agreement.
n. "Responding Party" means a party which has received a request for aid and assistance under the terms of this Agreement.

3. Conditional Obligation to Provide Aid and Assistance; No Right of Action for Third Parties.
    a. This is a reciprocal agreement. Each party understands and agrees it may be requested by another party to be a Provider. It is also mutually understood and agreed that each party's foremost responsibility is the persons within it jurisdictional boundaries. Accordingly, the provisions of the Agreement shall not be construed to impose an unconditional obligation on any Responding Party to provide aid and assistance pursuant to a request from a Requesting Party. When aid and assistance have been requested, a Responding Party may inform the Requesting Party that it is unable to provide all or part of the aid and assistance requested.

    b. Responding Jurisdiction shall be excused from making its resources available, or continuing to make its resources available, to the Requesting Jurisdiction in the event of the need of the resources of Responding Jurisdiction within its territory. Such decision of availability shall be made by the Responding Jurisdiction, and such decision shall be conclusive and in the Responding Jurisdiction's sole discretion.

    c. All functions and activities performed under this Agreement are hereby declared to be governmental functions. Functions and activities performed under this Agreement are carried out for the benefit of the general public and not for the benefit of any specific person. Accordingly, this Agreement shall not be construed as, or deemed to be an agreement for the benefit of any person not a party to this Agreement, and any such person shall have no right of action under this Agreement for any cause whatsoever.

4. Procedures for Requesting Aid and Assistance.
    a. Whenever the terms "Provider," "Recipient," "Requesting Party" or "Responding Party" are used in this Agreement, the reference shall include any of that party's authorized representatives.
    b. Aid and assistance shall not be requested unless the resources available within the stricken area are deemed inadequate by the Requesting Party. When the Requesting Party becomes affected by a disaster or emergency and deems its resources inadequate, it may request aid and assistance.
    c. All requests for aid and assistance shall be made and transmitted as follows:
        i. Requests may be directly made from one individual Jurisdiction to another, or to more than one other Jurisdiction.
        ii. Requests may be sent to the Colorado Coroners Association; Coroner Response Team who will coordinate a response to the Requesting Jurisdiction.
        iii. Requests should be coordinated through the Requesting Party's Office of Emergency Management, and the Responding Party's Office of Emergency Management, and Emergency Operations Manager as applicable in each Jurisdiction.
        iv. Requests should be made verbally, to be followed up by a written request as soon as reasonably feasible, via electronic transmission, or in writing through the Request for Mutual Aid Form specified as an attachment in this document.

v. Any declaration of a local disaster emergency under §24-33.5-709 C.R.S., or a disaster emergency under §24-33.5-704(4) C.R.S. must accompany the request for mutual aid when available.

vi. A Provider shall designate supervisory personnel among its employees sent to render aid and assistance to a Recipient. As soon as practicable, the Recipient shall assign work tasks to the Provider's supervisory personnel, and unless otherwise mutually agreed to in writing, the Recipient shall have the responsibility for coordinating communications between the Provider's supervisory personnel and the Recipient. The Recipient shall provide necessary credentials to the Provider's personnel, as authorized by law, authorizing them to operate on behalf of the Recipient. Direct supervision and control of the Provider's personnel, equipment, and other resources shall remain with the Provider's supervisory personnel. The Provider should be prepared to furnish communications equipment sufficient to maintain communications among its respective operating units. If this is not possible, the Provider shall promptly notify the Recipient of such circumstances.

d. It is the intent and Agreement of the Parties that the command structure and exchange of mutual aid provided for in this Agreement conform to the current standards of practice of the National Incident Management System (NIMS) and the Incident Command System (ICS).

e. The Requesting Party and Provider or Responding Party shall maintain personnel time records, and a log of vehicle mileage.

f. All records will remain the property of the requesting agency. Upon completion, responding party will return everything produced as part of the investigation to the requesting party. All notes and documents, developed through the assistance of the investigation, will be provided. All records management is the responsibility of the requesting county.

g. All evidence, property and remains, remain the property of the requesting party.

h. The Provider personnel will report work progress to the Recipient as requested.

i. A Requesting Party, acting through their Authorized Representative, shall include in the request for aid and assistance the amount of time for which the resources are being requested. This shall be detailed on the Mutual Aid Request Form.

j. All parties waive all claims and causes of action against all other parties for compensation, damage, personal injury or death occurring as a consequence, direct or indirect, of the performance of this IGA, to the extent permitted by, and without waiving any protection or other provisions of the Colorado Governmental Immunity Act.

k. Any request for refrigeration or storage must be approved by the Responding agency.

5. Reimbursement and Compensation.

a. First Twelve Hours of Response. Unless otherwise agreed in advance by the involved Parties, during the first twelve (12) hours from the time of the initial dispatch tone or request to a Responding Party, the Requesting Party will not incur any personnel or equipment charges from any Responding Party (Non-Reimbursable Costs).

b. After the First Twelve Hours of Response. Unless otherwise agreed by the involved Parties, after the first twelve hours from the time the Responding Party first dispatches personnel or equipment to the Requesting Party, the Requesting Party shall reimburse the Responding Party for the following costs associated with the response (Reimbursable Costs):

i. Personnel Costs. Personnel costs, including salaries, hourly wages, overtime, and costs of fringe benefits.
ii. Equipment. An amount for the use of the Responding Party's equipment during the period of assistance according to the Schedule of Equipment Rates established and published by the Federal Emergency Management Agency (FEMA), www.fema.gov/xls/government/grant/pa/egsch.xls. Rates for equipment not referenced on the FEMA Schedule of Equipment Rates shall be as agreed upon by the involved Parties and based on actual recovery of costs.
iii. Materials and Supplies. The actual replacement cost or replacement in kind of the expended or non-returnable materials and supplies provided by the Responding Party, plus handling charges. The Responding Party shall not charge the Requesting Party for materials, supplies and reusable items that are returned to the Responding Party in a clean, damage-free condition. Reusable supplies that are returned to the Responding Party with damage must be treated as expendable supplies for purposes of cost reimbursement.
iv. Insurance Coverage for Responding Personnel and/or Equipment. Each Jurisdiction shall maintain its own insurance coverage, for both liability and damage, for the responding personnel and/or equipment.

6. Recall.
   a. Unless otherwise mutually agreed to in writing, the duration of the Provider's aid and assistance shall be for an initial period of three (3) days, beginning from the date that the Provider's aid and assistance arrive to the requested meeting place. Thereafter, aid and assistance may be extended in daily or weekly increments as the situation warrants, for a period mutually agreed upon in writing.
   b. The Provider's personnel, equipment and other resources shall remain subject to recall by the Provider at any time to support its own Jurisdictional boundaries. The Provider shall make a good faith effort to give at least twenty-four (24) hours advance written notice to the Recipient's Authorized Representative of their intent to recall. If such notice is not practicable, then the Provider shall give the Recipient's Authorized Representative as much advance written notice as is reasonable under the circumstances.

7. Employment Status of Provider Personnel. Nothing contained in the IGA, and no performance under this IGA by personnel of the Parties, shall in any respect alter or modify the status of officers, agents, or employees of the respective Jurisdiction for purposes of worker's compensation or their benefits or entitlements, pension, levels or types of training, internal discipline, certification, or rank procedures, methods, or categories, or for any purpose, or condition or requirement of employment. Worker's compensation coverage shall be as structured in C.R.S. § 29-5-109, if the request meets the requirements of C.R.S. § 29-5-103 through 108; otherwise, the claim shall be processed as if it were generated by any other work assignment within the Providers jurisdiction. The Provider shall remain responsible for processing any worker's compensation claims filed by its personnel.

8. Insurance Coverage For Provider Personnel Or Equipment. Each Jurisdiction shall maintain its own insurance coverage, for both liability and damage, for the responding personnel and/or equipment.

9. Waiver. Each Jurisdiction waives all claims and causes of action against all of the other Jurisdictions for compensation, damage, personal injury or death occurring as a consequence, direct or indirect, of the performance of this IGA, to the extent permitted by, and without waiving any protection or other provisions of, the Colorado Governmental Immunity Act.

10. Assignment. This IGA shall be binding upon the successors and assigns of each of the Jurisdictions hereto, except that no Jurisdiction may assign any of its rights or obligations hereunder without the prior written consent the majority of other jurisdictions.

11. No Third-Party Beneficiary. It is expressly understood and agreed that enforcement of the terms and conditions of the IGA, and all rights of action relating to such enforcement shall be strictly reserved to the Jurisdictions, and nothing contained in the IGA shall give the express intention of the Jurisdictions that any person other than the Jurisdictions receiving services or benefits under this IGA shall be deemed to be an incidental beneficiary only.

12. Amendments. Amendments to this IGA may be made only upon majority consent by all Jurisdictions on an annual basis. Such consent shall become effective upon announcement by the Colorado Coroners Association to all Authorized Representatives.

13. Termination. Any Jurisdiction may terminate their involvement in this IGA, with or without cause, upon ten (10) days prior written notice sent to the other Authorized Representatives.

14. The parties to this Agreement are all governmental entities providing governmental services under this Agreement and do not intend to waive their governmental immunity by entering into this Agreement or performing under its terms. Nothing in this Agreement shall be construed as a waiver of immunity provided by common law, or by statute, specifically the Colorado Governmental Immunity Act, §§ 24-10-101 through 24-10- 120, C.R.S., and §24-33.5-711.5, C.R.S., or as an assumption of any duty for the benefit of any third party.

15. Each party to this Agreement shall be an independent contractor, and no party, nor such party's officers, employees, or agents shall be deemed to be an agent of any other party. Except as otherwise specifically provided herein, each party waives all claims and causes of action against the other party for compensation, damages, personal injury or death which may result or occur as a consequence, directly or indirectly, of any performance under this Agreement. Each party is responsible for its own negligence and that of its own officers, employees, and agents to the extent provided in the Colorado Governmental Immunity Act and § 24-33.5-711.5, C.R.S. As stated in paragraph 28 above, nothing in this Agreement shall be construed as a waiver of immunity provided by common law, or by statute, specifically the Colorado Governmental Immunity Act and §24-33.5-711.5, C.R.S., or as an assumption of any duty for the benefit of any third party.

16. The performance of any obligations under this Agreement is expressly subject to annual appropriation of sufficient funds by each party's respective governing body to enable such party to respond to requests for aid and assistance made under this Agreement.

17. This Agreement constitutes the entire Agreement of the parties regarding the subject matter referred to in it. As such, it supersedes any and all prior oral and/or written agreements of the parties regarding the subject matter referred to in this Agreement.

18. The laws of the State of Colorado shall be applied in interpreting, executing, and enforcing this Agreement. All parties shall comply with C.R.S. 30-10-606 as well as any other applicable federal, state, or local law or rule.

19. Custodian of the Agreement.
    a. The parties to this Agreement agree that the Colorado Coroners Association (CCA) shall act as custodian of the executed original and any executed counterparts of this Agreement. The CCA's obligations and responsibilities as custodian shall be limited to maintaining possession of the executed original, and any executed counterparts of, and any amendments to this Agreement, and providing to each party a current list of all the parties and Authorized Representatives to this Agreement each time the a local Jurisdiction executes this Agreement, withdraws as a party from it, or amends their list of Authorized Representatives. The CCA shall not be a party to this Agreement, and shall have no obligations or liability whatsoever to any of the parties to this Agreement or any third persons, except as to the custodial duties expressly stated herein; provided, however, acting as custodian of this Agreement shall not limit or derogate from the CCA's obligations and duties otherwise prescribed by its By-Laws.
    b. To facilitate the CCA's role as custodian of this Agreement, each party shall deliver to the CCA a copy of each fully executed Agreement, and executed counterpart thereof, any executed amendment thereof, any notice of withdrawal there from, and any changed list of Authorized Representatives.

20. Execution of the IGA.
    a. This IGA is executed by each Jurisdiction on a separate signature page. Original signature pages will be held by the Colorado Coroners Association. Copies of the IGA and signature pages will be provided to each Jurisdiction and such copies shall have the full force and effect as if they were originals. The Colorado Coroners Association shall provide timely notice to all party Jurisdictions of all additions to and withdrawals of party Jurisdictions, as well as timely notice of the effective date of any amendments to this IGA.
    b. Each party represents and warrants that the individual(s) signing this Agreement on its behalf is/are duly authorized to act on behalf of that party to enter into the Agreement and to bind that party to this Agreement, and that such authority had been duly approved by that party's governing body.
    c. As to each party, this Agreement shall take effect upon the date it duly signs this Agreement.

Intergovernmental Agreement for
Colorado County Coroners and Medical Examiners
Mutual Aid and Assistance

SIGNATURE PAGE

APPROVED AS TO FORM:

Brenda L. Bock

Brenda L Bock
President Colorado Coroners Association

PO Box 828
Kremmling, CO 80459

Date: September 10, 2015

_____ County, Colorado

Signed this _____ day of _____, 2015

_____
Chair of Board of County Commissioners

_____
Coroner or Medical Examiner

Intergovernmental Agreement for
Colorado County Coroners and Medical Examiners
Mutual Aid and Assistance

List of Authorized Representatives to Contact for Mutual Aid and Assistance

Jurisdiction/Party:

_____ Date: _____

Mailing Address:

_____

_____

1. Representative:

Name: _____ Title: _____

Contact phone(s): _____, or _____, or _____

Email: _____

2. Representative:

Name: _____ Title: _____

Contact phone(s): _____, or _____, or _____

Email: _____

3. Representative:

Name: _____ Title: _____

Contact phone(s): _____, or _____, or _____

Email: _____

Intergovernmental Agreement for
Colorado County Coroners and Medical Examiners
Mutual Aid and Assistance

Mutual Aid Request Form

Name of Requesting Jurisdiction:

Name of Authorized Representative:

Nature and Extent of the Emergency/Disaster:

Description of Personnel, Equipment, and/or Supplies Being Requested:

Expected Duration of the Request:

Contact Information for Supervising Personnel of the Requesting Jurisdiction:

Responding Personnel and Equipment should arrive to this location:

Reimbursement:

_____ County will reimburse staff labor, equipment, supplies, and standard room and board costs. Room and board costs will be reimbursed as federal per diem rats identified at www.gsa.gov. Equipment will be reimbursed at FEMA approved rates.

Name of Responding Jurisdiction:

Name of Authorized Representative:

We will provide:

Signatures:

_____DATE: _____ _____DATE: _____

AUTHORIZED REPRESENTATIVE REQUESTING AUTHORIZED REPRESENTATIVE RESPONDING

MEMORANDUM OF UNDERSTANDING

BETWEEN

(1) COLORADO DEPT OF LOCAL AFFAIRS,
DIVISION OF EMERGENCY MANAGEMENT
(2) COLORADO WING CIVIL AIR PATROL (CAP)
(3) COLORADO SEARCH AND RESCUE BOARD, INC. (CSRB)
(4) COUNTY SHERIFFS OF COLORADO, INC.

AND

COMMANDER
AIR FORCE RESCUE COORDINATION CENTER
TYNDALL AIR FORCE BASE FLORIDA

1. **PURPOSE**: To further delineate the operational procedures pursuant to the Search and Rescue (SAR) Agreement dated January 8, 2008, between the State of **Colorado** and the Inland SAR Mission Coordinator. The procedures outlined below are intended for use within the geographical boundaries of the State of **Colorado.** On incidents or missions involving overdue General Aviation (GA) interstate flights, DoD aircraft, commercial aircraft or missions of national concern, (e.g. National Special Security Events and Special Events Homeland Security), the general procedures outlined in the basic SAR agreement will apply.

2. **DEFINITIONS**: To ensure both parties understand a common terminology, the following definitions are provided:

a. INCIDENT - Notification by any source of a possible distress situation.

b. FEDERAL MISSION - Incidents that require the activation of federal air or ground assets and the expenditure of federal funds.

c. MISSING AIRCRAFT MISSION - Searches for missing intrastate GA aircraft believed to be in distress.

d. MISSING PERSONS MISSION - Searches for persons believed to be in a distress situation not involving an aircraft.

e. RESCUE / MEDEVAC / MERCY MISSION – Recovering; medical evacuation; moving donor organs, blood, or SAR dogs to assist in the time critical saving of life or limb.

f. RESPONSIBLE AGENCY - The federal or state agency with overall responsibility to coordinate the search effort regardless of assets being used.

g. COORDINATION - Mutual agreement between two or more agencies as to the actions

taken.

h. ADVISE / NOTIFY - Communication of actions which have been or will be taken regardless of concurrence.

i. FEDERAL ASSETS - SAR capable resources belonging to the federal government.

j. CIVIL AIR PATROL (CAP) AUTHORIZATION - When mission participation is authorized by the AFRCC, CAP in its role as an auxiliary of the Air Force becomes a federal asset. Notification to CAP must be made by the AFRCC.

k. EMERGENCY LOCATOR TRANSMITTER (ELT) - Emergency beacons that most U.S. civil aircraft are required to carry that send signals to satellites (COSPAS-SARSAT system) on a 121.5 MHz or 406 MHz frequency.

l. EMERGENCY POSITION INDICATING RADIO BEACON (EPIRB) – There are two types of EPIRB used in maritime applications. One type transmits an analog signal to satellites (COSPAS-SARSAT system) on 121.5 MHz. The other type transmits a digital identification code to satellites (COSPAS-SARSAT system) on 406 MHz and a low-power "homing" signal on 121.5 MHz.

m. PERSONAL LOCATOR BEACON (PLB) - Portable units that operate much the same as EPIRBs or ELTs. PLBs are designed to be carried by an individual person instead of on a boat or aircraft. Unlike ELTs and some EPIRBs, they can be activated manually for the sole purpose of transmitting a digital identification code to satellites (COSPAS-SARSAT system) on 406 MHz and a low-power "homing" signal on 121.5 MHz.

n. ALERT NOTICES (ALNOT) - A request originated by a flight service station (FSS) or an air route traffic control center (ARTCC) for an extensive communication search for overdue, unreported or missing aircraft.

o. NATIONAL ALERT WARNING SYSTEM (NAWAS) – The NAWAS network consists of two warning circuits: a national warning circuit and a state warning circuit. Warning information will be provided to the State by the National Warning Center (NWC) through the NAWAS Warning System via the national warning circuit. The NWC disseminates warning information to the Primary State NAWAS Warning Point located in a State EOC.

p. THE SARSAT SYSTEM - A satellite system using NOAA satellites in low-earth and geostationary orbits to detect and locate aviators, mariners and land-based users in distress. The satellites relay distress signals from emergency beacons to a network of ground stations and ultimately to the U.S. Mission Control Center (USMCC) in Suitland, Maryland. The USMCC processes the data and alerts the appropriate search and rescue authorities. SARSAT is a part of the international COSPAS-SARSAT Program.

3. **PROCEDURES:**

TYPE MISSION/INCIDENT	RESPONSIBLE AGENCY	PROCEDURES
Missing Aircraft Mission	CAP	The AFRCC will coordinate all asset requests through **CAP.** NOTE: *The AFRCC will be the Responsible Agency for all incidents or missions involving overdue General Aviation (GA) interstate flights, DoD aircraft, commercial aircraft or missions of national concern.*
Missing Person Mission	County Sheriff	The AFRCC will coordinate all federal asset requests (including CAP) through County Sheriff. CSRB will be notified of all sheriff-initiated requests, and CSRB may request assets on behalf of a sheriff as the lead agency.
Alert Notices (ALNOT) Incident	AFRCC/CAP	The AFRCC will inform Colorado Wing CAP of all ALNOTs. CAP will accomplish the required extensive communications check and will coordinate the use of federal assets with AFRCC.
Emergency Locator Transmitter (ELT) / Emergency Position Indicating Radio Beacon (EPIRB)	AFRCC	The AFRCC will, in coordination with the Federal Aviation Administration (FAA), accomplish a communication check and will coordinate with CAP to open a mission.
Personal Locator Beacon (PLB)	CSRB	PLB alerts will be sent to the CSRB who will in turn contact the appropriate sheriff(s). The AFRCC will coordinate all PLB alerts received with CSRB. The CSRB and/or county sheriff, as the lead agency, will request AFRCC coordinate all federal assets (including CAP) upon mission activation.
Rescue/Medevac/Mercy	AFRCC	The AFRCC will receive the mission request from Colorado DEM, County Sheriffs, CSRB, or CAP, locate and request appropriate resource and accomplish mission. NOTE: *Mission will be conducted only if local, state or civilian resource is not available. Financial constraints will not be an acceptable reason to not use civilian resources.*
National Alert Warning System (NAWAS)		No restrictions within the State of Colorado.

All missions and activities conducted involving federal funds, either directly, or through funding provided to participating agencies, and/or federal agencies, shall utilize the standard National Incident Management System/Incident Command System (NIMS/ICS) as required by United States Homeland Security Presidential Directive 5 (HSPD-5).

4. **POINTS OF CONTACT:**

STATE/FEDERAL AGENCY	DSN (Defense Switch Network)	COMMERCIAL
State Division of Emergency Management	N/A	1-303-279-8855
Colorado SAR Rescue Board (CSRB)	N/A	1-800-593-2772
Colorado Wing Civil Air Patrol	N/A	1-800-679-1079
County Sheriffs of Colorado, Inc.	N/A	1-720-344-2762
Air Force Rescue Coordination Center (AFRCC)	523 5955	1-850-283-5955 1-800-851-3051
AFRCC Administration	523 5683 523 5129	1-850-283-5683 1-850-283-5129

5. This MOU is implemented as of the date of the last signature and remains valid only by mutual agreement of all parties. Changes may be made by telephone, but must be followed up immediately by written correspondence.

6. **SIGNATURES:**

JED L. HUDSON, Lt Col, USAF
Commander, AFRCC
DATE: 14 APR 09

Hans Kallam, Director
Division of Emergency Management
DATE: 2/6/09

Bruce Fosdick, President
Colorado Search and Rescue Board
DATE: Jan 25, 2009

Edward Phelka, Colonel
Commander, Colorado Wing CAP
DATE: 24 Jan 2009

Don Christensen
Executive Director, County Sheriffs of Colorado, Inc
DATE: 2-5-09



The Colorado Intergovernmental Agreement for Fire Mutual Aid

April 25, 2015

In 2014, the Colorado State Fire Chief's Association sponsored the "Broken Arrow" exercises. These exercises were designed to improve our ability to respond rapidly to major events across the state. Following those exercises, many of the participating chiefs met along with Department of Fire Prevention and Control, Department of Homeland Security and Emergency Management, Colorado Sheriffs and the Colorado Emergency Manager's Association to work toward improvements identified in those exercises.

There were four points of focus for efforts in 2015 and beyond:

1. Development of a Colorado Fire Resource Mutual Aid Agreement.
2. Increase the number of organized strike teams and task forces to twenty.
3. Develop a training program for all fire personnel about mutual aid and mobilization procedures.
4. Work with appropriate local, state and federal agencies on ways to facilitate the transition from mutual aid to mobilization.

Here is the Colorado State Mutual Aid Agreement, adopted by the Colorado State Fire Chief's Association. It was reviewed by the Association's legal counsel, and has been crafted to help ensure the protection of all parties providing mutual aid. Input from across Colorado went into the agreement.

This agreement does not create any obligations. Under Colorado Revised Statutes Title 29, Article 5, all fire agencies can provide mutual aid to all other agencies. Under state statute and under this agreement, all mutual aid is voluntary. What this agreement does is to try to clarify and standardize the terms. Standardization of mutual aid periods and elimination of assumed liability were the key items we sought to put into the agreement.

Many of us have multiple agreements with differing terms currently. Some agreements conflict over mutual aid periods or assumed liability. It was in seeking to eliminate those types of inconsistencies and conflicts that this agreement was drafted. This agreement does not prevent any agencies from entering into automatic aid agreements, or contracts for service, or agreements to extend mutual aid to 24 hours, or any other agreement that might be necessary between your agency and your neighbors. This agreement represents what you would expect if you choose to go outside of your local area, or if you need the assistance from across the state.

We are recommending all fire agencies in Colorado adopt this agreement, in hopes that response to future fires and emergencies can be handled as smoothly as possible.

COLORADO INTERGOVERNMENTAL AGREEMENT FOR FIRE MUTUAL AID

THIS INTERGOVERNMENTAL AGREEMENT FOR MUTUAL AID ("Agreement") is made by and between the parties who are signatory to this Agreement.

WHEREAS, the Parties are authorized to provide fire protection, and in some instances other emergency services, such as hazardous material, extrication, rescue, ambulance and/or emergency medical services, within their jurisdictional boundaries and under certain circumstances outside their jurisdictional boundaries, including fire protection districts duly organized and operating pursuant to the provisions of Article 1, Title 32, Colorado Revised Statutes ("C.R.S."); municipalities operating fire departments pursuant to Article 15, Title 30, C.R.S; and other governmental agencies authorized to provide such services; and

WHEREAS, the Parties acknowledge that each Party would benefit from the availability of the other Parties in the event of fires, emergency medical incidents or other incidents; and,

WHEREAS, pursuant to the provisions of the Colorado Constitution, Article XIV, Section 18(2)(a) and (b) and C.R.S. § 29-1-203, the Parties desire to enter into an agreement to provide for mutual aid response of equipment and personnel of each Party to areas within the jurisdiction of another Party; and,

WHEREAS, establishment of a mutual aid agreement will serve a public purpose and will promote the safety, security and general welfare of the public.

NOW THEREFORE, in consideration of the mutual performance of the covenants, agreements and promises set forth herein, the Parties agree as follows:

1. **Colorado Revised Statutes**. Except for the provisions of C.R.S. §29-5-108, the provisions of Article 5, Title 29, the Colorado Revised Statutes, as amended, shall apply to the Parties. The statute shall control in the event of a conflict between the statute and this Agreement. The Assisting Party's equipment and personnel shall at all times remain under the immediate and complete control of the Assisting Party. As such, the provisions of C.R.S. §29-5-108 do not apply to this Agreement.

2. **Definitions.** The following terms used in this Agreement are defined as follows:
    a. "Assisting Party" means a Party providing or requested to provide Mutual Aid within the jurisdictional boundaries of the Requesting Party.
    b. "Emergency Incident" means a reported fire, emergency medical, rescue or hazardous material incident requiring an emergency response by a Party.
    c. "Mutual Aid" means the assistance provided by an Assisting Party to a Requesting Party on direct request of the Requesting Party.

d. "Party" means a municipal fire department, fire protection district or other governmental agency that has signed this Agreement".
e. "Parties" means every Party that has signed this Agreement.
f. "Requesting Party" means a Party within whose jurisdiction an emergency incident has been reported and which is assisted by or has requested assistance of an Assisting Party.

3. **Mutual Aid.** Each Party agrees to provide Mutual Aid to another Party or Parties when requested; provided, however, that an Assisting Party shall provide Mutual Aid at its sole discretion and shall be excused from making equipment and personnel available in the event of a pre-existing or contemporaneous need within the Assisting Party's jurisdiction, or when insufficient resources are available to provide Mutual Aid. The decision to provide Mutual Aid shall be made by the Assisting Party at its sole discretion, which decision shall be final and conclusive.

4. **No Liability for Failure to Provide Mutual Aid.** No liability of any kind or nature, whether expressly or implied, shall be attributed to or be assumed by a Party, its duly authorized agents and personnel, for failure or refusal to provide Mutual Aid. Nor shall there by any liability of a Party for withdrawal of Mutual Aid once provided pursuant to the terms of this Agreement.

5. **Pre-Approval.** By signing this Agreement, the governing body of a Party is hereby deemed to have approved the provision of Mutual Aid beyond its political boundaries , and any Mutual Aid provided pursuant to this Agreement shall not require any further approval by the governing body of the Party.

6. **Mutual Aid Period**. The extent of the Mutual Aid period shall be twelve (12) consecutive hours from the time of initial dispatch of the Emergency Incident, unless extended by an additional agreement between the Parties. The initial dispatch shall be the first notification of the Emergency Incident; a Requesting Party may not circumvent the limitation on Mutual Aid by re-toning when Mutual Aid is requested or by using the time of notification of an Assisting Party.

7. **Cost**. Each Party shall be responsible for all costs, including wages, benefits or other compensation of its personnel incurred in the performance of this Agreement through the end of the Mutual Aid period and shall not seek reimbursement from the Requesting Party, except for third party reimbursement as is allowed by law and collected by the Requesting Party. Nothing herein shall operate to bar any recovery of funds from any state of federal agency under any existing statute.

8. **Supplies**. Each Party shall be responsible for providing fuel, potable water, food and other such normal consumable supplies used by its own personnel and equipment. The Requesting Party shall be responsible for providing for or reimbursing the use of firefighting foam, special extinguishing agents, medical equipment and similar consumables when use is requested by the Requesting Party.

9. **Damages.** Each Party hereby assumes all liability and responsibility for damage to its own apparatus and/or equipment, except when such damage is directly caused by another Party to this Agreement. Each Party also assumes all liability and responsibility for any damage caused by its own apparatus while in route to or returning from an Emergency Incident. No Party shall be liable or responsible for the personal property of the Assisting Party's personnel which may be lost, stolen or damaged while performing their duties under this Agreement. A Requesting Party may, in its sole discretion, replace or reimburse the cost of an Assisting Party's equipment damaged or expended in providing Mutual Aid if requested by the Assisting Party.

10. **Not a Replacement for Responsibility**. Each Party shall be expected to maintain its equipment and organize its emergency response method with both personnel and equipment to the degree necessary to handle ordinary and routine Emergency Incidents occurring within its boundaries and for which the Party is organized. A Requesting Party shall not expect any other Party to respond to an Emergency Incident where the request arises due to a failure of the Requesting Party to organize available personnel or maintain equipment in reasonably working order and in sufficient quantity to meet the normal and routine needs of the persons and property within the Requesting Party's jurisdiction. Nothing in this Agreement prevents two or more of the Parties from entering into contracts, automatic aid agreements or other methods to meet their responsibilities as agreed between those Parties.

11. **Joining Parties**. Each Party agrees to allow a municipal fire department, fire protection district or other governmental emergency response agency to join this Agreement after formal approval of the governing body of such municipal fire department, fire protection district or other governmental emergency response agency and notification of such action to each of the other Parties to this Agreement.

12. **Third Party Recovery**. Each Party agrees that, for each Emergency Incident within its jurisdictional boundaries for which it has requested Mutual Aid through this Agreement, it will reasonably pursue any and all legal reimbursement possible, pursuant to state and federal laws, including but not limited to reimbursement for hazardous materials

incidents occurring within its boundaries, on behalf of all Assisting Parties, and upon full or partial payment by the responsible entity, shall distribute the reimbursement in a fair and equitable manner to Assisting Parties based on their relative documented expenses for the Emergency Incident.

13. **Governmental Immunity**. This Agreement is not intended, and shall not be construed, as a waiver of the limitations on damages or any of the privileges, immunities, or defenses provided to, or enjoyed by, the Parties and their councilpersons, directors, officers, employees and volunteers under common law or pursuant to statute, including but not limited to the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq.*

14. **Liability Insurance**. Each Party is responsible for determining and maintaining adequate levels of its own liability insurance.

15. **Personnel Status**. Nothing contained in this Agreement, and no performance under this Agreement by personnel of the Parties, shall in any respect alter or modify the status of officers, employees, volunteers or agents of the respective Parties for purposes of worker's compensation or their benefits or entitlements, pension, levels or types of training, internal discipline, certification, rank, or for any purposes or conditions of employment or volunteerism. Worker's compensation shall be as structured in C.R.S § 29-5-109. Pension benefits shall be provided as set forth in C.R.S. § 29-5-110.

16. **Equal Value**. Each Party declares that the value of this Agreement is equal to all Parties.

17. **Severability**. In the event that any part, term or provision of this Agreement is found to be in violation or conflict with any federal or state law, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the Parties shall be construed and enforced as if the Agreement did not contain the particular part, term or provision held to be invalid.

18. **Governing Law**. This Agreement shall be governed by and construed in accordance with Colorado law.

19. **Governance**. An Executive Board may be established by signatory parties to consider, adopt and amend rules, procedures, by-laws and other matters deemed necessary by the parties. The Executive Board shall consist of elected members from signatory parties who shall serve as voting representatives of other signatories and be established and structured as the signatory parties deem appropriate.

20. **Binding.** This Agreement shall be binding on the successors and assigns of each Party, except that no Party may assign any of its rights or obligations hereunder without the prior written consent of all other Parties.

21. **No Third Party Benefit**. This Agreement is made for the benefit of the Parties, and is not intended to benefit any third party or be enforceable by any third party. The rights of the Parties under or relating to this Agreement are not subject to the consent of any third party.

22. **Term and Effective Date**. This Agreement shall be in effect upon the date of the first signature; and shall be effective for each Party upon their authorized signatures. Unless terminated by all of the Parties, this Agreement shall remain in effect for so long as there are at least two Parties to this Agreement.

23. **Termination**. All of the Parties may terminate this Agreement at any time by written agreement of all of the Parties. Any Party may terminate its participation in this Agreement at any time upon thirty (30) days written notice to each of the other Parties. Notice may be made through the Colorado State Mutual Aid Board or through direct mailing to each Party.

24. **Execution**. This Agreement may be executed in multiple counterparts or duplicate originals, each of which shall be constitute and be deemed as one and the same document.

25. **Amendments.** This agreement may only be amended by written consent of all the parties hereto. The undersigned unit of local government or public agency hereby has adopted, and subscribes to, and approves this COLORADO INTERGOVERNMENTAL AGREEMENT FOR FIRE MUTUAL AID to which this signature page will be attached, and agrees to be a party thereto and be bound by the terms thereof.

COLORADO INTERGOVERNMENTAL AGREEMENT FOR FIRE MUTUAL AID

SIGNATURE PAGE

This signatory certifies that this COLORADO INTERGOVERNMENTAL AGREEMENT FOR FIRE MUTUAL AID has been approved by ordinance, resolution, or other manner approved by law, a copy of which document is attached hereto.

_____

Political Entity

_____

President, Mayor, or Designee

_____

Date

AGREEMENT FOR SHORT-TERM MUTUAL AID
BETWEEN THE COUNTY OF _____
& THE COUNTY OF _____
OR _____ POLICE DEPARTMENT

THIS AGREEMENT is made and entered into this _____ day of _____, 19__ by and between the parties hereto to provide mutual aid to prevent, alleviate, or combat the effects of an emergency which may result from either natural or man made disasters affecting either party to this agreement.

The parties to this agreement are the County of _____ and the County of _____. This agreement shall become valid upon its execution by both parties.

WHEREAS, it is desirable that each of the parties hereto should aid and assist each other by the exchange of services and facilities, including, but not limited to: fire, police, medical and health, communication, transportation services and facilities, mass processing of arrestees, transporting prisoners, and operating temporary detention facilities; to cope with the problems of warning, evacuation, rescue, relief, rehabilitation and reconstruction which would arise in the event of a natural or man made disaster, such as flood, fire, tornado, earthquake, winter storm, transportation, and hazardous material incident, explosion, civil disturbance and disobedience, and act of terrorism; and

WHEREAS, it is necessary and desirable that an appropriate agreement be executed for the exchange of such mutual aid; and

WHEREAS, Sections 29-1-203 and 29-5-101 through 29-5-109 C.R.S. authorize the parties to enter into an intergovernmental agreement for furnishing mutual aid in coping with disasters;

NOW, THEREFORE, IT IS HEREBY AGREED, by and between each of the parties hereto as follows:

1. Each party to this agreement shall develop a plan providing for the effective mobilization of all its available resources to cope with a disaster which may affect either party to the agreement.

2. Each party agrees, as an independent contractor, to provide those resources and render those services to the other party hereto which are available and necessary to assist in the prevention and combating of an anticipated or existing disaster in accordance with a heretofore or hereafter adopted mutual aid operational plan. Such plan shall indicate the method and manner by which available resources and services can be obtained: **PROVIDED, HOWEVER,** that no party to

this agreement shall be required to make resources available or render service to the other party when, by so doing, danger to the lives and property of that party's residents might result. The furnishing party shall determine, in its sole discretion, what resources and services, if any, can be reasonably provided within that limit.

3. All requests for mutual aid are to be made in person or by telephone by the Sheriff of the requesting county or a person exercising the functions thereof.

4. It is understood that mutual aid provided pursuant to this agreement and the operational plan adopted hereunder shall be available and furnished in all cases of local peril or emergency either anticipated or proclaimed except as provided for in paragraph 2, above.

5. It is understood that this agreement and the operational plan adopted hereunder shall not supplant (but, rather, shall supplement) pre-existing mutual aid agreements between the parties, or either of them and third parties, not shall they deny the right of either party hereto to negotiate supplemental mutual aid agreements with each other or with third parties.

6. The requesting party agrees to defend and indemnify the aiding party against any and all claims, damages, costs, and expenses, arising out of or claimed to arise out of negligent or intentional acts or omissions of said requesting party, its officers, agents, or employees, to the extent of its available insurance covering such liability and to the extent permitted by State Law. It is agreed that the requesting party shall not be liable for payment of any salary, wages, or other compensation for any of the aiding party's personnel performing services under this agreement.

7. The responsible local official, in whose jurisdiction an incident requiring mutual aid has occurred, shall remain in charge at such time as mutual aid is provided including the direction of the aiding party's responsible local official and other resources as are provided pursuant to this agreement unless said responsible local official shall delegate such responsibility or shall implement the Standing CSOC Policy and Procedures of the F.A.S.T. System dated Jan. 15, 1991 incorporated herein by this reference: **PROVIDED, HOWEVER**, that the aiding party's responsible local official or his designee shall have the right to refuse to perform requested acts, services, or manpower commitments when he deems such acts or services to be inappropriate under the circumstances. The aiding party's responsible local official or his designee

shall remain in charge of all personnel of the aiding party assigned under him to assist in providing aid. In any event, the party providing aid, shall, for all purposes, be an independent contractor and not the paid employee or agent of the party receiving aid.

REQUESTING COUNTY	**RESPONDING/AIDING COUNTY**
_____BY:	_____COUNTY
Board of County Commissioners	
ATTEST:	APPROVED:
_____	_____
(Seal)	Responding County Sheriff
APPROVED:	
_____	_____
County Sheriff	Law Enforcement Agency
APPROVED AS TO FORM:	
_____	_____
County Attorney	AGENCY HEAD

AGREEMENT FOR LONG-TERM MUTUAL AID
BETWEEN THE COUNTY OF _____
& THE COUNTY OF _____
OR _____POLICE DEPARTMENT

THIS AGREEMENT is made and entered into this _____ day of _____, 19__ by and between the parties hereto to provide mutual aid to prevent, alleviate, or combat the effects of an emergency which may result from either natural or man made disasters affecting either party to this agreement.

The parties to this agreement are the County of _____ and the County of _____. This agreement shall become valid upon its execution by both parties.

WHEREAS, it is desirable that each of the parties hereto should aid and assist each other by the exchange of services and facilities, including, but not limited to: fire, police, medical and health, communication, transportation services and facilities, mass processing of arrestees, transporting prisoners, and operating temporary detention facilities; to cope with the problems of warning, evacuation, rescue, relief, rehabilitation and reconstruction which would arise in the event of a natural or man made disaster, such as flood, fire, tornado, earthquake, winter storm, transportation, and hazardous material incident, explosion, civil disturbance and disobedience, and act of terrorism; and

WHEREAS, it is necessary and desirable that an appropriate agreement be executed for the exchange of such mutual aid; and

WHEREAS, Sections 29-1-203 and 29-5-101 through 29-5-109 C.R.S. authorize the parties to enter into an intergovernmental agreement for furnishing mutual aid in coping with disasters;

NOW, THEREFORE, IT IS HEREBY AGREED, by and between each of the parties hereto as follows:

1. Each party to this agreement shall develop a plan providing for the effective mobilization of all its available resources to cope with a disaster which may affect either party to the agreement.

2. Each party agrees, as an independent contractor, to provide those resources and render those services to the other party hereto which are available and necessary to assist in the prevention and combating of an anticipated or existing disaster in accordance with a heretofore or hereafter adopted mutual aid operational plan. Such plan shall indicate the method and manner by which available resources and services

can be obtained: **PROVIDED, HOWEVER,** that no party to this agreement shall be required to make resources available or render service to the other party when, by so doing, danger to the lives and property of that party's residents might result. The furnishing party shall determine, in its sole discretion, what resources and services, if any, can be reasonably provided within that limit.

3. All requests for mutual aid are to be made in person or by telephone by the Sheriff of the requesting county or a person exercising the functions thereof.

4. It is understood that mutual aid provided pursuant to this agreement and the operational plan adopted hereunder shall be available and furnished in all cases of local peril or emergency either anticipated or proclaimed except as provided for in paragraph 2, above.

5. It is understood that this agreement and the operational plan adopted hereunder shall not supplant (but, rather, shall supplement) pre-existing mutual aid agreements between the parties, or either of them and third parties, not shall they deny the right of either party hereto to negotiate supplemental mutual aid agreements with each other or with third parties.

6. The requesting party agrees to defend and indemnify the aiding party against any and all claims, damages, costs, and expenses, arising out of or claimed to arise out of negligent or intentional acts or omissions of said requesting party, its officers, agents, or employees, to the extent of its available insurance covering such liability and to the extent permitted by State Law. It is agreed that the requesting party shall not be liable for payment of any salary, wages, or other compensation for any of the aiding party's personnel performing services under this agreement.

7. The responsible local official, in whose jurisdiction an incident requiring mutual aid has occurred, shall remain in charge at such time as mutual aid is provided including the direction of the aiding party's responsible local official and other resources as are provided pursuant to this agreement unless said responsible local official shall delegate such responsibility or shall implement the Standing CSOC Policy and Procedures of the F.A.S.T. System dated Jan. 15, 1991 incorporated herein by this reference: **PROVIDED, HOWEVER,** that the aiding party's responsible local official or his designee shall have the right to refuse to perform requested acts, services, or manpower commitments when he deems such acts or services to be inappropriate under the circumstances. The aiding

party's responsible local official or his designee shall remain in charge of all personnel of the aiding party assigned under him to assist in providing aid. In any event, the party providing aid, shall, for all purposes, be an independent contractor and not the paid employee or agent of the party receiving aid.

8. This agreement shall be effective on the date first above written, and shall remain in effect until terminated. This agreement may be terminated by either party thirty (30) days after written notice thereof to the other party has been given.

9. This agreement and the obligations of the parties hereto are expressly contingent upon adequate funds being budgeted and appropriated by each part for the services and facilities discussed herein.

10. Each party to this Agreement agrees to comply with the letter and spirit of the Colorado Antidiscrimination Act of 1957, as amended, and other applicable law respecting discrimination and unfair employment practices, and as required by executive order, equal opportunity and affirmative action, dated April 16, 1975. Each party agrees to provide equal opportunity to all applicants and employees in all terms and conditions of employment without regard to race, color, religion, sex, national origin, age, handicap or veteran status.

COUNTY

_____
BY:
Board of County Commissioners

ATTEST:

_____
(Seal)

APPROVED:

_____
County Sheriff

APPROVED AS TO FORM:

_____
County Attorney

COUNTY/AGENCY

_____
BY:
Board of County Commissioners

ATTEST:

_____
(Seal)

APPROVED:

_____
County Sheriff

APPROVED AS TO FORM:

_____
County Attorney

City of _____

By _____
Mayor

Approved as to form:

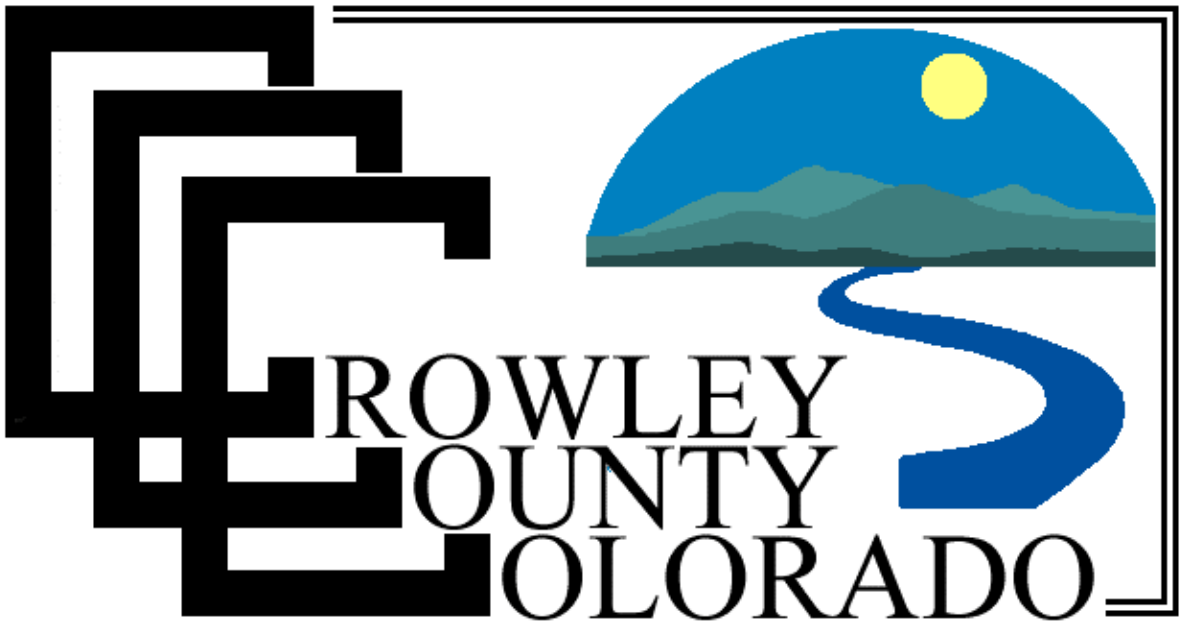
_____
City Attorney

Approved:

_____
Chief of Police

PLAN MAINTENANCE

STANDARD OPERATING PROCEDURES



2021

OVERVIEW

This formal planning process is established to ensure continuity across all plans within the emergency management program. These uniform planning procedures are to be used by the Crowley County Division of Emergency Management for major plans to include, but not limited to, the Comprehensive Emergency Management Plan, Continuity of Operations Plan/Continuity of Government Plan. This process also includes all annexes and appendices when stakeholder input is required. The formal planning process outlined in this planning process should be followed when the development of a new plan is required. Plans under the authority of the Emergency Management Program may be modified at any time by authority of the Division of Emergency Management to achieve goals of the emergency management program.

PURPOSE:

The planning process provides guidelines on developing emergency operations plans (EOP). It promotes a common understanding of the fundamentals of risk-informed planning and decision making to help planners examine a hazard or threat and produce integrated, coordinated, and synchronized plans. The goal is to make the planning process routine across all phases of emergency management and for all homeland security mission areas.

Using the tenants of the Federal Emergency Management Agency (FEMA) guidance *CPG-101 Developing and Maintaining Emergency Operations Plans*, this document was created to aid the emergency management program in the development and revisions of the major emergency plans. Accomplished properly, planning provides a methodical way to engage the whole community in thinking through the life cycle of a potential crisis, determining required capabilities, and establishing a framework for roles and responsibilities. It shapes how the Crowley County Division of Emergency Management envisions and shares a desired outcome, selects effective ways to achieve it, and communicates expected results.

STEPS OF THE PLANNING PROCESS

The official planning process is flexible and allows Crowley County to adapt it to varying characteristics and situations. While not ideal, if time is a constraint, steps can be minimized or skipped in order to accelerate the process. Certain situations may require the County to follow the steps that are appropriate to incident size, known risks, and available resources. At each step in the planning process, Crowley County will consider the impact of the decisions made on training, exercises, equipment, and other requirements.

STEP 1- Form a Collaborative Planning Team

The Crowley County Division of Emergency Management staff will determine those stakeholders needed for a core planning team if required. Stakeholder engagement is imperative to the overall success of the planning process. Stakeholders will be pulled from the Emergency Management Advisory Committee at the time of team development. The County uses a “whole community” approach to planning which can include, but is not limited to, all primary agencies of the emergency support functions, first response community, volunteer/faith-based organizations, subject matter experts, and members of the public. Throughout all steps of the planning process, stakeholder input will be solicited to ensure all plan components are developed in coordination with local, state and federal plans and requirements.

Stakeholders are selected by the chapter/section of the emergency management plan being written or redeveloped. Below is the list of sections of the major plans developed and managed by the

Division of Emergency Management and the stakeholders selected to provide input and operational directive to the plan.

Plan	Chapter	Stakeholders
Comprehensive Emergency Management Plan	Part 1 Basic Plan	MAC Group
	Part 2 Preparedness Element	MAC Group
	Part 3 Response Element	MAC Group
	Part 4 Recovery Element	MAC Group
	Part 5 Mitigation Element	MAC Group
	Part 6 Prevention Element	MAC Group
	Annex A Administrative Documents	MAC Group
	Annex B ESFs 1-18	Primary and Secondary Agencies
	Annex C Hazard Specific Plans	Primary Response Agency(ies)
	Annex D Operational Plans	MAC Group
Hazard Identification & Risk Assessment	All Chapters	MAC Group
COOP/COG	Annex A-Continuity of Government	County Administration / DEM
COOP/COG	Annex B-Continuity of Operations Plan County Departments	ESF Lead Department
Local Mitigation Strategy	All Chapters	Mitigation Planning Team
Strategic Plan	All Chapters	Advisory Committee
Procurement Manual	All Chapters	County Administration / Procurement Officer
Employee Handbook	All Chapters	Human Resources / Legal Department / County Attorney / County Administration

STEP 2- Understand the Situation

The need to develop a plan or procedure for the Division of Emergency Management requires the research and analysis of the threat or hazard associated with the plan. Crowley County's Hazard Identification and Risk Assessment will be used as the official research document to compile a background on the history of impacts of the hazard to Crowley County along with the risk rating. Additional information, including but not limited to; After Action Reports, community impacts, demographics, trends, and other risk assessments, will support the Emergency Management staff in developing a clear picture of the situation for the planning team.

STEP 3- Determine Goals and Objectives

Goals and objectives of plans are imperative to the success of the document and its operational feasibility. The planning teams listed above will utilize the information gathered in Step 2 to develop goals and objectives supporting the overall intention of the plan mission. The planning team should review goals and objectives frequently throughout the planning process to ensure plan

components meet the goals and objectives set forth in the proposed document. There may be times when goals or objectives will not be necessary to achieve the intended operational outcome of the plan or procedure; in these cases, a well-developed purpose statement and scope will be used to articulate the intention of the document.

STEP 4- Plan Development

The Division of Emergency Management establishes meetings with the appropriate agencies for their portion of the plan. Solutions-based problem solving is imperative to the overall planning process. Crowley County's Division of Emergency Management and the appropriate stakeholders will review multiple solutions to threats and hazards to meet requirements set forth. Timelines can be used to prioritize and phase-in the planning process. When used, these timelines will help stakeholders to identify key completion dates, meetings, deadlines, and public outreach activities. During this step, the planner will also determine who should have responsibility of specific components of the plan along with necessary resources required to meet the needs of the solutions presented.

STEP 5- Plan Preparation, Review, and Approval

During the plan preparation step, the Planner will determine the best location for the plan to live along with the format required to convey appropriate operational activities to implement the plan. The Planner will build an initial draft of the document and circulate it for input throughout the planning team and additional stakeholders identified in coordination with Step 1 and 2. The team will be brought together to review the document. Changes will be made directly to the document during the formal meeting to review the plan.

Upon completion of a final draft document, the Planner will check to ensure the document meets any established criteria that may be required as part of the overall plan approval process. The Planner will also review for adequacy, feasibility, acceptability, completeness and compliance prior to finalizing the document for approval.

Once the plan has been validated, the planner should present the plan to the appropriate officials and obtain official promulgation of the plan, if required. At a minimum, the document will require review by the chief administrator for the Division of Emergency Management and may require a signature when appropriate. Once the senior official grants approval, the Planner will arrange to distribute the plan for review with the Multi-Agency Coordination (MAC) Group at its next available meeting. At this time, the plan can be open again for stakeholder input and determination if the input provided meets the intention of the document. If so, then the Planner will incorporate the changes necessary and send the document out once more for additional input.

STEP 6- Plan Implementation and Maintenance

Once the plan reaches Step 6, a number of actions may be taken to ensure appropriate implementation and maintenance. After dissemination of the final document, it may be determined that personal may not have the required knowledge, skills and abilities to perform tasks identified in the plan. Additionally, the plan may need to be evaluated for effectiveness and to determine if the plan meets the intended outcomes of the planning team. This may be accomplished through an exercise or drill outlined in the building block approach of the Integrated Preparedness Plan (IPP). When the need for training or exercising is required the Division of Emergency Management will solicit for input from respective stakeholders.

PLANS MAINTENANCE

ROLES AND RESPONSIBILITIES:

Overall coordination of the development and updating process is the responsibility of Crowley County Division of Emergency Management (DEM). In this role, DEM sets schedules for the updating, tasks county agencies with review actions, coordinates with applicable Federal, State and municipal agencies and jurisdictions, and takes such other actions necessary to complete a plan update. This may include contracting for external personnel and resources to complete the updating process on behalf of DEM. DEM also serves as the custodian of the plan by maintaining the needed electronic files and records, printing documents, and monitoring/tracking distribution of the plan.

OVERVIEW OF PLAN MAINTENANCE PROCESS:

The process used by Crowley County DEM to maintain and improve all existing plans is illustrated here:



The actions taken to implement this process are coordinated by Crowley County DEM, with the assistance and support of the designated lead and support agencies for the County.

Actions will vary with the characteristics of the current needs for the specific plan, but updating may include any or all of the following:

Input from Stakeholders on Plan Revision

- Input provided by stakeholders via Executive Policy and Emergency Management Advisory Committee, interagency conferences and consultations between state, county and municipal agencies regarding current needs
- Changes in regulations and guidelines applicable to the content or format
- Recent experience with hazard mitigation, emergency response, and disaster recovery operations
- Changes in the mitigation, response and recovery capabilities, and resources of the participating agencies and organizations
- Changes in the demographic, social, or political characteristics of the county
- Recognition of additional or modified hazards confronting the county or increased vulnerability to those hazards
- Identified corrective actions from exercise and real-world event improvement plans

- Identified lessons learned from events around the country

Plan Revision and Review

Given the inputs to the plan revision process, the steps in this process will generally involve the following:

- DEM initiates the process for updating the plan by:
  - Establishing the schedule
  - Assigning staff/contractors to accomplish the necessary work
  - Conducting meetings with stakeholders, or via the Emergency Management Advisory Committee meetings
  - Reviewing applicable requirements and other changes in the community
- Under the direction of DEM, the assigned staff/contractor utilizes the inputs to the planning process to develop a draft of the updated plan for review by all participants
- A schedule for review of the draft is established by DEM and the documents are distributed to the involved participants
- As indicated, meetings between DEM, the assigned staff, may be necessary to discuss modifications to the draft plan
- The assigned staff/contractor modifies the draft plan according to the outcome of the review process and prepares a final draft plan
- If indicated, another review of the final draft plan is conducted by the participating agencies and organizations and a final plan is prepared
- The final plan is distributed by DEM to the participating jurisdictions, agencies, and organizations for final approval
- The CEMP is a designated "four year" update, and the Mitigation Plan, is a designated "five year" update, both with the Colorado Division of Homeland Security and Emergency Management (Division), each should be approved by the Division prior to the Crowley County Board of County Commissioners adoption

Plan Approval and/or Promulgation

All plans and procedures are reviewed and updated and suggested changes are incorporated into the plan.

For the CEMP and the mitigation plan, the final update is presented to the Crowley County Board of County Commissioners for review and adoption. If requested by the Board, final changes will be made in the CEMP/Hazard Mitigation Plan prior to adoption. The Hazard Mitigation plan final update is also adopted by all municipal governments within the County and other participating jurisdictions.

The Crowley County Board of County Commissioners adopts the CEMP and Mitigation Plan update in accordance with normal procedures. The adoption is documented appropriately, and a letter or similar notification of promulgation is included in the plan documents as an Appendix.

Upon adoption, a copy of the CEMP/Mitigation Plan, if modified, is again made available to all county agencies, municipalities, and involved community organizations. While the CEMP has its own distribution process, all other plans are available to stakeholders through MAC Group meetings or by request.

Agencies are advised of plan updates and all primary and support agencies would conduct such preparedness actions as needed to maintain readiness to implement the actions prescribed in the plan.

Plan Implementation and Evaluation

Plans are evaluated on a continuing basis between normally scheduled updates, and such evaluations are used to improve and enhance the effectiveness of the plans during the next update. If indicated, updates to portions of the plan will be made promptly, before the next scheduled update.

Since the evaluation of the effectiveness of plans is a continuing process, the plan should be viewed as a document in a constant state of change and improvement. Whenever possible, DEM will make changes to the plan and circulate such modifications.

Plan evaluation occurs through the following continuing mechanisms:

- Stakeholder meetings
- "After-action" evaluation of the emergency response to any significant disaster or emergency
- Critique and analysis of training or exercises
- Continuing evaluation of the hazards threatening the community and the vulnerability to those hazards
- Continuing evaluation of the capabilities of the participating agencies and organizations to conduct hazard mitigation, emergency response and disaster recovery operations
- Continuing review by the designated primary and support agencies during periods between formal updates of the plan
- Review and analysis of the plan and its underlying procedures and information bases by county personnel, outside experts, and state agency personnel
- Any other areas where feedback may be collected from stakeholders

Plan Improvement

The primary tool for identifying areas of success and areas in need of improvement is an After-Action Review (AAR). An AAR is completed at the conclusion of any exercise or significant real-world incident. Every AAR developed by the Crowley County DEM follows all HSEEP guidance, utilizes the same standard format, includes an Improvement Plan and is the responsibility of the corresponding staff position(s) for the noted program. Any major or substantial items identified in the Improvement Plan will also be submitted to the AAR/IP Corrective Actions Matrix for priority attention.

The AAR/IP Corrective Actions Matrix is designed to provide only a snap shot of those priority items and is not intended to be an exhaustive list of every item, issue or project that the Crowley County DEM is working to resolve. The matrix simply outlines what the problem is, source used to discover the problem, proposed solution, EM staff responsible for addressing and time-frame for correction implementation.

Training and Exercise

Training and exercise of all plans will occur based on the guidance provided within the Training and Exercise Plan (TEP), annual stakeholder input and involvement, and determination by the Emergency Management Director. Implemented corrective action solutions will be tested and validated through training and exercise.

Plan, Policy, Process or Procedure	Plan Evaluation / Maintenance Schedule	Revision Years
Communications and Warning Plan	Annually	2021, 2023, 2025, 2027
Comprehensive Emergency Management Plan (CEMP) - Basic Plan	Annually	2021, 2025, 2029, 2033

- Prevention Element - Response Element - Recovery Element - Prevention Element - Appendix A Administrative Documents - Appendix B ESFs & SOGs - Appendix C Hazard Specific Annexes		
Continuity of Operations / Continuity of Government Plans	Annually	2021, 2025, 2029, 2033
Debris Management Plan	Even Years	2020, 2022, 2024, 2026
Employee Handbook	Annually	2020, 2022, 2024, 2026
Hazard Identification, Risk Assessment and Consequence Analysis - CEPA	Annually	2022, 2024, 2026 2028
Hazard Mitigation Plan	Annually	2021, 2026, 2031, 2036
Mutual Aid Agreements, Contractual Service Agreements, Memoranda of Understanding	Annually	2021, 2023, 2026, 2029
Procurement Manual	Annually	2021, 2022, 2023, 2024
Resource Management & Logistics Plan	Annually	2019, 2020, 2021, 2022
Crowley County Emergency Water Response Plan	Odd Years	2019, 2023, 2027, 2031
Training and Exercise Plan	Annually	2021, 2022, 2023, 2024
Regional Cyber Security Plan	Annually	2021, 2024, 2027, 2030
Crowley IT Disaster Recovery Plan	Annually	2019, 2021, 2023, 2025
Regional Tactical Interoperability Communications Plan TICP	Annually	2021, 2024, 2027, 2030
Regional Debris Management Plan	Annually	2020, 2024, 2028, 2032
Regional Recovery Plan	Annually	2020, 2024, 2028, 2032



Contract and Procurement Policy Manual
Approved on November 15, 2021

Resolution No. 2021-8224

By: _____

Blaine Arbuthnot, Chairman of the Board of County Commissioners

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1 INTRODUCTION

1.1 PURPOSE OF PROCUREMENT POLICIES MANUAL

County government was created by its taxpayers and exists to serve its taxpayers.

The public must have confidence that public funds are expended prudently on its behalf and not for the personal benefit of County employees, officials, or their friends. The deliberate elements of actual or perceived conflict of interest, fraud, and abuse can be destructive to the public trust. The policies incorporated within should:

- Be reviewed at least annually to ensure the efficacy of procurement statutes and to incorporate periodic modifications.
- Promote and encourage ethical management and efficiency in County procurement procedures.

The purpose of this policy is to establish guidelines that meet or exceed the procurement requirements for the purchase of goods (apparatus, supplies, materials, and equipment), services, and construction or repair projects when state or federal funds are being used in whole or in part to pay for the cost of the contract.

Procurement in the public sector is the process through which a government acquires goods and services. The terms "acquisition," "procurement," "purchasing" and "contracting" are often used interchangeably. One of the most important rules of public procurement is that each procurement action results in a legal contract between the County and the supplier. Each procurement action is a legal action. Public procurement activities are governed by common law, the Uniform Commercial Code (UCC), government procurement laws and ordinances, and case law. Thus, those persons making procurement decisions are subject to legal requirements (and exposure) well beyond what other County officials may routinely experience.

1.2 MISSION

The County's procurement of materials, supplies, equipment, and services are at the lowest possible cost, consistent with the quality and delivery required. All purchases by an employee, acting as an authorized agent of the County, must be made in an open, fair, legal, and ethical manner to promote competition and best serve the taxpayers.

1.3 CODE OF ETHICS

As a political subdivision of the State of Colorado, any person employed by the County who purchases goods and services, or is involved in the purchasing process, shall be bound by this code and shall:

- Avoid the intent and appearance of unethical or compromising practice in relationships, actions, and communications.
- Demonstrate loyalty to the County by diligently following the lawful instructions of the State of Colorado while using professional judgement, reasonable care, and exercising only the authority granted.

- Conduct all purchasing activities in accordance with the laws, while remaining alert to, and advising the County regarding the legal ramifications of the purchasing decisions.
- Refrain from any private or professional activity that would create a conflict between personal interests and the interests of Crowley County.
- Identify and strive to eliminate participation of any individual in operational situations where a conflict of interest may be involved.
- Never solicit or accept money, loans, credits, or prejudicial discounts, and avoid the acceptance of gifts, entertainment, favors, or services from present or potential suppliers which might influence, or appear to influence purchasing decisions.
- Promote positive supplier relationships through impartiality in all phases of the purchasing cycle.
- Display the highest ideals of honor and integrity in all public and personal relationships to merit the respect and inspire the confidence of Crowley County and the public being served.
- Provide an environment where all business concerns, large or small, majority or minority owned, are afforded an equal opportunity to compete for County business.
- Enhance the proficiency and stature of the purchasing profession by adhering to the highest standards of ethical behavior.

1.4 CONDUCT WHEN DEALING WITH VENDORS

County employees and officials are prohibited from accepting any gifts, samples, entertainment, special personal price considerations, fees, commissions, or other gratuities from any providers, vendors, or bidders. Items of negligible value used as obvious forms of advertisement, such as pencils, calendars, notepads, and key rings, shall not be considered gratuities. Providers, vendors, or bidders who offer gifts, entertainment, etc. may be declared irresponsible bidders and may be debarred from bidding or proposing. A County employee or official who accepts a gift, entertainment, etc. shall be subject to disciplinary action per County Personnel Policy.

Only department heads or elected officials of the County shall negotiate contracts directly or indirectly with a provider or vendor for supplies or services, except where an emergency exists after normal working hours.

No supply or service shall be purchased or accepted for the private use of an employee or official.

Collusion is strictly prohibited at all levels of government.

Vendor contact with employees should be limited to prevent vendors from bypassing the procurement policies and procedures in an attempt to influence employees. All questions from vendors regarding any aspect of a County acquisition, from initial requisition through final acceptance of the purchase, shall be addressed to the department head or elected official.

When interacting with vendors/suppliers on behalf of the County, it is important to consider the following:

- Suppliers should be dealt with fairly and equitably.
- "Meet or beat" pricing among bidders should not be requested or accepted.
- Equal assistance should be given to all suppliers and potential vendors.

- Ensure solicitation activities are competitive.
- No supplier preference should be given.
- Goods or services should not be called proprietary or sole source unless it is determined that they are, and that determination can be properly documented.
- No favoritism of any kind is permitted.
- To treat internal customers and external suppliers should be treated with professional courtesy.

The ability to make purchases on behalf of the County does not entitle the purchaser to any kind of special personal privileges from the vendor, and no purchase for the County should be, in any way, tied to any personal purchases at any time.

It is important to remember that perception is everything. Even if a procurement decision is sound, the method of determination should be documented and will be open to public inspection. If a decision is perceived to be less than fair to all competitors, then the perception becomes the reality to the unsuccessful bidders. It is important that purchases or awards are made based on competition or the best value for the County, that the reason(s) for those purchases or awards is documented and defensible, and that a decision is based on fact and is made in the best interest of the County.

1.5 DETERMINATION OF RESPONSIBILITY

A determination of responsibility or non-responsibility shall be governed by this policy. Factors to be considered in determining whether the standard of responsibility has been met include whether a prospective contractor or vendor:

- Has the appropriate financial, material, equipment, facility, and personnel resources and expertise necessary to indicate capability to meet all contractual requirements (or the ability to obtain such capabilities).
- Has a satisfactory record of past performance, including conduct and cooperation.
- Has adequate financial resources to perform the contract (or the ability to obtain them).
- Has the ability to comply with the required or proposed delivery or performance schedule, taking into consideration all existing commercial and government business commitments.
- Has a satisfactory record of integrity and business ethics.
- Has the necessary organization, experience, accounting and operational controls, and technical skills (or the ability to obtain them).
- Is qualified and eligible to receive an award under applicable laws and regulations.

1.5.1 Written Determination of Non-Responsibility Required

The prospective contractor or vendor shall supply information concerning the responsibility of such contractor upon request. If the contractor fails to supply the requested information, the department head or elected official shall base the determination of responsibility upon any available information or may find the prospective contractor non-responsible.

If a bidder or offeror is found non-responsible, the department head or elected official shall prepare a written determination of non-responsibility setting forth the basis of the finding. A copy of the

determination shall be sent promptly to the non-responsible bidder or offeror. The final determination shall be made part of the procurement files.

1.6 PRE-QUALIFICATION

Certain County public improvement projects in excess of $100,000 may require that the prospective contractor be pre-qualified. On such public improvement projects, prospective contractors may be asked to submit a financial statement in accordance with the general provisions of the public improvement documents. Prequalification may be required for other County contracts and shall be determined on an individual basis by department head or elected official.

1.7 SUSPENSION OR DEBARMENT

Suspension or debarment of a vendor is a consequence that should be addressed with serious consideration. The department head or elected official shall have the authority to suspend or debar any vendors or contractors for the following:

- Defaulting on an awarded contract (debarment).
- Routinely performing unsatisfactory work (suspension or debarment).
- Violating contract terms and conditions without cure or remedy (suspension or debarment depending on severity).
- Having pending litigation against the County (may only be suspended pending results of litigation).
- Defaulting on the payment of any taxes, license fees or other monies due the County (suspension).
- Being convicted of fraud or criminal acts while performing as a contractor on any contracts, even those not associated or written by the County (debarment).
- If documentation substantiates a consistent past performance record of habitually or continuous unsatisfactory performance, safety violations, repeated violations of contract provisions, or delinquent performance by a contractor (suspension).

The department head or elected official may debar vendors from bidding or performing as a subcontractor on any County contracts for a minimum period of three months up to a maximum of three years. However, if a vendor under suspension fails to correct or cure the deficiency for which they have been suspended during the suspension period, the department head or elected official may convert the suspension into a debarment. Prior to formally suspending or debarring any vendor, the department head or elected official shall review and investigate all reasons and evidence supporting such a decision and shall inform the suspended or debarred vendor in writing of such decision.

The suspended or debarred vendor may, at the conclusion of the suspension or debarment period, submit a formal request to be removed from such status. Upon receipt of this request, the department head or elected official will be required to investigate current and past performance to determine responsibility.

1.8 PROCUREMENT RECORDS AND INFORMATION

Public Access to Procurement Information - requests for procurement records are available through the Administration Office in accordance with applicable state statute.

Retention of Procurement Records - all procurement records shall be retained and disposed of in accordance with the State of Colorado's records retention guidelines and schedules.

2 ADMINISTRATIVE MATTERS

2.1 APPLICABILITY

Policies set forth in this manual shall apply to all publicly funded contracts for purchases, services, and construction or repair work entered into by the County. Contracts funded, in whole or in part, with state or federal assistance monies shall comply with state and federal requirements.

All federally funded projects, loans, grants, and sub-grants, whether funded in part or wholly, are subject to the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for federal awards (Uniform Guidance) codified at 2 C.F.R. Part 200 unless otherwise directed in writing by the federal agency or state pass-through agency that awarded the funds.

Policies set forth in this manual shall apply to all employees and officials acting as agents of the County for the purpose of procurement of goods or services. Any employee or official who expends County funds or enters into a contractual agreement a) or personal use; b) without the written appropriate approval; c) without being authorized to act as an agent of the County; or d) without following the procedures as set forth by the BOCC will be subject to disciplinary action(s).

All procurement activities involving the expenditure of federal funds must be conducted in compliance with the Procurement Standards codified in 2 C.F.R. 200.317 through 200-326 unless otherwise directed in writing by the federal agency or state pass-through agency that awarded the funds. Crowley County will follow all applicable local, state, and federal procurement requirements when expending federal funds. Should Crowley County have more stringent requirements, the most restrictive requirement shall apply so long as it is consistent with state and federal law.

2.2 CHANGES TO THE MANUAL

All policy changes shall be made by Board of County Commissioners (BOCC) approved resolution(s) and incorporated herein. Grammar, punctuation, or minor changes made for clarification, easier interpretation, or revision changes to comply with changes in federal and state laws may be made providing no policy(s) is affected by the change(s).

2.3 SUPPLEMENTARY GENERAL PRINCIPLES OF LAW APPLICABLE

Unless otherwise stated within specific provisions of this manual, the principles of law and equity— including the Uniform Commercial Code (UCC) and any law relative to a contract,

department fraud, misrepresentation, duress, coercion, mistake, or bankruptcy—shall supplement the provisions as stated.

2.4 PURCHASE ORDER/CONTRACT SIGNATORY AUTHORITIES AND APPROVAL THRESHOLDS

Only the department head/elected official or BOCC has the authority, or may designate the authority, to commit funds or enter into contractual agreement. Any individual making a purchase otherwise obligating the County without a valid purchase order or contract may be held personally responsible.

The Board of County Commissioners has authorized spending limits as follows. These limits are based on the expenditure being approved in the County Budget. For any expenditures **not** approved in the County Budget, the Board of County Commissioners must be consulted prior to committing funds or entering into a contract, and they will approve or deny the request.

- COUNTY DEPARTMENTS and OFFICES: Not to exceed $ 5,000
- DEPARTMENT HEAD OR ELECTED OFFICIAL: $5,001 to $40,000
- BOARD OF COUNTY COMMISSIONERS' APPROVAL: $40,001 & greater

The BOCC, shall be kept apprised of procurement activities. The BOCC may approve or reject recommendations made for approval at its discretion.

ONLY the department head, elected official, or BOCC may sign contracts.

2.5 MINORITY BUSINESS ENTERPRISES

No provision is made in these policies for preferences or set-asides for minority, veterans-owned, or women-owned businesses unless mandated by the funding source. It is, however, the policy of Crowley County to make a special effort to solicit and encourage small, minority-owned, or women-owned business participation for County purchases or contracts.

2.6 LOCAL BUSINESS PREFERENCES

No provision is made in these policies for dollar percentage or other types of preferential considerations for local vendors or contractors. It is, however, the policy of Crowley County to solicit bids and encourage participation from local suppliers when such competitive local sources exist and when no sacrifice or loss in price or quality would result. In the event of a tie bid between a local vendor and an out of county vendor, award will be made to the local vendor if all factors are determined to be equal.

2.7 EQUAL OPPORTUNITY

The department head or elected official shall be responsible for ensuring the procurement of (or contracting for) products, commodities, and services are in a manner that affords all responsible businesses a fair and equal opportunity to compete.

2.8 ENGLISH ONLY PROVISION

Unless otherwise requested, all documentation must be in English for the submission of bids or proposals, interviews or presentations that are required as part of the solicitation process, and presentations to the public.

2.9 CONTRACTORS' CONFLICT OF INTEREST

Contracts or purchase orders will not be awarded to consultants, engineers, architects, or other professionals for contract administration services if they were paid for actual design or specification preparation of the subject project by the County, nor is a contractor or any affiliated firm of that contractor, allowed to bid on contracts in which they are being paid for contract oversight, without written consent or approval from the BOCC. In no event shall the consultant or contractor have authority for approving change orders or obligating the County financially. A contract or purchase order will not be awarded to any supplier or firm with a determined or perceived conflict of interest.

2.10 CONFLICT OF INTEREST (EMPLOYEE-OWNED BUSINESS)

Crowley County shall not contract for goods or services for any department or office if the contract is with an employee of that department/office.

Furthermore, contracting for goods or services with an employee, administrative officer, member of the employee's immediate family, or a company that is owned in whole or part by an employee, administrative officer, or a member of his/her immediate family, or a company in which an employee, administrative officer, or a member of his/her immediate family has a financial interest (see Definitions) is permitted providing strict adherence to the following requirements:

- The BOCC shall be notified immediately in writing of such an ownership interest or financial interest.
- No contract for goods or services shall be written to an employee-owned business if there is an appearance that the County employee-owned business has an advantage over other competitors.
- No solicitation of business by the employee shall take place during his/her normal duty hours.
- All purchases or contracts involving employee-owned businesses, regardless of estimated cost, shall be completed by the BOCC.

2.11 PROTESTS AND CLAIMS

Crowley County recognizes two types of grievances. These are protests and claims.

- A protest is filed prior to an award of a solicitation.
- A claim is filed after the award (or rejection) of a solicitation.

The BOCC must receive a protest or a claim in writing within seven calendar days from the day when the supplier knew or should have known of the facts giving rise to the aggrieved issue. Protests or claims received after the seven calendar days will not be formally addressed.

Before a protest or claim is submitted, it is recommended that the aggrieved party contact the BOCC to discuss the issue and attempt to resolve it in an informal manner. It is the policy of Crowley County to try to resolve all controversies by mutual agreement between the parties involved. However, if the issue cannot be resolved, the following constitute the applicable procedures to submit a protest or claim.

2.12 PROTEST AND CLAIMS PROCEDURE

A protest or claim may be submitted on any phase of the solicitation up to and including the date/time of bid or proposal opening and through the date of award. Protests and claims consist of written objections by an interested party to a solicitation for bids/proposals by the County or cancelation of the solicitation. Matters regarding County policies and procedures are not subject to this policy. Reasons for protests or claims may include, but are not limited to:

- The preparation of the specifications.
- Insufficient time to respond.
- Restrictive bonding requirements.
- Excessive or restrictive qualification requirements.
- Evaluation criteria

When submitting a protest or claim, the party must include the following:

- Solicitation number and title.
- Date the protest or claim.
- Description of the aggrieved issue.
- Submission of one original and two copies of the protest.
- The protest or claim must be delivered to the BOCC.

The BOCC will send a copy of the protest or claim to the County Attorney and the Department/Office affected by the protest. The BOCC will review the issue with the appropriate staff, which shall include the County Attorney. Within seven calendar days, the BOCC will reply, in writing, to the aggrieved party. The BOCC is the only person authorized to respond to the protest. The reply shall state the reasons for the decision reached. Specific findings of fact are not required, but if made, shall not be binding in any subsequent proceeding. The decision of the BOCC is final.

3 COMPETITION

The contracting or procurement of goods or services exceeding an annual requirement of $100,000 must be competitively solicited.

All procurement transactions will be conducted in a manner providing full and open competition consistent with the standards of 24 C.F.R. 85.36. Some of the situations considered to be restrictive of competition include but are not limited to:

- Placing unreasonable requirements on firms in order for them to qualify to do business;
- Requiring unnecessary experience and excessive bonding;
- Noncompetitive pricing practices between firms or between affiliated companies;
- Noncompetitive awards to consultants that are on retainer contracts;
- Organizational conflicts of interest;
- Specifying only a "brand name" product instead of allowing "an equal" product to be offered and describing the performance of other relevant requirements of the procurement; and
- Any arbitrary action in the procurement process.

Crowley County will conduct procurements in a manner that prohibits the use of statutorily or administratively imposed in-state or local geographical preferences in the evaluation of bids or proposals, except in those cases where applicable federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts state licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criterion provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.

Crowley County's has written selection procedures for procurement transactions. These procedure will ensure that all solicitations:

- Incorporate a clear and accurate description of the technical requirements for material, product, or service to be procured. Such description shall not, in competitive procurements, contain features which unduly restrict competition. The description may include a statement of the qualitative nature of the material, product, or service to be procured, and when necessary, shall set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a "brand name or equal" description may be used to define the performance or other salient requirements of procurement. The specific features of the named brand which must be met by offerors shall be clearly stated; and
- Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals

Crowley County will ensure that all prequalified lists of persons, firms, or products which are used in acquiring goods and services are current to include enough qualified sources to ensure maximum open and free competition. Also, Crowley County will not preclude potential bidders from qualifying during the solicitation period.

4 METHODS OF SOURCE SELECTION

4.1 PROCUREMENT BY SMALL PURCHASE PROCEDURES

Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that cost $5,000 to $100,000. They may be made on the open market by informal procurement methods, without public notice, and without following formal procurement methods described later. Procurement requirements shall not be artificially divided to constitute a small purchase under this policy (C.R.S. 24-103-204). If small purchase procedures are used, price or rate quotations shall be obtained from an adequate number of qualified sources. The types of informal procurement methods are as follows:

- **Single Quote:** A single quote may be obtained to purchase goods in the amount of $5,000 or less. The department/office should request that the vendor provide a written quote containing all details of the purchase, (e.g., date of delivery, freight costs, discounts, warranty). It is suggested that when time allows, you obtain competitive quotes either written or by any acceptable electronic method to ensure that you are getting the best value for the County.
- **Request for Quotes:** A Request for Quotes should be used to purchase goods in excess of $5,000, up to and including the amount of $100,000. The Request for Quotes must be obtained from at least two (but preferably three) qualified vendors. A "no bid" shall not meet the requirement of a responsive bid. The department/office will then receive and tabulate the vendor responses. Award shall be made to the vendor offering the lowest responsive bid based upon meeting County needs. If awarded to other than the lowest responsive bid, justification must be provided.

The department/office shall then forward a copy of the original Request for Quotes and all original responses along with a tabulation to the Administration Office with a purchase requisition/statement/invoice requesting payment for the purchase.

4.1.1 Waiver of Competition

The department head or elected official may elect to waive the competitive bidding process under certain conditions, including the following:

- A needed product or service is available from only one supplier (i.e., sole source).
- A particular product is wanted for experiment or trial.
- Additional products are required to complete an ongoing task.
- The amount of the purchase is too small to justify the expense of soliciting quotations.
- A purchase is made from another unit of government.
- The purchase of a used item is advantageous, and the item is available only on short notice and subject to prior sale.
- Under no circumstance shall the invoice or payment precede any quote, purchase order, or contract.

The employee shall require competition wherever practicable and, except for small purchases, the basis and reasons for each waiver shall be documented as public record.

4.1.2 Sole Source Procurement

A sole-source (non-competitive) procurement is permissible if a requirement is available from only a single supplier. A requirement for a particular proprietary item does not justify sole source procurement if there is more than one potential bidder or offeror for that item or service.

Some circumstances that could necessitate a sole source procurement are as follows:

- The purchase of technical equipment for which there is no competitive product, and which is available only from one supplier.
- The purchase of professional services from a vendor who is uniquely qualified to provide such services.
- The purchase of a component or replacement part for which there is no commercially available product, and which can be obtained only from the manufacturer.
- The purchase of an item where compatibility is the overriding consideration.
- The purchase of a used item which becomes immediately available and is subject to prior sale.
- The use of other than OEM (original equipment manufacturer) parts would void a still valid warranty.

Any request by a County department/office that a purchase be restricted to one potential supplier shall be accompanied by a written explanation from the department head or elected official as to why no other supplier will be suitable or acceptable to meet the need. This written justification and approval form will be placed in the procurement file or with the payment invoice for audit purposes.

Sole source refers to the supplier, not a product or service. Thus, the ability to meet a delivery date or to provide on-call repairs can create a sole source that is a single-supplier condition. Justification for a sole source purchase depends upon a needed item or service being available from only a single supplier under the prevailing conditions. If the item can be obtained from more than one source, price competition shall be solicited.

Justifications shall completely explain the rationale used in determining "sole source," as well as the determination that the awarded price is "fair and reasonable," using an element of price analysis justifying the total cost.

The department head or elected official can determine use of a sole source to be in the best interest of the County based on documented justification. This determination must be recorded.

4.1.3 Emergency Purchases

An emergency condition is a situation that creates a threat to public health, welfare, safety, or substantial financial loss such as may arise by reason of natural disasters, epidemics, riots, equipment failures, or other such reason as determined by the department head or elected official. The existence of such condition creates an immediate and serious need for supplies, equipment, materials, and services that cannot be met through normal procurement methods, and the lack such

would threaten the function of County government or the health, safety, or welfare of County residents. County departments/offices may make emergency procurements when an emergency condition arises, and the need cannot be met through normal procurement methods. An emergency procurement shall be limited only to a quantity of those supplies, equipment, materials, or services necessary to meet the emergency.

Emergency Purchases will comply with the Colorado state statutes.

If the emergency occurs outside of normal business hours, the individual authorizing the emergency purchase will inform the BOCC of any such purchase made no later than the first working day following the purchase. If the expense is $5,000.01 or more and the emergency occurs during normal business hours (i.e., 8:00AM–5:00PM, Monday–Friday), the BOCC shall be contacted (in person or by telephone) for guidance on the appropriate action needed to handle the purchasing emergency.

During any disaster the County will utilize (if applicable) pre-existing contracts; these contracts may be cooperatives contracts or agreements with the surrounding counties, State of Colorado or other cooperative agencies that help support the emergency purchasing.

If the follow-up review of an emergency purchase indicates that the purchase was not an emergency, the purchase may be disallowed for payment, and a determination to take the appropriate disciplinary action may be made.

Proper purchase documentation and approval limits remain the same for the authorization of the expenditures; however, formal invitation for bid or request for proposal procedures may not apply. The purchase order must be placed on the next scheduled formal agenda for approval by the BOCC.

Emergency procurements shall be limited only to a quantity of those supplies, services, or construction items necessary to meet the emergency.

Note: In the event of a disaster, the office of emergency management (OEM) procedures for the emergency operations center will become effective.

When FEMA becomes applicable for acquisition requirements during an emergency, FEMA's policies will supersede any others.

By relieving the budget constraints, the BOCC allows the OEM the flexibility to obtain goods and services required to react to the emergency or disaster situation.

4.1.4 Equipment Leases

All lease agreements for capital equipment in the amount of $40,001 or more shall be reviewed by the BOCC, approved as to form by the County Attorney after appropriate review and negotiation of terms and conditions, and signed only by a member of the BOCC. The BOCC may elect to seek additional proposals from third-party leasing companies. Lease agreements signed by unauthorized parties may be voided and may result in personal liability.

Equipment leases and purchase options should never be used to circumvent the requirements for competition. The soundest and safest approach is that any leases of equipment be subject to the requirements for competition that apply to outright purchases. Leases with the option to purchase should not be considered unless there is justification from the department head or elected official

why it is beneficial to pursue the approval. The department head or elected official must submit the justification for approval by the BOCC.

4.1.5 Use of State, Other Governmental Entity, or Cooperative Awards

The County may purchase from state, other governmental entity, or cooperative contracts awarded for goods or services required when the award specifically states this is permissible.

The County may not, however, use the prices on a state, other governmental entity, or cooperative contract as a means of negotiation with other vendors. Typically, the prices under these contracts have been negotiated with the anticipation that the volume will be increased because other government agencies having similar requirements will use them. These contracts are already in place and using them is a timesaving and normally cost-savings measure because they eliminate the requirement for formal solicitation.

Also, there are usually tightly negotiated terms and conditions that prove to be beneficial for all governmental agencies.

When a particular commodity or service is available on a state or other governmental contract, the designated employee may purchase directly from the contract, referencing the contract or award number, at the price negotiated by the state or other governmental entity. The department head or elected official may be able to negotiate your specific requirements with the vendor under the terms and conditions of the original contract.

4.2 PROCUREMENT BY SEALED BIDS (FORMAL ADVERTISING)

Bids are publicly solicited, and a firm fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in section a (below), apply.

a. For sealed bidding to be feasible, the following conditions should be present:
    - A complete, adequate, and realistic specification of purchase description is available;
    - Two or more responsible bidders are willing and able to compete effectively and for the business; and
    - The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

b. If sealed bids are used, the following requirements apply:
    - The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of know suppliers, providing them sufficient time prior to the date set for opening the bids;
    - The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services in order for the bidder to properly respond;
    - All bids will be publicly opened at the time and place prescribed in the invitation for bids;

- A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. If the lowest bidder is not selected, justification must be notated. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs shall be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and
- Any or all bids may be rejected if there is a sound documented reason.

4.2.1 Invitation for Bids

The invitation for bid shall, at a minimum, include the following:

- Instructions and information to bidders concerning the bid submission requirements, including the time, closing date, and the address of the office to which bids are to be delivered.
- The project description furnished by the requesting department/office.
- Basis of award, delivery, or performance schedule and inspection and acceptance requirements.
- The contract terms and conditions, including warranty and bonding or security requirements as applicable.
- Acceptable payment terms include but are not limited to, credit card, wire transfer, EFT, or check.

4.2.2 Receipt of Bids

Upon receipt, each bid shall be date/time-stamped by machine or by hand and shall be stored in a secure place until bid opening time. Bids shall not be opened upon receipt, with the exception of bids that must be opened in order to identify those bids that cannot be visibly identified by the information on the envelope. If bids are opened for identification purposes only, they will be opened and resealed in the presence of witnesses and documented as such on the front of the envelope.

4.2.3 Public Bid Opening

Bid Opening: The bid opening shall be held on the date, time, and place specified in the solicitation. All bids received on or before the date and time specified will be opened publicly and read aloud at the specified date and time. Bid envelopes will be opened in the order in which they were received. The bids will be read aloud by one of the commissioners and results tabulated. A bidder will not be allowed to complete or change a bid during a bid opening.

Late Bids: Any bid received after the time and date stated in the solicitation will be time/date stamped and returned to the vendor unopened. The County shall not be responsible for late bids received due to problems with any delivery services, adverse weather conditions, parking problems, unforeseen problems of the vendor(s), or any other situation where a bid cannot be delivered by the time and date specified in the invitation for bid.

Type of Bid Formats Accepted / Not Accepted: Telephone bids will not be accepted in formal solicitations. A Facsimile Bid Transmission may be accepted in the formal competitive sealed bid

process with advanced approval prior to the date and time of the opening as long as the original documents are provided to the Contracts and Procurement Division within 24 hours.

Award Notification: After award, the bidder will be notified of their bid acceptance. All documents submitted with the bid become public information immediately after a decision or award relating to the bid has been made, except for those items identified as proprietary information, trade secrets, or other information protected under the Colorado Open Records Act.

4.2.4 One Bid Received

If only one responsive bid is received in response to the invitation for bid, an award may be made to the single bidder if BOCC finds that 1) the price(s) submitted are fair and reasonable, 2) other prospective bidders had reasonable time to respond, or 3) there is not adequate time for re-solicitation. Otherwise, the bid may be rejected, and new bids may be solicited; the proposed solicitation may be canceled; or, if the BOCC determines that the price of the one bid is not fair and reasonable and that re-solicitation would likely be futile, negotiations may be entered into with the lone bidder.

Note: If new bids are solicited, the prices originally submitted shall not be released to the public in order to maintain the integrity of the procurement.

4.2.5 Award

A recommendation for award in the form of a purchase order/contract shall be to the lowest responsive and responsible bidder whose bid meets the requirements and the criterion set forth in the invitation for bid and is determined to be in the best interest of the County. A recommendation for award is a collaborative effort between the requesting department/office and the BOCC. Evaluation of all the information submitted by the vendor must be documented. However, the lowest-dollar bidder is not required to be recommended for award if it:

- Does not meet all the specifications as outlined in the invitation for bid.
- Takes exception to any of the specifications that is not acceptable.
- Cannot meet acceptable delivery requirements.
- Has additional costs that make the overall total cost higher than the next low bid.
- Has an unacceptable warranty limitation(s).
- Has past documented history by the requesting department/office, by reference(s) to poor quality, delivery or other information that would affect the operation of the requesting department/office.

The BOCC may determine to make whole or partial awards or may reject all bids if prices are determined to be unreasonably high or unrealistically low. If insufficient funds are available to award a contract, the solicitation may be canceled or the BOCC in coordination with the using department/office may choose to re-scope the project and re-solicit bids, as may be determined to be in the best interest of the County.

The department head or elected official will proceed to work with the successful bidder to obtain all contract or agreement documents in place before award is made and services or merchandise are provided to the County.

If the successful bidder fails to execute a contract within 10 business days of receiving the notification of award, the BOCC may take any bid deposit and consider it as liquidated damages for failure to execute the contract, not as a penalty.

4.3 PROCUREMENT BY COMPETITIVE PROPOSALS – REQUEST FOR PROPOSALS (RFP)

The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed-price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. It should not be used when the service or equipment to be contracted is standard, routine, for common items or if there is an industry standard associated with the service or commodity to be contracted. If this method is used, the following requirements apply:

- Request for proposals will be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals shall be honored to the maximum extent practical;
- Proposals will be solicited from an adequate number of qualified sources (minimum of two, but preferably three);
- Crowley County will have a method for conducting technical evaluations of the proposals received and for selecting awardees;
- Awards will be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and
- The County may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated, and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are potential source to perform the proposed effort.

4.3.1 Evaluation Process

The RFP evaluation process shall be conducted in a fair and objective manner that requires the Evaluation Committee and BOCC to evaluate all proposals on the specific criteria in the RFP.

Complete confidentiality is an ethical and legal requirement and is vital to fair and equitable evaluation. After proposals are submitted, all vendor contact shall be made through the BOCC. Vendor information, number of proposals received, results and other evaluation proceedings shall be kept confidential until a fully executed contract is established. Requests for this information shall be made in writing and its release will be in accordance with the Colorado statute (C.R.S. 24-72-203 and 24-72-204) for access to Public Records, and with County policy.

Evaluation Committee members will be selected by the BOCC in coordination with the using department/office. Committee members shall score each proposal individually and independently. However, after the individual scores are tabulated, group discussions are encouraged to discuss technical views to arrive at a better understanding of technical proposals during the evaluation

process. The results of the scoring by the evaluating committee shall be totaled to determine the overall highest rated proposal.

If interviews are part of the evaluation, the RFP must contain language that allows for interviews. The Evaluation Committee, prior to entering into discussions with any offerors, will make competitive evaluation criteria to be used with every interview. The evaluators shall not consider criteria that are not specified in the RFP when evaluating proposals. The evaluation committee will evaluate all proposals received for completeness and the proposer's ability to meet all the specifications as outlined in the RFP. The committee may then short list for interviews the specific firms whose proposals best meet all the criteria required.

4.3.2 Competitive Range Determination/Short List

The Evaluation Committee shall determine which proposals' ranking/scores are in the competitive range for the purpose of conducting written or oral discussions/interviews. The competitive range shall be determined based on criteria stated in the RFP. The determination should include all proposals that have a reasonable chance of being selected for award. The evaluation team solely determines the top proposals to create a short list.

If the RFP initially solicits unpriced technical proposals, they shall be evaluated to determine which are acceptable to the County or could, after discussion, be made acceptable. After necessary discussion of these technical proposals is completed, the Evaluation Committee shall request the price proposals from all offerors who submitted an acceptable technical proposal and make the award to the lowest responsible offeror, or, where applicable, negotiate for a Best and Final Offer.

4.3.3 Best and Final Offers

The evaluation selection committee may issue to one or all offerors still within the competitive range a request for best and final offers. Offerors should be reminded that Best and Final Offers are not mandatory. They are only an opportunity to revise if necessary.

If they chose not to submit a best and final offer, then their original proposal as submitted will be considered.

After receipt of best and final offers, the evaluation selection committee shall evaluate them accordingly and recommend award be made to the offeror whose best and final offer is most advantageous to Crowley County, considering price and the other factors included in the RFP.

4.4 PROCUREMENT BY NONCOMPETITIVE PROPOSALS

This is procurement through solicitation of a proposal from only one source, or after solicitation of several sources, competition is determined inadequate.

a. Procurement by noncompetitive proposals may be used only when the award of a contract in infeasible under small purchase procedures, sealed bids, or requests for proposals and one of the following circumstances apply:
    - The item is available only from a single source;
    - The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;
    - The awarding agency authorizes noncompetitive proposals; or

- After solicitation of a number of sources, competition is determined inadequate.

b. Cost analysis, i.e., verifying the proposed cost data, the projections of the data, and the evaluation of the specific elements of costs and profits, is required.
c. The County may be required to submit the proposed procurement to the awarding agency for pre-award review in accordance with the awarding review procedures.

5 CONTRACT COST AND PRICE

The County should perform a cost or price analysis in connection with every procurement action including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, the County should make independent estimates before receiving bids or proposals. A cost analysis must be performed when the offeror is required to submit the elements of his estimated cost, e.g., under professional, consulting, and architectural engineering services contracts. A cost analysis will be necessary when adequate price competition is lacking, and for sole source procurements, including contract modifications or change orders, unless price reasonableness can be established on the basis of a catalog or market price of a commercial product sold in substantial quantities to the general public or based on prices set by law or regulation. A price analysis will be used in all other instances to determine the reasonableness of the proposed contract price.

The County will negotiate profit as a separate element of the price for each contract in which there is no price competition and, in all cases, where cost analysis is performed. To establish a fair and reasonable profit, consideration will be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

Costs or prices based on estimated costs for contracts under grants will be allowable only to the extent that costs incurred, or cost estimates included in negotiated prices are consistent with federal cost principles. The County may reference their own cost principles that comply with the applicable federal cost principles.

The cost plus a percentage of cost and percentage of construction cost methods of contracting shall not be used.

6 AWARDING AGENCY REVIEW

The County must make available, upon request of the awarding agency, technical specifications on proposed procurements where the awarding agency believes such review is needed to ensure that the item and/or service specified is the one being proposed for purchase. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the County desires to have the review accomplished after a solicitation has been

developed, the awarding agency may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

The County must on request make available for awarding agency pre-award review procurement documents, such as requests for proposals or invitations for bids, independent cost estimates, etc. when:

- The County's procurement procedures or operation fails to comply with the procurement standards in this section; or
- The procurement is expected to exceed the acquisition threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation; or
- The procurement, which is expected to exceed the acquisition threshold, specifies a "brand name" product; or
- The proposed award is more than the acquisition threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or
- A proposed contract modification changes the scope of a contract or increases the contract amount by more than the acquisition threshold.

Crowley County will be exempt from the pre-award if the awarding agency determines that its procurement systems comply with the standards of this section.

- The County may request that its procurement system be reviewed by the awarding agency to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews shall occur where there is a continuous high-dollar funding, and third-party contracts are awarded on a regular basis.
- The County may self-certify its procurement system. Such self-certification shall not limit the awarding agency's right to survey the system. Under a self-certification procedure, awarding agencies may wish to rely on written assurances from the County that it is complying with these standards. The County will cite specific procedures, regulations, standards, etc., as being in compliance with these requirements and have its system available for review.

7 BONDING AND INSURANCE REQUIREMENTS

For contracts in excess of $100,000, a separate Bid Guarantee, Performance Bond, Labor and Materials Payment Bond, and Maintenance Bond or other legally acceptable surety may be required for all construction, labor, and public improvement contracts. The contractor shall deliver these bond(s) to the County within fourteen calendar days after receipt of the Notice of Award, or at the same time the contract is executed. If the contractor fails to deliver the required bond(s), the contractor's bid or contract may be rejected or terminated for default. The bond(s) must be submitted on bond form(s) executed by a surety company authorized to do business in the State of Colorado. Performance, Payments and Material, and Maintenance Bonds may be required on contracts less than $100,000 if the BOCC determines it to be in the best interest of Crowley County.

The minimum requirements shall be as follows:

- A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.
- A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
- A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

The BOCC may require such insurance as may be deemed necessary for the protection of the County or as may be required by the County. When a contract requires contractor insurance, the insurance certificates shall be provided with the contract, including all exceptions and riders attached to the certificate. All insurance requirements will be detailed in each individual solicitation.

8 CONTRACT PROVISIONS

All contracts paid for in whole or in part with federal funds shall be in writing. The written contract must include or incorporate by reference the provisions required under 2 C.F.R. 200.326 and as provided for under 2 C.F.R. Part 200, Appendix II.

No contract may be divided to bring the cost under bid thresholds or to evade any requirements under this Policy or state and federal law.

The contracts must contain provisions listed in this section. Federal agencies are permitted to require changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Federal Procurement Policy.

Administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms and provide for such sanctions and penalties as may be appropriate. (Contracts more than $100,000).

Termination for cause and for convenience by the grantee including the manner by which it will be affected and the basis for settlement. (All contracts in excess of $10,000).

Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented

in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of $10,000 by grantees and their contractors).

Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3). (All contracts for construction or repair).

Compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts in excess of $2000 awarded by grantees when required by Federal grant program legislation).

Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts awarded by grantees in excess of $2000, and in excess of $2500 for other contracts which involve the employment of mechanics or laborers).

Notice of awarding agency requirements and regulations pertaining to reporting.

Notice of awarding agency requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.

Awarding agency requirements and regulations pertaining to copyrights and rights in data.

Access by the grantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

Retention of all required records for three years after grantees make final payments and all other pending matters are closed.

Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and sub grants of amounts in excess of $100,000).

Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

9 CONTRACTING WITH SMALL MINORITY FIRMS, WOMEN'S BUSINESSENTERPRISE & LABOR SURPLUS AREA FIRMS

Crowley County and its contract awardees will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and any labor surplus area firms are used when possible.

Affirmative steps shall include:

- Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;
- Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
- Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in the bullet points above.

10 PROCUREMENT RULES WITH FEDERAL FUNDS

10.1 FEDERAL FISCAL COMPLIANCE

Crowley County shall ensure federal funds received by the district are administered in accordance with federal requirements, including by not limited to the federal Uniform Grant Guidance.

Crowley County shall stablish and maintain a sound financial management system to include internal controls and federal grant management standards covering the receipt of both direct and state-administered federal grants, and to track costs and expenditures of funds associated with grant awards.

Financial management standards and procedures shall assure that the following responsibilities are fulfilled:

- Identification – the County must identify, in its accounts, all federal awards received and expended, and the federal programs under which they were received.
- Financial Reporting – Accurate, current, and complete disclosure of the financial results of each federal award or program must be made in accordance with the financial reporting requirements of the Governmental Accounting Standards Board (GASB).
- Accounting Records – the County must maintain records which adequately identify the source and application of funds provided for federal-assisted activities.
- Internal Controls – effective control and accountability must be maintained for all funds, real and personal property and other assets. The County must adequately safeguard all such property and must assure that it is used solely for authorized purposes.
- Budget Control – actual expenditures or outlays must be compared with budgeted amounts for each federal award.

- Cash Management – the County shall maintain written procedures to implement the cash management requirement of GASB.
- Allowability of Costs – the County shall ensure that allowability of all costs charged to each federal award is accurately determined and documented.

10.1.1 General Allowability Determination Factors

All costs supported by federal funds must meet the standards outlined in the Uniform Grant Guidance. The following "basic considerations" apply to all costs:

- Be necessary and reasonable for the performance of the federal award. A cost is "necessary" if it meets an important program objective – it must address an existing need. A cost is "reasonable" if, in its nature and amount, it does not exceed that which would be incurred by a prudent person.
- Conform to any limitations or exclusions set forth as cost principles in Part 200 or in the terms and conditions of the federal award.
- Consistent with policies, regulations, and procedures that apply uniformly to both federal awards and other activities of the County.
- Consistent treatment. A cost cannot be assigned to a federal award as a direct cost if the same type of cost has already been allocated as an indirect cost.
- Be calculated in accordance with generally accepted accounting principles (GAAP), unless provided otherwise in Part 200.
- Not included as a match or cost-share unless the specific federal program authorizes federal costs to be treated as such.
- Adequately documented. All expenditures must be properly documented.
- Allocable to the federal award. A cost is allocable to the federal award if the goods or services involved are chargeable or assignable to the federal award in accordance with the relative benefit received. This means that the federal grant program derived a benefit in proportion to the funds charged to the program.
- Be the net of all applicable credits. The term "applicable credits" refers to those receipts or reduction of expenditures that operate to offset or reduce expense items allocable to the federal award. Typical examples of such transactions are purchase discounts; rebates or allowances; recoveries or indemnities on losses; and adjustments of overpayments or erroneous charges. To the extent that such credits accruing to or received by the state relate to the federal award, they shall be credited to the federal award, either as a cost reduction or a cash refund, as appropriate.

10.1.2 Employees – Time and Effort Reporting

All County employees paid with federal funds shall document the time they expend in work performed in support of each federal program, in accordance with law. Time and effort reporting requirements do not apply to contracted individuals.

10.1.3 Record Keeping

The County shall ensure the proper maintenance of federal fiscal records documenting:

- Amount of federal funds.
- How funds are used.
- Total cost of each project.
- Share of total cost of each project provided from other sources.
- Other records to facilitate an effective audit.
- Other records to show compliance with federal program requirements
- Significant project experiences and results.

All records must be retrievable and available for programmatic or financial audits.

10.1.4 Cost Sharing and Matching

Expenditures must meet the standard terms and conditions of the award to be cost share. The costs are allowable in accordance with Uniform Guidance when they are:

- Verifiable from the recipient's records;
- Not included as contributions for any other federally assisted sponsored project or program;
- Necessary and reasonable for proper and efficient accomplishment of project objectives;
- Not paid by the Federal Government under another award, except where authorized by federal statute to be used for cost sharing or matching; and
- Provided in the approved budget when required by the federal awarding agency.

The funding of cash cost sharing is the responsibility of the Department that has made the commitment. Records related to cost sharing must be retained for the period of time prescribed under relevant record retention policies.

10.2 PROCUREMENT PROCEDURES WITH FEDERAL FUNDS

I. General Procurement Standards and Procedures:

Either the department head/elected official or the BOCC shall procure all contracts in accordance with the requirements of this Section of the Policy.

A. Necessity. Purchases must be necessary to perform the scope of work and must avoid acquisition of unnecessary or duplicative items. The department head/elected official should check with the federal surplus property agency prior to buying new items when feasible and less expensive. Strategic sourcing should be considered with other departments and/or agencies who have similar needs to consolidate procurements and services to obtain better pricing.

B. Clear Specifications. All solicitations must incorporate a clear and accurate description of the technical requirements for the materials, products, or services to be procured, and shall include all other requirements which bidders must fulfill and all other factors to be used in evaluating bids or proposals. Technical requirements must not contain features that restrict competition.

C. Notice of Federal Funding. All bid solicitations must acknowledge the use of federal funding for the contract. In addition, all prospective bidders or offerors must acknowledge that funding is contingent upon compliance with all terms and conditions of the funding award.

D. **Compliance by Contractors.** All solicitations shall inform prospective contractors that they must comply with all applicable federal laws, regulations, executive orders, and terms and conditions of the funding award.

E. **Fixed Price.** Solicitations must state that bidders shall submit bids on a fixed price basis and that the contract shall be awarded on this basis unless otherwise provided for in this Policy. Cost plus percentage of cost contracts is prohibited. Time and materials contracts are prohibited in most circumstances. Time and materials contracts will not be used unless no other form of contract is suitable and the contract includes a "Not to Exceed" amount. A time and materials contract shall not be awarded without express written permission of the federal agency or state pass-through agency that awarded the funds.

F. **Use of Brand Names.** When possible, performance or functional specifications are preferred to allow for more competition leaving the determination of how to reach the required result to the contractor. Brand names may be used only when it is impractical or uneconomical to write a clear and accurate description of the requirement(s). When a brand name is listed, it is used as reference only and "or equal" must be included in the description.

G. **Lease versus Purchase.** Under certain circumstances, it may be necessary to perform an analysis of lease versus purchase alternatives to determine the most economical approach.

H. **Dividing Contract for M/WBE Participation.** If economically feasible, procurements may be divided into smaller components to allow maximum participation of small and minority businesses and women business enterprises. The procurement cannot be divided to bring the cost under bid thresholds or to evade any requirements under this Policy.

I. **Documentation.** Documentation must be maintained by the Administration Office and/or Requesting Department detailing the history of all procurements. The documentation should include the procurement method used, contract type, basis for contractor selection, price, sources solicited, public notices, cost analysis, bid documents, addenda, amendments, contractor's responsiveness, notice of award, copies of notices to unsuccessful bidders or offerors, record of protests or disputes, bond documents, notice to proceed, purchase order, and contract. All documentation relating to the award of any contract must be made available to the granting agency upon request.

J. **Cost Estimate.** For all procurements costing $250,000 or more, the BOCC shall develop an estimate of the cost of the procurement prior to soliciting bids. Cost estimates may be developed by reviewing prior contract costs, online review of similar products or services, or other means by which a good faith cost estimate may be obtained. Cost estimates for construction and repair contracts may be developed by the project designer.

K. **Contract Requirements.** The department head/elected official or BOCC must prepare a written contract to be awarded only to the lowest responsive responsible bidder possessing the ability to perform successfully under the terms and conditions of the contract..

L. **Debarment.** No contract shall be awarded to a contractor included on the federally debarred bidder's list.

M. **Contractor Oversight.** The Requesting Department receiving the federal funding must maintain oversight of the contract to ensure that contractor is performing in accordance with the contract terms, conditions, and specifications.

N. **Open Competition.** Solicitations shall be prepared in a way to be fair and provide open competition. The procurement process shall not restrict competition by imposing

unreasonable requirements on bidders, including but not limited to unnecessary supplier experience, excessive or unnecessary bonding, specifying a brand name without allowing for "or equal" products, or other unnecessary requirements that have the effect of restricting competition.

O. Geographic Preference. No contract shall be awarded on the basis of a geographic preference.

II. Specific Procurement Procedures

Either the department head/elected official or BOCC shall solicit bids in accordance with the requirements under this Section of the Policy based on the type and cost of the contract.

A. Service Contracts (except for A/E professional services) and **Purchase Contracts costing less than $10,000** shall be procured using the Uniform Guidance "micro-purchase" procedure (2 C.F.R. § 200.320(a)) as follows:

1. The contract may be awarded without soliciting pricing or bids if the price of the goods or services is considered to be fair and reasonable.
2. To the extent practicable, purchases must be distributed among qualified suppliers.

B. Service Contracts (except for A/E professional services) and **Purchase Contracts costing $10,000 up to $90,000** shall be procured using the Uniform Guidance "small purchase" procedure (2 C.F.R. § 200.320(b)) as follows:

1. Obtain price or rate quotes from an "adequate number" of qualified sources (a federal grantor agency might issue guidance interpreting "adequate number," so the department head/elected official/BOCC should review the terms and conditions of the grant award documents to confirm whether specific guidance has been issued).
2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as required under 2 C.F.R. § 200.321.
3. Cost or price analysis is not required prior to soliciting bids.
4. Award the contract on a fixed-price basis (a not-to-exceed basis is permissible for service contracts where obtaining a fixed price is not feasible).
5. Award the contract to the lowest responsive, responsible bidder.

C. Service Contracts (except for A/E professional services) and **Purchase Contracts costing $90,000 and above** shall be procured using a combination of the most restrictive requirements of the Uniform Guidance "sealed bid" procedure (2 C.F.R. § 200.320(c)) and state formal bidding procedures (G.S. 143-129) as follows:

1. Cost or price analysis is required prior to soliciting bids.
2. Complete specifications or purchase description must be made available to all bidders.
3. The bid must be formally advertised in a newspaper of general circulation for at least seven full days between the date of the advertisement and the date of the public bid opening. Electronic-only advertising must be authorized by the governing board. The advertisement must state the date, time, and location of the public bid opening, indicate where specifications may be obtained, and reserve to the governing board the right to reject any or all bids only for "sound documented reasons."

4. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as required under 2 C.F.R. § 200.321.
5. Open bids at the public bid opening on the date, time, and at the location noticed in the public advertisement. All bids must be submitted sealed. A minimum of 2 bids must be received in order to open all bids.
6. Award the contract to the lowest responsive, responsible bidder on a fixed-price basis. BOCC approval is required for purchase contracts unless the BOCC has delegated award authority to an individual official or employee. Any and all bids may be rejected only for "sound documented reasons."

D. Service Contracts (except for A/E professional services) **costing $250,000 and above** may be procured using the Uniform Guidance "competitive proposal" procedure (2 C.F.R. § 200.320(d)) when the "sealed bid" procedure is not appropriate for the particular type of service being sought. The procedures are as follows:

1. A Request for Proposals (RFP) must be publicly advertised. Formal advertisement in a newspaper is not required so long as the method of advertisement will solicit proposals from an "adequate number" of qualified firms.
2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
3. Identify evaluation criteria and relative importance of each criteria (criteria weight) in the RFP.
4. Consider all responses to the publicized RFP to the maximum extent practical.
5. Must have a written method for conducting technical evaluations of proposals and selecting the winning firm.
6. Award the contract to the responsible firm with most advantageous proposal considering price and other factors identified in the RFP. BOCC approval is required.
7. Award the contract on a fixed-price or cost-reimbursement basis.

E. Construction and repair contracts costing less than $10,000 shall be procured using the Uniform Guidance "micro-purchase" procedure (2 C.F.R. § 200.320(a)) as follows:

1. The contract may be awarded without soliciting pricing or bids if the price of the goods or services is considered to be fair and reasonable.
2. To the extent practicable, contracts must be distributed among qualified suppliers.

F. Construction and repair contracts costing $10,000 up to $250,000 shall be procured using the Uniform Guidance "small purchase" procedure (2 C.F.R. § 200.320(b)) as follows:

1. Obtain price or rate quotes from an "adequate number" of qualified sources (a federal grantor agency might issue guidance interpreting "adequate number," so the requesting department should review the terms and conditions of the grant award documents to confirm whether specific guidance has been issued).
2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as required under 2 C.F.R. § 200.321.
3. Cost or price analysis is not required prior to soliciting bids, although price estimates may be provided by the project designer.
4. Award the contract on a fixed-price or not-to-exceed basis.

5. Award the contract to the lowest responsive, responsible bidder. BOCC approval is required.

G. Construction and repair contracts <u>costing $250,000 up to $500,000</u> shall be procured using the Uniform Guidance "sealed bid" procedure (2 C.F.R. § 200.320(c)) as follows:

1. Cost or price analysis is required prior to soliciting bids (this cost estimate may be provided by the project designer).
2. Complete specifications must be made available to all bidders.
3. Publicly advertise the bid solicitation for a period of time sufficient to give bidders notice of opportunity to submit bids (formal advertisement in a newspaper is not required so long as other means of advertising will provide sufficient notice of the opportunity to bid). The advertisement must state the date, time, and location of the public bid opening, and indicate where specifications may be obtained.
4. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
5. Open the bids at the public bid opening on the date, time, and at the location noticed in the public advertisement. All bids must be submitted sealed. A minimum of 2 bids must be received in order to open all bids.
6. A 5% bid bond is required of all bidders. Performance and payment bonds of 100% of the contract price is required of the winning bidder.
7. Award the contract on a firm fixed-price basis.
8. Award the contract to the lowest responsive, responsible bidder. BOCC approval is required. Any and all bids may be rejected only for "sound documented reasons."

H. Construction and repair contracts <u>costing $500,000 and above</u> shall be procured using a combination of the most restrictive requirements of the Uniform Guidance "sealed bid" procedure (2 C.F.R. § 200.320(c)) and state formal bidding procedures (G.S. 143-129) as follows:

1. Cost or price analysis is required prior to soliciting bids (this cost estimate should be provided by the project designer).
2. Complete specifications must be made available to all bidders.
3. Formally advertise the bid in a newspaper of general circulation for at least seven full days between the date of the advertisement and the date of the public bid opening. Electronic-only advertising must be authorized by the governing board. The advertisement must state the date, time, and location of the public bid opening, indicate where specifications may be obtained, and reserve to the governing board the right to reject any or all bids only for "sound documented reasons."
4. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
5. Open the bids at the public bid opening on the date, time, and at the location noticed in the public advertisement. All bids must be submitted sealed and in paper form. A minimum of 3 bids must be received in order to open all bids.
6. A 5% bid bond is required of all bidders (a bid that does not include a bid bond cannot be counted toward the 3-bid minimum requirement). Performance and payment bonds of 100% of the contract price is required of the winning bidder.
7. Award the contract on a firm fixed-price basis.

8. Award the contract to the lowest responsive, responsible bidder. BOCC approval is required and cannot be delegated. The BOCC may reject and all bids only for "sound documented reasons."

I. Contracts for Architectural and Engineering Services costing $250,000 or more shall be procured using the Uniform Guidance "competitive proposal" procedure (2 C.F.R. § 200.320(d)(5)) as follows:

1. Publicly advertise a Request for Qualifications (RFQ) to solicit qualifications from qualified firms (formal advertisement in a newspaper is not required). Price (other than unit cost) shall not be solicited in the RFQ.
2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
3. Identify the evaluation criteria and relative importance of each criteria (the criteria weight) in the RFQ.
4. Proposals must be solicited from an "adequate number of qualified sources" (an individual federal grantor agency may issue guidance interpreting "adequate number").
5. Must have a written method for conducting technical evaluations of proposals and selecting the best qualified firm.
6. Consider all responses to the publicized RFQ to the maximum extent practical.
7. Evaluate qualifications of respondents to rank respondents and select the most qualified firm. Preference may be given to in-state (but not local) firms provided that granting the preference leaves an appropriate number of qualified firms to compete for the contract given the nature and size of the project.
8. Price cannot be a factor in the initial selection of the most qualified firm.
9. Once the most qualified firm is selected, negotiate fair and reasonable compensation. If negotiations are not successfully, repeat negotiations with the second-best qualified firm.
10. Award the contract to best qualified firm with whom fair and reasonable compensation has been successfully negotiated. BOCC approval is required.

III. Exceptions

Non-competitive contracts are allowed ***only*** under the following conditions and with the written approval of the federal agency or state pass-through agency that awarded the federal funds:

A. Sole Source. A contract may be awarded without competitive bidding when the item is available from only one source. The department head/elected official/BOCC shall document the justification for and lack of available competition for the item. A sole source contract must be discussed with the BOCC.

B. Public Exigency. A contract may be awarded without competitive bidding when there is a public exigency. A public exigency exists when there is an imminent or actual threat to public health, safety, and welfare, and the need for the item will not permit the delay resulting from a competitive bidding.

C. Inadequate Competition. A contract may be awarded without competitive bidding when competition is determined to be inadequate after attempts to solicit bids from a number of sources as required under this Policy does not result in a qualified winning bidder.

D. **Federal Contract.** A contract may be awarded without competitive bidding when the purchase is made from a federal contract available on the U.S. General Services Administration schedules of contracts.

E. **Awarding Agency Approval.** A contract may be awarded without competitive bidding with the express written authorization of the federal agency or state pass-through agency that awarded the federal funds so long as awarding the contract without competition is consistent with state law.

Crowley County Water System
Contingency Plan
For Emergency Response

Crowley County, Colorado
May 18, 2015

Primary Contact Information

Name	**Tobe Allumbaugh**
Title	**Chairman, Board of County Commissioners**
Address	**603 Main Street, Suite 2, Ordway, CO 81063**
Phone Number	**719-267-5555, ext. 3**
Alternate Phone Number	**719-980-2724 (cell phone)**

Prepared by: LaShelle Benbow
Administrative Assistant
For the Community Water Provider:
CROWLEY COUNTY WS, PWSID#CO0113200

The following table provides a way to track any future reviews or updates of this Contingency Plan.

Date of Review	Reviewed By	Changes or Comments
02/25/2019	**Board of County Commissioners**	**Update entire plan into new format, and update contact information.**

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INTRODUCTION

The purpose of this contingency plan is to establish and to keep up to date the procedures necessary to utilize alternative water supply sources in the event of the contamination or loss of the existing sources.

This Contingency Plan was produced as a component to the CROWLEY COUNTY WS's Source Water Protection Plan in accordance with the Colorado Department of Public Health and Environment's Source Water Assessment and Protection (SWAP) Program. A Source Water Protection Plan is designed to:

- Create an awareness of the community's drinking water sources and the potential risks to surface water and/or groundwater quality within the watershed;
- Encourage education and voluntary solutions to alleviate pollution risks;
- Promote management practices to protect and enhance the drinking water supply;
- Provide for a comprehensive action plan in case of an emergency that threatens or disrupts the community water supply.

This Contingency Plan serves as the final component in the list above. It is not designed to fulfill the requirements of a more comprehensive public water supply emergency operating plan that would be designed to deal with a wide array of emergencies beyond the contamination of existing sources.

SYSTEM INFORMATION

Name of Water System	**CROWLEY COUNTY WATER SYSTEM**
Public Water System ID #	**CO0113200**
Water System Address	**COUNTY LANE 8 & ROAD C.5, OLNEY SPRINGS, CO 81062**
Population Served	**5,810 (Census.gov – 07/01/2017)**
Number of Service Connections	**4 wholesale connections serving 1.379 taps/meters**
Average Daily Demand	**500,164 gallons**
Maximum Daily Demand	**972,935 gallons**
Interconnections with other Public Water Systems	**Crowley County Water Assoc. (CCWA) #CO0113100, Town of Crowley #CO0113300, Town of Ordway #CO0113700, and 96 Pipeline #CO0113050.**
Normal Power Source	**Electricity provided by Black Hills Energy and Southeast Colorado Power Association.**
Emergency Power Source	**None**
Location of Water System Maps and Records	**County Records: Crowley County Annex, 603 Main Street, Suite 2, Ordway, CO 81063, 719-267-5555, ext. 3.** **CCWA & Town of Crowley Records: 5778 County Lane 12, Olney Springs, CO 81062, 719-224-1003 or 719-468-8872 (Keith).** **Town of Ordway Records: Town Hall, 232 Main Street, Ordway, CO 81063, 719-267-3134.** **96 Pipeline Records: PO Box 32, Ordway, CO, 81063, 719-469-4437 (Karen).**

Basic Description of the Water System

The following information was obtained from the Public Water System Monitoring Plan.

Treatment Plants				
Facility ID (Assigned by Department)	**Plant Name**	**Availability (P, E, I, or S)**	**If seasonal, include months anticipated to be in operation**	**Contributing Sources** Facility IDs and Names
001	**CHLORINATION FACILITY**	**P**		**WELL NO 1 (002); WELL NO 2 (003); WELL NO 3 (004); WELL NO 4 (005); WELL NO 5 (006);**
Treatment Codes (see previous page for codes)				
GASEOUS CHLORINATION (401); CONTACT TIME PROVIDED (825);				

Entry Points to Distribution System	
***Residual Disinfectant*, Nitrate, Nitrite, Inorganics, Volatile Organics, Synthetic Organics, Radionuclides, Chlorite, Chlorine Dioxide, and Bromate Must be Collected at All Entry Points**	
Facility ID (Assigned by Department)	**Location Description and Contributing Treatment Plants**
001	**CHLORINATION FACILITY**

Consecutive Connections Serving Another Water System			
Receiving System PWS ID and Name	**Availability (P, E, I, or S)**	**Do you supply treated or raw water?**	**Integrated Agreement? Yes / No**
CO0113100 – Crowley County Water Association	**P**	**Treated Water**	**No**
CO0113300 – Town of Crowley	**P**	**Treated Water**	**No**
CO0113700 – Town of Ordway	**P**	**Treated Water**	**No**
CO0113050 – 96 Pipeline	**P**	**Treated Water**	**No**

Please see the attached Monitoring Plan Facility Flows and Water Treatment plan schematics.

Groundwater Supply Information:

Water System Facility Name	Water System Facility Number	Total Depth of Well (ft)	Depth of Plain Casing (ft)	Depth of Perforation (ft)	Yield (gpm)	Year Drilled	Permit Number	Annual Permitted Amount (acre feet)
Well No 1	002	45				1980	245212	
Well No 2	003	43				1980	248946	
Well No 3	004	45				1980	248947	
Well No 4	005	50	30	40	1000	1988	250982	
Well No 5	006	50	30	40	1000	1988	250983	

Storage of Finished Water:

Tank Name	Location	Storage Capacity
Lane 12 Tank	County Lane 12 (North of Crowley), Olney Springs, CO 81062	200,000 gal.
Highway Tank	Highway 71 (North of Ordway), Ordway, CO 81063	300,000 gal.

EMERGENCY RESPONSE

Emergency Response Activities

- Spill Response – Due to the remote location of our wells, the chance of a hazardous material spill is minimal. Normal hazardous material spill protocol will be used when practical and necessary. In addition to reporting the incident to the state for hazmat expertise, the health department and local emergency management (law enforcement and fire) personnel will be notified.

- The county has a Source Water Protection plan in place. Among other things, Notification Cards have been prepared and distributed to all key partners.

Chain of Command List

In the event of a water system emergency, contact:

Contact Name	Title	Telephone Number	Alternative Communication Source
Gary Kidd	**Water Manager**	**Cell 719-980-1584**	**Home 719-267-4113**
Tobe Allumbaugh	**Chairman, Board of County Commissioners**	**Cell 719-980-2724**	**Work 719-267-5555, ext. 3**
Blaine Arbuthnot	**County Commissioner District 2**	**Cell 719-980-4491**	**Work 719-267-5555, ext. 3**
Roy Elliott	**County Commissioner District 1**	**Cell 719-469-9864**	**Work 719-267-5555, ext. 3**

ALTERNATIVE WATER SUPPLY OPTIONS

Procedure for Evaluating Alternative Water Supply Options:

Crowley County has very limited options available for alternative water supplies. The advisory board, made up of representatives from Crowley County, Town of Ordway, 96 Pipeline, Town of Crowley and CCWA will meet to discuss the options available and the best course of action. In most cases, Faw Wells water will be used for incidents on the eastern end of the county, and Crowley County Water Assoc. water will be used for incidents on the western end of the County.

Alternative Water Supply Options:

Alternative Water Supply	Details
Existing System Sources	**As noted above, the two primary options for alternative water are Faw Wells, a water system operated by the Town of Ordway, and a well owned and operated by CCWA. Faw Wells is on the eastern end of the county and the CCWA well is located on the western end of the County. Jesus Hernandez, the Ordway Town Foreman, is in charge of the Faw Wells. Keith Benbow, Operator Responsible in Charge, is in charge of the CCWA System.**
Source Management (i.e.	**All of the water systems currently have the ability for blending, depending on the type and place of the emergency situation.**
New Wells or Surface Supplies	**n/a**
Conservation	**Historically, water conservation has been enforced differently, depending upon the water supplier. Some systems limit the amount of water usage to human consumption, animal consumption and then to lawns, trees and shrubs. Others simply reduce the amount of water consumed to a percentage of the norm. Both have worked well in the past.**
Connections to Other Public Water Systems	**With the exceptions of what is noted above, connections to other public water systems are not available**
Emergency Treatment	**Chlorination of contaminated wells.**
New Treatment	**n/a**
Point of use Treatment	**The Crowley County Water System is a wholesale system. All points of use treatment are implemented on the four retail systems.**

Boiled Water	**This applies more to the retail systems than our wholesale system.**
Point of Entry Treatment	**Whole house water treatment units.**
Bottled Water	**Can be made available.**
Tank Trucks	**Crowley County has three water trucks capable of hauling 12,000 gallons of potable water. Although these tans will have to be thoroughly sanitized and flushed, this option is available in case of a dire emergency.**

PRIORITY WATER USERS

If appropriate to your system, reducing water demand by conservations measure may lessen or eliminate the necessity of utilizing an alternative water supply option.

Priority Number	Water User
1	Nursing Homes: Crowley County Nursing Center
2	Prisons: Arkansas Valley Correctional Facility at Crowley and Crowley County Correctional Facility at Olney Springs
3	Schools: Crowley County School System and Kid's Campus Day Care
4	Industry: Ordway Feed Yard
5	Fire Department: Not an issue
6	Residential
7	Commercial

CONSERVATION MEASURES

Measures	Details
Mandatory water conservation measures	Reduced usage percentages. Restructure water rates. Limit water to human consumption.
Public education	Newspaper articles, information brochures circulated through the school

EMERGENCY CONTACTS

Table Instructions: Fill in the table below. Add or delete rows as necessary.

Organization	Contact Person	Phone Number	Alternative Communication Source
Water System Management and Employees	Tobe Allumbaugh	Cell 719-980-2724	Work 719-267-5555, ext. 3
Community Offices and Officials	Town of Ordway: James Gullett, Mayor Jesus Hernandez, Maintenance	Cell 719-469-2207 Cell 719-980-1181	Work 719-267-3134
Police	Sheriff John S. Kurtz	Cell 719-526-0583	Work 719-267-5235
Fire	County Dispatch	719-267-5235	719-267-5555, ext. 2
Office of Emergency Management	John Reitan	Cell 719-469-0048	Work 719-267-5230
CDPHE		303-692-2000	877-518-5608
CoWarn		303-691-4084	
State Officials			
County Officials	Blain Arbuthnot, Commissioner Roy Elliott, Commissioner	Cell 719-980-4491 Cell 719-469-9864	Work 719-267-5555, ext. 3
Schools	Scott Cuckow, Superintendent Judy Rusher, Director of Kids Campus	Cell 719-468-6201 Cell 719-980-0651	Work 719-267-3117 Work 719-267-3640
Power Company	Black Hills Energy Southeast Colorado Power Association	800-694-8989 800-332-8634	
Telephone Company	CenturyLink Secom, Inc.	800-573-1311 888-925-7695	800-345-2712 719-384-8583
Arkansas Valley Correctional Facility – State Prison	Warden Terry Jaques	719-267-3520	

Crowley County Correctional Facility (aka CoreCivic) – Private Prison	**Warden, Barry Goodrich**	**719-267-3548**	
Crowley County Nursing Center	**Scott Nelson, Administrator**	**Cell 719-469-7918**	**Work 719-267-3441**
Hospital	**Arkansas Valley Regional Medical Center**	**719-384-5412**	
Ambulance	**County Dispatch** **Mario Rodriguez, Director**	**719-267-5235** **Cell 719-469-6651**	**719-267-5555, ext. 2** **Work 719-267-5206**
Colorado Rural Water Association		**719-545-6748**	**crwa@comcast.net**
Nearby Water Systems	**96 Pipeline, Gary Sharp** **Town of Ordway, Jesus Hernandez** **Town of Crowley/CCWA, Keith Benbow**	**Cell 719-289-8442** **Cell 719-980-1181** **Cell 719-468-8872**	 **Work 719-224-1003**
Newspaper	**Pueblo Chieftain** **Ordway New Era**	**719-544-3520** **719-267-3576**	
Television	**KRDO**	**719-575-6285**	**krdonews@krdo.com**
Radio	**KBLJ**	**719-384-5456**	
Ordway Feed Yard	**Tyler Karney, Manager**	**Cell 719-469-1964**	**Work 719-267-3551**

EMERGENCY PUBLIC RELATIONS

Primary spokesperson for the media and public comment in the event of a contamination incident

Name	**Tobe Allumbaugh**
Title	**Chairman, Board of County Commissioners**
Address	**603 Main Street, Suite 2, Ordway, CO 81063**
Phone Number	**Cell 719-980-2724, Work 719-267-5555, ext. 3**
Alternative Communication Source	**tobe@crowleycounty.net**

Contamination Information Checklist to be conveyed to the public and media

- ☐ Name of water system – Crowley County Water System
- ☐ Contaminant of concern
- ☐ Date of Incident
- ☐ Source of contamination
- ☐ Public health hazard
- ☐ Steps the public can take
- ☐ Steps the water system is taking
- ☐ Other information

EVENT AND ACTION LOG[1]

Instructions: This table should be left blank and filled out in the event of a contamination or other emergency incident.

Description of Event	
Date and Time of Event	
Action Taken	
Evaluation of Action	
Costs to Water System (labor, equipment, & materials)	
Contract Services	

[1] This type of information may be needed in the event that the water system attempts to receive federal/state emergency relief funding assistance

Colorado - Southeast Region Cybersecurity Plan

OCTOBER 2020 V1.2

This plan covers the following Counties: Baca, Bent, Crowley, Kiowa, Otero, & Prowers



COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

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Southeast Colorado All-Hazards Region Cyber Security Plan Signature Page

Approved by:

Kiowa County
Name/Title/Agency — Date: 10-29-2020

BOCC
Name/Title/Agency — Date: 11/23/20

CCOEM
Name/Title/Agency — Date: 11-23-2020

Bent County
Name/Title/Agency — Date: 11-24-20

Wendy L Buxton-Andrade Prowers County
Name/Title/Agency — Date: 12-22-2020

Stephen Wann, Director Prowers OEM
Name/Title/Agency — Date: 12-22-2020

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ANNEX E: Critical Manufacturing Sector Cybersecurity Framework Implementation Guidance

ANNEX F: Dams Sector Cybersecurity Framework Implementation Guidance

ANNEX G: Nuclear Sector Cybersecurity Framework Implementation Guidance

i. Record of Distribution

In order to maintain transparency of the plan each person and agency below has received a copy of the plan.

Number	Name	Agency	Date
1	Riley Frazee	DHSEM-OEM-Field Services	
2	Jennifer Leathers	Baca County OEM	
3	Jerry Casebolt	SER Grant Coordinator	
4	Troy Abdulla	Bent County OEM	
5	John Reitan	Crowley County OEM	
6	Shellie Engelhardt	Kiowa County OEM	
7	Danny Chavez	Otero County OEM	
8	Brad Davidson	La Junta City OEM & Fire Chief	
9	Staffon Warn	Prowers OEM & Fire Chief	
10	Jeremy Burkhart	Lamar City OEM & Fire Chief	
11	Larry Sitts	Holly Town OEM	
12	Natalie Musick	Granada Town OEM	
13	Don Moore	DHSEM-OEM-Plans	
14	D'Wayne Gaymon	Colo Dept of Transportation	
15	Robert Madrid	Colo Dept of Transportation	
16	Cary Mount	Colo Dept of Transportation	
17	Wayne Gumke	Colo Dept of Transportation	
18	Neil Mauch	Colo Dept of Transportation	
19	Roy Darnell	Colo Dept of Transportation	
20	Raymond Eccher	Colo State Patrol – Pueblo Dispatch	
21		Town of Springfield – Public Works	
22	Dennis Carlson	Town of Walsh – Public Works	
23	Kenny Wagner	Las Animas Town – Public Works	
24	Robert Darnell	Bent County Road and Bridge	
25	Cutis Sniff	Bent County Road and Bridge	
26	Lex Nichols	Otero County Public Works	
27	Mark Dorenkamp	Prowers County Road and Bridge	
28	Pat Mason	City of Lamar Public Works	
29	Thomas Eikenberry	United States Forest Service	
30		American Red Cross	
31	Sally Broomfield	American Red Cross	
32	Janell Maier	Southeast Colorado Regional Epi	
33	Kris Stokke	Southeast Colorado Health Planner	
34	Aaron Oliveri	Southeast Regional Health Trainer	
35	Jessami Graham	Baca County Public Health	
36	Omer Tamir	Bent County Public Health	

Number	Name	Agency	Date
37	Richard Ritter	Otero/Crowley Public Health	
38	Meagan Hillman	Prowers/Kiowa Public Health	
39	JoLynn Idler	Prowers/Kiowa Public Health	
40	Chris Pryor	Colorado State Patrol – Hazmat	
41	TJ Steinbrunn	Colorado State Patrol – Hazmat	
42	Jason Kosola	Colorado Oil & Gas Commission SE Environmental Protection Specialist	
43	Rebecca Broussard	EPA Region 8 Environmental Protection Specialist	
44	Dr. Maggie Baldwin	Colo Dept of Ag – State Veterinarians Office	
45			
46	Donna Davis	Colorado State Forest Service	
47	Bruce Fickenscher	CSU Extension – Southeast Response Team Coordinator	
48	Travis Black	Colorado State Parks & Wildlife	
49	Dan Kirmer	Colorado State Parks & Wildlife	
50	Brad Henley	Colorado State Parks & Wildlife	
51	Bill McCormick	Dam Safety – Colo Div of Water Resources	
52	Mark Perry	Dam Safety – Colo Div of Water Resources	
53	Chuck Goin	Colorado Rural Water Association	
54	Bret Smith	Colorado Humane Society – SPCA Field Investigator	
55	Greg Chavez	United States Dept of Ag – APHIS	
56		United States Army Corp of Engineers	
57	Jeffrey Daniels	United States Army Corp of Engineers	
58	Shelly Dragomir	United States Army Corp of Engineers	
59	Jennifer Stark	National Weather Service	
60	Greg Heavener	National Weather Service	
61	Telly Stanger	Southeast Colorado Power Association	
62	Mark Hall	Southeast Colorado Power Association	
63	Houssin Hourieh	Lamar Light and Power	
64	Christa Mayhew	ATMOS Energy	
65	Scott Copley	Colorado State Patrol – Major	
66	Tim Knabenshue	Colorado State Patrol – 2C Captain	
67	Denney Owens	Colorado Dept of Corrections	
68	Shawn Foster	Colorado Dept of Corrections	
69	Tracy Nelson	Colorado Dept of Corrections	
70	Aaron Shiplett	Baca County Sheriff	
71	Jake Six	Bent County Sheriff	
72	John Kurtz	Crowley County Sheriff	
73	Casey Sheridan	Kiowa County Sheriff	

Number	Name	Agency	Date
74	Shawn Mobley	Otero County Sheriff	
75	Sam Zordell	Prowers County Sheriff	
76	Tara Marshall	Colo Dept of Local Affairs – DLG	
77	Randi Snead	Colo Dept of Local Affairs – DLG	
78	Jim Raymond	DHSEM-OEM-State Recovery Officer	
79	Spike Ausmus	Baca County Commissioner	
80	Shiloh Freed	Baca County Commissioner	
81	Rick Butler	Baca County Commissioner	
82	Cindi Parsons	Baca County Administrator	
83	Kim MacDonnell	Bent County Commissioner	
84	Jean Sykes	Bent County Commissioner	
85	Chuck Netherton	Bent County Commissioner	
86	Calvin Feik	Bent County Administrator	
87	Roy Elliott	Crowley County Commissioner	
88	Tobe Allumbaugh	Crowley County Commissioner	
89	Blain Arbuthnot	Crowley County Commissioner	
90	Mike Apker	Crowley County Administrative Assistant	
91	Richard Scott	Kiowa County Commissioner	
92	Howard “Butch” Robertson	Kiowa County Commissioner	
93	Donald Oswald	Kiowa County Commissioner	
94	Tina Adamson	Kiowa County Administrator	
95	John Hostetler	Otero County Commissioner	
96	Keith Goodwin	Otero County Commissioner	
97	Jim Baldwin	Otero County Commissioner	
98	Amy White-Tanabe	Otero County Administrator	
99	Ron Cook	Prowers County Commissioner	
100	Wendy Buxton-Andrade	Prowers County Commissioner	
101	Tom Grasmick	Prowers County Commissioner	
102	Janet Lundy	Prowers County Admin/Finance	
103	Ethan Williams	DHSEM-OEM-Plans	
104	Mark Boley	DHSEM-OEM-Field Services	
105	Trevor Denney	DHSEM-OEM-Field Services	
106	Steve Sanchez	Southeast Colorado Hospital District	
107	Rita Hetrick	Walsh Hospital District	
108	Char Korrell	Weisbrod Memorial County Hospital	
109	Leroy Fierro	Arkansas Valley Regional Medical Center	
110	Leslie Day	Prowers Medical Center	
111	Karen Bryant	Prowers Medical Center	
112	Sadie Martinez	DHSEM – AFN Coordinator	
113			

Number	Name	Agency	Date
114	Jerry Eastman	Colorado Information Analysis Center (CIAC)	
115	Jay Bond	Crowley County and Town of Crowley IT Manager	
116	Michael Trujillo	Town of Ordway IT Manager	
117	Triad Computer Services	Triad Computer Services / Bent County, Town of Sugar City IT	
118	Ian Springer	Prowers County IT Manager	
119	Five Ranges Computer Consulting	Crowley County and Town of Crowley	
120	CCS – Colorado Computer Support – Steve Jordan	Kiowa County Hospital District	
121	Prairie Company	Baca County & Springfield School District	
122	Reva Phillips	Town of Pritchett	
123	Donna Wood	Town of Two Buttes	
124	Donna Dawson	Town of Walsh	
125	B&B Computer Repair	Town of Walsh Computer Repair	
126	Leroy England	Campo School District	
127	BOCES	Pritchett & Walsh School District	
128	Mark Ricker	Springfield School District	
129	Corey Doss	Vilas School District	
130	Chris Westphal	Southeast Colorado Hospital District	
131	Kasey Johnson	Southeast Colorado Hospital District	
132	Medina Technology	Walsh Healthcare Center	

ii. List of Abbreviations and Acronyms

iii. Glossary of Terms

Availability	Refers to the information's need to be available for any information system to serve its purpose. This means that the computing systems used to store and process the information, the security controls used to protect it, and the communication channels used to access it must be functioning correctly.
Bot-network Operators	Bot-network operators take over multiple systems in order to coordinate attacks and to distribute phishing schemes, spam, and malware attacks. The services of these networks are sometimes made available on underground markets (e.g., purchasing a denial-of-service attack or servers to relay spam or phishing attacks).
Buyer	The people or organization that consume a given product or service.
Category	The subdivision of a function into groups of cybersecurity outcomes, closely tied to programmatic needs and particular activities. Examples of categories include “Asset Management,” “Identify management and Access Control,” and “Detection Processes.”
Critical Infrastructure	Systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on cybersecurity, national economic security, national public health or safety or any combination of those matters.
Confidentiality	The term used to prevent the disclosure of information to unauthorized individuals or systems.
Cybersecurity	(i) The process of protecting information by preventing, detecting, and responding to attacks. (ii) The protection of information and property from theft, corruption, or natural disaster while allowing the information and property to remain accessible and productive to its intended users. In addition, cybersecurity includes safeguarding of computer systems, as well as the data contained within, and maintaining confidentiality, integrity, availability.
Cybersecurity Event	A cybersecurity change that may have an impact on organizational operations (including mission, capabilities, or reputation).
Cybersecurity Incident	A cybersecurity event that has been determined to have an impact on the organization prompting the need for response and recovery.
Data Theft	Describes when information is illegally copied or taken from a business or other individual. Commonly, this information is user information such as passwords, social security numbers, credit card information, other personal information, or other confidential corporate information
Denial of Service (DOS) Attack	The prevention of authorized access to a system resource or the delaying of system operations and functions. This often involves cyber criminals generating a large volume of data requests.
Detect (function)	Develop and implement the appropriate activities to identify the occurrence of a cybersecurity event.

Distributed Denial of Service (DDoS)	Employs thousands of hijacked computers or internet-connected devices to deliver the data requests.
Framework	A risk-based approach to reducing cybersecurity risk composed of three parts; the Framework Core, the Framework Profile, and the Framework Implementation Tiers. Also known as the "Cybersecurity Framework."
Framework Core	A set of cybersecurity activities and references that are common across critical infrastructure sectors and are organized around particular outcomes. The Framework Core comprises four types of elements: Functions, Categories, Subcategories, and Informative References.
Framework Implementation Tier	A lens through which to view the characteristics of an organization's approach to risk-how an organization views cybersecurity risk and the processes in place to manage that risk.
Framework Profile	A representation of the outcomes that a particular system or organization has selected from the Framework Categories and Subcategories.
Function	One of the main components of the Framework. Functions provide the highest level of structure for organizing basic cybersecurity activities into Categories and Subcategories. The five functions are Identify, Protect, Detect, Respond, and Recover.
Hacktivist	A hacker who attacks information systems with the intent to advance a particular social or political agenda.
Identify (function)	Develop the organizational understanding to manage cybersecurity risk to systems, assets, data, and capabilities.
Industrial Control System	An information system used to control industrial processes such as manufacturing, product handling, production, and distribution. Industrial control systems include supervisory control and data acquisition systems (SCADA) used to control geographically dispersed assets.
Informative Reference	A specific section of standards, guidelines, and practices common among critical infrastructure sectors that illustrates a method to achieve the outcomes associated with each Subcategory. An example of an Informative Reference is ISO/IEC 27001 Control A.10.8.3, which supports the "Data-in-transit is protected" Subcategory of the "Data Security" Category in the "Protect" Function.
Integrity	Means that data cannot be modified undetectably. Integrity is violated when a message is actively modified in transit.
Malware	A virus, worm, Trojan horse, or other program that is inserted into a system, usually covertly, with the intent of compromising the confidentiality, integrity, or availability of the victim's data, applications, or operating system. Common types of malware include: Virus, Worm, Trojan

Mobile Code	A program (e.g., script, macro, or other portable instruction) that can be shipped unchanged to a heterogeneous collection of platforms and executed with identical semantics.
Phishing	Soliciting private information from customers or members of a business, bank or other organization in an attempt to fool them into divulging confidential personal and financial information. People are lured into sharing user names, passwords, account information or credit card numbers, usually by an official-looking message in an email or a pop-up advertisement that urges them to act immediately, usually by clicking on a link provided.
Protect (function)	Develop and implement the appropriate safeguards to ensure delivery of critical services.
Privileged User	a user that is authorized (and, therefore, trusted) to perform security-relevant functions that ordinary users are not authorized to perform.
Ransomware	A subset of malware in which the data on a victim's computer is locked, typically by encryption, and payment is demanded before the ransomed data is decrypted and access returned to the victim.
Recover (function)	Develop and implement the appropriate activities to maintain plans for resilience and to restore any capabilities or services that were impaired due to a cybersecurity event.
Respond (function)	Develop and implement the appropriate activities to take action regarding a detected cybersecurity event.
Risk	a measure of the extent to which an entity is threatened by a potential circumstance or event, and typically a function of: (i) the adverse impacts that would arise if the circumstances or event occurs; and (ii) the likelihood of occurrence.
Risk Management	The process of identifying, assessing and responding to risk.
Social Engineering	A euphemism for non-technical or low-technology means (such as lies, impersonation, tricks, bribes, blackmail and threats) used to attack information systems via an organization’s staff.
Spammers	Individuals or organizations distribute unsolicited e-mail with hidden or false information in order to sell products, conduct phishing schemes, distribute spyware/malware, or attack organizations (i.e., denial of service).
Subcategory	The subdivision of a Category into specific outcomes of technical and/or management activities. Examples of Subcategories include “External information systems are catalogued,” “Data-at-rest is protected,” and “Notifications from detection systems are investigated.”
Supervisory Control and Data Acquisition (SCADA)	A process control application or system that collects data from sensors and machines locally or in remote locations and sends the data to a central computer for management and control.
Supplier	Product and service providers used for an organization’s internal purposes (e.g., IT infrastructure) or integrated into the products of services provided to that organization’s Buyers.

Taxonomy	A scheme of classification.
Trojan	An “imposter,” a program that appears legitimate, but contains malicious code, and does not self-replicate. These can be carriers for a virus.
Virus	Malware that is parasitic in nature and replicates by copying itself into other programs. (not able to self-replicate, requires a host file)
Website Defacement	An attack on a website that changes the visual appearance of the site or a webpage. These are typically the work of system crackers, who break into a web server and replace the hosted website with one of their own. Most times, the defacement is harmless, however, it can sometimes be used as a distraction to cover up more sinister actions such as uploading malware or deleting essential files from the server.
Worm	Causes maximum damage to corporate information, self-replicates across networks, without a host file, through inbuilt email or scan engines.

1 Introduction

In 2018 President Trump Signed executive order 13800, Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure. This plan is the implementation of the presidential executive order to strengthen Cybersecurity for critical infrastructure in the Southeast Colorado All-Hazards Region (SECAHR).

The regions governments, private sector, private non-profits, and citizens depend on computer-driven and interconnected information technologies for multiple reasons. Our prosperity and security depend on how we respond to the opportunities and challenges in cyberspace. As all facets of American life have become more dependent on a secure cyberspace, new vulnerabilities have been revealed and new threats continue to emerge. This plan is to help address response and recovery from threats to the cyberspace within the SECAHR.

The single, most impactful way for any organization to reduce cybersecurity risk is to have informed and engaged leadership. Leadership positively influences the rest of the principles, flows through all sectors and through this plan. While the leaders in each sector may have different titles such as CEO, Agency Head, Administrator, Board of Directors, or Elected Official, they all need to lead by example by increasing their own awareness and requiring regular risk reporting and communication.

The second theme is the need to improve every individual's level of cybersecurity awareness. Each employee, student, and resident must understand how to operate technology safely. Without basic knowledge it is simply too easy for cybercriminals to entice individuals into giving away access to systems and data. This plan calls for education of employees in the workplace.

Cybersecurity risk reduction is a fairly new topic outside of the technology workforce. Fortunately, resources have been mustering to address this issue. All sectors stand to gain from work with a member of the national Council of Information Sharing and Analysis Centers ("ISACS"). These groups share information on threats and best practices to reduce risk. State and national-level online resources are also available for businesses and individuals. A listing of resources is at the end of this Plan. The SECAHR has a rich history of responding through cooperation and mutual aid. Cybersecurity risks and events present a new type of man-made disaster that requires attention.

Private business must demonstrate that it understands its role and is prepared to protect citizen data and the critical services they provide. It is especially important that company boards of directors and chief executive officers recognize the dangers of cyber compromise.

Law enforcement must strengthen their approach to cybercrimes.

1.1 Authority

Baca, Bent, Crowley, Kiowa, Otero and Prowers Counties constitute the Southeast Colorado All-Hazards Emergency Management Planning Region, hereafter referred to as the Region. A range of statutes, regulations, executive orders, plans and policies govern the Region's emergency management programs.

At the Federal level, The *Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974* (the Stafford Act) (P.L. 93-288, 100-107), *The Homeland Security Act of 2002*, *Post-Katrina Emergency Management Reform Act of 2006*, *The Sandy Recovery Improvement Act of 2013* (SRIA) (P.L. 113-2), *The National Disaster Recovery Framework, May 24, 2011* and *The Federal Civil Defense Act of 1950* (P.L. 81-920) establish assistance and guidance to State and local governments for disaster preparedness, response, recovery, and mitigation.
Presidential Executive Order 13800, *Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure*, creating the groundwork for the National Cyber Strategy.
The U.S. Department of Homeland Security, Cybersecurity and Infrastructure Security Agency's Framework and Implementation Guidance documents provide specifics for Cybersecurity planning.

The National Response Framework (NRF), the National Contingency Plan (NCP), The National Disaster Recovery Framework (NDRF), the State of Colorado Emergency Operations Plan provide planning and policy guidance to counties and local entities. Collectively, these documents support the foundation for the County and Municipal EOPs including cybersecurity and continuity of operations plans.

At the Regional level, Executive Order D 013 03 and House Resolution 03-1018 and the following organizations agreed prior to the House Resolution and Executive order to adopt a single regional planning and operations map: Colorado Counties Incorporated, the Colorado Municipal League, the Colorado State Fire Chief's Association, the Colorado Association of Chiefs of Police, the County Sheriffs of Colorado, the Emergency Medical Services Association of Colorado, and the Colorado Emergency Management Association. The Executive Order says "Through this Executive Order, I set forth the single regional planning and operations map and direct all state departments to recognize and adopt this map. To ensure a congruent system, I urge local agencies to adopt this map for emergency management and response purposes." The Southeast Region has a long history of utilizing the planning and response map to coordinate their activities and responses to disasters and emergencies.

The Colorado Revised Statutes (CRS) and associated Administrative Rules add state direction and guidance to local emergency management programs during a disaster.

C.R.S. 24-72-204 Open Records Act.

The Colorado Disaster Emergency Act (24-33.5-701 et. seq., Colorado Revised Statutes (CRS)); and Article IV, Constitution of the State of Colorado: entitled the Executive Department.

The purpose of Part 7 is to:

(a) Reduce Vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural catastrophes or catastrophes or human origin, civil disturbance, or hostile military or paramilitary action;
(b) Prepare for prompt and efficient search, rescue, recovery, care, and treatment of persons lost, entrapped, victimized, or threatened by disasters or emergencies;
(c) Provide a setting conductive to rapid and orderly start of restoration and rehabilitation of persons and property affected by disasters;
(d) Clarify and strengthen the roles of the governor, state agencies, and local governments in prevention of, preparation for, response to, and recovery from disasters.
(e) Authorize and provide for cooperation in disaster prevention, preparedness, response and recovery;
(f) Authorize and provide for coordination of activities relating to disaster prevention, preparedness, response, and recovery by agencies and officers of this state and similar state-local, interstate, federal-state, and foreign activities in which the state and its political subdivisions may participate;
(g) Provide a disaster and emergency management system embodying all aspects of pre-disaster and pre-emergency preparedness and post disaster and post emergency response; and
(h) Assist in prevention of disasters caused or aggravated by inadequate planning for regulation of public and private facilities and land use.

The principle executive officer of the affected jurisdiction has the authority to declare a disaster and delegate authority or responsibilities to effectively manage disaster response under C.R.S. 24-33.7-709(1). A local disaster may be declared only by the principal executive officer of a political subdivision. It shall not be continued or renewed for a period in excess of seven days except by or with the consent of the governing board of the political subdivision. Any order or proclamation declaring, continuing, or terminating a local disaster emergency shall be given prompt and general publicity and shall be filed promptly with the county clerk and recorder, city clerk, or other authorized record-keeping agency and with the office of emergency management.

The emergency declaration may extend to all or any part of the geographical area under the jurisdiction of the municipality, county, tribe or special district. When a wide area disaster occurs the principle executive officers must determine how decisions will be coordinated if separate disaster declarations are declared.

If the emergency or disaster is beyond the capability of the affected jurisdiction to respond, the governor through an executive order or proclamation can declare a state of emergency. The Counties affected by the disaster or emergency shall have their EOC accumulate and prepare supporting documentation for the declaration through damage

assessment and emergency support function information. In many cases, implementation of the State Emergency Operations Plan and access to State and Federal programs or funding are contingent on correctly following the declaration process in a timely manner. During a disaster, the operational response will end and a recovery response will clearly be all that remains. As the operational response transitions into recovery, the principle executive officers of the affected jurisdictions retain authority, but the environment under which their authority exists changes. In recovery, additional authorities are introduced into the process from State and Federal agencies creating a need for joint policy decision making. As the recovery process moves forward the local authority assumes a primary role and State and Federal authorities assume a supportive role.

During recovery the local principle executive officer determines the recovery structure that best serves the recovery process and delegates responsibility to the department or organization with the capability to manage the recovery process. The Chief Elected Officials, their agencies and departments shall coordinate and cooperate with other affected jurisdictions to ensure consistency for the public.

A state of emergency should not be prematurely lifted until a complete assessment and implementation of the recovery system is working. In addition, recovery may require modifications to codes and regulations to facilitate recovery for residents and businesses. A disaster declaration allows for the modifications without having to follow normal legislative procedures or established charters related to specific unmet needs of the community.

The policy group and legal advisors determine when actions can be executed, how the process can legally permit action and what actions are allowed during a disaster under the provisions of the law.

The National Incident Management System (NIMS) is a standardized approach to incident management developed by the Department of Homeland Security in response to Homeland Security Presidential Directive-5. Due to the unique aspects of a cyber-incident, Unified Command will likely be necessary. This Cyber Security document is built on the premise that the following partners will work together to form a Command Structure to coordinate the actions necessary for rapid identification, information exchange, response, and remediation to mitigate the damage caused by a cyber-event. Unified Command may include members from the following organizations.

1. Police Department/Sheriff’s Office
2. Information Technology
3. Emergency Management
4. Fire Department
5. Public Works
6. Transportation
7. Colorado Information and Analysis Center (CIAC)
8. Technology resources from the private and public sectors

9. Affected Agencies
10. Leadership/Policy Group

Cyber incidents may result in activation of a cyber-emergency response team. Emergency Management may be activated to implement the Emergency Operations Plan (EOP), its annexes as necessary, and/or Continuity of Operations Plan.

Additionally, if the Emergency Operations Center (EOC) is activated, resource ordering will be requested through the EOC and based upon the incident needs. Resources are ordered and follow the EOP (Resource Mobilization Plan) as all other incidents.

The Region's Emergency Managers and agencies having jurisdiction for cybersecurity have agreed to participate in the preparation of a Regional Cybersecurity Plan (RCP) to be used before, during and after a cyberattack within the region.

1.2 General

This document is a guideline for preparing for and responding to a cybersecurity incident. The

Following this RRP are Annexes for each county within the Region that contain county-specific details. The RRP, coupled with a County-Specific Annex, constitutes a County Recovery Plan (CRP) for each county within the Region. Throughout the RRP, information found in the County-Specific Annexes is referenced. A table summarizing information found in a County-Specific Annex is provided at the beginning of any CRP section for which additional information can be found in a County-Specific Annex. Each County- Specific Annex contains appendices for specific documents.

Each county has prepared an EOP that has been formatted to follow the structure used in the NRF, including the Emergency Support Function (ESF) Annexes identified in the NRF.

1.3 Purpose

This Plan is intended to develop an all-hazards approach for coordination among cybersecurity partners to include local, state, county, regional, federal, tribal, non-profit, private sector and community organizations within the SECAHR. Guidance within the Plan establishes a pathway to robust cybersecurity coordination and empowers cybersecurity partners to establish resilient and equitable local and regional cyber operations. The plan builds upon existing state, regional and local plans and is not intended to replace these plans.

The key goals of this Plan are to:

- Limit immediate incident impact to the jurisdiction / organization

- Assess the scope of the attack
- Identify trigger points for escalation within the jurisdictions.
- Determine how the incident occurred.
- Share information, including vulnerabilities, exploited to other local governments, special districts and private sector partners in the SECAHR to mitigate further incidents.
- Find out how to avoid further exploitation of the same vulnerability.
- Avoid further damage
- Assess the impact and damage in terms of financial impact and loss of image.
- Recover from the incident.
- Update policies, procedures, standards, and guidelines as needed based upon the After Action Report (AAR).
- (Possibly) Determine who initiated the incident for possible criminal and/or civil prosecution.

The Plan will achieve its purpose by offering guidance and tools that will support the region.

1.4 Scope

The scope of this plan includes the preparedness, response and recovery actions for cyber incidents that may occur in the Southeast Colorado All-Hazards Region (SECAHR), which is a geographically diverse region organized around six counties; 25 municipalities; and a population of nearly 50,000 people over 9,548 square miles. This plan applies to the citizens, counties, municipalities and special districts within the planning area.

1.5 Relationship to Other Plans

In the SECAHR, most jurisdictions have an emergency operations plan that outlines the actions that will be taken during the response phase of any emergency. Additionally, emergency responders work together on a regular basis to create response protocols, procedures and agreements to ensure adequate response. What recent incidents and exercises have shown, however, is that recovery will be much longer in duration, will involve key stakeholders outside of the typical emergency responder community, and will include complexities not seen in any other part of emergency management.

Cybersecurity planning is in its infancy in the SECAHR and in the nation, but coordinating with other emergency disaster plans within the SECAHR will be necessary for effective response, continuity of operations and recovery. The following plans directly relate to concepts within the framework and are referenced throughout the report where applicable.

Regional Plans
Colorado-Southeast Region Tactical Interoperable Communications Plan (TICP)

Colorado-Southeast Region Alert & Warning Plan (RAWP)
Colorado-Southeast Region Debris Management Plan (RDMP)
Colorado-Southeast Region Recovery Plan (RRP)
Colorado-Southeast Region Cybersecurity Plan (RCP)
Southeastern Colorado Mass Casualty Plan (SECMCP)

State Plans
State of Colorado Natural Hazards Mitigation Plan
State of Colorado Emergency Operations Plan (SEOP)
State of Colorado Disaster Recovery Plan

2 Situation and Assumptions

This section outlines the current environment within which this Regional Cybersecurity Plan (RCP) is being prepared and the assumptions that were made during its preparation. If any of the situations or assumptions change, and that change affects the accuracy of this RCP, the Region's Emergency Managers will update the RCP. Plan maintenance is discussed in Section 11.

2.1 Situation

- The Region is subject to a number of disaster circumstances that could create a need for cybersecurity response and recovery. Each county maintains and regularly updates a specific Hazard Analysis, which prioritizes the most likely events for each community. In 2020 DHSEM implemented the County Emergency Preparedness Assessment or CEPA process which identifies risks and hazards, response capabilities, and gaps in capabilities. In addition to county specific hazard analysis, the six counties in the region also participate and adopt a regional Pre-Disaster Hazard Mitigation Plan, which details region wide hazards in addition to county specific hazards.

- Baca, Bent, Crowley, Kiowa, Otero and Prowers counties constitute the Southeast Colorado All-Hazards Planning Region; Figure 1 shows the location of these counties in relationship to each other and the remainder of the State.

- Each county within the Region has an EOP that covers additional aspects related to emergency response and recovery.

- In a major or catastrophic disaster, the Region and its associated counties may have difficulty in locating staff, equipment, and funds to devote to response and recovery as it pertains to a cybersecurity incident.

- Factors which help support a successful response and recovery to a cybersecurity incident includes organizational flexibility, interagency cooperation, informed decision-making, and coordinated public communication that is clear, consistent, and ongoing.

- Large-scale cyber incidents may overwhelm government and private sector resources by disrupting the Internet and/or taxing critical infrastructure information systems.

- Complications from disruption of this magnitude may threaten lives, property, the economy, and national security.

- Rapid identification, information exchange, investigation, coordinated response and remediation often mitigate the damage caused by this type of malicious cyber activity.

    - A cyber incident may occur at any time of day with little or no warning, may cross-geographical boundaries and may lack an easily identifiable signature.

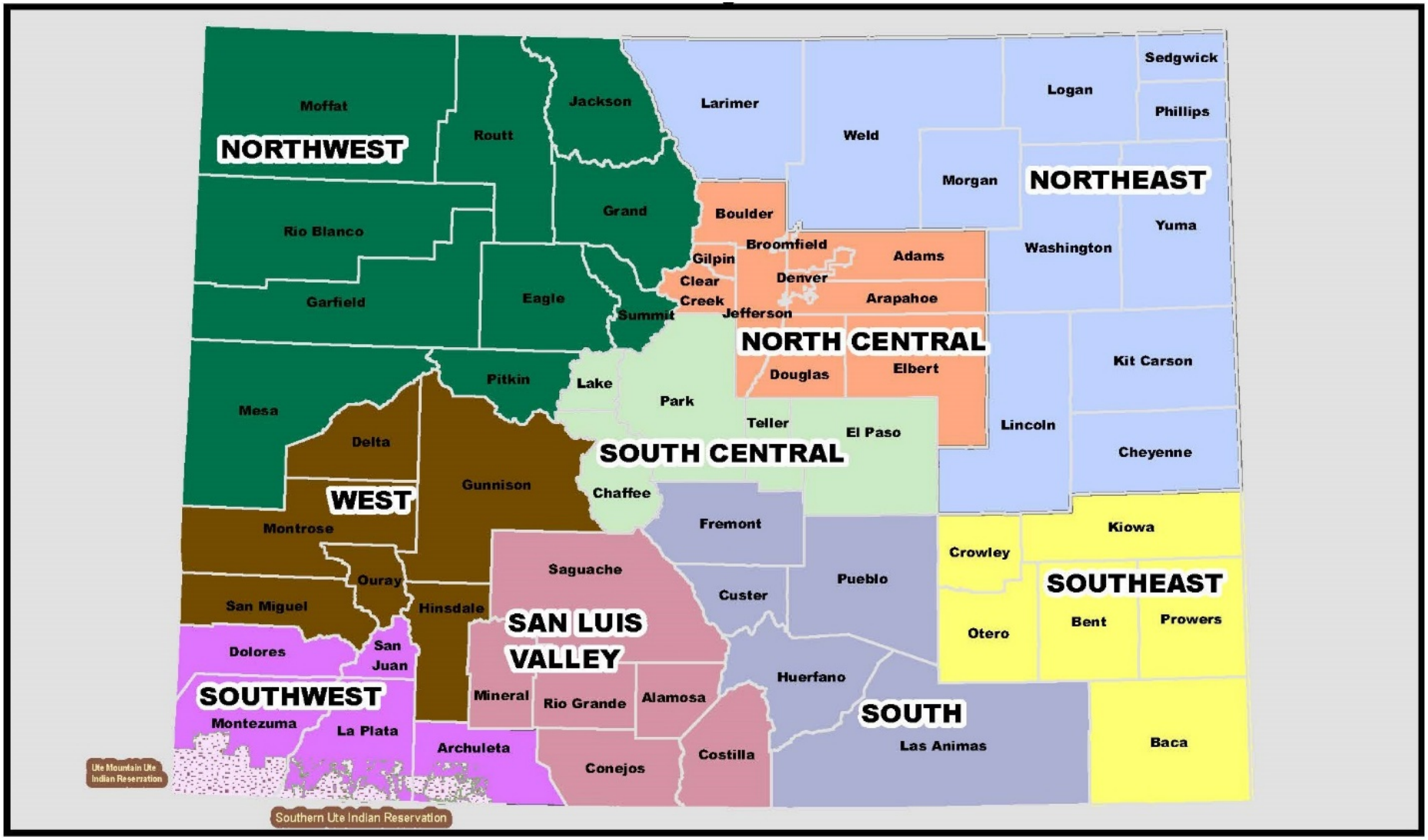


Figure 1: Colorado All-Hazard Regional Planning Areas

2.2 Assumptions

- The IT Department, person responsible for IT services and Contractors recognizes applicable cyber threats and will take reasonable precautions to protect their systems.

- The IT Department will develop and maintain the cyber security incident response guide (this information may also be incorporated as part of their Continuity of Operations Plan (COOP).

- Other departments and offices within the jurisdiction will report issues to the help desk per policy and report impacts during a cyber-incident.

- The jurisdiction will make notifications related to specific data compromise per state and federal law through the appropriate regulatory agency.

- Government and private sector organizations will work together collectively on cyber related issues to protecting critical infrastructure and develop plans and processes for restoring those systems in the event of a failure or compromise.

- IT Departments must understand their roles and responsibilities in the emergency response structure as first responders. This includes understanding NIMS and the incident command structure, the importance of a command post and planning.

- The typical "first responders" to an emergency may not be impacted during a cyber-incident. This is dependent upon the consequences of the incident. The first responders of a cyber-incident that impact the cyber environment are the IT staff. The first responders of a cyber-incident that impacts the cyber and physical environment will be inclusive of all personnel managing the consequences.

- The response to and recovery from a cyber-incident must take into account numerous existing challenges. Resources must be appropriately prioritized to resolve identified challenges. Identifiable challenges include:

    - Management of Multiple Cyber Incidents:
      The occurrence or threat of multiple cyber incidents may significantly affect the ability of responders to adequately manage the cyber incident. Multi-jurisdictional planning and exercises should be conducted to assist in addressing this issue.

    - Availability and Security of Communications:
      An infrastructure attack could impede communication needed for coordinating response and recovery efforts. A secure, reliable communications system is needed to enable public and private sector entities to coordinate efforts in the event that routine communications channels are inoperable. A redundant system of communication should be in place prior to an attack. These redundant systems could include things like Zello, Slack, Discord, or HSIN Connect.

- Availability of Expertise and Surge Capacity:
  Leadership must ensure that sufficient technical expertise is developed and maintained to address the wide range of ongoing cyber threats. Sufficient technical expertise may require in-place contracts with private sector entities that specialize in cyber incident response. In addition, the ability to surge technical and analytical capabilities in response to cyber incidents that may occur over a prolonged period must be planned for, exercised and maintained.

- Staffing to support the response is limited:
  Requesting resource support from other entities will be needed. The IT Department must understand the resource ordering process including the benefits of activating the EOC.

3 Concept of Operations

A computer security incident, as described by NIST 800-61 Revision 2, is "a violation or imminent threat of violation of computer security policies, acceptable use policies, or standard security practices." The sensitivity of this data requires that all computer security incidents be treated as if sensitive data were involved, and appropriate measures should be taken to ensure the protection of this data

3.1 Incident Response Categories

This section describes conceptually, how the cyber response is implemented. Response is implemented using a formal cyber incident response process:

- Detect (Processes, Monitoring)
- Respond (Communication, Analysis, Mitigation, Improvement)
- Recover (Processes, Improvement, Communication)

There are generally six (6) stages of incident response:

1. **Prepare**. Through Identification and Protection Functions develop an informed cyber incident response guide.

2. **Detect**. Detect and event and identify whether or not an incident has occurred. Identification may come from security monitoring, internal notification, and/or detection methods and processes.

3. **Respond**
   -Mitigate. Activities are performed to prevent the expansion of an event, mitigate its effects and resolve the incident.

-Eradicate. Removing the cause of the incident can be a difficult process. It can involve virus removal, removing user permissions, and/or dismissing employees.

4. **Recover**. Restoring a system to its normal business status is essential. Once a restore has been performed, it is also important to verify that the restore operation was successful and that systems are back to normal condition.

5. **Follow-up/Improvements**. Some incidents require considerable time and effort. Performing follow-up activity is one of the most critical activities in the response procedure. This follow-up may include updates to policies, plans, equipment and configurations.

3.2 Cyber Incident Source Authentication

It is critical that there is a mechanism to identify the authenticity of a reported cyber incident prior to committing further resources. (NIST 800-61)

- Ports, logs, and change documentation
- Documentation for Operating Systems, applications, protocols, and intrusion detection and antivirus products
- Network diagrams and lists of critical assets, such as database servers
- Current baselines of expected network, system, and application activity
- Cryptographic hashes of critical files to speed incident analysis, verification, and eradication
- Access to images of clean Operating System and application installations for restoration and recovery purposes
- Physical environment logs or other information sources

3.3 Detecting an Incident

The first sign of a security incident can come from a number of different sources. A user may report a locked account to the IT Help Desk, a server administrator could notice unusual log activity, or a network administrator could notice increased bandwidth use. It is important to accept input on possible incidents from those individuals associated including employees, guests, vendors, and partners.

Incident reports from non-IT staff should be directed to the IT Help Desk. Vendors, service providers, guests, and employees should report incidents and critical vulnerabilities to the IT Help Desk. If the individual contacting the IT Help Desk doesn't open a trouble ticket, the IT Help Desk will open one at this time. Once an incident is identified, the IT Help Desk should immediately notify the IT staff with the trouble ticket number.

Technical IT staff should bypass the IT Help Desk and directly notify the IT Director. This is an important step in reducing risk of exposure and decreasing incident response time. Other department directors may report incidents directly to

the IT Director. For example, Human Resources may report inappropriate use incidents in this manner. Agencies should have policies around this type of issue as it a special case of an insider threat.

3.4 Investigating and Confirming the Incident

The incident should be confirmed before taking further action within the system. Many incidents occur weeks or months before they are discovered, so a quick reaction does not necessarily make a substantive difference. The damage that can be caused by reacting to a false incident is usually worse than the damage that might be caused by taking the additional time required to confirm it.
If an EOC is activated, this support organization may assist in collecting and compiling impact information across the jurisdiction and sending it to the IT Department. The IT Department and its limited staff can continue to analyze and investigate the incident.

3.4.1 Confirming the Incident

The goal is to determine whether an event is a threat to assets, misinterpretation, or false alarm. Facts must be discovered and documented that show an incident is happening or has happened.

If an incident cannot be confirmed within 20 minutes, then it should be escalated to the appropriate administrator or staff member. Involving an administrator may provide the expertise required to confirm the incident. Still, there may be cases where there is not enough security expertise to confidently identify an incident. In some cases, third-party services may need to be contacted to assist in validating the entire incident issue.

Ensure there is a baseline of normal system operations as this is vital to confirming an incident and should be a routine practice of the IT Department. Without an understanding of what applications, servers, and networks look like when they are healthy, it is nearly impossible to identify security problems in these entities. Documentation of expected applications, services, and users should be available to identify strange behavior rapidly.

3.4.2 Changes during Incidents

While attempting to confirm an incident, some attention should be focused on minimizing the changes made to the systems, software, and network. Any changes will affect electronic evidence and may even indicate awareness of the incident to the attacker. If there is a need to make modifications to systems or network configurations, the changes should be recorded in detail. A scribe or documentation unit leader should be assigned to record settings and any changes made after the incident.

3.4.3 Response Activation

The alert levels developed by MS-ISAC (See Appendix Seven) allow the IT Department to assess the current situation as it evolves. Using the result from the formula, the Alert Level Indicator would generally reflect severity levels as follows: ·

Alert Level Indicator - Severity

- **Green - Low: -8 to -5**
- **Blue - Guarded: -4 to -2**
- **Yellow - Elevated: -1 to +2**
- **Orange - High: +3 to +5**
- **Red - Severe: +6 to +8**

The IT Director (if unavailable the senior most IT position) will notify staff of an activation to include the Emergency Management Office when a cyber-incident reaches level Blue as described in Appendix Seven “Alert Levels (developed by MS-ISAC)” of this Cyber Security Incident Response Guide. This notification could simply come in the form of a short email depending on the situation. This allows Emergency Managers to evaluate what their office may need to do if the level increases.

The Emergency Operations Plan (Cyber Annex) should reference these levels to ensure consistency across these two departments.

3.4.4 Handling and Documenting the Incident

During a security incident it is essential to document as much information as possible. This allows other responders who may investigate the incident to follow a process and method. It is important to document any changes that are made to systems or networks.

Identify one individual to be the record keeper. Having a single position responsible for documenting the incident allows for consistent, accurate records.
A third party may be contracted to perform this duty based upon insurance contracts.

3.4.4.1 Handling and Documenting Evidence

Evidence may be needed to prosecute criminal activity, therefore, evidence must be documented with accurate dates, times, and individuals involved. The notes the record keeper(s) take should

allow others to recreate the steps taken to confirm and respond to the incident. Proper chain of custody must be maintained. The chain of custody should document what the type of evidence, how it was collected, who has been responsible for the evidence since collection, and a process that allows for the security of the evidence. Follow current chain of custody forms used by law enforcement for electronic evidence.

3.4.4.2 Limiting Incident Exposure

The responsibility of limiting exposure should be controlled by the IT Director or designee to minimize several different personnel trying to resolve the situation as the same time.

The chances of someone trusted being involved are reasonably high. This may make investigation more difficult and could greatly increase the chances of alerting the attacker as a result of unusual activity. By notifying only the staff who are part of the incident handling process, the risk of alerting an attacker is greatly reduced.

At this time in the incident handling process, it may be necessary to ensure public information is strategic and controlled through the incident command structure.

3.4.5 Incident Handling Resources

No matter how up-to-date this document is, there will be new technologies, vulnerabilities, and techniques in use in the field. Therefore, it is critical for staff to maintain ongoing awareness of new trends in technology, security, and specifically incident handling. This should be kept in hard copy within the department. The following resources are considered authorities in incident handling by the community:

NIST Security Incident Handling Guide (SP 800 61)

https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-61r2.pdf

SANS Incident Handling Guides

http://www.sans.org

MS-ISAC Resource Home Page and Contact Information for Consulting through CERT

https://www.cisecurity.org/ms-isac/

HSIN Registration and Login Link

https://www.dhs.gov/homeland-security-information-network-hsin

https://**hsin**.dhs.gov

Forum of Incident Response and security teams (FIRST)

http://www.first.org

3.4.6 Escalating Incident Standard Operating Guidelines

The following steps outline the standard operating procedure for the jurisdiction. These are outlined in a typical order for response.

1. Help desk/IT staff receive information or discover a possible incident that needs investigating. Discovery can come from numerous sources.

2. Help desk follows internal ticketing process.

3. Through process IT Administration either confirms the Incident or the incident was determined to be a misinterpretation or false alarm. (NO FURTHER FOR MISINTERPRETATION OR FALSE ALARM)

4. Execute Incident Response Plan(s) and possibly Continuity of Operations Plans (COOP)

5. Determine if Departmental Operation Center / War Room is necessary

6. Determine if assets are threatened within the jurisdiction.

7. Identify the severity of the incident through the Incident Response Plan and form an initial incident command structure (this structure may be expanded as the incident progresses and can be modified into a unified command).

8. Notifications are made based on severity level and following the proper process.
9. (Documents needed to guide this procedure: Help desk Checklist, IT Staff emergency organizational structure and roles/responsibilities, Communications plan/protocol for activations (who, what, when, where, why and how), county administration policies related to cyber security)

10. IT Department may activate a team if this resource exists internally or their emergency response organizational structure. (this ensures roles and

responsibilities are covered across the incident response and there is not overlap of work being accomplished or conflicting work being completed)

11. Through notifications, the IT Director or designee contacts Emergency Management. Emergency Management recommends a level of Emergency Operations Center activation based on their Emergency Operations Plan and/or Cyber Annex.

12. The IT Director or designee contacts the Public Information Officer to start coordinating the decisions and release of information (both internal and external). (Documents needed to guide this procedure is public release templates, EOC activation level triggers within the EOP or Cyber Annex, policy group coordination within the EOP, Disaster Declaration templates within the EOP, and COOP activation level and coordinating plans).

13. EOC Manager will activate appropriate staff based upon internal plans (EOC operations should include triggers related to activating for a cyber-incident, annex for specifics related to cyber incidents, and checklists and flow charts for EOC staff). Emergency Management can also bring Alert & Notification expertise, Logistical expertise, and communications support to bear to help agencies respond to a cyber-incident.

14. EOC Policy Group or jurisdictions' administration (if no activated EOC) will make policy level decision as needed.

15. EOC Policy Group or IT Director (if no activated EOC) will notify Risk Management about possible insurance claim and/or services required (if the jurisdiction has cyber insurance).

16. EOC will order resources based upon the incident need following the jurisdictions resource mobilization and/ or logistics process.

17. If the incident impacts life safety at any time: the law and fire departments will be involved and the command structure should be modified.

18. The incident may activate a command post at any time. This could be the conference room in the IT Department. The command post allows leadership across departments a location to meet.

19. Planning personnel (likely Planning Section Chief in incident command structure) will ensure common incident objectives and potentially an incident action plan are developed and updated as determined by the incident. ***Ensure Cyber Annex within jurisdiction EOP outlines a command post option, incident planning, and an incident action plan.

    EXTERNAL ELEMENTS:

*EOC IT Liaison or IT Staff (dependent upon the response structure) should have information sharing procedures and processes for the notification laterally to other governments that may be vulnerable as well.

3.4.7 Analyzing the Event and Determining Risk

Before responding to a known security incident, the following should be answered:

- ❑ What systems and networks have been attacked?
- ❑ What data is exposed to the attacker?
- ❑ What critical systems and services are at risk?
- ❑ Will this incident directly affect customers or customer data?
- ❑ Is the incident visible to the public?

The answers to these questions come from detailed analysis of servers, network devices, desktop computers, log files, and user experience.

Specific technical steps that can be taken to analyze systems include the following:

- ❑ **Profile Networks and Systems.** Profiling includes running file integrity checking software on hosts to derive checksums for critical files and monitoring network bandwidth usage to determine what the average and peak usage levels are on various days and times.

- ❑ **Understand Normal Behaviors.** Incident response team members should study networks, systems, and applications to understand what their normal behavior is so that abnormal behavior can be recognized more easily. One way to gain this knowledge is through reviewing log entries and security alerts.
- ❑ **Log Retention Policy.** The length of time to maintain log data is dependent on several factors, including the organization's data retention policies and the volume of data. See NIST SP 800-92, Guide to Computer Security Log Management.

- ❑ **Event Correlation.** Evidence of an incident may be captured in several logs that each contain different types of data. Correlating events among multiple indicator sources can be invaluable in validating whether a particular incident occurred.

- ❑ **Keep All Host Clocks Synchronized.** Protocols for Network Time Protocol (NTP)

- ❑ **Maintain and Use a Knowledge Base of Information.** The knowledge base should include information that staff need for referencing quickly during incident analysis. Text documents, spreadsheets, and relatively

simple databases provide effective, flexible, and searchable mechanisms for sharing data among team members. Some examples could be having a network map stored offline in a hard copy format as relying on memory during an incident is problematic.

- ❑ **Internet Search Engines for Research.** Internet search engines can help analysts find information on unusual activity.

- ❑ **Run Packet Sniffers.** Sometimes the indicators do not record enough detail to permit the staff to understand what is occurring. If an incident is occurring over a network, the fastest way to collect the necessary data may be to have a packet sniffer capture network traffic. Configuring the sniffer to record traffic that matches specified criteria should keep the volume of data manageable and minimize the inadvertent capture of other information.

- ❑ **Filter the Data.** There is simply not enough time to review and analyze all the indicators; at minimum the most suspicious activity should be investigated. One effective strategy is to filter out categories of indicators that tend to be insignificant. Another filtering strategy is to show only the categories of indicators that are of the highest significance; however, this approach carries substantial risk because new malicious activity may not fall into one of the chosen indicator categories.

- ❑ **Seek Assistance from Others.** If current resources are unable to determine the full cause and nature of an incident, resource request may need to be made including contacting the Colorado Information Analysis Center (CIAC), MS-ISAC, other teams outside jurisdiction, and US-CERT. It is important to accurately determine the cause of each incident so that it can be fully contained and the exploited vulnerabilities can be mitigated to prevent similar incidents from occurring.

When discussing risk, use four general categories of assets and consider how the confidentiality, integrity, and availability of each are threatened by this incident. The security team should fill out this table together:

	Confidentiality	Integrity	Availability
Image			
Data			
Customer Data			
Negotiable Assets			

Each of these categories can be at risk; many times multiple categories are at risk at one time. Assigning general levels of risk to each asset category is a good way of concretely understand the business risk the security incident poses.

Risk levels will vary depending on the severity of the incident. When filling out the table above, a corresponding severity should be entered into the box. Severity can be broken down into three categories:

High Severity

- ❏ Confidential data is at risk.
- ❏ Organization-wide disruption is occurring or imminent.
- ❏ Legal ramifications are serious.
- ❏ Media/public interest will be high.

Medium Severity

- ❏ Internal data is at risk.
- ❏ The disruption is somewhat localized, but not organization-wide.
- ❏ Media/public interest is possible.
- ❏ Potential legal ramifications exist.

Low Severity

- ❏ Only public data is at risk.
- ❏ The incident is limited to a single or very few machines.
- ❏ There are no legal implications.
- ❏ Service has not been disrupted.
- ❏ No potential media/public interest exists.

It is not required that each severity condition be met in order to classify a risk as High/Medium/Low severity. Once risk to the organization has been assessed and discussed by the security team, an appropriate response can be identified and executed.

3.4.8 Determining Response Strategy

Despite the many security risks, there are relatively few decisions to make about how to respond. To determine a response strategy, the following key questions must be answered:

- ❏ How (and when) should the threat be neutralized?
- ❏ Is it more important to investigate the incident or to restore service?
- ❏ What vulnerability caused the initial exposure, and how should it be secured?
- ❏ Should evidence be gathered to attempt to pursue the attacker?
- ❏ How should service be restored?
- ❏ What entities have/should be notified, when, and by whom?

***See Incident Discovery Guide Appendix Five

During the course of developing and implementing a response to an incident, incident responders should keep in mind these general “rules of engagement”:

- ❏ Report all issues/incidents to the IT Director or designee for tracking and escalation.
- ❏ Include corresponding trouble tickets for all issues/incidents with existing tickets.
- ❏ Provide a comprehensive timeline of findings and actions associated with problem activities. This will be used with a chain of custody report
- ❏ Base all incident responses on issue/incident priority using established risk categories.

3.4.9 Collecting Forensic Evidence

All of the information collected during an incident, from initial detection to resolution, may be useful as forensic evidence. However, some incidents warrant collecting forensic evidence with the specific intent of being able to use that evidence to support legal action. There are situations that will typically require that forensic evidence collection take place:

- Incidents that represent a serious risk
- Incidents that may result in employee termination or other disciplinary action
- Incidents where a root cause cannot be identified, and a system must be restored before analysis can be completed
- Incidents that require outside investigation in connection with other cases.

*Ensure the use of chain of custody documentation when appropriate (contact law enforcement for jurisdictional updated chain of custody form)

The following three sections describe strategies for collecting digital evidence in such a manner that it can be reliably used in a court of law. If collecting this evidence requires the assistance of a third party, such as access logs from a connecting ISP, a search warrant or subpoena may be required. This is because many ISPs do not keep this type of information indefinitely and acquiring a subpoena or search warrant takes time, a retention letter can be sent to the third party requesting it hold the information until a search warrant can be acquired. Although the third party may legally disregard this request, it can prove beneficial. The first section briefly discusses cryptographic hashes and how they should be used to ensure the integrity of digital evidence.

The second section discusses the making of forensic copies of entire disks. This process is preferred for most serious security incidents. It preserves all the files and programs on a system, as well as files that have been recently deleted. It provides the most information for later analysis and is essential for completeness.

Unfortunately, making forensic copies of disks is a resource-intensive process that requires a great deal of evidence storage space and takes a significant amount of time and technical skill to accomplish. An alternative is to make only copies of specific files or directories. This strategy is used primarily for collecting evidence of inappropriate use, although it can also be appropriate for gathering evidence associated with a limited intrusion (such as copyrighted files illicitly stored on an anonymous FTP server).

Third-party service providers may be contacted to assist with evidence collection and preservation.

https://resources.infosecinstitute.com/computer-forensics-tools/#gref

3.4.9.1 Cryptographic Hashes

A hash (or digest) is a small representation of a large set of data. Hashing algorithms are intended to produce unique hash values for unique large sets of data and modern cryptographic hashing algorithms come close enough to accomplishing this for the court of law. A record of the hash of a file provides a method of proving that the file was not tampered with. This is essential for using data files, log files, or any other electronic evidence in court.

MD5 and SHA-256 are both suitable hashing algorithms for generating cryptographic hashes of evidence. While there are collision attacks on the MD5 algorithm, these do not invalidate the use of the algorithm for evidence integrity verification purposes. Depending on the platform and available tools, it may not always be possible to use a particular algorithm, and so two are noted as acceptable.

There are a variety of tools that can be used to generate cryptographic hashes using these algorithms.

- ➔ Windows: The File Checksum Integrity Verifier (FCIV) can be used to generate MD5 or SHA-256 hashes, and can operate in a single file or recursive mode. https://support.microsoft.com/en-us/help/841290/availability-and-description-of-the-file-checksum-integrity-verifier-u
- ➔ Mac OS X: OpenSSL is deployed by default with current versions of OS X. File hashes can be computed using “openssl sha256 <filename>” or “openssl md5 <filename>.”
- ➔ Linux: Typical Linux distributions include the tools md5sum and sha256sum, which can be used to generate hashes based on the respective algorithm in the name.
- ➔ File hashes should be stored on paper and attributed to a labeled (logical or physical) image.

3.4.9.2 Duplicating a Disk for Forensic Evidence

There are a number of techniques to duplicate a disk for forensic purposes, including sending an image of the evidence drive across the network, moving an evidence drive to a forensics workstation, and installing a forensics drive into the evidence machine. Each is effective and useful in different situations. The incident response staff should consult with a qualified, experienced expert before undertaking any disk duplication forensics activity. Regardless of

the duplication strategy chosen, the main ideas to keep in mind are the following:

- ❏ Do not boot the system if the systems is turned off disk you are trying to duplicate for evidence.
- ❏ Keep accurate records of what steps are taken, including serial numbers of drives and image hashes.
- ❏ Create a hash of the system.

In the event that evidence must be replicated and delivered to an external party such as an attorney, it is important that the integrity of the copy/deliverable be verified. Cryptographic hashes must be verified for any electronic copies that are created.

3.4.10 Responding to Common Incidents

3.4.10.1 Responding to Inappropriate use

Inappropriate use typically involves a trusted user who is involved in an activity not permitted by security, code of conduct, or inappropriate use policies. (See Annex A for template Employee Code of Conduct that includes an Inappropriate Use policy)

If an employee is suspected of violating the Acceptable Use Policy, collect evidence about the action. All investigations of this nature must be initiated and supervised by the IT Director or designee. Evidence can include log files, email messages, network traffic, or any other information that implicates the individual.

Before choosing this strategy, have a high degree of confidence that the inappropriate use was not due to a computer intrusion. If it is suspected to be computer intrusion, the incident response staff may create a full forensic duplicate of the evidence machine as described previously.

Inappropriate use can usually be associated with a specific application or file type. Typically, it is related to image files, copyrighted music or applications, Web browsing, or email. By identifying the application or file type associated with the incident, it is possible to gather only relevant information, making for a faster, simpler investigation.

Files should be collected in a similar manner to the disk images discussed above. Either the files should be sent across the network to a secure location, or they should be locally copied to a portable disk (USB hard drive or zip drive). Ideally, all evidence files should be burned to a CD as soon as possible. Practice good evidence handling and documentation so this data can be used to support HR disciplinary action. It is particularly important to make and record hashes of all evidence as it is collected.

3.4.10.2 Responding to Denial-of-Service Attack

A denial-of-service (DoS) attack involves an attacker using many Internet computers to send gigantic amounts of information toward a single target computer. That computer is overwhelmed with traffic and even the fastest servers are unable to handle the load.

DoS attacks are directed intentionally to one computer network at a time. This indicates that one or more individuals are spending effort to harm the system. DoS attacks can be mitigated through a few key strategies:

- ❏ Verify the type of Denial-of-Service attack
  - ❏ Volume Base Attacks
  - ❏ Protocol Attacks
  - ❏ Application Layer Attacks
- ❏ Depending type of attack, tracing back to origin can assist in determining optimal filtering locations
- ❏ Enable backup links
- ❏ Changing of IP addressing
- ❏ Reconfigure the firewall to help manage the attack
- ❏ Reconfigure upstream routers to block or divert the attack
- ❏ Talk to upstream providers, such as your hosting provider or ISP

At least two of the three strategies must be employed to handle a serious DoS attack. The last one requires the cooperation of the Internet Service Provider. Internet Service Provider 24/7 contacts are essential.

ISP's or Upstream providers may assist in tracing the attack back to the origin, this would allow notifying the owners of compromised systems.

3.4.10.3 Responding to Misappropriation of Data

The misappropriation of data typically involves sensitive information that is, whether accidental or not, sent from a secure location to a non-secure destination or unauthorized party. This type of incident can also cover any inadvertent access or data loss via unplanned means. Any such event is typically difficult to detect and will likely be reported by an internal individual.

When discovered, investigators should immediately document the exact situation, including what information was leaked, to whom it was sent, whether it is still available, what process led to the

breakdown, and what customers may be affected. Multiple parties will need this data to resolve the situation, including:

- ❏ Legal – to assess contract requirements in regards to leaked customer information.
- ❏ System Administrator – to process changes.
- ❏ IT Director – for notifications.

3.4.10.4 Responding to Theft of Information

Theft of information always results from some other security failure. The failure could be technical, such as an attacker breaking into an unpatched or misconfigured server, or it could be human, such as a disloyal employee that posts payroll information to a public mailing list. Ideally, theft of information can be detected when it occurs. Systems administrators may notice irregular use of a server or network, or an IDS may detect a violation of use policy. However, theft of information is often detected when it is discovered that a third party has the information against policy. In the worst case, confidential information may appear on the Internet somewhere. Should this happen, incident response staff need to review logs and systems to try and identify how the information was taken. This process can require significant effort, so it should be balanced with the sensitivity of the stolen data.

It is very important to collect evidence in the most responsible and well-documented manner possible. Where possible, forensic evidence collection practices, described later in this document, should be used to gather evidence.

3.4.10.5 Responding to Computer Intrusion

A computer intrusion could lead to interruption of services, corruption of data, or even theft of information. Handling a computer intrusion is done in three steps: identification and vulnerabilities, neutralizing the threat, and restoring service.

3.4.10.5.1 Identifying and Securing the Vulnerability

Identifying the risk and the extent of the intrusion. This can be accomplished in several ways, including:

- Determine the type of threat
- Understanding the behavior or characteristics of the threat
- Evaluate the spread of the intrusion and any critical areas
- Identify which users and accounts have been compromised

Review sources that could provide further indicators

- IDS/IPS - Both Network and Host
- SIEM's
- Antivirus and Antispam
- Operating system logs
- Network device logs - Firewalls and Routers
- Information on possibly new vulnerabilities

On Internet-facing production systems, check the vendors' websites daily. Some vendors (Microsoft) have been known to release bug fixes at least once a week. Check with all IT vendors, including those for each application, operating system, and network device.

3.4.10.5.2 Using Passive Network Monitoring

Once an incident is understood, network monitoring can provide valuable insight regarding incident spread and recurrence. Using a dedicated Unix or Windows machine, incident response staff can "sniff" local area network traffic between specified servers and network devices. Standard tools on either platform can be easily configured to monitor and (optionally) record traffic associated with almost every known cross-network attack. Tools are constantly changing and updating to perform these functions.

Network Intrusion Detection Systems (NIDS) are intended to catch as many security attacks as possible when they happen. Network monitoring can also be used to focus on a very specific attack vector; on a specific server or network. This type of monitoring is very common in many environments and systems.

Passive network monitoring may require a significant amount of personnel time or third-party vendor through contracting. Estimates of time are based on current activity and hours of active monitoring in a 24-hour period. This may need to change daily based on continuously changing circumstances. A third-party contract should allow for this type of fluctuation.

3.4.10.5.3 Neutralizing / Eradication of the Treat

Create a strategy to eliminate or reduce propagating threats, security team members must be sure the compromise is limited and isolated. This could include creating a quarantine network that would allow the security team to better understand the threat. After an incident has been contained, eradication may be necessary to eliminate components of the incident, such as deleting malware and disabling breached user accounts, as well as identifying and mitigating all vulnerabilities that were exploited. During eradication, it is important to identify all affected hosts within the organization so that they can be remediated. For some incidents, eradication is either not necessary or is performed during recovery.

Situations that pose a great risk may warrant unplugging machines from the network, or even the wall. Before removing a machine from the network, record as much information as possible, including users logged on, network connections, running processes and live memory captures. This information will be lost when the machine is isolated. It is highly advisable to create a forensic duplication of the compromised systems as early in the incident handling process as possible.

3.4.10.5.4 Restoring Services

In recovery, administrators restore systems to normal operation, confirm that the systems are functioning normally, and (if applicable) remediate vulnerabilities to prevent similar incidents. Recovery may involve such actions as restoring systems from clean backups, rebuilding systems from scratch, replacing compromised files with clean versions, installing patches, changing passwords, and tightening network perimeter security (e.g., firewall rulesets, boundary router access control lists). Higher levels of system logging or network monitoring are often part of the recovery process. Once a resource is successfully attacked, it is often attacked again, or other resources within the organization are attacked in a similar manner.

Restoring service depends on having reliable, up-to-date tape backups of important systems and data. These tape backups allow for recovery of a system to

a variety of points in time. This is important because it is common for a few nights of backups to take place before a security incident is even discovered. Additionally, these backups provide a baseline for comparison. Without them, it is impossible to discover what files, permissions, and settings might have been changed by an attacker.

As mentioned in the previous section, it is very important that systems be restored from known-secure versions, as opposed to being fixed and reconnected to the Internet directly. Data files, application settings, and even the system itself may have been replaced with malicious software.

The technical steps for actually restoring a machine are identical to those that would be used in any other disaster recovery system. In the unfortunate situation that full backups of a system are not available, the original operating system media should be used to get the system back to a functional state. After the operating system is installed, the appropriate installation and configuration checklists should be followed to be sure the new system is secure.

Preparation is the key to successful service restoration after an incident. Having full, current system backups is the best way to be prepared. System restoration should be practiced regularly. The IT Department should be trained on restoring a production server.

3.4.10.5.5 Data Backups

Performing data backups is a strategy that is common to almost every serious security situation. Restoring systems from clean back-ups is essential to recovery. Back-ups should be redundant, secure and tested on a routine basis.
Regular backups should be in place on all servers. The IT staff must evaluate the time of the last data backup to determine if backed-up data is sufficiently recent. If the most recent backup was prior to the incident, then every effort should be made to backup critical data from the compromised system before moving forward with incident handling.

3.4.10.6 Responding to Malicious Software/Viruses

Although several tools are in use to help protect against computer viruses and worms, there is no perfect protection. New viruses are coming out hourly and virus protection software is updated daily at best.

The first action when dealing with malicious software should be to stop the spread of the software. This usually requires some knowledge of the vectors the virus or worm is using to distribute itself to new targets. Serious outbreaks may require isolating infected machines from the network or disabling organization infrastructure such as email or Web services. Some viruses can cause damage on machines that are shut down or rebooted, so the outbreak should be identified before machines are turned off. There are exceptions to this rule in extreme circumstances, such as when network isolation is not possible and confidential or otherwise mission-critical information is at risk.

In cases where staff have a good understanding of the malicious software, options for mitigation include installing patches from Microsoft (or another vendor), reconfiguring email servers, and modifying firewall configurations. Each of these depends on the specific actions and characteristics of the malicious software, so it must be identified before they can be used effectively. Virus protection definitions should be forcibly updated on computers once the vendor announces support for the virus or worm in question. Be warned that some malicious software actually opens holes on a computer through which attackers from the Internet gain access. An infected machine should not be allowed to stay on the network.

3.4.10.7 Responding to Physical Intrusions

For any physical intrusion emergencies that happen on jurisdictional premises, dial 911.

Electronic incident response staff need to be involved in the investigation of any physical intrusion that leads to a computer intrusion security incident. It is especially important that electronic incident response staff investigate areas of physical intrusion for laptops, workstations, or servers that may have been accessed. Specifically, the incident response staff should:

- ❏ Check to ensure the machine is running an OS that requires a login and password.
- ❏ Check to ensure the machine has a screensaver password, and record the timeout.
- ❏ Quickly review the machine for any signs of physical tampering.

- ❏ Quickly compare the machine's hardware to known inventory (if possible).
- ❏ Quickly review the machine's logs for any signs of unauthorized electronic use.

Electronic incident response staff should also be involved in any investigations involving the theft of an entire system. Losing an entire system could be disruptive to the regular flow of business. To determine the effect that any theft would have, incident response staff should:

- ❏ Check records to get specific system information such as model and serial number. Report this information to the police as soon as possible.
- ❏ Check with regular users of the system to verify what it was used for and determine how critical the information is.

3.4.11 Formal Incident Reporting

When incidents do occur, they will be reported to affected parties as appropriate and based upon regulatory agency requirements. The jurisdiction's elected officials/leadership hold responsibility for controlling when and how incidents are reported. The IT Director and public information officer will develop the release jointly. The public information officer for the jurisdiction or designee should be the single point of contact for media inquiries. Each agency should develop a standard briefing format for cyber incidents and disruptions, compatible with the Regional Cybersecurity Response Plan. Authorities need to anticipate dissemination of false news and propaganda intended to aggravate the negative consequences of compromise or attack. Pre-planned messages, effective, established relationships with the media and the ability to use social media are likely required for effective response and recovery. Citizens should know ahead of time how to receive authoritative information in a compromise situation.

3.4.11.1 Reporting Incidents to Employees

If there is any doubt that someone needs to know specific information about an incident, speak to the IT Director before sharing such information. Outside of those who need to know to handle an incident in the short-term, however, the IT Director, with approval from the jurisdiction's administration, is responsible for deciding when and how to communicate the incident to employees. Employees should be given the name(s) of the public information officer or designee in case of media requests. Employees should be reminded to not speak directly to the media.

3.4.11.2 Reporting Incidents to other jurisdictions

3.4.11.2.1 PII

If Personally Identifiable Information or PII information is compromised, the following should occur:

- Work with your jurisdictions attorney to determine if the incident counts according to Colorado Revised Statute (CRS) as a "data breach" do not use the term unless it has been confirmed.
- Contact your local law enforcement agency to open a criminal complaint.
- Work with your cyber security insurance provider as needed for incident handling, reporting, remedy, and other costs.
- Report to the Colorado Attorney General as required by law.
- The jurisdiction is also responsible for contacting the individual or individuals who have had their personable Identifiable Information compromised and alert them of the "breach".

3.4.11.2.2 HIPAA

For breaches, involving information under the Health Insurance Portability Act of 1996 agencies must report to the State Attorney General per House Bill 1128. Jurisdictions should follow the procedures listed below:

Perform probability of Compromise to determine incident vs. breach

1) The nature and extent of the protected health information involved, including the types of identifiers and likelihood of re-identification;
2) The unauthorized person who used the protected health information or to whom the disclosure was made;
3) Whether the protected health information was actually acquired or viewed; and
4) The extent to which the risk to the protected health information has been mitigated.

If an Incident:

1) Perform security and privacy data protection incident investigation and remediate

If a breach of less than 500 people

1) Mitigate breach and provide credit monitoring to impacted individuals.
2) Staff with legal and risk if applicable
3) Complete OCR breach notification report and to Colorado Attorney General
4) Take action on safeguards applied to minimize risk and adjust training and awareness program as applicable.

If breach of 500 or more people.

1) Perform security and privacy/data protection investigation and remediation
2) Consult with public information for public notice
3) Staff with legal and risk management
4) Procure credit monitoring for impacted individuals
5) Provide notice to impacted individuals
6) Provide media release and post on agency website
7) Provide toll free assistance to impacted individuals
8) Report to OCR and Colorado State Attorney General
9) Document root cause and add safeguards and mitigation to annual HIPAA training and awareness program.

3.4.11.2.3 PCI

If Payment Card Industry information is compromised, the following should occur:

- Notify the State of Colorado ISOC.
- Contact Merchant Services for your financial Institution. Execute your communication plan with the finance department to assign single point of contact between payment brands, acquirers, banks and the jurisdiction. This should cut down on confusion, mixed messages and other serious damages to the jurisdiction.
- Contact your local law enforcement agency to open a criminal complaint
- Work with your cyber security insurance provider as needed for incident handling, reporting, remedy, and other costs.
- Reference Brand Procedures References – VISA, MasterCard, American Express and other brands.

- **American Express**

Merchants must notify American Express immediately and in no case later than twenty-four (24) hours after discovery of a Data Breach Incident. "Data Incident" means an incident involving at least one Card account number in which there is: unauthorized access or use of Card member Information that is stored, processed or transmitted on a merchant's equipment, systems, and/or networks (or the components thereof); use of such Card member Information other than in accordance with the Agreement; and/or suspected or confirmed loss, theft, or misappropriation by any means of any media, materials, records or information containing such Card member Information. (Reference "American Express Data Security Operating Policy for U.S. Merchants")

- **VISA**

Preserve Evidence

1) Immediately contain and limit the exposure. Minimize data loss. Prevent the further loss of data by conducting a thorough investigation of the suspected or confirmed compromise of information.
2) To identify the root cause and facilitate investigations, it is important to ensure the integrity of the system components and environment by preserving all evidence.
3) Do not access or alter compromised system(s) (e.g., do not log in with administrative credentials). Visa strongly recommends that the compromised system(s) be taken offline immediately and not be used to process payments or interface with payment processing systems. Do not turn the compromised system(s) off. Instead, isolate the compromised system(s) from the network (i.e., unplug the network cable).
4) Do not turn off, restart, or reboot the compromised system(s). Instead, isolate the compromised system(s) from the rest of the network by unplugging the network cable(s) or through other means.
5) Identify and document all suspected compromised components (e.g. PCs, servers, terminals, logs, security events, databases, PED overlay's etc.).
6) Document containment and remediation actions taken, including dates/times (preferably in UTC), individuals involved, and detailed actions performed.
7) Preserve all evidence and logs (e.g. original evidence such as forensic image of system and malware, security events, web logs, database logs, firewall logs, etc.).

Provide Visa Initial Investigation Report

1) Within three (3) business days of the reported compromise, provide an Incident Report to the Visa client or to Visa. (Reference page 4 of the Visa documentation referenced above)

Provide all Exposed Accounts

1) All compromised Visa accounts (known or suspected) must be uploaded to Visa's Compromised Account Management System (CAMS) within five (5) business days from the first to occur of the following events:
    a. The date Visa requests account numbers
    b. A Window of Exposure (WOE) is determined, or
    c. Discovery of compromised account data is identified
2) Entities should work with their acquiring bank to upload accounts
3) For more information or assistance, contact Visa at: CAMS@Visa.com

Contact Proper Authorities concerning the breach including CBI.
Perform security incident investigation and remediation in coordination with the proper authorities.
Follow proper notification process.

3.4.11.2.4 Election

Incidents involving election hacking or compromise jurisdictions should do the following:

- Contact the Secretary of State (SOS) to report Election compromise as required by law. The SOS office will follow their process of notifications which include notifying the U.S. Department of Homeland Security and the FBI.
- Contact the EI-ISAC to report Election compromise.
- Contact your local law enforcement agency to open a criminal complaint.
- Report the incident as a critical reporting element to the Colorado Information Analysis Center (CIAC).

3.4.12 CORA Requests

Colorado statutes (C.R.S. § 24-72-200.1, et seq) set forth the rights and requirements of the Colorado Open Records Act (CORA). Generally, the public has the right to access the public documents of a governmental entity. The IT Department, after consulting with the organization's official record keeper and legal counsel, must process CORA requests in a way that proves the information provided is complete and has not been altered. CORA requests will be processed using similar techniques to E Discovery requests in order to show that processing is complete and does not modify, create, or delete information.

CORA requests will only be processed by the IT Department upon approval

of the IT Director, the organization's official record keeper, and legal counsel. The IT Director or designee will work with legal counsel and data custodians to determine the scope of request processing. The results will be provided to legal counsel for further review to ensure that no confidential information is released.

3.4.13 Litigation Holds and E-Discovery

Electronic discovery is the electronic aspect of identifying, collecting, and producing electronically stored information (ESI) in response to a request for production in a lawsuit or investigation. ESI includes, but is not limited to, emails, documents, presentations, databases, voicemail, audio and video files, social media, and websites.

Electronic information relevant to upcoming litigations must be preserved and retained when there is reason to anticipate litigation or when a formal discovery or hold notice has been presented to legal counsel. Information relating to the request must be retained until there is no longer an anticipation of litigation or the formal litigation hold has been lifted.

The IT Director or designee will work with legal counsel and/or Risk Management to determine the scope of litigation holds focusing on: the claim, who was involved, the time period, and possible systems storing information relating to the claim. It is the responsibility of the records manager to document the technical processes used to gather and preserve information relating to the claim.

Electronic documents are more dynamic and often contain metadata such as time-date stamps, author and recipient information, and file properties. Preserving the original content and metadata for electronically stored information is required in order to eliminate claims of spoliation or tampering with evidence later in the litigation. Burn two copies of the data to DVD or CD's and label them with a numerical value. One copy of the data is saved by the records manager and the other is sent to the requesting party.

3.4.14 Root Cause Analysis

Depending on the length of the incident, all affected parties will meet after to review the results of the investigation to determine the root cause of the compromise and evaluate the effectiveness of the incident response plan.

- ❏ Any identified areas in which the plan, policy, or security control can be made more effective or efficient, must be updated accordingly.
- ❏ The incident handler in charge of overseeing the incident response must prepare an after action report, which should include the following:
    - o List of staff involved

- Date and Time of the event
- Time to Detect and Time to Mitigation
- Findings of the meeting between all affected parties;
- Description of any risks such as:
  - Vulnerabilities
  - Attack vectors
  - Compromised System(s)
- Identification of which mitigating factors had been used
- Quantitative results including source of statistics
- All findings and recommendations for further action, if applicable.

❑ The IT Director must review the information, approve it and add it to the after action report.

3.4.15 Follow-Up and After Action Reporting

Each incident should have a follow-up. This meeting will ensure that:

1. The incident was handled per process, in a professional and standardized manner
2. The outcome of the incident was appropriate to the issue
3. All documentation, policies, and processes are accurate and appropriate. If not, then changes should be proposed and implemented per the change management process

Information from these meetings should be documented in a central location. Changes to technical configurations, practice and procedure and policy should all be well-documented. A quality record of changes can act as an invaluable reference when evaluating the success of a security strategy. Any approved changes in incident handling practices should be recorded in this document. Keeping this document up-to-date with current incident handling practices will help ensure that evidence is protected and incidents are handled as efficiently as possible.

3.4.16 Prevention

3.4.16.1 Education

3.4.16.1.1 Citizen Education

Citizens within the SECAHR should protect their cyber devices by following cybersecurity best practices and being proactive in preventing a cyber-event. The best way the citizen can be proactive is to educate themselves. There are several free online courses to

help the average citizen become more cyber secure and operate safely.

The Federal Virtual Training Environment (FedVTE) provides the following courses free of charge and without login requirements.

- 101 Coding for the Public
- 101 Critical Infrastructure Protection for the Public
- Cryptocurrency for Law Enforcement for the Public
- Cyber Supply Chain Risk Management for the Public
- 101 Reverse Engineering for the Public
- Fundamentals of Cyber Risk Management
- Don't Wake Up to a Ransomware Attack – 1 Hour

The citizen can access these courses by going to the FedVTE website: https://fedvte.usalearning.gov/public_fedvte.php

Texas A&M Engineering Extension Service (TEEX) offers the following courses online and free of Charge but you must create an account.

- AWR168 – Cyber Law and White Collar Crime
- AWR174 – Cyber Ethics
- AWR175 – Information Security for Everyone

3.4.16.1.2 Employee Education

In 2020, the SECAHR board members voted and agreed to move Cybersecurity to a priority for the State Homeland Security Grant Program (SHSGP) and to create region wide cyber-education for all government employees. This class would be available to any and all employees of a County, Municipality, or Special District within the region. As a rural region, many agencies do not have access to courses in cybersecurity and this will give a baseline of cybersecurity education throughout the region. Agencies are encouraged to utilize or purchase their own courses for employees for a more knowledge as the regional courses are an awareness level course.

Additionally, Texas A&M Engineering Extension Service (TEEX) offers the following courses online and free of Charge but you must create an account. These trainings are more in depth and are around ten (10) hours in length and are targeted for IT professionals within your organizations.

- AWR138 - Network Assurance
- AWR139 - Digital Forensics Basics
- AWR173 - Information Security Basics
- AWR178 - Secure Software

Likewise, FedVTE has additional courses for government IT employees. You must be a government worker or a veteran to access the training. The courses available are:

- Advanced PCAP Analysis and Signature Development (APA)
- Analysis Pipeline
- Certified Ethical Hacker Version 10 (CEHv10) Prep
- CDM Module 1: Overview
- CDM Module 2: Hardware Asset
- CDM Module 3: Software Asset Management
- CDM Module 4: Configuration Settings Management
- CDM Module 5: Vulnerability Management
- CDM Dashboard Course
- CMaaS Transition Classroom Sessions
- CompTIA Cybersecurity Analyst (CySA+) Prep
- CompTIA Security+ (SY0-501 Certification Prep
- Cyber Dark Arts
- Cyber Security Investigations
- Cyber Supply Chain Risk Management
- Demilitarized Zone (DMZ) with IDS/IPS
- Don't Wake up to a Ransomware Attack
- Elections and IT – Embrace your role as a Manager
- The Election Official as IT Manager
- Emerging Cyber Security Threats
- Foundations of Incident Management
- Fundamentals of Cyber Risk Management
- Introduction to Threat Hunting Teams
- Introduction to Investigation of Digital Assets
- Introduction of Windows Scripting
- IPv6 Security Essentials Course
- ISACA Certified Information Security Manager (CISM) Prep
- (ISC)2 (TM) CAP Certification Prep Self Study 2014
- (ISC)2 (TM) CISSP (R) Certification Prep 2018
- (ISC)2 (TM) CISSP Concentration: ISSEP Prep
- (ISC)2 (TM) CISSP: ISSMP Prep 2018
- (ISC)2 (TM) Systems Security Certified Practitioner
- LAN Security Using Switch Features
- Linux Operating System Security
- Mobile and Device Security (2015)
- Mobile Forensics
- Network Layer 1 & 2 Troubleshooting
- Offensive and Defensive Network Operation
- Root Cause Analysis
- Radio Frequency Identification (RFID) Security

- Securing Infrastructure Devices
- Securing the Network Perimeter
- Security and DNS
- SiLK Traffic Analysis
- Software Assurance Executive Course (SAE)
- Static Code Analysis using HPE Fortify
- Static Code Analysis using Synopsis Coverity
- Supply Chain Assurance using Sonatype Nexus
- Windows Operating System Security
- Wireless Network Security

3.4.16.1.3 Business Education

The SECAHR relies on many forms of businesses to be secure to provide services to the governments of the region as well as the citizens. The SECAHR has a benefit to businesses following cybersecurity best practices. Businesses and operators of computer and other electronic equipment are encouraged to take a minimum the following courses in addition to the citizen education courses listed above. These courses are established by TEEX online.

- AWR169 – Cyber Incident Analysis and Response
- AWR176 – Disaster Recovery for Information Systems
- AWR177 – Information Risk Management

In addition, DHS CISA ICS (Industrial Control Systems) CERT offers a free ICS training program available to businesses. https://us-cert.cisa.gov/ics/Training-Available-Through-ICS-CERT

3.4.16.2 Law Enforcement Education & Cybersecurity

Law Enforcement and prosecutor education is also available and should be sought to increase knowledge of cybercrimes. Some courses available from FedVTE are:

- Mobile and Device Security (2015)
- Mobile Forensics
- Cyber Security Investigations
- Emerging Cyber Security Threats
- Foundations of Incident Management

Additionally, local law enforcement may reach out to the Colorado Information Analysis Center (CIAC) for cybersecurity support.

3.4.16.3 Action Steps

3.4.16.3.1 Businesses

The Southeast Regions Business community can take several specific steps to improve cybersecurity:
Public Utility Providers can continue to their leadership in collaboration with the Colorado Public Utilities Commission (PUC) and state officials to conduct confidential, rigorous annual assessments of their cybersecurity programs.
Businesses can support trade associations and the business community by discussion of what works for them: they can tighten their work with their extensive supply chain to verify more completely the full manufacturing process.
Insurance companies can share best practices and threat assessments with each other and make progress in become more valuable business partners with their insured to defend against cyber threats.
Financial services companies can work with their customers to improve customer defense. There is scope to improve protection of information systems in collaboration with third-party service providers. The areas of personnel training, operations monitoring, testing, management of incident response and reporting of an agreed level of cyber-attack are always open to improvement. The Federal Financial Institutions Examination Council (FFIEC) working with other regulators including state banking regulators have developed a method for banks and credit unions to use in assessing cyber risk. The business community may develop and effect such mythologies on its own with trade association guidance.
The state-level, regional and local trade associations and chambers of commerce have considerable scope to enter the cybersecurity field constructively and contribute to progress in the Region. They need to make cybersecurity a visible, active priority and explore provision of shared services. They need to demonstrate energy, plans and engagement. There is extensive room for offerings: a basic cybersecurity “kit” for small businesses, descriptions of core components of a cybersecurity team, communications of technical support and education resources available, crisis training, financial systems monitoring and operations oversight. Small- and medium-sized businesses need to be cyber secure in order to win business from larger companies that will select the more cyber-advanced competitor.

Effective cybersecurity can give businesses in the SECAHR a competitive edge. Businesses should develop their own, voluntary cyber security defense system, applying the seven principles and any other measures that will strengthen deterrence effectively.

3.4.16.3.2 Education

Despite efforts to improve cybersecurity, education institutions agree that aggressive steps are necessary to strengthen cybersecurity defense on campus and in classrooms.
Each institution should create its own cybersecurity awareness, prevention, defense and recovery programs, crafted to protect valuable personal information and verify the extent to which its programs succeed. Regional and state organizations will provide assistance as available such as BOCES and the Colorado Community College System. Outside third party vendors maybe needed to inspect and test cybersecurity system programs. Education institutions can increase and enrich the region's cybersecurity talent through certification, initial education and continuing education courses.

3.4.16.3.3 Law Enforcement

Supplementing municipal and federal intelligence, a key starting point for the SECAHR is focus on the kinds of information the CIAC needs and from what sources in order to make cybersecurity a more integral part of law enforcement's ability to protect Colorado and the Southeast Region. CIAC will need to affirm with its law enforcement partners the information it needs to receive and concurrently communicate what intelligence it intends to provide. A basic question is what staffing levels of top-secret and secret cleared professionals are required to manage the full flow of projected cybersecurity intelligence with effective screening, analysis and referral of actionable intelligence. The intelligence function needs an explicit plan to address mission, leadership and sources of support. Additional CIAC personnel could come from current or additional resources within the State Patrol, on loan from federal agencies such as the FBI or the Department of Homeland Security or from local law enforcement agencies. The plan should include guidance as to what structural and procedural changes are required to enable such a unit to operate effectively. The structure to strengthen Colorado's ability to receive, analyze and refer for action cybersecurity intelligence is in place. Growth and enhancement can focus on these areas:

- More extensive monthly cyber products from the CIAC;
- Robust and effective communications flow to and from local, state and federal law enforcement partners, including prosecutorial arms such as the United States Attorney for Colorado and Colorado Attorney General's Office; and

- Continued collaboration with the FBI, including contributions to the FBI Unified Crime Report.

4 Training, Exercise, and Plan Maintenance

Training on this plan will be completed annually for any IT personnel within the region. Additionally, cybersecurity training is being put together within the region for all government employees. This training is being paid for by the emergency managers through the Southeast Regional All-Hazard Homeland Security Grant Program. This training should be updated annually and offered to every county, municipal and special district employee within the region.

The SECAHR has prioritized, in the 2021 State Homeland Security Grant Program (SHSGP) cybersecurity planning, training and exercises. A cybersecurity exercise should be conducted within the region annually.

Coordinated Plan maintenance will be critical to the success of the Regional Cybersecurity Plan. This will include monitoring, evaluation, and updates to the plan as well as support to local plan maintenance.

The Regional Field Manager with assistance from each County Emergency Management Agency will lead plan monitoring. At a minimum, the plan is reviewed every two years, and after each cyber event. Monitoring for changes in best practices, local and regional capabilities, and regional priorities will occur on an annual basis.

Evaluation of the plan will be made during and after an event or exercises using the after action report.

Plan updating will be led by the Regional Field Manager and will be based on revisions identified through monitoring and evaluation. The framework will be updated as needed given the proposed monitoring schedule and evaluation. Updates can also be based on:

- The request of an elected official;
- When significant new risks or vulnerabilities are identified to appropriately plan for these risks;
- After events such as significant security incidents and changes to organizational or technical infrastructure.

Anytime the plan is updated, the plan will be re-distributed to plan holders and placed on the Regional website at www.secahr.com.

For modifications, changes and updates please contact:

Riley Frazee, CO-CEM, MEP, NREMT, TLO
DHSEM Regional Field Manager
310 E. Washington Street

Lamar, CO 81052
719-510-2388
riley.frazee@state.co.us

APPENDIX ONE: Documenting the Incident Form

Priorities:

-Collect and preserve initial information.

- Complete the form on this page quickly and accurately.
- Inform the IT Director or designee when this form is completed.

-Avoid alerting possible attacker(s).

- Gather only as much information as is necessary to confirm the incident is real.
- Inform individuals of the incident only as necessary to confirm it.

***The Incident Commander in conjunction with law enforcement should determine who will review, control and determine interim and final disposition of incident documentation and evidence.

Your Name:
Your Contact Information:
Current Date and Time:
Source of Time Reference:
How did you become aware of this incident?
What do you know about the incident? (Users, systems, software, hardware involved? Time events occurred?)
What actions have been taken to this point? (Who performed these actions and when?)
Who is aware of this incident? (Name, department/organization, notes)

APPENDIX TWO: Investigating and Confirming the Security Incident Form

System Administrator responding to the incident.
Priorities:
-Avoid alerting possible attacker(s).

- ❑ Gather only as much information as is necessary to confirm the incident is real.
- ❑ Inform individuals of the incident only as necessary to confirm it.

-Ensure the right parties are notified based upon the notification section of this plan.
-Preserve evidence and chain-of-custody.
-Record every change you make to applications, systems, or the network.
-Move to the next section as soon as you've confirmed the incident is real.

Your Initials:	Current Date and Time:
Source of Time Reference:	
What steps were taken/data was collected to confirm the incident?	
If you could determine, what led you to believe this is or is not a security incident?	
What actions have been taken to this point? (Who performed these actions and when?)	

APPENDIX THREE: Determining and Executing the IRP Form

Priorities:

- ❑ Assemble personnel designated with a role in this incident response. This team may include (as positions exist):
    - ❑ IT Director
    - ❑ Chief Information Security Officer
    - ❑ One or more network planners
    - ❑ Server administrator of each affected server
    - ❑ Application administrator/software developer/PC specialist/DBA as necessary
    - ❑ Human resources as necessary
    - ❑ Third-party resources as necessary
    - ❑ EOC Liaison (if EOC is activated)
    - ❑ Other Leadership and/or Other Department Directors (as needed)
- ❑ Determine IC and other needed positions in the Incident Command Structure (SEE APPENDIX 4)
- ❑ Quickly analyze the incident and determine risk.
- ❑ Determine and execute response strategy.
- ❑ Document every change you make as part of the response.
- ❑ Manage all evidence and its chain of custody.

Your Initials:	Current Date and Time:
Source of Time Reference:	
What risk does this incident pose to the jurisdiction? (SEE PAGE 12)	
What vulnerability caused the initial exposure and how should it be secured? (SEE APPENDIX 5)	
How and when should service be interrupted and restored? (SEE PAGES 14-17)	
Should evidence be gathered to attempt to pursue the attacker or further analyze the incident?	

What entities should be notified, when, and by whom? (SEE PAGES 8 and 11)
Record all changes made during this phase of incident handling: (SEE PAGE 10)

APPENDIX FOUR: Incident Commander Guide

Answer the following questions (repeat this checklist as the situation evolves). If the answer is **NO** to any of the checklist questions, you should take the appropriate corrective action(s) **IMMEDIATELY**.

Yes	No	Question
		Does everyone (Resources, EOC, Leadership, and Elected Officials) know who the Incident Commander is?
		Have you sized up the situation and established Incident Objectives?
		Have you activated the Incident Response Plan?
		Do you know the impacts to public safety or other critical infrastructure (utilities)?
		Have you developed a plan that prioritizes incident response and/or recovery tasks? And have you communicated this plan to all personnel assigned to the incident including new arrivals?
		Can you respond and/or recover with the resources available (onsite and en route) under the expected conditions?
		Do you have a sufficient command organization in place?
		Do you have a complete list of onsite and incoming resources?
		Are Standard Operating Procedures being followed?
		Are personnel gathering information to understand the extent of the incident?
		Can you communicate with everyone working on the incident response, supporting with resource orders, and making-decisions?
		If the incident will not be controlled before the next operational period, have you informed the senior leadership?
		Does the scope and complexity remain within your capabilities and qualifications to manage the incident?

APPENDIX FIVE: Incident Discovery Guide

Malicious Actions	Possible Indications of an Incident
Denial of Service (DoS) Examples	**You might be experiencing a DoS if you see…**
Network- based DoS against a particular host	• User reports of system unavailability • Unexplained connection losses • Network intrusion detection alerts • Host intrusion detection alerts (until the host is overwhelmed) • Increased network bandwidth utilization • Large number of connections to a single host • Asymmetric network traffic pattern (large amount of traffic going to the host, little traffic coming from the host) • Firewall and router log entries • Packets with unusual source addresses
Network- based DoS against a network	• User reports of system and network unavailability • Unexplained connection losses • Network intrusion detection alerts • Increased network bandwidth utilization • Asymmetric network traffic pattern (large amount of traffic entering the network, little traffic leaving the network) • Firewall and router log entries • Packets with unusual source addresses • Packets with nonexistent destination addresses
DoS against the operating system of a particular host	• User reports of system and application unavailability • Network and host intrusion detection alerts • Operating system log entries • Packets with unusual source addresses
DoS against an application on a particular host	• User reports of application unavailability • Network and host intrusion detection alerts • Application log entries • Packets with unusual source addresses

Malicious Software (malware) Examples	You might be infected with malware if you see…
A virus that spreads through email infects a host.	• Antivirus software alerts of infected files • Sudden increase in the number of emails being sent and received • Changes to templates for word processing documents, spreadsheets, etc. • Deleted, corrupted, or inaccessible files • Unusual items on the screen, such as odd messages and graphics • Programs start slowly, run slowly, or do not run at all • System instability and crashes
A worm that spreads through a vulnerable service infects a host.	• Antivirus software alerts of infected files • Port scans and failed connection attempts targeted at the vulnerable service (e.g., open Windows shares, HTTP) • Increased network usage • Programs start slowly, run slowly, or do not run at all • System instability and crashes
A Trojan horse is installed and running on a host.	• Antivirus software alerts of Trojan horse versions of files • Network intrusion detection alerts of Trojan horse client-server communications • Firewall and router log entries for Trojan horse client-server communications • Network connections between the host and unknown remote systems • Unusual and unexpected ports open • Unknown processes running • High amounts of network traffic generated by the host, particularly if directed at external host(s) • Programs start slowly, run slowly, or do not run at all • System instability and crashes
Malicious mobile code on a Web site is used to infect a host with a virus, worm, or Trojan horse.	• Indications listed above for the pertinent type of malicious code • Unexpected dialog boxes, requesting permission to do something • Unusual graphics, such as overlapping or overlaid message boxes
Malicious mobile code on a Web site exploits vulnerabilities on a host.	• Unexpected dialog boxes, requesting permission to do something • Unusual graphics, such as overlapping or overlaid message boxes • Sudden increase in the number of emails being sent and received • Network connections between the host and unknown remote systems

A user receives a virus hoax message.	• Original source of the message is not an authoritative computer security group, but a government agency or an important official person • No links to outside sources • Tone and terminology attempt to invoke panic or a sense of urgency • Urges recipients to delete certain files and forward the message to others

Unauthorized Access Examples	**You might be experiencing unauthorized access on your system or network if you see…**
Root compromise of a host	• Existence of unauthorized security-related tools or exploits • Unusual traffic to and from the host (e.g., attacker may use the host to attack other systems) • System configuration changes, including— - Process/service modifications or additions - Unexpected open ports - System status changes (restarts, shutdowns) - Changes to log and audit policies and data - Network interface card set to promiscuous mode (packet sniffing) - New administrative-level user account or group • Modifications of critical files, timestamps and privileges, including executable programs, OS kernels, system libraries, and configuration and data files • Unexplained account usage (e.g., idle account in use, account in use from multiple locations at once, unexpected commands from a particular user, large number of locked-out accounts) • Significant changes in expected resource usage (e.g., CPU, network activity, full logs, or file systems) • User reports of system unavailability • Network and host intrusion detection alerts • New files or directories with unusual names (e.g., binary characters, leading spaces, leading dots) • Highly unusual operating system and application log messages • Attacker contacts the organization to say that he or she has compromised a host
Unauthorized data modification (e.g. Web server defacement)	• Network and host intrusion detection alerts • Increased resource utilization • User reports of the data modification (e.g., defaced Website) • Modifications to critical files (e.g., Web pages) • New files or directories with unusual names (e.g., binary characters, leading spaces, leading dots) • Significant changes in expected resource usage (e.g., CPU, network activity, full logs or file systems)

Unauthorized usage of standard user account	• Access attempts to critical files (e.g., password files) • Unexplained account usage (e.g., idle account in use, account in use from multiple locations at once, commands that are unexpected from a particular user, large number of locked-out accounts) • Web proxy log entries showing the download of attacker tools
Physical intruder	• User reports of network or system unavailability • System status changes (restarts, shutdowns) • Hardware is completely or partially missing (i.e., a system was opened and a particular component removed) • Unauthorized new hardware (e.g., attacker connects a packet sniffing laptop to a network or a modem to a host)
Unauthorized data access (e.g., database of customer information, password files)	• Intrusion detection alerts of attempts to gain access to the data through FTP, HTTP, and other protocols • Host-recorded access attempts to critical files

Inappropriate Usage Examples	**You might have identified inappropriate usage if you see…**
Unauthorized service usage (e.g., Web server, file sharing, music sharing)	• Network intrusion detection and network behavior analysis software alerts • Unusual traffic to and from the host • New process/software installed and running on a host - Password cracking tools - Unauthorized website running - File transfer software - Peer-to-Peer (P2P) sharing software running • New files or directories with unusual names (e.g., “warez” server style names) • Increased resource utilization (e.g., CPU, file storage, network activity) • User reports • Application log entries (e.g., Web proxies, FTP servers, email servers)
Access to inappropriate materials (e.g., downloading pornography, sending spam)	• Network intrusion detection alerts • Eyewitness reports or complaints to management, HR, or ethics o Pornographic or explicit content displayed • Application log entries (e.g., Web proxies, FTP servers, email servers) • Inappropriate files on workstations, servers, or removable media
Attack against internal party	• Network intrusion detection alerts • Inside party reports (e.g. management, HR, or ethics) - Harassing email or text messages sent to internal users - Pornographic or explicit content sent to internal users • Network, host, and application log entries

Attack against external party	• Network intrusion detection alerts • Outside party reports - Harassing email or text messages sent to external users - Pornographic or explicit content sent to external users - External attack traffic traced back to the company • Network, host, and application log entries

APPENDIX SIX: Detection Methods

Type	Source	Description
Computer Security Software Alerts		
Technical	Network-based, host-based, and wireless IDS	Intrusion Detection System (IDS) or Intrusion Prevention System (IPS) products are designed to identify suspicious events and record pertinent data regarding them, including the date and time the attack was detected, the type of attack, the source and destination IP addresses, and the username (if applicable and known). Most IDPS products use a set of attack signatures to identify malicious activity; the signatures must be kept up to date so that the newest attacks can be detected. IDPS software often produces false positives—alerts that indicate malicious activity is occurring, when in fact there has been none. Analysts should manually validate IDPS alerts either by closely reviewing the recorded supporting data or by getting related data from other sources.
Technical	Antivirus, antispyware, and antispam software	Antivirus and antispyware software are designed to detect various forms of malicious code and prevent them from infecting hosts. When antivirus or antispyware software detects malicious code, it typically generates alerts. Current antivirus and antispyware products are effective at detecting and eradicating or isolating malicious code if their signatures are kept up to date.
Technical	File integrity checking software	Incidents may cause changes to important files; file integrity checking software can detect such changes. It works by using a hashing algorithm to obtain a cryptographic checksum for each designated file. If the file is altered and the checksum is recalculated, an extremely high probability exists that the new checksum will not match the old checksum. By regularly recalculating checksums and comparing them with previous values, changes to files can be detected.
Technical	3rd Party Monitoring service	Some organizations pay a third party to monitor their publicly accessible services, such as Web, Domain Name System (DNS) and FTP servers. The third party automatically attempts to access each service every few minutes. If the service cannot be accessed, the third party alerts the organization using the methods specified by the organization, such as phone calls, pages, and emails.
Logs		
Technical	Operating system, security, and application logs	Logs from operating systems, services, and applications (particularly audit-related data) are frequently of great value when an incident occurs. Logs can provide a wealth of information, such as which accounts were accessed and what actions were performed.
Technical	Network device logs	Logs from network devices such as firewalls and routers are not typically used as a primary source of precursors or indications. Although these devices are usually configured to log blocked connection attempts, they provide little information about the nature of the activity.

Publicly Available Information		
Human	Information on new vulnerabilities and exploits	Keeping up with new vulnerabilities and exploits can prevent some incidents from occurring and assist in the detection and analysis of new attacks. The National Vulnerability Database (NVD) contains information on vulnerabilities. Several organizations, such as US-CERT, CERT®/CC, IAIP, and the Department of Energy's Computer Incident Advisory Capability (CIAC), periodically provide threat update information through briefings, Web postings, and mailing lists.
Human	Information on incidents at other organizations	Reports of incidents that have occurred at other organizations can provide a wealth of information. There are Websites and mailing lists where incident response teams and security professionals can share information regarding reconnaissance and attacks that they have seen. In addition, some organizations acquire, consolidate, and analyze logs and intrusion detection alerts from many other organizations.
People		
Human	Internal Users	Users, system administrators, network administrators, security staff, and others from within the organization may report signs of incidents. It is important to validate all such reports. Not only do users generally lack the knowledge to determine if an incident is occurring, but also even the best-trained technical experts make mistakes. One approach is to ask people who provide such information how confident they are of the accuracy of the information. Recording this estimate along with the information provided can help considerably during incident analysis, particularly when conflicting data is discovered.
Human	Other Organizations	Although few reports of incidents will originate from people at other organizations, they should be taken seriously. A classic example is an attacker who identifies a serious vulnerability in a system and either informs the organization directly or publicly announces the issue. Another possibility is that the organization might be contacted by an external party claiming someone at the organization is attacking it. External users may also report other indications, such as a defaced Web page or an unavailable service. Other incident response teams also may report incidents.

APPENDIX SEVEN: Alert Levels (developed by MS-ISAC)

Alert Color/Formula Score	Color Indication
Green - Low : **-8 to -5**	**No unusual activity exists beyond the normal concern for known hacking activities, known viruses, or other malicious activity**. Examples: Normal probing of the network Low-risk viruses Actions: Continue routine preventive measures, including the application of vendor security patches and updates to anti-virus software signature files on a regular basis. Continue routine security monitoring. Ensure personnel receive proper training on cybersecurity policies.
Blue - Guarded : **-4 to -2**	**Indicates a general risk of increased hacking, virus, or other malicious activity.** The potential exists for malicious cyber activities, but no known exploits have been identified, or known exploits have been identified but no significant impact has occurred. Examples: A critical vulnerability is discovered but no exploits are reported. A critical vulnerability is being exploited but there has been no significant impact. A new virus is discovered with the potential to spread quickly. There are credible warnings of increased probes or scans. A compromise of non-critical system(s) did not result in loss of data. Actions: Continue recommended actions from previous level. Identify vulnerable systems. Implement appropriate countermeasures to protect vulnerable systems. When available, test and implement patches, install anti-virus updates, etc., in the next regular cycle.

Yellow - Elevated : **-1 to +2**	**Indicates a significant risk due to increased hacking, virus, or other malicious activity that compromises systems or diminishes service.** At this level, there are known vulnerabilities that are being exploited with a moderate level of damage or disruption, or the potential for significant damage or disruption is high. Examples: An exploit for a critical vulnerability exists that has the potential for significant damage. A critical vulnerability is being exploited and there has been a moderate impact. There is a compromise of a secure or critical system(s) containing sensitive information. There is a compromise of a critical system(s) containing non-sensitive information if appropriate. A virus is spreading quickly throughout the Internet, causing excessive network traffic. There is a distributed denial of service attack. Actions: Continue recommended actions from previous levels. Identify vulnerable systems. Increase monitoring of critical systems. Immediately implement appropriate countermeasures to protect vulnerable critical systems. When available, test and implement patches, install anti-virus updates, etc., as soon as possible.

Orange - High : **+3 to +5**	**Indicates a high risk of increased hacking, virus, or other malicious cyber activity that targets or compromises core infrastructure, causes multiple service outages, causes multiple system compromises, or compromises critical infrastructure.** At this level, vulnerabilities are being exploited with a high level of damage or disruption, or the potential for severe damage or disruption is high. Examples: An exploit for a critical vulnerability exists that has the potential for severe damage. A critical vulnerability is being exploited and there has been significant impact. Attackers have gained administrative privileges on compromised systems. There are multiple damaging or disruptive virus attacks. There are multiple denial of service attacks against critical infrastructure services. Actions: Continue recommended actions from previous levels. Closely monitor security mechanisms, including firewalls, web log files, anti-virus gateways, system log files, etc., for unusual activity. Consider limiting or shutting down less critical connections to external networks such as the Internet. Consider isolating less mission-critical internal networks to contain or limit the potential of an incident. Consider the use of alternative methods of communication, such as phone, fax, or radio in lieu of email and other forms of electronic communication. When available, test and implement patches, anti-virus updates, etc., immediately.

Red - Severe : **+6 to +8**	**Indicates a severe risk of hacking, virus or other malicious activity resulting in widespread outages and/or significantly destructive compromises to systems with no known remedy or debilitates one or more critical infrastructure sectors.** At this level, vulnerabilities are being exploited with a severe level or widespread level of damage or disruption of Critical Infrastructure Assets. Examples: Complete network failures Mission-critical application failures Compromise or loss of administrative controls of critical system Loss of critical supervisory control and data acquisition (SCADA) systems Potential for or actual loss of lives or significant impact on the health or economic security of the state Actions: Continue recommended actions from previous levels. Shut down connections to the Internet and external business partners until appropriate corrective actions are taken. Isolate internal networks to contain or limit the damage or disruption. Use alternative methods of communication, such as phone, fax, or radio as necessary in lieu of email and other forms of electronic communication.

The Alert Level is determined using the following threat severity formula:

Severity = (Criticality + Lethality) - (System Countermeasures + Network Countermeasures)

- **Lethality: How likely is it that the attack will do damage?**

(Value = Potential Damage)

  - 5: Exploit exists. Attacker could gain root or administrator privileges. Attacker could commit denial of service.
  - 4: Exploit exists. Attacker could gain user level access privileges. Attacker could commit denial of service.
  - 3: No known exploit exists. Attacker could gain root or administrator privileges. Attacker could commit degradation of service.
  - 2: No known exploit exists. Attacker could gain user level access privileges.
  - 1: No known exploit exists. Attacker could not gain access.

- **Criticality: What is the target of the attack?**

(Value = Target)

  - 5: Core services such as critical routers, firewalls, VPNs, IDS systems, DNS servers, or authentication servers
  - 4: Email, web, database, and critical application servers
  - 3: Less critical application servers
  - 2: Business desktop systems
  - 1: Home users

- **System Countermeasures: What host-based preventive measures are in place?**

(Value = Countermeasure)

  - 5: Current operating system with applicable patches applied. Server has been hardened and verified via vulnerability scan. Running host-based IDS or integrity checker. Anti-virus signature exists and has been applied to target systems.
  - 4: Current operating system with applicable patches applied. Operating system has been hardened. Anti-virus signature exists and has been applied to target systems.
  - 3: Current operating system with fairly up-to-date patches applied. Anti-virus signatures are current.
  - 2: Current operating system but missing some applicable patches. Anti-virus signature either does not exist or has not been applied to target systems.
  - 1: Older operating systems, including Windows NT 3.51, Solaris 2.6, Windows 95/98/ME. No anti-virus software protection.

- **Network Countermeasures: What network-based preventive measures are in place?**

(Value = Countermeasure)

  - 5: Restrictive (i.e., "deny all except what is allowed") firewall. Firewall rules have been validated by penetration testing. All external connections including VPNs go through (not around) the firewall. Network-based IDS is implemented. Email gateway filters attachments used by this virus.
  - 4: Restrictive firewall. External connections (VPNs, wireless, Internet, business partners, etc.) are protected by a firewall. Email gateway filters attachments used by this virus.
  - 3: Restrictive firewall. Email gateway filters common executable attachments.
  - 2: Permissive firewall (i.e., "accept all but") or allowed service (e.g., HTTP, SMTP). Email gateway does not filter all attachments used by this virus.
  - 1: No firewall implemented. Email gateway does not filter any attachments.

Using the result from the formula defined above, the Alert Level Indicator would generally reflect severity levels as follows:

- **Alert Level Indicator - Severity**
  - **Green - Low : -8 to -5**
  - **Blue - Guarded : -4 to -2**
  - **Yellow - Elevated : -1 to +2**
  - **Orange - High : +3 to +5**
  - **Red - Severe : +6 to +8**

APPENDIX EIGHT: Resource Typing

Resource:	Business Analysis Personnel (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Strong knowledge of current industry technology, as well as current operations and practices Experience developing and maintaining new and existing IT projects, as well as implementing and reporting on key metrics Experience guiding and assisting staff with project ideation and prioritization, as well as business technology requirements Strong knowledge of investment analysis for proposed systems to aid implementation decisions 7+ years of business analysis experience in an IT environment	Extensive practical knowledge of importing data via spreadsheets, graphs, and flow charts Expertise in developing requirements and specifications for business process review Expertise in conducting research into system products and requirements for justifying purchasing recommendations Strong knowledge of investment analysis for proposed systems to aid implementation decisions 7+ years of business analysis experience in an IT environment	Practical knowledge of importing data via spreadsheets, graphs, and flow charts Experience with developing requirements and specifications for business process review Experience with researching system products and requirements for justifying purchasing recommendations Knowledge of investment analysis for proposed systems to aid implementation decisions 6+ years of business analysis experience in an IT environment	Basic knowledge of importing data via spreadsheets, graphs, and flow charts Basic knowledge of requirements and specifications for business process review Basic knowledge of investment analysis for proposed systems to aid implementation decisions Less than 6 years of analysis experience in an IT environment	
	Supervisory Experience	5+ years of supervisory experience in a technical leadership role				

Resource:	Applications Services Personnel (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Technical Experience	Expert level knowledge of current industry technology, operations, and practices Develops IT standards related to application services as well as maintains internal operating processes Ability to allocate workflow and resources of a team while providing community support 8+ years of experience in technical support as well as working with business applications	Expert level knowledge of current industry technology, operations, and practices Technical expertise with in-house business application software Expertise in monitoring and troubleshooting application systems Experience in maintaining/executing backup and recovery procedures 8+ years of experience in technical support as well as working with business applications	Strong knowledge of current industry technology, operations, and practices Technical experience with in-house business application software Strong knowledge in monitoring and troubleshooting application systems Experience in maintaining/executing backup and recovery procedures 6+ years of experience in technical support as well as working with business applications	Basic knowledge of current industry technology, operations, and practices Basic technical experience with in-house business application software Basic experience with monitoring and troubleshooting application systems Less than 6 years of experience in technical support or information systems analysis	
	Supervisory Experience	5+ years of supervisory experience in a technical leadership role				

Resource:	Technical Services (Service Analyst)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Strong knowledge of current industry technology, as well as current operations and practices Strong knowledge of PC/Tablet operating systems and applications Advanced knowledge of computer operating systems and Microsoft enterprise domain environments Fundamental understanding of networks and client/server architecture 6+ years of experience in a desktop security technician role	Advanced knowledge of user security best practices including Microsoft Active Directory Security systems, LDAP, and general application authentication security Advanced knowledge of file permissions, as well as security components and ability to identify security risks Advanced knowledge of web content filtering Advanced experience with PC hardware and software, as well as Microsoft Office products Advanced knowledge of enterprise backup systems and backup data recovery 6+ years of experience in a desktop security technician role	Knowledge of user security best practices including Microsoft Active Directory Security systems, LDAP, and general application authentication security Strong knowledge of file permissions, as well as securit components and ability to identify security risks Strong knowledge of web content filtering Experience with PC hardware and software, as well as Microsoft Office products Strong knowledge of enterprise backup systems and backup data recovery 3+ years of experience in a desktop security role	Basic knowledge of general application authentication security Basic knowledge of file permissions Basic knowledge of web content filtering Basic experience with PC hardware and software, as well as Microsoft Office products Basic knowledge of backup systems and data recovery Less than 3 years of experience in desktop security	
	Supervisory Experience					

Resource:	Technical Services (Desktop Technician)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Strong knowledge of current industry technology, as well as current operations and practices Strong knowledge of PC/Tablet operating systems and applications Advanced knowledge of computer operating systems and Microsoft enterprise domain environments Fundamental understanding of networks and client/server architecture 4+ years of experience in a technical support environment	Advanced support for microcomputer hardware platforms and hardware peripherals Advanced experience with PC hardware and software, as well as Microsoft Office products Advanced knowledge of computer operating systems and Microsoft enterprise domain environments Advanced knowledge of various network-cabling topologies, including the ability to patch cables and diagnose network connectivity issues 4+ years of experience in a technical support environment	Support for microcomputer hardware platforms and hardware peripherals Experience with PC hardware and software, as well as Microsoft Office products Experience with computer systems, personal and network printing, and LAN environments Knowledge of various network-cabling topologies, including the ability to patch cables and diagnose network connectivity issues 2+ years of experience in a technical support environment	Basic knowledge of microcomputer hardware platforms and peripherals Basic experience with PC hardware and software, as well as Microsoft Office products Basic experience with computer systems, personal and network printing, and LAN environments Basic knowledge of various network cabling topologies Less than 2 years of experience in a technical support environment	
	Supervisory Experience	5+ years of supervisory experience in a technical leadership role				

Resource:	System Services Personnel (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Knowledge of current computing system technologies and experience in planning and implementing new system concepts Experience with complex program structures as well as evaluating hardware and software functions Experience in collaborating the development and maintenance of internal system cybersecurity as well as an incident response plan 8+ years of experience working with multi-platform systems	Knowledge of current computing system technologies and experience in planning and implementing new system concepts High-level technical knowledge of server hardware (Microsoft), software, virtualization (VMware), Citrix remote access, and enterprise email (Exchange) High-level technical knowledge of design and managing storage services (Netapp) Advanced knowledge of high-level utilities used for maintaining and troubleshooting the computing environment 8+ years of experience working with multi-platform systems	Knowledge of current computing system technologies and experience in planning and implmenting new system concepts Medium to high-level technical knowledge of server hardware (Microsoft), software, virtualization (VMware), Citrix remote access, and enterprise email (Exchange) Medium to high-level technical knowledge of design and managing storage services (Netapp) Knowledge of high-level utilities used for maintaining and troubleshooting the computing environment 6+ years of experience working with multi-platform systems	Basic knowledge of current computing system technologies Basic knowledge of server hardware, software, or virtualization processes Basic knowledge of managing storage services Basic knowledge of maintaining and troubleshooting computing environments Less than 6 years of experience working with multi-platform systems	
	Supervisory Experience	5+ years of supervisory experience in a technical leadership role				

Resource:	Quality Assurance Personnel (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Strong knowledge of enterprise application technologies Extensive experience testing database centric applications (Data integrity and quality) Strong knowledge of system testing best practices and methodologies Extensive experience with core software application (ERP and Document Management software) Extensive experience with ad hoc query programs, automated testing tools, and reporting software Extensive experience in all aspects of quality assurance and system/software application testing 10+ years of quality assurance experience in an IT environment	Knowledge of enterprise application technologies Experience testing database centric applications (Data integrity and quality) Knowledge of system testing best practices and methodologies Experience with core software applications (ERP and Document Management software) Experience with ad hoc query programs, automated testing tools, and reporting software Experience in all aspects of quality assurance and system/software application testing 6+ years of quality assurance experience in an IT environment	Basic knowledge of enterprise application technologies Basic experience with testing database centric application (Data integrity and quality) Basic knowledge of system testing best practices and methodologies Basic experience with core software application (ERP and Document Management software) Basic experience with ad hoc query programs, automated testing tools, and reporting software Basic experience with quality assurance and system/software application testing Less than 6 years or quality assurance experience in an IT environment		

Resource:	Project Management Personnel (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Strong knowledge and experience with scope development and various project management requirements (documentation, contract management, risk analysis, status reporting) Strong knowledge of financial budgeting and adherance to established project budgets Stong knowledge of project communication, control, tracking, and reporting 8+ years of experience in an IT project management environment	Fundamental knowledge and experience with scope development and various project management requirements (documentation, contract management, risk analysis, status reporting) Knowledge of financial budgeting and adherance to established project budgets Knowledge of project communication, control, tracking, and reporting 1+ years of experience in an IT project management environment	Basic knowledge of various project management requirements (documentation, contract management, risk analysis, status reporting) Basic knowledge of financial budgeting and adherance to established project budgets Basic knowledge of project communication, control, tracking, and reporting Less than 1 year of experience in an IT projects management environment		

Resource:	IT Manager (Single Resource - Overhead)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Experience directing priorities, work plans, resources, budget, and people for the entire county IT department Experience maintaining contacts with outside organizations and equipment contracts for technology applications Experience with administering departmental budgets and presenting technology investment funding strategies 7+ years of experience in Public Administration 10+ years of experience in public or private sector IT management	Experience directing priorities, work plans, resources, budget, and people for a division within the county IT department (supervising 8 people or more) Experience maintaining contacts and relationships with other internal Offices, Departments, and Divisions Experience establishing and directing staff training/education for newly implemented technical products Experience with closely following departmental budgets and implementing new technology into existing framework	Experience directing priorities, work plans, resources, budget, and people for a division within the county IT department (supervising 8 people or less) Experience directing staff to closely follow guidelines put in place by the IT Director and Division Managers Experience in developing further training/education plans for immediate staff Extensive experience in staff scheduling and monitoring staff requirements during shortages		
	Supervisory Experience	7+ years of supervisory experience in an IT environment	7+ years of supervisory experience in an IT or business environment	5+ years of supervisory experience in an IT or business environment		

Resource:	Network Services Personnel (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Knowledge of state-of-the-art data and network technologies High-level technical knowledge of data and voice switching, routing equipment, operating systems, firewalling and content filtering (as well the ability to maintain and troubleshoot) Experience in collaborating the development and maintenance of internal cybersecurity as well as an incident response plan 7+ of experience in advanced technical duties and administrative functions for data and voice network infrastructure	Knowledge of state-of-the-art data and network technologies Advanced working knowledge of various network protocols, routing protocols, and traffic/path management Advanced working knowledge of high-level utilities for maintaining and troubleshooting the network environment 7+ of experience in advanced technical duties and administrative functions for data and voice network infrastructure	Knowledge of state-of-the-art data and network technologies General knowledge of various network protocols, routing protocols, and traffic/path management General knowledge of high-level utilities for maintaining and troubleshooting the network environment 2+ years of experience in administrating data and voice network infrastructure	Basic knowledge of data and network technologies Basic knowledge of network and routing protocols Basic knowledge of maintaining and troubleshooting network environment functionality Less than 2 years of experience in administrating data and voice network infrastructure	
	Supervisory Experience	5+ years of supervisory experience in a technical leadership role				

Resource:	GIS Specialist (Single Resource)					
Minimum Capabilities		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Experience	Knowledge of specialized GIS software (ArcINFO, ArcVIEW, 3Danalyst, and other third part products) Knowledge of GIS systems life cycles Knowledge of geographic and cartographic concepts (spatial analysis, projections) 5+ years of experience in an IT environment with additional experience in GIS software integration	Knowledge of contemporary GIS software (ArcGIS, ArcIMS, ArcSDE) Basic knowledge and experience with geographic and cartographic concepts (spatial analysis, projections) 3+ years of experience in an IT environment with additional experience in GIS software integration	Basic knowledge of contemporary GIS software (ArcGIS, ArcIMS, ArcSDE) Basic knowledge of Geography and Cartography Less than 3 years of experience in an IT environment or GIS software integration	Basic knowledge of Geography or Cartography Basic knowledge of contemporary public mapping software (Google Maps)	

Resource:	Solutions Development Personnel (Single Resource)					
Minimum Capabilities:		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Personnel	Technical Experience	Expert knowledge of current programming languages (ASP.NET, C#, HTML, JavaScript, CSS) Knowledge of data management and software development at an administrative level Ability to allocate workflow and resources of a team while providing community support 8+ years of experience in an application development role	Expert knowledge of current programming languages (ASP.NET, C#, HTML, JavaScript, CSS) Knowledge of development methodologies (Agile, SDLC) Knowledge and experience working within an MVC framework environment 8+ years of experience in an application development role	Knowledge and experience with current programming languages (ASP.NET, C#, HTML, JavaScript, CSS) Knowledge of database languages, including structure and design Knowledge and experience with business intelligence practices 7-8 years of experience in an application development role	Basic knowledge of current programming languages Basic knowledge of business system applications and support structures Basic knowledge and working experience with various operating systems and applications Anything less than 7 years of experience in application development	
	Supervisory Experience	5+ years of supervisory experience in a technical leadership role				

APPENDIX NINE: Roles and Responsibilities

General: All agencies/organizations assigned to this plan	❖ Designating and training representatives for their agency to serve as primary points of contact in the event of a cyber-incident. ❖ Developing and maintaining procedures to ensure that a current inventory of agency resources and contact lists are available as part of their COOP plans. ❖ Developing and maintaining procedures to identify, locate, commit, and deploy any agency support resources if requested as part of their COOP Plan. ❖ Providing personnel, equipment, and other assistance to support emergency response and recovery operations within the agency's capabilities. ❖ Providing situational and operational situation reports in accordance with existing procedures and as requested by the jurisdiction. ❖ Should the resources of the incident within the jurisdiction become overwhelmed, outside resources may be called upon. ❖ Support agencies will provide assistance in the form of personnel, equipment, and/or technical assistance as requested by the incident command. ➢ Identifying and coordinating support staffing requirements appropriate to the emergency situation to include coordination of agencies' trained resources as available. If a cyber-threat and/or incident has caused activation of the EOC to any extent, Emergency Management, in consultation with Incident Command, will be responsible for measures necessary to monitor and document the situation. ➢ Coordinating response to requests for assistance from the affected agencies, community-level government, and private sector entities through normal EOC procedures. ➢ Provide assistance to other agencies and local officials for data collection, documentation, and damage assessment for affected IT systems and in the disaster area(s) to include information on mitigation and recovery. ➢ Assist documentation preparation for departmental funding needs. ❖ Obtain and compile documentation/information necessary for effective and efficient strategy management by EOC staff. ❖ Develop, maintain, and distribute any appropriate plans and policies related to a cyber-incident response.

Emergency Management (once activated)	❖ Coordinates with the State Emergency Operations Center (EOC). ❖ Respond to the consequences of an incident through the guidelines of the Emergency Operations Plan. ❖ Tracks paperwork for financial purposes. ❖ Facilitates the coordination of recovery efforts. ❖ Facilitates communications with other emergency entities involved in cyber incidents. ❖ Support the coordination of acquiring needed resources; coordinate public information support, and maintaining situational awareness. Examples of resources needed: ➢ Public Information Support. A Joint Information Center or Joint Information System (JIC/JIS) will most likely be needed during large-scale cyber incidents involving multiple agencies. The EOC may facilitate and support these needs. Multiple PIOs from the affected agency and/or jurisdictions may need to work together (in person or remotely) as a team to respond to media inquiries and produce unified messaging using a variety of methods. ➢ Emergency Management, in conjunction with incident command, may produce situational awareness for other government agencies. Daily situation reports, weekly briefings or other documents may be produced to provide a common operating picture. ➢ The Policy Group in the EOC serves as decision-maker.
EOC	❖ The EOC is responsible for implementing the Emergency Operations Plan, Resource Mobilization and all supporting plans. During a cyber-incident, the IT Department may be asked to assign personnel to the EOC. ❖ The jurisdictions law enforcement agency and Information Technology Department are the primary agencies for cyber incident response. ❖ Through the EOC, the Information Technology and Emergency Management Departments will be responsible for leading the consequence management portion of the incident. ❖ The EOC will tailor supporting personnel and materials specific to the cyber incident. The command staff and/or Information Technology Department staff will provide subject matter expertise related to the cyber threat, analysis, and recommendations to the EOC and ultimately the policy group.

IT Department	❖ Provide leadership in the development, delivery and maintenance of an information security program by safeguarding the information assets against unauthorized use, disclosure, modification, damage or loss. ❖ Responsible for governance, risk, compliance, and risk management related to cyber security within the jurisdiction. ❖ Develop information security policies related to prevention, protection, detection, response and recovery. ❖ Maintain the Cyber Security Incident Response Plan and ensure COOP plans address a cyber-incident. ❖ Responsible for ensuring incident command is implemented at the start of an incident which allows the structure to flex overtime based on the severity of the incident. ❖ Establish a command post / war room and share this information with leadership and the Emergency Management Department.
DHSEM	❖ Assists local EOC in by providing requested state level resources. ❖ Maintains WebEOC and resources lists. ❖ Conduit to state and FEMA funding assistance. ❖ State Emergency Operations Center may be activated based on the incident.
CIAC	❖ Conduit with the United States Computer Emergency Response Team (US - CERT) and the Multi - State Information Sharing and Analysis Center (MS - ISAC). ❖ Analyze cyber vulnerabilities, exploits, and attack methodologies; ❖ Provide technical assistance; ❖ Defend against an attack; and ❖ Provide indications and warning of potential threats, incidents, and attacks. ❖ Support the coordination of acquiring needed resources and maintaining situational awareness. ❖ Assist with incident triage and initial incident handling steps.
Department Staff (other than IT Staff)	❖ An IT staff member employed by each affected department or office may be designated to provide support as necessary.

National Guard **(Upon approval for activation by the Governor through the proper State process) A nexus to life safety must exist before NG resources can be utilized.**	❖ May provide the following cyber incident response capabilities: ➢ Cyber analysis including detailed examination of networks, systems, processes, and infrastructure. ➢ Threat and vulnerability assessment, including gaps in proper cyber posture. ➢ Information sharing, to include information regarding adversary tactics, techniques, and procedures. ➢ Digital forensics and investigation. ➢ Infrastructure and network monitoring support. ➢ Incident response, mitigation, and recovery.
FBI	❖ FBI Cyber Task Forces synchronize domestic cyber threat investigations in the local community through information sharing, incident response, and joint enforcement and intelligence actions. ❖ FBI CyWATCH – Receives cyber threat and incident reporting, assesses it for action, and engages with the appropriate components within FBI Cyber Division, FBI Field Offices, other government agencies and designated Federal Cyber Centers. ➢ May stand up a Cyber Incident Command Center (CICC) for enhanced coordination if the cyber incident is considered a significant or major incident defined by applicable Presidential Policy directive(s) ➢ May provide specialized and deployable on-scene forensic analysis to further attribution (would also depend on severity level). ❖ Forensics of digital evidence in support of criminal investigation.
DHS	❖ The Department of Homeland Security (DHS): When cyber incidents occur, DHS provides assistance to potentially impacted entities, analyzes the potential impact across critical infrastructure, investigates those responsible in conjunction with law enforcement partners, and coordinates the national response to significant cyber incidents. https://www.dhs.gov/national-cybersecurity-and-communications-integration-center ❖ DHS's National Cybersecurity and Communications Integration Center (NCCIC) is a 24/7 cyber situational awareness, incident response, and management center that is a national nexus of cyber and communications integration for the federal government, intelligence community, and law enforcement. ❖ NCCIC's Industrial Control Systems Cyber Emergency Response Team (ICS-CERT). Cybersecurity and infrastructure protection experts from ICS-CERT provide assistance to owners and operators of critical systems by responding to incidents and helping restore services, and by analyzing potentially broader cyber or physical impacts to critical infrastructure. ❖ NCCIC's National Cybersecurity Assessment and Technical Services (NCATS) offers cybersecurity scanning and testing services that identify vulnerabilities within stakeholder networks and provide risk analysis reports with actionable remediation recommendations.

	❖ NCCIC's National Coordinating Center for Communications (NCC) leads and coordinates the initiation, restoration, and reconstitution of national security and emergency preparedness telecommunications services and/or facilities under all conditions. ❖ The National Infrastructure Coordinating Center (NICC), which is part of the DHS National Operations Center, is the dedicated 24/7 coordination and information sharing operations center that maintains situational awareness of the nation's critical infrastructure for the federal government. The NICC and the NCCIC share cyber and physical security information to enhance the efficiency and effectiveness of the U.S. government's work to secure critical infrastructure and make it more resilient. ❖ The Cyber Security Advisor (CSA) Program was created in recognition that a regional and national focused cyber security presence is essential to protect critical infrastructure. CSAs offer immediate and sustained assistance to prepare and protect SLTT and private entities. CSAs represent a front line approach to key cyber infrastructures throughout the U.S. and its territories. CSAs are regionally located based on the Federal Emergency Management Agency (FEMA) regions. Region VIII CSA is located in Denver. CSAs work closely with their Physical Security Specialist counterparts – the Protective Security Advisor (PSA) – who are located in every State.
Federal Government	❖ The Federal Government plays a significant role in managing intergovernmental (Federal, State, local, and tribal) and, where appropriate, public - private coordination in response to a cyber - incident. DHS / NPPD / NCSD, other elements of DHS, the Intelligence Community, FBI, DOD, and other Government agencies work closely together and individually to coordinate response during a cyber-incident or attack, identify those responsible, and otherwise respond appropriately. Responsibilities include: ➢ Providing indications and warning of potential threats, incidents, and attacks ➢ Information - sharing both inside and outside the government, including best practices, investigative information, coordination of incident response, and incident mitigation ➢ Analyzing cyber vulnerabilities, exploits, and attack methodologies ➢ Providing technical assistance ➢ Conducting investigations, forensics analysis, and prosecution ➢ Attributing the source of cyber - attacks ➢ Defending against the attack ➢ Supporting recovery efforts

APPENDIX NINE: Resources

The following is a partial list of resources for cybersecurity information.

National Cyber Security Alliance
The National Cyber Security Alliance is dedicated to providing resources to help individuals and businesses become better digital citizens. These resources provide initial steps to begin reducing cybersecurity risks.

- Stay Safe Online - https://staysafeonline.org/
- CyberSecure My Business - https://staysafeonline.org/cybersecure-business/
- StopThinkConnect - https://www.stopthinkconnect.org/

Center for Internet Security - https://www.cisecurity.org/
The Center for Internet Security, is a non-profit entity that harnesses the power of a global IT community to safeguard private and public organizations against cyber threats. The CIS Controls and CIS Benchmarks are a global standard and recognized best practice for securing IT systems and data.

CyberSeek - http://cyberseek.org/
Provides data on cybersecurity careers and employment needs for employers, job seekers, students, and policy makers.

Law Enforcement
National - https://www.fbi.gov/investigate/cyber

Standards
National Institute of Standards and Technology - https://www.nist.gov/cyberframework

InfraGard
https://www.infragard.org/

Information Sharing and Analysis Centers (ISACS)

National Council of ISACS - https://www.nationalisacs.org/

AUTOMOTIVE ISAC - www.automotiveisac.com

AVIATION ISAC - www.a-isac.com

COMMUNICATIONS ISAC - www.dhs.gov/national-coordinating-center-communications

DEFENSE INDUSTRIAL BASE ISAC - www.dibisac.net

DOWNSTREAM NATURAL GAS ISAC - www.dngisac.com

ELECTRICITY ISAC- www.eisac.com

EMERGENCY MANAGEMENT AND RESPONSE ISAC - www.usfa.dhs.gov/emr-isac

FINANCIAL SERVICES ISAC - www.fsisac.com

HEALTHCARE READY- www.healthcareready.org

INFORMATION TECHNOLOGY ISAC - www.it-isac.org

MARITIME ISAC- www.maritimesecurity.org

MULTI-STATE ISAC- www.ms-isac.org

NATIONAL DEFENSE ISAC - www.ndisac.org

NATIONAL HEALTH ISAC- www.nhisac.org

OIL & NATURAL GAS ISAC - www.ongisac.org

REAL ESTATE ISAC - www.reisac.org

RESEARCH AND EDUCATION NETWORK ISAC - www.ren-isac.net

RETAIL CYBER INTELLIGENCE SHARING CENTER - www.r-cisc.org

SURFACE TRANSPORTATION, PUBLIC TRANSPORTATION AND OVER-THE-ROAD

BUS ISACS www.surfacetransportationisac.org

WATER ISAC - www.waterisac.org

APPENDIX ELEVEN: Cyber Resource Supplies/Equipment for Jump Kits

Jump kits may contain:

- Port lists, including commonly used ports and Trojan horse ports
- Documentation for OSs, applications, protocols, and intrusion detection and antivirus products
- Network diagrams and lists of critical assets, such as database servers
- Current baselines of expected network, system, and application activity
- Cryptographic hashes of critical files to speed incident analysis, verification, and eradication
- Access to images of clean Operating System and application installations for restoration and recovery purposes
- At least two computer devices (One of which being an investigative laptop, loaded with appropriate software (e.g., packet sniffers, digital forensics). This laptop should be scrubbed and all software reinstalled before it is used for another incident. One standard laptop for writing reports, reading emails and performing other duties unrelated to hands-on incident analysis.
- Other important materials include backup devices, blank media, chargers and basic networking equipment and cables.
- Viable communications tools for investigation and coordination if face-to-face is not an option. These may include cellular Wi-Fi connections.
- Network taps and approved use locations and policies to capture network traffic if needed. The ability to apply proxy decryptions policy should also be discussed before utilizing.
- Portable/cellular Wi-Fi capability for investigation machines to access internet search information.
- Current contact (mobile device and email addresses) list of leadership authorized to make decisions related to IT infrastructure etc.
- Copy of cyber insurance policy that is accessible when other assets are unavailable.
- Notebooks, pens, portable printer, printer paper, fresh ink cartridges, incident forms and this plan.

ANNEX A: Information Technology Employee Code of Conduct

Purpose and Scope

The purpose of the Information Technology (IT) Employee Code of Conduct is to outline responsibilities, guidelines, and standards of conduct for all IT employees who have access to sensitive information. We intend that this code will emphasize that you are a professional who is resolved to uphold ethical obligations and ideals. You should be committed to maintain the integrity and confidentiality of the computer systems with which you interact for the benefit of all involved. While IT employees must always be guided by their own professional judgment, we hope that consideration of this code will help when difficulties arise.

This IT Employee Code of Conduct applies to all IT employees. The code is directed specifically at those who have access to sensitive information, such as those who are responsible for the maintenance of computer networks, databases, electronic mail (e-mail), Internet connectivity, telephones (including cellular phones), pagers, voice mail, fax transmissions, modems, multimedia, video, and all other computer-related communications. Technologies, facilities, and other information resources used for information processing, transfer, storage, and communications are also included.

The IT Director, chief appointed or elected official, and/or legal counsel reserve the right to amend this Code of Conduct at any time and for any reason.

Code of Conduct

Due to the nature of IT's role, IT employees will come into contact with privileged information on a regular basis. The IT employee has the duty to the owners of the information to protect the confidentiality of all such information. This includes making changes, preventing unauthorized access, or not divulging that information to a third party. IT employees shall not use, seek or access information without a clear business purpose as would be reasonably acceptable to the IT Director and/or the department who is the custodian of such information.

All appropriate effort should be made by the IT employee, in accordance with industry-accepted practices, to enforce security measures to protect computer systems and the data contained in them. This includes regularly maintaining software and hardware, preventing unauthorized user access, analyzing levels of system performance and activity, and other security-related duties.

IT employees must uphold the policies, procedures, and laws that govern the systems and networks with which they interact, and make all efforts to ensure the same from the users of the systems.

IT employees will not exercise their powers to access private information other than is necessary for their role, and then only to a degree that is necessary to perform that role, while remaining within established policies and procedures. Any private information obtained by the IT employee may not be used for personal use, and must be kept confidential.

IT employees will not access other employee's offices or work spaces unless they have permission to do so. In addition, prior to providing desk side support, IT employees will contact the staff member they are going to be working with to ensure that they are available. If the staff member cannot be reached or is otherwise unavailable, the IT employee will reschedule the visit to a time when the staff member is available or the IT employee will touch base with a supervisory employee in the same division or department of the staff member to let them know what they are doing.

The IT employee must keep users informed about computing matters that may affect them, such as sharing of common resources, maintenance, security, conditions of acceptable use, occurrence of system monitoring, and any legal matters. This information must be presented in a manner designed to ensure user understanding and awareness.

An IT employee will answer questions and give support in a timely and effective manner, while openly declaring any limitations of personal knowledge and conflicts of interest.

Incidents of Inappropriate Use

This section of the code governs the role of the IT employee dealing with incidents of suspected inappropriate use of communication and computing facilities.

IT employees who encounter cases of suspected inappropriate use who are advised by a third party, or in the course of their duties, **shall immediately inform the IT Director or designee** and shall be governed by the procedures below for dealing with inappropriate use.

Account locking and suspension of access: This action will prevent users from accessing their account and subsequently the information therein. User accounts, including IT employee accounts, may be locked by the IT Director or designee after consultation with the chief appointed and/or elected official, legal counsel, and/or the appropriate Department Director(s) when:

- There is a threat to system or network security that requires the account to be disabled.
- There are reasonable grounds to believe that the account is responsible for an event or series of events that seriously degrade system or network performance to the extent that it compromises the other users' ability to continue work.
- There are reasonable grounds to believe that the security of the account itself has been jeopardized.
- To seal the account and evidence contained within because there is reason to believe that criminal or other charges, such as a breach in appropriate access and use of confidential information, will be laid against the user of the account.
- An existing problem, that would otherwise not require this reaction, has persisted despite trying to contact the account owner repeatedly.
- There are reasonable grounds to believe that the account has engaged in unauthorized use and/or personal use of sensitive information.
- Accounts that have been locked in connection with one of the above scenarios will be unlocked as soon as the conditions that required the lock no longer exist.

Access to electronic files and communications: the organization has the right to access electronic communications for organization-related purposes, which may include, but are not limited to:

- Retain or delete any or all computer files, e-mail messages, or electronic data on systems after an employee leaves the organization.
- Comply with demands and requests, such as subpoenas, search warrants, legal holds, open records requests, audits, and other requests to which the organization is legally required to respond.
- Obtain information relating to situations involving the health or safety of people or property, actions brought on behalf of the organization and any of its employees, and actions brought against the organization and any of its employees.
- Maintain system integrity, including maintenance, virus tracking, performance of ordinary system repair, and enhancement.
- Perform internal investigations, such as safety and security, as requested by the chief appointed and/or elected official, the legal counsel, or any Department Director.

Incident Log

IT employees are obligated to maintain an incident log which will be reviewed on a regular basis by the IT Director or designee. All incidents of suspected inappropriate use should be recorded in the log, along with any follow-up actions. All incidents should be logged until the time that they are resolved, especially if disciplinary action is considered, recommended, or implemented. Incident reports should consist at minimum of the following information:

- Date and time of the incident.
- Information about the accounts involved.
- Name and job title of the account holder.
- The type of use/abuse suspected.
- IT employee's name.
- Any further action suggested, requested, or required.

Procedures for Dealing with Incidents of Suspected Abuse

IT employees who discover, or who are privy to information about, an incident that appears to be an inappropriate use of communication and computing facilities will follow these steps:

1. Record all relevant details and any follow-up action in the incident log. Promptly inform the IT Director or designee who will inform the Department Director of the affected department of any computing incidents that clearly compromise system or network integrity. Incidents include, but are not limited to: data loss or theft, inappropriate systems or information access, notification from outside individuals or institutions of any incident, and any other breach or violation of IT procedures of which the IT employee is aware.

2. If appropriate, the IT Director or designee will arrange for the affected computer device to be removed from the network and will notify appropriate personnel in IT and the appropriate Department Director.

3. In cases where disciplinary action is not required, the IT Director or Designee will notify the account owner of the incident and their Department Director, and request an explanation via e-mail, phone, or fax. If repeated attempts to contact the account owner fail to resolve the issues, the account may be locked.

4. In cases where disciplinary action is required, the IT Director or designee will notify the offender's Department Director and recommend a course of action.

5. The IT Director or designee will perform any follow-up action as directed and authorized. This may include temporary restriction of access to accounts by the account owner, deletion or examination of material in the user account, deletion of accounts, or other appropriate steps.

Disciplinary Action

Any employee, who is found to have violated this Code of Conduct, the guidelines herein, or the organization's Personnel Policies and Procedures, may be subject to disciplinary action, up to and including termination of employment.

Agreement

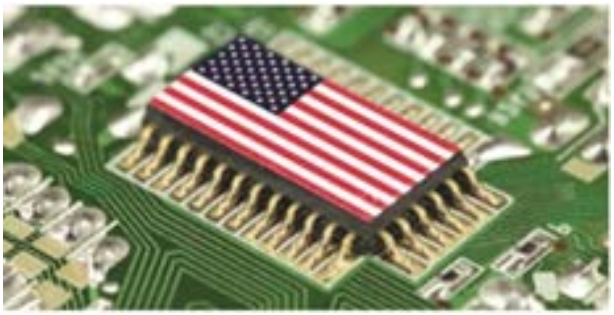
I have read and understand the Code of Conduct. I understand that if I violate the rules explained herein, I may face legal or disciplinary action according to applicable law or the organization's policy.

_____

Employee Name (print)

_____ _____

Employee Signature Date



“There are risks and costs to a program of action – but they are far less than the long range costs of comfortable inaction.” – John F. Kennedy

Crowley County, Colorado
IT Disaster Recovery Manual

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Important Contacts

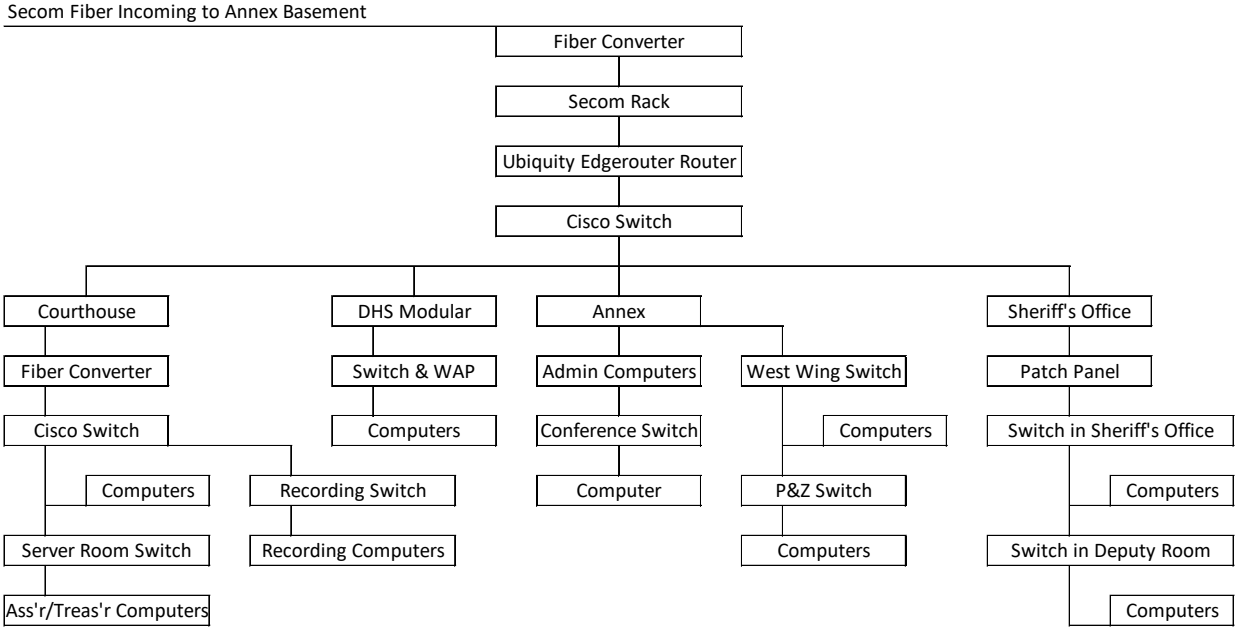
Type of Support	Contact	Phone	E-mail
Computer & Network Support	Jay Bond	719.924.5753	support@fiveranges.com
Telephone Support	SECOM Support	719.383.1349	noc@secom.net
Tyler Technology (Financial)	Incode Support	800.646.2633	
Tyler Technology (Treasurer)	Eagle Support	800.554.5534	
Tyler Technology (Assessor)	Eagle Support	800.554.5534	
Tyler Technology (Recording)	Eagle Support	800.554.5534	
SO Eforce Support	Eforce Support	888.570.4943	
CenturyLink Support (DHS)	DHS Helpdesk	877.487.4871	
Copier Support	Gobins	719.384.7793	
DHS Helpdesk	DHS Helpdesk	877.487.4871	pc.helpdesk@state.co.us
Internet Outages Contact only if instructed to	SECOM Support	719.383.1349	noc@secom.net

Explanation of Terms Used

Locations Reference

- Main Campus –
    - Location - The cluster of buildings between 6th and 7th streets in Ordway.
    - Manual Sections – Annex, Sheriff, DHS, Recording, Courthouse
- Annex
    - Location - The white building in the middle of the Main Campus
    - Manual Sections – Annex
- Sheriff's Office
    - Location - The large 2 story building at the corner of 6th and Main. This also contains the jail and County Court.
    - Manual Sections – Sheriff
- Courthouse
    - Location - The building at the corner of 7th and Main Street containing the main DHS offices as well as the offices of the Clerk, Treasurer and Assessor.
    - Manual Sections – Courthouse, DHS, Recording
- Modular
    - Location - Between the Annex and the Courthouse, this building houses DHS offices.
    - Manual Sections – DHS
- Fire Hall
    - Location - The corner of Highway 71 and 9th Street, this houses the Fire Hall, Office of Emergency Management and the Ambulance manager.
    - Manual Sections – Fire Hall

Network Map


Secom Fiber Incoming to Annex Basement
Fiber Converter
Secom Rack
Ubiquity Edgerouter Router
Cisco Switch
Courthouse
DHS Modular
Annex
Sheriff's Office
Fiber Converter
Switch & WAP
Admin Computers
West Wing Switch
Patch Panel
Cisco Switch
Computers
Conference Switch
Computers
Switch in Sheriff's Office
Computers
Recording Switch
Computer
P&Z Switch
Computers
Server Room Switch
Recording Computers
Computers
Switch in Deputy Room
Ass'r/Treas'r Computers
Computers

Annex Network

The Annex is the hub of all network activity, but some functions go through the Server located in the storage room between the Assessor's Office and the Treasurer's Office

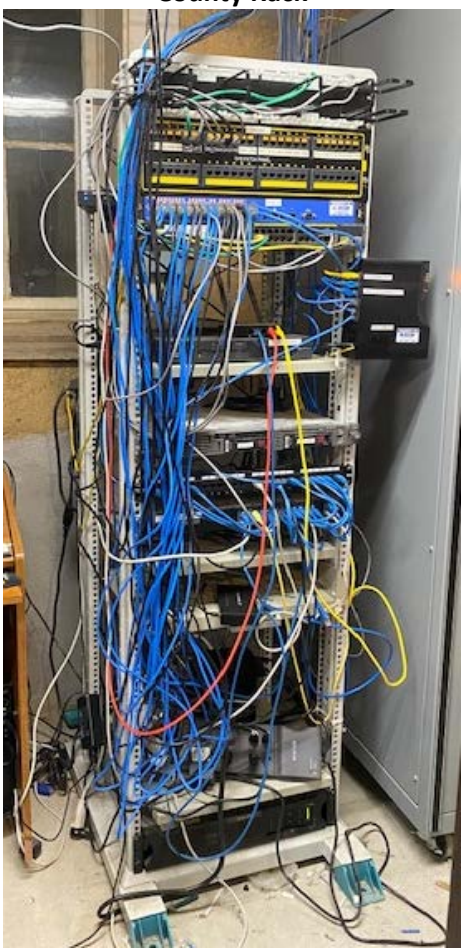
The network consists of the following items:

1. Ubiquity Edgerouter Router connecting the County network to the SECOM Fiber network.
2. Windows Server 2016 for DHCP, DNS and Active Directory in storage room between the Assessor and Treasurer offices.
3. Various switches and fiber media converters.

The storage room in the basement of the Annex contains the County Network rack, the SECOM rack (**to be accessed by SECOM reps only)** and the Fiber converters for the Courthouse.

SECOM fiber runs into the basement of the Annex to the SECOM rack, then the router and the network switch in the County rack. The SECOM rack and the UPS for the network switch and router are plugged into power from the generator, so if there is a power outage the generator should turn on and provide power to these items.

County Rack

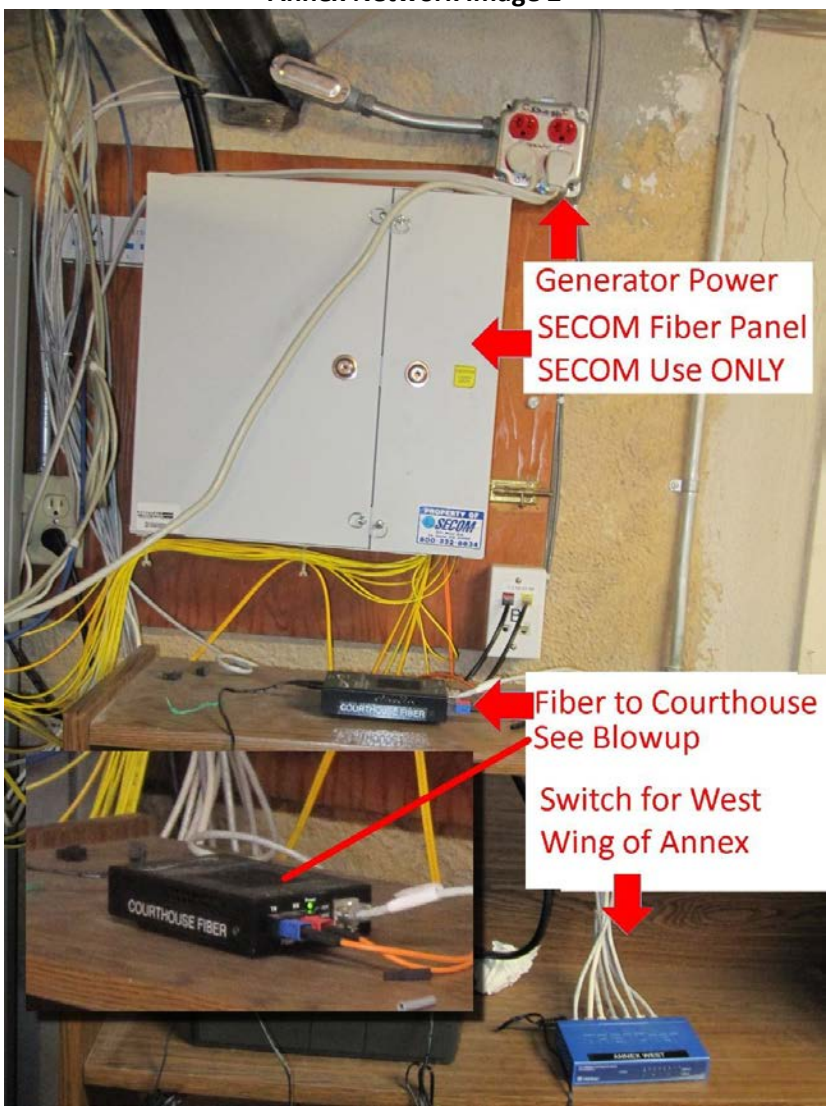


From this room, the network branches into various locations on the campus.

- Fiber to Courthouse. The fiber converter that runs between the Courthouse and the Annex is on the shelves to the right of the door as you come into the storage room This travels along the floor joists to a hole in the wall on the north side of the building, (shown below), then outside into a conduit under the drive (shown below). It terminates in the conduit that runs into the Electrical room of the Courthouse.

.

Annex Network Image 2





Fiber and Cat5 Out to Conduit for Courthouse. Conduit drop shown on right.

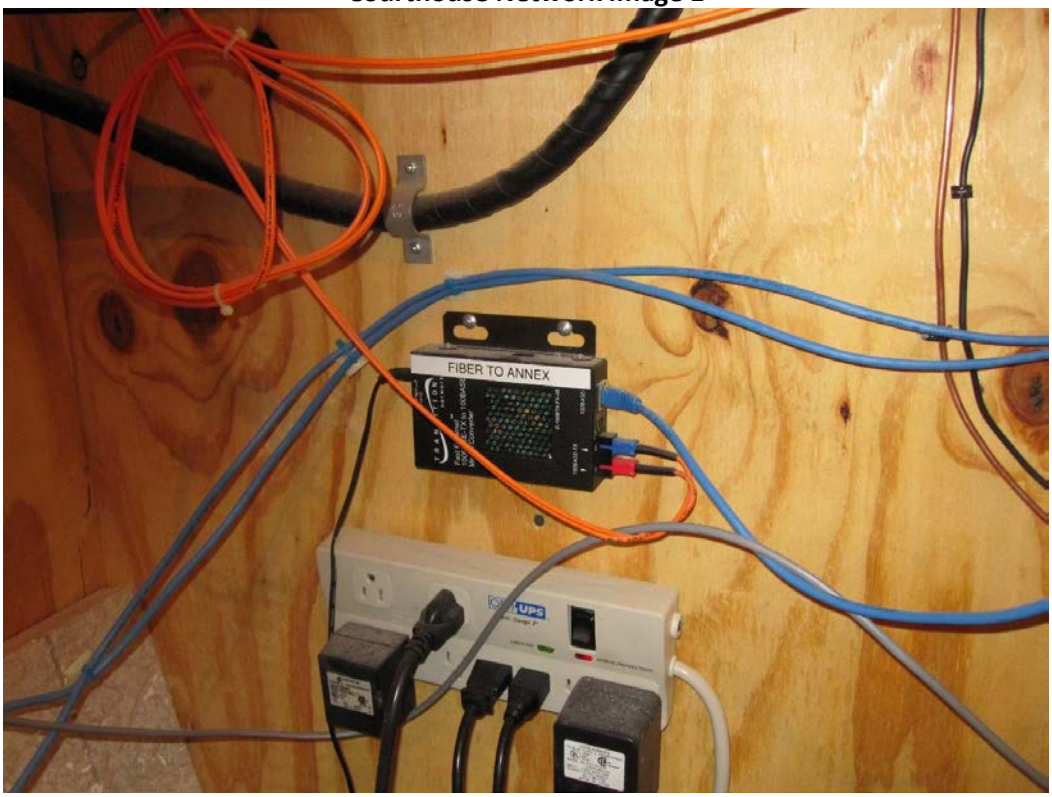
- Cat5 to the Sheriff's Office from this room through the east wall, then through steel conduit over on the outer east wall and into the attic of the Sheriff's Office. See Sheriff Network for details.
- Cat5 to the DHS Modular (Adult Learning Center). See DHS Modular Network for details.

Courthouse Network

The Courthouse Network consists of various sections since it houses several offices – DHS, Clerk's Offices, Assessor and Treasurer Offices. The network equipment in this building also impacts the rest of the County Network, so references are made to this building in the Annex Network section.

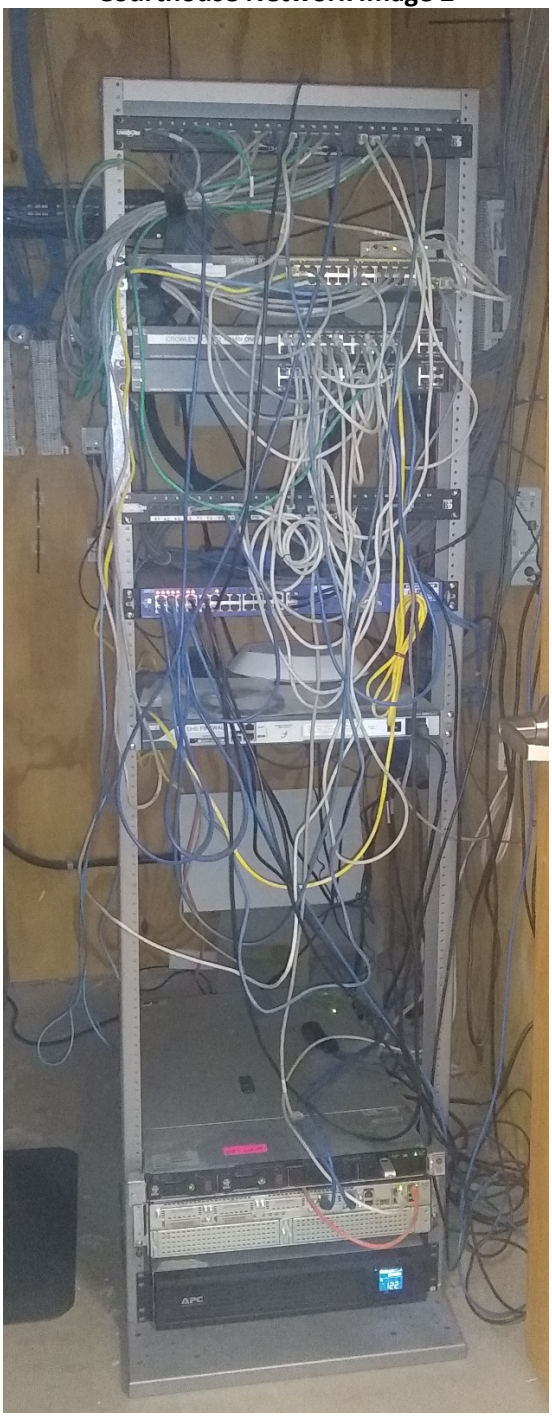
The Electrical Room in the back of the DHS in the Courthouse has the other end of the fiber connection to the Annex as show in the following photo:

Courthouse Network Image 1

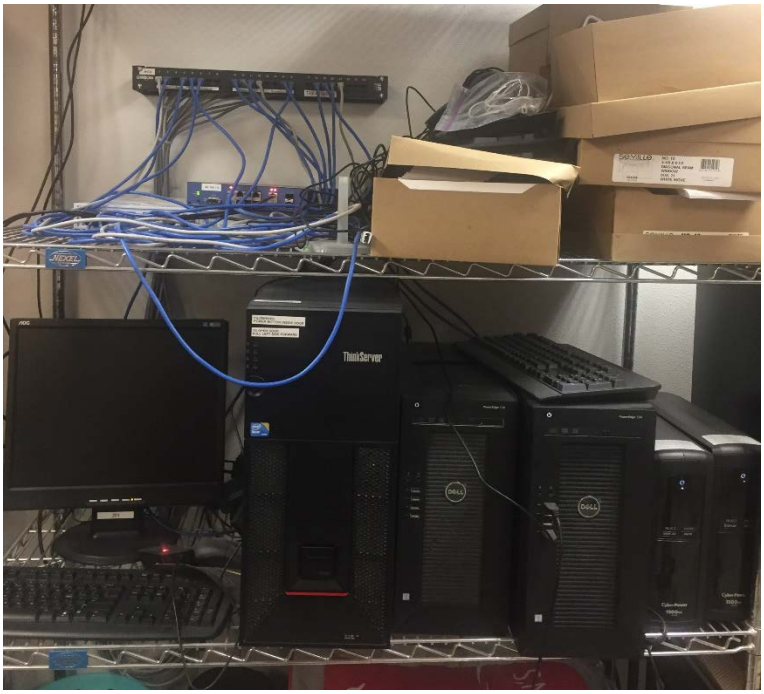


All network cabling terminates in the Electrical Room at the back of the DHS Offices, as shown below.

Courthouse Network Image 2



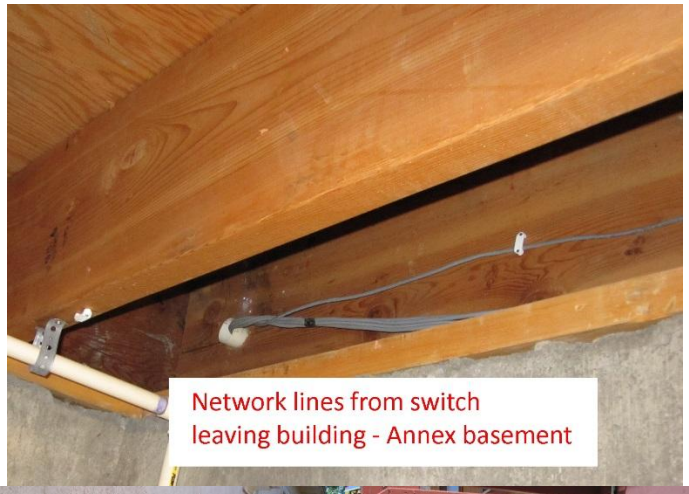
The storage room between the assessor and treasurer office includes a patch panel on the wall that connects to every port in the assessor and treasurer offices, a switch that provides network to the assessor and treasurer offices, a switch for the phone system and two servers, one for the Admin and one for the DHS. The Admin server provides IP addresses for the entire network so if it is not turned on all computers on the network in all buildings will have difficulty with the network and Internet. The DHS server provides file storage for the DHS office only.



Courthouse Network Image 1

DHS Modular Network

The DHS network in the Courthouse is covered by the Courthouse section of this manual. Several DHS offices are located in the Modular building in the parking lot between the Annex and the Courthouse. The network lines providing network to this building run underground from the Annex to the Modular.







Recording Network

The Recorder's Office is in the Clerk's office Recording room. There is only one networking item in this area, the rest is routed through the County network.



Recording Network Image 1

The network lines feeding this room are in the Electrical Room at the back of the DHS. Refer to the Courthouse Network for details.

Sheriff Network

The Sheriff's Office is connected to the County network via Cat5e cable from the Annex. All network control functions are handled by the County Server.

The network consists of the following items:

1. The SO server for file storage and DNS for the SO computers.
2. Patch Panel in the upstairs of the Sheriff's Office.
3. Network Switch in the Sheriff's office.
4. Network Switch in the basement.
5. Network Switch in the Deputy's room.
6. Network Switch behind the Booking Computer.

Due to the foot thick concrete floors and walls in the Sheriff's Office, networking in this building is challenging.

The following photos show the network connections for the Sheriff's Office:



Network Lines Feeding the Sheriff's Office

The lines from the Annex that feed the Sheriff's Office are contained in a piece of steel conduit on the outside of the Annex and going into the attic of the Sheriff's Office, as shown in these photos. From the attic they drop into a caged room on the top floor at the end of the hall after going upstairs.



Sheriff's Office Upstairs Patch Panel

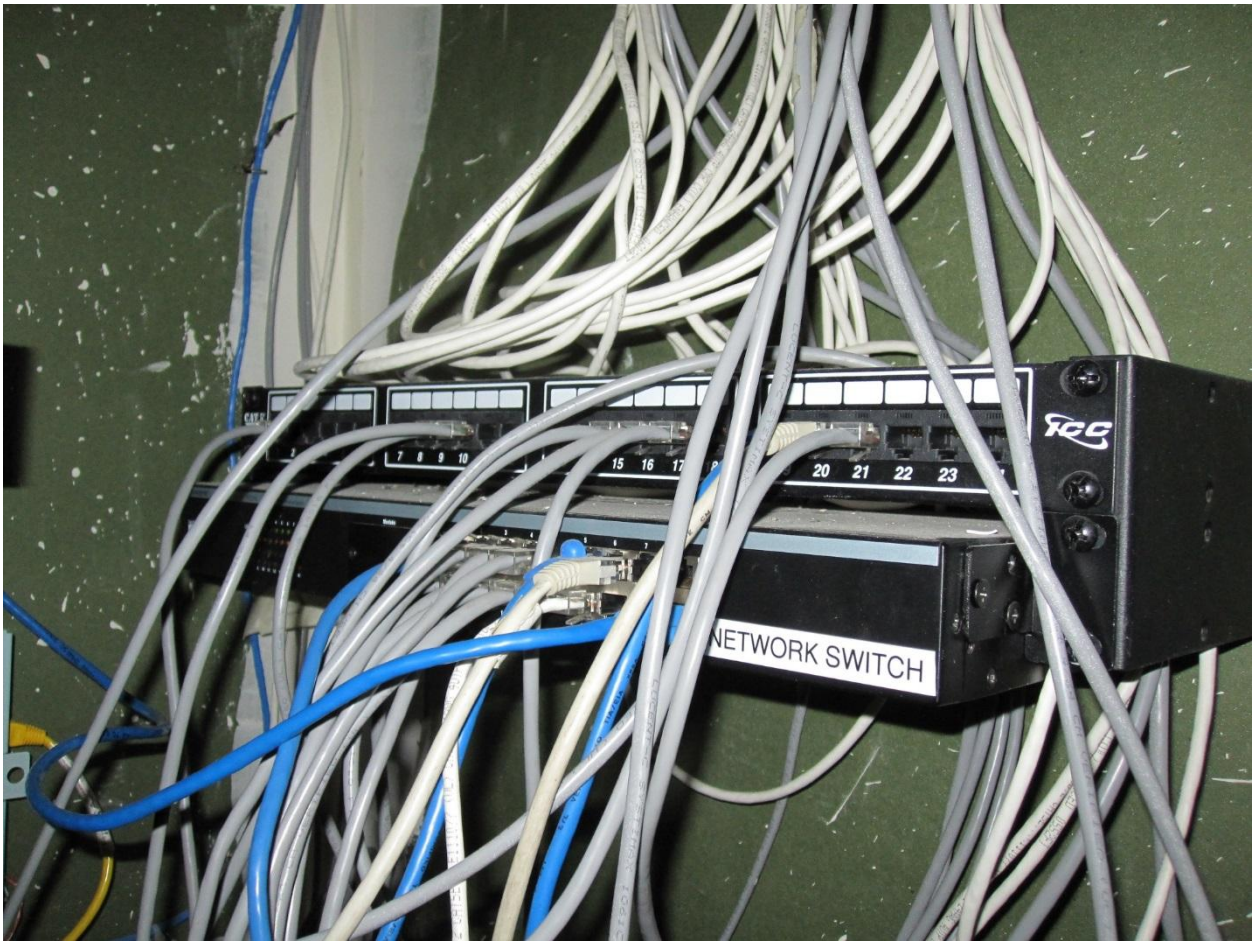
From this room the lines run to the Sheriff's office.



The lines then generally go through the basement to go to a switch then from there to all rooms in the building.

Fire Hall Network

The Fire Hall uses SECOM wireless to connect to the Internet.



Fire Hall Network Image 1

A Windows 10 computer provides network storage for this building. Backups are performed to an external hard drive using NovaBackup Professional. There is a two week backup rotation, with full backups once a week on the weekend and differential backups on weekdays. Every two weeks the cycle starts over and overwrites the oldest backup of the same name.

County Server & Network Information

Router
Ubiquiti Edgerouter
IP 192.168.0.1

County Server Information
Name: CCADSERVER1
Domain: CCADMIN.LOCAL
Server IP 192.168.0.136
Subnet 255.255.255.0
Gateway 192.168.0.1
DNS 127.0.0.1
208.123.128.36
208.123.128.37

DHCP
CCADSERVER1 provides DHCP to all connected devices except those with a static IP. Support's documents has a list of all static IP address. The parameters are as follows:
Address Pool: 192.168.0.2-192.168.0.120 – with exclusions at .102 and .103
Server Options:
Router 192.168.0.1
DNS Servers 192.168.0.136
208.123.128.36
208.123.128.37
DNS Name CCADMIN.LOCAL

DNS
DNS is provided CCADSERVER1 with the following parameters.
DNS Servers 127.0.0.1
208.123.128.36
208.123.128.37

DHS Server
Name: CCDHSSERVER1
Domain: CCDHS.LOCAL
Server IP 192.168.0.137
Subnet 255.255.255.0
Gateway 192.168.0.1
DNS 127.0.0.1
208.123.128.36
208.123.128.37

Sheriff's Office Server
Name: CCSOSERVER1
Domain: CCSO.LOCAL
Server IP 192.168.0.135

Subnet	255.255.255.0
Gateway	192.168.0.1
DNS	127.0.0.1
	208.123.128.36
	208.123.128.37

Wireless Access Points

There are several access points on the campus in all buildings. Generally, they are Linksys LAPAC1200 access points. The following SSIDs are used:

Admin Network

SSID	CCADMIN
	CCADMIN5G
	CCGST
	CCGST5G
Channel	Auto
Security	WPA2-PSK
Encryption	AES
Key	Available from Administration Staff

Sheriff's Office Network

SSID	CCSO
	CCSO5G
	SOCGST
	SOGST5G
Channel	Auto
Security	WPA2-PSK
Encryption	AES
Key	Available from Administration Staff

Backups

Backups are performed by the workstation in basement of the Annex using NovaBackup Professional. There is a one-week backup rotation, with full backups once a week on the weekend and differential backups on weekdays. Every Monday the backups for the week are archived by the IT onto an external hard drive which is then stored in the safe file cabinet in the admin office. There are two external hard drives that are used every other week so there is always an archive of 3-4 weeks.

Colorado - Southeast Region Debris Management Plan

May 2020 V2.0

This plan covers the following Counties: Baca, Bent, Crowley, Kiowa, Otero, & Prowers

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

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Southeast Colorado Regional Debris Management Plan Signature Page

Approved by:

Name/Title/Agency: Jean Sykes Commissioner Bent Co — Date: 4-9-2020

Name/Title/Agency: [signature] — Date: 4-23-2020

Name/Title/Agency: [signature] Crowley County Comm. — Date: 4/13/2020

Name/Title/Agency: Keith Goodwin Otero County Commissioner — Date: 4/20/20

Name/Title/Agency: [signature] Baca County Commissioner — Date: Apr/23/2020

Name/Title/Agency: Wendy L Buxton-Andrade - Prowers County Comm. — Date: 5-19-2020

Name/Title/Agency: [signature] Otero County OEM Director — Date: 4/20/20

Name/Title/Agency — Date

Name/Title/Agency — Date

Name/Title/Agency — Date

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i. Record of Distribution

In order to maintain transparency of the plan each person and agency below has received a copy of the plan.

Number	Name	Agency	Date
1	Riley Frazee	DHSEM-OEM-Field Services	
2	Jennifer Leathers	Baca County OEM	
3	Jerry Casebolt	SER Grant Coordntr	
4	Rick Stwalley	Bent County OEM	
5	John Reitan	Crowley County OEM	
6	Teresa Witte	Kiowa County OEM	
7	Danny Chavez	Otero County OEM	
8	Brad Davidson	La Junta City OEM & Fire Chief	
9	Staffon Warn	Prowers OEM & Fire Chief	
10	Jeremy Burkhart	Lamar City OEM & Fire Chief	
11	Larry Sitts	Holly Town OEM	
12	Natalie Musick	Granada Town OEM	
13	Don Moore	DHSEM-OEM-Plans	
14	D'Wayne Gaymon	Colo Dept of Transportation	
15	Robert Madrid	Colo Dept of Transportation	
16	Cary Mount	Colo Dept of Transportation	
17	Wayne Gumke	Colo Dept of Transportation	
18	Neil Mauch	Colo Dept of Transportation	
19	Roy Darnell	Colo Dept of Transportation	
20	Raymond Eccher	Colo State Patrol – Pueblo Dispatch	
21	Roman Horn	Town of Springfield – Public Works	
22	Dennis Carlson	Town of Walsh – Public Works	
23	Kenny Wagner	Las Animas Town – Public Works	
24	Robert Darnell	Bent County Road and Bridge	
25	Cutis Sniff	Bent County Road and Bridge	
26	Lex Nichols	Otero County Public Works	
27	Mark Dorenkamp	Prowers County Road and Bridge	
28	Pat Mason	City of Lamar Public Works	
29	Thomas Eikenberry	United States Forest Service	
30	Kendall Shafield	American Red Cross	
31	Sally Broomfield	American Red Cross	
32	John Dugan	Colo Dept of Public Health- Water Protection	
33	Jill Parisi	Colo Dept of Public Health – Solid Waste	
34	Heather Barbare	Colo Dept of Public Health – Solid Waste	
35	Janell Maier	Southeast Colorado Regional Epi	

Number	Name	Agency	Date
36	Kris Stokke	Southeast Colorado Health Planner	
37	Aaron Oliveri	Southeast Regional Health Trainer	
38	Jessami Graham	Baca County Public Health	
39	Omer Tamir	Bent County Public Health	
40	Richard Ritter	Otero/Crowley Public Health	
41	Meagan Hillman	Prowers/Kiowa Public Health	
42	JoLynn Idler	Prowers/Kiowa Public Health	
43	Chris Pryor	Colorado State Patrol – Hazmat	
44	TJ Steinbrunn	Colorado State Patrol – Hazmat	
45	Jason Kosola	Colorado Oil & Gas Commission SE Environmental Protection Specialist	
46	Rebecca Broussard	EPA Region 8 Environmental Protection Specialist	
47			
48	Dr. Maggie Baldwin	Colo Dept of Ag – State Veterinarians Office	
49	Donna Davis	Colorado State Forest Service	
50	Bruce Fickenscher	CSU Extension – Southeast Response Team Coordinator	
51	Travis Black	Colorado State Parks & Wildlife	
52	Dan Kirmer	Colorado State Parks & Wildlife	
53	Brad Henley	Colorado State Parks & Wildlife	
54	Bill McCormick	Dam Safety – Colo Div of Water Resources	
55	Mark Perry	Dam Safety – Colo Div of Water Resources	
56	Chuck Goin	Colorado Rural Water Association	
57	Bret Smith	Colorado Humane Society – SPCA Field Investigator	
58	Greg Chavez	United States Dept of Ag – APHIS	
59	Johnathan Tague	United States Army Corp of Engineers	
60	Jeffrey Daniels	United States Army Corp of Engineers	
61	Shelly Dragomir	United States Army Corp of Engineers	
62	Jennifer Stark	National Weather Service	
63	Greg Heavener	National Weather Service	
64	Telly Stanger	Southeast Colorado Power Association	
65	Mark Hall	Southeast Colorado Power Association	
66	Houssin Hourieh	Lamar Light and Power	
67	Christa Mayhew	ATMOS Engergy	
68	Scott Copley	Colorado State Patrol – Major	
69	Tim Knabenshue	Colorado State Patrol – 2C Captain	
70	Denney Owens	Colorado Dept of Corrections	
71	Shawn Foster	Colorado Dept of Corrections	
72	Tracy Nelson	Colorado Dept of Corrections	

Number	Name	Agency	Date
73	Aaron Shiplett	Baca County Sheriff	
74	Jake Six	Bent County Sheriff	
75	John Kurtz	Crowley County Sheriff	
76	Casey Sheridan	Kiowa County Sheriff	
77	Shawn Mobley	Otero County Sheriff	
78	Sam Zordell	Prowers County Sheriff	
79	Tara Marshall	Colo Dept of Local Affairs – DLG	
80	Randi Snead	Colo Dept of Local Affairs – DLG	
81	Jim Raymond	DHSEM-OEM-State Recovery Officer	
82	Spike Ausmus	Baca County Commissioner	
83	Shiloh Freed	Baca County Commissioner	
84	Rick Butler	Baca County Commissioner	
85	Cindi Parsons	Baca County Administrator	
86	Kim MacDonnell	Bent County Commissioner	
87	Jean Sykes	Bent County Commissioner	
88	Chuck Netherton	Bent County Commissioner	
89	Clavin Feik	Bent County Administrator	
90	Roy Elliott	Crowley County Commissioner	
91	Tobe Allumbaugh	Crowley County Commissioner	
92	Blain Arbuthnot	Crowley County Commissioner	
93	Mike Apker	Crowley County Administrative Assistant	
94	Richard Scott	Kiowa County Commissioner	
95	Howard “Butch” Robertson	Kiowa County Commissioner	
96	Donald Oswald	Kiowa County Commissioner	
97	Tina Adamson	Kiowa County Administrator	
98	John Hostetler	Otero County Commissioner	
99	Keith Goodwin	Otero County Commissioner	
100	Jim Baldwin	Otero County Commissioner	
101	Amy White-Tanabe	Otero County Administrator	
102	Ron Cook	Prowers County Commissioner	
103	Wendy Buxton-Andrade	Prowers County Commissioner	
104	Tom Grasmick	Prowers County Commissioner	
105	Janet Lundy	Prowers County Admin/Finance	
106	Ethan Williams	DHSEM-OEM-Plans	
107	Mark Boley	DHSEM-OEM-Field Services	
108	Trevor Denney	DHSEM-OEM-Field Services	
109	Laurie Wilson	Southeast Colorado Hospital District	
110	Rita Hetrick	Walsh Hospital District	
111	Char Korrell	Weisbrod Memorial County Hospital	
112	Leroy Fierro	Arkansas Valley Regional Medical Center	
113	Leslie Day	Prowers Medical Center	

Number	Name	Agency	Date
114	Karen Bryant	Prowers Medical Center	
115	Sadie Martinez	DHSEM – AFN Coordinator	
116	Sean Hackett	Colo Dept of Public Health – Solid Waste	
117	Steve Sanchez	Southeast Colorado Hospital District	

ii. List of Abbreviations and Acronyms

ACI	Advanced Contracting Initiative
ARC	American Red Cross
BOCC	Board of County Commissioners
C&D	Construction and Demolition
CDMP	County Debris Management Plan
CDPS	Colorado Department of Public Safety
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CRS	Colorado Revised Statutes
DDA	Detailed Damage Assessment
DET	Debris Estimating Teams
DHS	Department of Homeland Security
DHSEM	Division of Homeland Security and Emergency Management
DM	Debris Manager
DMP	Debris Management Plan
DMTF	Debris Management Task Force
ECC	Emergency Coordination Center
ECP	Emergency Conservation Program
EM	Emergency Management
EMBD	Emergency Management Board Designee
EMD	Emergency Management Director
EMP	Emergency Management Plans
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESF	Emergency Support Function
EWP	Emergency Watershed Protection Program
FEMA	Federal Emergency Management Agency
FIT	Field Inspection/Monitoring Team
FSA	Farms Service Agency
HAZUS-HM	Hazards United States Multi-hazard

HHW	Household Hazardous Waste
IDA	Initial Damage Assessment
JIC	Joint Information Center
M	Magnitude
NCP	National Contingency Plan
NRC	National Response Center
NRCS	Natural Resources Conservation Service
NRF	National Response Framework
OEM	Office of Emergency Management
PA	Public Assistance
PDA	Preliminary Damage Assessment
PPE	Personal Protective Equipment
PIO	Public Information Officer
PRT	Planning Response Team
RCRA	Resource Conservation and Recovery Act
RDMP	Regional Debris Management Plan
READ	Recycling Electronics and Asset Disposition
SOW	Scope of Work
T&M	Time and Materials Contract
TDSR	Temporary Debris Storage and Reduction
The Region	Southeast Colorado All-Hazards Region
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
U.S.	United States
U.S. DOT	United States Department of Transportation
U.S. FHWA	United States Federal Highway Administration
USACE	Unites States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture

iii. Glossary of Terms

Advanced Contracting Initiative (ACI)
A program developed by the Army Corps of Engineers to competitively award contracts for the future use in the areas of water, ice, power, temporary roofing, and debris removal. Having these contracts in place allows the Corps to rapidly respond to emergency situations

Area Method
Describes a lump sum contract when the scope of work is based on a one-time clearance of a specified area.

Baseline Checklist
A tool used by Field Inspection Teams to ensure that TDSR operations are compliant with the contract as well as with local, State, and Federal regulations. This checklist includes site data prior to activity, during use, and progressive updates.

Collection centers
Center where citizens can drop-off eligible debris from any debris generating event, if curb side collection is not available

Construction and demolition (C & D) debris
Waste generated by construction and demolition of buildings, such as bricks, concrete, drywall, lumber, miscellaneous metal parts and sheets, packaging materials, and any other non-hazardous materials resulting from construction and demolition operations, as defined in 6CCR 1007-2, The Regulations Pertaining to Solid Waste Sites and Facilities (Solid Waste Regulations), Section 1.2.

Contamination Reduction Zone
The area where personnel and equipment exiting the Exclusion Zone are decontaminated. This is also a buffer area between the Exclusion Area and the Support Zone.

Critical Facilities
Critical Facilities include facilities such as fire stations, police stations, hospitals, and other critical infrastructure as identified by the counties in their respective Emergency Operations Plans.

Damage Assessment
Process used to determine what happened, what the effects are, which areas were hardest hit, what situations must be given priority and what types of assistance are needed.

Debris
Items and materials broken, destroyed, or displaced by a natural or man-made federally declared disaster. Examples of debris include, but are not limited to, trees, construction and demolition material, and personal property.

Debris Management Cycle
Phased approach to debris management that includes normal operations, increased readiness, response, and recovery

Debris Management Task Force (DMTF)
Temporary unit formed for each county and staffed by county personnel to respond to issues regarding debris management.

Debris Manager (DM)
The debris manager has overall responsibility for the operations, planning, logistics, and finance of the debris management activities.

Debris Planning and Response Team (PRT)
Teams maintained by the Army Corps of Engineers which are pre-rostered, fully trained, and ready to deploy within 6 hours to begin operationally planning a Direct Federal Assistance mission.

Debris-generating Event
Any man made or natural disaster that results in debris that requires removal from the public right-of-way.

Detailed Damage Assessment (DDA)
The DDA is the second damage assessment conducted by the American Red Cross and should occur in the first seventy-two hours after a disaster occurs. This more detailed than the Preliminary Damage Assessment.

Disposal Site Monitor
Disposal Site Monitor(s) are assigned by the DMTF and are responsible for monitoring contractor activities at debris collection points and the processing/storage sites.

Electronic Waste (E-waste)
Electronic Waste includes televisions, desktop and laptop computers, stereo equipment, printers, facsimile machines, digital video disc players, video cassette recorders, radio and other similar waste. E-waste includes electronic devices, as defined by Solid Waste Regulations Section 1.2 that become wastes.

Environmental Baseline Study
An environmental baseline study is performed on any TDSR site prior to its use. Baseline data are essential to document the condition of the land before it is used and in returning it to that condition following site closeout.

Environmental Media debris
Soil, water, air, biota (plants and animals), or any other parts of the environment that can contain contaminants.

Essential Facilities

Essential facilities include schools, municipal buildings, water treatment plants, wastewater treatment plants, power generation units, airports, temporary shelters for disaster victims, etc.

Exclusion Zone
The area where contamination is known to occur or will likely occur. All persons in this area should be wearing the proper PPE. Access is limited to only those who have a need to be in this zone.

Field Inspection/Monitoring Teams (FIT)
FITs periodically monitor each TDSR site to ensure that operations are being followed as specified in the contractor scope of work and contract with respect to local and Federal regulations and the Baseline Checklist. FITs will also periodically monitor loading sites and canvass the city to report on any illegal dumping sites.

Hardfill
Hardfill (also known as natural cleanfill) is uncontaminated gravels, clay, rock, silt, rubble, concrete, soil, bricks, stones, asphalt, pavers, sand, etc.

Hold harmless agreement
The assumption of liability through contractual agreement by one party, thereby eliminating liability on the part of the other.

Household Hazardous Waste (HHW)
Products used in residences, such as paints and some cleaning compounds that are toxic to living organisms and/or the environment.

Initial Damage Assessment
Generally, the IDA is performed first and examines the damages and costs related to a disaster, the impact of the disaster on the community, and which State or Federal programs are the most appropriate possibilities for providing needed assistance.

Joint Preliminary Damage Assessment
The Joint PDA provides the Governor with the information necessary to determine whether to request a presidential major disaster declaration.

Lahars
A mixture of water and rock fragments that flow down the slope of a volcano, usual along a stream channel.

Lead Debris Management Department (LDMD)
Title given to each county department in charge of debris removal operations.

Load Site Monitor
A Load Site Monitor is assigned to each contractor loading site within the designated debris area and initiates load tickets that verify the debris being picked up is eligible under the terms of the contract.

Load ticket
Load tickets are generally used for unit price contracts and are a focal point for quantity verification for payment.

Lump Sum Contract
Written agreement under which a principal agrees to pay a contractor a specified amount for completing a scope of work without requiring a cost breakdown.

Magnitude
Magnitude is a number that characterizes the relative size of an earthquake. It is based on measurement of the maximum motion recorded by a seismograph.

Pass Method
Describes a lump sum contract where the scope of work is based on a certain number of passes through a specified area, such as a given distance along a right-of-way.

Personal Protective Equipment (PPE)
Specialized clothing or equipment worn by response workers for protection against health and safety hazards. PPE may include clothing, helmets, goggles, or other garment designed to protect the wearer's body.

Preliminary Damage Assessment
The PDA or "windshield survey" is conducted by the American Red Cross and often occurs prior to or simultaneous with the local IDA It is a quick look determining the boundaries of areas affected by the disaster, the general needs and characteristics of the disaster areas, the condition of roads, transportation systems, and utilities, the approximate number dwelling unites affected, and whether disaster conditions are improving or worsening.

Productive Equipment Hours Report
Completed by the Load Site Monitor.

Public Assistance Grant Program
Program operated by FEMA to provide assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

Public Assistance Pilot Program
A FEMA program that provides an additional five percent Federal cost share, to applicants that have a FEMA-approved debris management plan and at least two prequalified debris and wreckage removal contractors identified prior to a disaster. Note that currently in order to qualify for funds under this program the disaster must have occurred prior to December 31, 2008; unless the Federal government decides to re-appropriate funds.

Public Transfer Facilities

Facilities where the public can bring their waste. The waste is consolidated at the transfer facility and then transported to its final disposal location.

Putrescible waste
Waste that contain organic matter capable of being decomposed by microorganisms, and of such a character and proportion as to be capable of attracting or providing food for birds or disease vectors as defined in Section 1.2 of 6 CCR 1007-2. Usually used in reference to food wastes and other organic wastes that decay quickly.

Quality Assurance Report
Completed by the Load Site Monitor.

Rapid Needs Assessment
These assessments are conducted by teams of two or more registered building inspectors to quickly inspect and evaluate the safety of each applicable structure within affected areas.

Reasonable Cost
A price that is consistent with what a reasonable person would incur in the conduct of the same business in the same or similar circumstances.

Reportable quantity
Quantify of a hazardous substance that triggers reporting under CERCLA.

Right of entry agreement
An agreement that would give the jurisdiction the right to enter private property for debris clearance purposes.

Site Monitors
Monitor contractor activities at two locations; the collection point and the processing/storage site, to ensure satisfactory performance. Site monitors will ensure that contractors comply with the contract through training, enforcement of separation at the site, and monitoring of trucks at the facility.

Source segregated debris collection
Residents are directed to sort the debris by material type and place it at the curb in separate piles. Trucks designated for a particular debris type collect the assigned debris and deliver it to a temporary staging area, or debris management site, reduction, recycling, or disposal facility.

Support Zone
An area beyond the Warm Zone where there should be no contamination and it is safe for persons without PPE.

Temporary Debris Storage and Reduction Site (TDSR)
A location to temporarily store, segregate, transfer, and reduce debris prior to off-site reuse, recycling, or final disposal.

Time and Material (T & M) contract
A contract providing for the procurement of supplies or services on the basis of direct labor hours at specified fixed hourly rates, and material at cost.

Tonnage
Weight measured in tons.

Transfer Station
A major facility at which debris from collection vehicles is consolidated into loads that are transported by larger trucks or other means to more distant final disposal facilities, typically landfills.

Transformation Facility
A transformation facility burns waste, solid waste or biomass, to produce heat or electricity. A transformation facility is also referred to as a solid waste incarnation facility in Solid Waste Regulation Section 1.2.

Unit price Contract
The unit price contract uses construction units and prices for these units to develop line item costs and total contract cost. It is used when the scope of work id difficult to define and is based on estimated quantities.

White goods
White goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters.

iv. Public Assistance Alternative Procedures Pilot Program – Debris Removal Checklist

Yes	No	Plan Requirements	Page #	Comment
X		**Overview** – Does the plan describe the purpose and objectives?	30-31	
X		**Events and Assumptions** – Does the plan provide information on the types and anticipated quantities of debris that will be generated from various types and sizes of events	35-57	
X		**Debris Collection and Removal** – Does the plan have a debris collection strategy? Does the plan discuss the methods that will be used to remove debris and establish priorities for clearance and removal? Does the plan outline the roles and responsibilities of the various functions involved (Public Works, Finance, and Solid Waste Departments, etc.)?	68-73 60-67	Priorities and Goals Roles & Responsibilities
X		**Debris Disposal Location and Debris Management** – Does the plan identify where the disaster debris will be segregated, reduced, and disposed of whether debris will be hauled to a recycler?	84-86	Each County has specific annexes that identifies where TDMS and Landfill sites are located
X		**Debris Removal on Private Property** – Does the plan address the authority and process for private property debris removal?	72 182	Removal Right of Entry Example Agreement
X		**Use and Procurement of Contracted Services** – Does the plan describe the types of debris operations that will be contracted? Does the plan describe the process and procedure for acquiring competitively procured contracted services?	73-80	
X		**Use of Force Account Labor** – Does the plan define the types of work force account labor will accomplish?	61 69-70	

X		**Monitoring of Debris Operations** – Does the plan describe who and how debris removal contractors will be monitored at pickup sites, Debris Management Sites/Temporary Debris Storage and Reduction Sites and final disposition?	76-78	
X		**Health and Safety Requirements** – Does the plan describe how workers and the public will be protected and discuss the specific measures for adherence to safety rules and procedures?	86-88	
X		**Environmental Consideration and Other Regulatory Requirements** – Does the plan identify all debris operations that will trigger compliance with environmental and historic preservation laws and how compliance will be attained?	82	
X		**Public Information** – Does the plan include a public information strategy to ensure that residents receive accurate and timely information about debris operations?	67	
X		**Identification of Debris Removal Contractors**- Does the jurisdiction identify at least one or more debris contractors that has prequalified?	153-156	Each County also has prequalified contractors in their annex that they work with on a regular basis

1 Introduction

1.1 Authority

Baca, Bent, Crowley, Kiowa, Otero and Prowers Counties constitute the Southeast Colorado All-Hazards Emergency Management Planning Region, hereafter referred to as the Region. A range of statutes, regulations, executive orders, plans and policies govern the Region's emergency management programs.

At the Federal level, The *Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974* (the Stafford Act) (P.L. 93-288, 100-107), *The Homeland Security Act of 2002, Post-Katrina Emergency Management Reform Act of 2006, The Sandy Recovery Improvement Act of 2013* (SRIA) (P.L. 113-2), and *The Federal Civil Defense Act of 1950* (P.L. 81-920) establish assistance and guidance to State and local governments for disaster preparedness, response, recovery, and mitigation.

The National Response Framework (NRF), the National Contingency Plan (NCP), and the State of Colorado Emergency Operations Plan provide planning and policy guidance to counties and local entities. Collectively, these documents support the foundation for the County and Municipal EOPs.

At the Regional level, Executive Order D 013 03 and House Resolution 03-1018 and the following organizations agreed prior to the House Resolution and Executive order to adopt a single regional planning and operations map: Colorado Counties Incorporated, the Colorado Municipal League, the Colorado State Fire Chief's Association, the Colorado Association of Chiefs of Police, the County Sheriffs of Colorado, the Emergency Medical Services Association of Colorado, and the Colorado Emergency Management Association. The Executive Order says "Through this Executive Order, I set forth the single regional planning and operations map and direct all state departments to recognize and adopt this map. To ensure a congruent system, I urge local agencies to adopt this map for emergency management and response purposes." The Southeast Region has a long history of utilizing the planning and response map to coordinate their activities and responses to disasters and emergencies.

The Colorado Revised Statutes (CRS) and associated Administrative Rules add state direction and guidance to local emergency management programs during a disaster. The principle executive officer of the affected jurisdiction has the authority to declare a disaster and delegate authority or responsibilities to effectively manage disaster response under C.R.S. 24-33.5-709(1). A local disaster may be declared only by the principal executive officer of a political subdivision. It shall not be continued or renewed for a period in excess of seven days except by or with the consent of the governing board of the political subdivision. Any order or proclamation declaring, continuing, or terminating a local disaster emergency shall be given prompt and general publicity and shall be filed promptly with the county clerk and recorder, city clerk, or other authorized record-keeping agency and with the office of emergency management.

The emergency declaration may extend to all or any part of the geographical area under the jurisdiction of the municipality, county, tribe or special district. When a wide area disaster occurs the principle executive officers must determine how decisions will be coordinated if separate disaster declarations are declared.

If the emergency or disaster is beyond the capability of the affected jurisdiction to respond, a state of emergency can be declared by the governor through an executive order or proclamation. The Counties affected by the disaster or emergency shall have their EOC accumulate and prepare supporting documentation for the declaration through damage assessment and emergency support function information. In many cases, implementation of the State Emergency Operations Plan and access to State and Federal programs or funding are contingent on correctly following the declaration process in a timely manner.
During a disaster the operational response will end and a recovery response will clearly be all that remains. As the operational response transitions into recovery the principle executive officers of the affected jurisdictions retain authority, but the environment under which their authority exists changes. In recovery additional authorities are introduced into the process from State and Federal agencies creating a need for joint policy decision making. As the recovery process moves forward the local authority assumes a primary role and State and Federal authorities assume a supportive role.

During recovery the local principle executive officer determines the recovery structure that best serves the recovery process and delegates responsibility to the department or organization with the capability to manage the recovery process. The authorities having jurisdiction for recovery are the Chief Elected Officials of jurisdictions affected by the disaster. These Chief Elected Officials, their agencies and departments shall coordinate and cooperate with other affected jurisdictions to ensure consistency for the public.

A state of emergency should not be prematurely lifted until a complete assessment and implementation of the recovery system is working. In addition, recovery may require modifications to codes and regulations to facilitate recovery for residents and businesses. A disaster declaration allows for the modifications without having to follow normal legislative procedures or established charters related to specific unmet needs of the community.

The policy group and legal advisors determine when actions can be executed, how the process can legally permit action and what actions are allowed during a disaster under the provisions of the law.

On October 4, 2006, President Bush signed the Department of Homeland Security (DHS) Appropriations Act directing the Federal Emergency Management Agency (FEMA) to conduct a Public Assistance (PA) Pilot Program to provide an additional five percent (5%) Federal cost share, not to exceed 100 Percent, to applicants that have a FEMA-approved debris management plan and at least two pre-qualified debris and wreckage removal contractors identified prior to a disaster.

Further, On January 29, 2013 President Obama singed into the Law the Sandy Recovery Act of 2013 (P.L. 113-2) (SRIA). The law authorizes several significant changes to the way

FEMA may deliver disaster assistance under a variety of programs. One of those changes if for FEMA to provide an incentive to State, Tribal, or local governments, or owner or operator of a private nonprofit facility to have a Plan in place and accepted by FEMA prior to the declaration of a major disaster or emergency declaration. Additional requirements of the Plan can be found in *Public Assistance Debris Management Guide (FEMA 325)* and *Public Assistance Program and Policy Guide (FP 104-009-2) Published January 2016.*

The Region's Emergency Managers and agencies having jurisdiction for debris management have agreed to participate in the preparation of a Regional Debris Management Plan (RDMP) to be used during a disaster that requires management and processing of disaster-related debris, such as winter storm, tornadoes, earthquakes, etc.

1.2 General

The region is susceptible to many natural and man-made hazards which can potentially generate large amounts of debris. The debris poses an immediate public health and safety threat from disease, fire, and obstructions to emergency response activities, in addition to long-term environmental threats from debris storage and disposal operations. This RDMP identifies the actions required to plan for, and respond to, a natural or man-made debris-generating event. When properly implemented, the result will be a coordinated and comprehensive effort to reduce the debris-related impacts and costs of a disaster within the Region. In addition to expediting the Region's recovery from a debris-generating event, the RDMP maximizes the amount of Federal reimbursement received from FEMA for debris management activities.

Following this RDMP are Annexes for each county within the Region that contain county-specific details. The RDMP, coupled with a County-Specific Annex, constitutes a County Debris Management Plan (CDMP) for each county within the Region. Throughout the RDMP, information found in the County-Specific Annexes is referenced. A table summarizing information found in a County-Specific Annex is provided at the beginning of any RDMP section for which additional information can be found in a County-Specific Annex. Each County- Specific Annex contains appendices for specific documents.

Each county has prepared an EOP that has been formatted to follow the structure used in the NRF, including the Emergency Support Function (ESF) Annexes identified in the NRF. Debris clearance and removal is an aspect of ESF #3 – Public Works and Engineering and, if appropriate, ESF #10 – Oil and Hazardous Materials Response. This RDMP is a supporting plan to ESF #3 and ESF #14 - Recovery.

1.3 Purpose

The purpose of this RDMP and the corresponding County-Specific Annexes is:

- To provide organizational structure, guidance, and standardized procedures for the clearance, removal, reuse, recycling, and disposal of debris caused by a major debris-generating event that affects the Region;

- To establish the most efficient and cost effective methods to resolve disaster debris removal, reuse, recycling, and disposal issues;

- To expedite debris removal, reuse, recycling, and disposal efforts that (1) provide visible signs of recovery and (2) mitigate the threat to the health, safety, and welfare of the Region's residents. Visible signs of recovery offer encouragement and obvious healing of the community to the Region's residents.

- To coordinate relationships, interoperable communications and preplanning with local, State, and Federal agencies involved with debris management responsibilities; and

- To qualify the counties with in the Region to benefit from the economic and program incentives offered under the voluntary FEMA PA Pilot Program.

2 Situation and Assumptions

This section outlines the current environment within which this RDMP is being prepared and the assumptions that were made during its preparation. If any of the situations or assumptions change, and that change affects the accuracy of this RDMP, the Region's Emergency Managers will update the RDMP. Plan maintenance is discussed in Section 11.

2.1 Situation

- The Region is subject to a number of disaster circumstances that could create a need for debris management services. These circumstances include earthquakes, severe weather/wind storms, floods, tornadic activity, and other natural or terrorist/technologic events that could produce large amounts of debris. Each county maintains and regularly updates a specific Hazard Analysis, which prioritizes the most likely events for each community. In addition to county specific hazard analysis the six counties in the region also participate and adopt a regional Pre-Disaster Hazard Mitigation Plan which details region wide hazards in addition to county specific hazards.

- Baca, Bent, Crowley, Kiowa, Otero and Prowers counties constitute the Southeast Colorado All-Hazards Planning Region; Figure 1 shows the location of these counties in relationship to each other and the remainder of the State.

- Each county within the Region has an EOP that covers additional aspects related to emergency response and recovery.

- Natural and manmade disasters precipitate a variety of debris that could include, but is not limited to, trees, sand, gravel, building construction material, vehicles, personal property, and hazardous materials.

- The quantity and type of debris generated from any particular disaster will be specific to the location and type of event experienced, as well as its magnitude, duration, and intensity. This RDMP and the coordinating County-Specific Annexes are intended to be used for managing disaster debris, and are not intended for typical, day-to-day debris pick-up and disposal.

- The quantity and type of debris generated, its location, and the size of the area over which it is dispersed will determine the type of collection and disposal methods utilized to address managing the debris.

- In a major or catastrophic disaster, the Region and its associated counties may have difficulty in locating staff, equipment, and funds to devote to debris management, in the short-term as well as long-term.

- The waste management hierarchy—reuse, recycling, and disposal—will be considered in all debris management activities. Every effort will be made during response and recovery operations to separate waste streams to maximize reuse and recycling before considering disposal options.

- Within the Colorado Revised Statues (CRS) there are several chapters that could pertain to certain types of debris and situations.

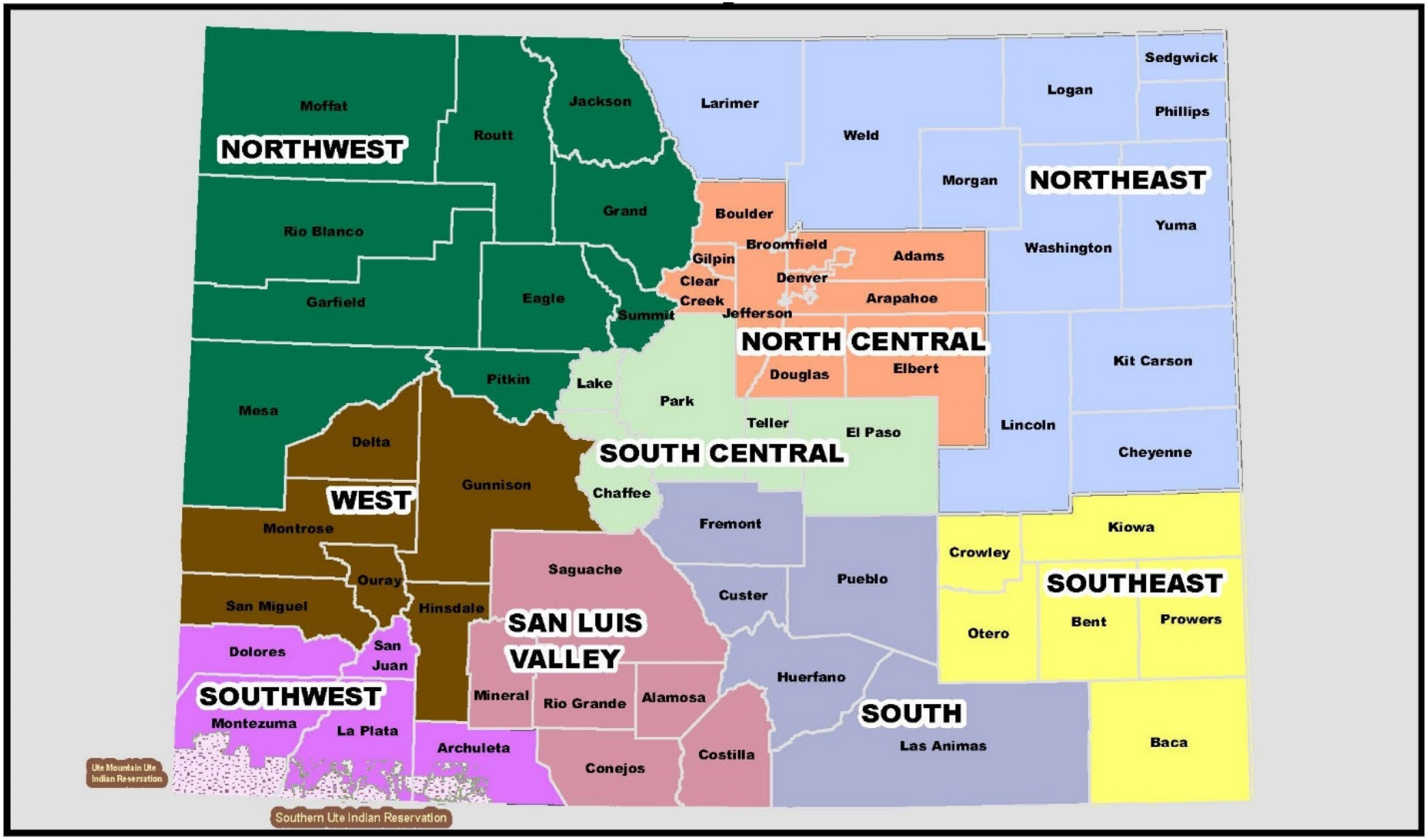

Figure 1: Colorado All-Hazard Regional Planning Areas

2.2 Assumptions

- A natural disaster that requires the removal of debris from public or private lands and waters could occur at any time. A major earthquake likely presents the worst-case scenario for a disaster in the Region. The probability of a major disaster or emergency occurring and causing damage (resulting in large amounts of debris needing disposal) is high.

- No Debris Management Plans (DMP) are currently found at the county or municipal level.

- The amount of debris resulting from an event or disaster would exceed a city's capabilities and the respective county would be called upon to provide debris clearance and removal with assistance from the city; the county and/or city Emergency Operations Center (EOC) would thus be activated.

- The amount of debris resulting from an event or disaster could exceed an individual county's and the Region's removal, processing, recycling, and disposal capabilities.

- If the natural disaster requires, the Governor may declare a State of Emergency that authorizes the use of State resources to assist in the removal and disposal of debris. In the event that Federal resources are required, the Governor may request, through FEMA, a Presidential Disaster Declaration.

- The Region and/or counties and municipalities may contract with private contractors to play a significant role in the debris clearance, removal, recycling, and disposal process.

- Existing franchise hauler contracts with the counties and municipalities should have an emergency services provision that contains the following language, or similar, and does not need to be modified before the franchise haulers can perform debris clearance or removal:

- **Emergency Services.** Within 24 hours of city (or county) notice, Contractor will provide, or begin providing, emergency services beyond the standard Scope of Services at the times and to the extent directed by the city (or county), including unscheduled cleanup of solid waste and other debris consequent upon natural disasters such as earthquakes and floods. City (or county) will compensate Contractor per agreed Contractor's Reimbursement Costs for those services.

- The Region and Individual County's debris management programs will be based on the waste management approach of reduce, reuse, and recycle. Debris placement in a landfill or incineration will always be the last option.

3 Potential Disaster Scenarios

The following is a brief discussion of the types of scenarios that could affect the Region and the type of debris associated with each scenario. Each County- Specific Annex contains debris volume estimations for the worst case scenario earthquake; volume estimations for other scenarios have not been calculated but may be added by individual counties as the information becomes available. In addition, the Marion and Linn County-Specific Annexes contain information to illustrate where potential volcanic debris could occur within those counties. Each county within the Region has previously prepared a Natural Hazard Mitigation Plan; refer to these plans for more detailed information on the County Hazard Analyses for various disaster scenarios.

3.1 Tornadoes

3.1.1 Disaster Potential

According to the Colorado Hazard Mitigation plan, a tornado is a localized, violently destructive windstorm occurring over land, especially in the Midwestern U.S., characterized by a long, funnel-shaped cloud composed of condensation and containing debris that extends to the ground and marks a path of great destruction. The National Weather Service Glossary provides further technical definition, stating that a tornado is "A violently rotating column of air, usually pendant to a cumulonimbus, with circulation reaching the ground. It nearly always starts as a funnel cloud and may be accompanied by a loud roaring noise. On a local scale, it is the most destructive of all atmospheric phenomena."

300 tornadoes occurred in the planning area between 1950 and November 19, 2018. The data indicates a wide range of occurrences on a per county basis. The Planning Team believes the data is more indicative of tornadoes being reported versus actual occurrences. The counties with the higher number of occurrences are also those counties with either higher population, greater damages experienced, or where official "Spotter Training" has been provided.

Tornado Occurrences by County 1950 – 2018
Baca County – 68
Bent County – 39
Crowley County – 12
Kiowa County – 83
Otero County – 24
Prowers County - 74

The vast majority of tornadoes affecting the planning area are rated between F0 and F2, according to the data collected by the National Climactic Data Center. The table below presents all F3 or greater events in the planning area. According to available data, only one event greater than F3 has been

documented in the planning area. The Holly tornado, an F3, resulted in a State Disaster Declaration, two fatalities, nine injuries, and over $4 million in property damage.

Tornadoes have been costly in the planning area. Tornadoes causing over a million dollars in damage (in 2010 dollars) are listed below.

On June 10, 1967, an F2 tornado struck Baca County, touched down and stayed on the ground for approximately 14 miles. The tornado was 100 yards wide, and caused $250,000 in damages, equivalent to $1.9 million in 2018. No one was killed, but 4 people were injured by the tornado.

On October 17, 1971, and F3 tornado touched down in Kiowa County. The tornado stayed on the ground for 5.6 miles and was 500 yards wide. The tornado caused $250,000 in damages, equivalent to $1,561,018 in 2018. No deaths or injuries were reported

On May 18, 1977, and F2 tornado struck in Kiowa County. The tornado touched down and stayed on the ground for 11.1 miles. The tornado was 440 yards wide, and caused $250,000 million dollars in damage, equivalent to $1,043,254 million dollars in 2018. No deaths or injuries were reported.

On May 18, 1977, and F4 tornado struck in Baca County. The tornado touched down and stayed on the ground for 9.3 miles. The tornado was 440 yards wide, and caused 2.5 million dollars in damage, equivalent to $1,043,254,950 billion dollars in 2018. No deaths or injuries were attributed to this tornado.

On June 20, 2004, and F1 tornado struck 5 miles south of Las Animas in Bent County. The tornado touched down and stayed on the ground for 1 mile. The tornado was 100 yards wide, and caused $1 million in damage, equivalent to $1.34 million in 2018. No one was killed, but 4 people were injured by the tornado. The tornado caused severe damage to at least seven buildings at Mountain Prairie Hog Farms. Seven farrowing barns (380 feet x 60 feet) were destroyed. One pig was killed. A fire started in one of the structures when a gas line broke. Debris was scattered a few miles east southeast of the Farms.

On March 28, 2007, and EF3 tornado struck the Town of Holly in Prowers County. A few severe thunderstorms occurred over extreme southeast Colorado producing damaging winds and large hail. One supercell generated large hail, damaging winds, and two tornadoes. The tornado which struck Holly in rural northeast Prowers County and rural southeast Kiowa County had a maximum rating of EF3. The path width reached a maximum of around 900 yards in extreme northeast Prowers County. Prior to this, as the tornado moved through Holly, the path width was around 600 feet. Over 200 residences and other buildings were affected or destroyed. Two people were killed and nine others were injured. The damage path was around 28 miles long, extending into Kiowa

County. The last substantial damage with the tornado was 12 miles north of Holly, in northeast Prowers County, where a ranch sustained high end EF3 damage. As the supercell cycled through, another tornado occurred east of Towner and moved into Kansas. The tornado caused $4 million in damage, equivalent to $4.88 million in 2018.

3.1.2 Types of Debris Generated

Tornadoes causes damage to structures and personal belongings and can generate large volumes of downed vegetation, mud and soil, household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste (HHW)), plastic sheeting, vehicles and demolition debris.

Tornadoes in Southeast Colorado

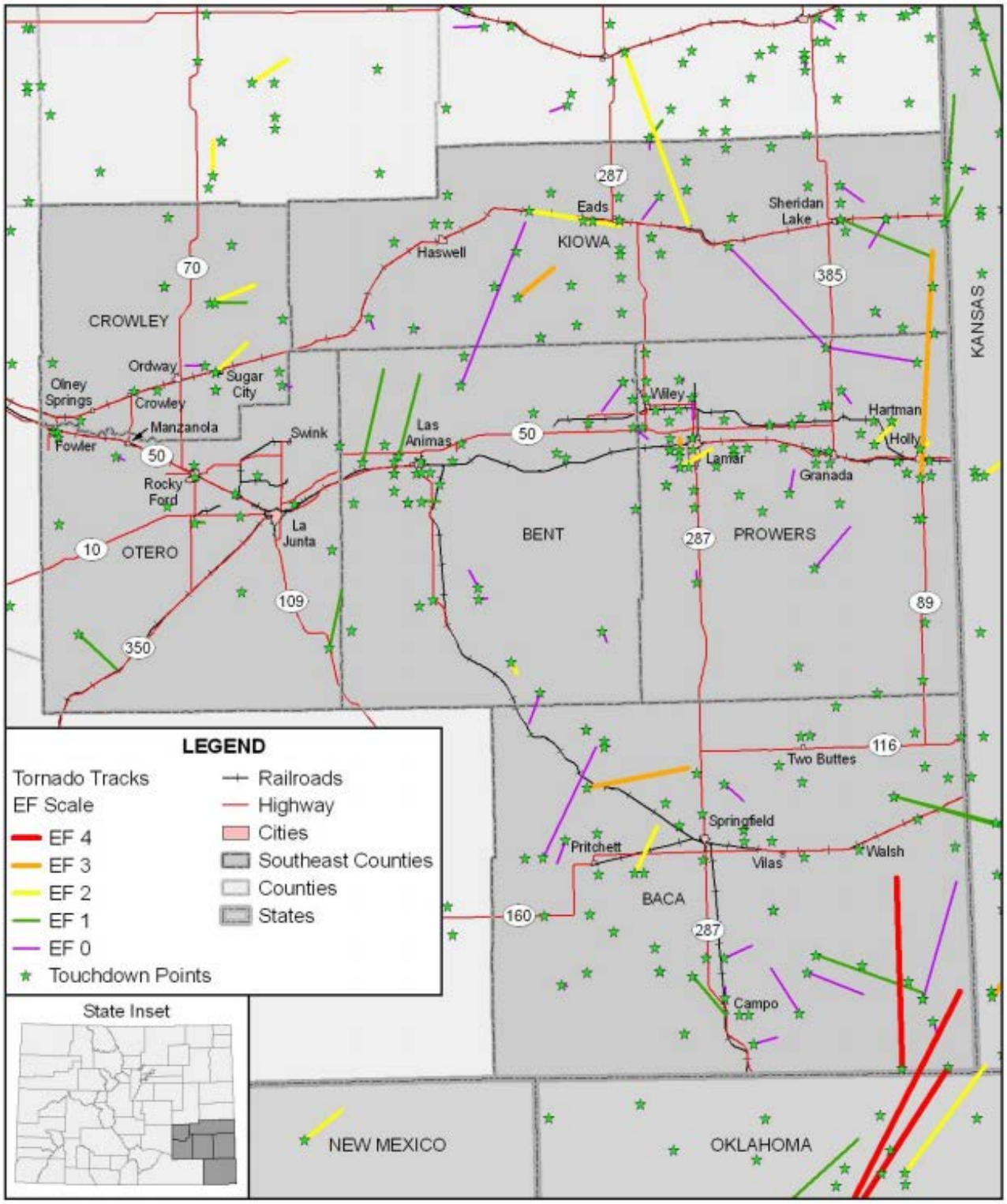

Figure 2: Tornadoes in Southeast Colorado

3.2 Winter Storms

3.2.1 Disaster Potential

Heavy snow, ice, severe winter storms, and blizzards are common occurrences in Colorado. The size of such events varies and may range in size from isolated (impacting only a portion of a county) to statewide. Generally, severe winter storm events are considered to be a regional occurrence, impacting multiple counties simultaneously and for extended time periods. The National Weather Service Glossary defines common winter storm characteristics as follows:

- Blizzard: A blizzard means that the following conditions are expected to prevail for a period of 3 hours or longer: – Sustained wind or frequent gusts to 35 miles an hour or greater; and – Considerable falling and/or blowing snow (i.e., reducing visibility frequently to less than ¼ mile).

- Heavy Snow: This generally means: – snowfall accumulating to 4" or more in depth in 12 hours or less; or – snowfall accumulating to 6" or more in depth in 24 hours or less. – In forecasts, snowfall amounts are expressed as a range of values, e.g., “8 to 12 inches.” However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as “up to 12 inches” or alternatively “8 inches or more”

- Ice Storm: An ice storm is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of ¼" or greater.

Heavy snow can immobilize a region, stranding commuters, stopping the flow of supplies, and disrupting emergency and medical services. Accumulations of snow can collapse roofs and knock down trees and power lines. In rural areas, homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, damage repair, and business losses can have a tremendous impact on cities and towns. Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days until damages are repaired. Even small accumulations of ice may cause extreme hazards to motorists.

Some winter storms are accompanied by strong winds, creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chills. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines. Blowing snow can reduce visibilities to only a few feet in areas where there are no trees or buildings. Serious vehicle

accidents can result with injuries and deaths. Heavy snowfall during winter can also lead to flooding or landslides during the spring if the area snowpack melts too quickly.

From 1993 to November 19, 2018 the region has had 115 snow or ice storm occurrences.

Snow and Ice Storm Occurrences Per County 1993-2018
Baca County – 21
Bent County – 14
Crowley County – 16
Kiowa County – 26
Otero County – 18
Prowers County - 20

March 1931 – A blizzard near Eads caused a school bus to become stuck. Tragically, 6 people died as a result. 5 were school children, and the bus driver died as well.

October 1946 – A lengthy snowstorm clobbered eastern Colorado with 20- 50 inches of snow and high winds. At least 13 people died. The storm began on Halloween. It rained that evening, then turned into snow the following day. The snow fell steadily for three days, ending up 3-5 feet deep in areas. The storm knocked out phone service. It was a slow process to open roads, taking two weeks to open up from La Junta – school kids out of Arlington couldn't get in for about two weeks as well. Arlington had an extensive feed yard system, still partly in operation in 1946. Following the storm, ranchers brought their cattle to town. 10-15% of herds died in storm, most of the rest brought to Arlington to be trucked out.

March 1977 – A blizzard on the plains of Colorado killed nine people.

October 1997 – deep snow cover over parts of the central Rockies and across the high plains of Nebraska, Kansas, and portions of western South Dakota and the panhandles of Oklahoma and Texas. Over 2 feet of snow fell in the planning area due to the storm.

March of 2005 went out like a lion over many sections of southern Colorado as an intense storm system produced heavy wet snow and high winds over the region, causing some downed power lines as well as numerous isolated power outages. The greatest snow amounts occurred in southern Bent and Otero Counties. The higher snow totals with this storm system ranged from 8 to 20 inches. 5 to 10 inches fell 20 miles northwest of Springfield in Baca County. 12 to 14 inches of snow was noted 17 miles southeast of La Junta in Bent County.

On December 20, 2006 heavy snow and blizzard conditions occurred over the western southeast plains of southern Colorado. 10 to 15 inches blanketed all six counties in the planning region.

On December 29, 2006, following on the heels of the December 20-22 blizzard, Colorado was subjected to a more severe blizzard starting on December 28th. Heavy snow and blizzard conditions impacted the southeast plains of southern Colorado. Wind gusts exceeded 55 mph, and snow amounts reached up to 48 inches. This caused snow drifts noted as high as 18 feet. The heaviest concentration of snow occurred within the Southeast region of the state (Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers). The area is home to 345,000 head of cattle and calves, 23,500 head of producing sows and 112,000 head of sheep and lambs, all with an estimated value of $500 million. Snow and transportation difficulties kept ranchers from feeding their cattle. Hay was delivered via air (using Colorado National Guard UH-60 Blackhawk helicopters and a Wyoming National Guard C-130 aircraft) and ground assets. The State of Colorado purchased $12,000 dollars of hay for this effort. Despite these efforts, over 35,000 head of cattle perished during and after the blizzard. Estimated losses were over $3 million. The Colorado Department of Transportation was a critical participant in the southeast region response operations by clearing the road networks. Preliminary estimates for their snow blowing/plowing activities were $7.1 million. Due to the nature of the storm, mass feeding also became a major operation. An example of this was the Salvation Army in Baca County, where they provided 1,155 meals over five and one-half days. They were able to transport food from Denver to the region.

During early February 2008, a winter storm produced bands of six to ten inches of snow along eastern Colorado and into Kansas and Nebraska. Many severe winter storms were reported across eastern Colorado throughout the early part of 2008. While snow accumulation generally remained below six inches, the snow was often accompanied by freezing rain and drizzle or foggy conditions. This band affected Crowley and Otero Counties This emphasizes that even smaller-scale storms have a significant impact on the planning region.

On March 24, 2010, a winter storm produced localized snow drifts up to 4 feet as well as heavy snow over a large portion of southern Colorado. Between 6 and 14 inches of snow covered the six counties in the planning area.

3.2.2 Types of Debris Generated

Winter storms can generate significant amounts of woody debris such as broken tree limbs and branches, but also includes utility lines, wires, poles/towers, and building debris from damaged roofs and structures.

3.3 Severe Weather/Wind/Hail

3.3.1 Disaster Potential

Storms in the planning area are generally characterized by heavy rain often accompanied by strong winds and sometimes lightning and hail. Approximately 10 percent of the thunderstorms that occur each year in the United States are classified as severe. A thunderstorm is classified as severe when it contains one or more of the following phenomena: hail that is 1 inch or greater, winds in excess of 50 knots (57.5 mph), or a tornado.

Thunderstorms result from the rapid upward movement of warm, moist air. They can occur inside warm, moist air masses and at fronts. As the warm, moist air moves upward, its cools, condenses, and forms cumulonimbus clouds that can reach heights of greater than 35,000 ft. As the rising air reaches its dew point, water droplets and ice form and begin falling the long distance through the clouds towards earth's surface. As the droplets fall, they collide with other droplets and become larger. The falling droplets create a downdraft of air that spreads out at Earth's surface and causes strong winds associated with thunderstorms.

There are four ways in which thunderstorms can organize: single cell, multi-cell cluster, multi-cell lines (squall lines), and supercells. Even though supercell thunderstorms are most frequently associated with severe weather phenomena, thunderstorms most frequently organize into clusters or lines. Warm, humid conditions are favorable for the development of thunderstorms. The average single cell thunderstorm is approximately 15 miles in diameter and lasts less than 30 minutes at a single location. However, thunderstorms, especially when organized into clusters or lines, can travel intact for distances exceeding 600 miles.

Thunderstorms are responsible for the development and formation of many severe weather phenomena, posing great hazards to the population and landscape. Damage that results from thunderstorms is mainly inflicted by downburst winds, large hailstones, and flash flooding caused by heavy precipitation. Stronger thunderstorms are capable of producing tornadoes and waterspouts.

The National Weather Service issues on average 72 Severe Thunderstorm Watches for the Region per year.

Lightning is an electrical discharge between positive and negative regions of a thunderstorm. A lightning flash is composed of a series of strokes with an average of about four. The length and duration of each lightning stroke vary, but typically average about 30 microseconds. Lightning is one of the more dangerous weather hazards in the United States and in Colorado. Each year, lightning is responsible for deaths, injuries, and millions of dollars in property

damage, including damage to buildings, communications systems, power lines, and electrical systems. Lightning also causes forest and brush fires, and deaths and injuries to livestock and other animals. According to the National Lightning Safety Institute, lightning causes more than 26,000 fires in the United States each year. The institute estimates property damage, increased operating costs, production delays, and lost revenue from lightning and secondary effects to be in excess of $6 billion per year. Impacts can be direct or indirect. People or objects can be directly struck, or damage can occur indirectly when the current passes through or near it.

Average Cloud-to-Ground Lightning Strikers Per year
Baca County – 8,500
Bent County – 6,700
Crowley County – 3,500
Kiowa County – 7,300
Otero County – 5,900
Prowers County – 7,200

Yearly total could-to-ground lighting strikes for the region are around 39,100.

Hail is associated with thunderstorms that can also bring high winds and tornadoes. It forms when updrafts carry raindrops into extremely cold areas of the atmosphere where they freeze into ice. Hail falls when it becomes heavy enough to overcome the strength of the updraft and is pulled by gravity towards the earth. Hailstorms occur throughout the spring, summer, and fall in the region, but are more frequent in late spring and early summer. Hailstones are usually less than two inches in diameter and can fall at speeds of 120 mph. Hail causes nearly $1 billion in damage to crops and property each year in the United States. Hail is also one of the requirements which the National Weather Service uses to classify thunderstorms as ‘severe.’ If hail more than ¾ of an inch is produced in a thunderstorm, it qualifies as severe.

There is no clear distinction between storms that do and do not produce hailstones. Nearly all severe thunderstorms probably produce hail aloft, though it may melt before reaching the ground. Multi-cell thunderstorms produce many hailstones, but not usually the largest hailstones. In the life cycle of the multi-cell thunderstorm, the mature stage is relatively short so there is not much time for growth of the hailstone. Supercell thunderstorms have sustained updrafts that support large hail formation by repeatedly lifting the hailstones into the very cold air at the top of the thunderstorm cloud. In general, hail 2 inches (5 cm) or larger in diameter is associated with supercells (a little larger than golf ball size which the NWS considers to be 1.75 inch.). Non-supercell storms are capable of producing golf ball size hail.

In all cases, the hail falls when the thunderstorm’s updraft can no longer support the weight of the ice. The stronger the updraft the larger the hailstone can grow.

Nebraska, Colorado, and Wyoming usually have the most hail storms in the United States. The area where these three states meet – "hail alley," averages seven to nine hail days per year. The reason why this area gets so much hail is that the freezing levels (the area of the atmosphere at 32 degrees or less) in the high plains are much closer to the ground than they are at sea level, where hail has plenty of time to melt before reaching the ground.

When viewed from the air, it is evident that hail falls in paths known as hail swaths. They can range in size from a few acres to an area 10 miles wide and 100 miles long. Piles of hail in hail swaths have been so deep, a snow plow was required to remove them, and occasionally, hail drifts have been reported. The Region has on average 5-6 days of severe hail over two inches in diameter.

Total hail occurrences in the region from 1950 to November 19, 2018: 1,228

Hail Occurrences per County 1950-2018
Baca County – 339
Bent County – 129
Crowley County – 82
Kiowa County – 258
Otero County – 138
Prowers County – 282

Total high wind occurrences in the region from 1950 to November 19, 2018: 321

High wind events per county 1950-2018
Baca County – 52
Bent County – 44
Crowley County – 44
Kiowa County – 82
Otero County – 47
Prowers County – 52

3.3.2 Types of Debris Generated

Severe Storms causes damage to structures and personal belongings and can generate large volumes of downed vegetation, mud and soil, household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste (HHW)), plastic sheeting, vehicles and demolition debris.

3.4 Earthquake

3.4.1 Disaster Potential

An earthquake is caused by a sudden slip on a fault. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up and the rocks slip

suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking that is felt during an earthquake. The amount of energy released during an earthquake is usually expressed as a Richter magnitude and is measured directly from the earthquake as recorded on seismographs.

Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks, such as water, power, communication, and transportation lines. Other damage-causing effects of earthquakes include surface rupture, fissuring, settlement, and permanent horizontal and vertical shifting of the ground. Secondary impacts can include landslides, seiches, liquefaction, fires, and dam failure. Seismic shaking is typically the greatest cause of losses to structures during earthquakes. Colorado is considered a region of minor earthquake activity. Geologic studies indicate there are about 90 potentially active faults in Colorado with documented movement within the last 1.6 million years. Potentially active faults, which represent the highest earthquake hazard, are those that have ruptured to the ground surface during the Holocene period (about the last 15,000 years). Faults with evidence of movement during the past 130,000 years are often considered active faults. Faults that last moved between 130,000 and 2 million years ago may be considered potentially active. Thousands of other faults exist in Colorado, but few have been studied in sufficient detail to determine their activity during the recent geologic past.
Past occurrences in the planning area were reported in the Earthquake Evaluation Report released by the CGS. The CGS also released a publication, titled "Colorado Earthquake Information 1867-1996," that provides details on past earthquakes. Based on that report, information of specific occurrences that affected the planning area are as follows:

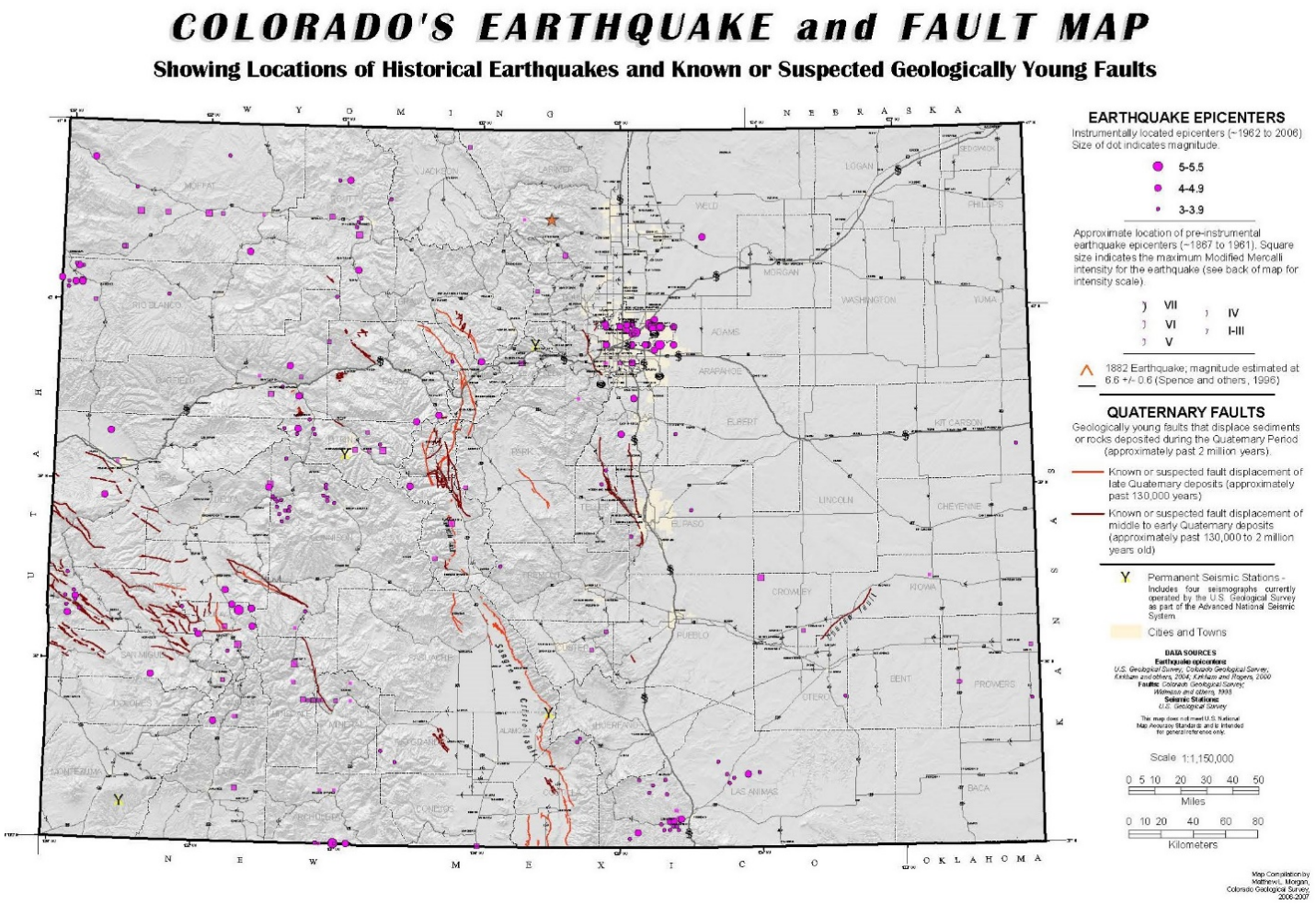

Figure 3: Colorado's Earthquake and Fault Map

Dec 4 1870 – F.A. Hadsell, writing in the Colorado School of Mines Quarterly (vol. 63, No. 1, Jan. 1968), reports the first known reference to an earthquake in Colorado occurred on December 7, 1870. The Colorado Transcript states, "A careful observer at Fort Reynolds, 20 miles east of Pueblo, noted that bottles standing 1 inch apart were knocked together violently."

Oct. 15, 1921 – The Colorado Geological Survey Humphreys (1921) and Wollard (1968) reported that an earthquake lasting for 2 to 3 seconds was felt by several in Eads. It was rated at intensity III.

Sept 29, 1928 – An earthquake shook Holly and other parts of Prowers County. Heck and Bodle (1930) described the earthquake as a rocking motion generally felt in Holly and indicated that many people were awakened and alarmed throughout the county. Stover, Reagor, and Algermissen (1984) rated this event at intensity IV.

November 28, 1955 – During the late evening on November 27, 1955 (local time) a light earthquake shook a limited area in southeastern Colorado. Murphy and Cloud (1957) stated that intensity IV was reported at Fowler and Sugar City. The CGS rated the report for the Colorado Experiment Station at III. The earthquake was also felt at Nepesta, Ordway, and Rocky Ford. Figure 4.16 is an intensity map for this event. According to the USGS quarterly series "Abstracts of Earthquake Reports", Pueblo experienced intensity IV effects. Based on the intensity map, the felt area for this event is around 1,500 km2 . Hadsell (1968) reported it at 1,000 km2 .

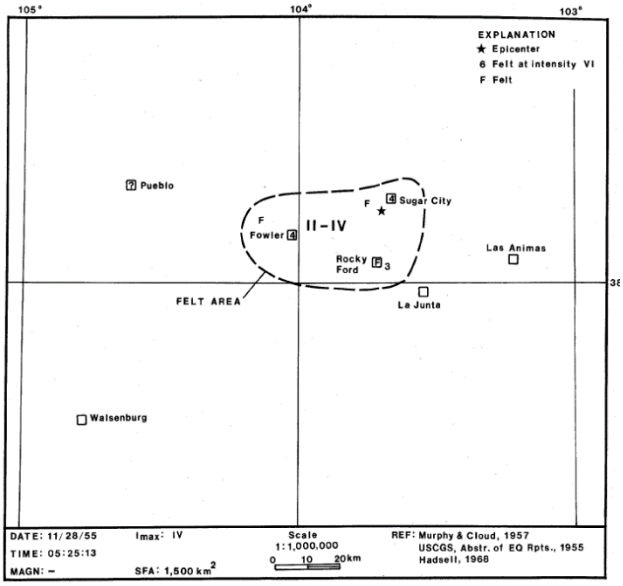

Figure 4: 1955-Nov 28 Earthquake Map

January 14, 1956 – A small earthquake on January 14, 1956 was felt in the Lamar area. Brazee and Cloud (1958) indicated it was felt by many at Lamar, causing considerable excitement and some alarm. A number of residents of Springfield also felt the quake, and a few reported creaking of buildings and rattling of loose objects. The figure to the right illustrates an intensity map for this earthquake based on the two felt reports. The felt area could be outlined in several ways, but based on our map the felt area is 9,900 km2 . Hadsell (1968) suggested the felt area was about 41,000 km2 , while Docekal (1970) reported it at 21,000 km2.

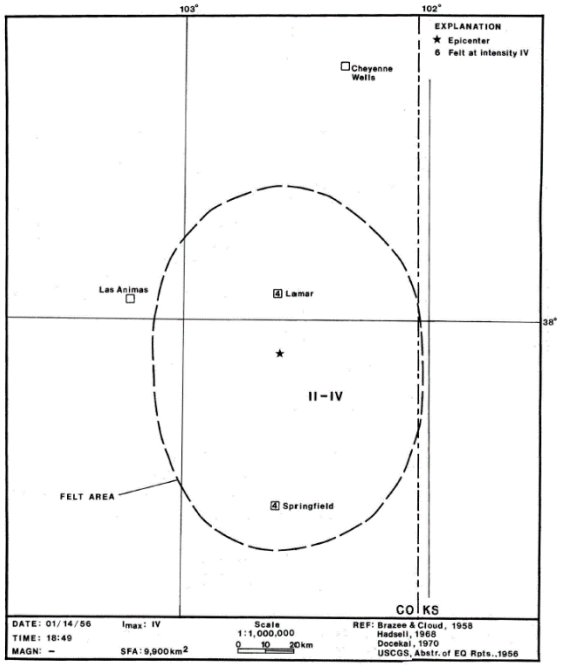

Figure 5: 1956-Jan 14 Earthquake Map

Apr. 21, 1968 – A magnitude 3.8 struck the area south of Holly in Prowers County.

Jan. 10, 2003 – A magnitude 2.9 earthquake struck the area of Lamar in Prowers County.

August 16, 2009 - An earthquake hit Colorado's plains, setting off tremors across the southeastern part of the state and into western Kansas, but causing no reported damage. The National Earthquake Information Center in Golden confirmed that a magnitude 3.9 earthquake occurred at 6:22 p.m. in southeastern Colorado, about 180 miles southeast of Denver.

3.4.2 Types of Debris Generated

Earthquake debris primarily includes building materials, personal property, and sediment from mudslides. Post-earthquake debris composition evolves with time. If the material is from damaged structures, it is likely to contain personal belongings, valuables, and mementos. For damaged structures that are still habitable, residents and businesses will usually begin soon after the main shock to clean up broken glass and ceramics, spilled foods and liquids, as well as broken furniture and appliances. Later, demolition material (including concrete, asphalt, bricks, gypsum wallboard, woody construction materials, metal, and soil) comprises the majority of the disaster-related waste stream. Putrescible household goods and other hazardous wastes may be mixed with any earthquake related debris.

3.5 Flooding

3.5.1 Disaster Potential

Floods are among the most frequent and costly natural disasters in terms of human hardship and economic loss and are usually caused by weather events. Floods can cause substantial damage to structures, landscapes, and utilities as well as life safety issues. Certain health hazards are also common to flood events. Standing water and wet materials in structures can become breeding grounds for microorganisms such as bacteria, mold, and viruses (see Section 4.2.19 Pandemic). This can cause disease, trigger allergic reactions, and damage materials long after the flood. When floodwaters contain sewage or decaying animal carcasses, infectious disease becomes a concern. Direct impacts, such as drowning, can be limited with adequate warning and public education about what to do during floods. Where flooding occurs in populated areas, warning and evacuation will be of critical importance to reduce life and safety impacts. The planning area is susceptible to various types of flood events as described below.

- Riverine flooding—Riverine flooding, defined as when a watercourse exceeds its "bankfull" capacity, generally occurs as a result of prolonged rainfall, or rainfall that is combined with already saturated soils from previous rain events. This type of flood occurs in river systems whose tributaries may drain large geographic areas and include one or more independent river basins. The onset and duration of riverine floods may

vary from a few hours to many days. Factors that directly affect the amount of flood runoff include precipitation amount, intensity and distribution, the amount of soil moisture, seasonal variation in vegetation, snow depth, and water-resistance of the surface due to urbanization. In the planning area, riverine flooding is largely caused by heavy and continued rains, increased outflows from upstream dams, and heavy flow from tributary streams. These intense storms can overwhelm the local waterways as well as the integrity of any flood control structures. The warning time associated with slow rise floods assists in life and property protection.

- Flash Flooding—Flash flooding describes localized floods of great volume and short duration. This type of flood usually results from a heavy rainfall on a relatively small drainage area. Precipitation of this sort usually occurs in the winter and spring. Flash floods often require immediate evacuation.

- Localized flooding—Localized flooding problems are often caused by flash flooding, severe weather, or an unusual amount of rainfall. Flooding from these intense weather events usually occurs in areas experiencing an increase in runoff from impervious surfaces associated with development and urbanization as well as inadequate storm drainage systems.

- Dam failure flooding—Flooding from failure of one or more upstream dams is also a concern to the planning area. A catastrophic dam failure could easily overwhelm local response capabilities and require mass evacuations to save lives. Impacts to life safety will depend on the warning time and the resources available to notify and evacuate the public. Major loss of life could result, and there could be associated health concerns as well as problems with the identification and burial of the deceased. Dam failure is further addressed in Section 4.2.3 Dam and Levee Failure.

In its common usage, the floodplain most often refers to that area that is inundated by the 100-year flood, the flood that has a 1% chance in any given year of being equaled or exceeded. A floodplain is flat or nearly flat land adjacent to a stream or river that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which are areas covered by the flood, but which do not experience a strong current. Floodplains are made when floodwaters exceed the capacity of the main channel or escape the channel by eroding its banks. When this occurs, sediments (including rocks and debris) are deposited that gradually build up over time to create the floor of the floodplain. Floodplains generally contain unconsolidated sediments, often extending below the bed of the stream.

Flooding has occurred frequently within the planning area. Major floods have affected the planning area. Numbers of Major Floods by County are listed below

Total major flood events in the Southeast region: 70

Baca County – 8
Bent County –10
Crowley County – 5
Kiowa County – 8
Otero County – 16
Prowers County – 23

3.5.2 Types of Debris Generated

Flooding causes damage to structures and personal belongings and can generate large volumes of downed vegetation, mud and soil, household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste (HHW)), sandbags, plastic sheeting, vehicles and demolition debris. Landslides are often associated with flooding and result in debris consisting of soil, gravel, rock, and some construction material.

Watersheds in Southeast Colorado

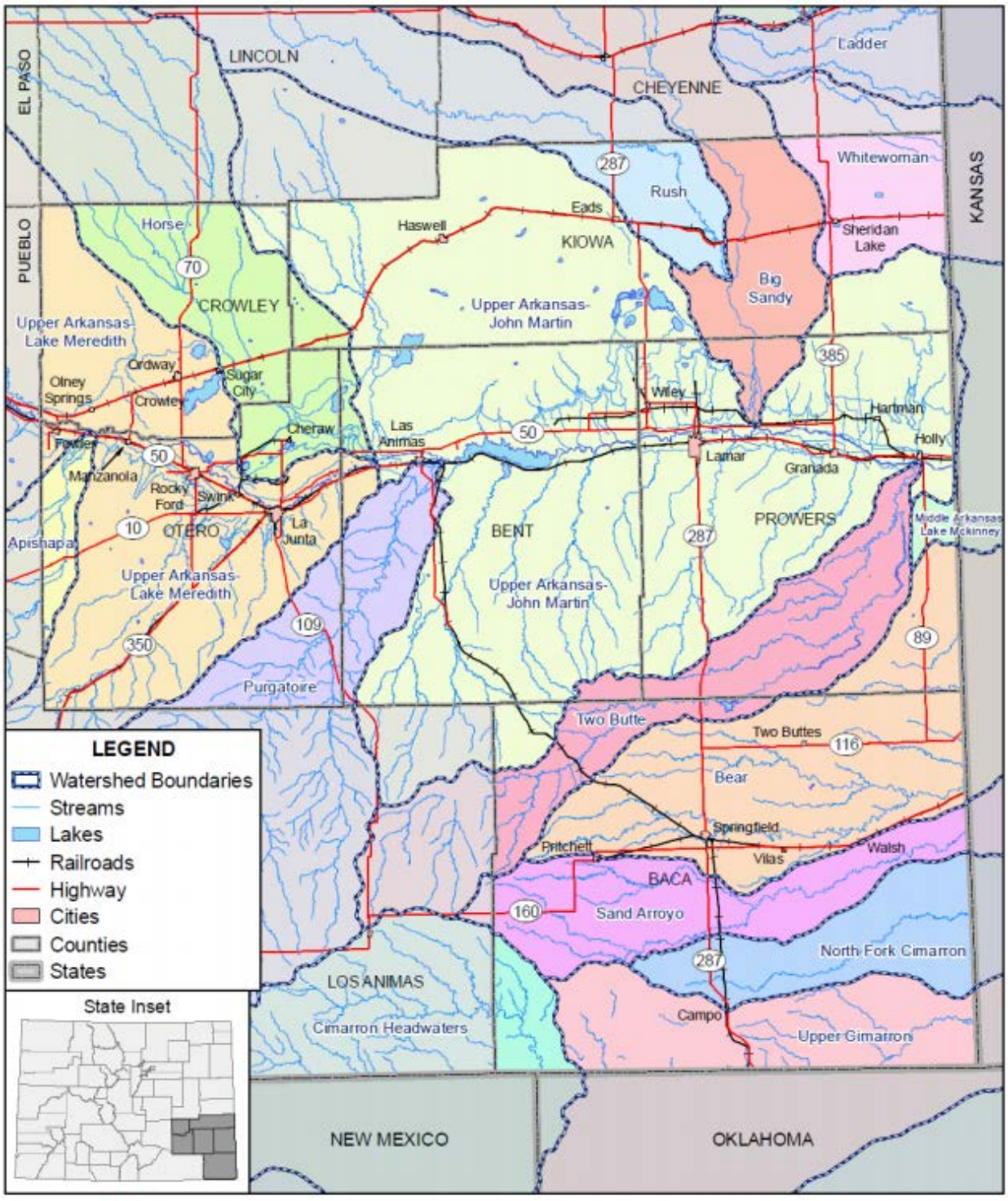

Figure 6: Watersheds in Southeast Colorado

3.6 Dam/Levee Failure

3.6.1 Disaster Potential

A dam is a barrier constructed across a watercourse that stores, controls, or diverts water. Dams are usually constructed of earth, rock, concrete, or mine tailings. The water impounded behind a dam is referred to as the reservoir and is measured in acre-feet, with one acre-foot being the volume of water that covers one acre of land to a depth of one foot. Due to topography, even a small dam may have a reservoir containing many acre-feet of water. Dams serve many purposes, including agricultural uses; providing recreation areas; electrical power generation; and erosion, water level, and flood control.

A dam failure is the collapse, breach, or other failure of a dam that causes downstream flooding. Dam failures may result from natural events, human-caused events, or a combination thereof. Due to the lack of advance warning, failures resulting from natural events, such as hurricanes, earthquakes, or landslides, may be particularly severe. Prolonged rainfall that produces flooding is the most common cause of dam failure.

Dam failures usually occur when the spillway capacity is inadequate and water overtops the dam or when internal erosion through the dam foundation occurs (also known as piping). If internal erosion or overtopping cause a full structural breach, a high-velocity, debris-laden wall of water is released and rushes downstream, damaging or destroying whatever is in its path. Overtopping is the primary cause of earthen dam failure in the United States.

Dam failures can also result from any one or a combination of the following causes:

- Prolonged periods of rainfall and flooding, which cause most failures;
- Inadequate spillway capacity, resulting in excess overtopping flows;
- Internal erosion caused by embankment or foundation leakage or piping;
- Improper maintenance, including failure to remove trees, repair internal seepage problems, replace lost material from the cross-section of the dam and abutments, or maintain gates, valves, and other operational components;
- Improper design, including the use of improper construction materials and construction practices;
- Negligent operation, including the failure to remove or open gates or valves during high flow periods; and
- Failure of upstream dams on the same waterway.

High winds can cause significant wave action and result in substantial erosion around dams and spillways. Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety will depend on the warning time and the resources available to notify and evacuate the public. Major loss of life could result as well as potentially catastrophic effects to roads,

bridges, and homes. Associated water quality and health concerns could also be issues. Factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of development and infrastructure located downstream; and the speed of failure.

In general, there are three types of dams: concrete arch or hydraulic fill, earth-rockfill, and concrete gravity. Each type of dam has different failure characteristics. A concrete arch or hydraulic fill dam can fail almost instantaneously: the flood wave builds up rapidly to a peak then gradually declines. An earth-rockfill dam fails gradually due to erosion of the breach: a flood wave will build gradually to a peak and then decline until the reservoir is empty. And, a concrete gravity dam can fail instantaneously or gradually with a corresponding buildup and decline of the flood wave.

The Colorado Division of Water Resources Dam Safety Branch assigns hazard ratings to large dams within the State. Two factors are considered when assigning hazard ratings: existing land use and land use controls (zoning) downstream of the dam. Dams are classified in three categories that identify the potential hazard to life and property:

- High hazard indicates that a failure would most probably result in the loss of life
- Significant hazard indicates a failure could result in appreciable property damage
- Low hazard exists where failure would result in only minimal property damage and loss of life is unlikely.

Privately owned high and significant hazard dams are required by Colorado regulations to have Emergency Action Plans (EAPs) in place. Federally-owned high hazard dams are also required to have EAPs by federal regulations. According to the State Hazard Mitigation Plan, all high-hazard dams in Colorado have EAPs in place, which provide for the emergency response procedures in the event of a dam emergency event. According to the National Performance of Dams Program (NPDP) database, housed in the Department of Civil and Environmental Engineering at Stanford University, there are 319 high hazard dams in Colorado. According to HAZUS, and data from the National Inventory of Dams (NID) and NPDP, there are dams in each county that pose a risk to people or property should the dam fail. These dams are:

Baca County
- Two Buttes CO00759

Bent County
- John Martin Reservoir CO01283
- Adobe Creek CO00515

Crowley County
- Lake Henry CO01116

- Lake Meredith CO01836

Kiowa County

- Nee-Noshe CO02024
- Queen CO02026

Otero County

- Crooked Arroyo Detention Catchment 1 CO00519
- Crooked Arroyo Detention Catchment 2 CO01837
- Crooked Arroyo Detention Catchment 3 CO00520
- Crooked Arroyo Detention Catchment 4 CO00521
- Dye CO 01847
- Horse Creek CO 01046
- Holbrook CO 01835

Prowers County

- Thurston Lake CO01851

Levees in the region are:

Bent County

- Las Animas North
- Las Animas South

Otero County

- Arkansas River
- King Arroyo

Prowers County

- Wolf Creek Channel – Granada North
- Wolf Creek Channel – Granada South
- South Granada Ditch – Granada
- Arkansas River – Town of Holly
- Wildhorse Creek – Town of Holly
- Willow Creek North– Town of Lamar
- Willow Creek South – Town of Lamar

3.6.2 Types of Debris Generated

Flooding causes damage to structures and personal belongings and can generate large volumes of downed vegetation, mud and soil, household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste (HHW)), sandbags, plastic sheeting, vehicles and demolition debris. Landslides are often associated with flooding and result in debris consisting of soil, gravel, rock, and some construction material.

High and Significant Hazard Dams in Southeast Colorado

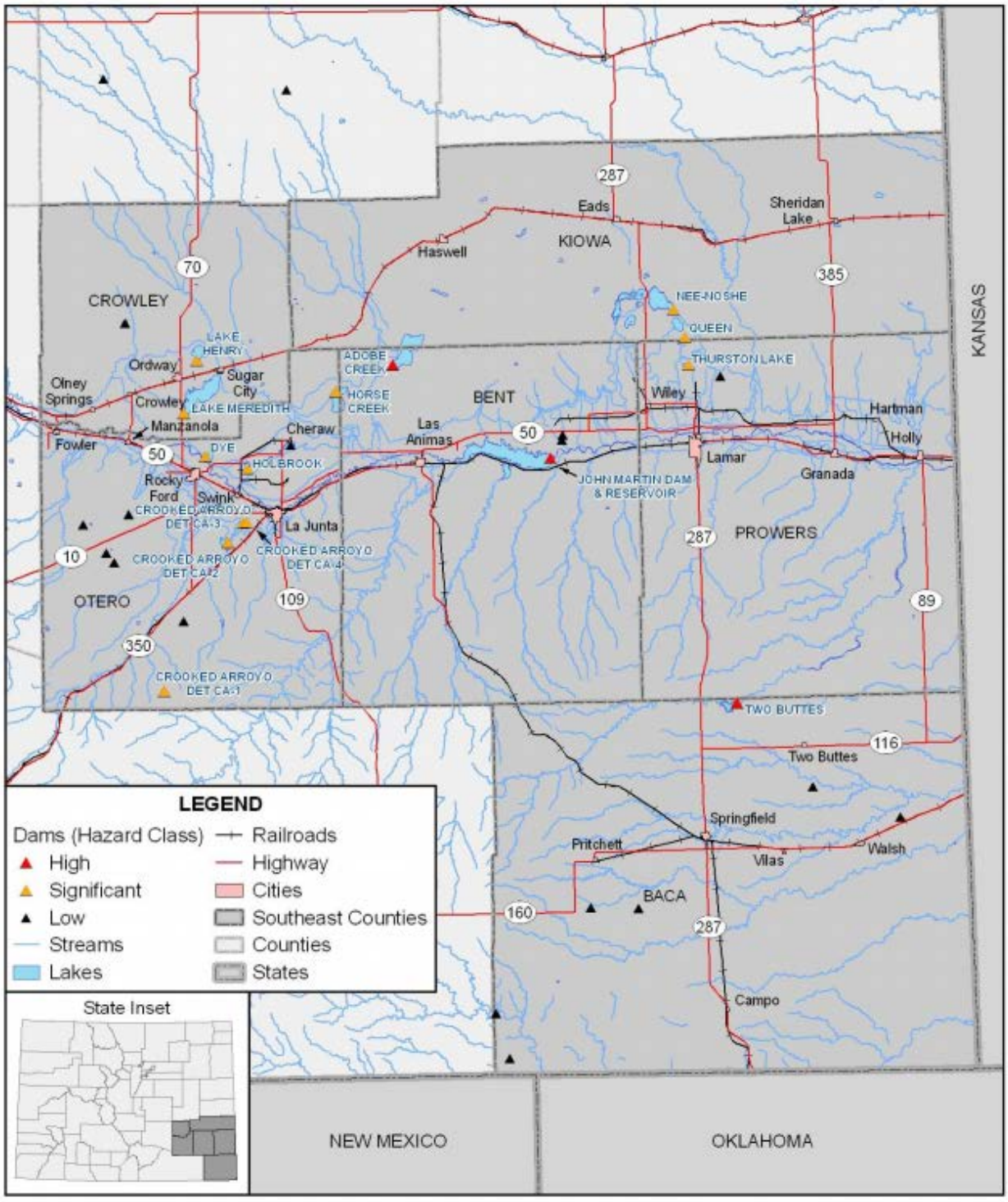

Figure 7: High and Significant Hazard Dams in Southeast Colorado

3.7 Wildfires

3.7.1 Disaster Potential

The Colorado Division of Fire Prevention and Control (DFPC) defines wildfires as "an open fire which spreads unconstrained through the environment. If not quickly controlled, the result can be a firestorm, often termed a 'conflagration,' which destroys large amounts of property and threatens lives."

Wildfires occur everywhere in Colorado. In the Southeast Colorado All-Hazards Region, the most common kinds of wildfires are grassland fires, which occur along railroad tracks, roads, in fields, and in the prairie land. Wildfires occur naturally (often through lightning strikes) and also from human causes, both intentional and accidental. Examples of human-driven causes of wildfire include campfires, sparks from railroad cars or engines, discarded cigarette butts, and grills. Droughts may increase the number of wildfire incidents by drying out fuel sources. Insect epidemics and forest parasites may also increase the number and severity of wildfires.

Wildfires are most likely to occur during the fire season, which extends from mid-spring to late fall, and is most prominent during the driest summer months of July and August. However, the fire season's duration is impacted by local fire conditions. Fire conditions are impacted by hot weather, vegetation growth, and low moisture content in air and fuel. These conditions, especially when combined with high winds and years of drought, increase the potential for wildfire to occur. The wildfire risk is predominantly associated with the wildland-urban interface (WUI). The WUI is made of up of areas where development is interspersed or adjacent to landscapes that support wildland fire. While traditionally associated with forested mountain areas, WUI areas are also present in grasslands, prairies, valleys, or in any area where a sustained wildfire may occur and impact developed areas. Fires in the WUI may result in major losses of property and structures, threaten greater numbers of human lives, and incur larger financial costs. In addition, WUI fires may be more dangerous than wildfires that do not threaten developed areas, as firefighters may continue to work on more dangerous conditions in order to protect structures such as businesses and homes. As the development of WUI areas increases, the likelihood of a severe wildfire also increases.

Historically significant wildfires are listed below.

June 15, 2006 - Strong winds caused 19 fires to consume 15,000 acres of grassland across northeastern Prowers County near Holly. At times, flames reached 40 feet in length. Fortunately, only two structures were destroyed, an abandoned house and a garage.

December 1, 2007 - a wildfire near Hasty burned several hundred acres and three empty mobile homes. A truck driver drove off the road due to thick

smoke. The truck was consumed by the wildfire. Two other semi-trailers ran off the road as well, and some power lines were burned. The highest winds across the southeast plains occurred around La Junta, where winds gusted to around 60 mph. Wildfires broke out in Pueblo County, Crowley County, and Bent County.

April 15 and 16, 2008 - the Ordway Fire, which resulted in Fire Management Assistance Declaration FM-2760, was caused by an unpermitted prescribed burn south of the City of Ordway. Strong winds spread the blaze rapidly east northeastward. Highways 96 and 71 were shut down, as 8,900 acres of grassland was consumed. Firefighters from 35 agencies battled the blaze. Twenty-four structures were destroyed west and north of Ordway. Over 150 power poles were destroyed. The entire Town of Ordway was evacuated. Tragically, two firefighters perished when the truck they were in plummeted into a culvert, where a bridge had burned out. Over $5 million of property damage were attributed to this fire. In addition to the damages to property, there were other economic damages. According to members of the community, the location of the fires near large herds of cattle caused stress in herds. Many cattle lost three to five percent of their body weight, resulting in millions of dollars of lost income for area ranchers.

April 1, 2010 - A wind-driven grass fire forced the evacuation of residents. The fire started around 3 p.m. along the Arkansas River near CR21 and Highway 266. The fire burned nearly 1,000 acres. An irrigation pump house was destroyed, along with some irrigation pipe.

April 17, 2018 – A wind driven wildfire burnt over 50,815 acers in Baca County and Stanton County Kansas. The fire began in Baca County and was driven by winds and burnt 24 structures during the inferno.

The number of large wildland fires that have occurred in the region are listed below by County:

Baca County – 7
Bent County – 4
Crowley County – 3
Kiowa County – 1
Otero County – 7
Prowers County – 3

3.7.2 Types of Debris Generated

Flooding from Level or Dam Failures can cause damage to structures and personal belongings and can generate large volumes of downed vegetation, mud and soil, household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste (HHW), sandbags, plastic sheeting, vehicles and demolition debris. Landslides are often associated with flooding and result in debris consisting of soil, gravel, rock, and some construction material.

4 Concept of Operations

This section provides an overview of the debris management cycle, including normal operations, including normal operations, increased readiness, response, and recovery. A brief discussion of the roles and responsibilities of the various levels of government in debris management is also provided. The County-Specific Annexes provide information regarding EOC activation and organization and assignment of responsibilities for debris management within the respective county.

4.1 Debris Management Cycle

Normal Operations and Increased Readiness tasks are, in part, addressed by this RDMP and the corresponding County-Specific Annexes. These tasks can be performed before a debris-generating event occurs. The Response part of the Debris Management Cycle is also known as Phase I; the primary focus of this phase is on clearing debris from the roadway for emergency resources. The Recovery part of the Debris Management Cycle is also known as Phase II; this phase includes debris removal, reuse, recycling, and disposal.

1. Normal Operations – Non-Disaster Activities

    a. Develop local and regional resource list of contractors who can assist local governments in all phases of debris management.

    b. Develop comprehensive DMP, including but not limited to: mutual aid agreements, sample contracts, pre-identified debris storage sites, lifeline and critical routes for priority clearing, Public Information Officer (PIO) planning and public education.

    c. Train and Exercise the debris management plan to ensure personnel with responsibilities are familiar with the plan and can implement the plan.

2. Increased Readiness

    a. Designate a Debris Manager (DM) to manage disaster-related debris and to coordinate debris management activities with local, regional, State, and Federal government representatives, waste haulers, and solid waste processing facilities.

    b. Establish procedures and sites for temporary storage and processing of disaster debris.

    c. Evaluate the DMP on an established schedule, or as appropriate

3. Response (Phase I)

a. Identify and prioritize debris removal sites considering critical facilities and roadways.

b. Begin public removal and/or contract privately for removal of debris.

c. Identify and eliminate debris-related threats to public health and safety.

d. Restore delivery of garbage and recycling collection services.

e. Provide information to the public regarding debris-related health issues.

f. Track debris management costs and debris tonnage processed.

4. Recovery (Phase II)

a. Identify and prioritize remaining debris removal sites. Emphasize recovery operations that provide reuse and recycling options for debris.

b. Remove or contract for removal of debris from sites not cleared during response operations.

c. Establish controls to prevent or minimize illegal dumping and theft of services.

d. Provide information and direction to the public regarding the handling of all categories of disaster-related debris.

e. Track debris management costs and debris tonnage processed. Submit claim for Federal assistance if applicable.

Specific actions and activities related to Phase I and Phase II are described in more detail in Sections 5.0 and 6.0.

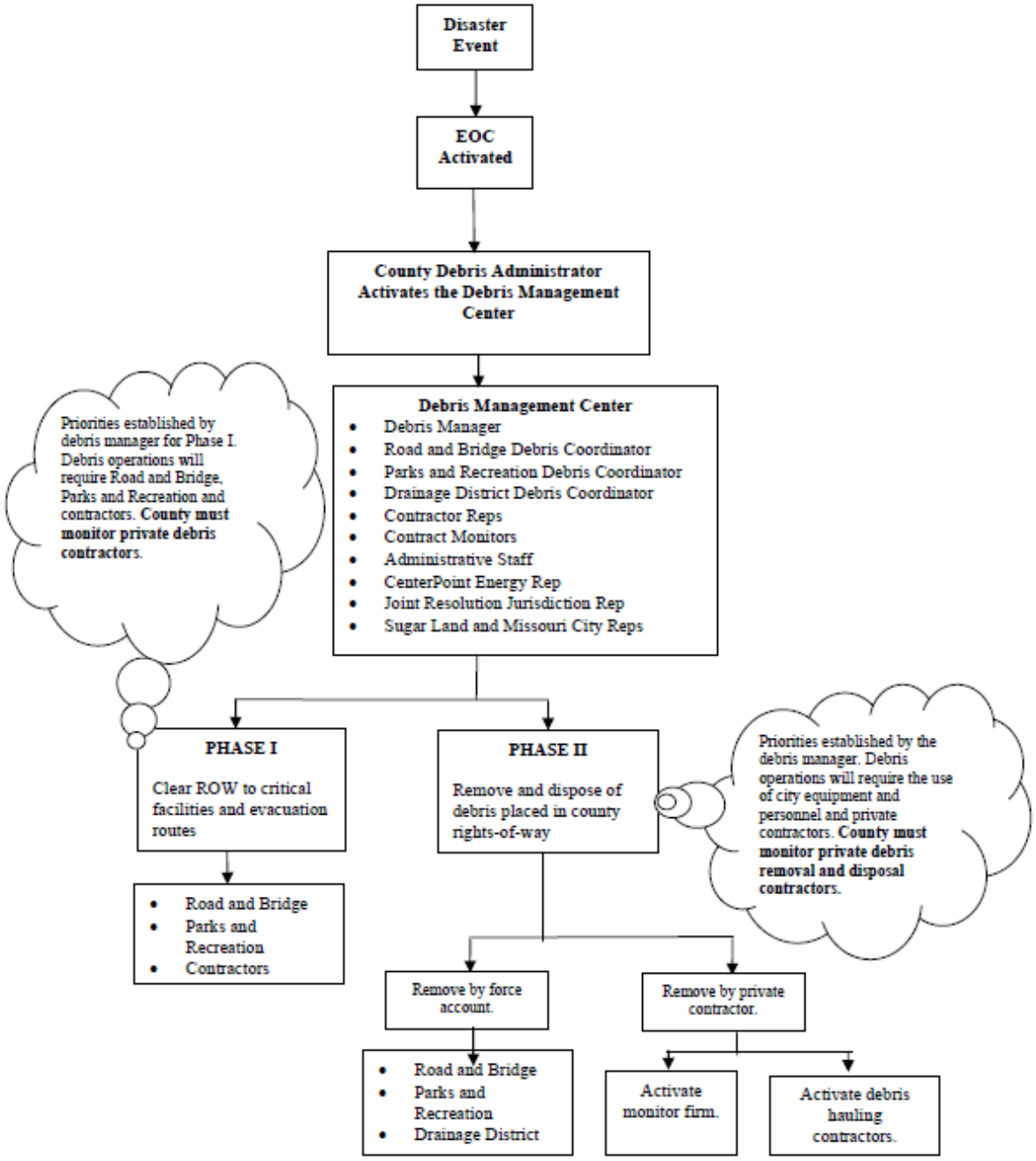

Figure 8: Regional/County Debris Management Flow Diagram

4.2 Government Roles

In most cases, debris clearance, removal, and disposal actions can be accomplished quickly, using municipal and, potentially, State resources. In other cases, however, the damage and resulting debris in a region is so extensive that it can only be successfully managed through adequate pre-planning and the coordinated efforts of Federal, State, and local governments. Leveraging contracts with private resources may also be necessary. Disaster debris on State property will be the cleanup responsibility of the State. The roles of government and the private sector in managing disaster debris are discussed below.

4.2.1 Municipalities

Municipalities have debris management responsibilities within their own boundaries. These responsibilities include administration of franchise-hauling activities, management of public information programs, emergency contracting, and designation of emergency drop-off points and Temporary Debris Storage and Reduction (TDSR) sites. Municipalities are responsible for performing damage assessments to identify necessary lifesaving actions, assess the magnitude of damage and determine whether additional resources are needed from other local governments or the State; this damage assessment report will be completed in accordance with the local EOPs. Response efforts may be accomplished with local force account labor and equipment, contractors, volunteers and assistance from adjacent communities. At the time of this writing no cities within the Region have prepared their own DMPs. Municipalities without a DMP will rely heavily on their respective counties for debris management support. Municipalities requesting assistance will channel requests through their county EOC.
Most Municipalities maintain equipment such as trucks, rubber tire loaders, graders, chippers, chain saws, small cranes, dozers, and backhoes with experienced operators who can be used to open roads and remove debris. Temporary hires may be added by a city to provide additional labor and equipment. Municipalities may have entered into mutual aid agreements with other cities or their respective counties; mutual aid agreements are discussed in Section 7.9.

4.2.2 Counties

Counties have debris management responsibilities, such as solid waste collection services, for unincorporated areas within their borders; they are also responsible for solid waste disposal at transfer stations and landfills. The responsibilities are similar to those outlined for the cities. When a municipality's capacity is exceeded, the Counties provide the next level of assistance. Counties within the Region will activate mutual aid agreements and contact each other for assistance with debris management before requesting assistance from the State. Counties within the Region maintain equipment and operators that can be used to open roads and remove debris from across the Region.

The County-Specific Annexes contain information detailing the breakdown of responsibilities of departments within a county.

Each county has designated a department that has lead debris management responsibilities. Because there is variation in the titles of the designated departments there is the need to develop consistent titles for use in this RDMP that can apply uniformly to each county. Table 4-2 provides each county's corresponding LDMD

Table 1: County lead debris management responsibilities

County	Department
Baca	Baca County Road and Bridge
Bent	Bent County Road and Bridge
Crowley	Crowley County Road and Bridge
Kiowa	Kiowa County Road and Bridge
Otero	Otero County Road and Bridge
Prowers	Prowers County Road and Bridge

Each county LDMD will designate a DM who will have overall responsibility for the operations, planning, logistics, and finance of the debris management activities. The DM will lead the Debris Management Task Force (DMTF), which will consist of one representative from each department the DM identifies as having debris management responsibilities, a PIO, and any other representative the DM deems appropriate (i.e. emergency managers and franchise hauler representatives). The PIO may be identical with the county PIO, rather than assigning a debris specific PIO; in this case the county PIO would disseminate debris information to the public. The exact number of DMTF members will depend on the severity of the situation and availability of personnel for each county. DMTF members may be staffed with personnel already assigned to other EOC positions. The DMTF will establish Debris Estimating Teams (DET) and

Field Inspection/Monitoring Teams (FIT) and will assign Site Monitors based on availability of personnel following an event.

4.2.3 State

A number of State agencies have a stake in (and oversight of) many disasters related debris management activities, including the Colorado Department of Public Health and Environment (CDPHE), the Colorado Department of Transportation (CDOT), the Colorado National Guard, and the Colorado Department of Agriculture – Natural Resources Division (CDA-NRD). Each is described briefly below. In addition, Colorado Emergency Management (OEM) serves as the counties' liaison to FEMA during a disaster and cleanup. Government response should be coordinated through appropriate local and/or State EOC's that have been activated for the disaster so that effective mutual aid may occur; on the county level this would be done through the County's EOC.

4.2.3.1 Colorado Division of Homeland Security and Emergency Management

Colorado Division of Homeland Security and Emergency Management (DHSEM) through the Office of Emergency Management and the Field Services section will provide technical assistance and give advice to local governments on planning, response, recovery, protection and mitigation activities as well as disaster finance. DHSEM also has responsibility for resource mobilization and assistance to local governments during a disaster or emergency. DHSEM through the State Emergency Operations Center and State Volunteer Agency Liaison (VAL) maintains resource lists and contacts of potential volunteers that could be used to augment government and/or contractor resources for debris removal among other things. DHSEM is the point of contact for State assistance including requesting National Guard Resources. DHSEM will also coordinate any Federal Resource requests from the local jurisdictions. DHSEM also maintains the State Emergency Operations Center (SEOC) to facility the states response and resources.

4.2.3.2 Colorado Department of Public Health and Environment

In Colorado CDPHE is the lead agency for solid waste disposal and regulations. During a disaster CDPHE can offer assistance with guidance on disposal, permitting, materials management, and compliance. CDPHE can grant exceptions for landfills that may not accept all kinds of debris as an example asbestos or animal carcasses.

4.2.3.3 Colorado Department of Transportation

As one of Colorado's designated emergency response agencies, CDOT plays an important supporting role in emergency response and disaster recovery. A functional transportation system is crucial for getting emergency responders and lifesaving supplies where they need to go and in helping promote economic recovery after a disaster. CDOT is responsible for clearing and removing debris from State highways and may be able to provide personnel and equipment to the counties.

4.2.3.4 Colorado National Guard

If counties request assistance from the State, the State may choose to deploy the Colorado National Guard in response. The Colorado National Guard also has heavy equipment and operators that may be used to clear debris. The Colorado National Guard is ordered through the Colorado Division of Homeland Security and Emergency Management and authorized only by the Governor of the State of Colorado.

4.2.3.5 Colorado Department of Agriculture

Farm Service Agency (FSA) programs, discussed under the subsequent Federal portion of this RDMP, are administered through the CDA. The FSA has local offices throughout the State that often coordinate with the Colorado State University Extension Service, Natural Resources Conservation Service, and/or the local soil and water conservation district office. The CDA and DNR can provide guidance on disposing of dead animals. Generally, animal carcasses cannot be burned in the open; however, the open burning of carcasses of animals that have died or been destroyed because of an animal disease emergency is allowed when authorized by CDA and CDPHE.

4.2.4 Federal

The legal authority for Federal assistance in natural disasters comes from the Stafford Act, which sets forth Federal disaster relief responsibilities, procedures, and conditions for Federal assistance. Among many other activities, the Stafford Act authorizes debris removal in "the public interest…from publicly and privately owned lands and water." The President makes the final decision to declare an area a major disaster and therefore eligible for Federal assistance. In such instances, FEMA will give to the United States Army Corps of Engineers (USACE) a mission assignment to prepare, execute, and monitor contracts for debris operations. Typically, when a mission is assigned by FEMA, the USACE will provide a liaison to the EOC when activated. This liaison will serve as an advisor to EOC staff, providing advice as needed and ensuring that USACE is prepared to respond when tasked. USACE will alert a Debris Planning and Response Team (PRT) and the Advance Contracting Initiative (ACI) Contractor under contract for that area and have those resources ready to respond when a mission assignment is authorized. Once USACE receives a mission assignment from FEMA, the management groups for both the PRT and ACI contractor will be available to meet with the DMTF and other representatives to conduct contingency planning as required.

In addition to FEMA and USACE, Federal agencies that may be available to provide assistance are the United States (U.S.) Environmental Protection Agency (EPA), the United States Coast Guard (USCG), the United States Department of Agriculture (USDA), and the U.S. Department of Transportation (DOT) Federal Highway Administration (U.S. DOT FHWA). Each is briefly described below.

4.2.4.1 Federal Emergency Management Agency

FEMA is the lead Federal agency that responds to disasters and emergencies to help save lives and protect public health, safety, and property. Its most visible role in disaster recovery and debris management consists of administering the PA Grant Program, which provides supplemental Federal disaster grant assistance to states and local governments (in this case, the counties). FEMA's PA staff will assemble a debris management team for the size and scope of the disaster. This team is

responsible for providing debris-related technical assistance to applicants and managing the PA grant process. The PA Grant Program is administered through a coordinated effort among FEMA, the affected state, and the applicants (counties). Communication and coordination among all of these agencies is important. Understanding FEMA requirements prior to an emergency enables a community to recover the maximum allowable for cleanup costs. For this reason, this RDMP is based on FEMA guidance and discusses FEMA requirements, even though a disaster may not qualify for reimbursement.

In 2013 under the Sandy Recovery Improvement Act of 2013 FEMA began a Pilot Program incentive to State, Tribal and Local governments, or owner or operator of a private nonprofit facility to have a Plan in place and accepted by FEMA prior to the declaration of a major disaster or emergency declaration. A Plan is a written document establishing procedures and guidance for managing disaster debris in an expeditious, efficient and environmentally sound manner. Recipients and sub-recipients may refer to the *Public Assistance Debris Management Guide* (FEMA 325) for more extensive details regarding items to consider in development of a Plan.

When a recipient or sub-recipient has a Plan determined acceptable by FEMA and has identified at least one or more pre-qualified contractors before the date of the disaster declaration incident period, FEMA will provide a one-time incentive of a two (2) percent increased cost share adjustment for the first 90 days of debris removal activities, beginning the first day of the declared incident period, provided the Plan is implemented for that disaster.

4.2.4.2 Army Corps of Engineers

USACE plays a key role in support of FEMA and other Federal agencies. Typical USACE activities and mission assignments regarding debris management include assessing building structural safety, conducting emergency repair of public infrastructure, and performing debris removal and disposal operations. This agency can provide support by either a Technical Assistance mission or a Direct Federal Assistance mission assignment. The USACE may be able to respond for up to 10 days without a Presidential Declaration.

4.2.4.3 Environmental Protection Agency

EPA is the primary Federal agency responsible for administering the Resource Conservation and Recovery Act (RCRA). Under RCRA, EPA issues regulations and guidelines to properly manage solid and hazardous waste and provides technical assistance to states and local governments. EPA also provides support and technical assistance on appropriate solid waste management practices, although the final decision on the management of these materials lies with State and local officials. EPA implements the Recycling Electronics and Asset Disposition (READ) services contract. It provides recycling and asset disposition services on a government-wide basis for the recycling of electronic equipment and the disposal of

excess or obsolete electronic equipment in an environmentally responsible manner. Counties may be able to utilize this vehicle through FEMA. EPA is also the primary Federal agency responsible for providing emergency support related to the release of hazardous materials and providing support under the NRF. EPA also provides support to local and State agencies in properly managing debris deemed hazardous, including household hazardous waste (HHW). Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), and the National Response Center (NRC), EPA may be able to provide support even when disasters are not federally declared.

4.2.4.4 United States Coast Guard

The USCG supports USACE in responding to marine debris contaminated with oil or hazardous substances; assistance includes marking and coordinating with USACE for the removal of obstructions declared to be hazards to navigation and aiding in vessel salvage and removal of vessel debris.

4.2.4.5 Department of Agriculture – Natural Resources Conservation Service and Farm Service Agency

The Natural Resources Conservation Service (NRCS) is limited in its authority in that debris-related activities are limited to either runoff retardation or soil erosion prevention in response to a sudden impairment in the watershed which creates an imminent threat to life or property. Typically, this includes debris within, or close proximity to, a channel. The program is called the Emergency Watershed Protection Program (EWP). The EWP's purpose is to undertake emergency measures for runoff retardation and soil erosion prevention on any watershed impaired by fire, flood, or any other natural occurrence. The FSA Emergency Conservation Program (ECP) provides emergency funding and technical assistance for farmers and ranchers to rehabilitate farmland damaged by natural disasters, including removal of debris and restoration of fences and conservation structures. Since these programs address private property the public will be made aware of this potential assistance through the PIO. The USDA also provides leadership, technical expertise, and assistance for the management of animal carcasses. They may also provide engineering and contracting/procurement personnel and equipment to assist in emergency removal of debris. The USDA is part of the Woody Biomass Utilization Group (WBUG), which seeks to utilize biomass produced from disasters.

4.2.4.6 Federal Highway Administration

The U.S. DOT FHWA assists in the emergency repair of Federal roads. State and local transportation agencies are empowered to begin emergency repairs immediately. Properly documented costs will be reimbursed once the FHWA division administrator determines that the disaster is eligible for funding; the types

of activities that are eligible for Federal funding include those related to road surfaces, debris removal, and demolition and reconstruction of damaged bridges.

4.3 Public Information

Informing the public about debris management before an event strikes will make dealing with the aftermath easier. The PIO will coordinate with other public information agencies, through a Joint Information System (JIS) or Joint Information Center (JIC) to keep the public informed of all debris removal activities and schedules. Public notifications will be arranged immediately after a disaster and continually throughout the removal and disposal operation.

Notifications could include:

- Information bulletins
- Hotline responses
- Public service announcements for radio and television,
- Handbills (a loose printed sheet to be distributed by hand)
- Door hangers
- Newspaper notices
- Community Meetings
- Social Media postings/information
- The Ability to communicate in different languages for those who do not speak English
- American Sign Language Interpreters should be used

Notices will emphasis the actions the public can perform to expedite the clean-up process, including separating flammable and nonflammable debris, segregating household hazardous waste, placing debris at the curbside, keeping debris piles away from fire hydrants and valves, reporting locations of illegal dump sites or incidents of illegal dumping, and segregating recyclable materials. The public will also be kept informed of important debris removal activities such as debris pick-up schedules, disposal methods, and ongoing actions to comply with State and EPA regulations, disposal procedures for self-help and independent contractors, and restrictions and penalties for creating illegal dumps.

The PIO will be equipped to answer questions from the press and residents. In past disasters problems arose when people did not understand the clean-up process and therefore became impatient with the process and resorted to illegal burning, dumping, and other improper management methods. Public information will be disseminated following the guidance and procedures outline in ESF #15 in each county’s EOP.

Counties may also consider advertising to encourage private citizens to submit their name and contact information if they are interest in using any by-products of debris removal, recycling, and reductions. The advertising would include the types of products that may be available and who to contact for more information regarding the program.

5 Phase I – Response Operations

Previous sections of this RDMP have provided an overview of the types of debris generating events and corresponding debris that could be expected in the Region; defined the planning environment surrounding the RDMP; and outlined the process of debris management and the roles of various local, State, and Federal agencies. Subsequent sections provide additional detail regarding Phase I and Phase II activities.

As outlined in Section 4, debris management operations are divided into two phases. Phase I operations typically occur during the first 24 to 72 hours following an event. During this phase the major emphasis of the counties is to push debris from the traveled way to the right-of-way or curb to open emergency evacuation routes and roadways to critical facilities and affected areas. Little or no effort is made to remove debris from the right-of-way, only to provide debris clearance to key access routes to expedite the following tasks:

- Movement of emergency vehicles and life-saving resources into impacted areas;
- Law enforcement;
- Resumption of critical services; and
- Assessment of damage to key public facilities and utilities such as schools, hospitals, government buildings, and municipal owned utilities.

Debris clearance priorities are as follows:

- The first priority for debris clearance includes roadways that allow ingress and egress to critical public facilities such as fire stations, police stations, hospitals, and other critical facilities as identified by the counties in their respective EOPs.
- Second priority will be given to essential facilities, including schools, municipal buildings, water treatment plants, wastewater treatment plants, power generation units, airports, temporary shelters for disaster victims, etc.
- Third priority for debris removal teams to address will be the elimination of debris related threats to public health and safety. This will include such things as the repair, demolition, or barricading of heavily damaged and structurally unstable buildings and systems.

The County-Specific-Annexes contain critical route maps, lists of critical facilities, and listings of prioritized county, State, and Federal roads within each county. Phase I includes several possible damage assessments. The assessments are not debris-specific and, at the county level, are coordinated by the county department and/or personnel designated in the respective county EOP. However, the process is outlined here to help provide insight into how debris estimation can be incorporated into the assessments. The DMTF will ensure that a debris estimating team (DET) is part of the assessments to collect data specific to debris management needs.

Generally, the initial damage assessment (IDA) is performed first, this assessment examines the damages and costs related to a disaster, the impact of the disaster on the community, and which State or Federal programs are most appropriate possibilities for providing needed assistance. While the IDA is being conducted, the American Red Cross (ARC) will be performing a preliminary damage assessment (PDA) or windshield survey; the PDA should occur within the

first 24 hours. It may be possible to coordinate the IDA with the ARC rather than duplicate the work. If efforts are coordinated with the ARC, the DMTF will ensure that a DET is present. Following the PDA, the ARC will perform an onsite detailed damage assessment (DDA) within the first 72 hours. Although other emergency responders may not participate in the DDA, it may be useful to continue collecting debris information; the DM will determine if a DET should continue collecting debris estimations.

Post-disaster safety inspections of buildings may also provide debris-estimating data. The inspections are performed by local building inspectors and qualified specialty inspectors. Once safety inspections of critical facilities within the affected area are complete the DM will coordinate with the inspectors to obtain pertinent debris data for assessment of the full scope of the debris clearance, removal, and disposal effort (i.e. number of public facilities tagged with a red "Unsafe Use" placard may result in demolition debris requiring disposal).

Clearance activities will be performed by force account employees and private contractors. At the discretion of the DMTF, each force account employee and contractor will be given an initial route for clearing and will be directed to respond with all due haste, personnel, and equipment. In accordance with FEMA guidance, Time and Material contracts will only be used for emergency debris removal during the first 70 hours following a disaster. Time and Material contracts are discussed in Section 7.

If the situation requires time and material contracts for periods longer than 70 hours, FEMA must review these situations on a case-by-case basis to determine if it is reasonable to extend reimbursement beyond 70 hours. During Phase I, counties will work with utility providers to ensure that power lines do not pose a hazard to emergency work crews and to determine the damage done to utility systems. Restoration of damaged energy utility infrastructure and accompanying systems is coordinated through ESF #12 of the county EOPs.

Also during Phase I, the county DMTFs will review their respective lists of TDSR sites and identify which sites should be opened based on initial observations of the location and volume of debris. Remaining legal, environmental, Historical Preservation, and health issues related to TDSR sites will also be addressed and resolved prior to activation of the TDSR site, which occurs in Phase II operations.

The DMTF will coordinate the restoration of garbage and recycling collection services during Phase I, if they were disturbed by the event and if appropriate (i.e., if there are residents still living in the area to participate in garbage and recycling services). Residents will be informed of when debris operations will take place in their neighborhoods and of any debris-related health issues, either through a DMTF PIO or the County PIO.

Documentation of debris management costs and decisions is important to ensure that resources are being used efficiently and the maximum Federal reimbursement is received. The DMTF will facilitate the documentation of costs through the close coordination and tracking of personnel, equipment, and debris tonnage processed.

Once all debris clearance priorities have been addressed force account workers and contractors will be directed by the DMTF to begin Phase II operations.

6 Phase II – Removal Operations.

Phase II operations usually begin after the emergency access routes are cleared and the residents return to their homes and begin to bring debris to the public rights-of-way. Phase II consists of removing, segregating, and disposing of the debris that hinders the orderly recovery of the community and poses a less immediate threat to health and safety. Operations usually begin within 72 hours of an event and can last for months, or even years. During this phase debris is moved either to TDSR sites for volume reduction and separation then disposal, or to landfills for permanent disposal. Under most circumstances, the counties will terminate their Time and Materials contracts and move into unit price contracts during Phase II.

Damage assessments performed, generally, during the transition from response to recovery include the Joint PDA and possible a Rapid Needs Assessment. The Joint PDA provides the Governor with the information necessary to determine whether to request a presidential major disaster declaration. The Rapid Needs Assessment typically occurs immediately following a presidentially declared major disaster or emergency. As with the IDA, the DM will ensure that a DET is part of the Joint PDA if deemed necessary.

Once the appropriate assessments have occurred, the DMTF will identify and prioritize debris removal sites and make the final determination regarding which TDSR sites should be opened and whether additional sites need to be identified. If not already completed, the environmental baseline studies of TDSR sites will be completed before the TDSR sites are activated; TDSR site are discussed in more detail in Section 8. Early in Phase II operations it will be important for the DMTF PIO or County PIO to notify citizens of debris procedures through public information campaigns.

The Region will use a combination of source segregated debris collected and collection centers. Source segregated collection means residents are directed to sort the debris by material type and place it at the curb in separate piles. Trucks designated for a particular debris type collect the assigned debris and deliver it to TDSR or disposal facility. This is the best method to use to meet the Regions goal of maximizing recycling and reduction of debris over land fill disposal. Source-segregated debris collection offers the potential of high salvage value and efficient recycling/reduction processing. This method is important when collecting hazardous and environmentally sensitive debris, such as household hazardous waste and white goods. Both types of debris are discussed at the end of this section. Collection centers will be facilitated by making certain TDSR sites open to the public where they can transport their debris to a common location. This will be important to service residents who live in rural areas where it might not be possible to move the debris to the curb.

Once citizens have started to segregate debris at the curb side the DMTF will use force account personnel and/or contractors to move debris from public property to the TDSR sites or landfill sites as appropriate. The affected areas will be divided into definable sectors for control purposes, and bids will be solicited based on the sectors and the estimated cubic yards or tonnage

of debris in each. Each county's DMTF will monitor the debris disposal contracts to ensure that public funds are properly accounted for and that contractors perform according to contract requirements. Throughout Phase II operations the DMTF will track debris management costs and debris tonnage processed and will submit a claim for Federal assistance if applicable.

Debris removal will generally be limited to debris in, upon, or brought to public streets and roads, right-of-ways, city and county properties and facilities, specifically designated critical private facilities (such as hospitals) and other public facility sites. In some cases, debris will be removed from private property as well. Subsequent sections discuss the removal of debris from public and private property, and special consideration for HHW and white goods.

6.1 Public Property/Right-of-way Debris Removal

Initial debris that is moved from the roadway is deposited at the curb or right-of-way during Phase I. There is little time or concern for sorting debris at this time. The objective is to provide for the safe movement of emergency and support vehicles into and out of the disaster area. As removal operations progress, the initial roadside piles of debris become the dumping location for additional yard waste and other storm-generated debris such as construction material, personal property, and trash; white metals such as refrigerators, washers, dryers and hot water heaters, and roofing; and even household, commercial, and agricultural chemicals. FEMA assistance is not available to reimburse private property owners for the cost of removing debris from their property; however, if property owners move the disaster-related debris to a public right-of-way, a county can qualify to be reimbursed for the pickup and disposal of the debris. The extent and duration of this type of work is carefully controlled; FEMA and county officials will agree on a time frame during which pick-up from the curb will be eligible for PA funding.

During debris removal from public property/right-of-way the respective county DMTF will determine whether local contractors will be needed to assist in Phase II operations and whether additional State and/or Federal assistance will be required. They will also develop independent teams using the local and county personnel to monitor the removal activities, and the monitors will be the eyes and ears for the DMTF in the field.

Daily update briefings with key debris managers will be conducted and all major debris removal and disposal actions will be reviewed and approved by the DMTFs or their designated local representatives. A representative of the corresponding DMTF will attend all briefings to resolve any coordination problems between State and Federal debris removal efforts and local debris removal and disposal efforts. The DMTF will also coordinate with local, tribal, and State DOT and law enforcement authorities to ensure that traffic control measures expedite debris removal activities.

Not all debris removed from public property is eligible for FEMA PA funds. The DMTF will ensure that the requested reimbursement is only for debris management that eliminates immediate threats to lives, public health and safety; eliminates immediate threats of significant damage to improved public or private property; and/or ensures economic recovery of the affected area to the benefit of the community-at-large.

6.2 Private Property Debris Removal

Debris removal from private property is the responsibility of the individual property owner, aided by insurance settlements and assistance from volunteer agencies. FEMA assistance is generally not available to reimburse private property owners for the cost of removing debris from their property; however, if property owners move the disaster-related debris to a public right-of-way, a county can qualify to be reimbursed for the pickup and disposal of the debris. The extent and duration of this type of work is carefully controlled; FEMA and county officials will agree on a time frame during which pick-up from the curb will be eligible for PA funding.

If the debris on private business and residential property is so widespread that public health, safety, and/or the economic recovery of the community is threatened, FEMA may fund debris removal from private property, but it must be approved in advance by FEMA. The counties should also execute hold harmless and right of entry agreements prior to entering the property. Additionally, the counties should obtain agreements from the private property owners to transfer any proceeds from debris removal covered by their insurance policy.

ONLY disaster-related debris removal costs not covered by insurance are eligible for reimbursement.

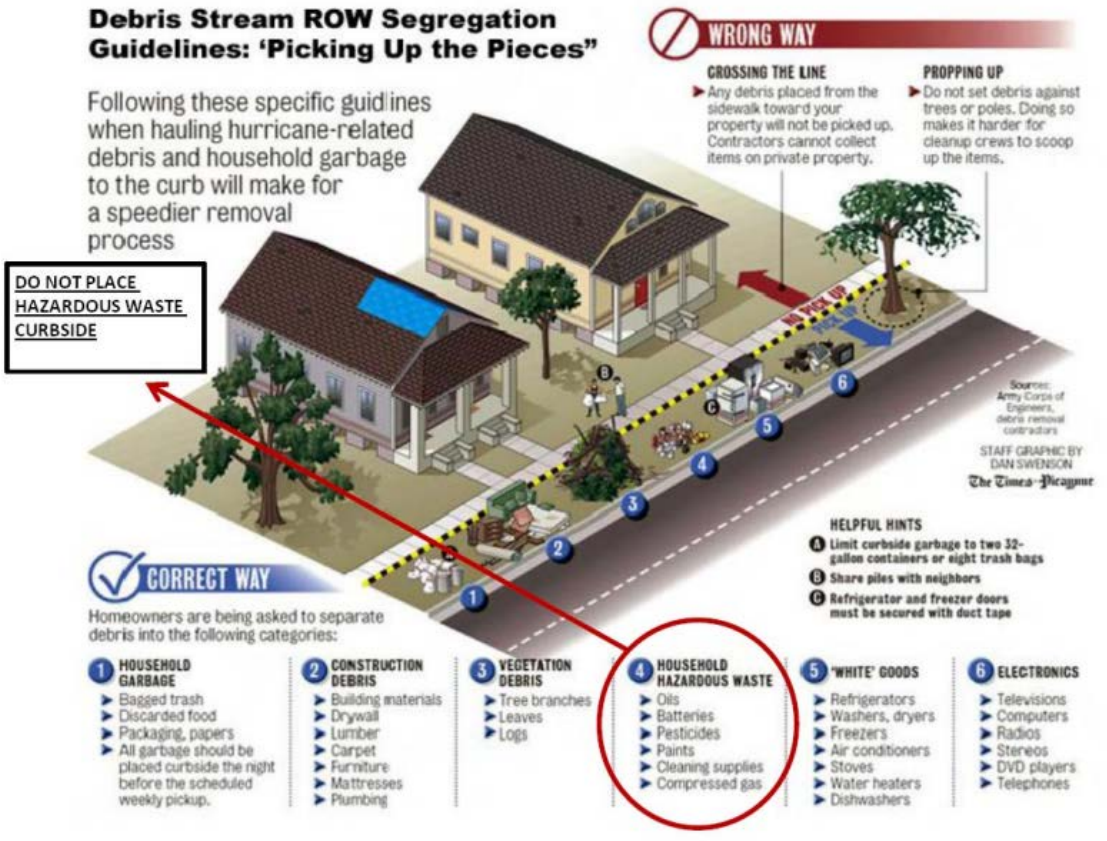

Figure 9: Debris Stream Right-of-Way Segregation Guidelines:

6.3 Household Hazardous Waste

Pickup and disposal of household hazardous waste is another component of Phase II operations. Typical HHW includes paints, thinners, used oil, batteries, cleaning products, solvents, fluorescent light bulbs, and pesticides. Many household items are also considered electronic wastes (e-wastes). Examples of e-waste are computer CRT monitors, CRT televisions, VHS cassette players, and other electronic appliances and are also considered "universal wastes" (hazardous wastes). These HHWs should not be disposed of with normal solid waste.

FEMA recommends that HHW is picked up in at least three passes through a community, with about two weeks between each pass; this allows enough time for citizens to return home and move debris to the curbside. Following an event, the respective DMTF will determine the number and frequency of collections, based on actual conditions following the event. Sufficient public notification and assessment and monitoring of the recovery efforts will also affect the scheduling of pickups. Just as with normal debris removal operations the Region will collect
HHW at curbside and specific disposal sites.

This public information program for HHW should include disseminating the following information to residents:

1. A description of the drop-off point collection program being implemented;
2. The responsible agency for the program with contact person and telephone numbers;
3. The locations of the drop-off points;
4. The hours of operation;
5. A description of the types of HHW being collected at each location; and
6. Any other relevant information

6.4 White Goods

White goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters.

Residents will be instructed to separate their white goods at the curbside. They will be collected and taken to a TDSR site for processing. Disposal options and procedures for white goods are included in Section 9.

7 Contracts and Agreements

This section discusses types of contracts; FEMA-related contracting issues such as reasonable cost and ineligible contracts; important things to consider when monitoring contractors; and the

type of site monitors required during debris removal. This section also includes a discussion of legal agreements to indemnify and limit liability, sample forms, and regional contractors.

The DMTF will identify the department responsible for managing debris contracts from project inception to completion. Managing debris contracts includes monitoring performance, contract modifications, inspections, acceptance, payment, and closing out of activities. The counties are encouraged to enter into cooperative agreements with other State agencies and local governments to maximize public assets. Section 9.8 discusses such agreements.

7.1 Reasonable Cost

FEMA will only reimburse reasonable cost for disaster debris removal. FEMA defines "reasonable" as a cost that is both fair and equitable for the type of work being performed. The reasonable cost requirement applies to all labor, materials, equipment, and contract costs awarded for the performance of eligible work.

7.2 Types of Contracts

There are three types of contracts that local governments can enter into for reimbursement. These contracts described below, include Time and Materials, Unit Price and Lump Sum.

7.2.1 Time and Materials (T&M)

T&M contracts are based on the price of labor and equipment when it is operating and are extremely flexible. T&M contracts may be used for short periods of time immediately after a disaster to mobilize contractors for emergency clearance efforts. They will have a dollar ceiling or a not-to-exceed limit for hours (or both) and will be terminated immediately when this limit is reached. This contract qualifies for reimbursement for the first 70 hours of debris clearance and only when all city and State equipment has been committed elsewhere.
The contract will state that:

a. The price for equipment applies only when equipment is operating;

b. The hourly rate includes operator, fuel, maintenance, and repair;

c. The county reserves the right to terminate the contract at its convenience; and

d. The county does not guarantee a minimum number of hours.

7.2.2 Unit Price Contracts

Unit Price Contracts are based on weights (tons) or volume (cubic yards) of debris hauled and should be used when the scope-of-work is not well defined and based on estimated quantities. A Unit Price Contract:

a. Ensures a wide range of competition because of the simplicity of the contract;
b. Allows the scope of work to be easily increased or decreased because unit pricing for the work accomplished is established at the time of the bidding process;
c. Provides an accurate account of actual quantities transported in either cubic yards or tons;
d. Requires contract monitoring at both loading sites and at the disposal sites;
e. Has a relatively low risk to the contractor;
f. Carries some risk of contract fraud if loading and disposal operations are not closely monitored;
g. Is complicated if additional segregation for recycling and disposal is required at the staging sites;
h. Requires all trucks to be accurately measured and numbered; and
i. Requires a significant amount of documentation and accurate accounting.

7.2.3 Lump Sum Contracts

Lump Sum Contracts establish the total contract price using a one item bid from the contractor. Lump sum contracts can be defined in one of two ways:

a. Area Method. Where the scope of work is based on a one-time clearance of a specified area. The Area Method:

    i. Requires minimum labor for monitoring,
    ii. Requires that contractors shoulder most of the risk,
    iii. Does not require quantities to be documented,
    iv. Must have a clear, definable scope of work that can be quantitatively measured by the contractor
    v. Often makes it difficult to quantify what debris will be brought to the right-of-way for removal, and
    vi. Results in a high probability of claims if debris estimates are difficult to estimate and require speculation

b. Pass Method. Where the scope of work is based on a certain number of passes through a specified area, such as a given distance along a right-of-way. The Pass Method:
    i. Requires minimum labor for monitoring,
    ii. Defines scope better than the Area method and decreases the risk of claims caused by quantity speculation,
    iii. Does not require quantities to be documented,

iv. Must have accurate, up-to-date plans and information on all roads that will be included in the "pass" scope of work,
v. Requires the public to cooperate in the removal process,
vi. Requires that the contracting agency must be successful in communicating with the public in the removal area,
vii. Provides three to four passes, depending on the magnitude of the disaster,
viii. Solicits a price for each pass and a total job price, and
ix. Clearly defines any debris segregation requirements, road locations, time intervals between passes and required time frame to complete each pass.

7.3 Ineligible Contracts

FEMA will not provide funding for the following types of contracts:

a. Cost-plus-percentage of cost contracts,
b. Contracts contingent upon receipt of local Government or Federal disaster assistance funding, and
c. Contracts awarded to debarred contractors.

7.4 Site Monitors

Site monitors assigned by the DMTF will monitor contractor activities at two locations; the collection point and the processing/storage site, to ensure satisfactory performance. Monitors will be trained and have a good understanding of eligible and ineligible debris to ensure that ineligible debris is not picked up. The DMTF will provide site monitors from their own staff.
Monitoring will include control of load tickets, verification that all debris picked up is a eligible under the terms of the contract; measurement and inspection of trucks to ensure they are fully loaded; on-site inspection of pick up areas, debris traffic routes, temporary storage sites, and disposal areas; verification that the contractor is working in its assigned contract areas; verification that all debris reduction and disposal sites have access control and security. Site monitors will ensure that contractors comply with the contract through training, enforcement of separation at the site, and monitoring of trucks at the facility. The monitors will periodically visit facilities to enforce contract requirements.

The DMTF will provide the following three types of monitors:

1. Field Inspection Teams (FIT)
    a. FIT will periodically monitor each TDSR site to ensure that operations are being followed as specified in the contractor scope of work and contract with respect to local and Federal regulations and the Baseline Checklist.
    b. Each Field Inspector will submit a daily report, such as the USACE Inspector's Quality Assurance Report describing their observations.
    c. FIT will periodically monitor loading sites and prepare daily reports describing their observations.
    d. FIT will also periodically canvass the city and report on the location of any illegal dumping sites.

2. Load Site Monitors
    a. The Load Site Monitors will be assigned to each contractor loading site within the designated debris areas.
    b. The Load Site Monitor will initiate the load tickets that verify the debris being picked up is eligible under the terms of the contract. They will be responsible for ensuring that the information outlined in Section 9.6 is on the load ticket. The Load Site Monitors will also:
        i. Complete a Record of Loads; and
        ii. Daily Quality Assurance Report and a Productive Equipment Hours Report.

3. Disposal Site Monitors
    a. The Disposal Site Monitors will be stationed at all TDSR sites, hardfill sites, recycling facilities, and landfill sites for the purpose of verifying the quantity of material being hauled by the contractor through the use of load tickets.
    b. TDSR site monitors will use the inspection stations at each TDSR site, which allows for a clear view of the load bed of each piece of equipment used to haul debris. The TDSR site contractor is responsible for constructing and maintaining the monitoring stations. TDSR Site monitors will also complete a monitoring report.
    a. Disposal Site Monitors will verify the load and estimate the volume of debris in cubic yards and record the estimated quantity on the preprinted load tickets. The Disposal Site Monitor will also ensure any remaining items on the load ticket are completed. The following sections on the bottom portion of the load ticket needs to be completed by the Disposal Site Monitor.

In addition to the specific site monitor tasks, each site monitor will also be trained and knowledgeable of the following contract monitoring issues:

- Even when homeowners take time to separate flammable, nonflammable, and other hazardous debris, contractors may place everything into the truck or push the curbside debris to a cul-de-sac or intersection and load it there.
- Site delays may be caused by the need to establish initial tare weights for each truck going across the landfill site's scale. Tare weights will be established using other scales, if available, before debris hauling begins.
- Overweight or unsafe trucks may result in State ODO enforcement officers issuing fines to the contractors.
- Commercialized containerized haulers will not be allowed to dump for free because they normally include the tipping fee as part of the overall costs.
- Ensure that contractors do not add excessive amounts of water to debris prior to loading; however, minimal amounts of water may be necessary to keep down dust.
- Ensure that contractors do not add excessive amounts of non-debris related dirt and sand; however, some minimal dirt pickup is unavoidable.

- Inaccurate truck capacities, either from improperly measured trucks or modified truck beds; trucks not fully loaded; or trucks lightly loaded (i.e. only tree tops).
- Loads exceeding capacities; for example, if a truck has a capacity of 80 cubic yards, then that is the maximum that should be allowed.
- Changing truck numbers because trucks are measured and volumes calculated then listed by truck number.
- Reduced truck capacity; for example, steel mesh welded above the normal truck bed.
- Pick-up of ineligible debris.
- Multiple counting of the same load; for example, trucks of debris come into the disposal site, are counted, drive out of the site— still fully loaded—and return with the same load.
- Metal plates in the truck bed placed after the truck was initially weighed.

Example monitoring forms such as a Tower Monitoring Form, Roving Monitoring Form, Daily Issue Log, and Productive Equipment Hours Report are included in Appendix G – Forms.

Type of Contract	PW Scope of Work	Monitoring Required					Comments
		Crew Efficiency	Collection Site	DMSs	Disposal Site	Compliance	
Lump-Sum	Defined debris quantities and reasonable costs. Estimate is basis for contract costs.		✓		✓		• Assess debris eligibility at collection site • Quantities are required to determine reasonable costs and establish change orders • Ensure ONLY debris from within contract limits is processed
Unit Price – CY	Based on eligible debris listed on load tickets.	✓	✓	✓	✓	✓	• Assess debris eligibility at collection site • Document debris quantities • Verify debris processing volumes
Unit Price – Ton	Based on actual weight measurements of eligible debris listed on load tickets.	✓	✓	✓	✓	✓	• Assess debris eligibility at collection site • Document debris quantities • Verify debris processing weights • Verify calibration of scales
Time-and-Materials	Based on labor, equipment, and materials records. Reasonable costs evaluated by determining costs per unit.	✓	✓		✓	✓	• Assess debris eligibility at collection site • Typically used for road clearance activities during the Response Phase • Eligible costs are typically limited to 70 work hours • Supervising and monitoring every work crew is required • Tracking debris removal quantities is still required to determine reasonable costs

Source: FEMA Disaster Assistance Fact Sheet 9580.203, *Debris Monitoring*

Table 2: Monitoring Requirements by Contract Type

7.5 Load Tickets

The contractor will only be paid based on the number of cubic yards or tonnage of material deposited at the disposal site as recorded on the debris load tickets. One part of the load ticket will be given to the truck driver, one part retained by the site monitor, and the third part returned to the site inspector through the contractor's authorized superintendent or foreman. The truck driver's portion of the load ticket will be turned in daily to his or her supervisor. The site monitor's copy will be turned in daily to the coordinator for the DMTF. Payment for hauling debris will only be approved upon presentation of the duplicate debris load ticket with the contractor's invoice to the DMTF. Load tickets will include the following:

- Preprinted ticket number;
- Contract number;
- Prime Contractor's name, Sub Contractor's name if applicable;
- Date of the work;
- Truck number;
- Truck capacity in cubic yards;
- Load size, either in cubic yards or tons;
- Truck driver's name;
- Type of debris such as woody, construction and demolition (C&D), metals, white goods, mixed, household hazardous waste, etc.
- Zone/Sector;
- Dumpsite location;
- Loading time (from work site) and odometer reading;
- Dumping time (at disposal site);
- Loading site monitor; and
- Dumping site monitor.

An example Load Ticket can be found in Appendix G – Forms.

7.6 Sample Truck Certification Form

A sample truck certification form can be found in Appendix G – Forms. Utilizing truck certification forms will assist Site Monitors in detecting issues outline in Section 9.4, which result either from an oversight by the contractor or from deliberate intention to inflate the volume or tonnage of debris.

7.7 Regional Contractors

During an emergency, local contractors will play an important role in debris management. If an emergency is widespread enough to affect more than one county in the Region there may be a strain on resources. The table provided in Appendix I – Regional Contractors presents a list of pre-qualified contractors that could be contracted during an emergency; the list includes general personnel crews, heavy equipment

resources, and chainsaw operators that have been identified in the Region. Each county will be responsible for making sure the contractors listed in its county are correct and will share that information with the other counties.

In the case of widespread damage resource may be needed from contractors outside the Region. The counties will contact other county Emergency Managers for assistance if the need arises. The two pre-qualified contractors for each county and documentation demonstrating how the list was obtained can be found in the County-Specific Annexes.

7.8 Sample Contracts and Generic Scope of Work

Sample contracts and generic scopes of work (SOW) are found in Appendix K – Sample Contracts and Scopes of Work. They include a sample SOW for an Equipment Leasing Contract, Unit Price Contracts, Time and Material Contracts, and Lump Sum contracts. Individual counties may choose to develop their own sample contracts and generic SOWs; if so, those documents can be found in the County-Specific Annexes.

7.9 Mutual Aid Agreements

Counties within the Region have existing mutual aid agreements, Appendix H - Agreements includes an example mutual aid agreement that could be used if new partnerships are identified that would benefit the debris removal process. The counties have an existing Inter-County Mutual Aid Agreement, which enables them to provide emergency assistance to each other during times of emergency in the form of supplemental personnel, equipment, materials or other

7.10 Legal Agreements to Indemnify and Limit Liability

Legal agreements to indemnify and limit liability may be needed for several instances; TDSR sites, accessing private property to remove eligible debris. Existing agreements for each county can be found in the county-specific annex. Also, TDSR sites that have been identified that require agreements but have not yet been obtained are identified in the counties' TDSR site table. An example Right-of-Entry Agreement can be found in Appendix K – Sample Contracts and Scopes of Work.

8 Temporary Debris Storage and Reduction Sites

Temporary debris storage and reduction (TDSR) sites are located and designed to temporarily store, segregate, transfer, and reduce debris for reuse, recycling, or final disposal. Potential staging sites to be considered during an emergency are landfills, large paved or unpaved lots, industrial properties, sites near rail access, and expansion of existing sites. TDSR sites are expensive and may not always be necessary. The DMTF will ensure that a TDSR site is

necessary and cost effective before it is opened. In small disasters, entities with available landfills or debris not easily reduced or recycled might not need such a facility. The DM and DMTF will provide listings of potential TDSR sites as part of plan maintenance.

Based on a maximum debris pile stack height of 10 feet (3.33 yards), one acre of land could hold 16,133 cubic yards of debris per acre. However, since FEMA estimates that 60 percent of the land area will be devoted to roads, safety buffers, burn pits, HHW, etc., one acre could actually hold 6,453 cubic yards of debris per acre.

8.1 Procedures for Evaluating Potential Sites

1. Debris storage and reduction sites will be evaluated by the DM and DMTF, at a minimum. Additional multi-disciplinary staff familiar with the area may also take part in the evaluation. Detailed information, including exact location, size, and available ingress and egress routes will be maintained for any site identified.

2. Sites used in the past will be revisited to observe whether site conditions have changed or the surrounding areas have changed significantly enough to alter the use of the site.

3. Site selection criteria for pre-determined and additional TDSR sites will be as follows:

    a. Site ownership
        i. Public lands are preferred and less costly to lease

        ii. Private lands should be used only if public sites are unavailable

        iii. Attorney will review leases to avoid closeout claims

    b. Site size - Size depends on volume of debris to be collected and planned volume reduction method.

    c. Site location - The use of TDSR sites can substantially increase the overall debris clearance costs, since debris is essentially managed twice, i.e., from the generation point to the temporary accumulation site, and from there to final disposal. Strategies to reduce these costs might involve the location of the sites.

        i. Evaluate the impacts of noise, traffic, and environment

        ii. Look for ingress/egress at sites to maximize efficiency of traffic flow

        iii. Locate sites outside of identifiable or known floodplain and flood prone areas

        iv. Consider impacts of trucks hauling to site on neighboring communities

v. Consider geological site conditions (topography, stable ground, groundwater levels, pervious vs. impervious soils, fractured rock). When planning site preparation, the counties will consider ways to make site closure and restoration easier.

vi. Consider prevailing winds, which can carry particulates and noise

vii. Consider visibility from the surrounding area

viii. Avoid environmentally sensitive areas (wetlands, threatened animal and plant species, public water supplies, critical habitats, historical and archaeological sites, sensitive land uses, etc.)

ix. Avoid known historically sensitive area. You should consult with the Colorado State Historic Preservation Officer (SHPO) if you plan to activate a TDSR not listed in this plan. The TDSR and landfills in this plan have been approved and are not of historic status.

d. Neighborhood concerns

i. 24-hour light and noise

ii. Dust and traffic

iii. Smoke from burning activities

iv. Runoff from hazardous waste (consider berms and holding ponds)

4. Conduct Environmental Baseline Studies for selected sites; prior to being used for TDSR sites.

a. Document existing conditions

i. Take photographs and video of the site

ii. Take random soil samples

iii. Take random water samples

iv. Check soil for Volatile Organic Carbons (VOCs)

v. Check drainage

vi. Obtain ambient air quality data

vii. Note important features such as landscaping, structures, fencing, etc.

b. Develop mitigation measures to minimize or eliminate impacts

c. Establish a monitoring program for:

x. Air quality, relative to dust, and particularly if burning will be conducted

xi. Water, both surface and ground

xii. Fuel spills

8.2 Environmental Permits Required

Environmental permits that may be required include waste processing and recycling operations permits, temporary land use permits, land use variances, traffic circulation plans, air quality permits, water quality permits, HHW permits, and fire department permits. CDPHE requires proper burn permits be obtained before burning can take place;

CDPHE must approve changes to requirements of operations at existing permitted solid waste facilities. If animal carcasses require disposal at a facility not permitted to accept animal carcasses CDPHE may grant an exception to the facility, and previsions are in place for carcasses resulting from any mass livestock mortality that is a result of an all-hazard event or depopulation ordered by the state veterinarian or other designated authority. CDPHE and CDA may authorize the open burning of animal carcasses if deemed necessary.

Environmental permits and land-use variances may be required to establish a temporary DMS. Several agencies may be involved in issuing permits and granting land-use approvals. The need for these permits may be satisfied by changes established in a declared disaster in a respective county; however, listings of permits that may be necessary include the following:

- Temporary land-use permits
- Land-use variances
- Traffic circulation strategies
- Air quality permits
- Water quality permits
- HHW permits
- Fire department permits
- Animal Carcass Disposal Permits

Agencies involved in issuing permits and granting land-use approvals includes, but is not limited to, the following:

- Colorado Department of Public Health and Environment
  303-692-2000
  cdphe.information@state.co.us

- CDPHE Indoor Environments Program (Asbestos, lead, CFCs)
  720-913-1311
  CDPHE.asbestos@state.co.us
  CDPHE.iaq@state.co.us

- CDPHE Air Pollution Control Division
  303-692-3100
  Cdphe.commentsapcd@state.co.us

- CDPHE Hazardous Materials and Waste Management Division
  303-692-3300
  Comments.hmwmd@state.co.us

- CDPHE Water Quality and Control Division
  303-692-3500
  Cdphe.commentswqcd@state.co.us

- Colorado Department of Agriculture
  303-869-9000
  Carcass Disposal Decision Making Tool
  https://www.colorado.gov/pacific/sites/default/files/Carcass%20Disposal%20Decision%20Making%20Tool.pdf

8.3 Site Operations and Closeout procedures

Environmental assessments of the TDSR should be conducted prior to beginning and after completing the waste staging and processing operations. The contractor will be responsible for preparing and closing out TDSR sites according to specification in the debris removal and disposal contract. Each TDSR site will eventually be emptied of all material and restored to its previous condition and use. DMTF inspectors will monitor all closeout activities to ensure that the contractor complies with the debris removal, processing, recycling, and disposal contracts. Figure 8-1 shows and example TDSR site layout for a 100 acres site. This would be the ideal layout; actual conditions, availability of personnel and equipment, size of the site, and other factors will affect actual TDSR site layouts.

8.3.1 Site Operations

The following procedures should be initiated once TDSR sites have been activated.

1. Establish proper buffer zones around the perimeter of the site and inside the site boundaries.

2. Construct containment berms as necessary and document photographically.

3. Ensure that incoming debris is segregated based on the volume reduction methods at the site:
    a. Recycling
    b. Grinding/Composting
    c. Separation
4. Develop holding areas for HHW, line these areas with plastic or other approved liners, and fence them. If HHW is accepted an EPA ID Number is required.
5. Immediately clean up any spills. Document the incident with the following information:
    a. When it occurred
    b. When the material was cleaned up
    c. When and where the material was disposed
    d. Immediate Notification of the spill is required. Contact the Colorado Environmental Release and Incident Reporting Line at 1- 1-877-518-5608 if a reportable quantity is spilled. This line is staffed 24 hours a day. For reporting requirements please see: https://www.colorado.gov/pacific/cdphe/emergency-reporting-line
6. Photograph operations and monitoring activities weekly so that areas of concern can be pinpointed later for additional sampling.
7. Maintain up-to-date maps and sketches of the site and operations.
8. Implement efficient procedures to keep debris moving into the site, properly separated and reduced, and moved out of the site.
9. Document any changes, tests, problems, actions taken, and monitoring visits conducted.
10. Perform ongoing volume reduction (on site or removal for disposal/reduction).
11. Provide nuisance management (dust, noise, smoke, traffic, etc.).
12. Provide vector controls (rats, insects, etc.).
13. Provide security (limit access).

14. Ensure that appropriate equipment is available for site operations.

8.3.2 Site Closeout Procedures

Once a site is no longer needed, it should be closed and restored to its previous condition and use. All mixed debris, construction and demolition (C&D) debris, and debris residue must be removed to approved landfills or recycling sites. If a contractor has this responsibility, field inspectors will monitor all closeout activities to ensure that the contractor complies with the contract. Site remediation will go smoothly if baseline data collection and site operation procedures are followed.

The contractor will be responsible for site closeout, but the following procedures should be in place for proper monitoring of the closeout:

1. Ensure that all operations have stopped and the site has been cleared and cleaned of all debris.

2. Ensure that current environmental data on soil and water have been compared to baseline data taken before the site was activated.

3. If private property, conduct environmental assessment with landowner.

4. Reference appropriate and applicable environmental regulations including CDPHE-approved plans and reporting requirements per Solid Waste Regulations.

5. Coordinate with local and officials on requirements and support for implementation of a site remediation plan.

6. Develop a remediation plan.

7. Remediation plan reviewed by landowner and DMTF.

8. Execute plan.

8.4 Health and Safety Hazards at Debris Sites

This section emphasizes the need to maintain personal safety if an incident is encountered, ensure the safety of the public, provide public education, accurately characterize the material and associated risk, and contact the appropriate emergency response agency to ensure the protection of public health and the environment.

Response to hazardous material debris sites should only be carried out by individuals who have received appropriate specialized training, are equipped with the necessary

personal protective equipment (PPE), and are acting in accordance with the agency's procedures. Those who have not received the First Responder Health and Safety Training mandated by 29 Code of Federal Regulations (CFR) 1910.120 should not enter any area where a hazardous materials release or suspected hazardous materials release has occurred. Specialized hazardous materials emergency response training is also very highly recommended before responding to a hazardous materials incident debris site.

Responders should use this information to take appropriate precautions to reduce the risk of exposure and injury to themselves and the public and protect the environment. This information is not provided for use in controlling, containing, or otherwise responding to a hazardous materials spill. The LDMD will act as an information and educational resource for the public to answer questions regarding proper disposal methods for household hazardous materials and other debris. The LDMD will also help assess hazardous material debris and refer those materials to the appropriate response and disposal agency.

Some common definitions when responding to hazardous debris sites are:

Hazardous Material: A substance that can threaten or harm people, the environment, or property. Included in this definition are specific regulatory terms such as hazardous wastes, hazardous substances, toxic substances, and hazardous chemicals.

Evacuation: Removal of persons from an area of potential hazardous material/chemical contamination. Normally no PPE is required. Removal of people from a contaminated area is referred to as "Rescue" and should be done by trained personnel wearing PPE.

Exclusion Zone: (Also known as the Hot Zone or Contaminated Area) the area where contamination is known to occur or will likely occur. All persons in this area should be wearing the proper PPE. Access is limited to only those who have a need to be in this zone.

Contamination Reduction Zone: (Also known as the Warm Zone) the area where personnel and equipment exiting the Exclusion Zone are decontaminated. This is also a buffer area between the Exclusion Area and the Support Zone.

Support Zone: (Also known as the Cold Zone.) An area beyond the Warm Zone where there should be no contamination and it is safe for persons without PPE.

Responders and workers of debris management operations are subject to the rules and regulations of the Colorado Department of Labor, while contracted personnel are subject to OSHA regulations. However, since these regulations are often tied together, the following list of regulations will be considered before, during, and after all debris management activities.

- 29 CFR 1910.1200 (HazCom)
- 29 CFR 1910.120 (Hazwoper)
- 29 CFR 1910.134 (Respiratory Protection)
- 29 CFR 1910.146 (Confined Spaces)

- 29 CFR 1910.1030 (Blood borne Pathogens)
- 29 CFR 1926.20-35 (General Construction),
- 29 CFR 1910.23 (Fall Protection),
- 29 CFR 1915.159 (Fall Arrest Equipment)
- 29 CFR 1910.132 (Personal Protective Equipment),
- 29 CFR 1910.137 & 29 CFR 1910.332 (Electrical safety),
- 29 CFR 1910.147 (Lockout/Tagout), and
- All other local, State, or Federal safety regulations.

9 Debris Disposal and Reduction Methods

Once debris has been collected and brought to TDSR sites the material can be processed for recycling, reuse, or reduction before land fill disposal. In this section the term recycling applies to any material that will undergo processing before being used in an end product. For example, concrete will be crushed before being turned into aggregate. The term reuse applies to any material that will be reused in its current form; no processing is required to make it useful in an end market. For example, wooden beams from a building would be used by rebuilding centers, rather than the wood being chipped into smaller pieces to be used as mulch. In many cases reduction is used in combination with either recycling or land fill disposal. The table below illustrates what options are available for each category of debris.

Table 3: Disposal Options for Categories of Debris

Category	Recycling	Reuse	Reduction	Landfill
Putrescible Waste			**X**	**X**
Vegetation	**X**		**X**	**X**
Treated Wood			**X**	**X**
Environmental Media	**X**			**X**
C&D	**X**	**X**	**X**	**X**
Metals and White Goods	**X**		**X**	**X**
Automobiles and Boats	**X**		**X**	**X**
Electronic Waste	**X**			
Hazardous Waste				**X***
Personal Property			**X**	**X**

***Must go to permitted hazardous waste treatment or disposal site**
(Please refer to Landfill Site-Specific Waste Acceptance Plans for Acceptable Material)

9.1 Recycling

Types of debris that are generally recyclable include environmental media debris, C&D debris, vegetation, metals and white goods (which would include automobiles and boats), and electronics. Recycling will be given consideration early in a disaster because it may reduce the cost of debris removal and disposal. To begin the recycling program, the DMTF should:

1. Locate markets and users.

2. Determine the segregation and preparation requirements.

3. Determine the tests that are required.

4. Determine the process for reducing and hauling.

5. Determine mitigation requirements to minimize environmental and public health impacts from the processing and disposal of disaster debris.

Appendix O contains waste equipment and processing requirements.

9.1.1 Environmental Media Debris

This debris category includes dirt, rocks, mud and sand. Environmental media debris will most likely be generated during flooding and earthquakes which can cause landslides. Large amounts of soil can be recovered if the material is put through a screen system, the resulting soil can be given back to the agricultural community, returned to their original location, used as fill in reconstruction projects, or used as cover material in landfills. The soil could also be transported to a staging area and reduction site where it could be combined with organic material that will decompose.

Soil recycling would require large earthmoving equipment, potentially dump trucks, conveying equipment, and screening equipment.

In agricultural areas where chemical fertilizers are used heavily, recovered soil may be too contaminated for use on residential or existing agricultural land. Monitoring and testing of the soil would be necessary depending on where the debris originated and may result in the soil being disposed of in a specific, designated landfill.

9.1.2 C&D Debris

C&D debris is generated by the total or partial destruction of structures during disasters and could represent a large portion of disaster debris but provide an excellent opportunity

for recycling. After the Northridge earthquake approximately 80 percent of mixed debris was able to be recycled by separating C&D debris from the waste stream.

Masonry materials, such as brick and blocks, and concrete could be crushed into aggregate and reused in road reconstruction or as fill as per the *CDPHE Compliance Bulletin Asphalt, Brick and Concrete Recycling & Beneficial Use Updated-January 2019* in Appendix V. Drywall can be recycled into new drywall, cement and agriculture uses. Lumber and other wood products could be ground and used for boiler fuel, mulch, and engineered lumber. Metal construction materials are discussed under section 9.1.4.

The DMTF will be careful to ensure that lead-based paint coated wood and chemically treated lumber are separated from recyclable wood. Pest may also restrict the shipment of wood materials. The DMTF will consult with the State Department of Agriculture for guidance.

Equipment used for recycling C&D material could include conveying, crushing/reducing, screening/separating, and magnetic equipment; and a manual picking station.
Section 8 Solid Waste Regulations requirements are applicable for recycling operations. Additionally, some equipment may require air permits.

9.1.3 Vegetation

This debris could be ground and used as mulch for residential, commercial, or agricultural areas, for producing compost, and for boiler fuel. Whole trees could also be used as a timber resource. Pests may restrict the shipment of wood materials. The DMTF will consult with the State Department of Agriculture for guidance. The USDA is part of the WBUG, which seeks to utilize biomass produced from disasters, and may be able to assist in identifying end market users. In addition, several counties already maintain a list of property owners interested in obtaining mulch from debris clearing operations. Care will be taken to separate treated wood from vegetative debris.

Equipment requirements could include crushing/reducing, and screening/separating equipment.

Vegetation will be managed in accordance with Section 14 of the Solid Waste Regulations.

9.1.4 Metals and White Goods

This debris category includes white goods; such as stoves, refrigerators, washers, and dryers; cars, boats, construction material, road and bridge debris. Metal is already typically recycled, therefore options for metal recycling after a disaster may be promising. Metal is almost always recycled back into other metal products.

Vehicles and boats may have title and ownership issues before they can be scrapped. All fluids would be drained and managed appropriately. In addition, batteries, tires, gas tanks, airbags, and mercury switches would be removed and managed appropriately.

Refrigerators and freezers will require special attention because they may contain putrescible wastes, refrigerants, and capacitors containing PCB's. Refrigerant containing appliances will be handled by EPA-certified refrigeration technicians or recycling centers (EPA maintains a list of approved recyclers).

Ferrous materials could be separated from other waste using magnetic separation. Metal maulers and shredders could be used to shred trailer frames, trailer parts, appliances, and other metal items.

9.1.5 Electronics

This debris category could contain televisions, computers, stereo equipment, and cell phones. As discussed in Section 4, EPA implements the READ services contract. It provides recycling and asset disposition services on a government wide basis for the recycling of electronic equipment and the disposal of excess or obsolete electronic equipment in an environmentally responsible manner. Counties may be able to utilize this vehicle through FEMA. Disposing of electronics in a landfill is generally prohibited in Colorado.

9.2 Reuse

Building material reuse centers may be able to provide deconstruction services, at a cost, for individual homes and/or county property that is damaged. In some cases, use of deconstruction methods rather than demolition can salvage 85 percent of a building for reuse. In order for material to be viable for reuse, the end use must be considered from the start. Rather than demolishing a building with heavy equipment, the building would be deconstructed with the idea of reuse in mind. Doors, flooring, wood beams, fixtures, tiles, molding are just some of the materials that could be reused without needing any physical processing. These activities may require a permit through the indoor environments program at CDPHE for asbestos, lead and CFCs. The contact email for the Indoor Environments Program is CDPHE.asbestos@state.co.us.

9.3 Reduction

Reduction will generally be used prior to recycling to break down material to a size that can be incorporated into new materials or prior to land fill disposal to reduce the amount of space required both in the truck for transportation and in the landfill for disposal. There are several reduction methods including; grinding, chipping, and incineration.

Recycling was discussed in its own Section 9.1. Reduction activities may require approval through Solid Waste and permitting through CDPHE.

9.3.1 Volume Reduction by Grinding, Chipping, and Shredding

Chippers can be used on vegetative debris, grinders can be used on vegetative or metal debris, and shredding is typically used for metal reduction or on personal property prior to placement in a landfill. Chipping operations are suitable in urban areas where streets are narrow or in groves of trees where it is cheaper to reduce the woody vegetation to mulch than to move it to a central grinding site and then returning it to the affected area. The DMTF will consider debris location when deciding how to equip the TDSR sites.

1. The resulting product of the chipping and grinding operation may be used as a landfill product, used as topsoil, or used for residential applications.

2. This method generally reduces volume of debris by 75 percent (4 to 1).

3. The mulch also must remain free of paper and plastic if used for agricultural purposes.

4. The following information is for the use of mulch as an agricultural product:

    a. Size: The average size of wood chips is not to exceed four inches in length and one half inch in diameter.

    b. The debris reduction rate for moderately contaminated debris is 100 to 150 cubic yards per hour, and when the debris is relatively clean it is 200 to 250 cubic yards per hour.

    c. Contaminants: The contamination rate for material other than wood products should be less than 10 percent of the mulch. Eliminate plastics completely. Use rake loaders to pick up debris because normal loaders pick up earth, which is part of the contaminant list and harms the chipper.

5. Tub grinders are ideal for use at TDSR sites due to high-volume capacity.

6. Mulch piles should be no higher than 15 feet

9.3.2 Incineration

Incineration or vegetative debris has up to a 95 percent reduction rate. Local agricultural extension personnel would be consulted to determine if the resulting ash can be recycled

as a soil additive. This option would be terminated if mixed debris enters the waste stream.

The incineration process requires a minimum of three steps, to include:

1. Unloading the debris.

2. Moving the debris into an incinerator.

3. Removing the ash from the incinerator to final disposition. Final disposition may be an appropriately constructed area at the TDSR site or a landfill.

There are several incineration methods available for volume reduction including; uncontrolled open-air incinerations, controlled open-air incineration, air curtain pit incineration, and portable air curtain incineration.

Uncontrolled open-air incineration is the least desirable method of volume reduction because it lacks any type of environmental control. It would be used as a last resort and coordinated through CDPHE.

Controlled open-air incineration carefully reduces vegetative debris by burning debris within a contained fixed area. The reduction of clean woody debris presents little environmental damage and is cost-effective.

Air curtain pit incineration offers an effective means to expedite the volume reduction process while substantially reducing the environmental concerns caused by open-air incineration. The air curtain incineration method uses a pit constructed by digging below grade or building above grade (if a high water table exists) and using a blower unit. The blower unit and pit comprise an engineered system that must be precisely configured to function properly. The burning chamber is usually no more than 8 feet wide and 9 to 14 feet deep. The length of the pit varies depending on site size, environmental permitting, and labor/equipment limitations. It is important to note that there are no industry standards for air curtain pit design. The County would seek knowledgeable personnel who are experienced with air curtain pit incinerator design and operating procedures when soliciting expertise to perform incineration services.

Portable air curtain incinerators use the same methods as air curtain pit incinerator systems, except that the portable incinerators use a pre-manufactured pit rather than an onsite constructed earth/limestone pit. Portable air curtain incinerators are the most efficient incineration systems available because the pre-manufactured pit is engineered to precise dimensions to complement the blower system. The pre-manufactured pit requires little or no maintenance as compared to earth or limestone constructed pits, which are susceptible to erosion. Portable air curtain units are ideal for areas with high water tables and sandy soils as well as areas where smoke capacity must be kept to a minimum.

Appendix W Colorado Open Burning Information Fact Sheet has more information on Open Burning.

9.4 Landfill and Treatment Facility Capacity Estimates

Appendix A contains a listing of landfills and treatment facilities within the Southeast All-Hazards planning area.

10 Documentation

The DMTF is responsible for proper documentation of debris removal, recycling, processing, recycling, and disposal procedures to ensure FEMA reimbursement. The DMTF will provide training to appropriate personnel working on reimbursement and will coordinate with FEMA on all documentation.
Documentation is a critical component in support of contractor invoices and in justifying FEMA's reimbursement policy. Load ticket disposition and debris monitoring activities are the major tools that the counties must employ in order to adequately document debris management activities for FEMA reimbursement. Required documentation includes the source of the material, the weight or volume of the material, the disposal cost, and salvage value remitted to the local government.

- Ensure that records are auditable. Lack of proper documentation can jeopardize or delay FEMA funding.
- Include a clause for termination for convenience - this will provide the city with the option to cancel the contract for any reason.
- Define a reasonable period of performance.
- Base the contract on an estimate of debris removal services prepared by the local planning staff; do not rely on contractor estimates.

11 Plan Maintenance

County Emergency Managers are responsible for updating County-Specific Annex information with assistance from county staff they deem appropriate. Once a county has finalized changes to its Annex the Emergency Manager shall provide the necessary hard copies or electronic copies for other county Emergency Managers to make changes to their copies of the RDMP. In most cases changes to a County-Specific Annex will not require discussion among other counties.

Changes to the RDMP will be implemented after County Emergency Managers, or their designated representatives for the issue, have reached an agreement regarding the proposed change and designated someone to implement the change and disseminating the information

Appendix A: Operating Colorado Landfills Accepting Wastes from the Public

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Operating Colorado Landfills Accepting Wastes from the Public

County Name	Facility Name	Address	City	Zip	Facility Phone
ADAMS	CONSERVATION SERVICES, INC	141800 East 88th Avenue	Bennett	80102.	303-644-4395
	EAST REGIONAL LANDFILL	8201 Schumaker Road	Bennett	80102	303-685-2700
	FERNALD INERT LANDFILL	7195 Colorado Blvd	Commerce City	80022	
	FREI-HENDERSON INERT LANDFILL	13205 Brighton Road	Henderson	80601	303-289-1837
	TOWER LANDFILL	8480 Tower Road	Commerce City	800022	303-371-5115
	ASPHALT SPECIALTIES	10100 Dallas Street	Henderson	80640	303-289-8555
ARAPAHOE	DENVER ARAPAHOE DISPOSAL SITE	3500 S. Gun Club Road	Aurora	80018	720-876-26
ARCHULETA	ARCHULETA LANDFILL	9 Mi S Pagosa Springs on CR 500	Nearest Town-Pagosa Spgs	81147	970-883-2644
BACA	CAMPO SWDS	2 Mi SE of Campo	Campo	81029	
	PRITCHETT SWDS	13500 CR BB	Pritchett	81064-0056	719-523-4006
	SPRINGFIELD MUNICIPAL LANDFILL	1 MI. SE of SPRINGFIELD, R287	SPRINGFIELD	81073	719-523-6524
	TWO BUTTES SWDS	CR 37.5 (1/2 mi S of Hwy 116)1 mile SE of Two Buttes	Two Buttes	81084	
	WALSH SWDS	1/2 mile west of CR 43 on CR EE	WALSH	81090	719-324-5411
CHAFFEE	CHAFFEE COUNTY LANDFILL	16550 Hwy 285	Salida	81201	719-539-3738
CHEYENNE	FIRSTVIEW SANITARY LANDFILL	14765 CR 34	Cheyenne Wells	80810	719-767-5099
CUSTER	CUSTER COUNTY LANDFILL	2250 County Road 328	Westcliffe	81252	719-783-2726
DELTA	ADOBE BUTTES LANDFILL	12211 Trap Club Rd.	Eckert	81418	970-835-7999
DOUGLAS	SEDALIA RECYCLING CENTER AND DEPOSITORY	5970 N HWY 85	SEDALIA	80135	303-621-2275
EAGLE	EAGLE COUNTY LANDFILL	815 Ute Creek Road	Wolcott	81655	970-328-3470

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County Name	Facility Name	Address	City	Zip	Facility Phone
EL PASO	COLORADO SPRINGS LANDFILL	1010 Blaney Road	COLORADO SPRINGS	80929	719-683-2600
	FOUNTAIN LANDFILL	10,000 Squirrel Creek Rd	Fountain	80817	719-382-9661
	MIDWAY LANDFILL and MIDWAY ORGANIC	8925 Rancho Colorado Blvd.	Fountain	80817	719-382-8383
FREMONT	PHANTOM LANDFILL	2500 Fremont County Road 67	Penrose	81240	719-372-6671
GARFIELD	SOUTH CANYON SWDS	1250 County Road 134	Glenwood Springs	81601	970-945-5375
	WEST GARFIELD SWDS LANDFILL	0075 CR 246A	Rifle	81650	970-625-2516
GUNNISON	SIX MILE LANDFILL	6 Miles East on Hwy 50	Gunnison	81230	970-641-5522
JEFFERSON	FOOTHILLS LANDFILL	8900 Hwy 93, 5 mi N of Golden	Golden	80403	303-279-9037
KIOWA	EADS SWDS LANDFILL	3 MI S OF EADS - CTY RD 40	EADS		
	HASWELL SWDS LANDFILL	2 MI S of Hwy 96 & Main in Haswell	Haswell		
KIT CARSON	KIT CARSON/BURLINGTON SWDS LANDFILL	19555 CR 46 (CR X & CR 46 - 3 mi NW of Burlington)	Burlington		719-346-8198
LA PLATA	BONDAD LANDFILL	1500 E CR 310/318	Durango	81301	970-247-8295
LAKE	LAKE COUNTY LANDFILL	1500 County Road 6; 1.7 MI S of Leadville	Leadville		719-486-3099
LARIMER	LARIMER COUNTY LANDFILL	5887 S Taft Hill Road	Fort Collins	80526	970-498-5770 (24-hour
LAS ANIMAS	TRINIDAD LANDFILL	2401 North State St	Trinidad	81082	719-846-2538
LINCOLN	LINCOLN COUNTY LANDFILL	2750 CR 3E	Genoa	80818	719-763-2465
LOGAN	LOGAN COUNTY LANDFILL	24235 East Hwy 6	Sterling	80751	970-522-8657
MESA	MESA COUNTY LANDFILL	3071 Hwy 50	Grand Junction	81503	970-241-6846
	S-ROAD DISPOSAL	5 & S Road	Mack	81525	
MINERAL	MINERAL COUNTY SWDLF LANDFILL	2.5 mi SE of Creede	Creede		719-658-2331
MOFFAT	MOFFAT COUNTY REGIONAL LANDFILL	1806 Moffat Cty Rd 107N, 2 Mi SW of Craig	Craig	81625	970-824-4347

County Name	Facility Name	Address	City	Zip	Facility Phone
MONTEZUMA	MONTEZUMA COUNTY LANDFILL	26100 CR F	Cortez	81321	970-565-9858
MONTROSE	BROAD CANYON LANDFILL	2 1 Mi SE of Naturita	Naturita	81506	970-258-2014
	MONTROSE SWDS	67999 Landfill Rd	Montrose	81402	970-249-8078
MORGAN	MORGAN COUNTY LANDFILL	21448 Co. Rd. 22 PO Box 189	Fort Morgan	80701	970-867-9713
OTERO	MANZANOLA LANDFILL	31189 CR 11	Manzanola	81058	719-383-3037
	OTERO COUNTY LANDFILL 2	21250 CR 21	La Junta	81050	719-383-3037
PHILLIPS	PHILLIPS COUNTY LANDFILL	22736 CR 29	Holyoke	80734	970- 854-2166
PITKIN	PITKIN CTY SOLID WASTE CENTER	32046 Highway 82	Snowmass Village	81615	970-923-3487
PROWERS	EAST LAMAR MUNICIPAL LANDFILL	29141 CR 14	Lamar	81052	719-336-4376
	GRANADA SWDS LANDFILL	1 1/2 mi W of Granada	Granada	81041	
	HOLLY MUNICIPAL LANDFILL	County Road GG.5 and CR 36; 2.5 miles northeast of Holly, CO	Holly	81047	719-537-6622
PUEBLO	SOUTHSIDE SW DISPOSAL SITE	5715 W. HWY 78	Pueblo		719-948-2900
RIO BLANCO	WRAY GULCH LANDFILL	18 Mi W of Meeker near State Hwy 64	Meeker	81641	970-878-9590
RIO GRANDE	SAN LUIS VALLEY REGIONAL LANDFILL	1600 C. R. 44	Monte Vista	81144	719-852-3810
ROUTT	MILNER LANDFILL	Route County Rd. 205	Milner		970-879-6985
SAGUACHE	SAGUACHE COUNTY LANDFILL	25125 Kelly Road; 8 Mi E of Saguache on Road 55	Saguache	81149	719-655-2554
SEDGWICK	NEW SEDGWICK COUNTY LANDFILL	13901 U.S. HWY 385	Julesburg	80737	970-474-3576
SUMMIT	Summit County Resource Allocation Park	639 CR 66 (Landfill Road)	Dillon	80435	970-468-9263
WASHINGTON	WASHINGTON COUNTY LANDFILL	29505 County Road DD	Akron	80720	970-345-0789
WELD	BUFFALO RIDGE LANDFILL	11655 WCR 59	Keenesburg	80643	303-732-0218
	DENVER REGIONAL LANDFILL (SOUTH)	1441 Weld County Road 6	Erie	80516	303-673-9431

County Name	Facility Name	Address	City	Zip	Facility Phone
WELD	NORTH WELD SANITARY LANDFILL	40000 WCR 25	Ault	80610	866-482-6319
YUMA	YUMA COUNTY SWDS LANDFILL	15738 CR 34	Eckley	80727	970-359-2467

Appendix B: Operating Colorado Transfer Stations

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Operating Colorado Transfer Stations

County Name	Facility Name	Address	City	Zip	Facility Phone
ADAMS					
	ALTOGETHER RECYCLING (ALPINE WASTE)	3801 E 56th Ave	Commerce City	80022	303-744-9881
	NORTH WASHINGTON TRANSFER STATION	All Recycling North, LLC 5350 N. Washington Street	Denver	80216	303-293-3333
ARAPAHOE					
	ENGLEWOOD TRANSFER STATION	2400 W. Union Avenue	Englewood	80110	303-797-9085
	JORDAN ROAD TRANSFER STATION	7120 S. Jordan Rd.	Englewood	80110	303-766-9219
BENT					
	LAS ANIMAS TRANSFER STATION	NW4 Less 10.5AC N. of River, N2N2SW4;4 blocks Ne of Las Animas off Moore Ave & CRGg	Las Animas	81054-0468	
	MCCLAVE TRANSFER STATION	31401 CR 30	MCCLAVE	81057	
CLEAR CREE					
	CLEAR CREEK CTY TRANSFER STATION	1531 Soda Creek Road	Idaho Springs	80452	303-567-9628
CONEJOS					
	SILVER MOUNTAIN TRANSFER STATION	11416 Rd 18; 1.4 mi. S. of Manassa	Manassa	81141	719-843-5354
COSTILLA					
	FORT GARLAND TRANSFER STATION	1 mile southwest of Ft Garland, Colorado off Highway 159 on County Road GG - 15 acres.	Fort Garland	81133	719-672-3601
	SAN LUIS TRANSFER STATION	2 miles north of san Luis, Colorado on Highway 159 off of County Road 19.5.	SAN LUIS	81152	719-672-3601
DELTA					
	NORTH FORK SWDS	36577 K50 Rd	Hotchkiss	81419	970-835-4470
DENVER					
	CHERRY CREEK TRANSFER STATION	7301 E. Jewell Avenue	Denver	80231	
DOLORES					
	CAHONE LANDFILL	1.9 mi east of US Hwy 666 just south of Rd. M	Dove Creek	81324	
DOUGLAS					
	SWAYBACK TRANSFER STATION	County Road 67			303-660-7480
EL PASO					
	BESTWAY TRANSFER LLC	543 Air Lane	Colorado Springs	80915	719-574-8989

County Name	Facility Name	Address	City	Zip	Facility Phone
	BRADLEY ROAD TRANSFER STATION	3650 Bradley Road	Colorado Springs		719-390-1859
	COLO. SPRINGS TRANSFER STATION	1965 Commercial Blvd	Colorado Springs	80906	
FREMONT					
	FAWN HOLLOW TRANSFER STATION	645 McDaniel Blvd	Canon City	81212	719-275-4457
	LONE WOLF DISPOSAL	9477 CR 45	Howard	81233	719-942-3001
GILPIN					
	MID COUNTY TRANSFER STATION	278 Jankowski Drive MM 15.5 on Hwy 119	Black Hawk	80422	303-582-5004
HINSDALE					
	HINSDALE COUNTY TRANSFER STATION	1775 Hwy 149 N	Lake City	81235	970-944-2400
HUERFANO					
	HUERFANO COUNTY WASTE TRANSFER ST	107 Industrial Blvd.	Walsenburg	81089	719-738-9985
KIT CARSON					
	FLAGLER SWDS TRANSFER STATION	.4 Miles W of CR 5 and CR T	Flagler	80815	719-346-8198
	SEIBERT TRANSFER STATION	1 mile west town on Hwy 24 & 1/4 mile north on dirt road	SEIBERT	80807	719-346-8198
	STRATTON SWDS TRANSFER STATION	1.5 mi N of Stratton	Stratton	80807	719-346-8198
LA PLATA					
	BAYFIELD SWDS LANDFILL	4496 CR 223; 6 mi W of Bayfield	BAYFIELD		970-749-1335
	MARVEL SWDS TRANSFER STATION	1765 CR 134	Hesperus	81326	970-749-1335
LARIMER					
	ESTES PARK TRANSFER STATION	680 Elm Road	Estes Park	80517	970-498-5770 (2
	LARIMER COUNTY TRANSFER STATION	20400 WCR 1	Berthoud		970-498-5770 (2
	RED FEATHER LAKES TRANSFER STATION	1 mi west of Red Feather Lakes on Red Feather Lakes Road	Red Feather Lakes		970-498-5770 (24-hour
	WELLINGTON TRANSFER STATION	3891 E. County Road 70 (also called Owl Canyon Road) between CR7 and CR9	Wellington		970-498-5770 (24-hour
MESA					
	DEBEQUE TRANSFER STATION	2155 45 1/2 Rd	DeBeque	81630	970-283-5690
	FRUITA TRANSFER STATION	1275 17.5 Rd	Fruita	81521	970-858-1034
	GATEWAY TRANSFER STATION	448 Trail Rd	Gateway	81522	970-858-1034
	MOLINA TRANSFER STATION		NEAREST TOWN -		970-268-5494
MONTROSE					
	NUCLA SWDS	2 mi W & 1 mi N of Nucla	Nucla	81402	970-864-2194

County Name	Facility Name	Address	City	Zip	Facility Phone
	NUCLA TRANSFER STATION	2 Mi W & 1 Mi N of Nucla	Nucla	81402	970-864-2194
	PARADOX SWDS	2 Miles NE of Paradox	Paradox	81402	
OURAY					
	OURAY COUNTY TRANSFER STATION	0.5 mi N of Ridgway 23756 Hwy 550	Ridgeway		
PARK					
	FAIRPLAY TRANSFER STATION	21925 Hwy 285 - 1 mi SW of Fairplay	Fairplay	80440	303-838-0560
	GUFFEY TRANSFER STATION	1619 CR 102	GUFFEY		303-838-0560
	HARTSEL TRANSFER STATION	29001 Hwy 9	Hartsel		303-838-0560
	LAKE GEORGE TRANSFER STATION	39141 Hwy 24	Lake George		303-838-0560
	PINE JUNCTION TRANSFER STATION	66615 Hwy 285	PINE		303-838-0560
PROWERS					
	LAMAR TRANSFER STATION	609 Crystal St	Lamar	81052	719-336-4376
RIO BLANCO					
	GTM, LTD TRANSFER STATION	235 County Road 15	Meeker	81641	
	RANGELY TRANSFER STATION	2809 Shale St	Rangely	80648	
SAN MIGUEL					
	NORWOOD TRANSFER STATION	1.3Mi W C.R. 35	NORWOOD		970-728-0447
	TELLURIDE TRANSFER STATION	850 Illium Road	Telluride	81435	
TELLER					
	CRIPPLE CREEK WASTE TRANSFER STATIO	1075 Teller County Road #1	Cripple Creek	80813	719-689-3525
	DIVIDE TRANSFER STATION	176 Weaverville Rd	Divide	80814	877-832-0419
WELD					
	NORTHERN COLORADO DISPOSAL	14902 WCR 64	GREELEY	80631	970-353-4090

Appendix C: Registered Composting Facilities in Colorado

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

COLORADO
Department of Public Health & Environment

Commercial Composting Facilities (May 2019)

Facility Name	Classification	Facility Address	City	County	State	Zip
ACE COMPOSTING	Composting-Class III	10639 CoRd 30	YUMA	YUMA	CO	80759
BOSS COMPOST	Composting-Class II	16700 WCR 12	Ft. Lupton	Weld	CO	80021
CB INDUSTRIES COMPOSTING	Composting-Class III	11289 Doughspoon Road	Austin	Delta	CO	81410
COLORADO COMPOST	Composting-Class III	SE 1/4 Section 10, T2N, R52W	Akron	Washington	CO	80720
DENVER ARAPAHOE DISPOSAL SITE (DADS)	Composting-Class III	3500 Gun Club Road	Aurora	Arapahoe	CO	80018
DONS GARDEN SHOP	Composting-Class II	6001 E Platte Ave.	Colorado Springs	El Paso	CO	80915
DYECREST DAIRY	Composting-Class I	1137 N. County Line Rd 1	Ft. Collins	Larimer	CO	80525
EAST REGIONAL LANDFILL	Composting-Class III	8201 Schumaker Road	Bennet	Adams	CO	80102
EATON COMPOSTING (A1 ORANICS)	Composting-Class III	16350 WCR 76	Eaton	Weld	CO	80615
ECO ACTION PARTNERS (Town of Ophir)	CESQ	26 Porphyry St.	Ophir	San Miguel	CO	81426
ELEMENTS MOUNTAIN COMPOST	CESQ	8875 County Road 150	Salida	Chaffee	CO	81201
GUERILLA COMPOSTING	CESQ	272 Upper Allen Rd	Crested Butte	Gunnison	CO	81224
MESA COUNTY LANDFILL	Composting-Class III	3071 Highway 50	Grand Junction	Mesa	CO	81503
MIDWAY LANDFILL and MIDWAY ORGANIC	Composting-Class III	8925 Rancho Colorado Blvd.	Pueblo	El Paso	CO	81008
MILNER LANDFILL	Composting-Class III	20650 Routt County Road	Milner	Routt	CO	80487
MONTEZUMA COUNTY LF	Composting-Class III	26100 Road F	Cortez	Montezuma	CO	81321
MOUNTAIN VIEW FARM	Composting-Class I	6875 N Cty Rd 9	Loveland	Larimer	CO	80538
ORGANIX SUPPLY	Composting-Class I	15121 County Road 32	Platteville	Weld	CO	80651
PIONEER WHOLESALE SUPPY (aka Southwest Soils)	Composting-Class II	58521 Amber Road	Olathe	Montrose	CO	81425
PITKIN CTY SOLID WASTE CENTER	Composting-Class III	32046 Highway 82	Snowmass Village	Pitkin	CO	81615
RATTLER RIDGE COMPOSTING	Composting-Class III	12002 WCR 59	Keenesburg	Weld	CO	80643
SOIL SOLUTIONS COMPOSTING FACILITY	Composting-Class I	530 County Road 61	Hooper	Saguache	CO	81163
SOUTH CANYON SOLID WASTE DISPOSAL SITE	Composting-Class III	1205 County Road 134	Glenwood Springs	Garfield	CO	81601
STROMO, LLC (Renewable Fiber)	Composting-Class III	21970 Rd 30	Hudson	Weld	CO	80642
SUMMIT COUNTY RESOURCE ALLOCATION PARK	Composting-Class III	639 SCR 66	Dillon	Summit	CO	80435
T+D's MULCH AND GRIND, INC.	CESQ	1880 S Ridge Rd	Castle Rock	Douglas	CO	80104
TEAGUE ENTERPRISES	Composting-Class III	15366 Road O	Fort Morgan	Morgan	CO	80701
TV DAIRY	Composting-Class I	7678 WCR 17	Fort Lupton	Weld	CO	80621
VAIL HONEYWAGON	Composting-Class III	955 Ute Creek Rd	Wolcott	Eagle	CO	81655

Appendix D: List of Registered Electronic Recyclers in Colorado

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

COLORADO
Department of Public Health & Environment

Electronics Recycling Facility List (September 2019)

Facility Name	County	Phone Number	Physical Address	Certification	TVs, CRT Monitors?
3R Technology Solutions	Arapahoe	303 944-8068	6395 e 56th Ave Commerce City CO 80022		Yes
Action Recycling Center	Jefferson	303 424-1600	7610 W 42nd Ave Wheat Ridge CO 80033		No TVs
At Your Disposal	Archuleta	970 731-4892	128 Bastille St. Pagosa Springs CO 81147		Yes
Blue Star Recyclers	El Paso	719-597-6119	100 Talamine Ct Colorado Springs CO 80907	E-Stewards	Yes
Blue Star Recyclers	Denver	303 534-1667	953 Decatur Street Suite C Denver CO 80204	E-Stewards	Yes
Blue Star Recyclers	Boulder	855 302-2583	6400 Arapahoe Road Boulder, CO 80303	E-Stewards	Yes
Canon City HS Tiger Print Recycling (VERN)	Fremont	719 276-6121	490 N Diamond Canon City CO 81212		Yes
Chaffee County Landfill	Chaffee	719 539-3738	16550 Hwy 285 Salida CO 81201		Yes
City of Durango Recycling Center	La Plata	970 375-5004	949 E 2nd Ave Durango CO 81301		Yes
Clean Valley Recycling	Otero	970 375-4809	203 N Swink Dr. Swink CO 81077		Yes
Community Computer Connection	Denver	303-407-4054	14500 E 33rd Place Aurora CO 80011	R2	No TVs
CORRecycling, Inc.	Mesa	970 234-2736	739 3rd Ave Grand Junction CO 81501		Yes
Data Destruction	Adams	303 388-3282	96 Inverness Drive East, Suite K Englewood CO 80122		No TVs
Denver Metro Recycling	Denver	720 320-4092	4877 National Western Dr 202-203 Denver CO 80216		No
Discover Goodwill	El Paso	719 633-8929	2855 S Academy Blvd. Co Springs 80916		No TVs
Eagle County Materials Recovery Facility	Eagle	970 328-3472	605 Ute Creek Road Wolcott, CO 81655		Yes
Eco-Cycle CHaRM	Boulder	303-444-6634	6400 Arapahoe Rd. Boulder CO 80301		Yes
Electronics Recyclers International	Arapahoe	800-374-3473	3250 North Abilene Street, Unit A Aurora CO 80011	E-Stewards, R2	Yes
Electronics Recycling	Denver	303 233-5223	4890 Ironton St Unit 6N		32" or smaller
E-Tech Recyclers	El Paso	720 523-2908	2854 N. Prospect St. Colorado Springs CO 80907		Yes

Fortune Plastic & Metal	Denver	303 307-1569	13105 E 38th Ave Unit 4 Denver CO 80239		No
Genesis Electronics Recycling	Denver	720-881-7238	2045 S Valentia St Unit 15 Denver CO 80231		No
Gunnison County	Gunnison	970 641-0044	811 Rio Grand Ave Gunnision Co 81230		Yes
IT Refresh (Onsite Electronics Recycling)	Larimer	970 797-2934	100 Link Lane, Unit 100 Fort Collins CO 80524	E-Stewards, R2	Yes
MDS	Mineral	303 503-9975	1412 Rio Grande Ave Creede CO 81130		Yes
Metech Recycling	Denver	720 377-7700	500 W 53rd Place Denver CO 80216		Yes
Milner Landfill	Routt	970-879-6985	1 CR 205 Milner CO 80487		Yes
Montezuma County Landfill	Montezuma	970 565-9858	26100 Road F Cortez CO 81321		Yes
Overton Recycling Inc	Rio Blanco	970 683-8219	109 3rd Street		Yes
Pacific Steel and Recycling	Mesa	970 241-2551	2365 River Road Grand Junction CO 81505		No
PCs for People	Denver	720 278-7725	1548 W Alameda Ave Suite C Denver CO 80223	R2	Yes
Phantom Landfill Twin Enviro Services	Fremont	719 372-6671	2500 CR 67 Penrose CO 81240		Yes
Pitkin County Resource Recovery Dept.	Pitkin	970 923-3487	32046 Colorado 82 Snowmass Village CO 81615		Yes
R2 Disassembly, LLC	Weld	303 443-1984	3733 Monarch St Unit F Frederick CO 80516	R2	Yes
Recla Metals	Montrose	(888) 621-0807	136 S Maple Ave Montrose CO 81401		No
RMB Recycling Center	Larimer	970 484-5384	1475 N College Ave Fort Collins CO 80524		No TVs
Schaefer Enterprises, Inc.	Weld	970 353-2779	500 W 26th St. Greeley CO 80631		Yes
Sedwick County Landfill	Sedwick	970 474-3558	13901 Hwy 385 Julesburg CO 80737		Yes
Southern Colorado Services & Recycling LLC	Pueblo	719 542-6910	1731 Erie Ave Pueblo CO 81001		Yes
Sum Computers	Adams	303 521-3869	4945 Monaco St Commerce City CO 80022		No TVs
Summit County Resource Allocation Park	Summit	970 468-9263	639 SCR 66 Dillon CO 80435		Yes
SustainAbility	Jefferson	303 424-1719	6240 W 54th Arvada CO 80002		Yes
SustainAbility	Denver	303 424-1719	1270 S Bannock St Denver CO 80223		Yes

Techno Rescue	Arapahoe	303 482-2207	779 Peoria St. Unit 15A Aurora CO 80011	E-Stewards, R2	Yes
Urban Recycling	El Paso	719 644-6419	3351 N Cascade Ave CO Springs CO 80907		Yes
Veolia Environmental Services	Adams	303 289-4827	9131 W. 96th Ave Henderson, CO 80640		Yes
Waste Management- Grand Junction	Mesa	866 305-7433	1227 Winters Avenue, Grand Junction, CO 81504		Yes
Waste Management Recycle America-CO Springs MRF	El Paso	719 633-0955	602 E 4th Street, Colorado Springs, CO 80907		Yes
Waste Mangement Steamboat	Routt	970-879-2400	2701 Downhill Drive, Steamboat, CO 80487		Yes
Waste-Not Recycling	Larimer	970 669-9912	1065 Poplar St Loveland CO 80534		Yes
Woodland Park Panther Recycling	Teller	719 686-2028	600 E Kelly Rd Woodland Park CO 80863		Yes
WSB Computer Services	Alamosa	719 687-9704	21 Craft Drive Alamosa CO 81101		Yes

Appendix E: Registered Recycling Facilities in Colorado

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

COLORADO
Department of Public Health & Environment

Registered Recycling Facility List (09/2019)

Facility name	Classification	County	Physical address
3R Technology Solutions Inc	8.3 MRF	Adams	6395 e 56th Ave Commerce City CO 80022
5280 Waste Solutions C&D Recycling Center	8.5 Industrial	Adams	605 W 62nd Ave Denver CO 80216
A1 Organics (DPS)	8.5 Industrial	Weld	19179 WCR 49 LaSalle CO 80645
A1 Organics- Monaco St. Organic Recycling Facility	8.3 MRF	Adams	9109 Monaco Street Commerce City CO 80022
A1 Organics Mountain States	8.3 MRF	Arapahoe	2300 W Radcliff Ave Englewood CO 80110
Aces High Waste and Recycle	8.5 Industrial	Routt	1605 Shield Dr. Steamboat Springs CO 80487
Acme Tree Service, Inc.	8.3 MRF	Adams	64th & Steel St. Commerce City CO 80022
Action Recycling Center	8.3 MRF	Jefferson	7610 W 42nd Ave Wheat Ridge CO 80033
All Recycling Services	8.3 MRF	Denver	1835 W Colfax Ave Denver, CO 80204
Altogether Recycling (Alpine Waste & Recycling)	8.3 MRF	Denver	645 W 53rd Place Denver CO 80216
Angel of Shavano Recycling LLC	8.3 MRF	Chaffee	185 Quigot Poncha Springs, CO 81242
Applegate Colorado LLC	8.4 End User	Fremont	230 Shop Drive Penrose CO 81240
Archuleta County Recycling Center	8.3 MRF	Archuleta	2140 CR 500 Pagosa Springs CO 81147
At Your Disposal (Eagle River Waste Services of CO LLC.)	8.3 MRF	Archuleta	128 Bastille St. Pagosa Springs, CO 81147
Atlas Metal & Iron Corp. Aurora	8.3 MRF	Arapahoe	2601 Chambers Rd Aurora CO 80011
Aurora Parks Recreation and Open Space Department	8.3 MRF	Arapahoe	15151 E Alameda Pkwy Ste 4600 Aurora CO 80012
Bestway Recycling Inc.	8.3 MRF	El Paso	4005 Interpark Dr. Colorado Springs Co 80907
Biochar Now, LLC	8.4 End User	Weld	19750 CR 7 Bldg A Berthold CO 80513
Blue Star Recyclers	8.3 MRF	El Paso	100 Talamine Ct Colorado Springs Co 80907
Blue Star Recyclers	8.3 MRF	Denver	953 Decatur St. Denver CO 80204
Blue Star Recyclers	8.3 MRF	Boulder	6400 Arapahoe Rd. Boulder CO 80301
Boral Material Technologies Inc. (Comanche Station)	8.5 Industrial	Pueblo	2005 Lime Rd Pubelo CO 81003
Boral Material Technologies Inc. (Craig Station)	8.5 Industrial	Moffat	2102 S Ranney St. Craig CO 81625
Boral Material Technologies Inc. (Nixon Station)	8.5 Industrial	El Paso	6598 Ray Nixon Rd. Fountain CO 80817
Boulder County Recycling Center	8.3 MRF	Boulder	1901 63rd St Boulder CO 80301
Broad Canyon Landfill	8.3 MRF	Montrose	30120 HH31 Road Naturita CO 81422
Bruin Waste Recycling	8.3 MRF	Montrose	2200 Industrial Dr Montrose CO 81401
Canon City HS Tiger Print Recycling (VERN)	8.3 MRF	Fremont	490 N Diamond Canon City CO 81212
Carter Lake Filter Plant	8.5 Industrial	Larimer	7100 W CR 8e Berthoud CO 80531
CH2E Colorado LLC	8.5 Industrial	Weld	12311 Weld County Road 41 Hudson CO 80642
Chaffee County Landfill & Recycling Center	8.3 MRF	Chaffee	16550 US HWY 285 Salida CO 81201
City and County of Denver Forestry Nursery	8.3 MRF	Denver	10450 Smith Road Denver CO 80239
City of Alamosa Rickey Recycling Center	8.3 MRF	Alamosa	1130 Old Airport Rd. Alamosa CO 81101
City of Broomfield Recycle Center Tree Drop off Site	8.3 MRF	Broomfield	225 Commerce St Broomfield CO 80020
City of Colorado Springs (Hancock Depository)	8.3 MRF	El Paso	1845 Hancock Drive Colorado Springs CO 80915

City of Durango Recycling Center	8.3 MRF	La Plata	949 E 2nd Ave Durango CO 81301
City of Fort Collins Hoffman Mill	8.5 Industrial	Larimer	1300 Hoffman Mill Road Fort Collins CO 80522
City of Loveland Water Treatment Plant	8.5 Industrial	Larimer	3152 N CR 29 Loveland CO 80538
City of Westminster Open Space Facility	8.3 MRF	Jefferson	1001 Alkire St Westminster Co 80005
Clean Harbors Environmental Services Inc.	8.3 MRF	Denver	4721 Ironton St. Unit B Denver CO 80239
Clean Valley Recycling	8.3 MRF	Otero	203 N Swink Dr Swink CO 81077
Clear Intentions	8.3 MRF	Adams	5601 Downing St Denver CO 80216
Colorado Industrial Recycling	8.3 MRF	El Paso	2730 Las Vegas St Colorado Springs, CO 80906
Colorado Landscape Materials and Recycling (All Demolition)	8.5 Industrial	Jefferson	6300 W 49th Drive Wheat Ridge CO 80033
CORRecycling, Inc.	8.3 MRF	Mesa	739 3rd Ave Grand Junction CO 81501
Crystal Clear Car Wash	8.5 Industrial	Delta	1250 US 50 Delta CO 81417
Curbside Recycling	8.3 MRF	Denver	4900 Dahlia St. Denver CO 80216
Curbside Recycling Indefinitely Inc.	8.3 MRF	Mesa	2549 River Rd Grand Junction Co 81505
Custer County Landfill	8.3 MRF	Custer	2250 CR 328 Westcliff, CO 81252
Custom Disposal LLC	8.5 Industrial	Weld	970 East Collins St. Eaton CO 80615
Data Destruction	8.3 MRF	Denver	96 Inverness Drive East, Suite K Englewood CO 80112
DEN North Concrete and Asphalt Recycle Yard	8.5 Industrial	Denver	110th Ave & Queensburg St. Denver CO 80249
DEN South Concrete and Asphalt Recycle Yard	8.5 Industrial	Denver	71st Ave & Jacson Gap St. Denver CO 80249
Denver Metro Recycling	8.3 MRF	Denver	4877 Nation Western Dr 202-203 Denver CO 80216
Direct Polymers LLC	8.3 MRF	Denver	3600 E 48th Ave Denver CO 80216
Discover Goodwill Retail Support Center	8.3 MRF	El Paso	2855 South Academy Blvd. Colorado Springs, CO 80916
Dons Garden Shop	8.3 MRF	El Paso	6001 E Platte Ave Colorado Springs CO 80915
Douglas County Slash Site	8.3 MRF	Douglas	1400 Caprice Dr. Castle Rock CO 80104
Durango Trash	8.5 Industrial	LaPlata	5115 CR 309A Ignacio CO 81137
Eagle County Recycled Materials Recovery Facility	8.3 MRF	Eagle	605 Ute Creek Road Wolcott, CO 81655
Eagle River Waste (Eagle River Waste Services of CO LLC.)	8.3 MRF	Rio Blanco	235 CR 15 Meeker, CO 81641
Eagle Valley Clean Energy	8.5 Industrial	Eagle	10775 Hwy 6 Gypsum CO 81637
Eco-Cycle CHaRM	8.3 MRF	Boulder	6400 Arapahoe Rd. Boulder CO 80301
Electronics Recyclers International Inc.	8.3 MRF	Aurora	3250 N Abilene Street Unit A Aurora CO 80011
Electronics Recycling	8.3 MRF	Denver	4890 Ironton Street #6N Denver CO 80239
Environmental Office Soultions of Colorado	8.3 MRF	Larimer	451 W 69th St Loveland Co 80548
ETech Recyclers	8.3 MRF	El Paso	2854 N. Prospect St. Colroado Springs CO 80907
Federal International	8.3 MRF	Denver	6541 Brighton Blvd Commerce City CO 80022
Flashfill Services Denver	8.5 Industrial	Denver	8830 Yosemite St. Henderson, CO 80640
Flashfill Services Nixon	8.5 Industrial	El Paso	14020 Ray Nixon Road Colorado Springs CO 80817
Fortune Plastic & Metal	8.3 MRF	Denver	13105 E 38th Ave Unit 4
Four Corners Textile Recycling LLC	8.3 MRF	Montezuma	1919 S Broadway Cortez CO 81321
G & S Mountain Recyclers/ Cruson Enterprises	8.3 MRF	Boulder	805 S lincoln Longmont, CO 80501
Gallegos Recycling Center	8.3 MRF	Larimer	1941 Heath Parkway Fort Collins CO 80524
Gallegos Sanitation Inc (Northern Colorado Recycle)	8.3 MRF	Weld	1216 N 11th Ave Greeley CO 80631
Genesis Electronics Recycling	8.3 MRF	Denver	2045 S Valentia St Unit 15 Denver CO 80231

Go Green Pallet & Recycling Company	8.3 MRF	Weld	937 A Street Greeley CO 80631
Gone For Good Recycling Center	8.3 MRF	Denver	101 Kalamath St Denver CO 80223
Great Divide Brewing Co.	8.3 MRF	Denver	1812 35th St. Denver Co 80216
Greeley Organics Waste Center	8.3 MRF	Weld	1130 E 8th Ave Greeley CO 80631
Green Girl Recycling	8.3 MRF	Boulder	21 S Sunset St. Longmont CO 80455
GreenSheen Paint + Design, Inc.	8.4 End User	Arapahoe	1281 W Dartmouth Ave. Englewood CO 80110
Gunnison County Recycling Center- Public Works	8.3 MRF	Gunnison	811 Rio Grand Ave Gunnision Co 81230
Hageman Earth Cycle, Inc.	8.3 MRF	Larimer	3501 East Prospect Fort Collins CO 80525
Hillen Corp.	8.5 Industrial	Adams	7600 Dahila St. Commerce City CO 80022
Holcim Cement	8.4 End User	Fremont	3500 Hwy 120 Florence Co 80922
Holcim Portland Plant	8.5 Industrial	Fremont	3500 Hwy 120 Florence Co 80922
Howard Davis Recycling	8.3 MRF	Fremont	4200 CR 123 Penrse CO 81240
Howard Disposal & Recycling	8.3 MRF	Fremont	2100 Forge Rd Canon City CO 81212
I.T. Refresh (Onsite Electronics Recycling)	8.3 MRF	Larimer	100 Link Lane, Unit 100 Fort Collins CO 80524
iCarpets Inc	8.3 MRF	Denver	4975 Paris St. Denver CO 80239
IT Renew, Inc.	8.3 MRF	Denver	14435 E 42nd Ave Suite 45
Lake County Landfill & Recycling Center	8.3 MRF	Lake	1500 CR 6 Leadville CO 80461
Lonestar Water Recycling Facility	8.3 MRF	Weld	15988 Weld CR 49 LaSalle CO 80645
McDonald Farms Enterprises, Inc I-25 North	8.5 Industrial	Weld	7240 I-25 Frontage Rd. Fredrick CO 80531
McDonald Farms Enterprises, Inc National Western Properties	8.5 Industrial	Denver	4647 National Western Drive Denver CO 80216
McKinley Paper Company	8.3 MRF	El Paso	3240 Astrozon Blvd Colorado Springs CO 80910
MDS Transfer Center	8.3 MRF	Mineral	1412 Rio Grande Ave Creede CO 81130
MDS Warehouse	8.3 MRF	Saguache	50940 CR E Center CO 81125
Metech Recycling	8.3 MRF	Denver	500 W 53rd Place Denver CO 80216
Midway Landfill	8.3 MRF	El Paso	8925 Rancho Colorado Blvd. Fountain CO 80817
Mogan County Landfill	8.3 MRF	Morgan	21448 Morgan County Rd 22 Fort Morgan CO 80701
Momentum Recycling	8.3 MRF	Boulder	1131 DillonRd. Broomfiled CO 80020
Montezuma County Landfill	8.3 MRF	Montezuma	26100 Road F Cortez CO 81321
Monument Waste Services, LLC	8.3 MRF	Mesa	2410 Blue Heron Rd. Grand Junction CO 81505
Naturita Enterprises Recycling Facility	8.5 Industrial	Montrose	31527 Hwy 141 Naturita CO 81422
Northern Colorado Disposal Inc	8.3 MRF	Weld	30951 N 59th Ave Greeley, CO 80631
Overton Recycling	8.3 MRF	Rio Blanco	109 3rd St Meeker CO 81641
Oxford R2 Ecycle	8.3 MRF	Arapahoe	2303 W. Oxford Ave Englewood CO 80110
Oxford Recycling, Inc	8.3 MRF	Arapahoe	2400 W Oxford Ave Englewood CO 80110
Pacific Steel and Recycling	8.3 MRF	Mesa	2364 River Road Grand Junction CO 81505
Parallel Products of Colorado, LLC	8.3 MRF	Weld	123 9th Ave Greeley CO 80631
PCs for People	8.3 MRF	Denver	1548 W Alameda Ave Suite C Denver CO 80223
Phillips County Landfill	8.3 MRF	Phillips	PO Box 131 Holyoke CO 80734
Phoenix Recycling	8.5 Industrial	LaPlata	4065 CR 307 Ignacio CO 81137
Pitkin County Resource Recovery Dept.	8.3 MRF	Pitkin	32046 Colorado 82 Snowmass Village CO 81615
Quest Services (CLOSED)	8.3 MRF	Yuma	506 E 8th Ave Yuma CO 80759

Quest Services (CLOSED)	8.3 MRF	Washington	506 E 8th Ave Yuma CO 80759
R2 Disassembly, LLC	8.3 MRF	Weld	3773 Monarch Street, Unit F Frederick, CO 80516
Recla Metals	8.3 MRF	Montrose	136 S Maple Montrose CO 81401
Recycle Care Inc.	8.3 MRF	Denver	13105 E 38th Ave #71 Denver CO 80239
RMB Recycling Center	8.3 MRF	Larimer	1475 N College Ave Fort Collins CO 80524
Rocky Mountain Bottle Company	8.4 End User	Jefferson	10619 W 50th Ave Whear Ridge CO 80033
Rocky Mountain E-Waste	8.3 MRF	Denver	12445 E 39th Ave #204 Denver Co 80239
Rocky Mountain Mulch	8.3 MRF	Montezuma	18499 RD 20 Lewis CO 81327
Rocky Top Resources	8.3 MRF	El Paso	1755 East Las Vegas Street Colorado Springs 80903
Root Shoot Malting LLC	8.5 Industrial	Larimer	3553 E Hwy 60 Loveland CO 80537
Roots Recycling	8.3 MRF	Pueblo	PO Box 2252 Pueblo CO 81005
Saguache County Landfill & Recycling Center	8.3 MRF	Saguache	25084 Kelly Rd Saguache CO 81149
San Luis Valley Regional Solid Waste Authority	8.3 MRF	Rio Grande	1600 CR 44 Monte Vista CO 81144
Sand Creek Recycling Center (Colorado Springs Utilities)	8.3 MRF	El Paso	3890 Hwy 85 / 87 South Colorado Springs CO 80906
Schaefer Enterprises, Inc	8.3 MRF	Weld	500 26th St Greeley CO 80631
Silver Anvil Engineering Corp	8.3 MRF	Denver	5362 Dahlia St Commer City CO 80022
SLV Minerals	8.5 Industrial	Moffat	59028 County Road AA Saguache CO 81143
South East and East Central Recycling Association	8.3 MRF	Bent	
Southern Colorado Services & Recycling LLC	8.3 MRF	Pueblo	1731 Erie Ave Pueblo CO 81001
Spring Back Colorado	8.3 MRF	Denver	4120 Brighton Blvd A-46 Denver CO 80216
Sterling Correctional Facility	8.3 MRF	Logan	12101 Hwy 61 Sterling CO 80751
Sum Computers Inc.	8.3 MRF	Adams	4945 Monaco St Commerce City CO 80022
Summit County Resource Allocation Park	8.3 MRF	Summit	639 SCR 66 Dillon CO 80435
SustainAbility	8.3 MRF	Jefferson	6035 W 55th Place Arvada CO 80002
SustainAbility	8.3 MRF	Jefferson	5555 Harlan St Arvada CO 8002
Sylvan Dale Ranch	8.5 Industrial	Larimer	2939 CR 31D Loveland, CO 80538
Teague Diversified, INC.	8.5 Industrial	Morgan	15366 CR 0 Fort Morgan, CO 80701
Techno Rescue	8.3 MRF	Arapahoe	908 Salida Way Aurora CO 80011
Terra Firma Recycling	8.3 MRF	Las Animas	2400 Nevada Ave Trinidad CO 81082
The Colorado Farm Brewery LLC	8.5 Industrial	Alamosa	2070 CR 12 S. Alamosa CO 81101
The Western Sugar Cooperative	8.5 Industrial	Morgan	18317 Hwy 144 Fort Morgan, CO 80701
Town of Palisade, Riverbend Park	8.3 MRF	Mesa	51 Pendleton St, Palisade, CO 81526
Twin Enviro NW Colorado Recycling Expansion	8.3 MRF	Routt	20650 Routt County Rd 205 Milner CO 80478
Upper Arkansas Recycling	8.3 MRF	Fremont	3224 A Independence Road Canon City 81212
Urban Recycling	8.3 MRF	El Paso	3341 N Casccade Colorado Springs CO 80907
Veolia Env Services Technical Soultions	8.3 MRF	Adams	9131 W. 96th Ave Henderson, CO 80640
Wasatch Recycling Depot (Community Intersections)	8.3 MRF	El Paso	601 S. Wahsatch Unit B Colorado Springs CO 80906
Waste Management - Montrose	8.3 MRF	Montrose	1901 6450 Road, Montrose CO 81401
Waste Management - Steamboat	8.3 MRF	Routt	2701 Downhill Drive, Steamboat, CO 80487
Waste Management- Denver Arapahoe Disposal Site	8.3 MRF	Arapahoe	3500 South Gun Club Road Aurora CO 80018
Waste Management- Grand Junction	8.3 MRF	Mesa	1227 Winters Avenue, Grand Junction, CO 81504

Waste Management- Larimer County MRF	8.3 MRF	Larimer	5887 South Taft Hill Road, Ft. Collins CO 80526
Waste Management Recycle America - Colorado Springs MRF	8.3 MRF	El Paso	602 E 4th Street, Colorado Springs, CO 80907
Waste Management Recycle America - Denver 48th st MRF	8.3 MRF	Denver	3600 E 48th Ave Denver CO 80216
Waste Management Recycle America- Franklin St. MRF	8.3 MRF	Denver	5395 Franklin Street, Denver. CO 80216
Waste Management- Silverthorne	8.3 MRF	Summit	314 3rd Street, Silverthorne, CO 80498
Waste-Not Recycling	8.3 MRF	Larimer	1065 Poplar St Loveland CO 80534
Western Aluminum Recycling INC.	8.3 MRF	Boulder	3280 Valmont Rd Unit C Boulder CO 80301
Western Disposal Services, Inc.	8.3 MRF	Boulder	5880 Butte Mill Road, Boulder CO 50301
Wireless Alliance	8.3 MRF	Boulder	5763 Arapahoe Ave Boulder CO 80303
Woodland Park Panther Recycling	8.3 MRF	Teller	600 E Kelly Rd Woodland Park CO 80863
WSB Computer Services, Inc (VERN)	8.3 MRF	Alamosa	21 Craft Drive Alamosa 81101
Yuma County San. Landfill	8.3 MRF	Yuma	15738 CR 34 Eckley CO 80727

8.3 MRFs	134
8.4 End users	5
8.5 Industrial	31
Total number of registered recycling facilities	**170**

Appendix F: Medical Waste Providers for Southeast Colorado

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Medical Waste Providers for Southeast Colorado

Name of Provider	Type of Service	Contact Phone Number:
Stericycle	Emergency Response for Recalls	1-888-732-3901
	Hazardous Waste Emergency Response	1-877-577-2669
	APHIS or Cargo Destruction	1-800-497-6605
MedPro	Medical Supplies, Sharps Disposal, HIPPA document shredding	1-888-641-6131

Appendix G: Forms

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

G.1 EMERGENCY EQUIPMENT SHIFT TICKET

Contractors as well as Government Employees shall use the Emergency Equipment Shift Ticket to Track Machine. The Contractor and Employees shall turn a shift ticket into their supervisor daily or as directed.

- Please print. Use pen only.
- An "Emergency Equipment Shift Ticket" must be completed each time work is done during the disaster period. The issuing agent is responsible for completing the form about the equipment. Be sure to complete all blocks and sign.
- Supervisor is responsible to check for accuracy and if in agreement, sign for commodity received.
- Issuing agent gives agent green "receiving agency copy" after both agents have signed.
- At end of shift, issuing agent gives finance pink copy and blue copy.
- Issuing agent retains goldenrod copy.
- The white "ordering office file copy" is retained in the book. Upon issuing agent's demobilization or when the book is complete, the book must be turned in to finance.

EMERGENCY EQUIPMENT SHIFT TICKET

NOTE: The responsible Government Officer will update this form each day or shift and make initial and final equipment inspections.

1. AGREEMENT NUMBER				2. CONTRACTOR *(name)*
3. INCIDENT OR PROJECT NAME		4. INCIDENT NUMBER		5. OPERATOR *(name)*
6. EQUIPMENT MAKE		7. EQUIPMENT MODEL		8. OPERATOR FURNISHED BY ☐ CONTRACTOR ☐ GOVERNMENT
9. SERIAL NUMBER		10. LICENSE NUMBER		11. OPERATING SUPPLIES FURNISHED BY ☐ CONTRACTOR (wet) ☐ GOVERNMENT (dry)
12. DATE MO/DAY/YR	13. EQUIPMENT USE HOURS/DAYS/MILES (circle one) START	STOP	WORK / SPECIAL	14. REMARKS *(released, down time and cause, problems, etc.)*
				15. EQUIPMENT STATUS ☐ a. Inspected and under agreement ☐ b. Released by Government ☐ c. Withdrawn by Contractor
				16. INVOICE POSTED BY *(Recorder's initials)*
17. CONTRACTOR'S OR AUTHORIZED AGENT'S SIGNATURE			18. GOVERNMENT OFFICER'S SIGNATURE	19. DATE SIGNED

NSN 7540-01-119-5628
50297-102

OPTIONAL FORM 297 (Rev. 7-90)
USDA/USDI

G.2 EMERGENCY EQUIPMENT FUEL AND OIL ISSUE

INSTRUCTIONS

- Please print. Use pen only.
- An "Emergency Equipment Fuel and Oil Issue" must be completed each time an issue is made for fuel or oil commodity.
- The issuing agent is responsible for completing the form about the equipment that is receiving the fuel or oil commodity. Be sure to complete all blocks and sign.
- Receiving agent is responsible to check for accuracy and if in agreement, sign for commodity received.
- Issuing agent gives agent green "receiving agency copy" after both agents have signed.
- At end of shift, issuing agent gives finance pink (2) and blue copies.
- Issuing agent retains goldenrod copy.
- The white "ordering office file copy" is retained in the book. Upon issuing agent's demobilization or when the book is complete, the book must be turned in to finance.

EMERGENCY EQUIPMENT FUEL AND OIL ISSUE *SEE COVER FOR INSTRUCTIONS.*

INCIDENT OR PROJECT NAME	OWNER OF EQUIPMENT: ☐ Contractor ☐ Government Name	
AGREEMENT NUMBER	TYPE OF EQUIPMENT	LICENSE OR IDENTIFICATION NUMBER

COMMODITY *(circle appropriate items)*	QUANTITY	UNIT	UNIT PRICE	AMOUNT
REGULAR GAS UNLEADED GAS DIESEL				
OIL OTHER *(specify)*				

DATE AND TIME ISSUED	REMARKS	TOTAL

ISSUING AGENT'S SIGNATURE	PRINT NAME AND TITLE
RECEIVING AGENT'S SIGNATURE	PRINT NAME AND TITLE
POSTED TO EQUIPMENT INVOICE *(FINANCE USE ONLY): INITIALS*	*DATE*

NSN 7540-01-317-7366
50304-101

PRINTED ON RECYCLED PAPER

OPTIONAL FORM 304 (7-90)
USDA/USDI

G.3 LOAD TICKET

Load Ticket	Ticket No.
Municipality (Applicant)	Prime Contractor
	Sub-Contractor
Truck Information	
Truck No	Capacity
Truck Driver (print legibly)	
Loading Information	
Loading — Time / Date / Inspector/Monitor	
Location (Address or Cross Streets)	
When Using GPS Coordinates use Decimal Degrees (N xx.xxxxx)	
N	**W**
Unloading Information	
Debris Classification	Estimated %, CYs, or Actual Weight
☐ Vegetation ☐ C&D ☐ White Goods ☐ HHW ☐ Other* See Below	
Unloading — Time / Date / Inspector/Monitor	
DMS Name and Location	
*Other Debris Explanation	Original: Applicant Copy 1: _____ Copy 2: _____ Copy 3: _____

Instructions:

The debris load site monitor will be responsible for completing the information in Loading Information. The debris load site monitor will retain one copy of the load ticket and give the remaining copies to the truck driver. The debris load site monitor will maintain a log that contains the information required.

The DMS monitor will be responsible for completing the information Unloading Information. The DMS monitor will verify that all required information is completed by the loading site monitor. After verifying that Section 1 is complete, the monitor in the inspection tower will make an estimate of the volume of debris contained in the truck or trailer in cubic yards. Each truck or trailer will have the measured size in cubic yards recorded on the side of the truck or trailer. That number should be validated with the volume stated in Section 1

G.4 Truck Certification Form

TRUCK CERTIFICATION FORM

General Information

Applicant: _____ Monitor: _____

Contractor: _____ Date: _____

Measurement Location: _____ County: _____

Declaration Number: _____

Truck Information

Make	Year	Color	License

Truck Measurements

Performed By: _____ Date: _____

Volume Calculated By: _____ Date: _____

Both Checked by: _____ Date: _____

Driver Information

Name: _____

Address: _____

Phone Number: _____

Owner Information

Name: _____

Address: _____

Phone Number: _____

Truck Identification

Truck Capacity

Photo

(See reverse for calculation worksheet)

TRUCK CERTIFICATION FORM

DUMP TRUCK

Measurements

Truck Measurements — Length (L) = ____ Width (W) ft = ____ Height (H) ft = ____

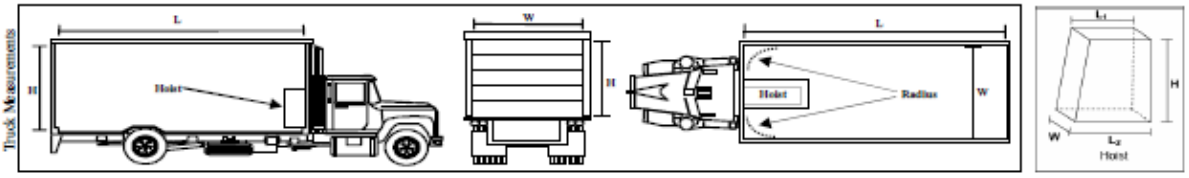
Hoist Measurement — $Length_1$ (L_1) ft = ____ $Length_2$ (L_2) ft = ____ $WidthH$ (W_H) ft = ____ $HeightH$ (H_H) ft = ____

Radius — Radius ft = ____ Height (H) = ____

Calculations

Bed Volume (Basic)	(LxWxH)/27 =	+	cyd
Hoist Volume	((L1+L2/2) x W_H x H_H)/27 =	-	cyd
Radius Volume	(3.14xR^2xH)/27 =	-	cyd
	Total =		cyd

Cubic Yards



EXTRA TRAILER

Measurements

Truck Measurements (Basic) — Length (L) = ____ Width (W) ft = ____ Height (H) ft = ____

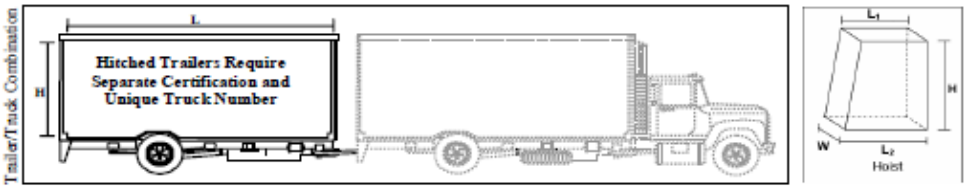
Hoist Measurement — $Length_1$ (L_1) ft = ____ $Length_2$ (L_2) ft = ____ $WidthH$ (W_H) ft = ____ $HeightH$ (H_H) ft = ____

Radius — Radius ft = ____ Height (H) = ____

Calculations

Bed Volume (Basic)	(LxWxH)/27 =	+	cyd
Hoist Volume	((L_1+L_2/2) x W_H x H_H) =	-	cyd
Radius Volume	(3.14xR^2xH)/27 =	-	cyd
	Total =		cyd

Cubic Yards



ROUND BOTTOM TRUCK

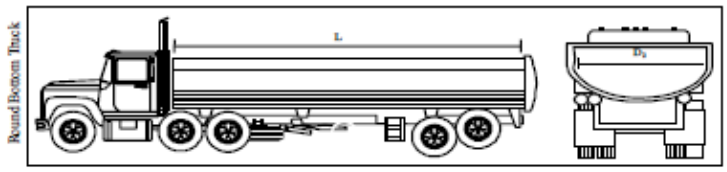
Measurements

Truck Measurements — Length (L) ft = ____ Diameter (D) ft = ____

Calculations

Approx. Volume (3.14 x $(D/2)^2$ x L) /27 = ____ cyd (round bottom portion only)

Cubic Yards



G.5 Truck Placard

Company Name

Truck Number

Cubic Yards

Inspected by and Date

TOWER MONITOR LOG

Date: _____

Monitor: _____ Applicant Monitor: _____

Time	Truck No.	Load Ticket	Capacity	Vol. or Weight	Pick-Up Location	Photo/ Disc	Comments

Applicant: _____ Page ____ Tower Site: _____

Monitor:_____ **ROVING MONITOR REPORT** **Date:**_____

Time	Truck No.	Load Ticket	Capacity	Vol. or Weight	Pick-Up Location	Photo/ Disc	Comments

Applicant: _____ **Page**_____

Monitor:_____ **DAILY ISSUE LOG** **Date:_____**

Issue No.	Truck No.	Load Ticket	Pick-Up Location	Contractor/ Sub-Contractor	Applicant Monitor	Photo/ Disc	Issue/Resolution

Applicant:_____ **Page_____**

Hazardous Stump Worksheet

Applicant: _____ Date: _____

Applicant Representative: _____ Signature: _____

FEMA Representative (if available) _____ Signature: _____

State Representative (if available): _____ Signature: _____

	Physical Location (i.e., Street address, road, cross streets, etc.)	Description of Facility (ROW, Park, City Hall, etc.)	Hazard		GPS (decimal degrees, 00.000000)		Tree Size (Diameter)	Eligible		Fill For Debris Stumps	Comments (See attached sketch, photo, etc.)
			Yes	No	Latitude (N)	Longitude (W)		Yes	No	CY	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

G.10 Debris Forecasting Methods

Qualitative Forecasting

Qualitative forecasting will consist of "windshield tours" and "pass throughs" of the impacted portions of the unincorporated sections of Prowers County or the affected municipality. These actions will note the location, vegetative cover, and estimated percentage of area impacted. These estimates will be the basis of the overall debris forecast.

The information gathered as part of the qualitative forecasting will be reported to impacted County(s) Assessors Office and Land Use Administrator which will establish the number of habitable structures in the review area as well as land-use of the noted properties. Based on this information, the following estimations can be applied.

Buildings – Several basic techniques have been established to forecast destroyed building debris quantities. These techniques can be used to forecast debris quantities prior to an event or estimate quantities after an event.

Residential Buildings – A formula for estimating the debris quantities from a demolished single-family home and associated debris is as follows:

L x W x S x 0.20 x VCM = ____ cubic yards of debris (cy)

- L = Length of the building in feet
- W = Width of the building in feet
- S = Height of building in stories
- VCM = Vegetative Cover Multiplier

The VCM is a measure of the amount of debris within a subdivision or neighborhood. The descriptions and multipliers are described as:

- Light (1.1 multiplier) includes new home developments where more ground is visible than trees. These areas will have a sparse canopy cover.
- Medium (1.3 multiplier) generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover.
- Heavy (1.5 multiplier) is found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.

The table below can be used to forecast debris quantities for totally destroyed single-family, single-story homes in the applicable vegetative cover category.

Typical House Size	Vegetative Cover Multiplier (cy)			
None	Light (1.1)		Medium (1.3)	Heavy (1.5)
1000 ft2	220	220	260	300
1200 ft2	240	264	312	360
1400 ft2	280	308	364	420
1600 ft2	320	352	416	480
1800 ft2	360	396	468	540
2000 ft2	400	440	520	600
2200 ft2	440	484	572	660
2400 ft2	480	528	624	720
2600 ft2	520	572	676	780

The amount of personal property within an average flooded single-family home has been found to be:

- 25-40 cy for homes without a basement
- 45-50 cy for homes with a basement

Mobile homes have less utilized space due to their construction and use. The walls are narrower, and the units contain more storage space. Therefore, the typical mobile home generates more debris by volume than a single-family home. Historically, the volume of debris from mobile homes can be found to be:

- 290 cy of debris for a single-wide mobile home
- 415 cy of debris for a double-wide mobile home

Outbuildings – All other buildings volumes may be calculated by using the following formulas:

- (L x W x H x .33)/27 = cubic yards of debris
- L = Length of the building in feet
- W = Width of the building in feet
- H = Height of the building in feet
- 0.33 is a constant to account for the “air space” in the building
- “27” is the conversion factor from cubic feet to cubic yards

Vegetation – This type of debris is the most difficult to estimate due to the random sizes and shapes of trees and shrubbery. The following serves as a guide for forecasting and estimating vegetative debris:

- Each home is estimated to have an associated 3.65 cubic yards of this type of debris
- Treat debris piles as cubes, not a cone (when estimating)
- 15 trees, 8 inches in diameter = 40 cy (average)

- One acre of debris, 3.33 yards high = 16,117 cy

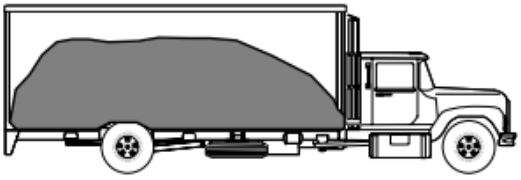
The following factors will be used to convert woody debris from cubic yards to tons:

- Softwoods: 6 cubic yards = 1 ton
- Hardwoods: 4 cubic yards = 1 ton
- Mixed Debris: 4 cubic yards = 1 ton
- Construction & Demolition: 2 cubic yards = 1 ton

**Several truckloads may need to be tested to confirm these factors during actually debris management activities.*

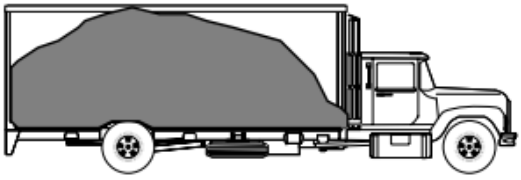
Figure 10: Debris Monitor Guidelines for Estimating Quantities

DEBRIS MONITOR GUIDELINES FOR ESTIMATING QUANTITIES



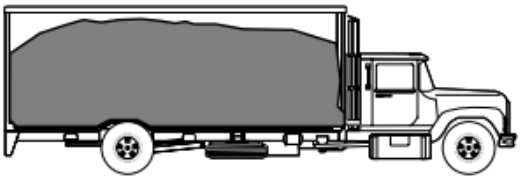
60 Percent Debris Load in Truck

If truck bed measured 20 cubic yards (CY), this 60 percent load would be 12 CY.



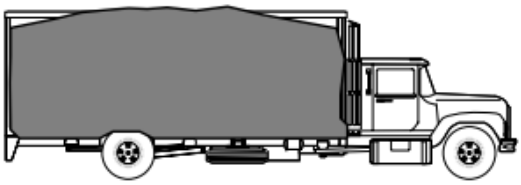
75 Percent Debris Load in Truck

If truck bed measured 20 CY, this 75 percent load would be 15 CY.



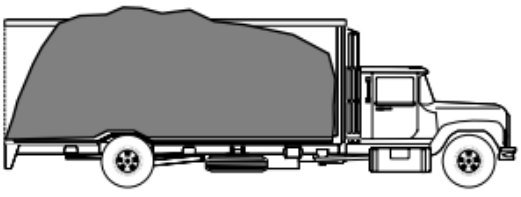
85 Percent Debris Load in Truck

If truck bed measured 20 CY, this 85 percent load would be 17 CY.



95 Percent Debris Load in Truck

If truck bed measured 20 CY, this 95 percent load would be 19 CY.



85 Percent Debris Load in Truck w/ No Tailgate

This truck has no structural tailgate—the capacity would automatically be reduced from 20 CY to 17 CY (85 percent reduction). Then the debris load itself is 85 percent of fully loaded—14.5 CY.



75 Percent Debris Load in Truck w/ No Tailgate

This truck has no structural tailgate—the capacity would automatically be reduced from 20 CY to 17 CY (85 percent reduction). Then the debris load itself is 75 percent of fully loaded—12.8 CY.

G.11 Debris Management Site Evaluation Form

Date of Site Evaluation: _____

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: _____

PROPERTY OWNERS NAME: _____

PROPERTY OWNERS ADDRESS: _____

SITE GPS COORDINATES: N _____ W _____

PROPERTY OWNERS PHONE NUMBER: _____

ESTIMATED PROPERTY SIZE: _____ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	
Any Proposed Future land Uses	
Environmental Issues	
Proximity to Schools, Churches, Community Centers	
Property Topography	
Open Water Sources	
Groundwater Wells	
Access to Electricity/Sewer/Water	
Soil Integrity	
Surface Water Drainage	
Prevailing Wind Direction	
Ingress/Egress	
Lighted Area	
Site Security	
Buffer Distance	
Property Developed	
Property Adjacent to Airport/Airfield	
Site Able to Handle Large Volume of Trucks	

SITE PREPARATION: High ☐ Medium ☐ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☐ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☐ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☐

Air curtain Incineration ☐

Grinding ☐

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☐ C & D

☐ Vegetation

☐ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

_____

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.

G.12 Sample Plan Adoption Resolution

RE: ADOPT SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMETN PLAN

WHEREAS, the Board of County Commissioners of _____ County, Colorado, Pursuant to Colorado Statute, is vested with the authority of administering the affairs of _____ County, Colorado, and

WHEREAS, State law, and particularly Section 24-33.5-707(8), C.R.S., requires the local disaster agency keep current a Local Disaster Emergency Plan for its area, and

WHEREAS, a debris management plan is an essential part of a Local Disaster Emergency Plan, and

WHERAS, The Office of Emergency Management has presented the Board with a Debris Management Plan for the Southeast All-Hazards Region which includes _____ County and

WHEREAS, after review, the Board deems it advisable to adopt said plan, a copy of which is attached hereto and incorporated herein by reference, in order to protect the health, safety and welfare of the residents of _____ County.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of _____ County, Colorado, that the Southeast All-Hazards Debris Management Plan, dated _____ 2019, be, and hereby is adopted

The above and foregoing Resolution was on motion duly made and seconded, adopted by the following vote on the ___ Day of _____, A.D., 2019

BOARD OF COUNTY COMMISSIONERS
_____COUNTY, COLORADO

ATTEST:

_____ County Clerk to the Board

_____
NAME NAME, Chair

BY: _____
Clerk to the Board

APPROVED AS TO FORM:

_____
County Attorney

Appendix H: Agreements

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

H.1 2012 Mutual Aid Agreement for Emergency Services

MUTUAL AID AGREEMENT
FOR
EMERGENCY SERVICES

THIS AGREEMENT made and entered into this 25th day of June, 2012, by and between the Emergency Services Agencies representing, **BACA, BENT, CROWLEY, KIOWA, OTERO and PROWERS** Counties.

WITNESSETH THAT:

WHEREAS, the agencies hereto maintain paid and/or volunteer emergency services, together with personnel and equipment; and

WHEREAS, it is, and will continue to be to the mutual benefit of each of the agencies, to assist the other when necessary in providing additional emergency equipment and personnel for the purpose of delivering emergency services within the boundaries of the other agency, and in turn to receive such assistance; and

NOW THEREFORE, in consideration of the premises and mutual covenants, performances and agreements hereafter set forth, it is mutually understood and agreed between the agencies as follows:

DEFINITIONS:

"Emergency Service Agencies" means any Organization, Department, Special District, Municipality, and/or County that would provide one or all of the following services: Fire Protection, Ambulance Service and Hazardous Material Incident Response.

"Answering Agency" means the agency responding to a request within the boundaries of the Requesting Agency.

"Requesting Agency" means the agency asking for aid under this agreement.

"Coordinator" means the person responsible for the respective agency or his/her and authorized representative.

MUTUAL ASSISTANCE AND AID: Each party hereto agrees to respond to requests for assistance from the other party. The Coordinator of the Answering Agency will determine what personnel and equipment will be sent in each particular situation.

Any request for aid shall include a clear statement of the amount and type of equipment and personnel requested and shall specify the location to which the Answering Agency must respond and check in.

RESPONSE: Each party agrees to respond to calls within the jurisdiction of the other without charge other than as noted below:

Food and Fuel

Upon arrival at the scene of the requesting agency, the answering agency must report to the on-scene coordinator in-charge, to be dispatched as needed.

The answering agency shall be under the immediate supervision and control of the coordinator of the requesting agency.

The answering agency will be released by the requesting agency when the services of the answering agency are no longer needed or when the answering agency is needed within the area for which it normally provides emergency public services.

RESPONSIBILITY/LIABILITY re: PERSONNEL AND EQUIPMENT: Each separate party shall assume full and complete responsibility and liability for its own personnel and equipment during any and all response incidents.

IMMUNITY: The personnel and equipment of each of the agencies, while engaged in performing any mutual aid service, activity or undertaking under the provisions of this agreement, shall have and retain all rights, privileges and immunity of and be deemed to be engaged in service and employment of such agency, notwithstanding that such mutual aid service is being performed in or for that other agency.

WAIVER: Each agency waives all claims against the other agency for compensation for any loss, damage, personal injury or death sustained by personnel, which occurs as a consequence of the performance of this agreement.

EFFECTIVE DATE /TERMINATION: This agreement shall become effective upon the approval and signature by the authorized representatives of the agencies hereto and shall continue until such time as any or all of the agencies gives sixty days advance written notice to the other agencies of the intention to terminate this agreement.

NON-ASSIGNABILITY: This agreement shall be non-assignable by any of the parties without the express written consent of all of the other parties.

INTERPRETATION/ENFORCEMENT: This agreement shall be interpreted and enforced in accordance with the laws of the State of Colorado.

MODIFICATION: No change or modification of this agreement shall be valid unless the same is in writing and signed by all of the parties hereto.

Attachment A: Equipment lists for each County

Attachment B: Contact lists for each County

IN WITNESS WHEREOF, the parties have executed this agreement the day and year first above written.

Adopted this 25th day of June, 2012.

Glen R. "Spike" Ausmus, Chairman
Baca County Board of Commissioners

Bill Long, Chairman
Bent County Board of Commissioners

T.E. (Tobe) Allumbaugh, Chairman
Crowley County Board of Commissioners

Richard Scott, Chairman
Kiowa County Board of Commissioners

Kevin K. Karney, Chairman
Otero County Board of Commissioners

~~Gene Millbrand~~, Chairman, JOE D. MARBLE
Prowers County Board of Commissioners

H.2 2001 SE Colorado Regional Mutual Aid Agreement for Emergency Services

Southeastern Colorado

Regional

Mutual

Aid

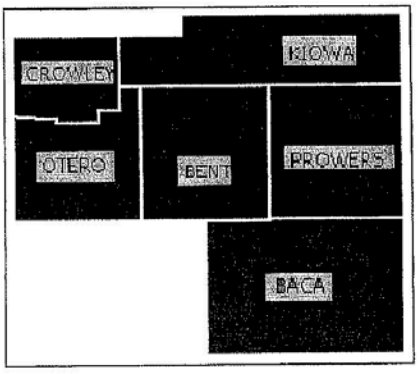
Agreement

For

Emergency Services

Between

Baca, Bent, Crowley, Kiowa, Otero, and Prowers Counties



MUTUAL AID AGREEMENT
FOR
EMERGENCY SERVICES

THIS AGREEMENT, made and entered into this 24th day of May, 20 61, by and between the Emergency Services Agencies representing, BACA, BENT, CROWLEY, KIOWA, OTERO AND PROWERS Counties.

WITNESSETH THAT:

WHEREAS, the agencies hereto maintain paid and/or volunteer emergency services, together with personnel and equipment therefore; and

WHEREAS, it is, and will continue to be, to the mutual benefit of each of the agencies, to assist the other when necessary in providing additional emergency equipment and personnel for the purpose of delivering emergency services within the boundaries of the other agency, and in turn to receive such assistance; and

NOW, THEREFORE, in consideration of the premises and mutual covenants, performances and agreements hereafter set forth, it is mutually understood and agreed between the agencies as follows:

1.0 DEFINITIONS:

1.1 "Emergency Service Agencies" means any Organization, Department, Special District, Municipality, and/or County, that would provide one or all of the following services: Fire Protection, Ambulance Service, Hazardous Material Incident Response.

1.2 The agency responding to a request within the boundaries of the other agency is designated as the "answering agency".

1.3 The agency requesting aid under the agreement is designated as the "requesting agency".

1.4 "Coordinator" means the person responsible for the respective service/ company or his/her designated and authorized representative.

2.0 MUTUAL ASSISTANCE AND AID:

2.1 Each of the agencies agree to respond to requests for assistance within the boundaries of the other agency upon request of the requesting coordinator at any and all times, provided that it shall be entirely with the discretion of the coordinator of the answering agency as to what personnel and equipment shall answer such call and whether or not, in any event, such call may be answered consistently with the safety and protection of the citizens and property of the said answering agency.

1

2.2 Each of the agencies agree to answer calls of the other agency, subject to Approval of each call by the coordinator of the answering agency as set forth in paragraph 2.1 above, without charge therefore, and with the express understanding that personnel and equipment of said answering agency shall be subject only to the liability, workman's compensation, and/or insurance of the answering agency. The equipment and employees of the answering agency shall at all times be under the supervision and control of the coordinator of the requesting agency, or his/her designated assistant.

2.3 Nothing in this agreement shall be construed to create, alter, or delegate the authority of any designated Emergency Response Authority.

3.0 ADDITIONAL PROVISIONS:

3.1 Any request for aid hereunder shall include a clear statement of the Amount and type of equipment and personnel requested, and shall specify the location to which the equipment and personnel are to be dispatched, however, the amount and type of equipment and number of personnel to be furnished shall be determined by a representative of the answering agency.

3.2 The answering agency shall report to the on-scene coordinator in-charge of the requesting agency at the location to which the equipment and personnel is dispatched and shall coordinate all activities with that official. The resources or facilities that are assigned shall be under the immediate supervision of the designated answering agency.

3.3 An answering agency will be released by requesting agency when the services of the answering agency are no longer required or when the answering agency is needed within the area for which it normally provides emergency public services.

3.4 The equipment and personnel of each of the agencies while engaged in performing any mutual aid service, activity or undertaking under the provisions of this Agreement, shall have and retain all rights, privileges and immunity of and be deemed to be engaged in the service and employment of such agency, not withstanding that such mutual aid service is being performed in or for that other agency.

3.5 If at any time the answering agency responds to a mutual aid call where requesting agency is not at the scene, the answering agency will follow their Standard Operating Procedures. However, the answering agency will contact the requesting agency's base for further orders and/or destination site.

3.6 Each agency waives all claims against the other agency for compensation for any loss, damage, personal injury or death sustained by personnel, which occurs as a consequence of the performance of this agreement.

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3.7 This agreement shall become effective upon the approval and signature by authorized representatives of the agencies hereto and shall continue until such time as any agency gives sixty (60) days advance written notice to the other agencies of its intention to terminate this Agreement.

3.8 This Agreement may be supplemented with various exhibits to be alphabetically designated in chronological order of adoption and signed by the respective agencies. These exhibits may set forth specific areas of first response, additional protocol areas of first response, additional protocol, and other communications and procedural matters.

END

IN WITNESS WHEREOF, the duly authorized representatives of the respective agencies hereto have hereunto signed these presents of the dates respectively indicated.

BACA COUNTY:

Campo Fire Department	Title	8-30-02 Date
Pritchett Vol. Fire Department	Chief Title	10-26-02 Date
Southeast Colo Hosp. Amb. Service	EMS Director Title	5-22-02 Date
Springfield Fire Department	Fire Chief Title	8-25-02 Date
Two Buttes Vol. Fire Department	Fire Chief Title	7-20-02 Date
Walsh Dist. Hosp. Amb. Service	WAIVED EMS Director Title	5-27-02 Date
Walsh Fire Department	Fire Chief Title	6-2-02 Date

BENT COUNTY:

Bent County Ambulance Service	EMS Board Title	12-24-01 Date
Hasty/Mclave Rural Fire Dist.	Chief Title	7-16-01 Date
Las Animas/Bent County Fire Dept.	Chief Title	7-16-01 Date

CROWLEY COUNTY:

Crowley County Ambulance Service	Amb. Director Title	7-7-01 Date
Crowley Fire Department	Chief Title	7-7-01 Date
Olney Springs Fire Department	Chief Title	7-8-01 Date
Ordway Fire Department	Chief Title	7-9-01 Date
Sugar City Fire Department	Chief Title	7-9-01 Date

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KIOWA COUNTY:

Eads Fire Department	Fire Chief Title	11/25/02 Date
Kiowa County Ambulance Service	Ambulance Board Director Title	12/10/02 Date
Kiowa County Search and Rescue	County Fire Chief Title	11-26-02 Date

OTERO COUNTY:

Fowler Rural Fire Department	fire chief Title	5-24-01 Date
La Junta Rural Fire Prot. District	FIRE Chief Title	5-24-01 Date
Manzanola Fire Department	FIRE CHIEF Title	5-30-01 Date
Manzanola Quick Response Unit	Chairman Title	5-30-01 Date
Rocky Ford Fire Department	Fire Chief Title	5/31/01 Date

PROWERS COUNTY:

Granada Fire Department	FIRE CHIEF Title	11-13-02 Date
Holly Vol. Fire Department	Fire Chief Title	5-21-02 Date
Holly Ambulance Service	Chief Title	5-21-02 Date
Lamar Fire Department	Fire Chief Title	1/7/2002 Date
Prowers County Fire Department	Fire Chief Title	1/7/2002 Date
Wiley Fire Department	Res Board. Title	12-3-02 Date
Colorado State Patrol	Chief Title	2/4/02 Date

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H.3 Colorado Intergovernmental Agreement for Emergency Management

INTERGOVERNMENTAL AGREEMENT FOR EMERGENCY MANAGEMENT

WITNESSETH THAT:

WHEREAS, intergovernmental agreements to provide functions or services, including the sharing of costs of such services or functions, by political subdivisions of the State of Colorado are specifically authorized by Section 29-1-203 C.R.S. (1986) and other sections of the C.R.S.; and

WHEREAS, establishment of an intergovernmental agreement will serve a public purpose and will promote the safety, security, and general welfare of the inhabitants of the jurisdictions; and

WHEREAS, the jurisdictions hereto are each authorized to provide, establish, and maintain disaster emergency services as defined by each jurisdiction; and

WHEREAS, disaster emergencies may arise in one or more of the jurisdictions, resulting in greater demands than the personnel and equipment of that jurisdiction can handle, and

WHEREAS, it is in the best interest of each of the jurisdictions that it may have service of and from the other jurisdictions to assist it in reacting to disaster emergencies; and

WHEREAS, other jurisdictions who provide similar resources may in the future desire to be included in this agreement; and

WHEREAS, it is in the best interests of each of the jurisdictions to have access to emergency resources to supplement their own during an emergency; and

WHEREAS, to receive the resources cited above, it is cost effective for each of the jurisdictions to make available during disaster emergencies, its own resources to other affected jurisdictions.

NOW THEREFORE, IT IS MUTUALLY AGREED by and between each of the signatory jurisdictions as follows:

1. a. This intergovernmental Agreement is promulgated under the provision of Article 1, the relevant portions of Articles 5 and 22, Title 29, and 24-32-2105 C.R.S. The statute shall control in case of conflict between this agreement and the statute. Each and every term, provision, or condition herein is subject to and shall be construed in accordance with the provisions of Colorado law, the Charters of the various jurisdictions, and the ordinances and regulations enacted pursuant thereto.

b. It is understood and agreed by the jurisdictions hereto that if any part, term or provision of this Agreement is by the courts held to be illegal or in conflict with any law of the State of Colorado, or of the United States of America, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the jurisdictions shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

c. All terms and words herein shall have the same definition as provided in Titles 24 and 29 of C.R.S. except as herein otherwise indicated. "Disaster Emergency" shall have the same definition as provided for "Disaster" at 24-32-2103 (1) C.R.S. Where terms and words herein are not so defined they shall have the commonly accepted definition.

2. This Agreement provides for the joint exercise by the jurisdictions of the function or service provided herein, but does not establish a separate legal entity to do so, nor does it constitute any jurisdiction as an agent of any other jurisdiction for any purpose whatsoever. This Agreement shall provide only for sharing of in-kind resources by the jurisdictions.

3. For and in consideration of the promises of each participating jurisdiction, each agrees with the others that in the event there are disaster emergencies in the territory served by one jurisdiction which are beyond the capabilities of that jurisdiction, subject to the limitations herein set forth, will assist the other, by causing and permitting its resources to be used in responding to each disaster emergencies in the other jurisdiction. The need for such assistance shall be determined by the jurisdiction requesting assistance, subject however, to the following limitations:

a. Any of the signatory jurisdictions shall be excused from making their resources available or continuing to make their resources available, to any of the other jurisdictions, in the event of the need of the resources of such jurisdiction within the territorial area of such jurisdiction or any other jurisdiction, or their prior use at any other place. Such decision of availability shall be made by the jurisdiction requested to give mutual aid, and such decision shall be conclusive and in the providing jurisdiction's sole discretion.

b. Mutual aid response by any jurisdiction beyond the political boundary of the responding jurisdiction is hereby deemed to be approved by the respective Executive and Legislative governing bodies of the jurisdictions, and such response shall require no further approval by responsible officials of any jurisdiction, except as provided by the limitations in Article 3 a (above).

4. Each jurisdiction shall, at all times, be responsible for its own costs incurred in the performance of this Agreement, and shall not receive any reimbursement from any other jurisdiction, except for third party reimbursement under Article 7, and except as may be negotiated and agreed to separately, in writing, by both the requesting and receiving jurisdictions.

5. Each jurisdiction waives all claims and causes of action against all of the other jurisdictions for compensation, damage, personal injury or death occurring as a consequence, direct or indirect, of the performance of this agreement, to the extent permitted by, and without waiving any protections or other provisions of, the Colorado Governmental Immunity Act.

6. Each jurisdiction agrees to allow any other governmental jurisdiction defined under Colorado law to join in this Mutual Aid Agreement after formal approval by its governing body and notification by the depository cited in Article 13 of such action to each of the other signatory jurisdictions to this Agreement. Each party who initially executes this agreement delegates to the office of the person executing this agreement, or such other parties as they may further designate in writing, the authority to execute such amendments as may be necessary in the future to accommodate the joinder of new jurisdictions to this Agreement, without change of any other terms or conditions of the Agreement.

7. Each jurisdiction agrees that it will reasonably pursue any legal reimbursement possible, pursuant to state or federal law, for incidents including, but not limited to, hazardous materials incidents, occurring within its jurisdiction, on behalf of all assisting jurisdictions. Upon payment by the responsible entity, and after subtracting the reasonable costs of pursuing and collecting the reimbursement the receiving jurisdiction will distribute the received funds in a fair and equitable manner to assisting jurisdictions, based upon a pro rata share of their documented expenses for the involved incident.

8. Nothing contained in this agreement, and no performance under this Agreement by personnel of the jurisdictions hereto, shall in any respect alter or modify the status of officers, agents, or employees of the respective jurisdictions for purposes of worker's compensation or their benefits or entitlements, pension, levels or types of training, internal discipline, certification, or rank procedures, methods, or categories, or for any purpose, or condition or requirement of employment. Worker's Compensation Coverage shall be as structured in C.R.S. 29-5-109, if the request meets the requirements of C.R.S. 29-5-103 through 108, otherwise the claim shall be processed as if it were generated by any other work assignment within the providing jurisdiction. The providing jurisdiction shall remain responsible for processing any worker's compensation claims filed by their own resources.

9. This Agreement shall be binding upon the successors and assigns of each of the jurisdictions hereto, except that no jurisdiction may assign any of its rights or obligations hereunder, without the prior written consent of two-thirds (2/3) of the other signatory jurisdictions.

10. It is expressly understood and agreed that enforcement of the terms and conditions of the Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the named jurisdictions hereto, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such Agreement. It is the express intention of the named jurisdictions that any person other than the named jurisdictions receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

11. Amendments to this Agreement may be made only upon unanimous consent by all then current signatory jurisdictions. Such consent shall become effective upon its receipt in writing at the depository cited below in Article 13.

12. Any jurisdiction hereto may terminate this Agreement, with or without cause, upon thirty (30) days prior written notice to the signature depository provided below.

13. This Agreement shall be executed by each jurisdiction on a separate signature page. Original signature pages will be held by the Colorado Division of Emergency Management (DEM) or its successor agency, at its offices at 9195 East Mineral Avenue, Suite 200, Centennial, Colorado 80112 or at such other place as DEM shall determine. Copies of signature pages shall be provided and certified by DEM to each party jurisdiction, and such copies shall have the full force and effect as if they were originals. DEM shall provide timely notice to all party jurisdictions of any additions to and withdrawals of party jurisdictions, as well as timely notice of the effective date of any amendment to this Agreement.

As outlined in the foregoing Intergovernmental Agreement, the below designated jurisdiction executes this Agreement on the most recent date indicated below.

JURISDICTION:

_____

By:

_____

Title:

_____

Date:

_____

Approved as to:

_____

By:

_____

Date:

_____

Approved as to:

_____

By:

_____

Date:

_____

OTHER:

ATTEST AS TO SIGNATURES:_____

Title:

_____

Date:

_____

H.3.1 Jurisdictions in Southeast Colorado that have Signed the Statewide IGA

1. Baca County
2. Bent County
3. Crowley County
4. Kiowa County
5. Prowers County
6. State of Colorado

Appendix I: Contractors / Equipment

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

I.1 Southeast Colorado Debris Management Resources

Company	County	Phone	Equipment
Carder, Inc 32625 CR 3.75 Lamar, CO 81052	Prowers	719-336-3479	Heavy Equipment Service and Rental
DeWitt Excavating 7395 US Hwy 50 Lamar, CO 81052	Prowers	719-336-4455	Heavy Equipment Service and Rental
Torres Excavation 1750 CR HH Lamar, CO 81052	Prowers	719-336-7361	Heavy Equipment Service and Rental
TLM Constructors, Inc. 102 C Street Swink, CO 81007	Otero	719-384-5956	Heavy Equipment Service and Rental
A-1 Rental 7215 Hwy 50 Lamar, CO 81052	Prowers	719-336-2771	Heavy Equipment Service and Rental, Pumps & Compressors, Generators
Colorado Machinery 685 Enterprise Drive Pueblo West, CO 81007	Pueblo	719-547-3505 1-800-333-0850	Heavy Equipment Service and Rental
Grand Rental Center 219 N. Grand Ave. Pueblo, CO 81007	Pueblo	719-542-4641	Heavy Equipment Service and Rental, Pumps & Compressors, Generators
Colorado Dirt Contractors 2997 N. I-25 Pueblo, CO 81008	Pueblo	719-546-1789	Heavy Equipment Service and Rental
United Rentals 221 Santa Fe Dr. Pueblo, CO 81007	Pueblo	1-800-748-2411 719-543-7426	Heavy Equipment Service and Rental
Wagner Rents 214 E. Ilex Pueblo, CO 81003	Pueblo	719-544-0088	Heavy Equipment Service and Rental, Pumps & Compressors
Wagner Rents 3026 Delta Dr. Colorado Springs, CO 80910	El Paso	1-800-438-8681 719-390-7316	Heavy Equipment Service and Rental, Pumps & Compressors
Sunstate Equipment 4125 N. Elizabeth Pueblo, CO 81008	Pueblo	719-543-1722	Heavy Equipment Service and Rental
Sunstate Equipment 1211 E. Cheyenne Rd. Colo. Springs, CO 80906	El Paso	719-577-9750	Heavy Equipment Service and Rental

Hertz Equipment 5525 E. Platte Ave. Colo. Springs, CO 80915	El Paso	1-800-704-4473 719-596-6629	Pumps and Compressors, Generators
Ranchers Supply E. Hwy 50 / P.O Box 721 Lamar, CO 81052	Prowers	719-336-2236	Pumps & Machinery
Semco 7395 Hwy 50 Lamar, CO 81052	Prowers	719-336-9006	Pumps & Machinery
Holdbrook Pump & Supply 219 Grand Cheraw, CO 81050	Otero	719-853-6316 719-853-6626	Pumps & Machinery, Pumps & Compressors
Air Gas 223 N. Main Lamar, CO 81052	Prowers	719-336-4439	Industrial Equipment and Sales
Arcon Supply 3524 Prospect Street Colo. Springs, CO 80907	El Paso	719-593-7912	Industrial Equipment and Sales
Timme Motor Sales 315 E. Enterprise Dr. Pueblo, CO 81007	Pueblo	719-547-4917	Generators
Grainger Industrial Supply 610 Popes Bluff Trail Colo. Springs, CO 80907	El Paso	719-598-9500	Safety Equipment
Colorado Equipment 101 N. Victoria Ave Pueblo, CO 81003	Pueblo	719-544-2647 1-800-304-4680	Safety Equipment
Jordan Construction Co. 555 E. 3rd Street Springfield, CO 81073	Baca	719-523-6611	Heavy Equipment Service and Rental
Robins Redi Mix LLC 1269 Colorado St. Springfield, CO 81073	Baca	719-523-4213	Heavy Equipment Service and Rental
Chenoweth Construction 700 Fountain Street Springfield, CO 81073	Baca	719-523-6506	Heavy Equipment Service and Rental
M R Rife Earthmoving 101 Mullen Street	Prowers	719-336-5300	Heavy Equipment Service and Rental

Lamar, CO 81052			
Town and Country Disposal LLC 801 E 6th Ave Springfield, CO 81073	Baca	719-529-0737	Trash Service
Plains Disposal LLC P.O. Box 44 Springfield, CO 81073	Baca	719-353-2114	Trash Service
Sam Fief Tree Service 31571 US Hwy 50 La Junta, CO 81050	Otero	719-469-8825	Tree Service
Silver Leaf Tree Service Lamar, CO 81052	Prowers	719-336-0683	Tree Service
Dashner's Tree Trimming Lamar, CO 81052	Prowers	719-688-1599	Tree Service
Tezak Heavy Equipment 205 Tunnel Drive Canon City, CO 81022	Fremont	719-269-1173	Heavy Equipment Service and Rental
Canyon Concepts Services 4072 Turnberry Court Colorado Springs, CO 80909	El Paso	719-332-5203	Environmental Remediation, Construction, Debris Management
Tetra Tech (Post Disaster Programs) 7222 Commerce Center Dr. Suite 150 Colorado Springs, CO 80919	El Paso	719-260-1700	Debris Monitoring, Debris Management, Environmental and spill response
WIH Resource Group P.O. Box 74873 Phoenix, Arizona 85087	Arizona	480-241-9994	Waste Management, Recycling and Transportation Consulting

In Addition to corporations listed above the counties and municipalities will also likely use private resources as many farmers and ranchers have heavy equipment that can also move debris.

I.2 Volunteer / Donated Equipment

Volunteers and donated equipment for debris removal will be directed to the County EOC and will be coordinated with the DMTF.

Appendix J: FEMA Debris Contracting Guidance RP9580.201

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

FEMA RECOVERY

FACT SHEET RP9580.201

Debris Contracting Guidance

Overview

Debris removal and monitoring contracts must meet rules for Federal grants, as provided for in Title 44 Code of Federal Regulations (CFR) §13.36, **Procurement** in order to be eligible for reimbursement under the Public Assistance Program. This fact sheet assists Public Assistance applicants with meeting procurement requirements established in 44 CFR Part 13, as well as other Public Assistance Program eligibility requirements, when procuring debris removal and monitoring contracts. Public Assistance applicants should comply with their own procurement procedures in accordance with applicable State and local laws and regulations, provided that they conform to applicable Federal laws and standards identified in Part 13.

Contract Procurement

To be eligible for Federal funding, applicants must comply with federal procurement standards as outlined in 44 CFR, §13.36, **Procurement**. Essential elements of the procurement process for debris removal and monitoring contracts include: competition; a clear and definitive scope of work; qualified bidders (documented by licenses, financial records, proof of insurance, and bonding, as applicable); a cost analysis to demonstrate cost reasonableness; compliance with all relevant local, State, and Federal requirements, laws and policies; and, clear documentation of the process/rationale followed in making procurement decisions. Federal regulations require applicants for Public Assistance grants to take the necessary steps to ensure there are opportunities to award contracts to minority, women-owned, and Labor Surplus Area businesses and firms whenever possible. This includes contracts with local organizations, firms, and individuals that support response and recovery activities in a declared major disaster or emergency area. Applicants' legal representatives should review their procurement process and any contract to be awarded to ensure they are in compliance with all Federal, State, and local requirements. Procurement policies must include procedures to handle protests and disputes related to contracts awarded. ***FEMA will, when requested by applicants, assist in the review of debris removal contracts. However, such a review does not constitute approval.***

RECOVERY FACT SHEET RP9580.201

DEBRIS CONTRACTING GUIDANCE

In order to ensure that debris removal and monitoring contracting costs are eligible, applicants should:

☐ Use competitive bidding procedures to meet procurement requirements for Federal grants, as established in 44 CFR § 13.36, *Procurement*.

☐ Only use abbreviated emergency procurement procedures that include an expedited competitive bid process if time does not allow for more stringent procedures and if they are allowed under State or local laws, codes, or ordinances.

☐ Provide a clear and definitive scope of work in the request for proposals/bids.

☐ Require bidders to provide copies of references, licenses, financial records, and proof of insurance and bonding.

☐ Ensure that debris removal or monitoring contract costs are reasonable and necessary as defined and required by OMB Circular A-87 and 44 CFR Part 13. *Competitively bid contracts that comply with Federal, State, and local procurement regulations and procedures will establish reasonable costs for the work.*

☐ Complete and document a cost analysis to demonstrate price reasonableness on any contract or contract modification where adequate price competition is lacking, as detailed in 44 CFR § 13.36(f). See Attachment 1, *Debris Removal Contract Cost Analysis*, for guidance on completing a cost analysis.

Cost Analysis

Pursuant to 44 CFR § 13.36, **Procurement**, Public Assistance applicants must complete a cost analysis for *any contract or contract modification where price competition is lacking*. Failure to complete a cost analysis may jeopardize FEMA Public Assistance grant funding. Applicants are encouraged to complete a cost analysis using the attached *Debris Removal Contract Cost Analysis*. Applicants are also encouraged to file documentation supporting the cost analysis with all associated contract documents.

Upon request, FEMA will provide guidance as necessary in the cost analysis process. Such a review does not constitute approval when determining the eligibility of costs for reimbursement under FEMA's Public Assistance Program.

Pre-Disaster and Standby Contracts

Applicants are encouraged to pre-qualify debris removal contractors prior to an event and solicit bid prices from this list of contractors once an event has occurred to ensure competitive bidding and obtain reasonable market prices at the time of work performed. The solicitation for pre-qualifying contractors

should adequately define in the proposed scope of work all potential debris types, anticipated haul distances, and size of events for which a contract may be activated.

Debris Removal Contract Provisions

All debris removal contracts must contain the following provisions:

☐ All payment provisions must be based on unit prices (volume or weight).

☐ Payments based on time and material costs are limited to work performed during the first 70 hours of actual work following a disaster event.

> *Note:* FEMA will typically only reimburse applicants for a time and materials contract for eligible debris clearance during the first 70 hours following a declared disaster. After 70 hours of work, the applicant should have sufficient information on the scope of work necessary to complete debris collection and disposal, and a basis for estimating a reasonable cost for the contract work to effectively solicit a lump sum or unit price contract. For some types of debris work time and materials contracts may be the most cost-effective and best suited to the type of work. Applicants should work closely with the State and FEMA when awarding such contracts to ensure eligibility requirements are met.

☐ Payment will be made only for debris that FEMA determines eligible. (This is an optional provision to protect the applicant.)

☐ Contractors must submit invoices regularly and for no more than 30-day periods.

☐ A "Termination for Convenience" clause allowing contract termination at any time for any reason.

☐ A time limit on the period of performance for the work to be done.

☐ A subcontract plan including a clear description of the percentage of the work the contractor may subcontract out and a list of subcontractors the contractor plans to use.

☐ A requirement that the contractor use mechanical equipment to load and reasonably compact debris into the trucks and trailers.

☐ A requirement that the contractor provide a safe working environment.

☐ A requirement that all contract amendments and modifications will be in writing.

RECOVERY FACT SHEET RP9580.201

DEBRIS CONTRACTING GUIDANCE

☐ A requirement that contractors must obtain adequate payment and performance bonds and insurance coverage.

Debris Monitoring Contracts

Applicants must monitor all debris removal operations. Applicants must document all eligible debris removal expenses as a condition of receiving Public Assistance funding. Applicants may use contractors to monitor their debris removal operations. In addition to the guidance provided above, applicants should consider the following when procuring debris monitoring contracts:

☐ Debris monitoring contracts must be competitively procured as required by 44 CFR § 13.36, **Procurement**.

☐ Debris monitors should not be employed by or affiliated with the debris removal contractor.

☐ Debris monitoring contracts are typically time and materials contracts and must contain a not-to-exceed clause, pursuant to 44 CFR § 13.36, **Procurement**.

☐ The contract should include a requirement that the contractor provide a safe working environment, including properly constructed monitoring towers.

☐ Use of a load ticket system to record with specificity (e.g., street address, GPS coordinates) where debris is collected and the amount picked up, hauled, reduced, and disposed of.

☐ Debris monitors should be trained and possess skills adequate to fulfill the duties of the job. Labor rates should be commensurate with the skill level required by the job function. **Professional engineers and qualifications are not required to perform monitoring duties.**

☐ The contractor should demonstrate that its staff is familiar with FEMA debris removal eligibility criteria.

Avoidance Checklist

☐ **DO NOT:** Award a debris removal or debris monitoring contract on a sole-source basis.

☐ **DO NOT:** Sign a contract (including one provided by a contractor) until your legal representative has thoroughly reviewed it.

☐ **DO NOT:** Allow any contractor to make eligibility determinations; only FEMA has authority to make final eligibility determinations.

RECOVERY FACT SHEET RP9580.201

DEBRIS CONTRACTING GUIDANCE

☐ **DO NOT:** Accept any contractor's claim that it is "FEMA certified." FEMA does not certify, credential, or recommend debris contractors.

☐ **DO NOT:** Award a contract to develop and manage debris management sites, unless the debris sites are part of your approved debris management plan or you contact the State or FEMA for technical assistance concerning the need for such an operation. Temporary Debris Storage and Reduction sites are not always necessary.

☐ **DO NOT:** Allow separate line item payment for stumps 24 inches and smaller in diameter; you should treat these stumps as normal debris.

☐ **DO NOT:** "Piggyback" or utilize a contract awarded by another entity. "Piggybacking" may be legal under applicable state law; however, the use of such a contract may jeopardize FEMA funding because these contracts do not meet requirements for competition established in 44 CFR § 13.36. If an applicant requests reimbursement for costs it incurred from a piggyback contract, FEMA will determine the reasonable cost for the performance of eligible work.

☐ **DO NOT:** Award pre-disaster/stand-by contracts with mobilization costs or unit costs that are significantly higher than what they would be if the contract were awarded post-disaster. Such contracts should have variable mobilization costs depending upon the size of the debris work that may be encountered.

☐ **DO NOT:** Allow for markups due to errors in volume calculations.

☐ **DO NOT:** Allow for miscellaneous items, or for contract contingencies of any kind, including "unknowns."

See Attachment 2, *Debris Operations Contract Bid Sheet,* for additional guidance on debris contracts.

Deborah Ingram
Acting Assistant Administrator
Recovery Directorate

9/27/10
Date

Attachments (2)

FEMA RECOVERY

FACT SHEET 9580.201

ATTACHMENT 1:
Debris Removal Contract Cost Analysis

This guidance is intended to assist Public Assistance applicants in complying with the requirements of 44 CFR Part 13.36, **Procurement**, for debris operation contracts or contract modifications where adequate price competition is lacking.

When to Conduct a Cost Analysis

Applicants should complete a cost analysis when one of the following conditions applies:

- The applicant has not received two or more priced bids from responsible bidders after soliciting a number of sources;
- Services can only be provided by a single source;
- The awarding agency authorizes noncompetitive proposals;
- The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation; or
- The procurement is a contract modification or change order.

General Contract Review

In order to conduct a cost analysis, applicants should request cost documentation from their debris contractors. This documentation should contain a detailed breakdown of costs for each item of work activity and information on how the contractor arrived at its costs, including, but not limited to:

- Number of labor hours,
- Labor rates,
- Materials (types, quantities, and costs),
- Equipment hours,
- Equipment rates, or
- Unit costs

Applicants are encouraged to verify the mathematical accuracy of the cost documentation by recalculating the contractor's cost figures. Applicants should also review the proposed contract's scope

of work for cost reasonableness to ensure that the proposed scope does not fall under an existing contract.

Applicants should ensure that the contract does not use prohibitive contracting methods per 44 CFR § 13.36(f)(4), including:

1. Cost plus a percentage of cost – this is a contract that provides a specified percentage profit over and above the actual costs of construction; and
2. Percentage of construction cost.

Labor Rate Analysis

Applicants may determine the reasonableness of labor rates by:

1. Comparing the proposed labor category rates with the labor rates in another contract that was competitively bid;
2. Matching rates for each labor category to an acceptable source (e.g. RS Means);
3. Verifying that the classification of each worker and skill level proposed in the contract are reasonable and necessary for the scope of work. For example, a contractor should not propose using an experienced supervisor rate or worker with professional qualifications for work that can be done by a low skilled laborer (e.g., using a professional engineer for debris monitoring). In this case, the supervisor labor classification is unreasonable and should be adjusted to the appropriate labor classification that is more commensurate with the type of work being performed; and
4. Verifying that the proposed number of labor hours are reasonable for the scope of work.

Equipment Rate Analysis

Applicants may determine the reasonableness of equipment rates by:

1. Comparing the proposed equipment rates with the equipment rates in another contract that was competitively bid (if a change order, compared rates to the original contract);
2. Comparing the proposed equipment rates to FEMA's Schedule of Equipment Rates, available at www.fema.gov;
3. Matching equipment rates for each piece of equipment to an acceptable source (e.g., EquipmentWatch);
4. Verifying that the type of equipment proposed is reasonable and necessary for the scope of work;
5. Verifying that the number of units (normally hours) of equipment usage necessary to complete the work is reasonable considering the specific scope of work; and
6. Verifying that there are no contract provisions for the following items with regard to the

proposed equipment costs:

- Mobilization costs
- Standby costs

Unit Rate Analysis

Applicants may determine the reasonableness of unit rates by:

1. Verifying that the unit of measurement (i.e. cubic yard, weight, each, etc.) is appropriate for the scope of work (if the contractor quoted a unit rate price); and
2. Comparing the proposed unit rates with similar rates in another contract that was competitively bid (if a change order, comparing rates to the original contract).

Materials and Supplies Analysis

Applicants should review the materials and supplies included in the contract proposal and ensure that all costs are reasonable.

(Scope of Work) Volume Estimates

In some circumstances, a contractor will include debris volume estimates in support of its proposed costs. Contractors develop these estimates using aerial and ground assessments, forecasting and estimating models (e.g., USACE hurricane debris models and photographs), side scan sonar and other methodologies.

Applicants should request hard copies of volume estimates and all supporting documentation in order to determine if the methodology that the contractor used to estimate debris was an acceptable and reasonable methodology. Applicants should also verify that the volume estimates are reasonable and accurate.

Price Analysis for Competitively Bid Contracts

Applicants are required by 44 CFR Part 13.36(f)(1) to perform a price analysis in all other instances (i.e., for competitively bid contracts when price competition is adequate), to determine the reasonableness of the proposed contract price. Price analyses may incorporate an evaluation of: historic documentation for similar work; average costs for similar work in the area; published unit costs from the national cost estimating databases; and FEMA cost codes, equipment rates, and engineering and design service curves. Upon request, FEMA will assist applicants in the review of these contracts and provide guidance as necessary.

FEMA RECOVERY

FACT SHEET R9580.201

ATTACHMENT 2:
Debris Operations Contract Bid Sheet

Overview

Public Assistance applicants may use the following debris operations bid sheet as a template when issuing requests for proposals and soliciting contract bids for debris removal work. Use of a standard bid sheet will help Public Assistance applicants to compare and analyze bids, resulting in a more effective procurement process. **The bid sheet serves only as a guide for soliciting requests for debris removal services; use of the bid sheet is not a requirement for Public Assistance funding.** Please refer to the *Debris Operations Contracting and Cost Analysis* (Attachment 1) for guidance on complying with procurement requirements established in 44 CFR Part 13, **Procurement**.

Debris Operations Bid Sheet

The debris operations bid sheet is presented on the next three pages. The remainder of this section is intentionally left blank.

FEMA RECOVERY

FACT SHEET R9580.201

ATTACHMENT 2:
Debris Operations Contract Bid Sheet

SAMPLE Debris Bid Sheet

SAMPLE Category	SAMPLE Field Name and Description	SAMPLE Unit	Cost per Unit	Estimated Total Units	Total
Vegetative Collect and Haul	0-15 Miles Veg from Right of Way (ROW) to Debris Management Site (DMS) *Vegetative collect and removal for a haul distance up*	CY	999999	999999	99,999,999.00
	16-30 Miles Veg from ROW to DMS *Vegetative collect and removal for a haul distance up between 16 and 30 miles*	CY	999999	999999	99,999,999.00
	31-60 Miles Veg from ROW to DMS *Vegetative collect and removal for a haul distance between 31 and 60 miles*	CY	999999	999999	99,999,999.00
	60+ Miles Veg from ROW to DMS *Vegetative collect and removal for a haul distance greater than 60 miles*	CY	999999	999999	99,999,999.00
	Single Price Veg from ROW to DMS *A single price vegetative collect and removal for any haul distance*	CY	999999	999999	99,999,999.00
Management and Reduction	Grinding *Grinding/chipping vegetative debris*	CY	999999	999999	99,999,999.00
	Air Curtain Burning *Air Curtain Burning vegetative debris*	CY	999999	999999	99,999,999.00
	Open Burning *Open Burning vegetative debris*	CY	999999	999999	99,999,999.00
	Compacting *Compacting vegetative debris*	CY	999999	999999	99,999,999.00
	Debris Management Site Management *Preparation, management, and segregating at debris management site*	CY	999999	999999	99,999,999.00
C & D Collect and Haul	0-15 Miles C&D from ROW to DMS *C&D collect and removal for a haul distance up to 15 miles*	CY	999999	999999	99,999,999.00
	16-30 Miles C&D from ROW to DMS *C&D collect and removal for a haul distance between 16 and 30 miles*	CY	999999	999999	99,999,999.00
	31-60 Miles C&D from ROW to DMS *C&D collect and removal for a haul distance between 31 and 60 miles*	CY	999999	999999	99,999,999.00
	60+ Miles C&D from ROW to DMS *C&D collect and removal for a haul distance greater than 60 miles*	CY	999999	999999	99,999,999.00
	Single Price C&D from ROW to DMS *A single price C&D collect and removal for any haul distance*	CY	999999	999999	99,999,999.00

THIS SAMPLE BID SHEET IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. IT SHOULD NOT BE SUBMITTED TO FEMA.

RECOVERY FACT SHEET DAP9580.201

ATTACHMENT 2: DEBRIS OPERATIONS CONTRACT BID SHEET

Final Disposal	0-15 Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 0-15 Miles*	CY	999999	999999	99,999,999.00
	16-30 Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 16-30 Miles*	CY	999999	999999	99,999,999.00
	31-60 Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 31-60 Miles*	CY	999999	999999	99,999,999.00
	60+ Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 60+ Miles*	CY	999999	999999	99,999,999.00
	Single Price from DMS to Final Disposal *A single price transport of processed debris from DMS to final disposal*	CY	999999	999999	99,999,999.00
	Tipping Fees (Vegetative) *Fee includes negotiated contract price or pass through amount for vegetative*	CY	999999	999999	99,999,999.00
	Tipping Fees (Mix) *Fee includes negotiated contract price or pass through amount for Mix*	CY	999999	999999	99,999,999.00
	Tipping Fees (C&D) *Fee includes negotiated contract price or pass through amount for C&D*	CY	999999	999999	99,999,999.00
Tree Operations	Hazardous Trees 6"-12" *Hazardous tree removal for a 6-12 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 13"-24" *Hazardous tree removal for a 13-24 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 25"-36" *Hazardous tree removal for a 25-36 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 37"-48" *Hazardous tree removal for a 37-48 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 49"+ *Hazardous tree removal for a 49+ inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Trees with Hazardous Limbs >2" *Hazardous hanging limb removal*	Tree	999999	999999	99,999,999.00
	Hazardous Sumps >24"-36" *Hazardous stump removal for a 24-36 inch stump diameter*	Stump	999999	999999	99,999,999.00
	Hazardous Sumps >37"-48" *Hazardous stump removal 37-48 inch stump diameter*	Stump	999999	999999	99,999,999.00
	Hazardous Sumps >49"+ *Hazardous stump removal 49+ inch stump diameter*	Stump	999999	999999	99,999,999.00
	Stump Fill Dirt *Fill dirt for stump holes after removal*	CY	999999	999999	99,999,999.00

THIS SAMPLE BID SHEET IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. IT SHOULD NOT BE SUBMITTED TO FEMA.

RECOVERY FACT SHEET DAP9580.201

ATTACHMENT 2: DEBRIS OPERATIONS CONTRACT BID SHEET

Specialty Removal	Waterway Debris Removal *Debris Removal from canals, rivers, creeks, streams, and ditches*	CY	999999	999999	99,999,999.00
	Sand Collection and Screening *Pick up, screen, and return debris laden sand/mud/dirt/rock*	CY	999999	999999	99,999,999.00
	Vehicle Removal *Removal of eligible vehicle*	Unit	999999	999999	99,999,999.00
	Vessel Removal (Land) *Removal of eligible vessel*	LF	999999	999999	99,999,999.00
	Vessel Removal (Marine) *Removal of eligible vessel from waterway*	LF	999999	999999	99,999,999.00
	Carcass Removal *Removal of debris that will decompose (animals and organic fleshy matter)*	Pound	999999	999999	99,999,999.00
	ROW White Goods Removal *Pick up and haul of white goods to disposal site*	Unit	999999	999999	99,999,999.00
	Freon Management *Freon management and recycling*	Unit	999999	999999	99,999,999.00
	Demolition of Private Structure	CY	999999	999999	99,999,999.00
	Electronic Waste *Removal of electronic debris that contain hazardous materials, such as cathode ray tubes. Includes computers monitors and televisions.*	Unit	999999	999999	99,999,999.00
	Silt Removal		999999	999999	99,999,999.00
	Putrescent Removal *Removal of debris that will decompose or rot (animals and organic fleshy matter)*		999999	999999	99,999,999.00
	Biowaste *Removal of waste capable of causing infection to humans (animal waste, human blood, pathological waste).*	Pound	999999	999999	99,999,999.00
	Household Hazardous Waste (HHW) *HHW removal and disposal*	Pound	999999	999999	99,999,999.00
Restoration	Beach/Lake Restoration *Berm/Beach Construction*	CY	999999	999999	99,999,999.00
	Canal Shoreline Restoration	LF	999999	999999	99,999,999.00
Monitoring	Debris Management Site Debris Monitors	Hour	999999	999999	99,999,999.00
	Debris Collection Site Debris Monitors (Field Monitors)	Hour	999999	999999	99,999,999.00
	Sr. Technician/Field Supervisor	Hour	999999	999999	99,999,999.00
	Clerical Staff	Hour	999999	999999	99,999,999.00
	Clerical Supervisor	Hour	999999	999999	99,999,999.00
				Total	9,999,999.00

THIS SAMPLE BID SHEET IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. IT SHOULD NOT BE SUBMITTED TO FEMA.

Appendix K: Sample Contracts and Scopes of Work

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

K.1 Example County Disaster Emergency Declaration

RESOLUTION NO. 20___- _____

_____COUNTY DISASTER DECLARATION

RESOLUTION DECLARING LOCAL DISASTER

WHEREAS, the _____ County Emergency Manager has advised the Board of County Commissioners of _____ County ("the Board") of a disaster (as that term is defined in Part 703 of Article 33.5 of Title 24 C.R.S.) currently present in the unincorporated area of _____ County, to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from _____ requiring emergency action to avert danger or damage which occurred on _____ __, 20___ (inclusive period of incident); and

WHEREAS, the Chairman of the Board _____ signed a Disaster Declaration on _____ __, 20___; and

WHEREAS, the cost and magnitude of responding to and recovery from the impact of the _____ is far in excess of the County's available resources; and

WHEREAS, the Emergency Manager has recommended that the Board declare a local disaster; and

WHEREAS, it would be appropriate and in the interests of the public health and safety, and would further protect property, for the Board to implement said recommendation; and

WHEREAS, pursuant to C.R.S. §24-33.5-709 and the emergency management and operations plans and resolutions of _____ County, Colorado, the Board is authorized to declare a local disaster.

NOW THEREFORE, BE IT RESOLVED THAT:

1. The Board hereby declares that there is a local disaster in unincorporated area of _____ County, to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from the _____ requiring emergency action to avert danger or damage.

2. The effect of this declaration of a disaster shall be to activate the response and recovery aspects of any and all applicable local and inter-jurisdictional disaster emergency plans to authorize the furnishing of aid and assistance under such plans.

3. BE IT FURTHER RESOLVED that the Mayors of all towns in _____ County affected by said disaster are urged to proclaim similar declarations and to cooperate with Baca County as necessary to cope with this incident.

BE IT FURTHER RESOLVED that this resolution shall be effective upon the date and time given below, and shall remain in effect until rescinded by the Board. True copies will be filed promptly with the Colorado Division of Homeland Security and Emergency Management and the _____County Clerk and Recorder, and shall be promptly distributed to the appropriate representatives of the news media.

MOVED, PASSED AND ADOPTED this _____ day of _____, 20____ at _____ ___.M.

BOARD OF COUNTY COMMISISONERS

_____ COUNTY, COLORADO

_____

_____

Chairman

ATTEST:

_____

_____

County Clerk and Recorder

K.2 Example Municipality Disaster Declaration

TOWN OF _____DISASTER DECLARATION

RESOLUTION DECLARING LOCAL DISASTER

WHEREAS, _____Town Mayor _____signed a Disaster Declaration on _____ _____, 20___ at ___:___ ___.M.; and

WHEREAS, the Town of _____ is and continues to suffer from a disaster (as that term is defined in part 703 of Article 33.5 of Title 24, C.R.S.), to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from a _____ and requiring emergency action to avert danger or damage, which occurred as a result of a _____ on _____, 20___ and

WHEREAS, it would be appropriate and in the interests of the public health and safety, and would further protect property, for the Board of Trustees to renew the Disaster Declaration made by Mayor _____ on _____ ___, 20___ and for the board to declare a local disaster; and

WHEREAS, pursuant to C.R.S. § 24-33.5-709 and the emergency management plans and resolutions the Board is authorized to declare a local disaster.

NOW THEREFORE IT BE RESOLVED THAT:

1. The Board of Trustees hereby declares that there is a local disaster in the Town of _____, to wit, the occurrence or imminent threat of widespread or severe damage, injury or loss of life or property, resulting from _____ requiring emergency action to avert danger or damage.

2. The effect of this Declaration of Disaster shall be to activate the response and recovery aspects of any and all applicable local and inter-jurisdictional disaster emergency plans and to authorize the furnishing of aid and assistance under such plans.

BE IT FURTHER RESOLVED that this resolution shall be effective upon the date and time given below, and shall remain in effect until rescinded by the Board. True copies will be filed promptly with the Colorado Division of Emergency Management and the Town Clerk, and shall be promptly distributed to the appropriate representatives of the news media.

MOVED, PASSED AND ADOPTED this _____ day of _____, 20___ at ____:___ ___.M.

BOARD OF TRUSTEES

TOWN OF _____, COLORADO

_____

_____

Mayor

ATTEST:

_____

_____

Town Clerk

K.3 Example Independent Contractor Service Agreement

INDEPENDENT CONTRACTOR SERVICE AGREEMENT

This Independent Contractor Service Agreement (the "Agreement") dated as of _____, 20___, is between _____ ("_____") by and through its _____ ("_____") and _____, [a sole proprietorship,] [a general partnership,] [a limited partnership in which _____ is a general partner,] [a _____ corporation] doing business as _____ (the "Contractor")

RECITALS

A. The _____ has accepted the proposal of Contractor for the Services subject to the execution of this Agreement by Contractor

B. _____ and Contractor intend by this Agreement to outline the terms and conditions under which the Services shall be provided.

TERMS AND CONDITIONS

Therefore, _____ and Contractor agree as follows:

1. The Services shall be provided in accordance with the terms of the Proposal, a copy of which is attached hereto. To the extent that the provisions of the Proposal and this Agreement are in conflict the terms of this Agreement shall control.

2. Contractor shall provide and complete the Services in a workmanlike fashion no later than _____, 20___. Contractor hereby warrants that it has the workforce, training, experience and ability necessary to properly complete the Services within the time period set forth above.

3. Payment for the Services shall be due only after the Services are completed to _____ satisfaction and Contractor has submitted an invoice for the amount due complete with the Contractor's taxpayer identification number or social security number.

_____ shall pay Contractor within 30 days after an invoice in proper form is submitted to _____. However, _____ shall have the right to publish notice of final payment pursuant to C.R.S. § 38-26-107 and to comply with the provisions of that statute.

4. Contractor is and shall remain an independent contractor and not an employee of _____. All persons used by Contractor to perform the services shall be employees of Contractor and shall not be deemed employees of _____. At all times while the Services are being rendered by Contractor, Contractor shall maintain Colorado worker's compensation coverage in the minimum amounts required by statute for all workers used by Contractor to provide the Services whether or not such workers are paid any compensation by Contractor for such work. Neither the contractor nor any employee of Contractor shall be entitled to unemployment benefits through the _____ and the Contractor shall be obligated to pay any federal or state income taxes due with respect to any sum payable by _____ hereunder. At all times while the Services are being rendered by Contractor, Contractor shall maintain commercial general liability coverage pending bodily injury and property damage coverage with a combined single limit of at least $1,000,000 and a deductible of not more than $1,000. Such insurance shall provide that it may not be cancelled without 30 days prior written notice to _____. Prior commencement of the Services, Contractor shall cause _____to be named as an additional insured and shall provide _____ with evidence acceptable to _____, that the insurance required by this Section 4 is in full force and effect.

5. In accordance with the laws of Colorado, Colorado labor shall be employed to perform the Services to the extent of not less than eighty percent (80%) of each type or class of labor in the several classifications of skilled and common labor employed to perform the Services. The term "Colorado labor" shall mean any person who has been a bona fide resident of the State of Colorado for a period of not less than one (1) year.

The selection of materials and equipment for the work shall be in accordance with the laws of Colorado which read substantially as follows:

> "Preference is hereby given to Colorado labor and to supplies, materials, and provisions produced, manufactured, or grown in Colorado, quality being equal to articles offered by competitors outside of the State."

6. This Agreement is subject to provisions of the Illegal Aliens-Public Contracts for Service Act (the "Act") found at C.R.S. § 8-17.5-101 *et seq*. As used in this provision, the following definitions shall apply: (1) "Basic Pilot Program" means the Basic Pilot Employment Verification Program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, that is administered by the United States Department of Homeland Security; (2) "Department" means the Colorado Department of

Labor and Employment; and (3) "Executive Director" means the Executive Director of the Department of Labor and Employment.

Contractor shall comply with the provisions of the Act. Specifically, Contractor shall not:

(1) knowingly employ or contract with an illegal alien to perform work under the Agreement; or
(2) Enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

Additionally, Contractor represents that Contractor has verified or attempted to verify through participation in the Basic Pilot Program that Contractor does not employ an illegal aliens and, if Contractor has not been accepted into the Basic Pilot Program prior to entering into this Agreement, Contractor shall apply to participate in the Basic Pilot Program every three months until Contractor is accepted or the work under this Agreement has not been completed whichever occurs first. This requirement shall not be applicable if the Basic Pilot Program has been discontinued. Contractor shall not use the Basic Pilot Program procedures to undertake pre-employment screening of job applicants while work under this Agreement is being done.

If Contractor obtains actual knowledge that any of its subcontractors performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall:

(1) Notify the Subcontractor and _____, within three days of discovery of such fact, that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

(2) Terminate the subcontract with the subcontractor if, within three days of receiving the notice required by subpart (1) above, the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor need not terminate the subcontract with the subcontractor if, during such three days, the subcontractor provides information establishing that the subcontractor has no knowingly employed or contracted with an illegal alien.

Contractor shall comply with any reasonable request by the Department made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

If Contractor violates any of the provisions of this section, _____ shall have the right to terminate the Agreement for breach of contract and, in such case; Contractor shall be liable to _____ for all actual and consequential damages incurred by _____ as a result of such breach and termination of this Agreement.

7. In the event either party to this Agreement brings suit to enforce or interpret any portion of this Agreement, the party substantially prevailing in such action shall be entitled to recover all costs incurred in such action, including without limitation reasonable attorney's fees. Any action brought in connection with this Agreement or the Services shall be brought only in the District Court, _____ County, Colorado or the _____ County Court which shall also be the proper place for trial of any such action.

8. This agreement shall be binding on and inure to the benefit of the parties hereto, their respective successors and assigns, and shall not be deemed to be for the benefit of or enforceable by any third party. This Agreement, together with the Proposal, constitutes the entire agreement between the parties concerning the Services and may not be amended except by a written document executed by both parties hereto. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Colorado without reference to choice of laws rules.

_____

By:_____

_____,Chairman

ATTEST:

_____

_____,Witness

CONTRACTOR

By: _____

Title: _____

K.4 Example Agreement for Services

AGREEMENT FOR SERVICES

THIS AGREEMENT is made and entered into this _____day of _____, 20___, by and between _____ COUNTY, COLORADO, (hereinafter referred to as "County"), and _____, (hereinafter referred to as "_____").

WITNESSETH:

WHEREAS, a disaster emergency has arisen in County, resulting in greater demands than the personnel and equipment of that jurisdiction can handle; and

WHEREAS, it is in the best interest of County that it may have access to services and equipment from _____ to assist it in responding to the disaster emergency needs by supplementing their own resources and _____ is willing to assist and make available resources to Baca.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. _____ agrees to provide _____with personnel to operate said equipment to County for a period of _____(__) days for _____ beginning on _____ __, 20___ and effective through _____ __, 20___.

2. Baca further agrees to provide fuel for the equipment and lodging and meals for the _____ personnel over the _____ (__) day period.

3. Both County and _____waive all claims and causes of action against each other for compensation, damage, personnel injury or death occurring as a consequence, direct or indirect, of the performance of this agreement, to the extent permitted by, and without waiving any protection or other provisions of the Colorado Government Immunity Act.

4. No performance under this Agreement by personnel of County or _____, shall in any respect alter or modify the status of officers, agents, or employees of the respective jurisdictions for the purpose of worker's compensation or their benefits or entitlements, pensions, levels or types of training, internal discipline, certification, or rank

procedures, methods, or categories, or for any purpose, or condition or requirement of employment. _____ shall remain responsible for processing any worker's compensation claims filed by their own resources.

IN WITNESS WHEREOF, the parties have entered into this Agreement the day and year first above written.

_____

By _____

Director

_____COUNTY, COLORADO

By_____

_____

Chair, Board of County Commissioners

ATTEST:

_____

_____

Clerk and Recorder

K.5 Example Intergovernmental Agreement

INTERGOVERNMENTATL AGREEMENT

THIS AGREEMENT is made and entered into this _____day of _____, 20___, by and between _____, (hereinafter referred to as "_____"), and _____, (hereinafter referred to as "_____").

WITNESSETH:

WHERAS, intergovernmental agreements provide functions or services, including the sharing of costs of services or functions, by political subdivisions of the State of Colorado are authorized by C.R.S. § 29-1-203 C.R.S.; and

WHEREAS, a disaster emergency has arisen in _____, resulting in greater demands than the personnel and equipment of that jurisdiction can handle; and

WHEREAS, it is in the best interest of _____ that it may have access to services and equipment from _____ to assist it in responding to the emergency disaster needs by supplementing their own resources and _____ is willing to assist and make available its resources to _____.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. _____ aggress to provide _____ and personnel to operate said equipment to _____for a period of _____(___) days for _____ beginning on _____ ___, 20___ and effective through _____ ___, 20___.

2. In Consideration for these services, _____agrees to reimburse _____ at a rate of $_____ per hour for labor and equipment. _____ further agrees to provide fuel for the equipment and lodging and meals for _____ personnel over the _____(___) day period. _____ shall extend reasonable cooperation to assist _____ in effective _____.

3. Both _____ and _____ waive all claims and causes of action against each other for compensation, damage, personnel injury or death occurring as a consequence, direct or indirect, of the performance of this Agreement, to extend

permitted by, and without waiving any protections or other provisions of the Colorado Governmental Immunity Act.

4. No performance under this Agreement by personnel of either jurisdiction hereto, shall in any respect alter or modify the status of officers, agents, or employees of the respective jurisdictions for purposes of worker's compensation or their benefits or entitlements, pension, levels or types of training, internal discipline, certification, or rank procedures, methods, or categories, or for any purpose, or condition or requirement of employment. Worker's Compensation coverage shall be as structured in C.R.S § 29-5-109, if the request meets the requirements of C.R.S. § 29-5-103 through 108, otherwise the claim shall be processed as if it were generated by any other work assignment within _____. _____ shall remain responsible for processing any worker's compensation claims filed by their own resources.

IN WITNESS WHEREOF, the parties have entered into this Agreement the day and year first written above.

_____

By: _____

Director,

_____

By: _____

Director,

K.6 Right of Entry Agreement Example

I/We _____, the owner(s) of the property commonly identified as _____,
(address or legal description of property)
_____, _____, State of_____
(city/town) (county)
do hereby grant and give freely and without coercion, the right of access and entry to said property in the County/City of _____, its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold harmless the City/County of _____, State of _____, its agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge, and waive any action, either legal or equitable that might arise out of any activities on the above described property. The property owner(s) will mark any storm damaged sewer lines, water lines, and other utility lines located on the described property.

I/We (have_____, have not_____) (will_____, will not_____) received any compensation for debris removal from any other source including Small Business Administration (SBA), National Resource Conservation Service (NRCS), private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense. For the considerations and purposes set forth herein, I set my hand this _____day of_____, 20__.

_____
Witness Name

_____
Witness Signature

_____
Owner Name

_____
Owner Signature

_____
Telephone No. and Address

K.7 Scope of Work Example – Equipment Leasing for Clearing of Debris

SCOPE OF WORK
FOR
EQUIPMENT LEASING FOR CLEARING OF DEBRIS
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]

1. GENERAL

1.1 The purpose of this contract is to provide debris clearing and removal response assistance to [LOCATION; I.E. “Colorado counties” or “Baca and Prowers Counties in Colorado”] which have been declared disaster areas by the President because of the effects of [NAME OFDISASTER].

2. SERVICES

2.1 The Contractor shall provide specified equipment, with operators and laborers, for debris removal. The contractor shall provide all labor and materials necessary to fully operate and maintain (including fuel, oil, grease and repairs) the following:

[INSERT QUANTITY AND DESCRIPTION FROM EQUIPMENT PICK LIST]

2.2 The Contractor shall provide the crews for [INITITIAL TIME; I.E. “two weeks” or “not to exceed either time or dollar amount”] with a Government option to extend for up to an additional [EXTENSION TIME; I.E. “one week”].

2.3 All hourly equipment rates include the cost of the operator, supervision, maintenance, fuel, repairs, overhead, profit, insurance, and any other costs associated with the equipment and personnel.

2.4 All hourly manpower rates include the cost of protective clothing (to include hard-hats and steel-toed boots), fringe benefits, hand tools, supervision, transportation and any other costs.

2.5 The work shall consist of clearing and removing any and all “eligible” debris (see section 3.0 for a definition of eligible debris) as directed by the Contracting Officer’s Representative (COR). Work will include: 1) loading the debris, 2) hauling the debris to an approved dumpsite, and 3) dumping the debris at the dumpsite. Ineligible debris will not be loaded, hauled, or dumped under this contract. This work will involve primarily clearing the right-of-way (ROW) of streets and roads.

2.6 The Contractor shall not move from one designated work area to another designated work area without prior approval from the COR.

2.7 The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

2.8 The Contractor shall comply with local, tribal, State and Federal Safety and Health Requirements.

3. DEBRIS CLASSIFICATION

3.1 **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications: Burnable, Non-Burnable, and Recyclable. Debris that is classified as Household Hazardous Waste (HHW) is not to be transported by this contract.

3.2 **Burnable Debris.** Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; tree stumps with base cut measurements less than 2 feet; untreated structural timber; untreated wood products; and brush.

3.3 **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; sheet rock; cloth items; non-wood building materials; carpeting; recyclable debris including metal products (i.e. mobile trailer parts, household appliances (white metal), and similar items), or uncontaminated soil.

3.4 **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government.

4. DUMPSITES

4.1 The Contractor shall use only debris dumpsites designated and approved by the COR.

4.2 The dumpsite operator shall direct all dumping operations. The Contractor shall cooperate with the dumpsite operator to facilitate effective dumping operations.

5. PERFORMANCE SCHEDULE

5.1 The Contractor shall commence mobilization immediately upon award of the contract and designation of work areas by the COR and will commence debris removal operations within 24 hours of Notice to Proceed.

5.2 The Contractor shall work during daylight hours for [INSERT] hours per day, [INSERT] days per week.

6. EQUIPMENT

6.1 All trucks and other equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. Any truck used to haul debris must be capable of

rapidly dumping its load without the assistance of other equipment; be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity; and measured and marked for its load capacity. Sideboards or other extensions to the bed are allowable, provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2" by 6" boards or greater and not to extend more than 2 feet above the metal bedsides. The Contracting Officer's representative must approve all requests for extensions. Equipment will be inspected prior to its use by the Contractor using applicable U.S. Army Corps of Engineers forms. The forms will be provided to the Government after completion.

6.2 Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs, one attached to each side. A total of [QUANTITY] signs will be provided by the Government and are to be returned to the Government prior to issuance of final payment. A fee of $[AMOUNT] will be accessed against the final payment for each lost sign.

6.3 Prior to commencing debris removal operations, the Contractor shall present to the Government's representative all trucks or trailers that will be used for hauling debris for the purpose of determining hauling capacity. Hauling capacity, in cubic yards, will be recorded and marked on each truck or trailer. Each truck or trailer will also be numbered for identification. The government reserves the right to re-measure trucks and trailers at any time during the contract and to use re-measurements as the basis for calculating loads for payment purposes.

6.4 Trucks or equipment that are designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.

7. REPORTING

7.1 The Contractor shall submit a report to the COR by close of business each day of the term of the contract. Each report shall contain, at a minimum, the following information:

Contractor's Name.
Contract Number.
Daily and cumulative hours for each piece of equipment.
Daily and cumulative hours for personnel, by position.

8. OTHER CONSIDERATIONS

8.1 The Contractor shall supervise and direct the work, using qualified labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes and fees necessary to perform under the terms of this contract.

8.2 The Contractor must be duly licensed in accordance with the state's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to

complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR prior to issuance of a notice to proceed.

8.3 The Contractor shall be responsible for taking corrective action for any notices of violations issued as a result of the Contractors or any subcontractors' actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.

8.4 The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in additional to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area.

9. PAYMENT

9.1 The Contractor will be entitled to invoice for 60% of the mobilization and demobilization line item after all equipment is delivered to the designated work site. The remaining 40% will be due after all equipment is removed from the work site, all vehicle signs have been returned to the government, and the contractor has submitted a proper invoice.

9.2 Payment for work completed will be based on verified hours worked from the daily operational report. Equipment down time resulting from equipment failure, routine maintenance and fueling that exceeds fifteen (15) minutes of a work hour will be considered unacceptable work and non-payment for one half of that hour and the number of work hours will be reduced to exclude the down time (the minimum reduction shall be one-half hour).

9.3 All payments made under this contract will be in accordance with PAYMENTS clauses located in other sections of this contract.

10. OPTIONS

10.1 The option items listed in Schedule B (the bid Schedule) are for the purpose of extending this contract for 7 days at a time. These options will be exercised at the discretion of the Government in accordance with the OPTION TO EXTEND SERVICES clause located elsewhere in this contract.

K.8 Scope of Work Example – Unit Price Contract for Debris Removal

SCOPE OF WORK
FOR
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]

1. GENERAL

   1.1 The purpose of this contract is to provide debris clearing and removal response assistance to [LOCATION; i.e. "Colorado counties" or "Baca and Prowers Counties in Colorado"] which have been declared disaster areas by the President because of the effects of [NAME OF DISASTER].

2. SERVICES

   2.1 The Contractor shall provide for debris removal from the area(s) outlined on the attached maps, and described as: [DESCRIPTION OF WORK AREA].

   2.2 The debris shall be taken to the dumpsite(s) indicated on the attached maps, located at [LOCATION (S) OF DUMPSITE(S)].

   2.3 The total amount of debris to be removed under this contract is estimated to be [QUANTITY].

   2.4 The work shall consist of clearing and removing any and all "eligible" debris (see section 4.0 for a definition of eligible debris) primarily from the public right-of-way (ROW) of streets and roads, as directed by the Contracting Officer's Representative (COR). Work will include 1) examining debris to determine whether or not debris is eligible, burnable or non-burnable, 2) loading the debris, 3) hauling the debris to an approved dumpsite or landfill, and 4) dumping the debris at the dumpsite or landfill. Ineligible debris will not be loaded, hauled, or dumped under this contract. Burnable debris will be loaded separately from non-burnable debris. Mixed loading of burnable and non-burnable will be kept to a minimum. The COR will determine the appropriate dumpsite for mixed loads.

   2.5 Debris removal shall include all eligible debris found on the ROW within the area designated by the COR. The COR may specify any eligible debris within the ROW which should not be removed, or which should be removed at a later time. The Contractor shall make as many passes through the designated area as required by the COR. The Contractor shall not move from one designated work area to another designated work area without prior approval from the COR. Any eligible debris, such as fallen trees, which extends onto the ROW from private property shall be cut at the point where it enters the ROW, and that part of the debris which

lies within the ROW shall be removed. The Contractor shall not enter onto private property during the performance of this contract.

2.6 The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

2.7 The government reserves the right to inspect the site, verify quantities, and review operations at any time.

2.8 All work shall be accomplished in a safe manner in accordance with EM 385-1-1.

3. LOAD TICKETS

3.1 "Load tickets" will be used for recording volumes of debris removal. (See Enclosure)

3.2 Each ticket will contain the following information:

3.3 [SELECT ONLY ONE OF THE FOLLOWING PARAGRAPHS, AND DELETE THE OTHERS]

Load tickets will be issued by a COR prior to departure from the loading site. The COR will keep one copy of the ticket, and give three copies to the vehicle operator. Upon arrival at the dumpsite, the vehicle operator will give the three copies to the COR at the dumpsite, the COR will validate, retain one copy and give two copies to driver for the Contractor's records, (one copy for the sub-contractor and one copy for the prime contractor).

Load tickets will be issued by a COR prior to departure from the loading site. The COR will keep one copy of the ticket, and give two copies to the vehicle operator for the Contractor's records.

Load tickets will be issued by a COR to a vehicle operator upon arrival at the dumpsite. The COR will keep one copy of the ticket, and give two copies to the vehicle operator for the Contractor's records.

Ticket Number
Contract Number
Date
Contractor Name
Site Departure Time
Dump Arrival Time
Debris Classification
Debris Quantity

4. DEBRIS CLASSIFICATION

4.1 **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications: Burnable, Non-Burnable, and Recyclable. Debris that is classified as

4.2 **Burnable Debris.** Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; untreated structural timber; untreated wood products; and brush.

4.3 **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; sheet rock; cloth items; non-wood building materials; metal products (i.e. Mobile Trailer parts, Household appliances (White Metal), and similar items), or uncontaminated soil; roofing materials; and carpeting. Household Hazardous Waste (HHW) is not to be transported by this contract.

4.4 **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government.

4.5 **Stumps.** Tree stumps located within the ROW with are one-half or more of the root ball exposed will be removed. Tree stumps with base cut diameter measurements less than or equal to 24 inches (measured 24 inches up from where the tree originally exited the ground) will be considered to be burnable debris and removed of with the same methods used for other burnable debris. Tree stumps larger than 24 inches in diameter will be removed of as burnable and paid for in accordance to the MEASURMENT and PAYMENT paragraphs in this contract.

5. DUMP SITES

5.1 The Contractor shall use only debris dumpsites designated in Section 2.2, unless otherwise approved by the COR. The Contractor shall haul non-burnable debris to the site designated for non-burnable debris and burnable debris to the burn sire designated.

5.2 The dumpsite operator shall direct all dumping operations. The Contractor shall cooperate with the dumpsite operator to facilitate effective dumping operations.

5.3 The Government makes no representations regarding the turn-around time at the dumpsites.

6. PERFORMANCE SCHEDULE

6.1 The Contractor shall commence performance on [DATE].

6.2 The Contractor shall, with the CORs direction, provide a work with plan showing where operations will begin and which streets/roads will be cleared on a 2, 7, 14 day projection. The plan will be updated every 2 days.

6.3 Maximum allowable time for completion will be [ENTER] calendar days, unless the Government initiates additions or deletions to the contract by written change orders. Subsequent changes in completion time will be equitably negotiated by both parties pursuant to applicable State and Federal law. Liquidated damages shall be assessed at $[AMOUNT] per calendar day for any time over the maximum allowable time established by the contract.

7. EQUIPMENT

7.1 All trucks and other equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment; be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity; and measured and marked for its load capacity. Sideboards or other extensions to the bed are allowable provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2” by 6” boards or greater and not to extend more than two feet above the metal bedsides. The Contracting Officer’s representative must approve all requests for extensions. Equipment will be inspected prior to its use by the Contractor using applicable U.S. Army Corps of Engineers forms. The forms will be provided to the Government after completion.

7.2 Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs; one attached to each side. The U.S. Army Corps of Engineers will furnish these signs to the Contractor. The signs remain the property of the United States Government, and will be returned to the U.S. Corps of Engineers at the conclusion of the contract.

7.3 Prior to commencing debris removal operations, the Contractor shall present to the Government’s representative all trucks or trailers that will be used for hauling debris, for the purpose of determining hauling capacity. The hauling capacity will be based on the interior dimensions of the truck’s metal dump bed. Hauling capacity, in cubic yards, will be recorded and marked on each truck or trailer with permanent markings. Each truck or trailer will also be numbered for identification with a permanent marking.

7.4 Trucks or equipment which are designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.

7.5 Equipment used under this contract shall be rubber tired and sized properly to fit loading conditions. Excessive size equipment (6 CY and up) and non-rubber tired equipment must be approved by the COR.

8. REPORTING

8.1 The Contractor shall submit a report to the COR during each day of the term of the contract. Each report shall contain, at a minimum, the following information:

Contractor's Name
Contract Number
Crew
Location of work
Day of Report
Daily and cumulative totals of debris removed, by category

8.2 Discrepancies between the daily report and the corresponding load tickets will be reconciled no later than the following day.

9. OTHER CONSIDERATIONS

9.1 The Contractor shall supervise and direct the work, using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes, and fees necessary to perform under the terms of this contract.

9.2 The Contractor must be duly licensed in accordance with the state's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR.

9.3 The Contractor shall be responsible for taking corrective action in response to any notices of violations issued as a result of the Contractors or any subcontractors' actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.

9.4 The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment, and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in additional to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area. Work shall be accomplished in a safe manner in accordance with EM 385-1-1.

10. MEASUREMENT

10.1 Measurement for burnable debris removed will be by the cubic yard as predetermined through truck bed measurement. Trucks with less than full capacities will be adjusted down by visual inspection by the COR. Measurement will be documented by load tickets.

10.2 Measurement for non-burnable debris removed will be by the cubic yard as predetermined through truck bed measurement. Trucks with less than full capacities will be adjusted down by visual inspection by the COR. Load tickets will document measurement

10.3 Measurement for payment of stumps removed with 25 to 36 inch diameters base cuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.4 Measurement for payment of stumps removed with 37 to 48 inch diameter basecuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.5 Measurement for payment of stumps removed with 49 inch and larger diameter basecuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.6 Measurement for mobilization and demobilization will be by the job.

11. PAYMENT

11.1 Payment for the removal of burnable debris (including stumps 24 inches and smaller) to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for Burnable Debris.

11.2 Payment for the removal of non-burnable debris to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for Non-burnable Debris.

11.3 Payment for the removal of stumps, 25 inches and larger, to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for the appropriate size category for Stumps.

11.4 Payment for mobilization and demobilization will be paid for under the contract bid item for Mobilization and Demobilization.

11.5 Payment for work completed may be invoiced on a bi-weekly basis. Invoices will be based on verified quantities from the daily operational reports and valid load tickets.

11.6 The Contractor will be entitled to invoice for 60% of the mobilization and demobilization line item after all equipment is delivered to the designated work site. The remaining 40% will be due after all equipment is removed from the work site, all vehicle signs have been returned to the government, and receipt of a proper invoice.

11.7 All payments made under this contract will be in accordance with PAYMENTS clauses located in other sections of this contract

12. OTHER CONTRACTS

12.1 Other contracts may have been issued.

12.2 The Government reserves right to issue other contracts or direct other contractors to work within the area included in this contract

13. ATTACHMENTS

13.1 Bidding Schedule

13.2 Daily Report

13.3 Load Ticket

SCOPE OF WORK EXAMPLE
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL

BIDDING SCHEDULE

ITEM	QTY	DESCRIPTION	UNITS	UNIT PRICE	AMOUNT
001.	1	Mobilization and Demobilization	Lump Sum		
002.	xxx	Removal of Burnable Debris	Cubic Yard		
003.	xxx	Removal of Non-Burnable Debris	Cubic Yard		
004.	xxx	Removal of Stumps - 26 to 36 inch	Each		
005.	xxx	Removal of Stumps - 37 to 48 inch	Each		
006.	xxx	Removal of Stumps - 49 inch and larger	Each		

SCOPE OF WORK EXAMPLE
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL

DAILY REPORT						
CONTRACTOR: CONTRACT NO. :					DATE OF REPORT:	
	Truck No.	Capacity	Burn site trips	C.Y. Totals	Landfill trips	C.Y. Totals
1						
2						
3						
4						
5						
6						
7						
8						
	Daily Totals					

DAILY REPORT				
CONTRACTOR:			DATE OF REPORT:	
	Processing Site	Stumps 26-36 in.	Stumps 36-48 in.	Stumps > 49"
1				
2				
3				
4				
5				
6				
7				
8				
9				
	DAILY TOTALS			

SCOPE OF WORK EXAMPLE
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL

Sample Debris Load Ticket

Load Ticket			Ticket No.
Municipality (Applicant)			Prime Contractor
			Sub-Contractor
Truck Information			
Truck No			Capacity
Truck Driver (print legibly)			
Loading Information			
Loading	Time	Date	Inspector/Monitor
Location (Address or Cross Streets)			
When Using GPS Coordinates use Decimal Degrees (N xx.xxxxx)			
N			**W**
Unloading Information			
Debris Classification			Estimated %, CYs, or Actual Weight
☐ Vegetation ☐ C&D ☐ White Goods ☐ HHW ☐ Other* See Below			
Unloading	Time	Date	Inspector/Monitor
DMS Name and Location			
*Other Debris Explanation			Original: Applicant Copy 1: _____ Copy 2: _____ Copy 3: _____

K.9 Example Time and Materials Contract

ARTICLE 1:
Agreement Between Parties

This contract is entered into on this day _____of _____, 20 _____, by and between the city/county of _____, hereinafter called the ENTITY and_____, hereinafter called the CONTRACTOR.

ARTICLE 2:
Scope of Work

This contract is issued pursuant to the Solicitation and Procurement on _____, 20_____ , for the removal of debris caused by the sudden natural or manmade disaster of _____to _____, 20_____ . It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3:
Schedule of Work

Time is of the essence for this debris removal contract.

Notice to proceed with Work: The work under this contract will commence on _____, 20_____ . The equipment shall be used for (recommended not to exceed 70) hours, unless the ENTITY initiates additions or deletions by written change order. Based upon unit prices of equipment and labor, no minimum or maximum number of hours is guaranteed.

ARTICLE 4:
Contract Price

The hourly rates for performing the work stipulated in the contract, documents, which have been transposed from the low bidder's bid schedule, are as follows:

Equipment/Machine/Operator	Mobilization/ Demobilization Cost	Hourly Rate
Manufacturer, Model		Total unit rate shall be given which includes maintenance, fuel, overhead, profit, and other associated cost with the equipment. Estimated Cost per unit of material. Only actual invoice amounts will be paid.

Labor man-hours	Protective clothing, fringe benefits, hand tools, supervision, transportation, and any other costs.

ARTICLE 5:
Payment

The ENTITY shall pay the Contractor for mobilization and demobilization if the Notice to Proceed is issued and will pay for only the Time that the equipment and manpower is actually being used in accomplishing the work. The Contractor shall be paid within days of the receipt of a pay estimate and verification of work by the inspector.

ARTICLE 6:
Claims

Not Applicable

ARTICLE 7:
Contractor's Obligations

The Contractor shall supervise accomplishment of the work effort directed by labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, liability insurance, taxes, and fees necessary to perform under the terms of the contract. Caution and care must be exercised by the Contractor not to cause any additional damage to sidewalks, roads, buildings, and other permanent fixtures.

ARTICLE 8:
Insurance and Bonds

The Entity's representative(s) shall furnish all information necessary for commencement of the Work and direct the Work effort. Costs of construction permits, disposal sites and authority approvals will be home borne by the Entity. A representative will be designated by the Entity for inspection the work and answering any on-site questions. This representative shall furnish the Contract daily inspection reports including work accomplished and certification of hours worked.

The Entity shall designate the public and private property areas where the work is to be performed. Copies of complete "Right of Entry" forms, where they are required by State or local law for private property shall be furnished to the contractor by the Entity. The Entity shall hold harmless and indemnify the Contractor and his employees against any liability for any and all claims, suits, judgements, and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are the result of negligence on the part of the Contractor.

The Entity will terminate the contract for failure to perform or default by the Contractor.

ARTICLE 9:
Insurance and Bonds

The Contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personnel Injury, etc, as deemed necessary by the Entity).

Surety: The Contractor shall deliver so the Entity fully executed Performance and Payment Bonds in the amount of 100% of the contract amount, if required by the specifications, general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the costs of which will be included in the base bid.

ARTICLE 10:
Contractor Qualifications

The Contractor must be duly licensed in the State per statutory requirements.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

_____
Entity (City, County, Town, Etc.)

By _____Seal By_____ Seal
Principal of the firm

_____
Contractor (Include address, City, State)

K.10 Example Lump Sum Contract for Debris Removal

ARTICLE 1:
Agreement Between Parties

This contract is made and entered into on this day____ of_____ , 20_____ , by and between the city/county of _____, hereinafter called the ENTITY and_____ , hereinafter called the CONTRACTOR.

ARTICLE 2:
Scope of Work

This contract is issued pursuant to the Solicitation and Procurement on _____, 20____, for the removal of debris caused by the sudden natural or manmade disaster of _____to _____, 20_____ . It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3:
Schedule of Work

Time is of the essence for this debris removal contract.

Notice to proceed with the Work: The Work under this contract will commence on _____, 20_____ . Maximum allowable time for completion will be _____ Calendar days, unless the Entity initiates additions or deletions by written change order. If the Contractor does not complete Work within the allotted time, liquidated damages will be assessed in the amount of _____per day.

ARTICLE 4:
Contract Price

The lump sum price for performing the work stipulated in the contract document is.
$ _____. _____.

ARTICLE 5:
Payment

The Contractor shall submit certified pay requests for completed work. The Entity shall have 10 calendar days to approve or disapprove the pay request. The Entity shall pay the Contractor for his/her performance under the contract within _____days of approval of the pay estimate. On contracts over 30 days in duration, the Entity shall pay the Contractor a pro-rata percentage of the contract amount on a monthly basis, based on the amount of work completed and approved in that month. The Entity will remunerate the

Contractor within 30 days of the approved application for payment, after which interest will be added at a rate of _____on each payment. Retainer shall be released upon substantial completion of the work. Funding for this contract is authorized pursuant to Public Law _____, And _____. Local Statute or ordinance

ARTICLE 6:
Change Orders

If the scope of work is changed by the Entity, the change in price and contract time will be promptly negotiated by the parties, prior to commencement of work.

ARTICLE 7:
Contractor's Obligations

The Contractor shall supervise and direct the Work, using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, equipment, personnel, taxes, and fees necessary to perform under the terms of the contract.

Any unusual, concealed, or changed conditions are to be immediately reported to the Entity. The Contractor shall be responsible for the protection of existing utilities, sidewalks, roads, building, and other permanent fixtures. Any unnecessary damage will be repaired at the Contractor's expense.

ARTICLE 8:
Entity's Obligations

The Entity's representative(s) shall furnish all information, documents, and utility locations, necessary for commencement of Work. Costs of construction permits and authority approvals will be borne by the Entity. A representative will be designated by the Entity for inspecting the work and answering on-site questions.

The Entity shall designate the public and private property areas where the disaster mitigation work is to be performed. Copies of complete "Right of Entry" forms, where they are required by the State and local law for private property, shall be furnished to the Contractor by the Entity. The Entity shall hold harmless and indemnify the Contractor judgements and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are caused by the gross negligence of the Contractor, his subcontractors or his employees.

ARTICLE 9:
Claims

If the Contractor wishes to make a claim for additional compensation, for work or materials is not clearly covered in the contract, or nor ordered by the Entity as a

modification to the contract, he/she shall notify the Entity in writing. The Contractor and the Entity will negotiate the amount of adjustment promptly; however, if no agreement is reached, a binding settlement will be determined by a third party acceptable to both Entity and Contractor under the sections of applicable State law.

ARTICLE 10:
Insurance and Bonds

The contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personal injury, etc. as deemed necessary by the Entity).

Surety: The Contractor shall deliver to the Entity fully executed Performance and Payment Bonds in the amount 100% of the contract amount, if required by the specifications, or general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the cost of which will be included in the base bid.

ARTICLE 11:
Contractor Qualifications

The Contractor must be duly licensed in the State per statutory requirements.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

_____
Entity (City, County, Town, Etc.)

By_____ Seal
_____
Contractor (Include Address, City, State

By _____ Seal
Principal of the Firm

DEBRIS CONTRACTOR OVERSIGHT TEAM STANDARD OPERATING GUIDELINES

DEBRIS REMOVAL AND DISPOSAL OPERATIONS

General

The City Debris Manager (DM) and Debris Management Center (DMC) staff will coordinate debris removal and disposal operations for all portions of the City. Phase II operations involve the removal and disposal of curbside debris by City force account and private contractors. While City agencies will provide oversight of their own removal operations, contractor operations will be overseen by the Debris Contractor Oversight Team (DCOT).

Mixed debris will be collected and hauled from assigned Debris Control Zones to designated TDSR sites or to designated landfill locations. Clean woody debris will be hauled to the nearest designated vegetative TDSR site for eventual grinding.

Load tickets will be used to track all debris that is loaded, hauled, and disposed of. Load tickets are to be used by both in-house and contracted haulers and will serve as supporting documentation for contractor payment as well as for requests for Federal assistance or reimbursement.

Franchise garbage contractors will continue to pick up refuse in accordance with current procedures, routes, and removal schedules. They will haul disaster debris only as requested by the contracting authority.

DEBRIS CONTRACTOR OVERSIGHT TEAM

General

The DCOT supervisor and team members will be detailed from Colorado Springs Public Works Department, El Paso County Highway Department, and other City Departments as required. The DCOT team may also be supplemented with contracted inspectors and other personnel as needed. (Figure 1) below shows the organization of the DCOT within the DMC.

The DCOT team supervisor will be located at the Debris Management Center (DMC) and will provide overall supervision of the two field-based monitoring elements as described below. The DMC is located at Colorado Springs EOC. Once operations become routine, it may relocate to the Streets Division Building. Specific DCOT Supervisor responsibilities include the following:

1. Planning, TDSR site inspection, quality control, and other contractor oversight functions.

2. Receiving and reviewing all debris load tickets that have been verified by a Disposal Site Monitor (see description below).

3. Making recommendations to the City DM regarding distribution of in-house and contractor work assignments and priorities.

4. Reporting on progress and preparation of status briefings.

5. Providing input to the DMC PIO on debris removal and disposal activities and pickup schedules.

The DCOT Supervisor will oversee the activities of two types of field-based inspection teams. The functions and responsibilities of the field inspectors are described in the following sections.

Roving Monitors

Teams of Roving Monitors will be assigned to a specific Debris Control Zones or to a specific Contractor depending upon the distribution of work assignments. Their mission is to act as the "eyes and ears" for the Debris Manager and DCOT Supervisor to ensure that all contract requirements, including safety, are properly implemented and enforced. Staff to fulfill the Roving Monitor positions will be provided by Colorado Springs Public Works Department and El Paso County Highway Department. Roving Monitors will have the authority to monitor contractor operations and to report back to the DCOT Supervisor. Roving Monitors may request contract compliance, but do not have the authority to otherwise direct contractor operations or to modify the contract scope of work.

The following actions will be initiated immediately after a debris-generating disaster:

1. The Debris Manager will establish two-person roving monitor teams with their own transportation and communications.

2. Roving Monitor teams will be assigned to each contractor's debris removal and disposal zone.

Once assigned, Roving Monitors will monitor debris operations on a full-time basis and make unannounced visits to all loading and disposal sites within their assigned Debris Management zone(s). In addition, Roving Monitors are responsible to do the following:

1. Obtain and become familiar with all debris removal and disposal contracts for which they are providing oversight.

2. Observe all phases of Debris Management operation, to include loading sites, TDSR sites, and final landfill sites.

3. Complete a Debris Loading Site Monitoring Checklist (Attachment 1) for every site visited.

4. Complete a Debris Disposal Site Monitoring Checklist (Attachment 2) for every TDSR Site visited. Ensure that operations are being followed as specified in the applicable Debris Removal and Disposal Contract with respect to local, state, and federal regulations.

5. Complete the Stockpiled Debris Field Survey Form (Attachment 3) at least weekly at all temporary TDSR Sites to determine estimated quantities of debris stockpiled.

6. Periodically measure curbside debris using the estimating formulas shown in (Attachment 4).

7. Prepare a daily written report of all contractor activities observed to include photographs and the aforementioned checklists.

Roving Monitors will also submit daily written reports to the DCOT supervisor outlining their observations with respect to the following:

1. Is the contractor using the site properly with respect to layout and environmental considerations?

2. Has the contractor established lined temporary storage areas for ash, household hazardous wastes, and other materials that can contaminate soil and groundwater?

3. Has the contractor established environmental controls in equipment staging areas, fueling, and equipment repair areas to prevent and mitigate spills of petroleum products and hydraulic fluids?

4. Are plastic liners in place under stationary equipment such as generators and mobile lighting plants?

5. Has the contractor established appropriate rodent control measures?

6. Are burn sites constructed and operating in accordance with the plans and requirements as stated in the contract?

7. Has the contractor establish procedures to mitigate:

a. Smoke – Are the incineration pits constructed properly and being operated according to the contract statement of work?

b. Dust – Are water trucks employed to keep the dust down?

c. Noise – Have berms or other noise abatement procedures been employed?

d. Traffic – Does the TDSR site have a suitable layout for ingress and egress to help traffic flow?

Roving Monitor's reports will also include observations at loading sites, disposal sites, and the locations of any illegal dumping sites.

Load Site Monitors

Load Site Monitors will be stationed at designated contractor loading sites.

Load Site Monitor positions will be staffed from Colorado Springs Public Works Department and El Paso County Highway Department and supplemented by other City department personnel depending on the magnitude of the debris-generating event.

Load Site Monitors will be assigned to each contractor loading site within designated Debris Control Zones. The Load Site Monitors' primary function is to verify that debris being picked up is eligible under the terms of the contract. They will initiate and sign load tickets as verification that the debris being picked up is eligible.

The primary tracking mechanism for all debris loaded, hauled, and disposed of will be the Load Ticket. Load tickets will be initiated at pickup and closed-out upon drop-off of each load, and are to be used by both City and contracted haulers.

Disposal Site Monitors

Disposal Site Monitors will be staffed by Colorado Springs Public Works Department and El Paso County Highway Department personnel. The Disposal Site Monitors will be stationed at all TDSR sites and landfill disposal sites for the purpose of verifying the quantity of material being hauled by the contractor.

The Disposal Site Monitor will estimate the cubic yards of debris in each truck entering the TDSR site or landfill disposal site and will record the estimated quantity on pre-numbered debris load tickets. The contractor will only be paid based on the number of cubic yards of material deposited at the disposal site as recorded on the debris load tickets. (Appendix M)
The Disposal Site Monitor will be responsible for completing and signing each load ticket and returning DCOT copies to the DCOT Supervisor. In addition, Disposal Site Monitors will maintain a daily Debris Disposal Site Load Tracking Log (Appendix M), which will also be returned to the DCOT at the end of each day.

At each TDSR site and landfill disposal site, the Contractor will be required to construct and maintain a monitoring station tower for use by the Disposal Site Monitor. The Contractor will construct the monitoring station towers of pressure treated wood with a floor elevation that affords the Disposal Site Monitor a complete view of the load bed of each piece of equipment being utilized to haul debris. The Contractor will also provide each site with chairs, table, and portable sanitary facilities.

DEBRIS MONITOR IDENTIFICATION AND TRAINING PROGRAM

The Debris Manager is responsible for identifying suitable debris monitors for debris management operations. Given the urgency regarding Emergency Push Operations, the Debris Manager may task Departmental employees to oversee the certification process for Emergency Push Crews. During such time that the Debris Manager can adequately train a sufficient quantity of monitors to sustain debris management operations, potential debris monitors may be selected from a pool of temporary employees utilized in staffing of various City functions, or directly from a local staffing company.

The Debris Manager is responsible for installing and instructing a debris monitor training program. The debris monitoring training program is taught through a three-fold process:

1. **Classroom Instruction**: Classroom instruction includes the review of a debris monitoring Power Point Presentation provided in (**Appendix L)**, and practice properly completing debris monitoring documentation provided in (**Appendix M)**. During the classroom training, the Debris Manager may select potential trainees, maintaining a greater capacity and understanding of the classroom material, for more sensitive monitoring tasks such as stump monitoring or DMS tower monitoring.

2. **In-Field Training**: In-field training includes the pairing of a monitor trainee with a seasoned monitor to discuss debris monitoring documentation and overall monitoring operations.

3. **Quality assurance and quality control plan**: As a QA mechanism, the Debris Manager or his/her designated representative, will review ticketing documentation as a given DMS location for completeness and accuracy and address inconsistencies immediately with the substandard monitor. As a QC mechanism, the Debris Manager will continually inspect and oversee the completeness and accuracy of the ticketing documentation each day and address inconsistencies with monitors the following morning.

Appendix L: Animal Carcass Disposal Guidance

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

L.1 CDPHE Animal Carcass Disposal – November 2015

COLORADO
Hazardous Materials
& Waste Management Division
Department of Public Health & Environment

Animal Carcass Disposal
November 2015

All-Hazards Events

Large quantities of animal carcasses that result from an all-hazards event (blizzard, flood, tornado, etc.), any disease-related mass deaths of livestock, or an event in which the state veterinarian determines that depopulation of animals is required, must be managed in a manner that prevents the spread of infection and contamination of soil and ground water. During such events, the Colorado Department of Agriculture is the lead agency and will direct all activities related to management and disposal of carcass wastes. The Memorandum of Understanding (MOU) between the Department of Agriculture and the Colorado Department of Public Health and Environment (we, us, our) called "Regarding Storage, Treatment or Disposal of Livestock Carcasses During Any All-Hazards Event" is available on our website at colorado.gov/cdphe/swguidance. This agreement provides guidance related to the roles and responsibilities associated with a mass mortality or depopulation event. Emergency preparedness and response plans for control and mitigation of livestock disease outbreaks can be found in the Animal Health Division of the Department of Agriculture's website (colorado.gov/aganimals) under the Animals tab.

Other Events

Carcasses that are disposed of due to mortality or disease unrelated to an all hazards event or that cannot be used for their original intended purpose are considered to be a solid waste and must be managed in compliance with the Colorado Solid Waste Act (30-20-100.5 et.seq., C.R.S.) and its implementing regulations (6 CCR 1007-2, Part 1). Be aware that under these regulations, special requirements apply to animals known or suspected of being contaminated with infectious substances contagious to humans.

The local or county governments may also have regulations and ordinances regarding the proper management of carcasses. Therefore, you should contact your local public health department concerning local ordinances for disposal. Inappropriate management of these wastes may spread infection or cause contamination of soil or ground water.

In general, the following best management practices may be used for the safe disposal of carcasses that are not contaminated with infectious substances contagious to humans.

Disposal at a Permitted Landfill

Carcasses may be sent to a permitted solid waste landfill for disposal with the landfill operator's prior approval. You will need to contact the landfill operator first to determine their waste acceptance policies. Many landfills have specific days or times when they will accept carcasses for disposal or may have certain packaging requirements that must be met before they will accept the waste.

Rendering

Carcasses may be sent to a licensed rendering plant with the rendering plant operator's prior approval. You should contact the plant to make arrangements before sending the carcasses. Again, these facilities may have specific preparation and packaging requirements for the carcasses that must be met before they will accept carcasses for disposal.

Off-site Incineration

Carcasses may be sent to an off-site incinerator (for example, a pet crematory) that is permitted and approved by local authorities and/or our Air Pollution Control Division to accept such wastes. You should contact the facility to see if they have any preparation or quantity limitations prior to transporting the carcasses.

Composting

Carcasses may be sent to an off-site composting facility that is permitted to accept such wastes. You will need to contact the composting facility directly and determine their waste acceptance policies prior to shipping the carcasses.

Composting of carcasses may be allowed on your own property. Depending on the specifics of your operation, it may be regulated 1) by the Colorado Department of Agriculture and exempt from Solid Waste regulations; or 2) regulated under dual authority of our Solid Waste Program and the local governing authority in accordance with Section 14 of 6 CCR 1007-2. Under Option 2 above, you will need to have an approved composting plan in place before you may conduct such operations. Composting plan requirements are described in Colorado's solid waste regulations (6 CCR 1007-2, Part 1, Section 14.11). These plans must include, but are not limited to:

- The basis for selecting the composting site, including site conditions that make it appropriate for a composting operation.
- Structures to be used for run-on and runoff controls.
- Odor management.
- A description of the composting operation, including how the compost will be managed and tested, and what will be done with the final product

Pit Incineration

In certain cases, carcasses may be incinerated in an onsite pit. Open burning permits, obtained through our Air Pollution Control Division, are required for this process. Pit incineration is generally used when there are several animal mortalities that resulted from disease and there is a risk for disease transmission if the carcasses are transported for disposal offsite. Additional controls, such as plans for disposition of the ash and other remains, must be specified prior to using this process.

On-Site Burial

Carcasses may be buried on-site once concurrence has been obtained from this department and the appropriate local agencies. If you bury your carcasses on your own property, you should follow these best management practices:

- Layers of lime or quicklime should be applied below and above the carcass to help accelerate decomposition of the waste. Care should be used in applying lime as it is caustic and can cause severe burns to the skin and eyes.
- Burial pits must be covered with a minimum of two feet of soil.
- Carcasses cannot be placed in any body of water, seasonal creek or pond, or in areas that may carry or hold water such as gullies, ditches, blowouts or natural depressions.
- To minimize potential impacts to groundwater, large numbers of bigger carcasses (e.g., more than ten cows) should not be limed and buried together.
- Surface water must be diverted from the burial site through the use of berms or other structures.
- All carcasses must be buried at least 150 feet away from any water supply source.
- All carcasses must be buried downgradient from any groundwater supply sources.
- The bottom of the burial pit must be at least five feet above the high point of the uppermost groundwater table to ensure that carcasses do not come into contact with groundwater.
- Burial sites must be located at least one mile away from any residence of any person.
- Burial sites should not be located in areas with fractured or cavernous rock, high seasonal water tables or highly permeable soils.

Other disposal practices, including alkaline hydrolysis and mobile incineration, may be used with prior approval.

If you have a large number of animal mortalities due to disease, including Avian Flu, contact the Colorado Department of Agriculture or State Veterinarian's Office for further guidance on controlling livestock and poultry disease. The Department of Agriculture will determine if the mortalities should be managed as an all-hazards event.

For more information, contact:

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Customer Technical Assistance
303-692-3320
www.colorado.gov/cdphe/hm
comments.hmwmd@state.co.us

L.2 Agriculture Disposal MaTCH Tool (Matrix, Decision Tree, Checklist)

Agricultural Disposal MaTCh Tool

(Matrix, Decision Tree, Checklist)

Lori.p.miller@aphis.usda.gov

Lori P. Miller, PE

USDA APHIS

4700 River Road, Unit 41, Room 5D-03.3

Riverdale, MD 20737

202-254-5743

FADPreP website to request password: https://fadprep.lmi.org

APHIS website for training modules:
http://www.aphis.usda.gov/animal_health/emergency_management/

Carcass Management Options Matrix

Weighting	Criteria	Off-Site Landfill	Rendering	Off-Site Incineration	Composting	Open Air Burning	On-Site Burial
Most Important (x3)	Public Health Risk (1)	9	9	9	9	6	3
	Biosecurity (2)	6	6	6	3	3	3
	Pathogen Inactivation (3)	3	6	9	6	9	3
	Environmentally Sustainable (4)	9	9	9	9	3	3
Important (x2)	Need to Transport Carcasses Offsite (5)	2	2	2	6	6	6
	Volume Reduction (6)	4	6	6	4	6	4
	Availability(7)	6	4	2	4	4	4
	Throughput (8)	6	6	2	4	4	4
	Speed to Implement (9)	6	4	4	4	4	4
	Public Acceptance (10)	6	4	6	4	2	4
Less Important (x1)	Cost Effectiveness (11)	3	2	1	1	1	3
	Efficiency (12)	3	3	3	2	1	2
	Operability (13)	3	3	3	2	1	3
	Regulatory limitations (14)	2	3	2	2	1	1
	Denial of use (15)	3	2	2	2	2	1
	Total Points	71	69	66	62	53	48
	Average Score	4.7	4.6	4.4	4.1	3.5	3.2

Matrix Explanation

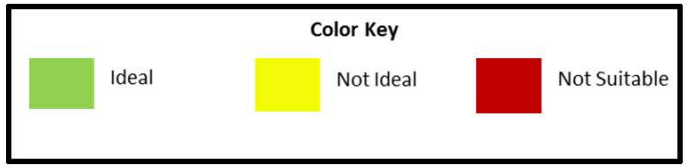
Green technologies were scored 3 points

Yellow technologies were scored 2 points

Red technologies were scored 1 point

Scores were weighted according to the importance of the criteria.

Scores for each column were totaled then averaged to obtain the ranking



Matrix Footnotes

Mobile, new, or innovative technologies are not included in this matrix, but a separate table for such technologies is under development.

Values in matrix may be incident specific.

1. ***Public health risk*** **–** based on the UK 2001 human health qualitative risk assessment which excluded composting and mobile technologies. The rankings are consistent with the public health risks tabulated by the United Kingdom (UK) Department of Health (now the Department for Environment, Food and Rural Affairs), in "A Rapid Qualitative Assessment of possible risks to Public Health from current Foot & Mouth Disposal Options, Main Report," June 2001.

2. ***Biosecurity*** – if process can be contained and easily disinfected = 3, if process is somewhat contained, but the processing area is difficult to disinfect = 2, if process is not contained = 1

3. ***Pathogen Inactivation*** **–** If process completely inactivates pathogen = 3, partial inactivation = 2, no inactivation = 1

4. ***Environmental sustainability*** – low risk of environmental contamination and useful end product = 3, low risk of contamination or useful end product = 2, risk of environmental contamination and no useful end product = 1

5. ***Transport carcasses offsite*** – Yes = 1, No = 3

6. ***Volume reduction*** – process reduces volume of biomass = 3, same volume = 2, increases volume = 1

7. ***Availability*** **–** option is widely available = 3, regional or somewhat available = 2, very limited availability = 1.

8. ***Throughput*** – the amount of biomass that can be processed per day. If >200K lbs/day = 3, between 200K lbs/day - 50K lbs/day = 2, <50K lbs/day = 1. Note: Throughput X Availability = Capacity

9. ***Speed to implement*** – how quickly can option begin taking first carcasses including obtaining regulatory approval where immediately = 3, <5 days = 2, more than 5 days = 1

10. ***Public acceptance*** – likelihood of public protests where low = 3, medium = 2, and high = 1

11. ***Cost effectiveness*** **–** cost to perform option from K State Carcass Disposal: A Comprehensive Review where <$100/ton = 3, $100/ton - $250/ton = 2, > $250/ton = 1.

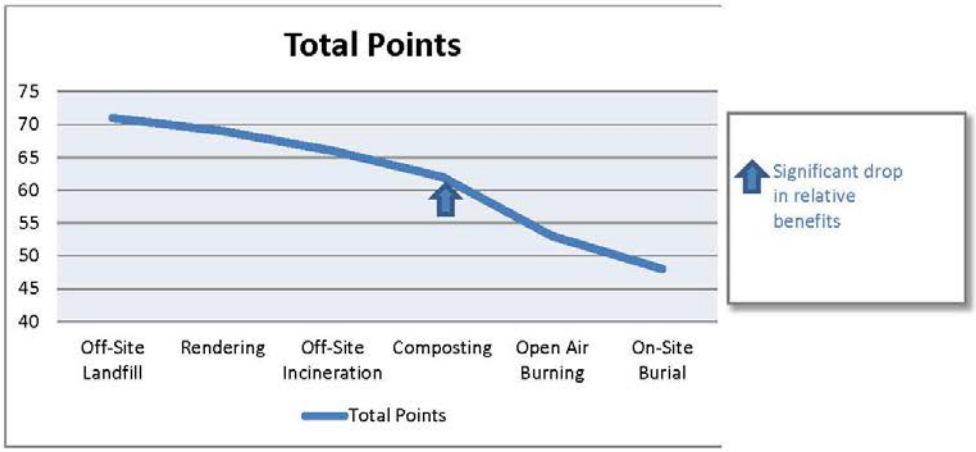
12. ***Efficiency*** – amount of inputs (utilities, chemicals, fuel, carbon source) to contain and stabilize biomass over a short period of time

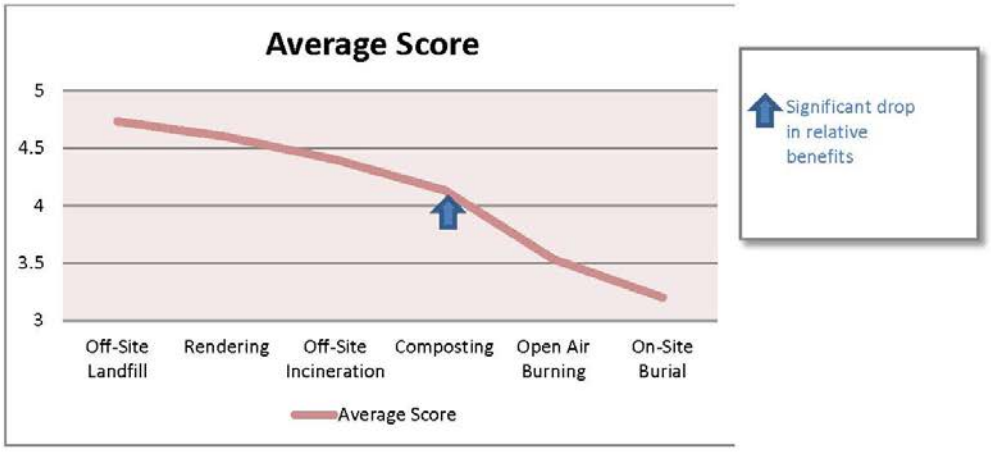
13. ***Operability*** – ease of implementation, for example simple to do, operators readily trained and available

14. ***Regulatory limitations*** **–** permits or regulator exemptions would have to be obtained in order to utilize this disposal method

15. ***Denial of use*** **–** land or equipment is no longer able to be used for its intended purpose due to disposal method

Matrix Results Graphed





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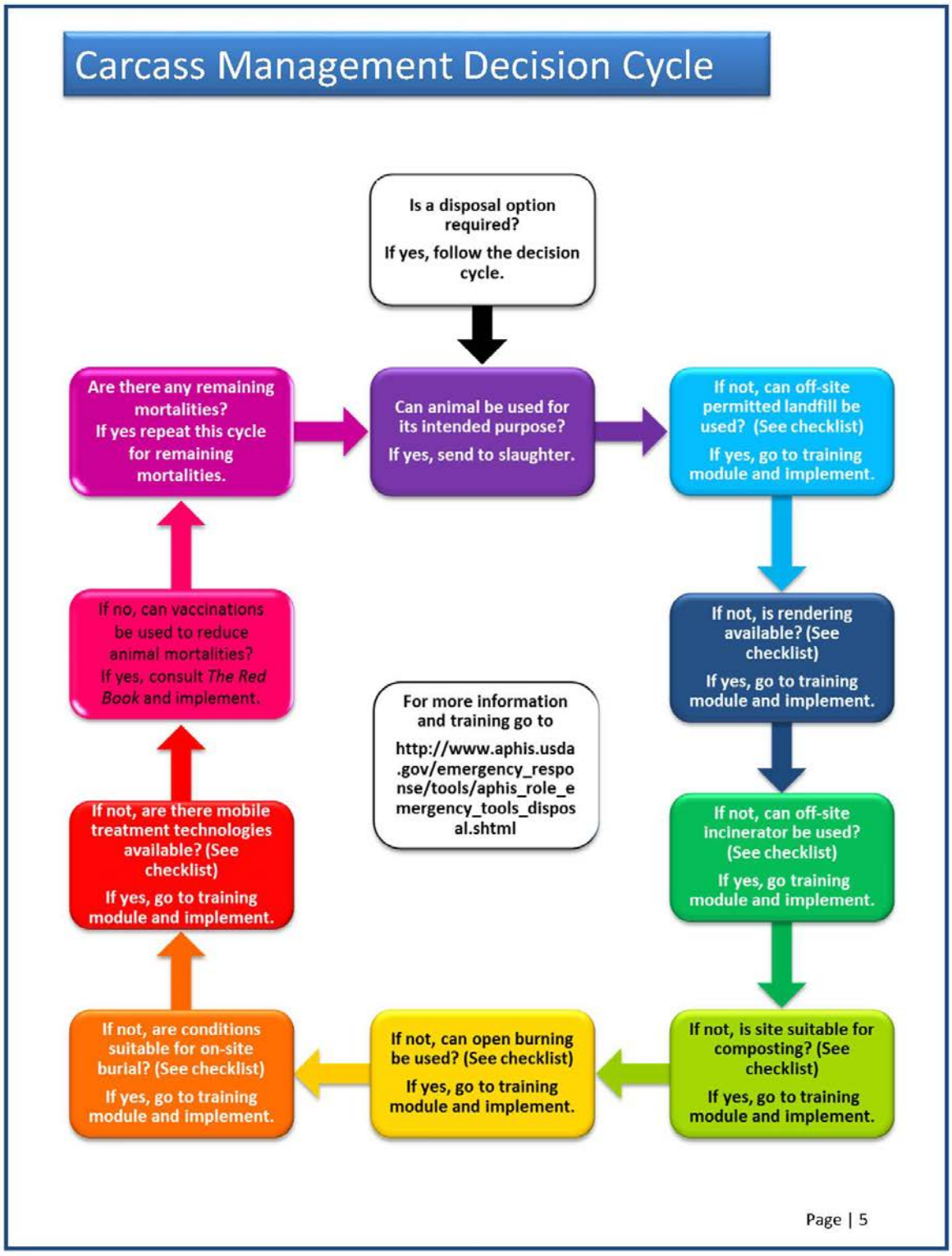
Carcass Management Decision Cycle
Is a disposal option required?
If yes, follow the decision cycle.
Can animal be used for its intended purpose?
If yes, send to slaughter.
If not, can off-site permitted landfill be used? (See checklist)
If yes, go to training module and implement.
If not, is rendering available? (See checklist)
If yes, go to training module and implement.
If not, can off-site incinerator be used? (See checklist)
If yes, go training module and implement.
If not, is site suitable for composting? (See checklist)
If yes, go to training module and implement.
If not, can open burning be used? (See checklist)
If yes, go to training module and implement.
If not, are conditions suitable for on-site burial? (See checklist)
If yes, go to training module and implement.
If not, are there mobile treatment technologies available? (See checklist)
If yes, go to training module and implement.
If no, can vaccinations be used to reduce animal mortalities?
If yes, consult The Red Book and implement.
Are there any remaining mortalities?
If yes repeat this cycle for remaining mortalities.
For more information and training go to
http://www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools_disposal.shtml
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Carcass Management Options Checklist

First Option - Can Animal be used for its intended purpose?

- ❑ Consider vaccination as a way to maintain animal health
  - ❑ Consult USDA APHIS Red Book for guidance on stamping out, vaccination to live and vaccination to slaughter options
- ❑ Can livestock and poultry entering the food chain meet food safety requirements? Consult with food safety officials to:
  - ❑ Ensure animals are safe for human consumption
  - ❑ Ensure public acceptance of products
  - ❑ Ensure pathogens are contained
- ❑ If so, send to slaughter or other processing. **If not,** ensure that depopulation methods are compatible with disposal capacity. Consider storage options so depopulation rate does not exceed disposal rate.
- ❑ **Proceed through checklist to select disposal option(s).**

Second Option - Can off-site permitted landfill be used?

- ❑ See a comprehensive list of landfills at http://www2.ergweb.com/bdrtool/login.asp.
  - ❑ Logon to the I-WASTE Tool and obtain a password if you do not currently have one.
  - ❑ Enter userid and password.
  - ❑ Choose treatment and disposal facilities button on the lower left.
  - ❑ Enter filter criteria such as "facility type (e.g., rendering, incinerators, or landfill)"
  - ❑ Note that construction debris landfills are not suitable for carcass disposal, and hazardous waste landfills are not necessary unless the carcasses are contaminated with a hazardous material causing them to be classified as hazardous
  - ❑ Enter State or EPA region, and click "View List of Facilities" button.
- ❑ Contact facilities and determine if they will accept your livestock or poultry and meet some or all of your capacity needs.
  - ❑ If there is insufficient capacity, consider fast-tracking expansion of existing landfill or permitting of new landfill for this purpose.
  - ❑ Consider potential environmental and biosecurity concerns.

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- ❑ If the landfill will accept the material, arrange for biosecure transport. Consult a qualified waste management professional to:
    - ❑ Determine if any permits are required for transport of infected carcasses.
    - ❑ Determine type of transport vehicles required. If the waste must travel on public roads, it should be transported in closed, leak-proof trucks or dumpsters. Secondary containment may be needed, depending on the type of waste being transported.
    - ❑ Work with disposal group within the Incident Command System to determine how many animals can be depopulated per day and how many trucks will be needed for transport per day, ensuring the rates are about the same.
    - ❑ Pre-identify transport routes to minimize exposure to susceptible premises.
- ❑ If permitted landfilling is an option, see the **Secure Transport** and **Off-Site Treatment/Burial** training modules at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement off-site permitted landfilling. **If not,**

Third Option - Is rendering available?

- ❑ See a complete list of renderers at http://nationalrenderers.org/about/directory or the EPA database at http://www2.ergweb.com/bdrtool/login.asp.
    - ❑ Logon to the I-WASTE Tool and obtain a password if you do not currently have one.
    - ❑ Enter userid and password.
    - ❑ Choose treatment and disposal facilities button on the lower left.
    - ❑ Enter filter criteria such as "facility type (e.g., rendering, incinerators, or landfill)"
    - ❑ Enter State or EPA region, and click "View List of Facilities" button.
- ❑ Contact facilities and determine if they will accept your livestock or poultry and meet some or all of your capacity needs.
    - ❑ If the capacity is less than needed, can the carcasses be stored/refrigerated while awaiting disposal?
- ❑ If so, arrange for storage and transport to rendering facility for disposal. Consult a qualified waste management professional to:
    - ❑ Determine if any permits are required for transport of infected carcasses.
    - ❑ Determine type of transport vehicles required. If the waste must travel on public roads, it should be transported in closed, leak-proof trucks or dumpsters. Secondary containment may be needed, depending on the type of waste being transported.

- ❑ Work with disposal group within the Incident Command System to determine how many animals can be depopulated per day and how many trucks will be needed for transport per day, ensuring the rates are about equal.
- ❑ Pre-identify transport routes to minimize exposure of susceptible premises.

❑ If rendering is an option, see **Secure Transport** and **Off-Site Treatment/Burial** training modules at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement rendering. **If not,**

Fourth Option - Can off-site incinerator be used?

❑ See a complete list of incinerators at or the EPA database at http://www2.ergweb.com/bdrtool/login.asp.

- ❑ Logon to the I-WASTE Tool and obtain a password if you do not currently have one.
- ❑ Enter userid and password.
- ❑ Choose treatment and disposal facilities button on the lower left.
- ❑ Enter filter criteria such as "facility type (e.g. rendering, incinerators, or landfill)"
- ❑ Enter State or EPA region, and click "View List of Facilities" button.

❑ Contact air authorities to verify operations are not in violation of their air permits.

❑ If the facilities are compliant, contact them and determine if they will accept your livestock or poultry and meet some or all of your capacity needs.

❑ If so, arrange for transport to off-site incineration facility for disposal. Consult a qualified waste management professional to:

- ❑ Determine if any permits are required for transport of infected carcasses.
- ❑ Determine type of transport vehicles required. If the waste must travel on public roads, it should be transported in closed, leak-proof trucks or dumpsters. Secondary containment may be needed, depending on the type of waste being transported.
- ❑ Work with disposal group within the Incident Command System to determine how many animals can be depopulated per day and how many trucks will be needed for transport per day, ensuring the rates are about equal.
- ❑ Pre-identify transport routes to minimize exposure of susceptible premises.

❑ If off-site incineration is an option see the **Secure Transport** and **Off-Site Treatment/Burial** training modules at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement off-site incineration. **If not,**

Fifth Option - Is site suitable for composting?

- ❑ Identify a suitable site on premises or in a centralized location in accordance with the checklist items, below.
  - ❑ If off-site consider the need for secure transport
- ❑ Based on the expert opinion of a trained and qualified compost specialist, are the site conditions suitable for composting the number of animals affected?
  - ❑ See USA composting council website for more information on training courses and equipment availability http://compostingcouncil.org/
  - ❑ Adequate land area to build compost piles
  - ❑ At least 200 feet from water wells, surface water bodies (lakes, streams, rivers, etc.), sinkholes, seasonal seeps or other landscape features that indicate the area is hydrologically sensitive.
  - ❑ Consider all groundwater pathways including the presence of drain tiles, soil characteristics, depth to groundwater, use of groundwater etc.
  - ❑ Located away from neighbors and/or out of sight.
  - ❑ Located downwind from neighbors and/or houses.
  - ❑ Located away from environmentally-sensitive areas.
  - ❑ Located close to the livestock or poultry facility or have clear access for transport.
  - ❑ Clear of overhead utility lines.
  - ❑ Void of excess water.
  - ❑ Located on a gentle slope (1%-3%) so there will be no water ponding.
  - ❑ Consider the need for an impermeable base and/or protective cover to prevent leachate generation and migration.
- ❑ If the site is suitable, consider the duration of time it takes to fully compost and determine if the following issues can be overcome:
  - ❑ Personnel required to ensure maintenance of pile.
  - ❑ Need for pest management.
  - ❑ Potential for extreme weather (e.g., hurricane) to disturb pile.
  - ❑ Denial of use of land area while carcass decomposes.

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- ❑ Grinding of infectious carcasses prior to composting is not recommended unless aerosols are controlled.
- ❑ Final composted material cannot be used on crops and will need to be disposed of.

❑ If so, is there a sufficient local supply of carbon source such as wood chips (3 pounds carbon source per pound of biomass)?

- ❑ Manure from contaminated feedlots can be scraped and used in compost to clean the feedlot as well as provide carbon materials for composting.
- ❑ Check with local agencies and organizations to determine if stockpiles of carbon source are available (e.g., parks department and landfills). Ensure that the carbon source is free of any pests or pathogens which could threaten local species.

❑ If so, have you arranged for the necessary equipment and supplies to be delivered to the site?

- ❑ Personnel
- ❑ Composting supplies and carbon source
- ❑ Personal protective equipment
- ❑ Personal supplies
- ❑ Cleaning and disinfecting (biosafety) supplies
- ❑ Hand tools
- ❑ Heavy equipment (mid-size skid-steer loaders, tractors with bucket loaders, excavators, bulldozers, payloaders, forklifts, trucks, containers and caps, polyethylene material for lining carcass transport containers)

❑ If composting is an option see **Outdoor Composting** training module at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement composting. **If not,**

Sixth Option - Is site suitable for open air burning?

❑ Based on the expert written opinion of an experienced air quality specialist, will open burning release air pollutants in excess of public health standards?

- ❑ Consider if proposed site is within an air quality attainment or non-attainment area.

❑ If not, does the applicable permitting authority allow open air burning?

- ❑ Local Fire Department
- ❑ State Department of Agriculture, Animal Health

- ❑ State Department of Environment or Natural Resources
- ❑ USDA-APHIS
- ❑ USEPA

❑ If so, can the permit conditions, such as measures to control the spread of fire, distance to occupied buildings etc. be met?

❑ If so, based on the expert opinion of an experienced environmental engineer, are the site conditions suitable for open air burning?

- ❑ What environmental testing (e.g., water, ash, soils) are required and at what frequency?
- ❑ How and where would the ash be disposed of?
- ❑ Are weather conditions (e.g., wind and drought) suitable for open are burning?

❑ If so, will burning be publically unacceptable?

❑ If so, have you arranged for the necessary personnel, equipment and supplies to be delivered to the site?

- ❑ Adequate source of combustible material and fuel to keep the fire going. Verify that type of fuel is acceptable to regulatory agencies.
- ❑ Other equipment including mechanical chains and lifting equipment.
- ❑ Personnel properly trained in the use of this equipment.
- ❑ Fire safety equipment also should be readily available.

❑ If open air burning is an option, see **On-Site Treatment/Burial** training module at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement on-site open air burning. **If not,**

Seventh Option - Is site suitable for on-site burial?

❑ Are soils suitable (see USDA NRCS online Web Soil Survey)?

❑ If so, based on the expert written opinion of an experienced groundwater hydrologist, will leachate contaminate groundwater in excess of public health standards?

- ❑ Consider all groundwater pathways including the presence of drain tiles, soil characteristics, depth to groundwater, use of groundwater etc.

❑ If not, based on the expert written opinion of an experienced environmental engineer, will the burial site create a stability or explosion hazard from production of methane?

- ❑ If not, is adequate land available for on-site burial?
- ❑ If so, is burial permitted by applicable regulatory authorities? Can permit requirements be met?
- ❑ If so, will land owner accept on-site burial, associated environmental liabilities, and potential loss of property value or use?
- ❑ If on-site burial is an option, see the **On-Site Treatment/Burial** training module at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement on-site burial. **If not,**

Eighth Option - Are mobile treatment technologies available for your area?

- ❑ Contact all appropriate mobile treatment technology vendors.
  - ❑ Verify the units are available for deployment to your site.
  - ❑ Verify your ability to meet all site/utility requirements.
  - ❑ Verify units can be fully disinfected after use.
  - ❑ Verify the units have adequate capacity to meet your needs.
  - ❑ If the capacity is less than needed, can the carcasses be stored/refrigerated while awaiting disposal?
  - ❑ Verify the availability of skilled operators and spare parts to keep the units operational.
  - ❑ Verify the unit can be set-up on the site (e.g., the site has appropriate grading)
- ❑ If so, is the technology permitted by the applicable regulatory authorities?
  - ❑ State Department of Agriculture, Animal Health
  - ❑ State Department of Environment or Natural Resources
  - ❑ USDA-APHIS
  - ❑ USEPA
- ❑ If so, can the permit conditions be met?
- ❑ If so, can the technology process byproducts be readily disposed?

If mobile treatment is an option, see **On-Site Treatment/Burial** training module at www.aphis.usda.gov/emergency_response/tools/aphis_role_emergency_tools.shtml and implement on-site mobile technologies. **If not,**

Ninth Option – Can vaccination be used to reduce animal mortalities?

- ❑ If you were unable to find a method of disposal for all animals, re-consider vaccination as way to maintain animal health
    - ❑ Consult Red Book for guidance on stamping out, vaccination to live and vaccination to slaughter options
    - ❑ Consult National Veterinary Stockpile (NVS) for availability of vaccine and equipment http://www.aphis.usda.gov/animal_health/emergency_management/nvs.shtml
- ❑ If you still need to dispose of animals, return to First Option and repeat cycle until all carcasses can be managed.

Definitions

Biomass is the total quantity or weight of livestock/poultry carcasses and associated biodegradable material requiring management.

Capacity is equal to throughput times availability where throughput is the amount of biomass that can be processed per day per system and availability is the number of systems available.

Composting is a natural biological decomposition process that takes place in the presence of oxygen (air). Composting process control parameters include the initial ratios of carbon and nitrogen rich materials, the amount of bulking agent added to assure air porosity, the pile size, moisture content, and turning frequency. Turning or rotating the compost piles can improve composting rates, but is not recommended when disposing of infected carcasses.

Depopulation (also known as culling, destruction, and/or euthanasia) is a method by which large numbers of diseased and/or suffering animals are killed quickly and efficiently with as much consideration given to the welfare of the animals as practicable. It may be practiced during an animal health emergency, such as a major disease outbreak to eliminate animal suffering or help prevent or mitigate the spread of the disease through the elimination of infected, exposed, or potentially exposed animals. It also serves to remove contaminated livestock from the food supply, protect the nation's agricultural and national economy, and safeguard public health. Animals should not be depopulated until a disposal plan is in place.

Grinding is an operation that reduces biomass particle size. Grinding implies that particles are broken apart largely by smashing and crushing rather than tearing or slicing.

Groundwater is water below the land surface in a zone of saturation.

Leachate is any liquid material that drains from land, waste, or stockpiled material and contains significantly elevated concentrations of contamination derived from the material that it has passed through.

Off-site (Fixed-facility) incinerators include (a) small on-farm incinerators, (b) small and large incineration facilities, (c) crematoria, and (d) power plant incinerators. Unlike open-air burning and air-curtain incineration, fixed-facility incineration is wholly contained and, usually, highly controlled.

On-site Burial in the context of this document refers to excavating a trench or pit into the earth, placing carcasses in the trench, and covering with the excavated material (backfill).

Open-air burning includes burning carcasses (a) in open fields, (b) on combustible heaps called pyres, and (c) with other burning techniques that are unassisted by incineration equipment.

Pathogens are any organism capable of producing disease or infection.

Permitted Landfills are modern Subtitle D landfills that are highly regulated operations, engineered and built with technically complex systems specifically designed to protect the environment and include liners and leachate controls. These landfills are distinguished from older landfills in the U.S. (sometimes

called small arid landfills) which were constructed before Subtitle D regulations were effective, and therefore were not constructed with sophisticated containment systems.

Premises are geographically and epidemiologically defined locations, including a ranch, farm, stable, or other establishment.

Pyres are structures, usually made of wood, for burning carcasses.

Rendering is the process by which purified fat and protein products are recovered from inedible portions of animals by cooking at high temperatures.

Slaughter is the killing of an animal or animals for human consumption.

Stamping out is the depopulation of clinically affected and in-contact susceptible animals.

Waste can be loosely defined as material that cannot be used for its intended purpose.

Vaccination to Live is the depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, without subsequent depopulation of vaccinated animals.

Vaccination to Slaughter is the depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, with subsequent depopulation of vaccinated animals.

Appendix M: Compliance Bulletin – One's Own Waste on One's Own Property Exemption

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Colorado Department of Public Health and Environment

Compliance Bulletin
Solid Waste
One's Own Waste On One's Own Property Exemption

reviewed/revised January 2013

Colorado's solid waste laws (30-20-10 *et. seq.*, C.R.S.) and regulations (6 CCR 1007-2, Part 1) allow a person or business to dispose of their own solid waste generated on their own property without first obtaining a permit (Certificate of Designation) under the "one's own waste on one's own property" exemption. State and local government agencies are specifically excluded from using this exemption.

Some people interpret this exemption to mean that if they do not dispose of any waste other than their own, they are not required to follow the solid waste rules and regulations. This is not a correct interpretation. This exemption may be used only if you comply with the minimum standards of the state's solid waste regulations and ensure your property does not become a nuisance. Disposal must also be in compliance with local laws and ordinances, which may limit or prohibit this activity.

All sites where solid waste disposal takes place must meet certain siting requirements such as not being located in an active fault zone, wetland or floodplain, or near an aircraft runway. Local laws and ordinances may have further location restrictions. Additional specifications and procedures for controlling nuisance conditions, design of disposal area, monitoring of surface and ground water, site maintenance, site closure and post closure care are also required.

You must have a written operations plan that describes your site's design, how it will operate and how it will be managed so it will be in compliance with the solid waste regulations. The operations plan must be submitted to the Colorado Department of Public Health and Environment (the Department) and the local governing authority for review and approval before any waste disposal takes place. If you want to make changes to your plan, you will need to have the changes reviewed and approved by the Department and the local governing authority before modifying your site or its operations.

After your operations plan is approved and you begin disposal operations, you will be responsible for ensuring your site is in compliance with your plan and the solid waste regulations at all times. You will need to ensure that the waste is kept adequately covered and that there are no problems with noise, dust, erosion, windblown trash, wildlife or vermin, or other nuisances. When you cease disposal operations on your property you must implement your closure plan. Also, the property must be left in an orderly manner and with a good aesthetic appearance that blends in with the surrounding area. Depending on the nature of your disposal activities, you may be required to establish an environmental covenant with the Department that restricts how the property can be used in the future.

Be aware that the Department is authorized to bill you for the time needed to review your operations plan. This will include time spent by staff reviewing your plan, meetings with you or

your representatives, and time spent writing comments and responses. You will also be charged an annual operating fee for your site if your plan is approved. In addition, you will be required to establish financial assurance in an amount sufficient to provide for site closure and post closure care by a third party in case you become unable to close it yourself. More information on these requirements can be found in Sections 1, 2 and 3 of Part 1 the state's solid waste regulations (6 CCR 1007-2), available on the Department's website at www.colorado.gov/cs/Satellite/CDPHE-Main/CBON/1251607568997.

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For more information, please contact:

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Colorado Department of Public Health and Environment

Customer Technical Assistance Line
(303) 692-3320
(888) 569-1831 ext. 3320 toll-free
E-mail: comments.hmwmd@state.co.us
Website: www.colorado.gov/cdphe/hm

Appendix N: Procurement Guide for FEMA Public Assistance Projects

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

COLORADO
Division of Homeland Security & Emergency Management
Department of Public Safety

Procurement Guide for FEMA Public Assistance Projects

June 2015

The following chart displaying FEMA PA DR 4145 procurement guidelines is provided to assist eligible subgrantees in identifying and applying the required regulations when using FEMA funds for the procurement of disaster services, including both non-architectural/engineering (A/E) services (such as materials, supplies, contracts, etc.) and A/E services. FEMA Public Assistance (PA) subgrantees are required to adhere to the most stringent of Federal or Local procurement requirements and are encouraged to compare this guidance to their local requirements. Federal procurement regulations for FEMA PA DR 4145 are governed by 44 C.F.R. 13.36 and FEMA Guidance: Requirements for Grantees and Subgrantees.

Procurement Requirements

Category of Purchase	Size of Contract	Required Documentation	Detailed Guidance
All Except A/E Services[1,2]	$0-$150k[3]	Quotes Required	• Quotes must have written documentation which includes a description of the following: – Services/Supplies needed, including the scope of work – List of contractors contacted, including the point of contact and dates – Price quotes obtained – Rationale for procurement method • Contract vehicle is required for purchases less than $150k[4] • Quotes will be the basis for contractor selection and contract price
	$150k+	Bids Required	• Bid process requires signed bids with description, scope, and pricing from vendor • Invitation to Bid or Request for Proposal (RFP) is required for purchases greater than $150k – RFP must be publicly advertised for no fewer than 3 days. – Lowest bidder that meets criteria/restrictions for bidders must be documented. – A documented no-bid response constitutes a response. • Contract is required for purchases greater than $150k • For split purchases, the value of goods purchased in the same fiscal year is combined • Sole source requirements: price, signature, what is being quoted, rationale for why it is cost reasonable
A/E Services[1,5]	$0-$150k[3]	Quotes Required	• Quotes must have written documentation which includes a description of the following: – Services/Supplies needed, including the scope of work – List of contractors contacted, including the point of contact and dates – Price quotes obtained – Rationale for procurement method • Contract vehicle is required for purchases less than $150k[4] • Quotes will be the basis for contractor selection and contract price
	$150k+	Bids/RFQ Required	• Bid process requires signed, bids with description, scope, and pricing from vendor • Invitation to Bid or Request for Proposal (RFP) is required for purchases greater than $150k – RFP must be publicly advertised for no fewer than 3 days – Lowest bidder that meets criteria/restrictions for bidders must be documented. – A documented no-bid response constitutes a response. • Contract is required for purchases greater than $150k • Sole source requirements: price, signature, what is being quoted, rationale for why it is cost reasonable • May use competitive proposal procedures for qualifications-based procurement of A/E services where most qualified competitor is selected

[1] Required contract provisions are listed in 44 C.F.R. 13.36 (i). These provisions have been included as required as a result of federal law, executive order, and general good contracting principles.
[2] Competition guidance is located in 44 C.F.R. 13.36. These guidelines are imperative to having all open bid contracted work be approved for reimbursement.
[3] The State does not review procurement for vendors with less than $10,000 in aggregate value across all PWs submitted for reimbursement by each subgrantee, with the exception of State Agencies and State Entities where the local procurement requirements requires quotes for purchases >$5,000. Note that procurement requirements still apply below this threshold; subgrantees need to demonstrate that the more stringent requirements among the Federal and Local regulations were followed.
[4] Refer to Request for Reimbursement Documentation Checklist for details on contract vehicle types
[5] May use competitive proposal procedures for qualifications based procurement of A/E professional services where competitors' qualifications are evaluated and the most qualified contractor is selected, subject to negotiation of fair and reasonable compensation. This is the only circumstance where price is not used as a selection factor

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Additional Notes

- Subgrantees must follow the Federal procurement requirements for the FEMA PA Grants; if local procurement requirements are less stringent than the Federal guidelines, please contact DHSEM for further guidance.
- **According to the 44 CFR 13.36(e), subgrantees will take all necessary affirmative steps to assure contracting with small and minority firms, women's business enterprise and labor surplus area firms services are used when possible.** Refer to 44 CFR 13.36(e)(2) for a list of affirmative steps, including the use of the Small Business Administration (SBA) and the Minority Business Development Agency of the Department of Commerce.
- **Non-critical PNP facilities must apply first to the SBA for Permanent Work assistance,** then to FEMA for the remainder. When submitting the SBA request, the subgrantee should also notify FEMA of the facility damage so that site inspections can be conducted while the SBA is reviewing the loan request. FEMA will use the collected information in the event the SBA declines funding.
- **Cost and Price analysis should follow 44 C.F.R. 13.36 (f)** which highlights cost analysis required for every procurement action, including the prohibition of using cost plus-a-percentage-of-cost or cost plus-a-percentage-of-construction-cost methods. Additional cost reasonableness guidance is available under Other State Guidance in CO.EMGrants.com.
- **Bonding guidance is located in 44 C.F.R. 13.36 (h)** and includes information regarding how subgrantees should bond for projects under $150,000 and what bonding requirements exist for projects greater than $150,000.
- **IHE, Hospitals, and Other Private Nonprofit subgrantees should follow 2 C.F.R. 215.40-48 for establishing procedures for procurement**. This code includes topics such as competition (215.43), Procurement Procedures (215.44), Cost of Price Analysis (215.45), Socioeconomic Contracting (215.46), Bonding (215.47), and Required Contract Provisions (215.48).

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Frequently Asked Questions

1. What documentation is required for quotes?
   A quote consists of a description of the scope of work, price obtained (quoted), services/supplies needed, list of the contractors contacted, name of the person responding, date, basis for selection, and rationale for procurement method.

2. How many quotes need to be obtained?
   *A **minimum** of three qualified sources need to be obtained[6]; three of more is preferable to better determine and prove cost reasonableness. Please refer to Category of Purchase above for specific guidance.*

3. What is required for competitive bidding?
   Competitive bidding requires signed, sealed bids with description, scope, and pricing.

4. What is an informal bid?
   An informal bid is a documented quote. Please see above for documentation requirements for quotes.

5. Are phone bids acceptable?
   Phone bids are acceptable for informal bidding, but the requestor must have written documentation stating the vendor that was contacted, the point of contact, the date, and the quoted price.

6. What should be evaluated for competitive proposal procedures for qualifications-based procurement of A/E services?
   Qualifications based on competitive procurement is subject to negotiation of fair and reasonable compensation. Each vendor shall be evaluated for their qualifications, approaches to the project, ability to furnish required services, anticipated design concepts, and use of alternative methods. Their current statements of qualifications and performance date on file should also be evaluated for alignment with scope.

7. Does a no-bid response qualify as a response?
   Yes, a no-bid response qualifies as a response. Please document that no responses to the bid were received.

8. Is there a length of time requirement for bid advertisement?
   Request for Proposals (RFPs) must be publicly advertised for no fewer than 3 days. When bids are required, the duration of the bid advertisement must be long enough to encourage, to the maximal extent practicable, open and free competition.

9. Is single source procurement acceptable? What are the requirements?
   According to 44 CFR Section 13.36(d)(4), procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source, or after solicitation of a number of sources, competition is determined inadequate. Procurement by non-competitive proposals may be used only when the award of a contract is infeasible under small purchase or competitive proposal procedures, sealed bids, or competitive proposals under specific circumstances. One of these circumstances is that the item is available only from a single source. Single source procurement should be documented with support indicating a description of what is being quoted, price, signature of the subgrantee, and a rationale for cost reasonableness.

10. What if our local governing body does not have a procurement policy in place?
    FEMA Public Assistance Program regulations require all subgrantees adhere to Federal procurement regulations, at the minimum. However, if you are unable to adhere to these regulations, a cost reasonableness assessment can be prepared on a case-by-case base and may serve as proof of proper procurement. Please contact the Applicant Assistance Team for additional information.

11. Am I required to select the lowest bid received from procurement by sealed bids?
    Yes, according to 44 CFR 13.36(d)(2) bids are publicly solicited and a firm-fixed-price contract is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bid, is the lowest in price. If you do not select the lowest bid, you should be prepared to justify your selection by documenting the reasons for which you chose to select a higher bid.

12. We did not follow the correct procurement policy, what options do we have to support our procurement method?
    If you did not adhere to these procurement guidelines, you will need to provide written documentation (i.e. memo) justifying the procurement methods used. Additionally, a cost reasonableness assessment will need to be prepared documenting that the costs incurred were reasonable. Please contact the Applicant Assistance team for additional information.

[6] FEMA Recovery Fact Sheet No. 9580.212. http://www.fema.gov/media-library-data/20130726-1857-25045-5393/fact_sheet___rp9580.212_public_assistance_grant_contracting_faqs.pdf

Appendix O: Waste Equipment and Processing Requirements



Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Waste Equipment and Processing Requirements

Waste Handling Equipment Types: Equipment selections are based upon the type of activity to be carried out and the materials involved. The table below groups construction and demolition (C&D) processing equipment into five main types:

1. Conveying;
2. Crushing / Reducing;
3. Screening / Separating;
4. Magnetic & Electric Field Separation; and
5. Manual Picking Station

	Equipment	Materials Handled
1. Conveying Equipment	Conveyors transfer materials from one location to another. The most common type of conveying equipment used to process C&D is a belt conveyor which consists of a strip of belting material that is looped around a shaft on each end.	All types of C&D and other waste streams sized and weighted properly to fit on the conveyor belt
2. Crushing/Reducing Equipment	Size reduction is the unit operation in which waste materials are mechanically reduced in size. The objective is to obtain a product that is reasonably uniform and considerably reduced in size in comparison with its original form.	
1. Hydraulic breaker or jackhammer	A pneumatic impact tool is used for breaking oversized material into pieces small enough to be processed by the next crusher/reduction unit in the process.	Concrete pavement, foundations.
2. Jaw Crusher	Designed to crush large chunks of concrete, asphalt, etc.	Concrete, asphalt, pipes, steel, rebar, manhole lids, etc. Compressible materials such as wood and plastics tend to jam up the jaws and severely reduce throughput.
3. Hopper	Receives the chunks and feeds them to the cone, or impactor.	Can choose either cone or impactor, or both.
4. Cone	Crushes concrete and asphalt to aggregate size	Can choose either cone or impactor, or both.
5. Impactor	Crushes concrete and asphalt to aggregate size	Concrete & Asphalt
Hammermill	Also known as wood hogs, can	Wood

	process a variety of wood materials. Reduction occurs as the heavy hammers, attached to a rotating element, impact the material as it enters and eventually force the shredded material through the discharge of the unit.	
Stump Grinder	Large machines, often trailer-mounted and top-loaded by on-board knuckleboom loaders. The machine is more expensive than a wood hog but can handle large bulky materials.	Wood, stumps
Rotary Shear Shredders	Low-speed, high-torque machines that rip and tear material apart.	Ideal for primary reduction of bulky wood material, such as pallets, crates and stumps, up to 3" to 4" in diameter. Large units can also reduce concrete, steel drums, white goods and furniture.
Screw Shredders	Shredding is done by two parallel screws with opposing threads.	Bulky wood material, including tree stumps, brush, logs, scrap lumber, clean wood, pallets, trees, yard trimmings.
3. Screening/Separating Equipment	Screening is a unit operation used to separate mixtures of materials of different sizes into two or more size fractions by means of one or more screening surfaces.	
Grizzly Screen	Vibrating grizzly feeders are ideal for feeding rubble and mixed C&D material to the primary crusher.	Rubble and mixed C&D material
Vibrating Screen	Vibrating screens can be designed to vibrate from side to side, vertically, or lengthwise.	Rubble and mixed C&D material
Trommel Screen	An inclined rotating cylindrical screen where material to be separated tumbles and contacts the screen several times as it travels down the length of the screen.	Rubble and mixed C&D material
Disc Screen	Disc screens consist of parallel horizontal shafts equipped with interlocking lobed (or star-shaped) discs that run perpendicular to the flow of infeed material.	Wood
Air Classifiers	A separator which uses an air stream to separate materials based on the weight difference of the material.	Commingled waste (plastic, glass, paper, metal)

Flotation	A unit operation which employs water to separate wood from rubble-based material.	Separates wood from rubble-based material
4. Magnetic & Electric Field Separation	Uses the electrical and magnetic properties of waste materials to separate them.	
Magnetic Separation	Designed to remove ferrous metals from a moving bed of material.	Ferrous materials
Electrostatic Separation	High-voltage electrostatic fields can be used to separate nonconductors of electricity, such as glass, plastic, and paper, from conductors such as metals.	Nonconductors such as glass, plastic, and paper
Eddy Current Separation	Separates non-ferrous metal (usually aluminum cans) from the waste stream by passing a current through the materials. These systems can be expensive.	Non-ferrous metal (usually aluminum cans)
5. Manual Picking Station	An elevated platform with a conveyor and a catwalk along both sides of the conveyor. Manual sorting is done by removing specified items from the conveyor and dumping`` them in the appropriate chute provided.	Various Waste Types (waste items must be non hazardous and small enough to be "hand-picked" though)

Appendix P: FEMA Hazardous Stump Extraction and Removal Eligibility & Stump Conversion Table

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

DAP9523.11

FEMA
DISASTER ASSISTANCE POLICY

I. TITLE: Hazardous Stump Extraction and Removal Eligibility

II. DATE: MAY 15 2007

III. PURPOSE:

Establish criteria used to reimburse applicants for removing eligible hazardous stumps from public or, where authorized, private property.

IV. SCOPE AND AUDIENCE:

The policy is applicable to all major disasters and emergencies declared on or after the date of publication. It is intended for all personnel involved in the administration and execution of the Public Assistance Program, including applicants.

V. AUTHORITY:

Sections 403 and 407 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121-5206, as amended.

VI. BACKGROUND:

Public Assistance regulations authorize reimbursement for the removal of debris from public and private land when it is in the public interest. Such removal is in the public interest when it is necessary to: eliminate immediate threats to life, public health and safety, or eliminate immediate threats of significant damage to improved public or private property; or to ensure economic recovery of the affected community to the benefit of the community at large. Trees that are uprooted during a disaster event such that all or part of their roots are exposed may pose an immediate threat to public health and safety.

VII. POLICY:

A. When a disaster event uproots a tree or stump (i.e., 50% or more of root ball is exposed) on a public right-of-way, improved public property or improved property owned by certain private nonprofit organizations, and the exposed root ball poses an immediate threat to life, public health and safety, FEMA may provide supplemental assistance to remove, transport, dispose, and provide fill for the root cavity of an eligible uprooted tree or stump. The Federal Emergency Management Agency (FEMA) will reimburse applicants reasonable costs for this type of work only when uprooted stumps are more than 24 inches in diameter (measured two feet from the ground), with the consensus of the Applicant and the State, and is approved in

advance by FEMA, using the attached Hazardous Stump Worksheet.

1. If it is necessary to remove an uprooted stump before it can be inspected by FEMA because it poses a threat that must be dealt with immediately, the applicant must submit documentation, to FEMA including photographs, that establishes its location on public property, specifics on the threat, stump diameter measured two feet up the trunk from the ground, quantity of material to fill the hole, and any special circumstances.

2. FEMA will reimburse applicants for extraction, transport and disposal of stumps with a diameter of 24 inches or smaller at the unit cost rate for regular vegetative debris, using the attached Stump Conversion Table, as such stumps do not require special equipment.

3. FEMA will reimburse applicants at the unit cost rate (usually cubic yards) for normal debris removal for all stumps, regardless of size, placed on the rights-of-way by others (i.e., contractors did not extract them from public property or property of eligible Private Non Profit organization). In such instances, applicants do not incur additional cost to remove these stumps because the same equipment that is used to pick up "regular" debris can be used to pick-up these stumps.

4. If an applicant incurs additional costs in picking up large stumps (over 24 inches in diameter) from rights-of-way, it should complete the Hazardous Stump Worksheet and present documentation to FEMA in advance for consideration.

5. Stumps with less than 50% of their root ball exposed should be cut flush at ground level and the cut portion included with regular vegetative debris.

6. Straightening or bracing of trees is eligible for reimbursement if it is less costly than removal and disposal. Applicant must provide a cost analysis showing cost effectiveness.

VIII. ORIGINATING OFFICE: Disaster Assistance Directorate (Public Assistance Division)

IX. SUPERSESSION: This policy supersedes Recovery Policy Number 9523.11, Hazard Stump Removal and Extraction Eligibility dated May 6, 2006.

X. REVIEW DATE: Three years from the date of publication.

David Garratt
Acting Assistant Administrator
Disaster Assistance Directorate

Hazardous Stump Worksheet

Applicant: _____ Date: _____

Applicant Representative: _____ Signature: _____

FEMA Representative (if available) _____ Signature: _____

State Representative (if available): _____ Signature: _____

	Physical Location (i.e., Street address, road, cross streets, etc.)	Description of Facility (ROW, Park, City Hall, etc.)	Hazard		GPS (decimal degrees, 00.000000)		Tree Size (Diameter)	Eligible		Fill For Debris Stumps	Comments (See attached sketch, photo, etc.)
			Yes	No	Latitude (N)	Longitude (W)		Yes	No	CY	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Stump Conversion Table

Diameter to Volume Capacity

The quantification of the cubic yards of debris for each size of stump in the following table was derived from FEMA field studies conducted throughout the State of Florida during the debris removal operations following Hurricanes Charley, Frances, Ivan and Jeanne. The following formula is used to derive cubic yards:

$$\frac{[(\text{Stump Diameter}^2 \times 0.7854) \times \text{Stump Length}] + [(\text{Root Ball Diameter}^2 \times 0.7854) \times \text{Root Ball Height}]}{46656}$$

0.7854 is one-fourth Pi and is a constant.
46656 is used to convert cubic inches to cubic yards and is a constant

The formula used to calculate the cubic yardage used the following factors, based upon findings in the field:

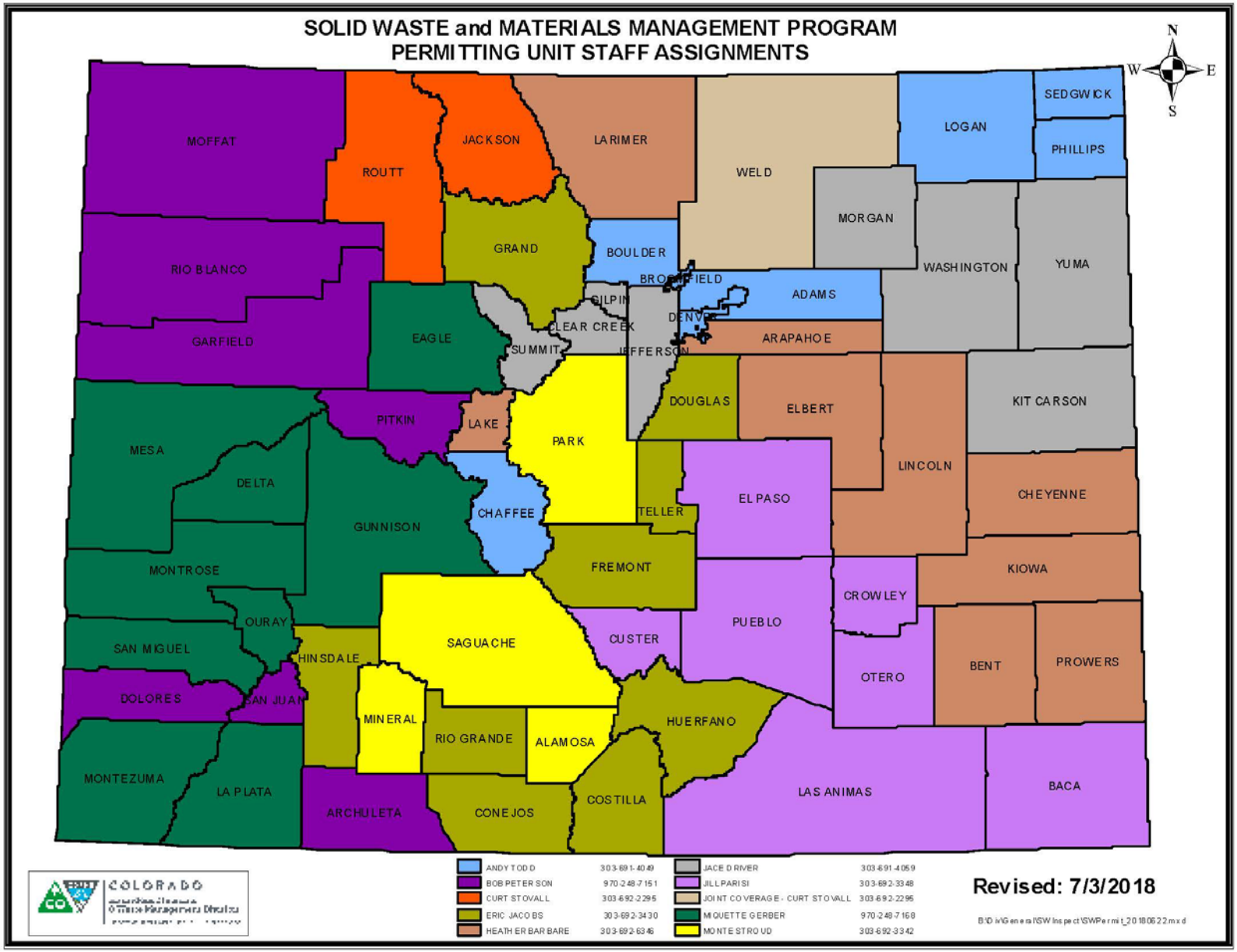
- Stump diameter measured two feet up from ground
- Stump diameter to root ball diameter ratio of 1:3.6
- Root ball height of 31"

Stump Diameter (Inches)	Debris Volume (Cubic Yards)	Stump Diameter (Inches)	Debris Volume (Cubic Yards)
6	0.3	46	15.2
7	0.4	47	15.8
8	0.5	48	16.5
9	0.6	49	17.2
10	0.7	50	17.9
11	0.9	51	18.6
12	1	52	19.4
13	1.2	53	20.1
14	1.4	54	20.9
15	1.6	55	21.7
16	1.8	56	22.5
17	2.1	57	23.3
18	2.3	58	24.1
19	2.6	59	24.9
20	2.9	60	25.8
21	3.2	61	26.7
22	3.5	62	27.6
23	3.8	63	28.4
24	4.1	64	29.4
25	4.5	65	30.3
26	4.8	66	31.2
27	5.2	67	32.2
28	5.6	68	33.1
29	6	69	34.1
30	6.5	70	35.1
31	6.9	71	36.1
32	7.3	72	37.2
33	7.8	73	38.2
34	8.3	74	39.2
35	8.8	75	40.3
36	9.3	76	41.4
37	9.8	77	42.5
38	10.3	78	43.6
39	10.9	79	44.7
40	11.5	80	45.9
41	12	81	47
42	12.6	82	48.2
43	13.3	83	49.4
44	13.9	84	50.6
45	14.5		

Appendix Q: Solid Waste and Materials Management Program Permitting Unit Staff Assignments Map

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS


SOLID WASTE and MATERIALS MANAGEMENT PROGRAM
PERMITTING UNIT STAFF ASSIGNMENTS
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ROUTT
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LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MORGAN
WASHINGTON
YUMA
RIO BLANCO
GRAND
BOULDER
BROOMFIELD
ADAMS
GILPIN
DENVER
ARAPAHOE
GARFIELD
EAGLE
CLEAR CREEK
SUMMIT
JEFFERSON
DOUGLAS
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
MESA
DELTA
CHAFFEE
TELLER
EL PASO
LINCOLN
CHEYENNE
GUNNISON
FREMONT
MONTROSE
KIOWA
CROWLEY
OURAY
PUEBLO
SAGUACHE
CUSTER
SAN MIGUEL
HINSDALE
OTERO
BENT
PROWERS
DOLORES
SAN JUAN
MINERAL
RIO GRANDE
ALAMOSA
HUERFANO
MONTEZUMA
LA PLATA
ARCHULETA
CONEJOS
COSTILLA
LAS ANIMAS
BACA
COLORADO
ANDY TODD 303-691-4049
BOB PETERSON 970-248-7151
CURT STOVALL 303-692-2295
ERIC JACOBS 303-692-3430
HEATHER BARBARE 303-692-6346
JACE DRIVER 303-691-4059
JILL PARISI 303-692-3348
JOINT COVERAGE - CURT STOVALL 303-692-2295
MIQUETTE GERBER 970-248-7168
MONTE STROUD 303-692-3342
Revised: 7/3/2018
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Appendix R: Job Aids

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

R.1 Debris Monitor Duties and Responsibilities

DEBRIS MONITOR DUTIES AND RESPONSIBILITIES		
FEMA Debris Monitor	**State/Tribal Debris Monitor**	**Applicant Field Supervisor**
Safety		
• Ensure safety by identifying possible health/safety risks and requiring proper field safety gear	• Ensure contractor is complying with public and employee safety standards • Ensure safety requirements on State highways and roads are observed during debris operations (load limits, truck covers, etc.)	• Be familiar with and maintain/ implement all safety requirements
Eligibility		
• Verify compliance with FEMA PA Program requirements (i.e., provide eligibility guidance, timeframe requirements, and documentation and reporting requirements)	• N/A	• Ensure that a reasonable level of effort is applied to the monitoring process, commensurate with the debris operations and the schedule • Ensure only eligible debris is collected for loading and hauling
Compliance		
• Spot check debris loading, staging, reduction, and disposal sites to ensure compliance with eligibility requirements • Report any noncompliance, misconduct, or other negative actions to the assigned FEMA Debris Specialist for appropriate coordination and resolution with State and applicant officials	• Ensure all work complies with local ordinances and State and Federal regulations • Monitor environmental compliance on all debris management sites (DMSs) • Monitor preservation of places and buildings pertaining to the State's historic and archaeological treasures	• Obtain and become familiar with the requirements outlined in all debris removal and disposal contracts to ensure the contract requirements are implemented correctly • Make unannounced visits to all loading and disposal sites within an assigned area • Take photographs of all trucks and trailers used in the debris operation, to establish a baseline inventory of equipment
Debris Operations		
• Validate certification of trucks and trailers • Evaluate operational efficiency • Oversee documentation requirements	• Ensure trucks are measured, certified, and operated properly • Ensure trucks are loaded properly and loads are accurately evaluated • Verify load tickets are properly completed and controlled by the applicant	• Ensure only debris from approved public areas is removed • Assist in measuring all debris hauling trucks and trailers with the appropriate contractor representatives, if applicable
Management and Oversight		
• N/A	• Ensure debris sites are properly mobilized and administered • Ensure accurate recordkeeping and appropriate documentation • Ensure contractor activities are conducted as mandated in contractor scope of work	• Serve as the first line of management for debris monitors and assist with any questions or conflicts that arise • Prepare a daily written report of all activities observed and include photographs • Be familiar with all phases of debris management operations

DEBRIS MONITOR DUTIES AND RESPONSIBILITIES (continued)	
Applicant Debris Loading Monitor	**Applicant Debris Tower/Site Monitor**
Safety	
• Check area for safety considerations, such as downed power lines, children playing in the area, traffic control needs, and safe operation of trucks and equipment • Implement all safety requirements • Before work begins, inspect areas to identify covered utility meters, transformers, fire hydrants, mail boxes, etc. (as a baseline to account for any damage as a result of the debris removal operations) • Ensure that debris loads are contained properly before leaving the loading area	• Check area for safety considerations, such as downed power lines, children playing in the area, traffic control needs, and safe operation of trucks and equipment • Implement all safety requireme
Eligibility	
• Determine whether each load is to be claimed for reimbursement based on established criteria, and mark load tickets if ineligible for FEMA reimbursement • Validate eligible hazardous trees, including hangers, leaners, and stumps • Verify global positioning system (GPS) readings or an address/location for leaning trees, trees with hanging limbs, and uprooted/exposed stumps that constitute an immediate threat; a separate ticket should be written for these items if required in the contract • Do not issue tickets for trucks that arrive at pick-up sites already loaded, or partially loaded • Ensure that force account labor and debris contractor work is within the assigned scope of work	• N/A
Compliance	
• Obtain and become familiar with the requirements outlined in all debris removal and disposal contracts to ensure the contract requirements are implemented correctly • Report to field supervisor if debris removal work does not comply with all local ordinances as well as State and Federal regulations (i.e., improper disposal of hazardous wastes)	• Obtain and become familiar with the requirements outlined in all debris removal and disposal contracts to ensure the contract requirements are implemented correctly • Report to field supervisor if debris removal work does not comply with all local ordinances as well as State and Federal regulations (i.e., improper disposal of hazardous wastes) • Verify relevant permits were obtained for debris reduction methods such as burning

DEBRIS MONITOR DUTIES AND RESPONSIBILITIES (continued)	
Applicant Debris Loading Monitor	**Applicant Debris Tower/Site Monitor**
Debris Operations	
• Ensure that hazardous wastes are not mixed into loads • Record the types of equipment used (for time-and-materials contracts) • Record the hours equipment was used, including down time of each piece of equipment by day (for time-and-materials contracts) • Ensure that only debris specified by the applicant is collected for loading and hauling • Ensure only debris from approved public areas is removed • Ensure the work area is clear of debris before equipment is moved to a new loading area • Prepare complete and accurate load tickets • Issue load tickets for each debris load to the truck driver • Evaluate and record performance and productivity of debris removal crews	• Ensure that hazardous wastes are not mixed into loads • Record the types of equipment used (for time-and-materials contracts) • Record the hours equipment was used, including down time of each piece of equipment by day (for time-and-materials contracts) • Accurately measure and document load hauling compartments for trucks and trailers to compute volume capacity in cubic yards (CY) for each truck and trailer prior to its commencement of debris hauling operations (recertify on regular basis) • Recertify truck capacities on a regular basis • Ensure that truck loads are accurately credited o Estimate the percentage of full capacity for each truck or trailer load o Ensure trucks are not artificially loaded (e.g., debris is wetted, fluffed, or not compacted) • Collect load ticket from truck driver and initial each load ticket before permitting any truck to proceed from the tower entrance to dumping location • Physically control load tickets • Ensure that all debris is removed from trucks at DMSs • Monitor site development and restoration of DMSs • Oversee debris reduction (burning, chipping)
Communication	
• Remain in constant contact with debris management/ dispatch center or field supervisor • Report issues (such as safety concerns, contractor non-compliance, and improper equipment use) to field supervisor • Maintain a log of debris operations issues • Photograph and provide written documentation of any damage to utility components, driveways, road surfaces, private property, vehicles, etc. • Perform other duties as directed by designated debris management personnel	• Remain in constant contact with debris management/ dispatch center or field supervisor • Report issues (such as safety concerns, contractor non-compliance, and improper equipment use) to field supervisor

Appendix S: Regional Public Information Contacts

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
PRINT MEDIA					
		Plainsman Herald 849 Main Street Springfield, CO 81073	(719) 523-6254 (O) (719) 523-4010 (F)	(Baca)	plainsmanherald@gmail.com
		Bent County Democrat 510 Carson Avenue Las Animas, CO 81054	(719) 456-1333 (O) (719) 456-1420 (F)		bcd@ljtdmail.com
		Kiowa County Independent 1316 Maine Street P.O. Box 272 Eads, CO 81036	(719) 438-2040		
		Kiowa County Press 1208 Main Street P.O. Box 248 Eads, CO 81036	(719) 438-5800 (O)		kiowacountypress@gmail.com
		La Junta Tribune 422 Colorado Avenue	(719) 384-1437 (O)		publisher@ljtdmail.com

		P.O. Box 500 La Junta, CO 81050			
		Rocky Ford Gazette 912 Elm Avenue Rocky Ford, CO 81067	(719) 254-3351 (O) (719) 254-3354 (F)		jr@rockyforddailygazette.com
		Lamar Ledger 310 South 5th Street P.O. Box 1217 Lamar, CO 81052	(719) 336-2266 (O) (719) 336-2526 (F)		cfrost@lamarledger.com
		Prowers Journal 208 S. Main Street Lamar, CO 81052	(719) 336-9095 (O)		
		Pueblo Chieftain 825 W. Sixth Street Pueblo, CO 81003	(719) 544-3520 (O)		mbialas@chieftain.com
		Colorado Country Life Magazine 5400 N. Washington Denver, CO 80216	(303) 455-4111 (O)		mneeley@coloradocountrylife.org

		The Denver Post 5990 Washington Street Denver, CO 80216	(303) 954-1201		newsroom@denverpost.com
		The Pueblo Chieftain 825 W. Sixth Street Pueblo, CO 81003	(719) 544-3520		ryans@chieftain.com
RADIO MEDIA					
		Cat Country Radio 29 Angela Drive Palm Coast, FL 32164	(714) 516-8885 (O)	TX: Springfield Call sign: KTTE Freq: 91.9 FM	fishfm1@hotmail.com
		KTLF Light Praise 1665 Briargate Blvd. Suite 100 Colorado Springs, CO 80921	(719) 593-0600 (O) 1855-593-0600 (O)	TX: Vilas, Call sign: KTLF Freq: 91.5 FM	lightpraise@ktlf.org
		KTLF Light Praise 1665 Briargate Blvd. Suite 100 Colorado Springs, CO 80921	(719) 593-0600 (O) 1855-593-0600 (O)	TX: Walsh, Call sign: KTLF Freq: 89.3 FM	lightpraise@ktlf.org

		**TIGRE 104.9 FM**	(719) 253-3777 (O)	TX: Olney Spgs Call Sign: KRYE Freq: 104.9 FM	
		**KBLJ Radio** P.O. Box 485 La Junta, CO 81050	(719) 384-5456 (O) (719) 384-5450 (F)	TX: La Junta Call Sign: KBLJ Freq: 1400 AM	kblj@myhometeamsports.com
		**KTHN Radio** P.O. Box 485 La Junta, CO 81050	(719) 384-5456 (O) (719) 384-5450 (F)	TX: La Junta Call Sign: KTHN Freq: 92.1 FM	kblj@myhometeamsports.com
		**KECC NPR Radio** 912 N. Weber Street Colorado Springs, CO 80903	(719) 473-4801 (O) 1800-748-2727 (O) (719) 473-7863 (F)	TX: La Junta Call sign: KECC Freq: 89.1 FM	psa@krcc.org
		**KRKV** La Junta, CO 81050	(719) 241-0071 (O)	TX: La Junta Call sign: KRKV Freq: 107.3 FM	bill@theavbridge.com

		KPHT 106 West 24th Street Pueblo, CO 81003	(719) 545-2080 (O)	TX: Rocky Ford Call Sign: KPHT Freq: 95.5 FM	nickdonovan@iheartmedia.com
		KPCR	(573)324-2283 (O) (573) 324-2670 (F)	TX: Fowler Call Sign: KPCR Freq: 99.3 FM	
		KLMR Lamar, CO 81052	(719) 336-2206 (O)	TX: Lamar Call sign: KLMR Freq: 93.5 FM Freq: 920 AM	rtownsend@cherrycreekradio.com
		KVAY Radio 224 South Main Street Lamar, CO 81052	(719) 336-8734 (O) (719) 336-5977 (F)	TX: Lamar Call sign: KVAY Freq: 105.7 FM	studio@kvay.com
		KTLF Light Praise 1665 Briargate Blvd. Suite 100 Colorado Springs, CO 80921	(719) 593-0600 (O) 1855-593-0600 (O)	TX: Lamar, Call sign: KTLF Freq: 89.3 FM	lightpraise@ktlf.org

		CSN International P.O. Box 391 Twin Falls, ID 83303	1800-357-4226 (O) (208) 736-1958 (F)	TX: Lamar Call sign: KAWZ Freq: 90.1 FM	
		Family Life Radio P.O. Box 35300 Tucson, AZ 85740	1800-776-1070 (O)	TX: Lamar Call sign: KWFL Freq: 91.3 FM	
		KJIL 909 W. Carthage Meade, KS 67864	1866-480-5545 (O) (620) 873-2991 (O) (620) 873-2755 (F)	TX: Lamar Call sign: KJIL Freq: 91.3 FM	kjil@kjil.com psa@kjil.com
		KJIL 909 W. Carthage Meade, KS 67864	1866-480-5545 (O) (620) 873-2991 (O) (620) 873-2755 (F)	TX: Holly Call sign: KJIL Freq: 88.5 FM	kjil@kjil.com psa@kjil.com
		850 KOA 4695 S Monaco Street Denver, CO 80237	(303) 713-8500 (O)	TX: Denver Call sign: KOA Freq: 850 AM	
TELEVISION MEDIA					
		KOAA News 5	(719) 630-3930 (O) (719) 544-7733 (F)		news@koaa.com

		KKTV 11 News 520 E. Colorado Colorado Springs, CO 80903	(719) 578-0000 (O) (719) 634-3741 (F)		news@kktv.com
		KRDO Colorado Springs, CO 80915	(719) 575-6258 (O) (719) 632-0815 (F)		news@krdo.com
		KXRM Fox 21 560 Wooten Road Colorado Springs, CO 80915	(719) 955-3021 (O) (719) 591-4180 (F)		news@fox21news.com

Appendix T: Sample Press Releases

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Pre-scripted information will include the following, but is not limited to:

SAMPLE PRESS RELEASES

U.1 For Immediate Release (Approximately 48-72 Hours Prior to Event)

_____ County, City of _____, Town of _____- The potential for dangerous conditions is eminent for this community and its residents. In anticipation of a likely large debris-generating storm, residents are asked to secure or store all yard items that may become damaging projectiles. _____ County, City of _____, Town of _____, is prepared and has a plan in place to immediately respond following the event. Once dangerous conditions subside and roads have been cleared of obstructions, residents should bring any debris to the right-of-way.

Residents should separate clean, vegetative debris (woody burnable debris such as limbs and shrubbery) from construction and demolition debris. Do not mix hazardous material, such as paint cans, aerosol sprays, batteries, or appliances with construction and demolition debris. Household garbage, tires or roof shingles cannot be combined with any storm debris.

Do not place debris near water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, residents should continue to push remaining debris to the public right-of-way for collection on subsequent passes. Residential debris drop-off locations may be available within the County and/or City/Town limits. Check _____ County's and your municipalities Web site _____ for the location of these sites and the hours of operation or call _____. _____ County's and your municipalities website will also provide office closure times/date (including garbage collection and facilities). All reconstruction debris (debris resulting from rebuilding) is the responsibility of the homeowner. Those items must be dropped off at the _____. All residents within _____ County are encouraged to stay indoors until the danger has passed. Please tune into local news media for updated information.

####

U.2 For Immediate Release (Approximately 0-72 Hours Following Event)

_____ County, City of _____, Town of _____, —is beginning its recovery process in the wake of _____. _____ County, City of _____, Town of _____, residents are asked to place any storm-generated debris on the right-of-way. The right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Keep vegetative debris (woody burnable debris such as limbs and shrubbery) separated from construction and demolition debris, as they will be collected separately. Bagged debris should not be placed on the public right-of-way.

Any household hazardous waste, roof shingles or tires resulting from _____, may be eligible for removal and should be separated at the curb.

Do not place near water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the _____ will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, please continue to push remaining debris to _____ for collection on subsequent passes. Household garbage collection will resume to its normal schedule on _____ /_____/_____ at _____: _____ am/pm.

Please check _____ County or your municipalities Web site _____ for additional information and updates on the debris removal process. For more information, please call the city's debris hotline at _____.

####

U.3 For Immediate Release (72 hours prior to final pass of debris removal)

_____ County, City of _____, Town of _____,— Final preparations are being made for the third and potentially final pass for debris removal in the wake of _____.

_____ County, City of _____, Town of _____, residents should have all storm-generated debris in front of their homes on the public right-of-way (the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement) no later than _____ to be eligible for pick-up. _____ County, City of _____, Town of _____, will not be able to guarantee that debris placed on the public right-of-way after the specified deadline will be removed.

Residents should continue to separate vegetative debris (wood burnable debris such as limbs and shrubbery) and construction and demolition debris. Do not place debris near water meters, fire hydrants, or any other above-ground utility. Hazardous household chemicals such as paint cans and batteries may be deposited at the_____.

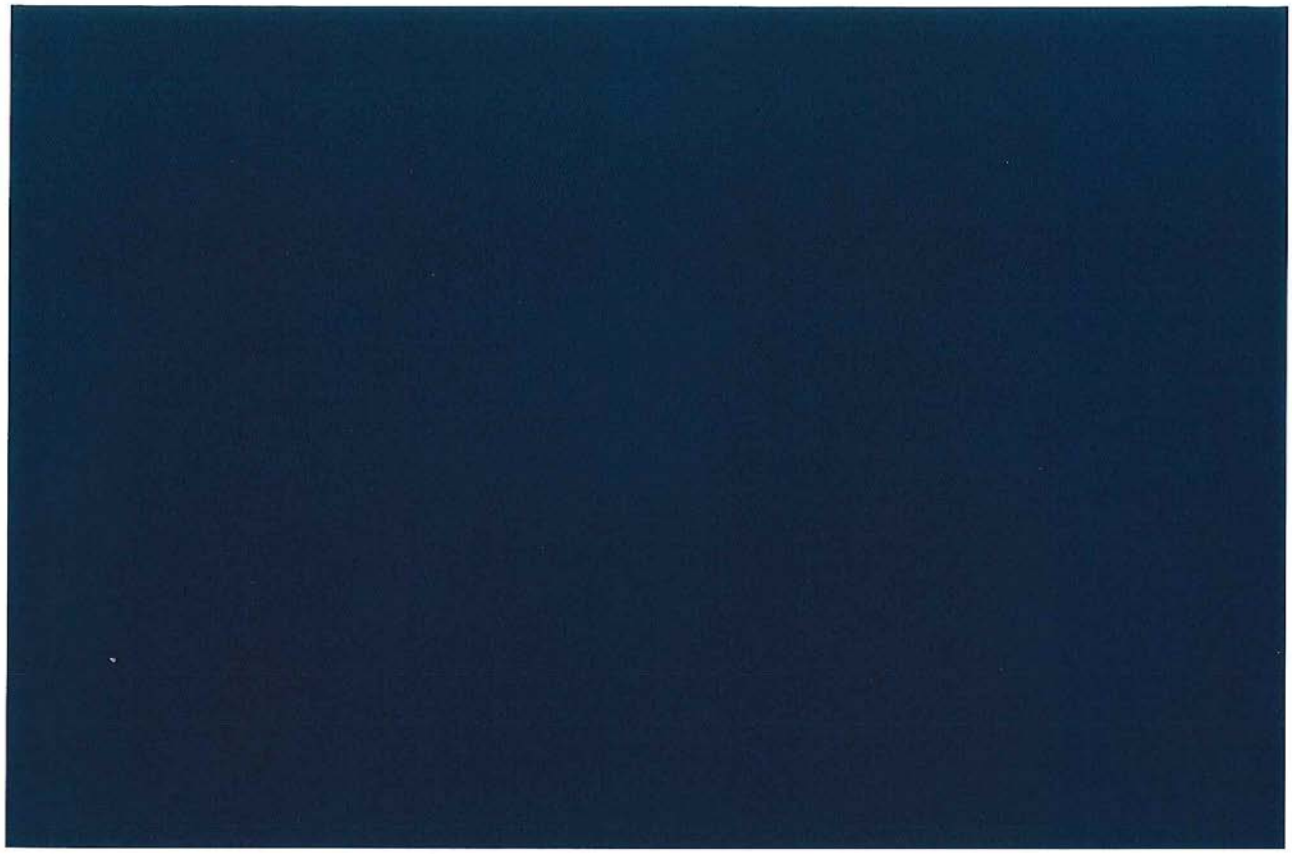
You can follow the debris removal efforts in your neighborhood and the rest of the community by going to the _____ County or your municipalities web site at _____ or _____ or by calling _____.

####

Appendix U: Public Assistance Alternative Procedures Pilot Program Guide for Debris Removal (Version 6)

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS



Public Assistance Alternative Procedures Pilot Program Guide for Debris Removal (Version 6)

June 28, 2018

FEMA

Federal Emergency Management Agency
Department of Homeland Security
500 C Street, S.W.
Washington, DC 20472

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PART I. OVERVIEW

On January 29, 2013, President Obama signed into law the Sandy Recovery Improvement Act of 2013 (P.L. 113-2). This law amends Title IV of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.) (Stafford Act). Specifically, the law adds section 428, which authorizes alternative procedures for the Public Assistance Program under sections 403(a)(3)(A), 406, 407 and 502(a)(5) of the Stafford Act. It also authorizes the Federal Emergency Management Agency (FEMA) to implement the alternative procedures through a pilot program. The pilot program for the alternative procedures that pertain to debris removal is available through June 28, 2019. FEMA will analyze data documented throughout the pilot to assess the procedures' effectiveness at furthering the goals outlined in the Sandy Recovery Improvement Act (SRIA). Based on the assessment, FEMA may elect to discontinue the program, extend the pilot for an additional performance period, or issue regulations that would institute the program changes authorized by the law.

The law identifies the following goals for these procedures:

- Reducing the costs to the Federal Government of providing Public Assistance.
- Increasing flexibility in the administration of such assistance.
- Expediting the provision of assistance to a state, tribal or local government, or nonprofit owner or operator of a private nonprofit facility.
- Providing financial incentives and disincentives for timely and cost-effective completion of projects with such assistance.

Public Assistance Program Features Included in the Alternative Procedures

The alternative procedures authorized under the law pertain to debris removal (emergency work) and repair, restoration, and replacement of disaster-damaged public and private nonprofit facilities (permanent work). This guide outlines the alternative procedures for debris removal only.

Alternative Procedures for Debris Removal

For debris removal, the law allows for, and FEMA is currently piloting:

- Reimbursing base and overtime wages for the employees of state, tribal or local governments, or owners or operators of private nonprofit facilities performing or administering debris and wreckage removal; and

- Providing incentives to a state or tribal or local government to have a debris management plan accepted[1] by the FEMA Administrator and have pre-qualified one or more debris and wreckage removal contractors before the start of the declaration's incident period.

The law also authorizes FEMA to make awards for debris removal on the basis of fixed estimates, and to allow subrecipients to use excess funds from those awards for approved purposes. FEMA is not implementing these procedures as part of this pilot. FEMA continues to work to improve debris estimating methodologies and will consider implementing these procedures in the future. Additionally the law authorizes procedures using a sliding scale for determining the Federal share for debris and wreckage removal based on the time it takes to complete removal; and use of program income from recycled debris without offset to the grant amount. However, at this time FEMA is discontinuing use of the two procedures associated with these authorities. FEMA's analysis of debris pilot data demonstrates that both the Sliding Scale and Recycling Revenues procedures, as currently designed, are not furthering the intended goals of SRIA. Specifically, the Sliding Scale has not resulted in more timely or cost effective completion of debris removal operations and less than one percent of applicants have participated in the Recycling Revenue procedure.

FEMA will continue to assess these provisions and consider different approaches to implementation that may further the goals of SRIA. FEMA may include new versions of these procedures or any new pilot procedures in future versions of this guide.

A. Applicability

In accordance with the law, state, tribal, and local governments, and the owners and operators of certain private nonprofit facilities may participate in the alternative procedures during the pilot performance period.[2] Participation in the pilot program and use of the alternative procedures for debris removal is voluntary. If subrecipients use any of the alternative procedures, they must sign an acknowledgement regarding these procedures, which FEMA will attach to the Subaward Application (Project Worksheet).

The alternative procedures for the debris removal pilot program are available to any applicant, upon request, for any major disaster or emergency declared on or after June 28, 2013, and until the end of the pilot program period. For incidents declared between June 28, 2013, and June 27, 2014, the alternative procedures contained in this document are for large projects only

[1] FEMA will review debris management plans as described in the Debris Management Plan Job Aid.
[2] *See* "FEMA: Public Assistance Interim Program Guidance on 2 C.F.R. Part 200," which applies to all major disasters and emergencies declared on or after December 26, 2014. "Recipient" is a "state or Indian tribal government that receives a Federal award directly from FEMA to carry out an activity under the PA Program." "Subrecipient" is a "non-Federal entity that receives a subaward from a pass-through entity [e.g., a state or Indian tribal government that provides a subaward to a subrecipient] to carry out an activity under the PA program."

with the exception of reimbursement for straight time force account labor which can be applied to both small and large projects.[3] (See **Debris Removal Straight Time Force Account Labor** section.) For disasters and emergencies declared on or after June 28, 2014, all of the debris removal alternative procedures can be applied to both small and large projects. Small projects, will be processed using the Simplified Procedures authorized by Section 422 of the Stafford Act.

Major changes between the PA Alternative Procedures Guide for Debris Removal Version 5, published on June 28, 2017, and this guide (Version 6) are as follows:

- Discontinue use of the Increased Federal Cost Share (Sliding Scale) procedure;
- Discontinue use of Recycling Revenue procedure; and
- Applicants no longer need to utilize the acknowledgement form when they choose not to participate in the pilot program.
- Remove the exception to the appeals regulation which is unnecessary with the discontinued use of the Sliding Scale procedure.

B. Compliance with Applicable Laws, Regulations, and Policies

The law authorizes FEMA to carry out the alternative procedures via this guidance as a pilot program. Accordingly, FEMA has developed this document to provide the framework for implementing the alternative proceduresas a pilot program and to establish acceptable requirements.

Subrecipients participating in this pilot program must abide by the elements of this guidance document for applicable components of the Public Assistance Program; and FEMA will approve projects to which the alternative procedures apply in accordance with this document. However, all other statutory, regulatory and policy requirements of the Public Assistance Program apply and are not affected by the alternative procedures. The alternative procedures also do not affect requirements for compliance with other federal requirements, including environmental and historic preservation (EHP) laws, regulations, and executive orders.

C. Purpose of this Guidance Document

This document provides guidance to FEMA, recipients, and subrecipients for implementing the alternative procedures for the debris removal pilot program. This guidance document pertains only to procedures authorized under the law. FEMA, recipients, and subrecipients will implement all other aspects of the Public Assistance Program in accordance with standard procedures. It describes the scope and limitations of the alternative procedures; describes changes to the aspects of the Public Assistance Program to which these procedures apply;

[3] A Large Project is a project with a total estimated cost that exceeds the monetary threshold established in section 422 of the Stafford Act and 44 CFR §206.203(c). For major disasters and emergencies declared after October 1, 2017, the threshold is $125,500. This threshold will be adjusted annually for inflation. A small project is any project with a value less than the large project threshold.

identifies responsibilities for certain activities; and, identifies timelines for key actions and decisions.

As described previously, FEMA is implementing the alternative procedures initially through a pilot program. The pilot will allow FEMA to gather meaningful information on the effectiveness of the alternative procedures, to establish controls for the proper use of federal funds, and to inform a potential future proposed rulemaking.

PART II. ALTERNATIVE PROCEDURES FOR DEBRIS REMOVAL

These procedures contain provisions intended to increase the effectiveness of debris removal operations and reduce federal administrative costs. Subrecipients may elect to use one or both of the procedures for their debris removal projects. Utilizing both debris removal alternative procedures is not required for any given debris removal project in order to receive the incentive for the other provision. These alternative procedures are addressed in greater detail in the following sections.

A. Requesting Alternative Procedures for Debris Removal

Upon the declaration of a major disaster or emergency by the President authorizing FEMA to provide debris removal assistance, FEMA will provide eligible Public Assistance subrecipients the opportunity to participate in the alternative procedures for the debris removal pilot program. Subrecipients must notify FEMA of their intent to participate in the alternative procedures by signing and submitting the *Public Assistance Alternative Procedures Pilot Program for Debris Acknowledgement* (Appendix A) before obligation of their first subaward for debris removal.

B. Straight Time Force Account Labor

When subrecipients use their own labor forces to perform all or part of debris removal operations, FEMA will reimburse, at the appropriate cost share level, the base and overtime wages for existing employees and hiring of additional staff. This alternative procedure can be used with the Debris Management Plan procedure or independently.

C. Debris Management Plans

A subrecipient with a FEMA-accepted debris management plan at the time of an event can increase the effectiveness of its debris management operations. Specifically, a debris management plan should improve a subrecipient's ability to complete debris removal within the timelines associated with the sliding scale.

When the subrecipient has a FEMA-accepted debris management plan before the date of the declared incident period, FEMA will provide a one-time incentive of a two (2) percent cost share adjustment applied to debris removal work completed within 90 days. This one-time incentive will not be available to the same subrecipient again during the course of the pilot. This procedure can be used with any of the other pilot procedures or independently. FEMA will review plans submitted through the recipient. Plans should include all of the following ten elements:

- Debris management overview

- Incidents and assumptions
- Debris collection and removal plan
- Debris removal from private property
- Public information
- Health and safety requirements
- Environmental considerations and other regulatory requirements
- Temporary debris management sites and disposal locations
- Force account or contracted resources and procurement
- Monitoring of debris operations

Please see FEMA's *Public Assistance Program and Policy Guide* at https://www.fema.gov/public-assistance-policy-and-guidance for more information Debris Management Plans.

The legislation also requires a subrecipient to have at least one (1) or more pre-qualified debris removal contractors.[4] Any debris contract award must comply with federal procurement requirements, as outlined in 2 CFR Part 200. Federal procurement compliance may have more stringent requirements than state or local requirements.

In addition, the content of the plans will vary and depend highly on state and local ordinances and zoning, as well as the location of critical infrastructure, emergency services, disposal locations, and other localized factors. FEMA will review the plans to ensure that subrecipients have considered the ten elements previously listed. FEMA review or acceptance of the plan does not mean it is approving any operational component of the plan and does not commit the Federal Government to funding any aspect of the plan.

[4] A pre-qualified contractor is one that has been identified and evaluated by a local government and has been determined to be capable to perform debris removal work (e.g., capabilities, bonding, insurance, availability). Identification of these qualifications should be done in conjunction with the drafting of a debris management plan, which should include specific contract requirements and explain how contractor qualifications are established. Identifying a pre-qualified contractor does not create a "stand-by" contract.

PART III. FEDERAL AWARDS MANAGEMENT REQUIREMENTS

The process for monitoring and closing projects is streamlined under the alternative procedures. The federal awards management requirements are outlined in the sections that follow.

A. Federal Awards Management Activities

For projects funded under the alternative procedures, major activities conducted during the Federal Awards Management phase are as follows:

- The subrecipient must complete work within established regulatory time frames and request time extensions as applicable;
- The subrecipient must submit quarterly progress reports to the recipient for large projects in which the work is not completed and financially reconciled, pursuant to 44 CFR §206.204(f) *Progress reports*;
- The recipient will provide funds to the subrecipient in accordance with federal and state requirements;
- The recipient will ensure that subrecipients understand and adhere to federal procurement requirements as well as other requirements of 2 CFR Part 200. The recipient will ensure that subrecipients comply with EHP requirements, notify FEMA of any work that requires EHP compliance reviews, and provide necessary documentation to conduct EHP reviews;
- The subrecipient must not deposit subaward funds in an interest-bearing account. If that occurs, the subrecipient must remit any interest earned to FEMA; and
- The subrecipient will submit to the recipient a final report of project costs. This report will be used to track and monitor the success of the pilot. The final report should include the following components as documented on the Project Worksheet (FEMA Form 90-91):
    - Total actual costs to complete the subaward
    - Actual quantities of debris removed
    - Time frames for full removal of debris
    - Compliance with federal procurement requirements
    - Documentation of compliance with all subaward conditions
    - Compliance with EHP conditions

B. Subaward Closure

Alternative procedures subawards are closed when the approved scope of work is completed, and the subrecipient provides the recipient an accounting of the subaward in accordance with the

requirements detailed in subsection A – Federal Awards Management Activities. The recipient will provide the accounting of project costs to FEMA and will request the project be closed.

C. Audits and Compliance Reviews

The Office of Inspector General may audit any subrecipient and/or subaward. FEMA also can conduct compliance reviews of awards and subawards. For alternative procedures subawards, a compliance audit will review subawards and costs to ensure that the subrecipient complied with the guidelines contained within this document and other applicable requirements. Any corrective actions the Agency takes as a result of these audits or compliance reviews may be appealed in accordance with 44 CFR §206.206.

PART IV. REPORTING AND PERFORMANCE MEASURES

FEMA will review and evaluate the alternative procedures pilot program to determine if the pilot met the objectives of the Sandy Recovery Improvement Act. FEMA will assess if the pilot achieved the objectives for the alternative procedures outlined in the law, namely:

- Reducing the costs to the Federal Government of providing Public Assistance.
- Increasing flexibility in the administration of such assistance.
- Expediting the provision of assistance to a state, tribal or local government, or nonprofit owner or operator of a private nonprofit facility.
- Providing financial incentives and disincentives for timely and cost-effective completion of projects with such assistance.

FEMA will continue conducting program performance analysis and make further adjustments to the pilot as necessary to achieve furthering the intended goals of SRIA. If the pilot is determined to be effective, the data will be used to inform the development of future proposed rulemaking.

APPENDIX - A

Public Assistance Alternative Procedures Pilot Program for Debris Removal Acknowledgement

In accordance with the Sandy Recovery Improvement Act of 2013, the Federal Emergency Management Agency (FEMA) is implementing alternative procedures for the Public Assistance (PA) Program through a pilot program.

As a representative of the subrecipient, we elect to participate in the following:

- ☐ One-time incentive for a FEMA-accepted debris management plan and identification of at least one pre-qualified contractor
- ☐ Reimbursement of straight time force account labor costs for debris removal

1. The pilot is voluntary and the subrecipient must apply the selected alternative procedures to all of its debris removal subawards.
2. The subrecipient acknowledges that FEMA may request joint quantity evaluations and details regarding subrecipient operations necessary to assess the pilot program procedures.
3. All contracts must comply with local, state, and federal requirements for procurement, including provisions of 2 CFR Part 200.
4. The subrecipient must comply with all federal, state and local environmental and historic preservation laws, regulations, and ordinances.
5. The Office of Inspector General may audit any subrecipient and/or subaward.

Signature of Subrecipient's Authorized Representative — Date

Printed Name and Title

Subrecipient Name — PA ID Number

Appendix V: Compliance Bulletin – Asphalt, Brick and Concrete Recycling & Beneficial Use

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

COLORADO
Department of Public Health & Environment

Compliance Bulletin
Asphalt, Brick and Concrete Recycling & Beneficial Use
Updated - January 2019

Construction and demolition projects generate millions of tons of waste in the U.S. every year. Much of this waste consists of asphalt, brick and concrete materials. Recycling these materials can create jobs, save valuable landfill space and reduce environmental impacts from mining new materials. Asphalt, brick and concrete can often be recycled on the job site at reduced expense when compared to disposal alternatives which can provide significant savings during construction by avoiding new material purchase and waste disposal costs.

Applicability

This guidance is for fully-cured asphalt pavement, clay bricks with or without attached mortar, fully-cured concrete and concrete washout wastes. "Fully-cured" means the material has hardened for at least 60 days. Asphalt, brick, and concrete that have paint, adhesives, mastics, sealants or other coatings must be tested to ensure the coatings do not contain asbestos or lead paint before this guidance may be applied. **All recycling and beneficial use of these materials must meet all other local, state and federal requirements.**

Pre-Approved Beneficial Uses

The Colorado Department of Public Health and Environment (the Department) has approved beneficial uses for several types of uncontaminated materials in the Pre-Approved Beneficial Use Table 3, which is available on our website at: www.colorado.gov/cdphe/swregs

Clean and uncontaminated asphalt, brick and concrete material may be recycled and used in a variety of ways that do not require consultation and specific approval from the Department. Determining what qualifies as "clean and uncontaminated" requires a thorough inspection of the material to look for obvious signs of contamination such as odor, staining, discoloration or the presence of adhered materials as well as a thorough understanding of the site history. If the material came from a structure, ensure that a state demolition permit was issued and that all suspect asbestos-containing materials (including all non-friable materials) were tested and do not contain asbestos. Sampling and laboratory analysis may be needed if there is a reason to suspect contamination. Ideally, any potential contamination issues would have been found during a Phase I and/or Phase II environmental site assessment or an asbestos building inspection. If no such investigation has been performed, then it is very important to perform a thorough inspection prior to beginning the recycling process. Future liability issues may be avoided by taking steps to properly characterize the material as uncontaminated.

The tables below, taken from the Pre-Approved Beneficial Use Table 3, show the approved uses for uncontaminated asphalt, brick, concrete and concrete washout waste. All beneficial uses of reclaimed asphalt, brick, concrete and concrete washout materials must meet established engineering specifications or other appropriate specifications for the end use. The specifications must identify the physical characteristics of the material used (e.g., size, shape, gradation, durability and strength characteristics) and the intended benefit that the material provides. The recycled material must be selected and prepared to meet a specific need and used as a substitute for, or in conjunction with, a commercial product or raw material. Further information on the performance and storage standards for the beneficial use of solid waste, which must be met for all uses, can be found in Section 8.6.2 of Part 1 of the solid waste regulations, available on our website at:
www.colorado.gov/cdphe/swregs

Material Type	Pre-Approved Beneficial Uses
Reclaimed Asphalt	Road Base Component of hot or cold mix asphalt Re-compacted asphalt Roadside dressing Chip seal material Culvert cover Base stabilization Structural fill Mine backfill[a]
Reclaimed Concrete, Brick and Stone (non-asbestos bearing materials)	Road base Concrete aggregate Component of engineered structural fill Aggregate substitute Engineered rip rap (concrete only) Roadside dressing Mine backfill[a]

a. Mine backfill may only occur under a reclamation permit from the Division of Reclamation, Mining and Safety with the Colorado Department of Natural Resources.

While these uses are pre-approved by the Department, the following conditions also apply:

1) When using crushed material as a component of structural fill, crush the material to six inches or less, or size according to an engineer's backfill specification.
2) Ensure a minimum of three feet of separation between the placement of the material and the seasonally high ground water level.

Structural fill uses are limited to the use for a project specific need for strength and stability. The reclaimed material must be a direct substitute for a commercial earthen product in established engineering or other appropriate specifications.

If uncontaminated asphalt, brick or concrete will not be directly reused, there are many facilities that will accept these materials for recycling.

Reuse of Concrete Washout Materials

Material	Pre-Approved Beneficial Uses					
	Wash out mixer truck chutes or drums	*Ready mix concrete ingredient[a]*	*Ingredient in pre-cast concrete products[a]*	*Road base, Structural fill*	*Pave yard of a concrete plant*	*Treat and send to wastewater treatment plant*
Washwater	✓[b]	✓	✓			✓[c]
Cement Fines[d]	✓	✓	✓	✓		
Fine Aggregate		✓	✓	✓		
Coarse Aggregate		✓	✓	✓		
Hardened Concrete				✓[e]		
Unused Wet Concrete			✓		✓	

a. Materials checked in this column are recyclable if allowed by the concrete quality specifications.
b. No discharge of washwater to surface water or the ground unless in accordance with a CDPS or NPDES permit.
c. Treat to reduce pH and remove metals then deliver to municipal wastewater treatment plant. All discharges to wastewater treatment plant must be approved by the treatment plant operator.
d. Fine particles of cementitious material (Portland cement, fly ash)
e. Must be fully-cured for at least 60 days.

Exemption from Registration and Oversight as an Industrial Recycling Facility

Section 8.5 of the *Regulations Pertaining to Solid Waste Sites and Facilities* (6 CCR 1007-2, Part 1; the regulations) specifies the requirements for industrial recycling operations, including for the recycling of asphalt, brick and concrete. Some facilities that recycle these materials are subject to all of the requirements found in Section 8.5 including facility registration, general site requirements, recordkeeping, reporting and closure requirements. However, many facilities will meet one of the exemptions noted below, meaning the facility is exempt from the facility registration requirement, general site requirements, recordkeeping, reporting and closure requirements of Section 8.5. ***However, the use of the recycled material still must meet all of the criteria for pre-approved beneficial use outlined in this compliance bulletin.***

The first exemption is for facilities that process recyclable materials on the same site where the recyclable materials were generated and are recycling and storing only materials generated on-site.

The second exemption applies to concrete and asphalt operations that meet the following conditions: (1) the material is managed and separated into commodity-specific piles processed for reuse, (2) the material is managed in active piles separated by material type within one year of receipt, and (3) incoming loads have all non-concrete, non-asphalt and non-rebar material removed from the concrete and asphalt materials within thirty (30) calendar days. In addition, any material that is not asphalt, brick, concrete, or rebar cannot exceed 10% of the total material onsite by weight or volume.

Other Beneficial Uses

If the intended recycling and reuse of the asphalt, brick and concrete material is not found on the pre-approved list above, it may still qualify for a case-by-case beneficial use approval. In order for the Department to approve your beneficial use project, a facility must submit an "Application for a Solid Waste Beneficial Use Determination." The application form includes a list of performance criteria that must be met and a checklist of attachments that must be included in order for the Department to evaluate the project. The application form may be found on our website at: www.colorado.gov/cdphe/swforms

Recycling & Beneficial Use Best Management Practices

The ability to recycle asphalt, brick and concrete material safely and in a manner protective of public health and the environment requires not only meeting the requirements of the solid waste regulations, but also following established best management practices.

- Ensure that only uncontaminated material is crushed and processed.
  - Know the results of the Phase I or II environmental site assessment (ESA).
  - If no environmental site assessment was performed:
    - Perform a thorough visual inspection of the materials.
    - Learn the site history and whether prior contamination may have occurred.
    - Perform sampling and laboratory testing if there are any doubts whether the material may be contaminated.
- Do not crush material that has paint, finishes, adhesives, mastics, sealants, coatings or any other potential contaminants until the material is tested for lead and asbestos.
- Properly size and engineer the material for the intended use in accordance with the recommendations of a professional engineer.
- Manage and separate the material into commodity-specific piles for processing and reuse.
- Remove and recycle any rebar from the concrete.
- Notify the relevant local authorities of the intended activity to gain any necessary permits and approvals before crushing or material processing begins.

- Do not allow any unpermitted discharges to air, water or other environmental resources.
- Avoid creating nuisance conditions such as fugitive dust, excessive noise, or allowing exhaust or fumes to drift off-site.

Waste Disposal

If there is obvious staining and discoloration, or if the site was previously home to a type of facility frequently found to be contaminated such as a dry cleaner, a gas station, or an industrial facility, then sampling and analysis should be performed on the material. Also, be aware that certain types of brick (e.g, refractory or fire brick) and concrete may be associated with asbestos and should be tested even if there may be no obvious evidence such as remnants of floor tile or mastic.

If the condition of the material is not suitable for reuse or recycling, then it will have to be disposed of as solid or hazardous waste. Knowledge of the site history along with analytical results will help determine what type of disposal is required. Contact the Department if additional information regarding sampling and analysis requirements or assistance with determining the type of disposal is needed.

Other Applicable Regulations

Crushing of asphalt, brick or concrete materials at a facility or on the work site may be subject to air permitting requirements. For more information, please contact the Air Pollution Control Division at 303-692-3100 or via email at: cdphe.commentsapcd@state.co.us

Stormwater permitting may be required for facilities or work sites that are recycling asphalt, brick or concrete materials. For more information, please contact the Water Quality Control Division at 303-692-3500 or via email at: cdphe.commentswqcd@state.co.us

If there are surface waters or wetlands near the processing site that may potentially be impacted by site activities, please contact the US Army Corps of Engineers at 202-761-7690 or via their website at: www.usace.army.mil/contact.aspx

For more information on industrial recycling and beneficial use, refer to Sections 8.5 and 8.6 of the Colorado solid waste regulations (6 CCR 1007-2, Part 1), available on our website at: www.colorado.gov/cdphe/swregs

For more information

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Customer Technical Assistance
303-692-3320
www.colorado.gov/cdphe/hm
comments.hmwmd@state.co.us

Appendix W: Colorado Open Burning Information Fact Sheet

Colorado - Southeast Region Debris Management Plan

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Colorado Open Burning Information

Who needs an Open Burning Permit?

Anyone performing a non-exempted open burn in Colorado.

Who doesn't need an Open Burning Permit?

Campfires, non-commercial cooking fires and agricultural burning are exempted from open burn permitting. These burns are still subject to fire district and municipal fire rules.

What is agricultural burning?

Agricultural burning is the burning of water conveyance ditches and/or fields to prepare land for the planting of **COMMERCIAL CROPS.** Land zoned as "*agricultural*" does not automatically provide exemption from open burn permitting.

How do I apply for a permit?

If you wish to burn in the following counties, please contact the COUNTY HEALTH DEPARTMENT:

-Boulder	**-Denver**	**-El Paso**	**-Jefferson**	**-Lake**	**-Las Animas**	**-Mesa**	**-Routt**	**-Weld**
-Broomfield	**-Eagle**	**-Grand**	**-Kiowa**	**-Larimer**	**-Huerfano**	**-Pueblo**	**-Summit**	

Those living in counties not listed above need to apply for a STATE open burning permit through CDPHE. *There is no fee for this permit*. See contact information below.

What materials may be burned?

Untreated, natural wood (sticks and branches), leaves, dry prairie grass, slash, weeds. All burns must be performed in open piles. *Burning in barrels or incinerators is not allowed.*

What materials are not allowed to be burned?

Tree stumps, tires, chemicals, plastic, cut lumber, construction debris, trash. Burning of these materials produces pollution that is harmful to the environment and the health of you and your neighbors!

What happens if I burn without a permit?

Air Quality Control Commission Regulation 9 provides guidelines for open burning. Burning without a permit or burning of prohibited materials can lead to a sizable civil penalty of up to $10,000 per day. (per C.R.S 25-7-123) **GET A PERMIT BEFORE YOU BURN!**

Before you burn

- ❑ Check with your local fire department regarding fire safety and municipal rules.
- ❑ Apply for an open burning permit with the local health department or CDPHE.

On the day of your Burn

- ❑ Inform your fire department that you plan on burning.
- ❑ Make sure the fire is out COLD before sundown.

Questions? Contact the Air Pollution Control Division
cdpheAPopenburning@state.co.us – (303) 692-3268
https://www.colorado.gov/cdphe/openburn

Colorado Department of Public Health and Environment

Remember: YOU DON'T ALWAYS HAVE TO BURN! Many materials can be given away, mulched, reused or recycled.

Appendix X: References

Colorado - Southeast Region Debris Management Plan

BACA – BENT – CROWLEY – KIOWA – OTERO – PROWERS

Federal Emergency Management Agency, (2018, June 28) Public Assistance Alternative Procedures Pilot Program Guide for Debris Removal

Federal Emergency Management Agency, (2017, July) Public Assistance Debris Management Guide

Fremont County Colorado, (2016) Fremont County Debris Management Plan

Federal Emergency Management Agency, (2016, May) 9523.13 Debris Removal from Private Property

Ward County North Dakota (2017, October) Ward County Debris Management Plan

Annex 1: County Specific - Baca County

BACA COUNTY, COLORADO DEBRIS MANAGEMENT PLAN

COUNTY SPECIFIC ANNEX TO THE SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMENT PLAN

EMERGENCY MANAGEMENT
Baca County

Last updated January 2020

Appendix A: Baca County Key Points of Contact

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
Leathers	Jennifer	**Baca County Emergency Management** 741 Main Street (mailing) 29400 US Hwy 297 (Phys) Springfield, CO 81073	(719) 523-6796 (W) (719) 529-0471 (C) (719) 523-6776 (F) (719) 523-6677 (D)	EM-810	jleathers@bacacountyco.gov
Caddick	Jessami	**Baca County Public Health Agency** 741 Main Street, Suite 4 Springfield, CO 81073	(719) 523-6621 (O) (719) 523-6537 (F) (719) 563-0980 (C)	PH-1	jcaddick@bacacountyco.gov
Ausmus	Spike	**Baca County Commissioner District 1** 741 Main Street Springfield, CO 81073	(719) 563-1128 (O) (719) 529-0181 (C) (719) 523-6584 (F)	COM-1	sausmus@bacacountyco.gov
Freed	Shiloh	**Baca County Commissioner District 2** 741 Main Street Springfield, CO 81073	(719) 563-1129 (O) (719) 353-1569 (C) (719) 523-6584 (F)	COM-2	sfreed@bacacountyco.gov

Butler	Rick	**Baca County Commissioner District 3** 741 Main Street Springfield, CO 81073	(719) 563-1127 (O) (719) 523-3222 (719) 523-6584 (F)	COM-3	rbutler@bacacountyco.gov
Parsons	Cindi	**Baca County Administrator** 741 Main Street Springfield, CO 81073	(719) 523-6532 (O) (719) 523-6584 (F)		cparsons@bacacountyco.gov psmith@bacacountyco.gov
		Town of Springfield Public Works 748 Main Street P.O. Box 4 Springfield, CO 81073	(719) 523-4528 (O) (719) 523-4511 (D) (719) 523-6956 (F)		
Carlson	Dennis	**Town of Walsh Public Works** 401 N Colorado Street P.O. Box 280 Walsh, CO 81090	(719) 324-5411 (O) (719) 324-5510 (F) (719) 351-4410 (C)	WALSH-18	walshsuper@gmail.com

Appendix B: Land Fills and Debris Management Sites in Baca County

LANDFILL	OWNER/OPERATOR	ACCESS	ACCEPTS
Campo SWDS (CLOSING)	City of Campo 2 Mi SE of Campo Campo, CO 81029	Public	
Pritchett SWDS (CLOSED)	Town of Pritchett 13500 CR BB Pritchett, CO 81064 719-523-4006	Public	
Springfield Municipal Landfill	Town of Springfield 1 Mile SE of Springfield R287 Springfield, CO 81073	Public	
Two Buttes SWDS (CLOSING)	CR 37.5 (1/2 mi S of Hwy 116) 1 Mile SE of Two Buttes Two Buttes, CO 81084	Public	
Walsh SWDS (CLOSED)	½ Mile West of CR 44 on CR EE Walsh, CO 81090	Public	

Note: none of the landfills located within Baca County will accept radiological material, hazardous chemicals/wastes, or animal carcasses.

B.1 Springfield Municipal Landfill Information:

Date of Site Evaluation: 11/14/2018

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Town of Springfield Landfill

PROPERTY OWNERS NAME: Town of Springfield

PROPERTY OWNERS ADDRESS: 748 Main Street, Springfield, CO 81073

SITE GPS COORDINATES: N _____ W _____

PROPERTY OWNERS PHONE NUMBER: 719-523-4528

ESTIMATED PROPERTY SIZE: 67.36 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Municipal Landfill
Any Proposed Future land Uses	Expansion of Current Landfill
Environmental Issues	None Known
Proximity to Schools, Churches, Community Centers	5+ Miles
Property Topography	Flat Grasslands
Open Water Sources	None
Groundwater Wells	8- GW Monitoring wells to the North
Access to Electricity/Sewer/Water	None
Soil Integrity	Sandy Loam
Surface Water Drainage	To the North and West
Prevailing Wind Direction	From SW
Ingress/Egress	Access from Hwy 160
Lighted Area	No
Site Security	Fenced and Gated
Buffer Distance	1 Mile
Property Developed	No- Landfill Site
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☑ Medium ☐ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Any town, community or resident of Baca County, Colorado

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

CDPHE may allow any of the above for Disaster Debris Reduction but would need permission from CDPHE.

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

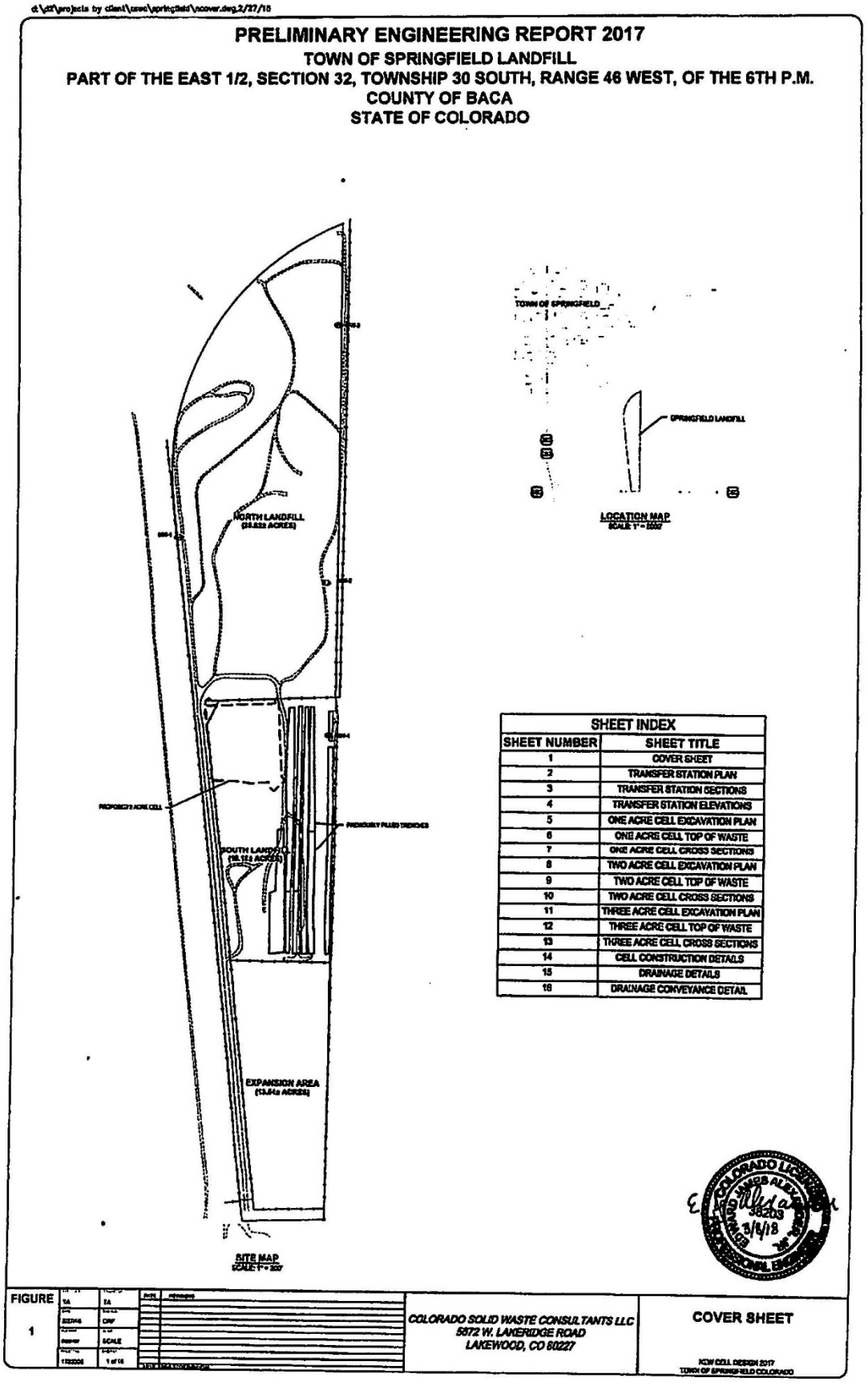
☑ White Good

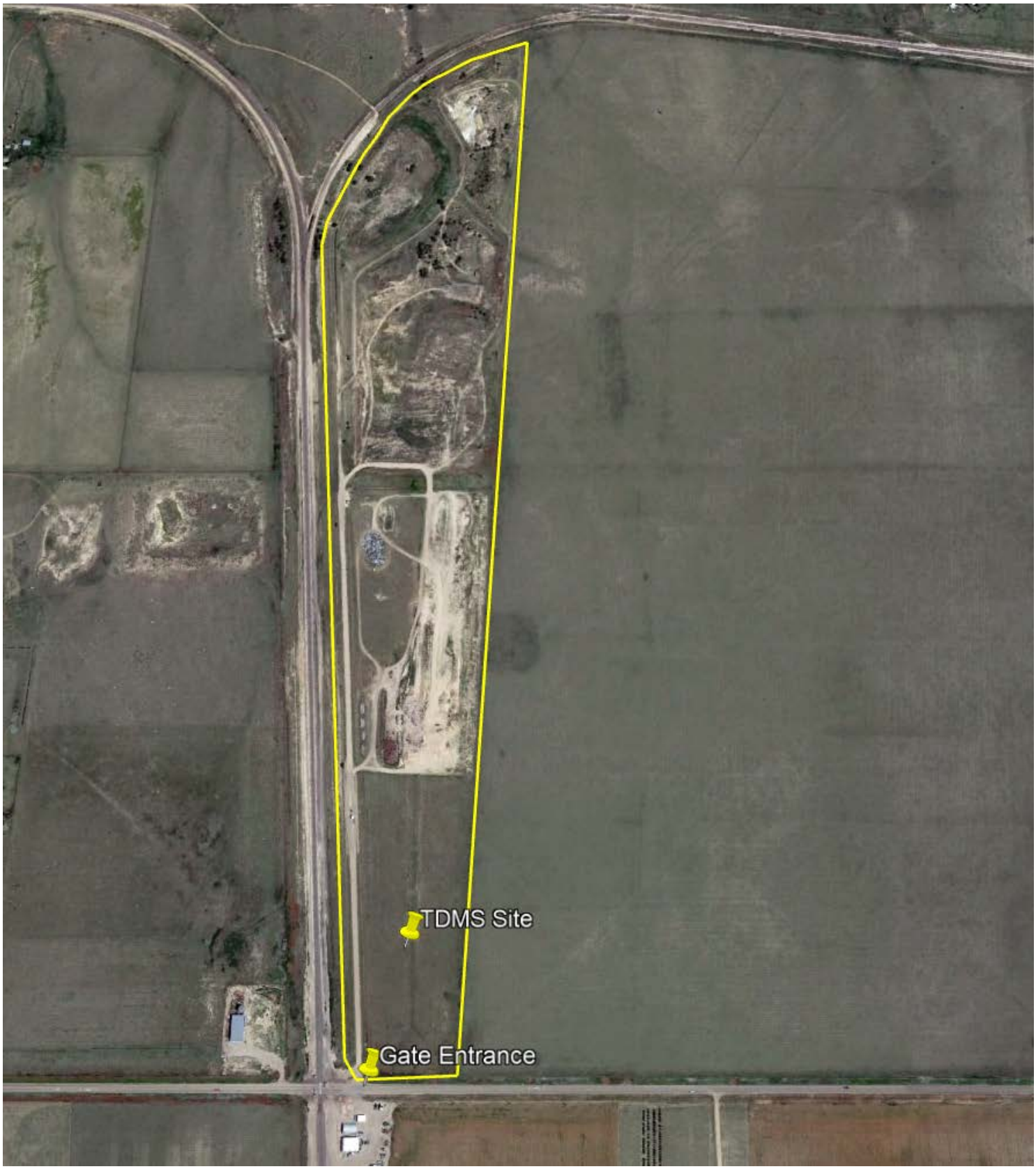
☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Springfield Landfill 0 Miles, Lamar, CO Landfill 50+ Miles.

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.


d:\ctl\projects by client\town\springfield\ncover.dwg,2/27/18
PRELIMINARY ENGINEERING REPORT 2017
TOWN OF SPRINGFIELD LANDFILL
PART OF THE EAST 1/2, SECTION 32, TOWNSHIP 30 SOUTH, RANGE 46 WEST, OF THE 6TH P.M.
COUNTY OF BACA
STATE OF COLORADO
NORTH LANDFILL
SOUTH LANDFILL
EXPANSION AREA
SITE MAP
TOWN OF SPRINGFIELD
SPRINGFIELD LANDFILL
LOCATION MAP
SHEET INDEX
SHEET NUMBER
SHEET TITLE
1 COVER SHEET
2 TRANSFER STATION PLAN
3 TRANSFER STATION SECTIONS
4 TRANSFER STATION ELEVATIONS
5 ONE ACRE CELL EXCAVATION PLAN
6 ONE ACRE CELL TOP OF WASTE
7 ONE ACRE CELL CROSS SECTIONS
8 TWO ACRE CELL EXCAVATION PLAN
9 TWO ACRE CELL TOP OF WASTE
10 TWO ACRE CELL CROSS SECTIONS
11 THREE ACRE CELL EXCAVATION PLAN
12 THREE ACRE CELL TOP OF WASTE
13 THREE ACRE CELL CROSS SECTIONS
14 CELL CONSTRUCTION DETAILS
15 DRAINAGE DETAILS
16 DRAINAGE CONVEYANCE DETAIL
FIGURE
1
COLORADO SOLID WASTE CONSULTANTS LLC
5572 W. LAKERIDGE ROAD
LAKEWOOD, CO 80227
COVER SHEET


TDMS Site
Gate Entrance

B.2 Temporary Debris Storage & Reduction Site (TDSR) – Springfield

Date of Site Evaluation: 11/14/2018

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Town of Springfield TDSR

PROPERTY OWNERS NAME: Town of Springfield

PROPERTY OWNERS ADDRESS: 748 Main Street, Springfield, CO 81073

SITE GPS COORDINATES: N _____ W _____

PROPERTY OWNERS PHONE NUMBER: 719-523-4528

ESTIMATED PROPERTY SIZE: 67.36 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Municipal Landfill
Any Proposed Future land Uses	Expansion of Current Landfill
Environmental Issues	None Known
Proximity to Schools, Churches, Community Centers	5+ Miles
Property Topography	Flat Grasslands
Open Water Sources	None
Groundwater Wells	8- GW Monitoring wells to the North
Access to Electricity/Sewer/Water	None
Soil Integrity	Sandy Loam
Surface Water Drainage	To the North and West
Prevailing Wind Direction	From SW
Ingress/Egress	Access from Hwy 160
Lighted Area	No
Site Security	Fenced and Gated
Buffer Distance	1 Mile
Property Developed	No- Landfill Site
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☑ Medium ☐ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Any town, community or resident of Baca County, Colorado

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

CDPHE may allow any of the above for Disaster Debris Reduction but would need permission from CDPHE.

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Springfield Landfill 0 Miles, Lamar, CO Landfill 50+ Miles.

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.

B.3 Temporary Debris Storage & Reduction Site (TDSR) – Pritchett

Date of Site Evaluation: 04/17/2017

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Pritchett Landfill

PROPERTY OWNERS NAME: Town of Pritchett

PROPERTY OWNERS ADDRESS: P.O. Box 56 Pritchett, CO 81064

SITE GPS COORDINATES: N 37.351261 W -102.842580

PROPERTY OWNERS PHONE NUMBER: 719-523-4006

ESTIMATED PROPERTY SIZE: 1.5 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Closed Landfill
Any Proposed Future land Uses	None
Environmental Issues	None
Proximity to Schools, Churches, Community Centers	1.5 Miles out of town
Property Topography	Flat
Open Water Sources	None
Groundwater Wells	1 Well for monitoring
Access to Electricity/Sewer/Water	None
Soil Integrity	Good
Surface Water Drainage	Ok
Prevailing Wind Direction	S/SW
Ingress/Egress	One way in, One way out
Lighted Area	No
Site Security	Fenced / Padlock
Buffer Distance	50ft
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Medium Volume

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Town of Pritchett

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Springfield 15 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.4 Temporary Debris Storage & Reduction Site (TDSR) – Campo

Date of Site Evaluation: 11/14/2018

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Campo Municipal TDSR

PROPERTY OWNERS NAME: Town of Campo

PROPERTY OWNERS ADDRESS: 413Oak Street, Campo, CO 81029

SITE GPS COORDINATES: N 37°04'33.60" W 102°34'13.02"

PROPERTY OWNERS PHONE NUMBER: 719-787-24116

ESTIMATED PROPERTY SIZE: 20 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Closing Landfill
Any Proposed Future land Uses	None
Environmental Issues	None
Proximity to Schools, Churches, Community Centers	2 Miles
Property Topography	Flat Grasslands
Open Water Sources	None
Groundwater Wells	None
Access to Electricity/Sewer/Water	No
Soil Integrity	Sandy Loam
Surface Water Drainage	To the SE
Prevailing Wind Direction	From SW
Ingress/Egress	Access from Hwy 287
Lighted Area	No
Site Security	Fenced and Gated
Buffer Distance	1.27 Mile
Property Developed	No- Landfill Site
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☑ Medium ☑ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☑ Medium ☐ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Campo

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

CDPHE may allow any of the above for Disaster Debris Reduction but would need permission from CDPHE.

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Springfield Landfill 21 Miles,

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.5 Temporary Debris Storage & Reduction Site (TDSR) – Walsh

Date of Site Evaluation: 11/30/2018

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Walsh Municipal Landfill

PROPERTY OWNERS NAME: Town of Walsh

PROPERTY OWNERS ADDRESS: 401 N Colorado Street, Walsh, CO 81090

SITE GPS COORDINATES: N 37.398337° W 102.304125°

PROPERTY OWNERS PHONE NUMBER: 719-523-4528

ESTIMATED PROPERTY SIZE: 10 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Municipal Landfill - Closing
Any Proposed Future land Uses	Closing Landfill
Environmental Issues	Creek to the North of Landfill
Proximity to Schools, Churches, Community Centers	3+ Miles
Property Topography	Slope to the North
Open Water Sources	None – Creek to the North
Groundwater Wells	1-Ground Water Monitoring Well NE
Access to Electricity/Sewer/Water	None
Soil Integrity	Sandy Loam
Surface Water Drainage	To the North and East
Prevailing Wind Direction	From SW
Ingress/Egress	Off of County Road 43.
Lighted Area	No
Site Security	Fenced and Gated
Buffer Distance	1 Mile
Property Developed	No- Landfill Site
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☑ Medium ☐ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Town of Walsh

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

CDPHE may allow any of the above for Disaster Debris Reduction but would need permission from CDPHE.

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Springfield Landfill 20 Miles,

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.


Monitoring Well
Locked Gate

Appendix C: Government Equipment Lists

C.1 Baca County:

84-6000744
01/01/2017 - 12/31/2017
Sorted: General - system number

[District 1]
Asset List

11/28/2018
10:11:36AM

S	System No.	System No.	Description	Date In Service	Category	Location	Tax Schedule
	1	1	1988 Ford LT 9000	11/16/1987	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	2	2	1984 Mack Truck w/Dump & Spreader w/step	4/18/1990	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	3	3	1991 Load King Trailer	5/21/1991	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	4	4	1988 Ford w/Heil Hoist & Box & Spreader	12/31/1987	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	5	5	1994 Mack CH613	1/26/1998	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	6	6	1993 Mack CH613	2/1/1998	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	7	7	1991 Ranco Bottom Dump 20-40	3/7/1991	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	8	8	1990 Ranco Bottom Dump 20-40	3/29/1990	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	9	9	2000 Mack Truck	10/5/2010	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	10	10	2000 Mack Truck	1/28/2004	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	11	11	2000 Mack Truck	1/28/2004	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	12	12	Wagner Cat road grader	4/30/2011	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	13	13	2011 CAT Skid Ster	3/30/2012	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	14	14	1990 Ford F450 Utility Bed Bucket	3/29/2010	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	15	15	1994 Kenworth T600B Water Tanker	7/18/2008	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	16	16	2008 Volvo Motorgrader G940	5/19/2008	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	17	17	2008 Road Groom	12/16/2008	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	18	18	2009 Witzco low Boy Tlr RG50	2/11/2009	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	19	19	2006 Volvo G940	9/8/2009	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	20	20	1989 JD 4755 Tractor	12/18/2009	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	21	21	2001 Mack CH613	10/28/2010	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	22	22	1990 Chevrolet 4x4 C10	5/21/2002	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	23	23	1995 Ford 1/2 ton F150	2/10/2000	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	24	24	1996 Ford F150	2/22/2000	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	25	25	1993 GMC 2500	11/19/1990	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	26	26	1989 GMC 4x4 1500	5/21/2002	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	27	27	2001 Dodge RAM 2500 4X4	12/18/2006	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	28	28	Volvo G940 2007	11/20/2006	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	29	29	950 CAT front end loader	12/27/2006	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	30	30	1997 Chevy Pickup	4/13/2004	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	31	31	1996 GMC Pickup	1/8/2004	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	32	32	1998 GMC Pickup	3/23/2004	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	33	33	1999 Chevy Pickup	4/9/2004	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	34	34	1995 Chevy pickup	7/1/2005	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	35	35	770 GP Grader	5/7/2012	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	36	36	2002 Chevy Pickup	12/13/2010	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	37	37	2003 Chevy Pick up	12/13/2010	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	38	38	2002 Chevy Pickup	12/28/2010	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	39	39	1998 CAT 140 H	4/19/2001	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9

Page 1 of 2

84-6000744
01/01/2017 - 12/31/2017
Sorted: General - system number

[District 1]
Asset List

11/28/2018
10:11:36AM

S	System No.	System No.	Description	Date In Service	Category	Location	Tax Schedule
	40	40	1997 CAT 140 H	4/1/1999	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	41	41	2001 CAT 140 H	10/17/2002	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	42	42	1994 CAT 140 G	7/20/1994	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	44	44	2001 D6M Dozer	1/9/2003	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	45	45	1978 Michigan Scraper	6/19/1975	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	46	46	1980 MF275 Tractor	3/7/1980	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	47	47	1998 CAT 938 G Loader	12/18/1998	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	48	48	1986 JD 4450 Tractor	5/1/1998	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	49	49	1982 JD 4440 Tractor	5/14/1998	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	50	50	1996 Case 580 Backhoe	1/20/2000	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	51	51	1999 New Holland 885LX Skid Steer	1/24/2000	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	52	52	1999 Bison 3 Pt Blade	3/19/1999	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	53	53	Mower	7/1/2005	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	54	54	Mobil Street Sweeper	5/8/2000	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	55	55	2000 Radial Stacker	3/22/2001	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	56	56	MG1 Lift Group	12/11/2012	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	57	57	2009 Chev Truck	12/26/2012	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	58	58	Screener	7/1/2005	MISCELLANEOUS EQUIPMENT		990, Pg 10 #1 - Form 9
	59	59	Volvo G960 Lift	1/13/2013	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	60	60	1965 Trailer	4/18/2013	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	61	61	2004 Chev Pickup	10/31/2013	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	62	62	Diamond Trailer	11/18/2013	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	63	63	2014 Vovo G960B Motor Grader	5/7/2014	MOTOR GRADERS	District 1	990, Pg 10 #1 - Form 9
	64	64	207 Chev Pickup	9/1/2014	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	65	65	1998 Chev Pickup	12/8/2014			990, Pg 10 #1 - Form 9
	66	66	Dozer Blad 6-Way 92"	2/14/2015	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	67	67	2011 Chev 2500 Pickup	9/23/2015	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	68	68	315CL Track Hoe	10/27/2015	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	69	69	Malsam Belt Tereer	11/25/2015	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	70	70	WR75-3 Walk and Roll Packer/Roller	12/7/2015	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	71	71	Walk n Roll Series 75 Packer/Roller	1/13/2016	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	72	72	Volvo Shank Ripper	1/13/2016	MISCELLANEOUS EQUIPMENT	District 1	990, Pg 10 #1 - Form 9
	73	73	1991 Peterbuilt Trucj	9/27/2016	TRUCKS/TRAILERS	District 1	990, Pg 10 #1 - Form 9
	74	74	JD Mower HX15	3/31/2017	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	75	75	2012 Ford F250 Pickup	11/21/2016	PICKUPS	District 1	990, Pg 10 #1 - Form 9
	76	76	2012 John Deere 5100M Tractor	12/30/2016	TRACTORS/LOADERS/MOWERS	District 1	990, Pg 10 #1 - Form 9
	78	78	2015 Ford F150 pickup	11/20/2017	PICKUPS		990, Pg 10 #1 - Form 9

[District 2] Asset List

S	System No.	System No.	Description	Date In Service	Category	Location	Tax Schedule
	1	1	1993 Ranco Bottom Dump	1/13/1993	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	2	2	1973 GMC Trk MDI CE61403	10/2/1972	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	3	3	1993 Ranco Belly Dump	1/13/1993	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	4	4	1984 Mack	3/24/1994	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	5	5	1993 Ranco Botom Dump	1/13/1993	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	6	6	1997 Mack CH613	7/2/2002	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	7	7	2002 Load King	7/2/2002	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	8	8	1998 Mack Truck	5/18/2004	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	9	9	1995 Chevrolet	3/13/1995	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	10	10	1985 Chevrolet	2/27/1985	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	11	11	1994 Chevrolet 3/4 Ton Supercab	3/31/1998	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	12	12	2001 SuperCab Ford Pickup	1/31/2012	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	13	13	1994 Chevrolet Pickup 3/4 ton 4x4	11/19/1999	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	14	14	1995 Chevrolet Pickup 3/4 ton 4x4	12/9/2002	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	15	15	1994 Chevrolet Pickup 3/4 ton 4x4	12/9/2002	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	16	16	1995 Chevrolet Pickup 4X4	12/31/2001	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	17	17	1999 Chevrolet Pickup K2500	2/26/2004	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	18	18	1997 Ford pickup	7/1/2005	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	19	19	1999 Chevy	7/1/2005	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	20	20	1995 GMC 4X4 2500 Pick-up	3/9/2009	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	21	21	2001 140H Caterpillar	2/18/2003	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	22	22	1993 140G Caterpillar	9/28/1993	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	23	23	1993 140G Caterpillar	9/28/1993	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	24	24	2001 140H Caterpillar	12/5/2001	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	25	25	2002 140 H Caterpillar	2/26/2004	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	26	26	2007 Case 865 Motor Grader	2/10/2009	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	27	27	1983 John Deere 4450	4/10/1997	LOADERS AND TRACTORS	District 2	990, Pg 10 #1 - Form 9
	28	28	1993 Case 821 Wheel Loader	5/19/1993	LOADERS AND TRACTORS	District 2	990, Pg 10 #1 - Form 9
	29	29	1997 Case 821B Wheel Loader	1/1/1998	LOADERS AND TRACTORS	District 2	990, Pg 10 #1 - Form 9
	30	30	2003 D6M Cat Dozer	3/14/2004	LOADERS AND TRACTORS	District 2	990, Pg 10 #1 - Form 9
	31	31	Finlay 312 Screener	1/31/2003	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	32	32	Pressure Washer	12/30/2003	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	34	34	Packer 285'	12/1/1999	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	35	35	Portable Rock Crusher	6/1/1998	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	36	36	Galion Dresser Packer	1/1/2000	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	38	38	Roller	7/1/2005	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	39	39	2005 Skid Steer	6/8/2009	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	40	40	1980 JD 4440	7/17/2009	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	41	41	2005 Ford SuperCab Pickup	1/18/2012	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9

[District 2]
Asset List

S	System No.	System No.	Description	Date In Service	Category	Location	Tax Schedule
	42	42	2012 Lo-Pro Steel Belly Dump	5/1/2012	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	43	43	10,000 Gal Diesel Tank 9'x21'	1/1/1999	FUEL TANKS	District 2	990, Pg 10 #1 - Form 9
	44	44	3000 Gal Steel Tank	5/22/2001	FUEL TANKS	District 2	990, Pg 10 #1 - Form 9
	45	45	2001 Chevy 4X4	2/24/2010	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	46	46	1991 GMC Bucket Truck	3/3/2010	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	47	47	Ingersoll Rand Vib Roller	4/27/2010	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	48	48	1989 Freightliner Dump Truck	6/4/2010	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	49	49	770GP Grader	5/7/2012	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	50	50	2014 Belly Dump	5/17/2013	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	51	51	Diamond Trailer	6/28/2013	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	52	52	2011 Caterpillar	12/29/2014	MOTOR GRADERS	District 2	990, Pg 10 #1 - Form 9
	53	53	1999 Chevy 4x4 Pickup	9/9/2013			990, Pg 10 #1 - Form 9
	54	54	2014 LP RCM 4015 Mower	7/16/2014	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	55	55	2014 LP RCM 4015 Mower	7/16/2014	MISCELLANEOUS EQUIPMENT	District 2	990, Pg 10 #1 - Form 9
	56	56	2006 GMC 2500HD Pickup	2/4/2015	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	57	57	2001 Chev 1500 Pickup	12/9/2015	PICKUPS	District 2	990, Pg 10 #1 - Form 9
	58	58	2008 MACK CHU613	6/25/2015	LOADERS AND TRACTORS	District 2	990, Pg 10 #1 - Form 9
	59	59	John Deere 770G	9/14/2016	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	60	60	2013 Mack Truck	2/2/2017	TRUCKS AND TRAILERS	District 2	990, Pg 10 #1 - Form 9
	61	61	2002 Chey 2500 Pickup	9/29/2017	PICKUPS		990, Pg 10 #1 - Form 9

[District 3] Asset List

S	System No.	System No.	Description	Date In Service	Category	Location	Tax Schedule
	2	2	1986 TRAIL KING 1900-44	5/28/1986	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	3	3	1988 RANCO BOTTOM DUMP TLR	5/5/1988	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	4	4	1997 MACK TRUCK	2/11/2003	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	5	5	1992 MACK TRUCK RD90	4/16/1992	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	6	6	1991 RANCO BOTTOM DUMP	3/15/1991	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	7	7	1988 MACK TRUCK MDL R68ST	11/10/1987	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	8	8	1981 MACK TRACTOR	1/6/1982	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	9	9	1995 HMD TRAILER	2/7/1995	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	10	10	1981 MACK TRUCK	3/2/1983	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	11	11	1980 FORD LNT 9000	2/17/1981	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	12	12	1981 USED INT'L (WYLIE ATT)	1/20/1989	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	13	13	1984 INTERNATIONAL MDL 1654	10/24/1989	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	14	14	1999 Mack Truck	2/17/2004	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	15	15	2 trailers	7/1/2005	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	16	16	1982 GMC/CHEV (ATT:ROSCO OIL DIS)	7/1/1999	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	17	17	1995 FORD	2/1/1999	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	18	18	1992 CHEVROLET/GMC REBUILT	8/19/1986	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	19	19	1997 FORD F250	4/10/1999	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	20	20	1988 FORD	5/22/1995	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	21	21	1989 CHEV 1/2 TON	5/11/2000	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	22	22	1987 FORD	11/11/1994	PICKUPS	District 3	990, Pg 10 #1 - Form 9
D	24	24	1996 Chevy Pickup	4/1/2004	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	26	26	Volvo G940 2007	11/20/2006	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	27	27	1997 CATERPILLER 140H	4/17/1998	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	28	28	1993 CATERPILLER 140	3/26/1994	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	29	29	1990 CATERPILLER 140G	9/24/1990	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	30	30	1999 140H CATERPILLAR	10/8/2001	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	32	32	140H CAT	3/8/2004	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	33	33	JOHN DEERE 4250 TRACTOR	3/17/1997	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	34	34	91' 1580 SUPER K BACKHOE	3/1/1992	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	35	35	2000 821C LOADER	1/11/2000	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	36	36	1997 CATERPILLAR D6MPSXL	4/19/2001	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	37	37	1995 950 F II CATERPILLER	3/21/1996	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	38	38	POWER STACKER	1/1/1995	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	39	39	1996 CASE IH 5140 2WD TRACTOR	6/16/1999	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	40	40	1961 4010 JD LOADER W/BUCKET	3/27/2002	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	41	41	Loader	3/17/2006	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	42	42	FLEX 15 RINO MOWER	8/8/1995	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	43	43	FLEX RINO MOWER	1/1/1999	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9

[District 3]
Asset List

S	System No.	System No.	Description	Date In Service	Category	Location	Tax Schedule
	44	44	10,000GAL STEEL TANK	4/25/2001	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	45	45	41'X150' METAL BLDG	1/1/1975	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	46	46	312 FINLEY SCREENER	5/22/2003	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	47	47	2000 Chevy	9/28/2010	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	48	48	1400 Turbo Cheiftain Power Screener	4/6/2010	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	49	49	2004 GMC	10/14/2010	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	50	50	2007 Peterbilt 385	12/6/2011	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	51	51	Heating Unit	2/19/2013	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	52	52	2004 Ford F-250	3/18/2013	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	53	53	JD 4630 Tractor	6/28/2013	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	54	54	Land Pride Mower	9/9/2013	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	55	55	2004 Chey 2500 Diesel Pickup	2/18/2014	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	56	56	2013 259B3 Caterpillar	2/10/2014	TRACTORS AND LOADERS	District 3	990, Pg 10 #1 - Form 9
	57	57	2014 Caterpillar 12M2 LR	9/18/2014	MOTOR GRADERS	District 3	990, Pg 10 #1 - Form 9
	58	58		7/2/2001			990, Pg 10 #1 - Form 9
	59	59	2007 PETERBILT 379	10/2/2015	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	60	60	2015 LW21-40 Belly Dump Trailer	3/19/2015	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
	61	61	DOZER BLAD 92" 6-Way	1/19/2015	MISCELLANEOUS EQUIPMENT	District 3	990, Pg 10 #1 - Form 9
	62	62	2011 Chev Pickup	2/23/2016	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	63	63	2011 GMC Pickup	2/23/2016	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	64	64	2009 GMC 3500 Pickup	3/11/2016	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	65	65	Diamond Trailer	5/31/2016	TRUCKS AND TRAILERS	District 3	990, Pg 10 #1 - Form 9
D	66	66	2005 Chev 2500 Pickup	6/27/2016	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	67	67	2008 Ford 350 Pickup	9/27/2016	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	68	68	2003 Chev 2500 Pickup	11/2/2016	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	69	69	2005 Chevy Silverado 1500 pickup	2/8/2017	PICKUPS	District 3	990, Pg 10 #1 - Form 9
	70	70	2014 Peterbilt 579 truck	10/9/2017	TRUCKS AND TRAILERS		990, Pg 10 #1 - Form 9

C.2 Springfield:

Description	Identity Code	Manufacture/Make	Model	Organization Name
Auxillary Sweeper	1431001	Paladin	22084PH4-0022	Town of Springfield
Walk Behind Snow Blower	092215M007373	Husqvarna	5T 230 P	Town of Springfield
10 Ft Mowing Deck	18632	Rhino	SE10-4a	Town of Springfield
15 Ft Mowing Deck	1POHX15EJET0604	John Deere	HX15	Town of Springfield
F150	1FTRF14W54NB407	FORD	F150	Town of Springfield
STREET SWEEPER	1HTMPAFNX5H1187	INTERNATIONAL	CT 4900	Town of Springfield
F150	1FTFX1EF5CKD387	FORD	F150	Town of Springfield
Tractor 5410	lv54105340386	John Deere	5410	Town of Springfield
Dump Truck	1FDXR82E7SVA193	Ford	L8000	Town of Springfield
Maintainer	87V07089	Caterpillar	120G	Town of Springfield
Tractor 401B	338452	John Deere	401B	Town of Springfield
Dump Truck/Snow Plow	1HTSHAAR6VA4524	International		Town of Springfield
TRAILER	SFWFS18261R0005			Town of Springfield
F550	1FDAF56Y55EC447	FORD	F550	Town of Springfield
COMPACTOR	SFN00296	CATERPILLAR	816F	Town of Springfield
LOADER	62F00531	CATERPILLAR	IT18F	Town of Springfield
LOADER	CAT924HHHXCO289	CATERPILLAR	924H	Town of Springfield
DUMP TRUCK	3FDNF65A9YMA767	FORD	F650	Town of Springfield
WATER TRUCK	1HTSHAAR4WH5198	INTERNATIONAL	4900	Town of Springfield
UTILITY TRACTOR	1LV5085MTEJ6443	JOHN DEERE	5085M	Town of Springfield
Silver Four Door Sedan	1FAHP27136G1670	Ford	Five Hundred	Town of Springfield
Ford	!FTEX1EPXFKE098	F150	4X4 Sport	Town of Springfield
Ford	1FDPF80C5VVA335	Ford		Town of Springfield
Ford	1FDXF46F42EC802	Ford	F450	Town of Springfield
Chevy	C17DGAV153594	Chevy		Town of Springfield
International	1HTMKAAR56H1852	International	4400	Town of Springfield
Dodge	3B7KC26Z9M55822	Dodge	2500	Town of Springfield
Water/Sewer Pick-up	1FTFX1EF3CKD387	Ford	F-150	Town of Springfield
Water/Sewer Pick-up	1FTPF17L31NA655	Ford	F-150	Town of Springfield
Backhoe/Extend a Hoe	JJG0220599	Case	580-L	Town of Springfield

C.3 Walsh:

Case W14H Loader with 2 Yard Bucket
Case W20H Loader with 3 Yard Bucket
Case 821B Loader with 4 Yard Bucket
Ford A62 Loader with 1.5 Yard Bucket

JCB Backhoe with 1.5 Yard Bucket
Case Skid steer with 0.5 Yard Bucket

¾ Ton Chevy Crew Cab Pickup
1 Ton Dump Truck 1.5 Yard Bed
1 Ton Dump Truck 1.5 Yard Bed
International Single Axle Dump Truck 5 Yard Bed
International Tandem Axle Dump Truck 10 Yard Bed

Ford Van with Bucket Lift

Ford Trash Tuck with 29 Cubic Yard Bed
International Trash Truck with 21 Cubic Yard Bed

John Deere Motor Grader
Pull Behind 21’ Solid floor pipe trailer

C.4 Vilas:

Backhoe with Bucket
Tractor with Mower

C.5 Two Buttes:

Tractor with Mower

C.6 Pritchett:

Tractor with Bucket

C.7 Campo:

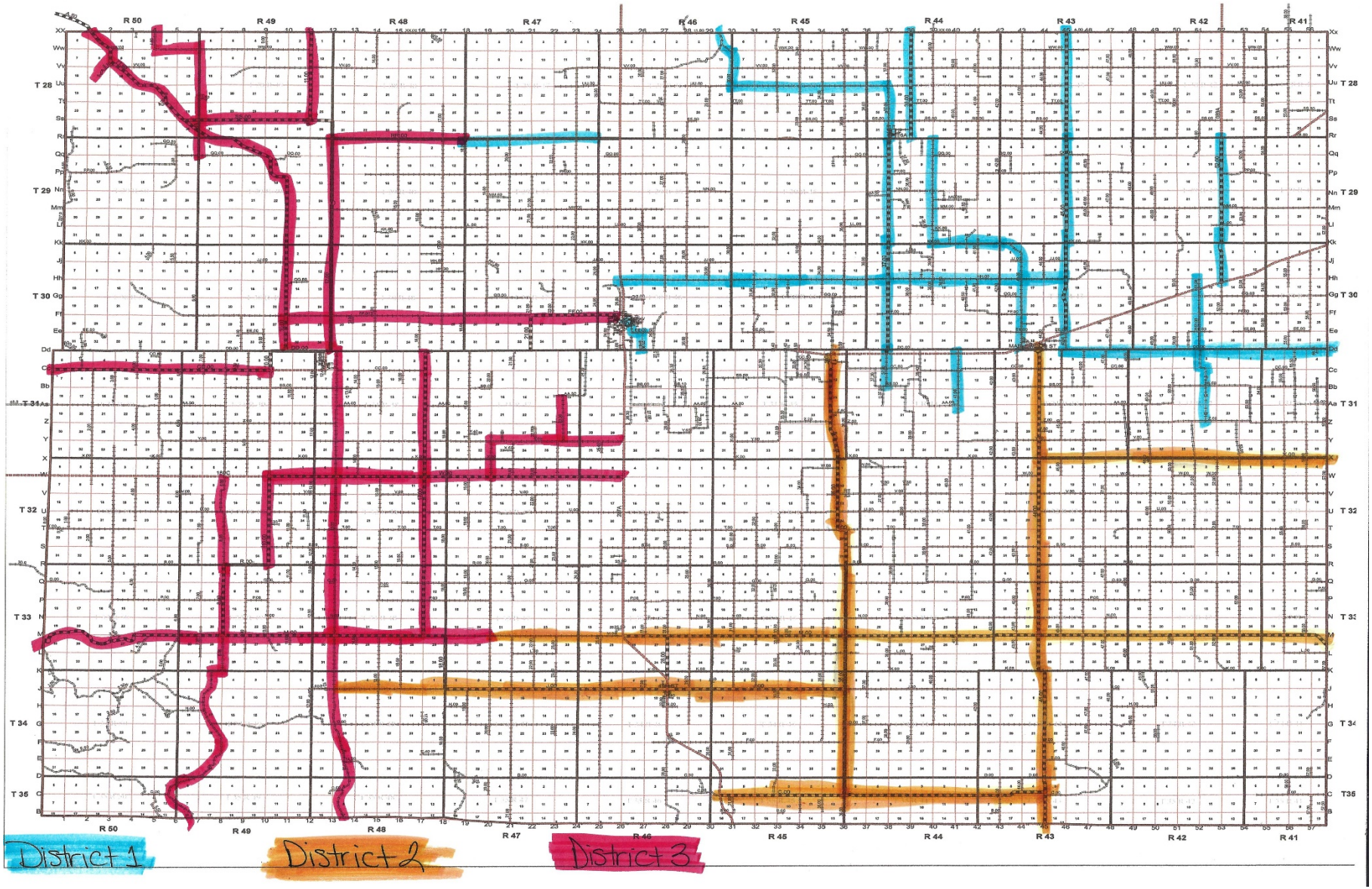
The Town of Campo has no equipment that is government owned for debris management. They rely upon the board members and the community to donate time and equipment for projects and would rely upon the same for initial debris management equipment.

Appendix D: Countywide Debris Contractors

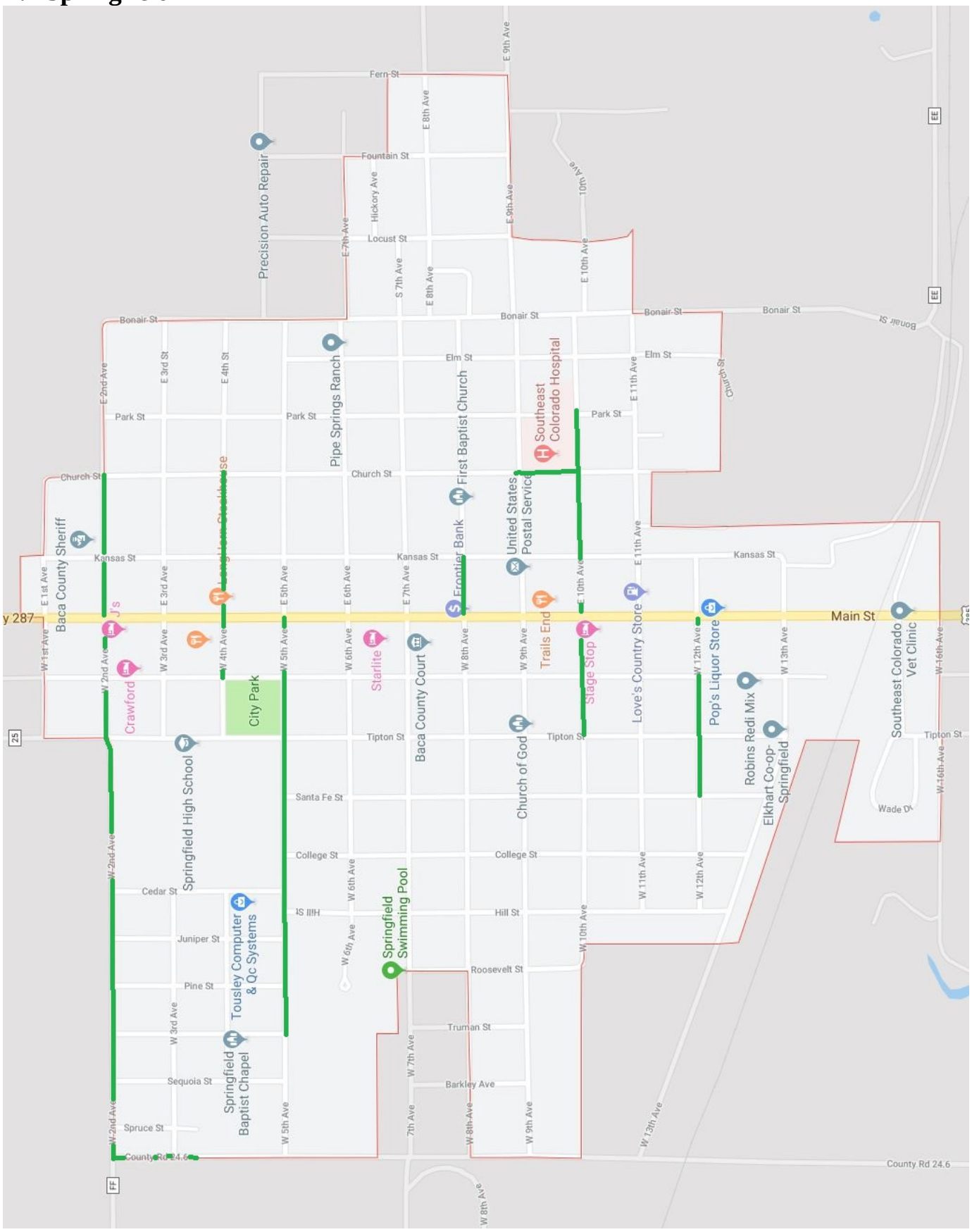
Company	County	Phone	Equipment
Jordan Construction Co. 555 E. 3rd Street Springfield, CO 81073	Baca	719-523-6611	Heavy Equipment Service and Rental
Robins Redi Mix LLC 1269 Colorado St. Springfield, CO 81073	Baca	719-523-4213	Heavy Equipment Service and Rental
Chenoweth Construction 700 Fountain Street Springfield, CO 81073	Baca	719-523-6506	Heavy Equipment Service and Rental
Town and Country Disposal LLC 801 E 6th Ave Springfield, CO 81073	Baca	719-529-0737	Trash Service
Plains Disposal LLC P.O. Box 44 Springfield, CO 81073	Baca	719-353-2114	Trash Service

Appendix E: Primary Road Clearance Priorities

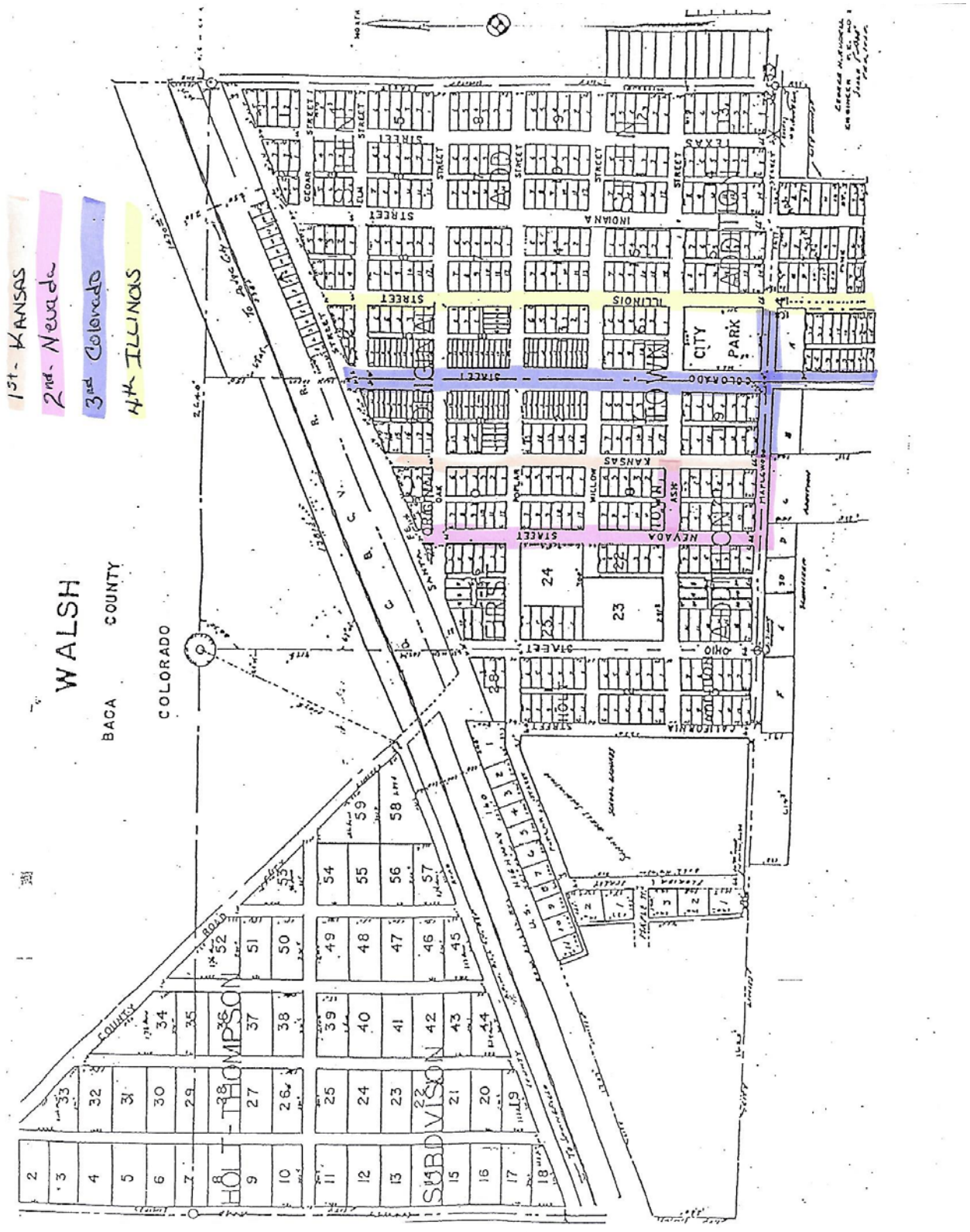
E.1 Baca County



E.2 Springfield



E.3 Walsh

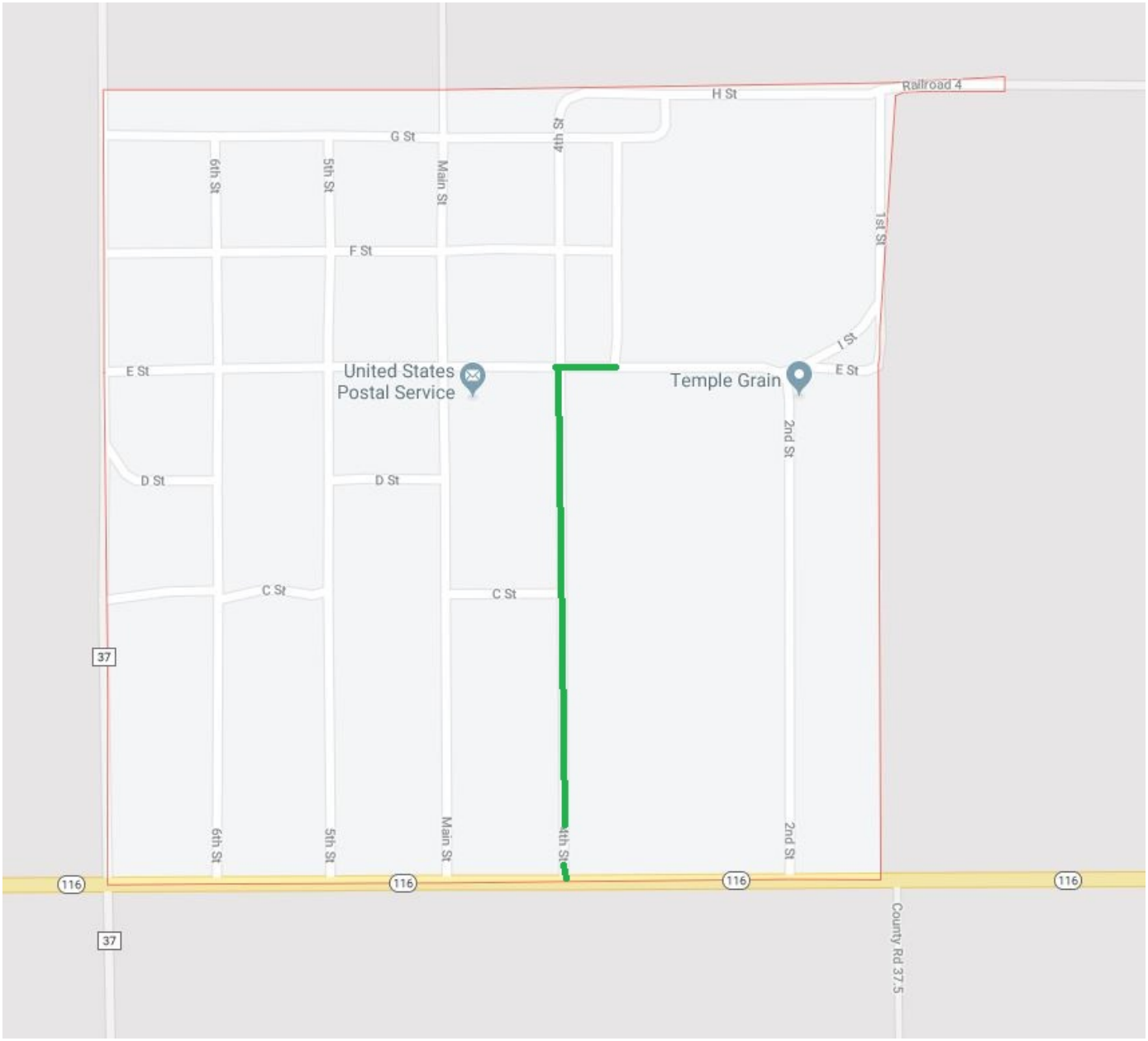


** US Hwy-160 is also a Priority for EMS, Fire Response and resources however it is the Colorado Department of Transportation Responsibility

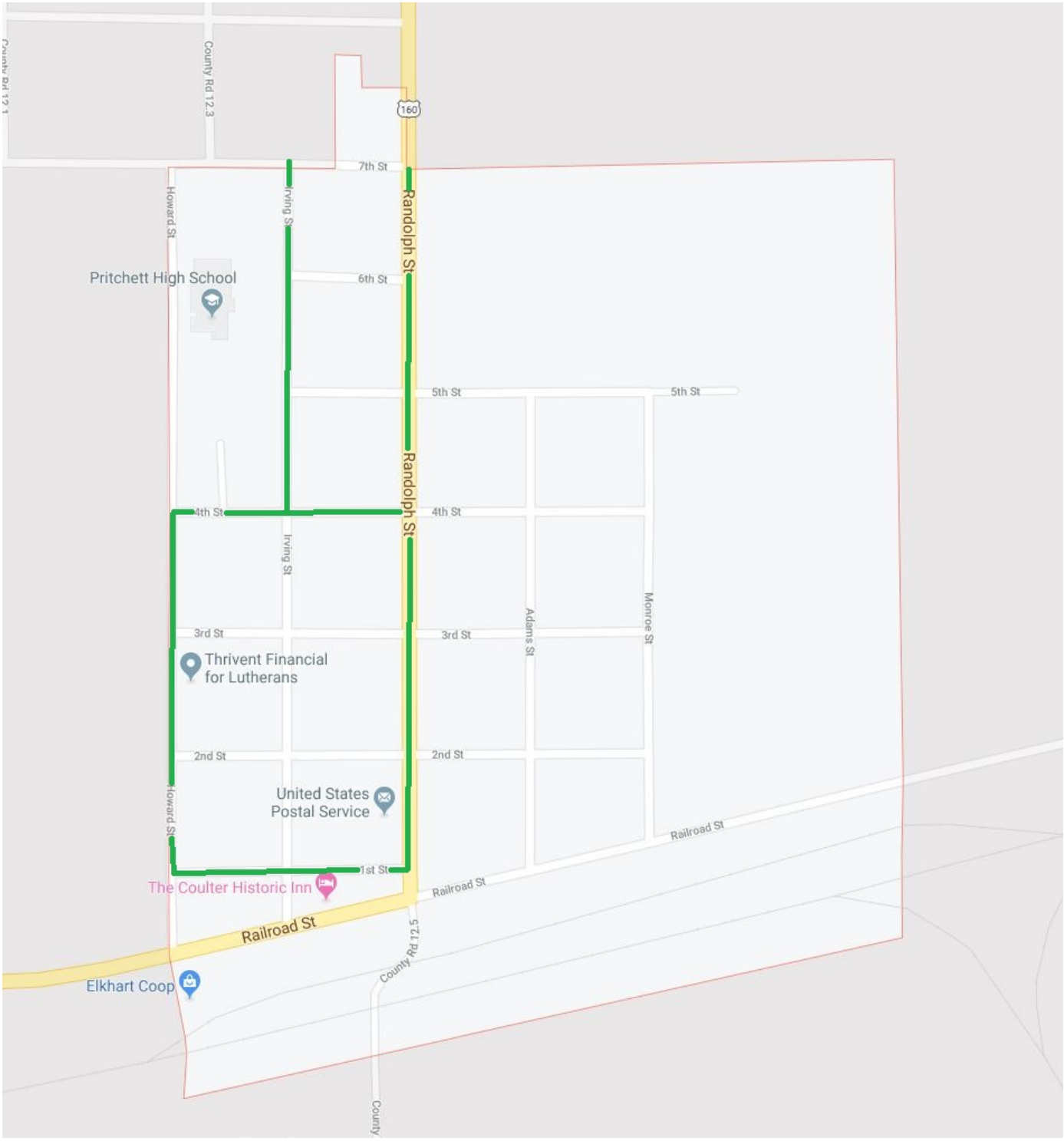
E.4 Vilas


ELKHART COOP
VILAS BRANCH
Vilas School
District RE-5
United States
Postal Service
W Cedar St
N Cedar St
E Pine St
E Main St
E Maple St
N Ohio Ave
S Ohio Ave
CC 4
160
36
100
DD
37.5
CC

E.5 Two Buttes



E.6 Pritchett



E.7 Campo


Jenkins Pilot Car Services
1st St
2nd St
3rd St
Maple St
Elm St
United States Postal Service
J
J
Campo
5th St
385
Oak St
Campo Community Center
7th St
8th St
9th St
10th St
Hwy 287
Maple St
11th St
287
Clarence's Truck Stop
Hwy 287

Appendix F: Baca County Critical Facilities

1) Southeast Colorado Hospital District
373 E. 10th Ave
Springfield, CO 81073
719-523-4501

2) Baca County EOC
29400 US Hwy 287
Springfield, CO
719-523-6796

3) Baca County Sheriff's Office
265 E. 2nd Ave
Springfield, CO 81073
719-523-6677

4) Baca County Courthouse
741 Main Street
Springfield, CO 81073
719-523-6532

5) Springfield Town Hall
748 Main Street
Springfield, CO 81073
719-523-4528

6) Springfield Fire Department
County Road 24.6
Springfield, CO 81073
719-523-4121

7) Walsh Fire Department/Walsh Ambulance Service
400 N. Kansas Street
Walsh, CO 81090
719-324-5445

8) Campo Fire Department/Campo Quick Response Team
413 Oak Street
Campo, CO 81029
719-787-2416

9) Vilas Fire Department
Vilas, CO 81087
719-523-6677

10) Pritchett Fire Department
103 First Street
Pritchett, CO 81064

11) Two Buttes Fire Protection District
4th & E Street
Two Buttes, CO 81084

12) Springfield Ambulance Service
972 Kansas Street
Springfield, CO 81073
719-523-4501

13) Walsh Police Department & Town Hall
401 N. Colorado Street
Walsh, CO 81090
719-324-5411

14) Southeast Colorado Power Association
25107 US-160
Springfield, CO 81073
719-523-4566

15) Walsh Healthcare Center
150 N. Nevada Street
Walsh, CO 81090
719-324-5262

16) Road & Bridge District 1
311 Main Street
Two Buttes, CO 81084

17) Road & Bridge District 2
121 West 1st Street
Campo, CO 81029

18) Road & Bridge District 3
300 Randolph
Pritchett, CO 81064

Appendix G: Baca County Community Specific Debris Estimates

G.1 Springfield - 1405 Buildings = 81,490 cy of Debris
G.2 Walsh - 670 Buildings = 38,860 cy of Debris
G.3 Vilas – 67 Buildings = 3,886 cy of Debris
G.4 Two Buttes – 68 Buildings = 3,944 cy of Debris
G.5 Pritchett – 132 Buildings = 7,656 cy of Debris
G.6 Campo – 103 Buildings = 5,974 cy of Debris
G.7 Stonington – 12 Buildings = 696 cy of Debris

Appendix H: Baca County Public Information Strategy for Debris Management

Public information related to debris management will be submitted to the public in as many ways as possible. Although there will be an operational public information officer designated by the Debris Project Manager, this position will work in cooperation with the Baca County Public Information Officer (or ESF-15 when activated) to facilitate the distribution of public information. The following communication vehicles will be considered when performing this function:

SWIFT911 is the county's mass notification system that is designed to keep Baca County residents and businesses informed of emergencies and non-emergency events.

NOAA Weather Radio – NOAA Weather Radio may be used to issue civil type messages on frequency of 162.400. This can be activated through the EAS, IPAWS system or by contact the National Weather Service in Pueblo by calling (719) 948-9429.

Websites: Baca County and jurisdictions inside Baca County have various websites that information can be posted on.
www.bacacountyco.gov is the county's web site that is designed to keep Baca County residents and businesses informed of events.
www.secahr.com is the Southeast Colorado All-Hazards Region Website
www.springfieldcolorado.org is the Town of Springfield's web site for information
www.townofwalsh.com is the Town of Walsh's website for information
www.townofcampo.co is the Town of Campo's website for information

Media – This includes local television, radio, newspapers, or community newsletters that reach the impacted area(s).

Social Media- Information will be posted on various official county social media sites including but not limited to Facebook and Twitter.

Public forums – This includes interactive meetings at a local government building(s), schools, churches, etc.

Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a call center if the size of the debris management process warrants it. This may include a direct Baca County hotline or information may be routinely submitted to the regional 2-1-1 system.

Annex 2: County Specific - Bent County

BENT COUNTY, COLORADO DEBRIS MANAGEMENT PLAN

COUNTY SPECIFIC ANNEX TO THE SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMENT PLAN



Last updated January 2020

Appendix A: Bent County Key Points of Contact

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
Stwalley 	Rick	**Bent County Emergency Management** 725 Bent Avenue Las Animas, CO 81054	(719) 662-1200 (W) (719) 456-1363 (D) (719) 456-0375 (F) (719) 980-0068 (C)	Stwalley EM-820	rick.stwalley@bentcounty.net COEM820@gmail.com
Wagner 	Kenny	**Las Animas Public Works** 532 Carson Street P.O. Box 468 Las Animas, CO 81054	(719) 456-2571 (O) (719) 469-0642 (C) (719) 456-1363 (D) (719) 456-1210 (F)		LAPW1@bentcounty.net
Darnell 	Robert	**Bent County Road & Bridge District 1** 725 Bent Street P.O. Box 350 Las Animas, CO 81054	(719) 456-1678 (O) (719) 469-6500 (C) (719) 456-1363 (D) (719) 456-0375 (F)	Robert (West Half of Bent County)	robert.darnell@bentcounty.net
Sniff 	Curtis	**Bent County Road & Bridge District 2** 101 Hwy 196 McClave, CO 81057	(719) 829-4770 (O) (719) 688-3750 (C) (719) 456-1363 (D) (719) 456-0375 (F)	Curtis (East Half of Bent County)	curtis.sniff@bentcounty.net

Tamir	Omer	**Bent County Public Health Agency** 701 Park Avenue Las Animas, CO 81054	(719) 456-0517 (O) (719) 469-4058 (C) (719) 456-0518 (F)		otamir@bcns.org
MacDonnell 	Kim	**Bent County Commissioner** 725 Bent Avenue P.O. Box 350 Las Animas, CO 81054	(719) 456-1600 (O) (719) 456-0375 (F) (719) 469-5153 (C)		kim.macdonnell@bentcounty.net
Sykes 	Jean	**Bent County Commissioner** 725 Bent Avenue P.O. Box 350 Las Animas, CO 81054	(719) 456-1600 (O) (719) 456-0375 (F) (719) 688-2239 (C)		jean.sykes@bentcounty.net
Netherton 	Chuck	**Bent County Commissioner** 725 Bent Avenue P.O. Box 350 Las Animas, CO 81054	(719) 456-1600 (O) (719) 351-0220 (C) (719) 456-0375 (F)		chuck.netherton@bentcounty.net
Feik 	Calvin	**Bent County Administrator** 725 Bent Avenue P.O. Box 350 Las Animas, CO 81054	(719) 456-2223 (O) (719) 468-0397 (C) (719) 456-0375 (F)		bent.admin@bentcounty.net

Appendix B: Land Fills and Debris Management Sites in Bent County

TRANSFER STATION	OWNER/OPERATOR	ACCESS	ACCEPTS
Las Animas Transfer Station	NW 4 Less 10.5AC N of River, N2N2SW4; 4 blocks NE of Las Animas off More Ave & CRGG Las Animas, CO 81054		
McClave Transfer Station	31401 CR 30 McClave, CO 81057		

Note: none of the transfer stations located within Bent County will accept radiological material, hazardous chemicals/wastes, or animal carcasses.

B.1 Temporary Debris Storage & Reduction Site (TDSR) – Las Animas

Date of Site Evaluation: 10/22/2018

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Las Animas Transfer Site

PROPERTY OWNERS NAME: City of Las Animas

PROPERTY OWNERS ADDRESS: 532 Carson Ave. Las Animas, CO 81054

SITE GPS COORDINATES: N 38°4'39.03" W 103°12'37.33"

PROPERTY OWNERS PHONE NUMBER: 719-456-0422

ESTIMATED PROPERTY SIZE: 30.0 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Transfer Station
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	Nothing near
Property Topography	Flat
Open Water Sources	Site waste ponds adjacent to site, Arkansas River 300 yards, Golf course pond 50 yards
Groundwater Wells	No
Access to Electricity/Sewer/Water	No
Soil Integrity	
Surface Water Drainage	
Prevailing Wind Direction	Out of the North
Ingress/Egress	One way
Lighted Area	No
Site Security	No
Buffer Distance	25 Yards
Property Developed	Minimal
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Las Animas, Fort Lyon

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

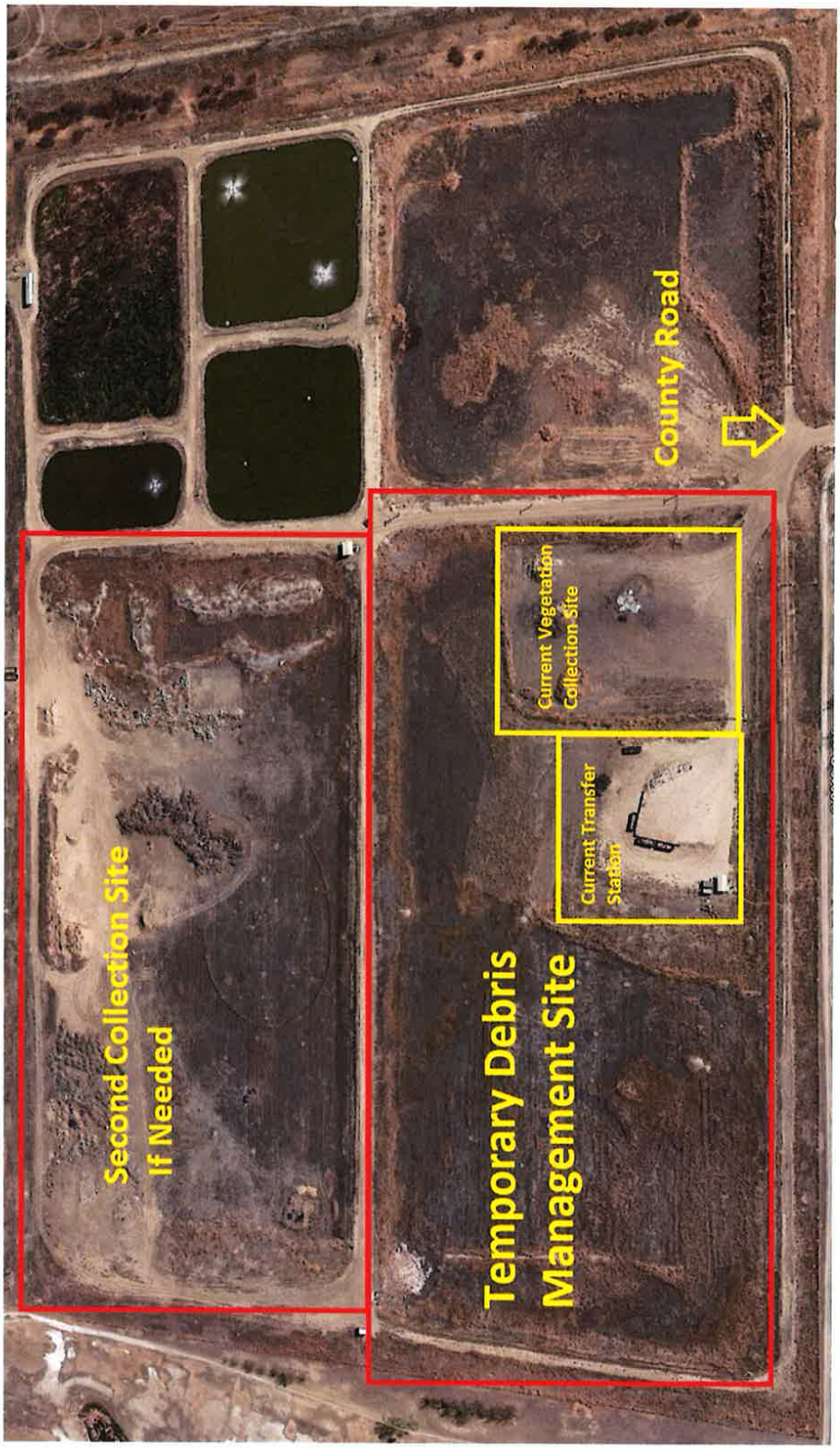
☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Landfill 30 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.


Second Collection Site
If Needed
Temporary Debris
Management Site
Current Transfer
Station
Current Vegetation
Collection Site
County Road

B.2 Temporary Debris Storage & Reduction Site (TDSR) – McClave

Date of Site Evaluation: 10/22/2018

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: McClave Transfer Site

PROPERTY OWNERS NAME: Bent County

PROPERTY OWNERS ADDRESS: 725 Bent Ave. Las Animas, CO 81054

SITE GPS COORDINATES: N 38°5'28.03" W 102°51'4.49"

PROPERTY OWNERS PHONE NUMBER: 719-662-1202

ESTIMATED PROPERTY SIZE: 10.0 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Transfer Station
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	Nothing near
Property Topography	Flat
Open Water Sources	Arkansas River 1 Mile South
Groundwater Wells	No
Access to Electricity/Sewer/Water	No
Soil Integrity	
Surface Water Drainage	
Prevailing Wind Direction	Out of the North
Ingress/Egress	One way
Lighted Area	No
Site Security	No
Buffer Distance	¼ Mile
Property Developed	Minimal
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Hasty, McClave, Cadoa

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Landfill 50 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.




Current Transfer Station
Ingress/Egress
Temporary Debris Management Site
County Roads
30

Appendix B.3: Recycling Facilities in Bent County

NAME	OWNER/OPERATOR	ACCESS	Materials
South East and East Central Recycling Association	US Hwy 50 Las Animas, CO 81054	Private	

Appendix B.4: Waste Tire Transport Providers in Bent County

BUSINESS NAME	OWNER/OPERATOR	ACCESS	TYPE
City of Las Animas	Ken K. Wagner 532 Carson Avenue Las Animas, CO 81054	Public	Waste Tire Hauler, Waste Tire Collection Facility

Appendix C: Government Equipment Lists

C.1 Bent County:

Inventory #	Type	Kind	Description	Year	VIN
974	III	Loader	950H Cat Loader	2007	K5K01699
500	I	Backhoe	450F Backhoe	2013	HJR00205
981		Tractor	4450 John Deer Tractor		031214R
343	II	Grader	John Deere 770-G	2018	1DW770GXAHF684298
978	II	Grader	John Deere 770-G	2013	1DW770GXHDE655006
010	II	Grader	CAT Blade 140H	1999	01AL00723
980 /046	II	Grader	CAT Blade 140H	1998	09TN00667
7		Roller	Wacker Asphalt Roller	2011	5941611
983		Chipspreader	Etnyre Chipspreader	1999	K5658
982	III	Sweeper	Walden Broom	1980	620294
1		Roller	Hyster Roller	1963	589L826E
2		Roller	Compactor Roller	2001	013076
5		Mower	Rhino Mower	1992	10808
4		Mower	Rhino Mower	2001	16022
		Welder	Miller Trailblazer Welder	2009	LK04014CO
			Baker V Plow	1960	278267
			Baker V Plow	1970	8003
			Wausau V Plow	1976	2903
			V Plow	1980	
487	IV	Pickup	Chevrolet 1500	2014	1GCNKPEC8E2311481
826		Pickup	Chevrolet 1500	2009	1GTEK14C292186000
614		Pickup	Chevrolet 2500	2003	1GCH14V2YE219535

591		**Pickup**	**Chevrolet 1500**	**2000**	**1GCEK14V2YE372935**
545		**Pickup**	**Chevrolet 2500**	**1998**	**1GCGK24R5W2Z71203**
546		**Pickup**	**Chevrolet 1500**	**1996**	**1GCE14R9T2213737**
548		**Pickup**	**Chevrolet 1500**	**1990**	**2GCED14K21111**
550		**Pickup**	**Chevrolet 2500**	**1985**	**GCGK4M7P51132199**
506		**Truck**	**International Prostar**	**2009**	**245CUAPR99C099233**
466		**Truck**	**IHC Watertruck**	**2007**	**2HSCSHAPR07C472287**
488		**Truck**	**IHC 7600**	**2016**	**3HTGSSNT6GN379307**
827		**Truck**	**IHC 7600**	**2007**	**IHTWY5BT57J473406**
990		**Truck**	**IHC Semi**	**1999**	**2HSFDASR8XCO71835**
028		**Truck**	**IHC Semi**	**1998**	**2HSFBAMR7WCO46016**
539		**Truck**	**IHC 9400**	**1996**	**2HTFHASTOTC017915**
542		**Truck**	**GMC Brigadier**	**1985**	**1G1P96123FB500829**
543		**Truck**	**Chevrolet**	**1974**	**CCE624V108905**
991		**Truck**	**IHC Semi 4800**	**1984**	**2H5VDJXROECAO770**
540		**Truck**	**IHC 2500**	**1986**	**14SZJJRU9GHA34088**
985		**Trailer**	**Ranco Belly Dump**	**1994**	**1A9B501XL008314**
986		**Trailer**	**Ranco Belly Dump**	**1988**	**L008625**
038		**Trailer**	**Load King**	**1988**	**5LKT32226W028400**
984		**Trailer**	**Low Boy**	**1993**	**19WA11023R5061091**
012		**Trailer**	**Utility Trailer**	**2011**	**4P546106B2160475**
989		**Trailer**	**Homemade Trailer**	**1979**	**ID291740**

C.2 Las Animas:
The Town would rely upon the county and the county's heavy equipment for debris removal.

C.3 Hasty:
The Town would rely upon the county and the county's heavy equipment for debris removal.

C.4 McClave:

The Town would rely upon the county and the county's heavy equipment for debris removal.

Appendix D: Countywide Debris Contractors

Company	County	Phone	Equipment

Bent County does not have any heavy equipment contracts and would rely upon heavy equipment and debris contracts within the region or surrounding areas.

Appendix E: Primary Road Clearance Priorities

E.1 Bent County

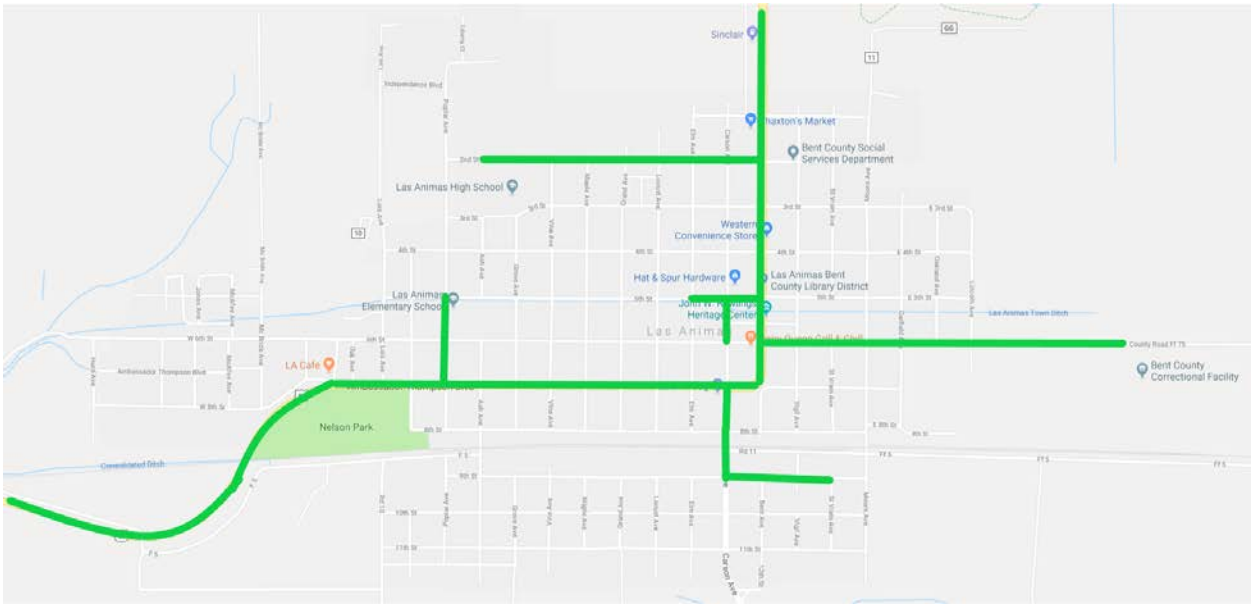
Highway 50 through the County – This is a CDOT responsibility but is a priority for the County's transportation and mutual aid resources.

Highway 196 from US Hwy 50 to McClave

Highway 183

County Road GG.5 off of US Hwy 50 to the Bent County Sheriff's Office.

E.2 Las Animas



6th Street from US Hwy 50 to Bent County Correctional Facility

5th Street from US Hwy 50 to Elm street/Las Animas/Bent County Fire Protection District Station

Carson Street from 5th to 6th Street

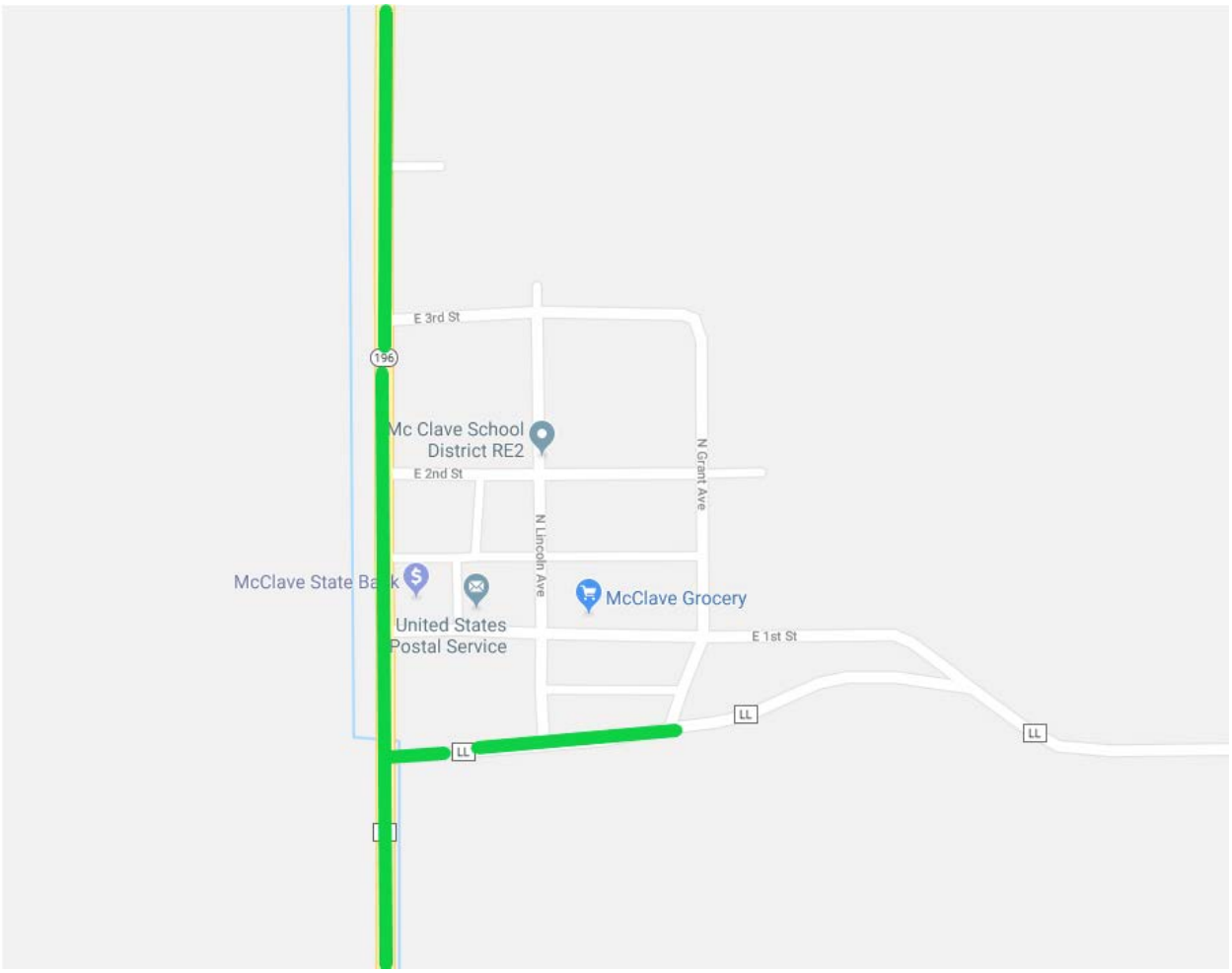
Carson Street from 7th to 8th Street

2nd Street from Hwy 50 to Ash

Popular Ave from Hwy 50 to 5th Street

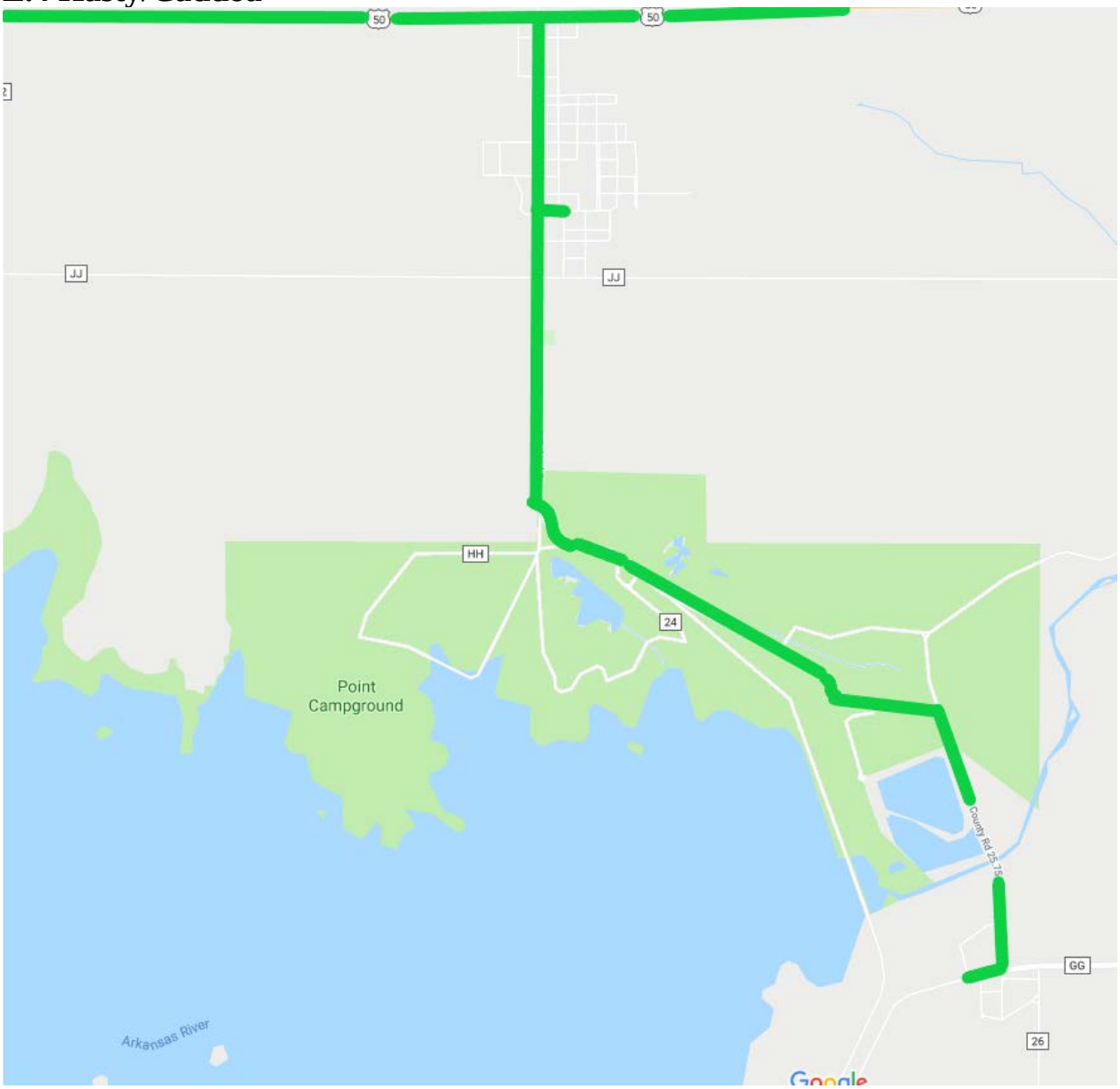
9th Street from Hwy 101 to St. Vrain

E.3 McClave



Lane LL from Hwy 196 to Grant Ave

E.4 Hasty/Caddoa



Lane 24 from Hwy 50 to Army Corp of Engineers and State Parks Office

1st Street to Lane 24

Appendix F: Bent County Critical Facilities

Las Animas Fire
435 Bent
Las Animas, CO 81054

Bent County Ambulance
52 North Bent
Las Animas, CO 81054

Hasty Fire and Ambulance
100 East 1st
Hasty, CO 81044

McClave Fire and Ambulance
Lane LL and Lincoln Ave
McClave, CO 81057

Bent County Sheriff
11000 road GG.5
Las Animas, CO 81054

Bent County Court House
725 Bent Ave
Las Animas, CO 81054

Bent County Road and Bridge West End
9th street and Vigil Ave
Las Animas, CO 81054

Bent County Road and Bridge East End
1st street and Hwy 196
McClave, CO 81057

Bent County Correctional Facility
11560 Road FF.75
Las Animas, CO 81054

Las Animas Light and Power Warehouse
Moore Ave and 8th Street

Las Animas, CO 81054

Bent County Community Center (sheltering)
1214 Ambassador Thompson Blvd.
Las Animas, CO 81054

Appendix G: Bent County Community Specific Debris Estimates

G.1 Las Animas – 114,840cy

G.2 McClave – 2,970cy

G.3 Hasty – 24,700cy

G.4 Fort Lyon – 34,650cy

G.5 Caddoa – 7,425cy

Appendix H: Bent County Public Information Strategy for Debris Management

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www.bentcounty.net is the county's web site that is designed to keep Bent County residents and businesses informed of events.
www.secahr.com is the Southeast Colorado All-Hazards Region Website
www.colorado.gov/pacific/cityoflasanimas is the Town of Las Animas' web site for information

Media – This includes local television, radio, newspapers, or community newsletters that reach the impacted area(s).

Social Media- Information will be posted on various official county social media sites including but not limited to Facebook and Twitter.

Public forums – This includes interactive meetings at a local government building(s), schools, churches, etc.

Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a call center if the size of the debris management process warrants it. This may include a direct Bent County hotline or information may be routinely submitted to the regional 2-1-1 system.

Annex 3: County Specific - Crowley County

CROWLEY COUNTY, COLORADO DEBRIS MANAGEMENT PLAN

COUNTY SPECIFIC ANNEX TO THE SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMENT PLAN

Last updated January 2020

Appendix A: Crowley County Key Points of Contact

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
Reitan	John	**Crowley County Emergency Management** 611 E 9th Street Ordway, CO 81063	(719) 267-5230 (W) (719) 267-5555 (D) (719) 267-3060 (F) (719) 469-0048 (C)	EM-830	john.reitan@crowleycounty.net
Ritter	Richard	**Otero County Health Department (Otero & Crowley)** 13 West 3rd Street, Room 111 La Junta, CO 81050	(719) 383-3045 (O) (719) 383-3060 (F) (719) 469-4045 (C)		rritter@oterogov.org
Allumbaugh	T.E. (Tobe)	**Crowley County Commissioner District 3** 603 Main Street Suite 2 Courthouse Annex Ordway, CO 81063	(719) 267-5262 (O) (719) 980-2724 (C)		tobe@crowleycounty.net
Arbuthnot	Blain	**Crowley County Commissioner District 2** 603 Main Street Suite 2 Courthouse Annex Ordway, CO 81063	(719) 267-5259 (O) (719) 950-4491 (C)		blain@crowleycounty.net

Elliott	Roy	**Crowley County** **Commissioner District 1** 603 Main Street Suite 2 Courthouse Annex Ordway, CO 81063	(719) 267-5664 (O) (719) 267-3114 (F)		roy@crowleycounty.net
Apker	Mike	**Crowley County** **Administrative Assistant** 603 Main Street Suite 2 Courthouse Annex Ordway, CO 81063	(719) 267-5555 (O) (719) 267-3114 (F)		mike@crowleycounty.net

Appendix B: Landfill and Debris Management Sites in Crowley County

NAME	OWNER/OPERATOR	ACCESS	ACCEPTS
Ordway Airport TDSR	Crowley County	Y	

Note:

B.1 Temporary Debris Storage & Reduction Sites (TDSR) – Ordway

Date of Site Evaluation: 11/01/2018

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Ordway Airport TDSR

PROPERTY OWNERS NAME: Crowley County

PROPERTY OWNERS ADDRESS: Lane 17.5, South of Highway 96

SITE GPS COORDINATES: N 38°11'06" W 103°45'27"

PROPERTY OWNERS PHONE NUMBER: 719-267-5262

ESTIMATED PROPERTY SIZE: 50.0 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Undeveloped
Any Proposed Future land Uses	No
Environmental Issues	None known
Proximity to Schools, Churches, Community Centers	Approximately 1 Mile
Property Topography	Flat
Open Water Sources	None
Groundwater Wells	None
Access to Electricity/Sewer/Water	No
Soil Integrity	Packed
Surface Water Drainage	Fair
Prevailing Wind Direction	East to West
Ingress/Egress	Limited
Lighted Area	Yes with Portable Lighting
Site Security	No Fence but would be provided
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	Yes
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Ordway, Crowley, Sugar City, Olney Springs

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Landfill 15 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



Appendix C: Government Equipment Lists

C.1 Crowley County:

MOBEQU	387HND	ROAD AND BRIDGE	DIST 1	AIR COMPRESSOR	1982	SULLAIR	185 GPQ COMPRES
MOBEQU	401BHH	ROAD AND BRIDGE	DIST 1	CAT ROAD GRADER	2008	CATEPILLAR/140	140 AWD
MOBEQU	413AVP	ROAD AND BRIDGE	DIST 1	CHIP SPREADER	1970	ETE SP	CHIP SPREADER
MOBEQU	415AVP	ROAD AND BRIDGE	DIST 1	FORK LIFT	1969	ANT FORK LIFT	
MOBEQU	425AVP	ROAD AND BRIDGE	DIST 1	LOADER	2004	JOHN DEERE	624J
MOBEQU	436AVP	ROAD AND BRIDGE	DIST 1	BELLY DUMP TRAILER	1999	WIT TL	BELLY DUMP TRAILER
MOBEQU	437AVP	ROAD AND BRIDGE	DIST 1	BELLY DUMP TRUC	1995	RANCO	BELLY DUMP
MOBEQU	440AVP	ROAD AND BRIDGE	DIST 1	TRAILER	1989	HMD TRAILER	TRAILER
TRKTRA	443AVP	ROAD AND BRIDGE	DIST 1	TRACTOR TRAILER	1992	KENWORTH TRUCK	TRACTOR TRL
TRKTRA	446AVP	ROAD AND BRIDGE	DIST 1	TRACTOR TRAILER	1993	KENWORTH	TRACTOR TRL
MEDTRK	544OSQ	ROAD AND BRIDGE	DIST 1	BUCKET TRUCK	1990	GMC	7000 BUCKET TRK
MOBEQU	689HOK	ROAD AND BRIDGE	DIST 1	ROAD GRADER	2015	JOHN DEERE	670G
MOBEQU	726JJO	ROAD AND BRIDGE	DIST 1	TRAILER	1985	WISCONSIN	725-12
MOBEQU	727JJO	ROAD AND BRIDGE	DIST 1	BACKHOE	1989	JCB	1550
MOBEQU	729JJO	ROAD AND BRIDGE	DIST 1	SWEEPER	1997	BROCE	300
MOBEQU	848BRS	ROAD AND BRIDGE	DIST 1	TRACTOR - INTER	1981	1981 TRACTOR	5088
MOBEQU	850BRS	ROAD AND BRIDGE	DIST 1	KOMATSU DOZER	1986	KOMATSU DOZER	1986
PICKUP	865CIU	ROAD AND BRIDGE	DIST 1	2006 FOREMAN PI	2006	FORD	F150
MOBEQU	866FHU	ROAD AND BRIDGE	DIST 1	BROCE BROOM	1991	BROCE BROOM	BROOM RJ-300
MOBEQU	867FHU	ROAD AND BRIDGE	DIST 1	GENERATOR	1963	OVER-LOWE	T-P5A4-DC
MEDTRK	868CIU	ROAD AND BRIDGE	DIST 1	DUMP TRUCK	1989	INTERNATIONAL	DUMP TRUCK
MOBEQU	870FHU	ROAD AND BRIDGE	DIST 1	WOOD CHIPPER	1989	ASPLUNDH	CHIPPER
MOBEQU	AFO878	ROAD AND BRIDGE	DIST 1	TRAILER	1995	UNKNOWN	TRAILER
MEDTRK	OAM283	ROAD AND BRIDGE	DIST 1	DISTRIBUTOR TRUCK	2003	FREGITHLINER T	FL-80 DIST TRK
PICKUP	QTL748	ROAD AND BRIDGE	DIST1	PICKUP FOREMAN	2016	FORD	F150 4X4
MOBEQU	AFO877	ROAD AND BRIDGE	DIST1	ROLLER PNEUMATIC	1994	CATEPILLAR	PS130
MOBEQU	018HNB	ROAD AND BRIDGE	DIST2	BELLY DUMP	1995	RANCO	BELLY DUMP TRAILER
LTTRK	023QFI	ROAD AND BRIDGE	DIST2	ONE TON TRUCK	1994	CHEVY	3500
MEDTRK	026QFI	ROAD AND BRIDGE	DIST2	WATER TRUCK	1992	IHC	WATER TRUCK
MOBEQU	088FHV	ROAD AND BRIDGE	DIST 2	CARGO TRAILER	2007	CCSAC TRAILER	CCSAC TRAILER
MOBEQU	090FHV	ROAD AND BRIDGE	DIST2	JOHN DEERE LOADER	2011	JOHN DEERE	LOADER 624K
MOBEQU	159MQH	ROAD AND BRIDGE	DIST 2	JOHN DEERE TRACTOR	2013	JOHN DEERE	TRACTOR 6140D
HVYTRK	238AVK	ROAD AND BRIDGE	DIST2	DUMP TRUCK	1990	KENWORTH	DUMP TRUCK
MOBEQU	405AVP	ROAD AND BRIDGE	DIST2	GRADER	2001	JOHN DEERE	GRADER
MOBEQU	414AVP	ROAD AND BRIDGE	DIST2	WORK CREW TRAIL	2002	HOMEMADE	TRAILER
MOBEQU	417AVP	ROAD AND BRIDGE	DIST2	REEFER TRAILER	1987	GD	REEFER BOX
TRKTRA	442AVP	ROAD AND BRIDGE	DIST2	TRACTOR TRAILER	1992	KENWORTH	TRACTOR TRAILE
TRKTRA	445AVP	ROAD AND BRIDGE	DIST2	TRACTOR TRAILER	1992	KENWORTH TRUCK	TRAC TRAILER
MEDTRK	602SWQ	ROAD AND BRIDGE	DIST2	DUMP TRUCK	1990	INTERNATIONAL	DUMP TRUCK
MOBEQU	688HOK	ROAD AND BRIDGE	DIST 2	ROAD GRADER	2015	JOHN DEERE	GRADER
MOBEQU	691HOK	ROAD AND BRIDGE	DIST 2	FORAGE HARVESTER	1983	JOHN DEERE	TRACTOR
MOBEQU	779FHU	ROAD AND BRIDGE	DIST2	BOTTOM DUMP TRA	1998	RANCO TRAILER	BOTTOM DUMP
MOBEQU	780FHU	ROAD AND BRIDGE	DIST2	RUBBER TIRE P/T	2005	WRT	ROLLER
PICKUP	866CIU	ROAD AND BRIDGE	DIST2	2006 FOREMAN PI	2006	FORD	F150
MEDTRK	869CIU	ROAD AND BRIDGE	DIST2	DUMP TRUCK	1983	INTERNATIONAL	DUMP TRUCK
PICKUP	QTL749	ROAD AND BRIDGE	DIST2	PICKUP FOREMAN	2016	FORD PICKUP	F150 4X4
MEDTRK	021QFI	ROAD AND BRIDGE	DIST3	DUMP TRUCK	1994	INTERNATIONAL	DUMP TRUCK
LTTRK	022QFI	ROAD AND BRIDGE	DIST3	1 TON TRUCK	1996	CHEVY	3500 DUMP
MOBEQU	025HNB	ROAD AND BRIDGE	DIST3	BELLY DUMP TRL	1991	RANCO BELLY DU	1991
MEDTRK	025QFI	ROAD AND BRIDGE	DIST3	DUMP TRUCK	1991	INTERNATIONAL	MID RANGE DUMP
TRKTRA	030HNB	ROAD AND BRIDGE	DIST3	VOLVO TRACTOR T	2001	VOLVO	VNM64T
TRKTRA	031HNB	ROAD AND BRIDGE	DIST3	VOLVO TRACTOR T	2001	VOLVO	VNM64T
HVYTRK	199JAN	ROAD AND BRIDGE	DIST3	WATER TRUCK	1993	PETERBILT	377 WATER TRUCK
HVYTRK	240AVK	ROAD AND BRIDGE	DIST3	TRUCK TANDEM DU	1994	INT TRUCK	TANDEM
MEDTRK	288AVK	ROAD AND BRIDGE	DIST3	DUMP TRUCK	1983	INT TRUCK	GREEN
MOBEQU	394BFE	ROAD AND BRIDGE	DIST3	BELLY DUMP TRL	1995	RANCO TRL	1995
MOBEQU	395BFE	ROAD AND BRIDGE	DIST3	LOADER - JOHN D	2007	JOHN DEERE	624 J LOADER
MOBEQU	400BHH	ROAD AND BRIDGE	DIST3	JOHN DEERE BACKHOE	2003	DEERE BACKHOE	BACKHOE 310G
MOBEQU	404AVP	ROAD AND BRIDGE	DIST3	ROAD GRADER	2000	JOHN DEERE	GRADER
MEDTRK	709UQV	ROAD AND BRIDGE	DIST 3	DUMP TRUCK	1991	INTERNATIONAL	4000 MID RANGE
MOBEQU	728JJO	ROAD AND BRIDGE	DIST 3	ROAD BROOM	1997	BROCE	300
MOBEQU	764EUL	ROAD AND BRIDGE	DIST3	ROAD BROOM	1990	BROCE/BROOM	BROOM RJ-300
MOBEQU	766EUL	ROAD AND BRIDGE	DIST3	PATCHER - DURAC	1996	DURACO	81-DJ
MOBEQU	776FHU	ROAD AND BRIDGE	DIST3	RUBBER TIRE ROLLER	2007	WRT EQUIP	ROLLER PT-15
MOBEQU	778FHU	ROAD AND BRIDGE	DIST3	PNEUMATIC ROLLER	1997	GALION DRESSER	ROLLER P-3000

MEDTRK	QTL791	ROAD AND BRIDGE	DIST3	DUMP TRUCK	1993	INTERNATIONAL	F-2574
PICKUP	867CIU	ROAD AND BRIDGE	DIST3	2006 FOREMAN PI	2006	FORD	F150
MOBEQU	869FHU	ROAD AND BRIDGE	DIST3	TRAILER	1994	TRAILER KING	TKT402400
MEDTRK	870CIU	ROAD AND BRIDGE	DIST3	DUMP TRUCK	1986	INTERNATIONAL	DUMP TRUCK
MOBEQU	AFO880	ROAD AND BRIDGE	DIST 3	TRACTOR	1999	NEW HOLLAND	B110C4
MOBEQU	CSZ635	ROAD AND BRIDGE	DIST3	ROAD GRADER	2018	CATEPILLAR	12M3 AWD
PICKUP	QTL750	ROAD AND BRIDGE	DIST3	FOREMAN PICKUP	2016	FORD	F150 4X4
MOBEQU	081HLR	ROAD AND BRIDGE	CTF DIST3	TRACTOR	2005	CASE	TRACTOR JX95
MOBEQU	091FHV	ROAD AND BRIDGE	CTF DIST3	RHINO MOWER	2013	RHINO	MOWER FR 120
PICKUP	OAM282	ROAD AND BRIDGE	CTF DIST2	PICKUP FOREMAN	1994	FORD	F150 LET
MOBEQU	396BFE	ROAD AND BRIDGE	CTF DIST2	TRACTOR - CATEP	2006	CHALLENGER	TRACTOR CATEPILLAR

MOBEQU	022HNB	ROAD AND BRIDGE	DIST 1	SIGN TRAILER	1996	CDPT	TRAILER
MOBEQU	023HNB	ROAD AND BRIDGE	DIST 1	SIGN TRAILER	1996	CDOT	SIGN TRAILER
MOBEQU	024HNB	ROAD AND BRIDGE	DIST 1	BELLY DUMP TR	1988	RANCO TRAILER	1988
LTTRK	024QFI	ROAD AND BRIDGE	DIST 1	ONE TON TRUCK	1995	CHEVY	3500
MOBEQU	027HNB	ROAD AND BRIDGE	DIST 1	RUBBER TIRE P/T	2006	WRT	ROLLER
TRKTRA	029HNB	ROAD AND BRIDGE	DIST 1	VOLVO TRACTOR T	2001	VOLVO	VNM64T
MEDTRK	030QFI	ROAD AND BRIDGE	DIST 1	DUMP TRUCK	1989	INTERNATIONAL	DUMP TRUCK
MEDTRK	035MQG	ROAD AND BRIDGE	DIST 1	DUMP TRUCK	1998	GMC MED TRK	3500
MOBEQU	082HLR	ROAD AND BRIDGE	DIST 1	FORAGE HARVESTER	1976	JOHN DEERE	5400
MOBEQU	084FHV	ROAD AND BRIDGE	DIST 1	STEEL ROLLER -	1971	GENERAL	STEEL ROLLER
MOBEQU	087FHV	ROAD AND BRIDGE	DIST 1	PATCHER - CRAFTCO	2000	CRAFTCO	PATCHER
MOBEQU	089FHV	ROAD AND BRIDGE	DIST 1	ROLLER ASPHALT	1992	MAULDLIN	RIDE ON ROLLER
MOBEQU	092FHV	ROAD AND BRIDGE	DIST 1	TRACTOR	2001	NEW HOLLAND	TRACTOR
MOBEQU	161MQH	ROAD AND BRIDGE	DIST1	BOBCAT	1996	SKID STEER	853H
MEDTRK	235AVK	ROAD AND BRIDGE	DIST 1	OIL DIST TRUCK	1975	CHEVY TRUCK	OIL DISTRIB
TRKTRA	239AVK	ROAD AND BRIDGE	DIST 1	FREIGHT LINER T	1989	FREGITHLINER T	TRUCK
PICKUP	249AVK	ROAD AND BRIDGE	DIST 1	PICKUP FOREMAN	1994	FORD PICKUP	F150
MEDTRK	286AVK	ROAD AND BRIDGE	DIST 1	INTERNATIONAL TRK	1985	INT/LT	TRUCK

C.2 Ordway:

One Front End Loader
One small Dump Truck

C.3 Sugar City

One Back Hoe

C.4 Olney Springs

One Back Hoe
One Small Flatbed Truck

Appendix D: Countywide Debris Contractors

Company	County	Phone	Equipment

Crowley County does not have any contractors located in the county and would use contractors listed throughout the region.

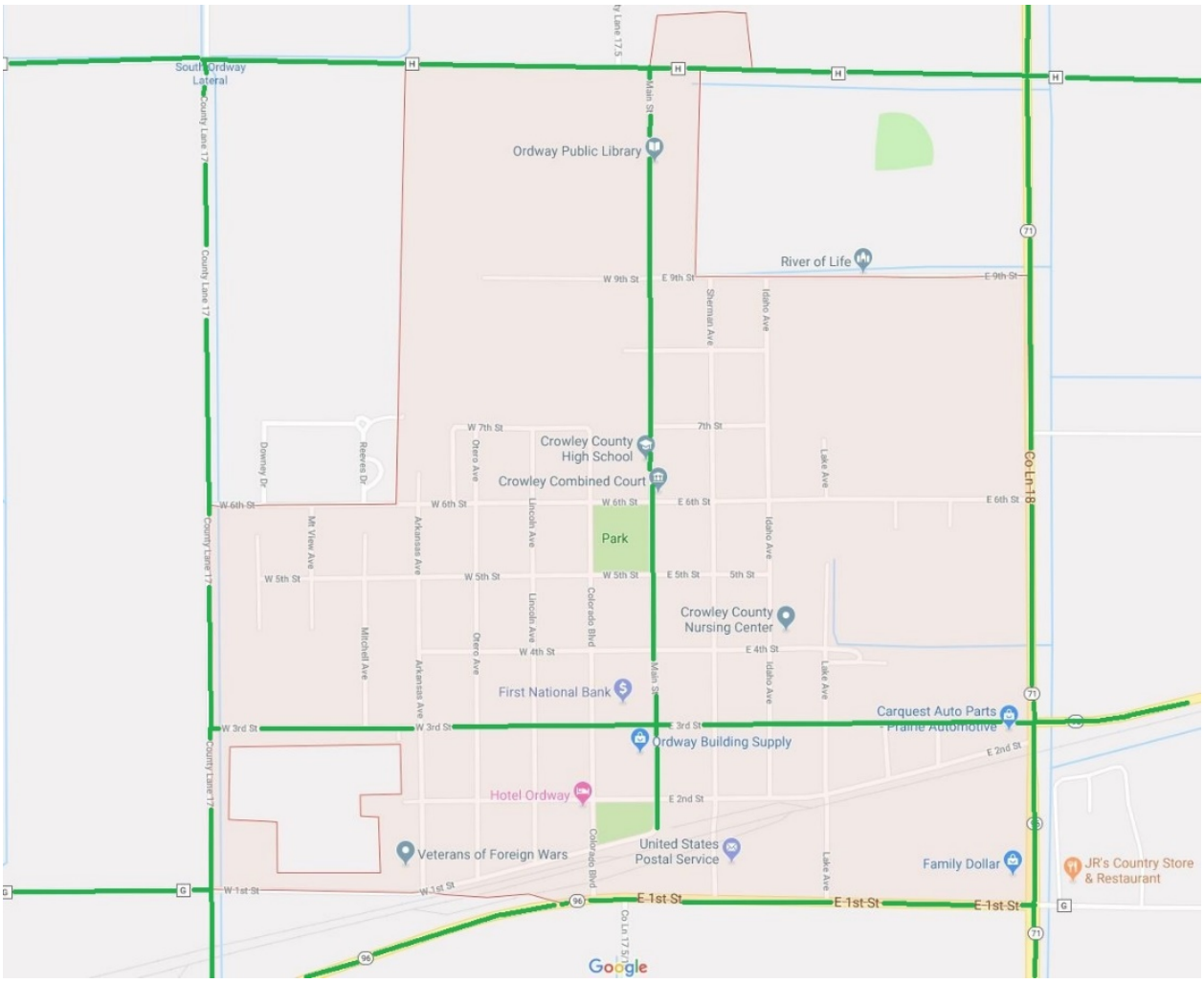
Appendix E: Primary Road Clearance Priorities

E.1 – Crowley County

1. Road G from Lane 10 East to Hwy 71
2. Road H from Lane 10 Eest to Hwy 71
3. Lane 10 North from Hwy 96 to Road H
4. Lane 7 North from Hwy 96 to Road D
5. Lane 12 North from Hwy 96 to Road H
6. Lane 13 South from Hwy 96 to AVCF entrance
7. Lane 23 South from Hwy 96 to Road F

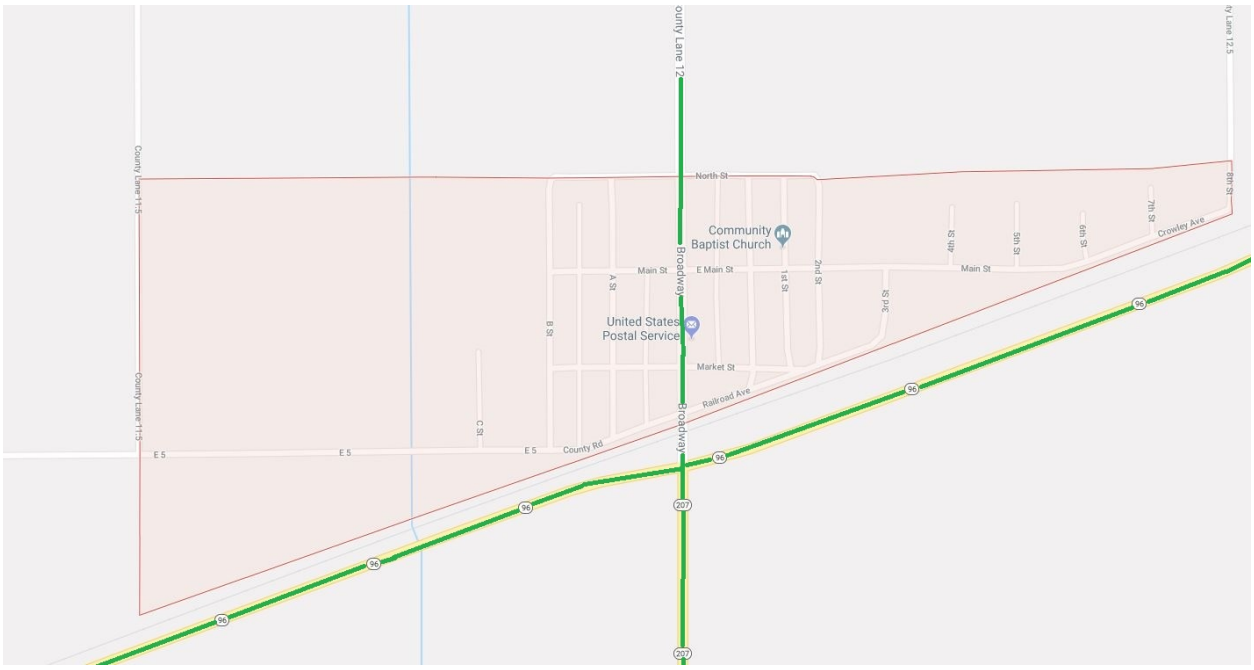
E.2 – Ordway

1. Main Street
2. Colorado State Highway 96
3. 3rd Street
4. County Road G
5. County Road H
6. Colorado State Highway 71
7. Lane 17 County Lane G to County Lane H



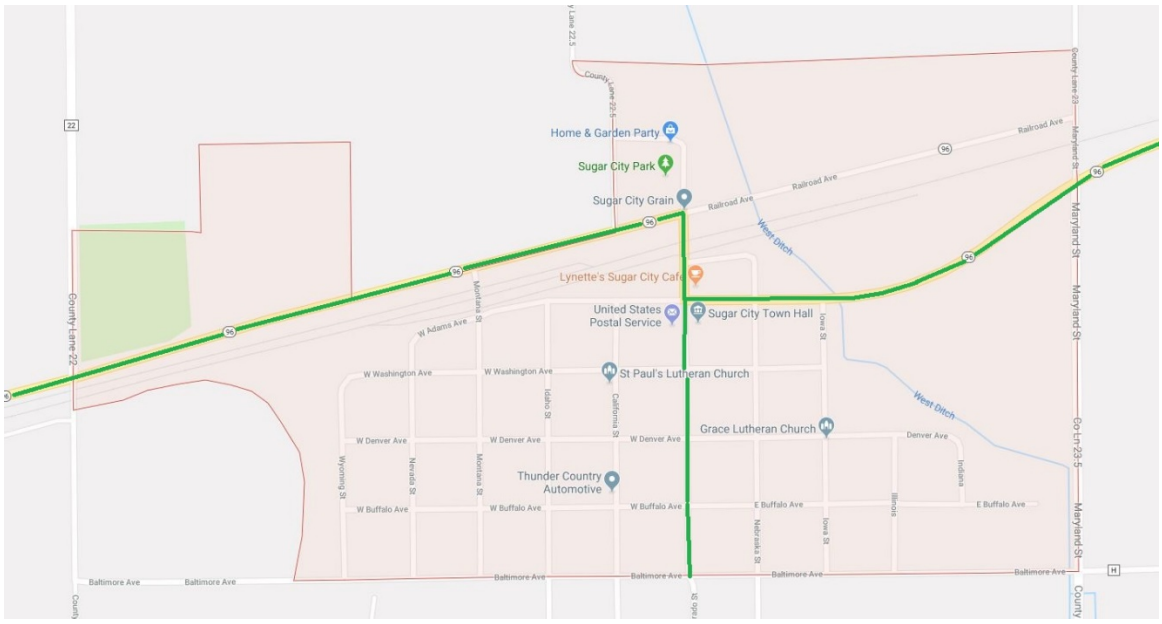
E.3 – Crowley

1. Broadway Street/Lane 12 North to Road G
2. Colorado Highway 96
3. Colorado Highway 207



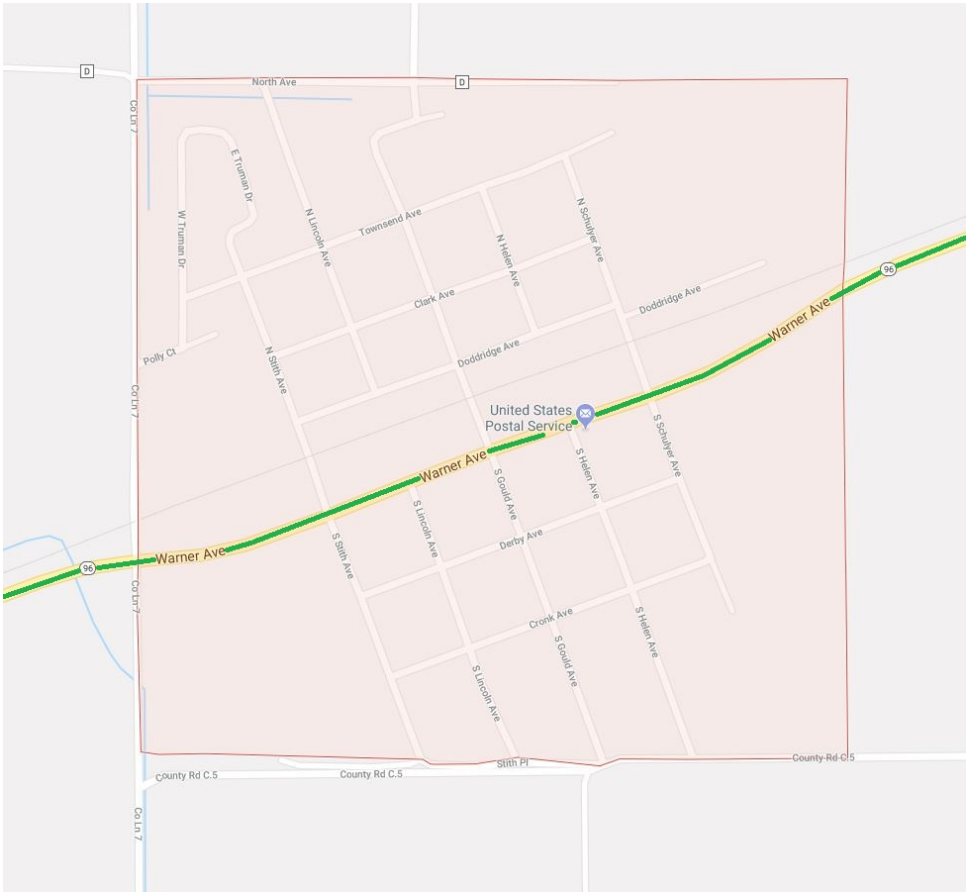
E.4 – Sugar City

1. Main Street
2. Colorado Highway 96



E.5 – Olney Springs

1. Colorado State Highway 96/Main Street



Appendix F: Crowley County Critical Facilities

F.1 Ordway area critical facilities

Town Hall
232 Main Street
Ordway, CO 81063

County Shop
South Lake Street
Ordway, CO 81063

City Shop
South Lake Street
Ordway, CO 81063

Crowley County High School
602 Main Street
Ordway, CO 81063

Crowley County Elementary School
630 Main Street
Ordway, CO 81063

Crowley County Middle School
1001 Main Street
Ordway, CO 81063

Crowley County Nursing Center
401 Idaho Street
Ordway, CO 81063

Crowley County Sheriff's Office (Dispatch and Jail)
110 E. 6th Street
Ordway, CO 81063

Ordway Fire Department
611 E. 9th Street
Ordway, CO 81063

Black Hills Power Station

JRs Country Store
18055 Road H
Ordway, CO 81063

Bens Gas House
131 Main Street
Ordway, CO 81063

Courthouse
603 Main Street
Ordway, CO 81063

F.2 Sugar City

Town Hall & Fire Station
205 Colorado Street
Sugar City, CO 81067

Colorado Department of Transportation Shop
Lane 23 and Railroad Avenue
Sugar City, CO 81067

County Road and Bridge Shop
Lane 23 and Railroad Avenue
Sugar City, CO 81067

F.3 Crowley

Town Hall
300 Main Street
Crowley, CO 81033

Arkansas Valley Correctional Facility
12750 State Highway 96 & Lane 13
Crowley, CO 81033

F.4 Olney Springs

Town Hall
401 Warner Street (Colorado Highway 96)
Olney Springs, CO 81062

Core Civic (Crowley County Correctional Facility)
6564 Colorado Highway 96
Olney Springs, CO 81062

County Road and Bridge Shop
7434 Road C.5
Olney Springs, CO 81062

Appendix G: Crowley County Community Specific Debris Estimates

G.1 Ordway – 6,509cy
G.2 Sugar City – 1,951cy
G.3 Crowley – 1,205cy

Appendix H: Crowley County Public Information Strategy for Debris Management

Public information related to debris management will be submitted to the public in as many ways as possible. Although there will be an operational public information officer designated by the Debris Project Manager, this position will work in cooperation with the Crowley County Public Information Officer (or ESF-15 when activated) to facilitate the distribution of public information. The following communication vehicles will be considered when performing this function:

CodeRED® is the county's mass notification system that is designed to keep Crowley County residents and businesses informed of emergencies and non-emergency events. Crowley County Emergency Management has also made application to FEMA for IPAWS Alert and Warning access. Their COG ID is 201652.

NOAA Weather Radio – NOAA Weather Radio may be used to issue civil type messages on frequency of 162.425 or 162.500. This can be activated through the EAS, IPAWS system or by contact the National Weather Service in Pueblo by calling (719) 948-9429.

Websites: Crowley County and jurisdictions inside Crowley County have various websites that information can be posted on.
www.colorado.gov/crowleycounty is the county's web site that is designed to keep Crowley County residents and businesses informed of events.
www.secahr.com is the Southeast Colorado All-Hazards Region Website
www.townofordway.com is the Town of Ordway web site for information

Media – This includes local television, radio, newspapers, or community newsletters that reach the impacted area(s).

Social Media- Information will be posted on various official county social media sites including but not limited to Facebook and Twitter.

Public forums – This includes interactive meetings at a local government building(s), schools, churches, etc.

Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a call center if the size of the debris management process warrants it. This may include a direct Crowley County hotline or information may be routinely submitted to the regional 2-1-1 system.

Annex 4: County Specific - Kiowa County

KIOWA COUNTY, COLORADO DEBRIS MANAGEMENT PLAN

COUNTY SPECIFIC ANNEX TO THE SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMENT PLAN

Last updated January 2020

Appendix A: Kiowa County Key Points of Contact

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
Witte	Teresa	**Kiowa County Emergency Management** P.O. Box 172 1305 Goff Street Eads, CO 81036	(719) 688-0506 (C) (719) 688-5403 (P) (719) 438-2288 (W)	EM-840	twittedem@gmail.com
Hillman	Meagan	**Prowers County Public Health (Kiowa & Prowers)** 1001 S. Main Street Lamar, CO 81052	(719) 336-8721 (O) (719) 336-9763 (F) (719) 688-0458 (C)		mhillman@prowerscounty.net
Idler	Jo Lynn	**Kiowa County Public Health (Kiowa & Prowers)** 1001 S. Main Street Lamar, CO 81052	(719) 336-8721 (O) (719) 336-9763 (F) (719) 940-3159 (C)		jidler@prowerscounty.net
Scott	Richard	**Kiowa County Commissioner** 1305 N Goff Street P.O. Box 100 Eads, CO 81036	(719) 438-5810 (O) (719) 438-5615 (F)		Kiowaco100@gmail.com

Robertson 	Howard "Butch"	**Kiowa County Commissioner** 1305 N Goff Street P.O. Box 100 Eads, CO 81036	(719) 438-5810 (O) (719) 438-5615 (F)		Kiowaco100@gmail.com
Oswald 	Donald	**Kiowa County Commissioner** 1305 N Goff Street P.O. Box 100 Eads, CO 81036	(719) 438-5810 (O) (719) 438-5615 (F) (719) 688-8877 (C)		Kiowaco100@gmail.com
Adamson 	Tina	**Kiowa County Administrator** 1305 N Goff Street P.O. Box 100 Eads, CO 81036	(719) 438-5810 (O) (719) 438-5615 (F)		Kiowaco100@gmail.com

Appendix B: Landfill and Debris Management Sites in Kiowa County

SITES	OWNER/OPERATOR	ACCESS	ACCEPTS
Kiowa County Landfill	Kiowa County	Y	
Eads TDSR	Kiowa County	Y	
Haswell TDSR	Kiowa County	Y	
Sheridan Lake	Plainview School	Y	

Note: none of the transfer stations located within Kiowa County will accept radiological material, hazardous chemicals/wastes, or animal carcasses.

B.1 Landfill – Eads Landfill

Date of Site Evaluation: 12/6/2018

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Kiowa County Landfill

PROPERTY OWNERS NAME: Kiowa County

PROPERTY OWNERS ADDRESS: 1305 N. Goff Street, Eads, CO 81036

SITE GPS COORDINATES: N 38°25'47.62 W 102°47'05.49"

PROPERTY OWNERS PHONE NUMBER: 719-438-5810

ESTIMATED PROPERTY SIZE: 10.8 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	No;
Property Topography	44'; 6.3% South Slope
Open Water Sources	4.92 Miles SE of Landfill Lake
Groundwater Wells	No; .33 Miles SW of Landfill Private Well
Access to Electricity/Sewer/Water	No
Soil Integrity	Stable; Caliche
Surface Water Drainage	South; Good
Prevailing Wind Direction	Out of the North
Ingress/Egress	One way; drive through
Lighted Area	No
Site Security	No
Buffer Distance	0.33 Miles
Property Developed	Minimal
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Eads

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Lamar Municipal Landfill 42.6 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.2 Temporary Debris Storage & Reduction Site (TDSR) – Kiowa County Fair Grounds

Date of Site Evaluation: 12/6/2018

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Kiowa County Fairgrounds

PROPERTY OWNERS NAME: Kiowa County

PROPERTY OWNERS ADDRESS: 1305 N. Goff Street, Eads, CO 81036

SITE GPS COORDINATES: N 38°29'08.08 W 102°47'15.17"

PROPERTY OWNERS PHONE NUMBER: 719-438-5810

ESTIMATED PROPERTY SIZE: 9.59 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	No;
Property Topography	6'; 1.1% SE Slope
Open Water Sources	498 Feet SW, Open Water Golf course
Groundwater Wells	Yes Municipal Well Town of Eads
Access to Electricity/Sewer/Water	Yes
Soil Integrity	Stable;
Surface Water Drainage	Southeast; Poor
Prevailing Wind Direction	Out of the North
Ingress/Egress	Three Entrance/Exits
Lighted Area	Yes
Site Security	No
Buffer Distance	277 Feet South
Property Developed	Yes; Fairgrounds, county maintenance shop
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Eads

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Kiowa County Landfill 3.68 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.3 Temporary Debris Storage & Reduction Site (TDSR) – Haswell

Date of Site Evaluation: 12/6/2018

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Haswell TDSR

PROPERTY OWNERS NAME: Kiowa County

PROPERTY OWNERS ADDRESS: 1305 N. Goff Street, Eads, CO 81036

SITE GPS COORDINATES: N 38°26'22.03 W 103°09'45.85"

PROPERTY OWNERS PHONE NUMBER: 719-438-5810

ESTIMATED PROPERTY SIZE: 6.97 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Closed Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	No;
Property Topography	31'; 3.3% Southeast Slope
Open Water Sources	4.92 Miles SE of Landfill Lake
Groundwater Wells	No;
Access to Electricity/Sewer/Water	No
Soil Integrity	Stable; Caliche
Surface Water Drainage	Southeast; Good
Prevailing Wind Direction	Out of the North
Ingress/Egress	Two Ways
Lighted Area	No
Site Security	No
Buffer Distance	354 Feet
Property Developed	Minimal
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	No

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Haswell

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Kiowa County Landfill 22.7 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.4 Temporary Debris Storage & Reduction Site (TDSR) – Sheridan Lake

Date of Site Evaluation: 12/6/2018

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Plainview TDSR

PROPERTY OWNERS NAME: Plainview School District

PROPERTY OWNERS ADDRESS: 13997 County Road 71, Sheridan Lake, CO 81071

SITE GPS COORDINATES: N 38°25'47.62 W 102°47'05.49"

PROPERTY OWNERS PHONE NUMBER: 719-729-3331

ESTIMATED PROPERTY SIZE: 12.3 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	School; Track, Field,
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	Yes; Onsite
Property Topography	12'; 1.0% South Slope
Open Water Sources	0.39 SW Seasonal Lake
Groundwater Wells	Yes; .Onsite School Well
Access to Electricity/Sewer/Water	Yes
Soil Integrity	Stable; Good
Surface Water Drainage	South; Good
Prevailing Wind Direction	Out of the North
Ingress/Egress	One way
Lighted Area	Yes
Site Security	No
Buffer Distance	0.39 Miles
Property Developed	Minimal
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE):

Sheridan Lake, Towner

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: Yes

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Kiowa County Landfill 34.4 Miles; Lamar Municipal Landfill 45.8 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



Appendix C: Government Equipment Lists

C.1 Kiowa County:

Vehicle #	Year	Make	Model
6	2000	Ford	Pickup
15	2004	GMC	Sierra Pickup
16	1999	Dodge	Pickup 4x4
18	2000	Ford	Pickup
20	1997	Ford	Pickup
21	2008	Chevrolet	Pickup
22	1987	Mack	Tractor Truck
25	1990	Mack	Truck Tractor
26	1989	Kenworth	T800 Dump Trk
27	1989	Kenworth	T800 Dump Trk
28	1989	Kenworth	T800 Dump Trk
75	1989	Ford	Pickup
31	1973	IHC	Dump Truck
32	1973	IHC	Dump Truck
34	2002	Chevrolet	Pickup
35	1979	Chevrolet	Pickup
39	1996	Kenworth	T400 Dump Trk
40	2014	GMC	Pickup
44A	1987	Mack	Tractor Truck
46B	1996	GMC	3500 Crew PU
53A	2005	GMC	Sierra Pickup
54	1980	Chevrolet	Pickup
55A	2008	Ford	F250 4x4 Pickup
56	2004	Dodge	Ram 2500 Pickup
57	1970	IHC	Winch Truck
59A	1996	Kenworth	T800 Tractor
63B	1997	Kenworth	T800 Tractor
65	1996	Kenworth	T400 Dump Trk
67	1970	IHC	Water Truck
73	2008	Mack Truck	Semi
75	1989	Ford	F150 Pickup
76	2008	Ford	F250 4x4 Pickup
83	1993	Ford	Pickup
84	1993	Ford	Pickup
86	1995	Ford	Pickup

89	**2001**	**Dodge**	**Ext Cab Pickup**
	2007	**Mack**	**Semi Truck**
	1992	**GMC**	**Pickup**
Motor Graders			
1A	**1999**	**Caterpillar**	**Motor Grader**
7A	**1999**	**John Deere**	**Motor Grader**
8A	**2002**	**John Deere**	**Motor Grader**
10A	**2002**	**John Deere**	**Motor Grader**
11A	**1999**	**John Deere**	**Motor Grader**
23A	**2002**	**John Deere**	**Motor Grader**
	2006	**Volve G960**	**Motor Grader**
	2011	**John Deere**	**Motor Grader**
	2011	**John Deere**	**Motor Grader**
	2013	**Caterpillar**	**Motor Grader**
	2013	**Caterpillar**	**Motor Grader**
	2013	**Caterpillar**	**Motor Grader**
Other licensed equipment			
D4H	**1988**	**Caterpillar**	**Dozer D4H**
13C	**2004**	**John Deere**	**624 Loader 4x4**
14	**2011**	**John Deere**	**624k Loader**
47	**1974**	**Ford**	**Tractor Mower**
48	**1974**	**ETN**	**Chip Spreader**
49	**1972**	**Gallion**	**Roller**
51	**1974**	**Ford**	**Tractor Mower**
52	**2002**	**John Deere**	**7610 Tractor**
58	**2002**	**John Deere**	**7610 Tractor**
66	**1966**	**Massey**	**Tractor**
70A	**1993**	**John Deere**	**310D backhoe**
72B	**1980**	**International**	**1486 Tractor**
77	**2002**	**John Deere**	**7610 Tractor**
78	**1991**	**John Deere**	**624E Loader**
82	**2005**	**John Deere**	**310G Loader BH**
850	**1997**	**John Deere**	**Crawler Dozer**
Other Non-Licensed			
52M	**2001**	**Rhino**	**Mower Flex 14m**
56M	**1995**	**Bush Hog**	**Mower**
58M	**2001**	**Rhino**	**Mower Flex 14m**
72M	**1999**	**Rhino**	**Flex 15 Mower**
72T		**Malsom**	**Terracer HS**

77M	**2004**	**Rhino**	**Flex 15 Mower**
	2012	**Rhino**	**MRF-180**
	2012	**Rhino**	**MRF-180**
	2012	**Rhino**	**MRF-180**
	2012	**Tractor**	**Mower**
		Tractor	**Mower**
	1995	**John Deere**	**LX188 Mower**
		Sheep Roller	
		Smooth Roller	
		Xplorer	**400 4 Wheeler**
		Box Scrapper	
Trailers			
6T	**1990**	**Ranco**	**Belly Dump**
24T	**2014**	**Witzco**	**Low Boy**
25T	**1988**	**Ranco**	**Belly Dump**
28T	**1989**	**2 Axle Backhoe**	**Homemade Trlr**
36T	**1996**	**PJ Trailer**	**24 Ft**
41T	**1989**	**Chausse**	**Asphalt Tank**
42T	**1990**	**HMD**	**Tanker Trailer**
44T	**1990**	**Ranco**	**Belly Dump**
45T	**1974**	**Homemade**	**Spray Trailer**
46T	**1998**	**WW Utility**	**Trailer**
63TA	**2013**	**Ranco**	**Trailer**
68T	**1991**	**Homemade**	**Welder Trailer**
79AT	**2001**	**Childress**	**Gooseneck**
88T	**2003**	**Texas Bragg**	**6x10 Welding Trl**
	1983	**Homemade**	**Trailer**
	2001	**IRO**	**Trailer**

C.2 Eads:
1 – Backhoe
1 – Dump Truck
1 - Skidsteer

C.3 Sheridan Lake
Sheridan Lake has no heavy equipment and will rely upon the County

C.4 Haswell
Haswell has no heavy equipment and will rely upon the County to assist

Appendix D: Countywide Debris Contractors

Company	County	Phone	Equipment
Barnett Construction	Kiowa	719-940-3031	
Murdock Hauling	Kiowa	719-688-9881	
Koehler's	Kiowa	719-438-5328	
Weber Water & Dozer	Kiowa	719-729-3583	
719 Metal Works	Kiowa	719-688-6147	

Appendix E: Primary Road Clearance Priorities

E.1 Kiowa County

County Road 49 from Prowers County Line to CO-96
US Hwy 287*
US Hwy 385*
CO Hwy 96*

*These are state and US highways and remain the priority of CDOT but they remain critical to Kiowa County and their transportation needs.

E.2 Eads – Maine Street 287 North to 7th Street

13th Street from Maine Street to Hickman Street,
Goff Street from 13th South to in front of the Fire Station ½ block
14th Street from Maine to Luther Street
Luther Street to 13th to 12th
13th Street Luther to Maine St.
Maine Street South of Hwy 96 to Prairie Pines

E.3 Sheridan Lake

Broadway east of Hwy 96 to the Fire Station

E.4 Haswell

Main street south of 96 to the Fire Station

Appendix F: Kiowa County Critical Facilities

Eads Road & Bridge Shop
15474 Hwy 287
Eads, CO 81036

Haswell Road & Bridge Shop
205 Sharp Ave.
Haswell, CO 81045

Sheridan Lake Road & Bridge Shop
Sheridan Lake, CO 81071

Eads Fire Station
1300 Goff Street
Eads, CO 81036

Haswell Fire Station
205 Sharp Ave.
Haswell, CO 81045

Sheridan Lake Fire Station
419 E. Broadway
Sheridan Lake, CO 81071

Towner Fire Station
78251 College Ave
Towner, CO

Eads High School
W. 10th Street
Eads, CO 81036

Plainview School
13997 Co. Rd 71
Towner, CO

Prairie Pines Assisted Living
101 E. Lowell Street
Eads, CO 81036

Town of Eads Shop
1307 Luther Street
Eads, CO 81036

Town of Eads City Hall
110 W. 13th Street
Eads, CO 81036

Kiowa County Courthouse
1305 N. Goff Street
Eads, CO 81036

Southeast Colorado Power Association
303 E. 14th
Eads, CO 81036

Eads Medical Clinic
1211 Luther Street
Eads, CO 81036

Kiowa County Ambulance Service
206 W. 12th Street
Eads, CO 81036

Colorado Interstate Gas
3073 Hwy 287
Eads, CO 81036

United Methodist Church
110 E. 11th Street
Eads, CO 81036

First Baptist Church
705 Maine St
Eads, CO 81036

First Christian Church
100 7th Street
Eads, CO 81036

Brown Funeral Home
1109 Hickman Street
Eads, CO 81036

Praise Community Church
7th Street
Eads, CO 81036

Public Health
1308 Maine Street
Eads, CO 81036

Eads Post Office
1200 Maine Street
Eads, CO 81036

Haswell Post Office
301 Main Street
Haswell, CO 81036

Sheridan Lake Post Office
619 E Burnette
Sheridan Lake, CO 81071

Appendix G: Kiowa County Community Specific Debris Estimates

G.1 Eads – 43,870 cy of Debris

G.2 Sheridan Lake – 7,888 cy of Debris

G.3 Haswell – 3,100 cy of Debris

Appendix H: Kiowa County Public Information Strategy for Debris Management

Public information related to debris management will be submitted to the public in as many ways as possible. Although there will be an operational public information officer designated by the Debris Project Manager, this position will work in cooperation with the Kiowa County Public Information Officer (or ESF-15 when activated) to facilitate the distribution of public information. The following communication vehicles will be considered when performing this function:

Swift911™ is the county's mass notification system that is designed to keep Kiowa County residents and businesses informed of emergencies and non-emergency events.

NOAA Weather Radio – NOAA Weather Radio may be used to issue civil type messages on frequency of 16.525. This can be activated through the EAS, IPAWS system or by contact the National Weather Service in Pueblo by calling (719) 948-9429.

Websites: Kiowa County and jurisdictions inside Kiowa County have various websites that information can be posted on.
www.kiowacounty-colorado.com is the county's web site that is designed to keep Kiowa County residents and businesses informed of events.
www.secahr.com is the Southeast Colorado All-Hazards Region Website

Media – This includes local television, radio, newspapers, or community newsletters that reach the impacted area(s).

Social Media- Information will be posted on various official county social media sites including but not limited to Facebook and Twitter.

Public forums – This includes interactive meetings at a local government building(s), schools, churches, etc.

Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a call center if the size of the debris management process warrants it. This may include a direct Kiowa County hotline or information may be routinely submitted to the regional 2-1-1 system.

Annex 5: County Specific - Otero County

OTERO COUNTY, COLORADO DEBRIS MANAGEMENT PLAN

COUNTY SPECIFIC ANNEX TO THE SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMENT PLAN

Last updated May 2020

Appendix A: Otero County Key Points of Contact

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
Chavez	Danny	**Otero County Emergency Management** 13 W 3rd Street Room 212 La Junta, CO 81050	(719) 241-4147 (C)	EM-850	EM@oterogov.org Web Address: *www.oterogov.com*
Davidson	Brad	**La Junta Fire and Emergency Management** P.O. Box 489 601 Colorado Ave. La Junta, CO 81050	(719) 384-2323 (O) (719) 384-8639 (F) (719) 384-2525 (D) (719) 469-1007 (C)	3-1	brad.davidson@lajuntacolorado.org
Ritter	Richard	**Otero County Health Department (Otero & Crowley)** 13 West 3rd Street, Room 111 La Junta, CO 81050	(719) 383-3045 (O) (719) 383-3060 (F) (719) 469-4045 (C)		rritter@oterogov.org
Nichols	Lex	**Otero County Public Works** Otero County Courthouse 13 W. 3rd Street La Junta, CO 81050	(719) 383-3035 (O) (719) 468-8878 (C) (719) 383-3935 (F)		lnichols@oterogov.org

Goodwin	Keith	**Otero County** **Commissioner District 1** Otero County Courthouse 13 W. 3rd Street, Room 112 La Junta, CO 81050	(719) 383-3000 (O) (719) 383-3090 (F) (719) 469-7001 (C)		kgoodwin@oterogov.org
Hostetler	John	**Otero County** **Commissioner District 2** Otero County Courthouse 13 W. 3rd Street, Room 112 La Junta, CO 81050	(719) 383-3000 (O) (719) 383-3090 (F)		jhostetler@oterogov.org
Baldwin	Jim	**Otero County** **Commissioner District 3** Otero County Courthouse 13 W. 3rd Street, Room 112 La Junta, CO 81050	(719) 383-3000 (O) (719) 383-3090 (F) (719) 468-1629 (C)		jbaldwin@oterogov.org
White-Tanabe	Amy	**Otero County** **Administrator** Otero County Courthouse 13 W. 3rd Street, Room 112 La Junta, CO 81050	(719) 383-3000 (O) (719) 469-9333 (C) (719) 383-3090 (F)		atanabe@oterogov.org

Appendix B: Landfills and Debris Management Sites in Otero County

LANDFILL	OWNER/OPERATOR	ACCESS	ACCEPTS
Manzanola Landfill	Town of Manzanola 31189 CR 11 Manzanola, CO 81058 719-383-3037	Public	
Otero County Landfill 2	Otero County 21250 CR 21 La Junta, CO 81050 719-383-3037	Public	

Note: none of the landfills located within Otero County will accept radiological material, hazardous chemicals/wastes, or animal carcasses.

B.1 Otero County Landfill 2 Site Evaluation:

Date of Site Evaluation: __02/06/2017_____

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: ___Otero County Landfill #2

PROPERTY OWNERS NAME: Otero County Landfill Inc.

PROPERTY OWNERS ADDRESS: 21250 County Rd. 21, La Junta, CO 81050

SITE GPS COORDINATES: N 37 56'23.07____W 103 41'30.56

PROPERTY OWNERS PHONE NUMBER: 719-383-3035

ESTIMATED PROPERTY SIZE: __640____ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	3 miles
Property Topography	Prairie Grassland
Open Water Sources	No
Groundwater Wells	4
Access to Electricity/Sewer/Water	Electric Yes, sewer/water No
Soil Integrity	Clay, Shale
Surface Water Drainage	Good
Prevailing Wind Direction	Out of the west
Ingress/Egress	
Lighted Area	Yes
Site Security	Fenced
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☐

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: YES___

☑ C & D

☑ Vegetation

☑ White Good

☑ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.2 Manzanola Landfill Site Evaluation:

Date of Site Evaluation: __04/30/2019_____

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: ___Manzanola Landfill

PROPERTY OWNERS NAME: Otero County Landfill Inc.

PROPERTY OWNERS ADDRESS: 31889 County Rd. 11, Manzanola, CO 81058

SITE GPS COORDINATES: N 38 05'12.89" W 103 52'34.31"

PROPERTY OWNERS PHONE NUMBER: 719-383-3035

ESTIMATED PROPERTY SIZE: __146____ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	2 miles
Property Topography	Prairie Grassland
Open Water Sources	Yes, High Line Canal to the north ½ mile
Groundwater Wells	5 dry test wells
Access to Electricity/Sewer/Water	Electric Yes, sewer/water No
Soil Integrity	Clay, Shale
Surface Water Drainage	Good
Prevailing Wind Direction	Out of the west
Ingress/Egress	Good
Lighted Area	Yes at the gate house entrance
Site Security	Fenced
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Manzanola

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: YES

☑ C & D

☑ Vegetation

☑ White Good

☑ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Number #2 Landfill 20 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.3 Temporary Debris Storage & Reduction Sites (TDSR) – Rocky Ford Fairgrounds

Date of Site Evaluation: 02/06/2017

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Rocky Ford Fairgrounds

PROPERTY OWNERS NAME: City of Rocky Ford

PROPERTY OWNERS ADDRESS: 203 S main, Rocky Ford, CO 81067

SITE GPS COORDINATES: N 38 03'30.01W 103 43'04.71

PROPERTY OWNERS PHONE NUMBER: 719-254-7414

ESTIMATED PROPERTY SIZE: 30 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Fairgrounds
Any Proposed Future land Uses	No
Environmental Issues	Possible
Proximity to Schools, Churches, Community Centers	1 mile
Property Topography	City
Open Water Sources	Yes
Groundwater Wells	
Access to Electricity/Sewer/Water	Yes
Soil Integrity	
Surface Water Drainage	
Prevailing Wind Direction	West to east
Ingress/Egress	
Lighted Area	Yes
Site Security	Fenced
Buffer Distance	
Property Developed	Yes
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☐

Air curtain Incineration ☐

Grinding ☐

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Landfill #2 approximately 15 miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.4 Manzanola TDMS Site Evaluation:

Date of Site Evaluation: __04/30/2019_____

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: ___Manzanola Landfill TDMS

PROPERTY OWNERS NAME: Otero County Landfill Inc.

PROPERTY OWNERS ADDRESS: 31889 County Rd. 11, Manzanola, CO 81058

SITE GPS COORDINATES: N 38 05'12.89" W 103 52'34.31"

PROPERTY OWNERS PHONE NUMBER: 719-383-3035

ESTIMATED PROPERTY SIZE: __24.5____ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	2 miles
Property Topography	Prairie Grassland
Open Water Sources	Yes, High Line Canal to the north ½ mile
Groundwater Wells	5 dry test wells
Access to Electricity/Sewer/Water	Electric Yes, sewer/water No
Soil Integrity	Clay, Shale
Surface Water Drainage	Good
Prevailing Wind Direction	Out of the west
Ingress/Egress	Good
Lighted Area	Yes at the gate house entrance
Site Security	Fenced
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

Manzanola

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: YES

☑ C & D

☑ Vegetation

☑ White Good

☑ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Number #2 Landfill 20 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.5 Fowler TDMS Site Evaluation:

Date of Site Evaluation: __04/30/2019_____

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: ___Fowler TDMS

PROPERTY OWNERS NAME: Otero County Landfill Inc.

PROPERTY OWNERS ADDRESS: County Rd. 3, Fowler, CO 81039

SITE GPS COORDINATES: N 38 06'28.57" W 104 01'30.04"

PROPERTY OWNERS PHONE NUMBER: 719-383-3035

ESTIMATED PROPERTY SIZE: __15____ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Vacant
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	3 miles
Property Topography	Prairie Grassland
Open Water Sources	None
Groundwater Wells	None
Access to Electricity/Sewer/Water	Electric No, sewer/water No
Soil Integrity	Clay, Shale
Surface Water Drainage	Good
Prevailing Wind Direction	Out of the west
Ingress/Egress	Limited
Lighted Area	No, Could use Portable Light towers
Site Security	Fenced
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	2 Miles from Airport
Site Able to Handle Large Volume of Trucks	Limited

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

_Fowler___

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☐

Air curtain Incineration ☐

Grinding ☐

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: YES___

☑ C & D

☑ Vegetation

☑ White Good

☑ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Number #2 Landfill 30 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.6 North La Junta TDMS Site Evaluation:

Date of Site Evaluation: 04/30/2019

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: North La Junta TDMS

PROPERTY OWNERS NAME: City of La Junta.

PROPERTY OWNERS ADDRESS: Harris Road, La Junta, CO 81050

SITE GPS COORDINATES: N 38 01'43.48" W 103 30'.23.85"

PROPERTY OWNERS PHONE NUMBER: 719-384-5991

ESTIMATED PROPERTY SIZE: 154 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Open Burning for Tree Limbs
Any Proposed Future land Uses	Open Burning of Tree Limbs/Branches
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	5 miles
Property Topography	Prairie Grassland
Open Water Sources	None
Groundwater Wells	None
Access to Electricity/Sewer/Water	Electric No, sewer/water No
Soil Integrity	Clay, Shale
Surface Water Drainage	Good
Prevailing Wind Direction	Out of the west
Ingress/Egress	Adequate
Lighted Area	No, Could use Portable Light towers
Site Security	Fenced
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	Yes 1 Mile
Site Able to Handle Large Volume of Trucks	Limited

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

_La Junta, Cheraw___

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☑

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: YES___

☑ C & D

☑ Vegetation

☑ White Good

☑ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

Otero County Number #2 Landfill 25 Miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.7 La Junta Otero County TDMS Site Evaluation:

Date of Site Evaluation: 04/30/2019

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Otero County Landfill #2

PROPERTY OWNERS NAME: Otero County Landfill Inc.

PROPERTY OWNERS ADDRESS: 21250 County Rd. 21, La Junta, CO 81050

SITE GPS COORDINATES: N 37 56'23.07 W 103 41'30.56

PROPERTY OWNERS PHONE NUMBER: 719-383-3035

ESTIMATED PROPERTY SIZE: 640 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	No
Environmental Issues	No
Proximity to Schools, Churches, Community Centers	3 miles
Property Topography	Prairie Grassland
Open Water Sources	No
Groundwater Wells	4
Access to Electiricty/Sewer/Water	Electric Yes, sewer/water No
Soil Integrity	Clay, Shale
Surface Water Drainage	Good
Prevailig Wind Direction	Out of the west
Ingress/Egress	
Lighted Area	Yes
Site Security	Fenced
Buffer Distance	
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☐

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: YES___

☑ C & D

☑ Vegetation

☑ White Good

☑ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

_____

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



Appendix B.8: Electronic Recycling Sites in Otero County

NAME	OWNER/OPERATOR	ACCESS	TV's CRT Monitors?
Clean Valley Recycling	203 N Swink Drive Swink, CO 81077	Private	Yes

Appendix B.9: Waste Tire Transport Providers in Otero County

BUSINESS NAME	OWNER/OPERATOR	ACCESS	TYPE
Rocky Ford Discount Tire Co, Inc.	David E. Watters 1601 Elm Ave. Rocky Ford, CO 81067 719-254-3391	Business	Waste Tire Generator, Waste Tire Hauler
Otero County	21250 County Road 21 La Junta, CO 81050 719-383-3035	Landfill Collection	Waster Tire Collector, Processor, End User

Appendix C: Government Equipment Lists

C.1 Otero County Equipment List

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 1
Sorted by: VT / VEHN

All Status Codes except SOLD

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
05	01	CAR	0347	03FORDCRV	G	2FAFP71W03X199788	20238	20238	110319	O	137AVN
VT	01	(CAR)		1							
04	03	TANDEM DUMP	0440	96VOLO	D	4V5SCBCF0TR516595	8500	8500	302336	O	261WIB
03	03	TANDEM DUMP	0444	01FL0112	D	1FVHAEA891PJ49019	15000	15000	133581	O	
01	03	TANDEM DUMP	0446	01FL0112	D	1FVHAEA851PJ49020	15000	15000	136078	O	
VT	03	(TANDEM DUMP)		3							
06	04	PICKUPS	0069	77 CHEV PU	G	CCS347Z153254	0	500	33288	O	060AVN
01	04	PICKUPS	0166	93 GMC	D	1GTGK24F2PE565382	16475	16000	241148	O	513A29
09	04	PICKUPS	0235	97FORD4X4	G	1FTDF18W0VKD45751	17925	17925	178279	O	290-HXA
10	04	PICKUPS	0246	98DOD2500	G	3B7KF22ZXWG221916	20760	20760	206815	O	597A29
07	04	PICKUPS	0248	98DODRAM	G	3B7KC26Z6WM282183	26279	26279	92519	O	598A29
03	04	PICKUPS	0324	98CHEV2500	G	1GCGC24R4WE143801	11000	11000	141351	O	087AVN
01	04	PICKUPS	0334	02DODG2500	G	387KF26W62M267738	18838	18838	128069	O	108AVN
02	04	PICKUPS	0335	02DODG2500	G	3B7KF26W82M267739	18838	18838	151809	O	109AVN
06	04	PICKUPS	0337	02DODDAKOT	G	1B7GG16X82S638296	13793	13793	183687	O	115AVN
06	04	PICKUPS	0373	05CHEVC150	G	1GCEK14V95E265683	14866	14866	124865	O	174-AVN
05	04	PICKUPS	0375	05GMC3500	G	1GDJK34U85E281175	18507	18507	39776	O	177AVN
03	04	PICKUPS	0376	05DODG2500	G	3D7KS26DX5G832270	17094	17094	82633	O	178AVN
01	04	PICKUPS	0411	08GMC1500	G	1GTEK14C78Z252300	17333	17333	94199	O	
02	04	PICKUPS	0420	09FORDF150	G	1FTRF14W89KB57562	19280	19280	50398	O	290-HXA
05	04	PICKUPS	0431	10CHEV3500	G	1GB3KZBK5AF149940	21890	21890	28957	O	949TGF
14	04	PICKUPS	0452	89GMCPK	G	1GTGK24K8KE532473	6000	6000	94877	O	
05	04	PICKUPS	0455	13DODGE150	G	1C6RR7KT5DS592803	24551	24551	24265	O	
09	04	PICKUPS	0460	13DODGE150	G	1C6RR7KT9DS672427	24551	24551	18451	O	CO
03	04	PICKUPS	0461	13FORDF150	G	1FTNF1EFXDXF11247	20649	20649	10781	O	
02	04	PICKUPS	0463	14FORD250	G	1FTBF2B67EEB67339	24365	24365	1990	O	
01	04	PICKUPS	0464	14FORDF150	G	1FTMF1EM9EKD69260	20655	20655	3611	O	
VT	04	(PICKUPS)		21							
04	05	LIGHT DUMPS	0035	80 DUMP TK	G	C17DEAV141753	14869	6300	67860	O	610A29
VT	05	(LIGHT DUMPS)		1							
08	06	BELLY DUMPS	0145	91PETERBLT	D	1XPFD69X9MD309786	57922	52000	426059	O	407V11
08	06	BELLY DUMPS	0317	01PETE 378	D	1XPFDU9X21d564005	67639	67639	248692	O	330AVS

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 2

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
08	06	BELLY DUMPS	0381	06FTLFLD12	D	1FUJALDE86DV93142	75921	75921	115275	O	361AVS
VT	06	(BELLY DUMPS)	3								
08	08	TRAILERS	0086	73 TRAILER		B915	11850	2708	0	O	319AVS
01	08	TRAILERS	0111	84 TR/RAMP		521149C0	1000	1000	0	O	408V11
02	08	TRAILERS	0113	75 TRAILER		483101	750	855	0	O	318AVS
04	08	TRAILERS	0173	90 HMD TRL		1DO912129CO	200	200	0	O	428V11
01	08	TRAILERS	0225	88 M&M TRL		88141201	800	76	0	O	403V11
02	08	TRAILERS	0252	TOPHAT98		4R7FS2527WT019763	6650	6650	0	O	524V11
03	08	TRAILERS	0253	TOPHAT98		4R7FS2525WT019762	6650	6650	0	O	525V11
02	08	TRAILERS	0372	0477X12PAR		13ZLP122041006548	1575	1575	0	O	358AVS
04	08	TRAILERS	0377	07HMTRAILE		TL007645	275	275	0	O	CO
03	08	TRAILERS	0412	95 FALCON		432111221S1002172	1000	1000	0	O	CO
10	08	TRAILERS	0434	01PJTRAILE		4P5SA081612009672	500	500	0	O	336AVS
VT	08	(TRAILERS)	11								
01	09	HEAVY DUMPS	0168	94 GMC	D	1GDM7H1J7RJ501599	45097	45097	140907	O	630A29
02	09	HEAVY DUMPS	0170	94 GMC	D	1GDM7H1JORJ501993	45097	45097	118463	O	620A29
03	09	HEAVY DUMPS	0172	94 GMC	D	1GDM7H1J4RJ502032	45097	45097	100213	O	523A29
01	09	HEAVY DUMPS	0236	98GMCTOP	D	1GDP7H1J8VJ520296	65352	65352	124287	O	601A29
02	09	HEAVY DUMPS	0237	98GMCTOP	D	1GDP7H1J2VJ520455	65352	65352	111684	O	602A29
03	09	HEAVY DUMPS	0238	98GMCTOP	D	1GDP7H1J4VJ520361	65352	65352	107880	O	603A29
01	09	HEAVY DUMPS	0351	03 IHC7400	D	1HTWDAAR14J082647	62929	62929	75599	O	151AVN
02	09	HEAVY DUMPS	0352	03 IHC7400	D	1HTWDAAR34J082648	62929	62929	58677	O	149AVN
03	09	HEAVY DUMPS	0353	03 IHC7400	D	1HTWDAAR54J082649	62929	62929	52445	O	150AVN
VT	09	(HEAVY DUMPS)	9								
15	10	GENERATORS	0345	01MQDCA25	D	7105215	8000	8000	5769	O	346AVS
VT	10	(GENERATORS)	1								
15	11	GRADERS	0130	1973 12F	D	89H1647	38650	8811	254	O	410V11
03	11	GRADERS	0185	94 JD GRAD	D	DW770BH547857	114999	114999	6281	O	490V11
01	11	GRADERS	0200	96 JD 770	D	DW770BH557127	125339	125339	2570	O	505V11
02	11	GRADERS	0247	98JD770CH	D	DW770CH568334	147000	147000	10290	O	520V11
01	11	GRADERS	0264	99CAT143H	D	1AL00715	179250	0	10507	O	534V11
03	11	GRADERS	0265	99CAT143H	D	1AL00713	161309	0	7228	O	535V11
02	11	GRADERS	0316	00JD772CH	D	DW772CH577760	130051	130051	7018	O	327AVS
VT	11	(GRADERS)	7								

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 4

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
07	20	CONVEYORS	0292	HOLET		1170	0	0	0	O	
07	20	CONVEYORS	0293	CEDARPAS		1150	0	0	0	O	
07	20	CONVEYORS	0294	PROTEC		649312244088/1190	0	0	0	O	
07	20	CONVEYORS	0295	HOLET		1110	0	0	0	O	
07	20	CONVEYORS	0296	KOLMAN		57124250/1109	0	0	0	O	316AVS
07	20	CONVEYORS	0299	HOLET		1100	0	0	0	O	
VT	20	(CONVEYORS)		11							
04	22	BROOMS	0257	99ROSCBROO	D	R36155	30770	30770	1828	O	530V11
VT	22	(BROOMS)		1							
01	23	SNOW PLOWS	0153	SNOWPLOW		V PLOW/#264	1000	950	0	O	
02	23	SNOW PLOWS	0262	VPLOW		10C1051/#247	1000	1000	0	O	
03	23	SNOW PLOWS	0263	V PLOW			1000	1000	0	O	
02	23	SNOW PLOWS	0270	ROOT		32147-97/#237	0	0	0	O	
02	23	SNOW PLOWS	0271	ROOT		28647-93/#170	0	0	0	O	
01	23	SNOW PLOWS	0275	ROOT		32140/#236	0	0	0	O	
01	23	SNOW PLOWS	0276	ROOT		28648/#168	0	0	0	O	
06	23	SNOW PLOWS	0277	WAUSAU		1136RB-5094-0/209	0	0	0	O	
03	23	SNOW PLOWS	0280			28649/#172	0	0	0	O	
03	23	SNOW PLOWS	0281			32142/#238	0	0	0	O	
03	23	SNOW PLOWS	0282			UNIT193	0	0	0	O	
03	23	SNOW PLOWS	0283	HENKE		UNIT185	0	0	0	O	
01	23	SNOW PLOWS	0300	HENKE		0065/#200	0	0	0	O	
01	23	SNOW PLOWS	0354	RSP10IS		RSP01583	7325	7325	0	O	
02	23	SNOW PLOWS	0355	RSP10IS		RSP01582	7325	7325	0	O	
03	23	SNOW PLOWS	0356	RSP10IS		RSP01584	7325	7325	0	O	
04	23	SNOW PLOWS	0441	FRUEHAUF		R-1242FE	1000	1000	0	O	
04	23	SNOW PLOWS	0449	12X48X15		RSP0112	1000	1000	0	O	
04	23	SNOW PLOWS	0450	12X48X15		RSP01018	1000	1000	0	O	
14	23	SNOW PLOWS	0453	89FISHER		267497	500	500	0	O	
VT	23	(SNOW PLOWS)		20							
07	24	WELDERS	0224	WELDER/TR	G	ID09013267CO	300	285	697	O	133V29
02	24	WELDERS	0256	99HMTRIA	H		400	400	472	O	526V11
03	24	WELDERS	0303	LINCOLN	G	L300F2442905638	0	0	192	O	
05	24	WELDERS	0383	MILLER 130		KJ232242	0	0	0	O	
05	24	WELDERS	0384	LINCOLN 5	G	10430V1980204059	0	0	0	O	
05	24	WELDERS	0386	LINCOLN		A-749268	0	0	0	O	
05	24	WELDERS	0387	MILLER 250		KD344797	0	0	0	O	

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 5

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
05	24	WELDERS	0388	PLASMA CUT		MX43-004846	0	0	0	O	
03	24	WELDERS	0393	ARC WELDER		AC66655	1998	0	0	O	
01	24	WELDERS	0396	MILLER 302	G	LF342192	3644	3644	178	O	CO
03	24	WELDERS	0418	LINCOLN255		U1071207800	1998	1998	0	O	
01	24	WELDERS	0419	MILLER135		LE462048	649	0	0	O	
VT	24	(WELDERS)		12							
15	26	PUMPS	0120	WATER PUMP	G	ID09013262CO	150	145	116	O	537V11
04	26	PUMPS	0121	135 INTERN	G		900	900	6	O	
15	26	PUMPS	0204	WATERPUMP	G	ID09013264CO	0	0	0	O	129V29
04	26	PUMPS	0266	FORD300	G	K5962	0	0	610	O	
04	26	PUMPS	0331	HONDA	G	GCAH1322439	699	699	0	O	
04	26	PUMPS	0342	B&SENG8HR	G	192432	1800	1800	0	O	
04	26	PUMPS	0451	GX270UT2	G	GCBGT-1153736	830	830	0	O	
VT	26	(PUMPS)		7							
06	27	CAT COMPACTOR	0141	90CAT936E	D	33Z04542-936LF	158196	134900	16539	O	502V11
VT	27	(CAT COMPACTOR)		1							
04	28	EXCAVATOR TRAC	0318	01CATEXCAV	D	6TLO1335	137920	137920	2224	O	331AVS
15	28	EXCAVATOR TRAC	0364	00JD450LC	D	FC090454	197600	197600	11202	O	
VT	28	(EXCAVATOR TRACK)		2							
04	29	WOOD CHIPPER	0192	95 WOODCHI	G	1VRD10156S1001501	11920	11920	161	O	492V11
VT	29	(WOOD CHIPPER)		1							
04	30	BACKHOE	0240	98 FORD 57	D	31009486	42143	42143	3058	O	514V11
VT	30	(BACKHOE)		1							
04	31	CHIPSPREADER	0249	98ETNYRECH	D	K5629	137000	137000	822	O	134V29
04	31	CHIPSPREADER	0457	83ETNYRE	G	K4643	16000	16000	0	O	
VT	31	(CHIPSPREADER)		2							
07	32	CRUSHER CONE	0260	94CEDAR		2AD0294	0	0	9311	O	
VT	32	(CRUSHER CONE)		1							

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 6

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
02	33	DIESEL PICKUPS	0243	98DO2500	D	3B7KF2669WM277945	27017	27017	188269	O	111AVN
03	33	DIESEL PICKUPS	0244	98DO2500	D	3B7KF2660WM277946	27017	27017	158382	O	596A29
01	33	DIESEL PICKUPS	0245	98DODRAM	D	3B7KF2269WG221878	28446	28446	211940	O	618A29
VT	33	(DIESEL PICKUPS)		3							
04	34	STEEL TIRE ROL	0098	80 ROLLER	D	617OE405500	47288	23370	352	O	
VT	34	(STEEL TIRE ROLL)		1							
04	35	ROLLER RUB TIR	0242	WRT-15		123597	13750	13750	139356	O	516v11
04	35	ROLLER RUB TIR	0367	WRT13/2004		PT-13-180603	12203	12203	0	O	353AVS
VT	35	(ROLLER RUB TIRE)		2							
01	36	SAND SPREADER	0131	SANDSPRDR		TG-500\465-A/#216	3200	2470	0	O	
02	36	SAND SPREADER	0320	SWEN SB-9		93540/#170	2990	2990	0	O	
03	36	SAND SPREADER	0321	SWEN SB-9		93527/#238	2990	2990	0	O	
01	36	SAND SPREADER	0338	SWEN SB-9		95747/#236	2700	2700	0	O	
01	36	SAND SPREADER	0348	TGS II9DD		TGS04608	2775	2775	0	O	CO
02	36	SAND SPREADER	0349	TGS II9DD		TGS04606	2775	2775	0	O	
03	36	SAND SPREADER	0350	TGS II9DD		TGS04607	2775	2775	0	O	
02	36	SAND SPREADER	0435	11HIWAYTGC		132122	6434	6434	0	O	
01	36	SAND SPREADER	0442	12 H600 HI		135048	6585	6585	0	O	
04	36	SAND SPREADER	0447	FSH11X13		19386	1000	1000	0	O	
03	36	SAND SPREADER	0454	12 WARREN			6185	6185	0	O	
VT	36	(SAND SPREADER)		11							
07	37	SCREENING DECK	0287	72KOLMAN		72048	0	0	0	O	
07	37	SCREENING DECK	0288	86ALLISCH		B57667	0	0	0	O	
07	37	SCREENING DECK	0289	PORTEC		2409-6012-86-3D	0	0	0	O	
VT	37	(SCREENING DECK)		3							
04	39	WEEDBURNER	0123	WEEDBURNER	D	ID09013265CO	0	145	0	O	130V29
VT	39	(WEEDBURNER)		1							
06	40	AIR COMP	0143	AIR COM/TR	G	ID09013266CO	100	100	1340	O	131V29
05	40	AIR COMP	0306	INGERSOLL		114232	0	0	0	O	
05	40	AIR COMP	0307	BEAIRD		W7099-45	0	0	0	O	
05	40	AIR COMP	0308	CURTIS		20X66-80	0	0	0	O	

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 7

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
05	40	AIR COMP	0385	AMERICAN		135202	0	0	0	O	
04	40	AIR COMP	0389	CRAFTMANS		2416043280	0	0	0	O	
05	40	AIR COMP	0390	NAPA		03276	0	0	0	O	
01	40	AIR COMP	0391	MAGNAFORCE		P3345365	0	0	0	O	
03	40	AIR COMP	0392	AIR AMERIC		25580V2M-1	0	0	0	O	
07	40	AIR COMP	0394	SPEEDAIRE		1Z763	0	0	0	O	
06	40	AIR COMP	0421				1000	1000	0	O	
05	40	AIR COMP	0432	NAPA2010	G	00012107	0	0	0	O	
VT	40	(AIR COMP)		12							
04	41	DITCH A	0181	DITCH A			85	85	0	O	
VT	41	(DITCH A)		1							
04	42	BUCKET TRUCK	0254	80CHEBUCKE	G	C17DSAV146870	8500	8500	339	O	523V11
VT	42	(BUCKET TRUCK)		1							
06	43	DEFAULT LOADER	0135	72CAT950	D	81J4209	28000	6320	2133	O	421V11
VT	43	(DEFAULT LOADER)		1							
04	44	EXCAVTOR RUBBE	0149	91 JD	D	FF495DS001062	84000	76608	10490	O	499V11
VT	44	(EXCAVTOR RUBBER)		1							
02	46	DEFAULT MOTOR	0301	TJD		5303675/#177	0	0	0	O	
VT	46	(DEFAULT MOTOR)		1							
06	47	TRASH COMPACTO	0302	00TRM335C	D	HE1487	206000	206000	10641	O	
06	47	TRASH COMPACTO	0426	09CAR816F2	D		374220	374220	7489	O	
VT	47	(TRASH COMPACTOR)		2							
03	48	POWER WASHER	0311	HOTSY		980SS	4303	4303	0	O	
05	48	POWER WASHER	0312	HOTSY	D	980	3789	3789	1036	O	
15	48	POWER WASHER	0358	580767700		1007653855	420	420	0	O	
05	48	POWER WASHER	0399	SEARS 6.75		1012054702	319	319	0	O	CO
VT	48	(POWER WASHER)		4							

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 8

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
04	50	DEFAULT TRACTO	0156	91 JD 2955	D	732190-1020003	25867	25867	6684	O	500V11
VT	50	(DEFAULT TRACTOR)		1							
04	51	AIR JACK HAMME	0322	SULLAIR		68256071	912	912	0	O	
VT	51	(AIR JACK HAMMER)		1							
13	52	S/S VAN	0404	06CHRYT&C	G	2A4G9FFR16R697634	18815	18815	173508	O	
13	52	S/S VAN	0465	14DODGEVAN	G	2C4RDGBG6ER292197	20593	20593	0	O	CO
VT	52	(S/S VAN)		2							
04	53	WEED SRRAYER	0330				0	0	0	O	
VT	53	(WEED SRRAYER)		1							
07	54	DEFAULT BACKHO	0065	82 BACKHOE	D	JD310A	22791	9738	1593	O	425V11
VT	54	(DEFAULT BACKHOE)		1							
05	55	TIRE MACHINE	0332	RIM CLAMP		MODEL # 5060-E	900	900	0	O	
VT	55	(TIRE MACHINE)		1							
15	56	ARTICULATE TRU	0362	01JD400C	D	200274	133900	133900	835	O	
15	56	ARTICULATE TRU	0363	01JD400C	D	200267	129900	129900	1551	O	
VT	56	(ARTICULATE TRUCK)		2							
04	57	JUMPING COMPAC	0365	WACKERPACK		654403910	1899	1899	0	O	CO
VT	57	(JUMPING COMPACT)		1							
15	58	DEFAULT DOZER	0100	59CATDOZER	D	44A5249	12000	7600	940	O	
VT	58	(DEFAULT DOZER)		1							
07	59	CRUSHER GENERT	0369	04CAT3306B	D	9NR05865	35000	35000	3038	O	
VT	59	(CRUSHER GENERTOR)		1							
04	60	WATER TRUCK	0370	78FORDF700	G	F70FVAG9865	3000	3000	23022	O	160AVN
VT	60	(WATER TRUCK)		1							

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 9

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
11	61	SHERIFF CAR	0397	04FORDCRVI	G	2FAHP71W24X102990	17480	17480	116233	O	CO
11	61	SHERIFF CAR	0405	07CONVIC	G	2FAHP71W47X152987	20970	20970	130824	O	
11	61	SHERIFF CAR	0424	09FORDCROV	G	2FAHP71V29X138144	20635	20635	96333	O	
11	61	SHERIFF CAR	0425	09FORDCROV	G	2FAHP71V49X138145	20635	20635	106048	O	
11	61	SHERIFF CAR	0430	2010FORDCR	G	2FABP7BV4AX128272	0	0	66674	O	
11	61	SHERIFF CAR	0433	2010FORDCR	G	1FABP7BV6AX137605	0	0	65637	O	
11	61	SHERIFF CAR	0445	11CROWNVIC	G	2FABP78V1BX108773	17500	17500	52480	O	
11	61	SHERIFF CAR	0458	13 FORD SE	G	1FAHP2MK9DG222500	25046	25046	9823	O	
11	61	SHERIFF CAR	0459	13 FORD SE	G	1FAHP2MK9DG222501	25046	25046	21041	O	
11	61	SHERIFF CAR	0466	14FORDINTE	G	1FAHP2MK8EG168429	25476	25476	0	O	
VT	61	(SHERIFF CAR)		10							
11	62	SHERIFF VAN	0378	06FORDVAN	G	1FBNE31L56HA61022	18391	18391	181880	O	
VT	62	(SHERIFF VAN)		1							
11	63	SHERIFF SUV	0366	04CHEVTAHO	G	1GNEK13Z04J236431	26013	26013	114785	O	154AVN
11	63	SHERIFF SUV	0413	08CHEVTRAI	G	1GNDT13SX82224783	21608	21608	56569	O	
VT	63	(SHERIFF SUV)		2							
11	64	SHERIFF PICKUP	0422	09GMC1500		1GTEK14C69Z211979	0	0	20164	O	
11	64	SHERIFF PICKUP	0443	12DODGE150		1C6RD7KT2CS289037	0	0	22109	O	
VT	64	(SHERIFF PICKUP)		2							
07	65	POWER UNIT	0371	CAT3406	D	92U22861	5000	5000	2377	O	CO
VT	65	(POWER UNIT)		1							
08	66	HEAVY WATER TR	0146	91PETERBLT	D	1XPFD69X0MD309787	57922	52000	386918	O	406V11
04	66	HEAVY WATER TR	0147	91PETERBLT	D	1XPFD69X2MD309788	57922	52000	470196	O	405V11
VT	66	(HEAVY WATER TR)		2							
04	67	PLATE COMPACTO	0395	ROBIN JPC8		2161770	1240	1240	0	O	
VT	67	(PLATE COMPACTOR)		1							
07	68	TRAILERS CRUSH	0105	77 CRUSHER	D	AVD83609	156639	59375	0	O	389V11
07	68	TRAILERS CRUSH	0106	63 TRAILER		AVD836302	3153	760	0	O	390V11
07	68	TRAILERS CRUSH	0112	69 TRAILER		18378	700	700	0	O	311AVS
VT	68	(TRAILERS CRUSHER)		3							

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 10

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
06	69	DRAGLINE W/N S	0199	NORTHWEST	D	9250MOD150TC	1500	950	1108	O	
VT	69	(DRAGLINE W/N SAF)	1								
04	71	PORTABLE AIR C	0402	05SULLAIR1	D	004150003	8495	8495	467	O	053-EUM
VT	71	(PORTABLE AIR COM)	1								
04	72	CRACK POT	0403	07CRAFCOSS	D	1C9SY101271418087	32976	32976	1273	O	654HRM
VT	72	(CRACK POT)	1								
02	73	SM DRUM ROLLE	0407	08 MQAR-13	G	270809	12880	12880	169	O	CO
01	73	SM DRUM ROLLE	0409	08 MQAR-13	G	261104	12880	12880	97	O	CO
03	73	SM DRUM ROLLE	0410	08 MQAR-13	G	261105	12880	12880	134	O	CO
VT	73	(SM DRUM ROLLER)	3								
04	74	GRASS SPREADER	0408				550	550	0	O	
VT	74	(GRASS SPREADER)	1								
12	75	CAR ADMIN	0415	01SUBARU	G	4S3BH686116655540	9900	9900	166427	O	419RBU
VT	75	(CAR ADMIN)	1								
06	76	SCALE	0423	TRINER TS6		MODEL TS60-730	7495	7495	0	O	
VT	76	(SCALE)	1								
07	77	WATER TANK	0427				0	0	0	O	
VT	77	(WATER TANK)	1								
10	78	WEED EATER	0428	STEIL/FS44	G		150	150	0	O	
VT	78	(WEED EATER)	1								
15	79	FARM DISC	0429	KRAUSE 11F			1100	1100	0	O	
VT	79	(FARM DISC)	1								
04	80	DEMO SAW	0436	STIHLTS700		172433849	1876	1876	0	O	
VT	80	(DEMO SAW)	1								

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 11

DV	VT	DESCRIPTION	VEHN	YR MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
04	81	TIRE GRIPER	0437				0	0	0	O	
VT	81	(TIRE GRIPER)	1								
12	82	ADMIN SUV	0438	11CHEVTRAN	G	1GNKVEED3BJ262683	21600	21600	80869	O	
VT	82	(ADMIN SUV)	1								
13	83	S/S SUV	0439	11CHEVTRAN	G	1GNKVEED2BJ234812	21300	21300	69612	O	
VT	83	(S/S SUV)	1								
13	84	S/S CAR	0401	05CHSY300	G	2C3JA53G55H184706	19365	0	168857	O	UXS7777
VT	84	(S/S CAR)	1								
11	85	SHERIFF TRAILE	0359	04WELLS12'		1WC200E2244052714	5597	5597	0	O	
11	85	SHERIFF TRAILE	0360	04WELLS24'		1WC200L2544052676	7692	7692	0	O	
11	85	SHERIFF TRAILE	0361	04WELLS24'		1WC200L2744052677	7692	7692	0	O	
VT	85	(SHERIFF TRAILERS)	3								
16	86	CLERKS TRAILER	0400	TS6X12DS2		16HCB12166K008098	3250	0	0	O	
VT	86	(CLERKS TRAILER)	1								
04	87	ASPHLT TANKER	0406	73FRUEHAUF		OMR633205	7500	7500	0	O	
04	87	ASPHLT TANKER	0414	70FRUEHAUF		OMM509304	4500	4500	0	O	CO
04	87	ASPHLT TANKER	0456	75FRUE		OMS687109	7000	7000	0	O	
VT	87	(ASPHLT TANKER)	3								
06	88	SHEEPS FT ROLL	0368	RSX112		SF1834	700	700	0	O	
VT	88	(SHEEPS FT ROLLER)	1								
04	89	JETTER TRUCK	0251	70 CHEVY S	G	CE530P178144	3713	3713	55889	O	605A29
VT	89	(JETTER TRUCK)	1								
04	90	OIL DIST TRUCK	0197	95FORDOIL	D	1FDXF80C5TVA14727	81377	81377	15485	O	164AVN
VT	90	(OIL DIST TRUCK)	1								

OTERO COUNTY VEHICLE INVENTORY 06-03-2014 Page 12

DV	VT	DESCRIPTION	VEHN	YR	MAKE	FUEL	SERIAL NUMBER	CAP	BOOK	ODO	SC	LICENSE
08	91	TRAILERS BELLY	0339	02	MC2000		2MFB2S5C62R002101	23090	23090	226177	O	340AVS
08	91	TRAILERS BELLY	0340	02	MC2000		2MFB2S5C82R002102	23090	23090	62982	O	341AVS
08	91	TRAILERS BELLY	0341	02	MC2000		2MFB2S5CX2R002103	23090	23090	415410	O	342AVS
VT	91	(TRAILERS BELLY)	3									
04	92	TRAILERS WATER	0148		WATER TRL		OM15349C	0	665	375840	O	409V11
08	92	TRAILERS WATER	0327	79	H20 TRA		T41117	14879	14879	463478	O	335AVS
VT	92	(TRAILERS WATER)	2									
14	93	SMALL MOWERS	0221		GB MOWER		73114865	1807	1235	43376	O	
04	93	SMALL MOWERS	0309		DR TRIMMER		FC15OV577744	898	898	0	O	
04	93	SMALL MOWERS	0328		MURRAY 22'		22516X92B	150	150	0	O	
04	93	SMALL MOWERS	0398		99MTDYARD		0113840301999	0	0	0	O	
VT	93	(SMALL MOWERS)	4									
14	94	SNOW BLOWER	0462		TORO38674		313000340	1709	1709	0	O	
VT	94	(SNOW BLOWER)	1									
		Report Totals:	249		Cap/Book Values			6449845		5784762		

C.2 City of La Junta Equipment List

Backhoes/Loaders – 9
Dump Trucks – 11
Excavator – 1
Chippers – 3
Roll Off Trucks – 2
Grader – 1
Sweeper/Broom – 3
Tractors – 7
Arial Device – 5
Track/Skid Loader/Backhoes – 3

C.3 City of Rocky Ford Equipment List

Loader
Backhoe
Skid steer
Chipper
Dump Truck
3 Trash Trucks

C.4 Town of Cheraw Equipment List

Backhoe
Dump Truck
Trash Truck

C.5 Town of Fowler Equipment List

Backhoe
Tractor
Dump Truck
Vacuum Truck
Vacuum Truck

C.6 Town of Manzanola Equipment List

Tractor with small bucket
Backhoe
Dump Truck

C.7 Town of Swink Equipment List

Backhoe
Trash Truck
Dump Truck

Appendix D: Countywide Debris Contractors

Company	County	Phone	Equipment
TLM Constructors, Inc. 102 C Street Swink, CO 81007	Otero	719-384-5956	Heavy Equipment Service and Rental
Holdbrook Pump & Supply 219 Grand Cheraw, CO 81050	Otero	719-853-6316 719-853-6626	Pumps & Machinery, Pumps & Compressors
Sam Fief Tree Service 31571 US Hwy 50 La Junta, CO 81050	Otero	719-469-8825	Tree Service
Habitat Construction 200 S. 17th Street Rocky Ford, CO 81067	Otero	719-254-3900	Heavy Equipment Service and Rental, Earth Moving Equipment
All Right Paving and Redi-Mix 200 Speculator Ave Lamar, CO 81052	Otero	719-336-2451	Trucking, Earth Moving Equipment

Appendix E: Primary Road Clearance Priorities

E.1 Otero County Road Clearing Priority List

Highway 50/Colorado to 3rd Street (La Junta)
Highway 50/Smithland to 2nd Street (La Junta)
Highway 50 to Dalton Street (La Junta)

Highway 50 to Swink Avenue (Swink)

Highway 50 to 6th Avenue (Fowler)

E.2 City of La Junta Road Clearing Priority List

1st Street
3rd Street
10th Street
Adams Street
Topeka/Grant Street
Colorado Avenue

E.3 City of Rocky Ford Road Clearing Priority List

12th Street to Nursing Home from Hwy 50
Main Street
Washington Avenue
2nd Street
Chestnut Avenue
Walnut Avenue
Spruce Avenue
Locust Avenue
Sycamore Avenue
South 14th Street
Catalapa Avenue
Pine Avenue
Hopkins Avenue

E.4 Town of Cheraw Road Clearing Priority List

East Grand Ave
Road 31 North

E.5 Town of Fowler Road Clearing Priority List

2nd Street to Nursing Home (From Hwy 50)
7th Street from Hwy 50 to Fire Department
Santa Fe to Substation Electrical
Park Street to Water Plant

E.6 Town of Manzanola Road Clearing Priority List

North Beatty Ave to Electrical Sub Station
Hwy 207 North Fire Department, Sewer Plant
South Park Street to Water Plant

E.7 Town of Swink Road Clearing Priority List

Main Street South from Hwy 50
Main Street North (Hwy 25) To Substation, Water, Sewer

Appendix F: Otero County Critical Facilities

Otero County Sheriffs Office
222 E 2nd Street
La Junta, CO 81050

Arkansas Valley Regional Medical Center
1100 Carson Ave
La Junta, CO 81050

Bents Fort-NPS
35110 State Highway 194 E.
La Junta, CO 81050

Otero County Courthouse
13 W 3rd Street
La Junta, CO 81050

La Junta City Hall
601 Colorado Avenue
La Junta, CO 81050

Town of Swink City Offices
3rd & Columbia
Swink, CO 81077

Rocky Ford Town Hall
203 S. Main Street
Rocky Ford, CO 81067

Manzanola Town Hall
301 N Park Street
Manzanola, CO 81058

Fowler Town Hall
317 S Main Street
Fowler, CO 81039
Town of Cheraw Office
220 Railroad Avenue
Cheraw, CO 81030

Phillips 66 Pipeline Facility
31601 E. US Hwy 50
La Junta, CO 81050

Source Gas
502 Colorado Avenue
La Junta, CO 81050

SECOM
27850 Harris Road
La Junta, CO 81050

SECPA
30226 6th Avenue
La Junta, CO 81050

Blackhills Energy
101 S 1st Street
Rocky Ford, CO 81067

La Junta Fire Station 1
601 Colorado Ave
La Junta, CO 81050

Cheraw Fire
Cheraw, CO 81030

Rocky Ford Fire
203 S 9th Street
Rocky Ford, CO 81067

Swink Fire Station
103 and 105 Railroad
Swink, CO 81077

La Junta Fire Station 2
30270 1st Avenue
La Junta, CO 81050

Care Connect
Industrial Park – Airport
La Junta, CO 81050

Manzanola Fire
100 W South Railroad
Manzanola, CO 81058

Fowler Fire
215 7th Street
Fowler, Co 81039

AMR-Medtrans
402 Elm Ave
Rocky Ford, CO 81067

USFS
1420 E 3rd Street
La Junta, CO 81050

Appendix G: Otero County Community Specific Debris Estimates

G.1 City of La Junta Debris Estimate – 3,479 Buildings – Avg Sq Ft 2,075 - Total Estimated Debris 1,809,080 Cubic Yards

G.2 City of Rocky Ford Debris Estimate – 2,011 Buildings – Avg Sq Ft 1,797 – Total Estimated Debris 941,148 Cubic Yards

G.3 Town of Cheraw Debris Estimate - 141 Buildings – Avg Sq Ft 1,878 – Total Estimated Debris 65,988 Cubic Yards

G.4 Town of Fowler Debris Estimate – 709 Buildings – Avg Sq Ft 1,688 – Total Estimated Debris 294,944 Cubic Yards

G.5 Town of Manzanola Debris Estimate – 240 Buildings – Avg Sq Ft 1,452 – Total Estimated Debris 87,360 Cubic Yards

G.6 Town of Swink Debris Estimate – 300 Buildings – Avg Sq Ft 1,621 - Total Estimated Debris 124,800 Cubic Yards

Appendix H: Otero County Public Information Strategy for Debris Management

Public information related to debris management will be submitted to the public in as many ways as possible. Although there will be an operational public information officer designated by the Debris Project Manager, this position will work in cooperation with the Otero County Public Information Officer (or ESF-15 when activated) to facilitate the distribution of public information. The following communication vehicles will be considered when performing this function:

CodeRED® is the county's mass notification system that is designed to keep Otero County residents and businesses informed of emergencies and non-emergency events.

NOAA Weather Radio – NOAA Weather Radio may be used to issue civil type messages on frequency of 162.500 or 162.425. This can be activated through the EAS, IPAWS system or by contact the National Weather Service in Pueblo by calling (719) 948-9429.

Websites: Otero County and jurisdictions inside Otero County have various websites that information can be posted on.
www.oterogov.com is the county's web site that is designed to keep Otero County residents and businesses informed of events.
www.secahr.com is the Southeast Colorado All-Hazards Region website
www.ci.la-junta.co.us is the City of La Junta website
rockyfordco.com is the City of Rocky Ford website
www.fowlercolorado.com is the Town of Fowler website

Media – This includes local television, radio, newspapers, or community newsletters that reach the impacted area(s).

Social Media- Information will be posted on various official county social media sites including but not limited to Facebook and Twitter.

Public forums – This includes interactive meetings at a local government building(s), schools, churches, etc.

Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a call center if the size of the debris management process warrants it. This may include a direct Otero County hotline or information may be routinely submitted to the regional 2-1-1 system.

Annex 6: County Specific - Prowers County

PROWERS COUNTY, COLORADO DEBRIS MANAGEMENT PLAN

COUNTY SPECIFIC ANNEX TO THE SOUTHEAST ALL-HAZARDS REGION DEBRIS MANAGEMENT PLAN

Last updated January 2020

Appendix A: Prowers County Key Points of Contact

Last Name	First Name	Organization & Address	Phone / Fax / Dispatch/Cell	Zello Radio Radio Call Sign Ham Radio	Email Address & Website
Warn	Staffon	**Prowers County Emergency Management/ LEPC** 2506 South Main Street Lamar, CO 81052	(719) 336-3977 (D) (719) 688-4701 (C) (719) 336-4883 (F) (719) 336-3000 (O) SATELLITE (254)-381-3891	EM-860 Rural-1	staffon.warn@prowerscounty.net staffon.warn@gmail.com
Hillman	Meagan	**Prowers County Public Health (Kiowa & Prowers)** 1001 S. Main Street Lamar, CO 81052	(719) 336-8721 (O) (719) 336-9763 (F) (719) 688-0458 (C)		mhillman@prowerscounty.net
Idler	Jo Lynn	**Prowers County Public Health (Kiowa & Prowers)** 1001 S. Main Street Lamar, CO 81052	(719) 336-8721 (O) (719) 336-9763 (F) (719) 940-3159 (C)		jidler@prowerscounty.net
Burkhart	Jeremy	**City of Lamar Emergency Management & Fire Chief** 505 South Main Street Lamar, CO 81052	(719) 336-4321 (W) (719) 336-3977 (D) (719) 336-2331 (F) (719) 688-4321 (C)	jeremy.burkhart F-1	jeremy.burkhart@ci.lamar.co.us

Sitts	Larry	**Town of Holly Emergency Management Director** P.O. Box 453 Holly, CO 81047	(719) 688-1663 (C) (719) 537-6793 (H)	EM-865	harpositts@gmail.com
Musick	Natalie	**Town of Granada Emergency Management Coordinator** 107 South Main Granada, CO 81041	(719) 688-2025 (C) (719) 734-5444 (O) (719) 336-3977 (D)	EM-867	natalie.musick@gmail.com
Dorenkamp	Mark	**Prowers County Road and Bridge, Supervisor** 109 East Sherman Street Lamar, CO 81052	(719) 336-5536 (O) (719) 688-1979 (C)		mark.dorenkamp@prowerscounty.net
Mason	Pat	**City of Lamar Public Works** 103 North 2nd Street Lamar, CO 81052	(719) 688-2909 (C) (719) 336-2002 (W)		pat.mason@ci.lamar.co.us
Grasmick	Tom	**Prowers County Commissioner District 1** 301 South Main St, Ste 215 Lamar, CO 81052	(719) 688-5429 (C)		tgrasmick@prowerscounty.net

Cook	Ron	**Prowers County Commissioner District 2** 301 South Main St, Ste 215 Lamar, CO 81052	(719) 688-2681 (C)		rcook@prowerscounty.net
Buxton-Andrade	Wendy	**Prowers County Commissioner District 3** 301 South Main St, Ste 215 Lamar, CO 81052	(719) 691-4910 (C)		wandrade@prowerscounty.net
Lundy	Janet	**Prowers County Interim Administrator** 301 South Main St, Ste 215 Lamar, CO 81052	(719) 336-8029 (O) (719) 336-2255 (F)		Janet.lundy@prowerscounty.net ctyadmin@prowerscounty.net

Appendix B: Landfills and Debris Management Sites in Prowers County

LANDFILL	OWNER/OPERATOR	ACCESS	ACCEPTS
East Lamar Municipal Landfill 29141 CR 14	City of Lamar 105 East Parmenter Lamar, CO 81052 719-336-2002 719-336-4376	Public	
Lamar Transfer Station	609 Crystal Street Lamar, CO 81052 719-336-4376	Public	
Granada SWS Landfill	Town of Granada 103 South Main St Granada, CO 81041 (719) 734-5411	Public	
Holly Municipal Landfill County Road GG.5 and CR 36; 2.5 miles NE of Holly, CO	Town of Holly 100 Tony Garcia Dr. Holly, CO 81047 719-537-6622	Public	

Note: none of the landfills or transfer stations located within Prowers County will accept radiological material, hazardous chemicals/wastes, or animal carcasses.

B.1 East Lamar Municipal Landfill – Lamar Landfill

Date of Site Evaluation: 11-10-18

OWNERSHIP OF PROPERTY: Municipal Property X County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: City of Lamar Landfill

PROPERTY OWNERS NAME: City of Lamar

PROPERTY OWNERS ADDRESS: 505 South Main

SITE GPS COORDINATES: 38.060006, -102.505539

PROPERTY OWNERS PHONE NUMBER: 719-336-4376

ESTIMATED PROPERTY SIZE: 50ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Landfill
Any Proposed Future land Uses	None
Environmental Issues	None
Proximity to Schools, Churches, Community Centers	NA
Property Topography	Sloped
Open Water Sources	Canal 1 mile, Arkansas River 2.35 miles
Groundwater Wells	Monitoring wells
Access to Electricity/Sewer/Water	Electricity
Soil Integrity	Sand
Surface Water Drainage	Sloped
Prevailing Wind Direction	North Winter, South Summer
Ingress/Egress	County Road 14 off US 50
Lighted Area	No
Site Security	Yes
Buffer Distance	Yes
Property Developed	Yes for a land fill
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☐ Low ☑

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

City of Lamar, Town of Wiley and Town of Granada

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

_____

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.2 Temporary Debris Storage & Reduction Site (TDSR) – Lamar

Date of Site Evaluation: 11-10-18

OWNERSHIP OF PROPERTY: Municipal Property ☑ County Property ☐ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: City of Lamar Transfer Station

PROPERTY OWNERS NAME: ___City of Lamar

PROPERTY OWNERS ADDRESS:505 South Main

SITE GPS COORDINATES: 38.102337, -102.609094

PROPERTY OWNERS PHONE NUMBER: 719-336-4376

ESTIMATED PROPERTY SIZE: 36 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Storage and trash collection
Any Proposed Future land Uses	None
Environmental Issues	Ponds and Arkansas River ¼ mile to the north
Proximity to Schools, Churches, Community Centers	
Property Topography	Sloped
Open Water Sources	Ponds and Arkansas River
Groundwater Wells	None
Access to Electricity/Sewer/Water	Yes
Soil Integrity	Class 6 and sand/clay
Surface Water Drainage	Land
Prevailing Wind Direction	North Winter, South Summer
Ingress/Egress	From Crystal Street
Lighted Area	No
Site Security	Yes
Buffer Distance	Yes
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Can be made to with slight adjustments

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

City of Lamar and Town of Wiley

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

City of Lamar Landfill 8 miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.3 Temporary Debris Storage & Reduction Site (TDSR) – Prowers County Fairgrounds

Date of Site Evaluation: 11-10-18

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Sand and Sage Fairgrounds

PROPERTY OWNERS NAME: Prowers County

PROPERTY OWNERS ADDRESS: 301 South Main Suite 215

SITE GPS COORDINATES: 38.066269, -102.623600

PROPERTY OWNERS PHONE NUMBER: 719-336-8025

ESTIMATED PROPERTY SIZE: 8 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Fairgrounds
Any Proposed Future land Uses	None
Environmental Issues	None
Proximity to Schools, Churches, Community Centers	High School ¼ mile, Pre-School ¼ mile
Property Topography	Flat
Open Water Sources	None
Groundwater Wells	None
Access to Electricity/Sewer/Water	Yes
Soil Integrity	Class 6 and sand
Surface Water Drainage	Storm sewer
Prevailing Wind Direction	North Winter, South Summer
Ingress/Egress	From north and south
Lighted Area	Yes
Site Security	Yes
Buffer Distance	Yes
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Yes

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

City of Lamar

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

City of Lamar Landfill 8 miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.4 Temporary Debris Storage & Reduction Site (TDSR) – Beggs Pit

Date of Site Evaluation: 11-10-18

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Beggs Pit

PROPERTY OWNERS NAME: Prowers County

PROPERTY OWNERS ADDRESS: 301 South Main Suite 215

SITE GPS COORDINATES: 38.120609, -102.631073

PROPERTY OWNERS PHONE NUMBER: 719-336-8025

ESTIMATED PROPERTY SIZE: 7 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Road and Bridge storage area
Any Proposed Future land Uses	None
Environmental Issues	None
Proximity to Schools, Churches, Community Centers	Alta Vista Charter School 3 miles
Property Topography	Sloped
Open Water Sources	Yes, canal
Groundwater Wells	None
Access to Electricity/Sewer/Water	No
Soil Integrity	Class 6 and sand/clay
Surface Water Drainage	Land
Prevailing Wind Direction	North Winter, South Summer
Ingress/Egress	From County Road 7
Lighted Area	No
Site Security	Yes
Buffer Distance	Yes
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Can be made to with slight adjustments

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

City of Lamar and Town of Wiley

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

City of Lamar Landfill 9 miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



B.5 Temporary Debris Storage & Reduction Site (TDSR) – Beggs Pit #2

Date of Site Evaluation: 11-10-18

OWNERSHIP OF PROPERTY: Municipal Property ☐ County Property ☑ Private Property ☐

Other Ownership (describe) ☐_____

PROPERTY NAME: Beggs Pit

PROPERTY OWNERS NAME: Prowers County

PROPERTY OWNERS ADDRESS: 301 South Main Suite 215

SITE GPS COORDINATES: 38.122037, -102.635309

PROPERTY OWNERS PHONE NUMBER: 719-336-8025

ESTIMATED PROPERTY SIZE: 7 ACRES

CHARACTERIZATION OF NEIGHBORING PROPERTIES	
EVALUATION FACTOR	COMMENTS
Property Current Land Use	Road and Bridge storage area
Any Proposed Future land Uses	None
Environmental Issues	None
Proximity to Schools, Churches, Community Centers	Alta Vista Charter School 3 miles
Property Topography	Sloped
Open Water Sources	Yes, canal
Groundwater Wells	None
Access to Electricity/Sewer/Water	No
Soil Integrity	Class 6 and sand/clay
Surface Water Drainage	Land
Prevailing Wind Direction	North Winter, South Summer
Ingress/Egress	From County Road 7
Lighted Area	No
Site Security	Yes
Buffer Distance	Yes
Property Developed	No
Property Adjacent to Airport/Airfield	No
Site Able to Handle Large Volume of Trucks	Can be made to with slight adjustments

SITE PREPARATION: High ☐ Medium ☑ Low ☐

SUITABILITY TO WET WEATHER: High ☐ Medium ☑ Low ☐

ABILITY TO SERVE A SPATIAL AREA: High ☐ Medium ☑ Low ☐

ACCESSIBLITY TO MUNICIPALITIES (LIST MUNICIPALITIES LIKELY TO UTILZIE SITE)

City of Lamar and Town of Wiley

SITE ACCEPTABILITY FOR WHAT TYPE OF REDUCTION METHOD (CHECK APPLICABLE METHOD(S)):

Open Burning ☑

Air curtain Incineration ☐

Grinding ☑

WILL THIS SITE BE RECOMMENDED FOR USE (YES/NO) AND EXPLAIN: _____

☑ C & D

☑ Vegetation

☑ White Good

☐ Other (Describe) _____

LIST THE CLOSEST LANDFILL AND APPROXIMATE DISTANCE FROM SITE:

City of Lamar Landfill 9 miles

ATTACH SITE SKETCH OR SATELLITE IMAGARY AND IDENTIFY MAJOR FEATURES OF SITE (ROADWAYS, BARRIERS TO USE, SPATIAL AREA). IF ONLY PORTIONS OF THE PROPERTY ARE SUITABLE FOR USE, PLEASE IDENTIFY WHAT AREA(S) WILL BE USED AND WHAT AREAS WILL NOT.



Appendix B.6: Waste Tire Transport Providers in Prowers County

BUSINESS NAME	OWNER/OPERATOR	ACCESS	TYPE
Arkansas Valley Alfalfa Milling Company	Kenneth Ullom 35590 US Hwy 287 Wiley, CO 81092 719-829-4866	Business	Waste Tire Hauler

Appendix C: Government Equipment Lists

C.1 Prowers County

Year	Make	Body Style	Vehicle Vin #	License Plt #	Remarks / Type
1951	HMD	TRLR	ID171348COLO	642AVS	Mobile Equipment
1965	JOY	AC	107	633AVS	Mobile Equipment
1969	LOR	DR	34295	627AVS	Mobile Equipment
1971	FRU	TRLR	OMN557501	638AVS	Mobile Equipment
1972	FRU	TRLR	0MP591801	427CLV	Mobile Equipment
1976	WMA	TL	6009	028V24	OIL TANKER
1979	INTER	TK	AA172JHB31229	249A31	Medium Truck
1980	BIG	WD	JF844593		Mobile Equipment
1980	FRU	TRLR	0MT001103	046V24	Mobile Equipment
1981	GAL	ROLLER		1410	Mobile Equipment 1981 Gallion Rubber Tire Roller
1983	HMD	TRLR	ID172742COLO	172V12	Mobile Equipment
1984	INT	TK	1HTLDUXP9EHA62314	445DBI	Medium Truck
1987	INT TAN	TK	2HSFBG2R8HC000235	024V24	Medium Truck
1987	UTILITY	TRLR	1UYVS2472HC697203	057V24	Mobile Equipment
1990	CAS	EXCAV	JAK0032438	630AVS	Mobile Equipment
1991	INT	TK	1HTSDZ7NXMH311755	999UHC	Medium Truck
1992	EAG	TRLR	112HAN301NL039441	966FHU	Mobile Equipment Replaced plate 644AVS 7/12
1992	FRE	TT	1FUYDZYB5NH527874	186V12	Heavy Truck Tractor
1993	INT	TK	1HTSDPPR8PH482628	396EUW	Medium Truck
1993	MACK	TK	1M2AM09C7PM002123	584SQR	Truck 04/29/2015
1994	INT	TT	1HTGLLLR5RH544089	760EUP	4/1/2013
1995	CHEV	PK	1GCGK24K4SZ257273	245A54	Medium Truck
1995	RED RIVER	LIVE BOTTM TL	1R9LB4222S1051070	ROR632	NEW PURCHASE 12-30-2019
1996	PTRB	TRAC	1XPCDR8X3TN418467	635AVS	Heavy Truck Tractor
1996	PTRB	TRAC	1XPGD98X1TN422017	636AVS	Heavy Truck Tractor
1996	RANCO	TRLR	1R9BSE506TL008093	165V12	Mobile Equipment
1997	BIG	TRLR	16VCX1828V1394356	162A31	Mobile Equipment
1997	FORD	TR	1FTYN80E9VVA36438	298DAK	Heavy Truck
1997	INT	PK	1HTSHAAR4VH452453	727HVN	Medium Truck
1997	RANCO	TRLR	1R9BSE507VL008249	158V12	Mobile Equipment

1997	RANCO	TRLR	1R9BSE505VL008248	163V12	Mobile Equipment
1998	LIN	WD	U1961003664		Mobile Equipment
1998	MCC	TRLR	41BFS442XJM000851	658AVS	Mobile Equipment
1998	RANCO	TRLR	1R9BSE508WL008083	053V24	Mobile Equipment
1998	RANCO	TRLR	1R9BSE506WL008082	052V24	Mobile Equipment
1999	CHEV	PK	1GCGK24U9XE150106	207A31	Medium Truck
2000	FRE	TK	1FVX6EDB8YLG91334	335VKB	Heavy Truck
2000	FRE	TK	1FVX6EDB5YLG46819	328VKB	Mobile Equipment snow plow
2000	FRE	TK	1FVX6EDBXYLG46816	333VKB	Mobile Equipment
2001	CHEV	PK	1GCHK24U51Z304105	651AVN	Medium Truck
2001	CHEV	PK	1GCHK24U01Z303024	652AVN	Medium Truck
2001	CHEV	PK	1GCHK24U31Z302059	653AVN	Medium Truck
2001	FREIG	TRAC	1FUJAHBD91PH44233	CQB934	Tx Val $79,800- Heavy Tr Trac Plate replmnt 10/2015
2001	HMD	TRLR	ID17004194CO	643AVS	Mobile Equipment
2001	RANCO	TRLR	1R9BSE50X1L008952	176V12	Mobile Equipment
2001	RANCO	TRLR	1R9BSE5011L008953	177V12	Mobile Equipment
2002	ROS	BR	38404	425CLV	Mobile Equipment
2002	VERMEER	BR CHIPPER	1VRU111A421002777	ROR631	NEW PURCHASE 10-22-2019
2003	FREIG	TK FLD	1FVHAEAS03LK35020	TWQ495	TRUCK 11/23/2016
2003	TOP	TRLR	4R7BU182137047665	652AVS	Mobile Equipment
2004	CAT	EX 320CL	PAB02227		MSRP $175,000- Mobile Equip
2004	INTL	TR	1HTWXAHT44J078424	834MQG	DUMP TRUCK 03/31/2014
2005	FRH	TT	1FUJA6CK65LV33051	959FHU	Truck Tractor 03/01/2012
2006	FRHT		1FUJA6CK56LV47279	ROR629	HEAVY TRUCK 7/12/2013 Plate rep 07-23-19 641fob
2006	KW	TR	1XKWDU9X36R138081	ROR623	TRACTOR NEW PURCHASE 01/23/2018
2007	CAT	BACKHOE	KMW02143	629AVS	Tx Val $94,190- Mobile Equip
2007	CHEV	PK	1GCHK24U47E136506	716HVN	Medium Truck
2007	FRE	TT	1FUJA6CK37LY28014	939HNE	Truck Tractor 01/01/2014
2007	FRHT	TR	1FUJA6CG87LY31051	CQB936	Truck Tractor 09/28/2015

2009	FOLD	PK	1FTNF21529EA16310	749HVN	Medium Truck
2009	FORD	PK	1FTNF21549EA16311	750HVN	Medium Truck
2009	KENWORTH	W900	1XKWD40X99J257477	WUO271	NEW PURCHASE 11-07-2019
2010	PJ	TRLR	4P5FS2820A1147071	632AVS	Mobile Equipment
2011	FORD	PK	1FTBF2B69BEB25668	339VKB	Medium Truck
2012	FORD	PK	1FTBF2B64CEA98493	439UHE	Medium Truck
2012	FORD	PK	1FTBF2B60CEB16438	022UHF	Medium Truck
2012	FORD	PK	1FTBF2B66CEA98494	440UHE	Medium Truck 1/1/2012
2012	PJ	TRLR	4P5T62429C1179629	ROR622	Mobile Equipment Plt Rpl per mark 13018 066HLR
2013	CAT	GRADER	M9D01557	759EUP	Mobile Equipment 08/01/2013
2013	RANCO	TL	1D9SD4028DR661540	046FTM	Bottom Dump Trailer 1/13
2014	CAT	BULL DOZ	GMK01208	SMM	BULL DOZER 01/2014
2014	CAT	GRADER	M9D01842	194HNV	GRADER 06/18/2018
2014	CAT	GRADER	M9D01843	193HNV	GRADER 06/18/2018
2014	FORD	PK	1FTBR2B6XEEB08978	688MQG	Medium Truck 12/01/2013
2014	FORD	PK	1FTBF2B68EEB08977	687MQG	Medium Truck 12/01/2013
2014	WITZ	TL	1W8A11F39ES000252	677LZQ	TRAILER 11/20/2014
2015	CAT	GRADER	N9D00392	594SQR	GRADER 04/25/2015
2015	CAT	GRADER	N9D00412	593SQR	GRADER 04/25/2015
2015	RANO	TL	591SD4020FR136419	591SQR	TRAILER 08/26/2017
2015	WITZ	TL	1W8A11F39FS000124	589SQR	TRAILER 02/06/2015
2016	CAT	GRADER	N9M00308	RAR693	ROAD GRADER
2016	CAT	GRADER	N9M00309	RAR692	ROAD GRADER 2/20/16
2017	CAT	LOADER	R8D00214	TWQ516	LOADER PUR 1/13/2017
2017	CAT	GRADER	N9D00725	HOP740	GRADER REPLACED 2013 CAT GRADER

2018	CAT	LOADER	KJP02733	ROR624	LOADER NEW PURCHASE 01/30/2018
2018	CAT	GRADER	N9M00550	DHH231	NEW PURCHASE 05-30-2018
2018	FORD	PK	1FT7W2B64JEB40888	TWQ512	2018 FORD F250 PURCHASE 02/26/2018
2019	CAT	SKID STEER	DTB10343	X631409	NEW PURCHASE 05-11-2019
2019	CAT	RD GRADER	N9D01177	ROR628	NEW PURCHASE 01-26-2019
2019	CAT	RD GRADER	N9D01211	ROR627	NEW PURCHASE 01-26-2019
2019	FORD	F-250 PK	1FTBF2B62KED14078	WUO693	NEW PURCHASE 11-13-2018
2019	FORD	F250 PK	1FTBF2B60KEE24921	WUO704	NEW PURCHASE 02-27-2019
2019	FORD	F250 PK	1FTBF2B69KEE24920	WUO707	NEW PURCHASE 03-25-2019
2019	FORF	F250 PK	1FTBF2B69KEE24921	WUO704	NEW PURCHASE 02-27-2019
	BOMAG	ROLLER	A101170501560		STEEL WHEEL ROLLER
			80D48-P-P-S112185		Mobile Equipment Screen Machine
			CH40-244E-1H2181		Mobile Equipment Small Stacking Conveyor
			6001683		Mobile Equipment Large Stacking Conveyor
					Mobile Equipment Middle Stacking Conveyor
			Fairgrounds		Mobile Equipment Case 5240 Mower Tractor
					Mobile Equipment John Deere Cx20 Mower
					Mobile Equipment Snocrete 9481C Snowblower

					Mobile Equipment Snocrete 954IC Snowblower
			Fairgrounds		Mobile Equipment Bush Hog 2846QT Tractor Bucket
					Mobile Equipment Lorain the Crane
					Mobile Equipment Joy AirscrewAir Compressor
					Mobile Equipment Petti Bone Roto-Tiller
					Mobile Equipment Lrg Pull Behind Rubber Tire Roller
					Mobile Equipment Sml Pull Behind Rubber Tire Roller
2006	CAT	GR	CCA01841	301DAK	Mobile Equipment

C.2 City of Lamar

UNIT	DESCRIPTION	YEAR	ID NUMBER	LIC NO	DEPT
33-0001	DODGE 4500HD 4X4 MED-2	2015	3C7WRLBLXFG607443	587SQR	AMB
3303	CHEV 3500 4WD MED-5	1995	1GBJK34F9SE25410	154A31	AMB
3305	CHEV 3500 4WD MED-4	1999	1GBJK34FXXF037437	315A54	AMB
3306	IHC 4900 RESCUE 4WD R-1	2002	1HTSDADN52H1537219	N/A	AMB
3307	JEEP CHEROKEE 4 WD	1997	1J4FJ28S8VL544996	274A54	AMB
3308	CHEV 3500 4WD MED-3	2005	1GBJK34265E260056	385EUW	AMB
3309	DODGE 4500 4WD MED-1	2009	3D6WD66L39G528900	336VKB	AMB
3352	INT'L TRUCK	1984	1HTLDUXR8EHA22517	320A54	AIRPORT
3356	INT'L TRUCK	2002	1HTGBADR72H517648	429DB1	AIRPORT
3359	JD MOWER W/ DECK	2007	LV2305H326042	N/A	AIRPORT
3360	RSS 1000 SNOW BLOWER	1992	1S9SB3020N3133022	SMM	AIRPORT
35-0001	RHO FR15 MOWER/15'	2005			AIRPORT
35-0002	GEHL SKID LOADER 5620	1992	6717	SMM	AIRPORT
34-0001	PIERCE SABER LADDER TRUCK	2014	4P1CS01A4EA014443		FIRE
34-0002	BECK/SPARTAN E-1	1991	4S7AT9L0IMC003195	EXEMPT	FIRE
34-0003	PEMFAB E-3	1195	1P3F112C25A095002	EXEMPT	FIRE
34-0004	FORD F450	2015	1FDUFHY45FEA16543		FIRE
34-0005	PACE AMERICAN TRLR	2007	47ZWB20267X053793	045FTM	FIRE
34-0006	DODGE RAM- 1/2 TON	2013	1C6RR7KT5DS684834	329ZSJ	FIRE
34-0007	FORD F-250 4WD A-1	1975	F26YRV65942	EXEMPT	FIRE
34-0008	CHEV-ANTIQUE	1942	2AF1152715	EXEMPT	FIRE
34-0009	JEEP GRAND CHEROKEE	2002	1J4GW48S82C125611	442DB1	FIRE
34-0010	QUINDT HP75 CYCLONE II Q-1	1998	4ENGAAA87W1009173	EXEMPT	FIRE
34-0011	PIERCE SABER FIRE ENG E-2	2008	4P1CC01A18A008908	EXEMPT	FIRE
34-0012	CHEVROLET HAZMAT 1	1994	1GBJK34F3RE214936	744HVN	FIRE
34-00013	WATERCRAFT TRAILER	1999	4FGL00814XD320347	192HNV	FIRE
34-00014	POLARIS JET SKI	1999	PLE03046K899		FIRE
34-0015	DODGE RAM 1500 QUAD CAB	2017	1C6RR7FT4HS785492	HOP732	FIRE
34-0016	DODGE RAM 1500 QUAD CAB	2017	1C6RR7FT6HS785493	HOP733	FIRE
40-0002	CRACK SEAL/TAR POT	2006	1C94M16236M119080		STREETS
40-0003	HOMEMADE TRAILER	2016	IDTL051943AA	HOP739	STREETS
40-0004	YALE FORK LIFT GP-040	1984	L-404328		STREETS
40-0005	JOHN DEERE MOWER 455	1999	CO71807		STREETS
40-0006	JOHN DEERE CAB MOWER 455	2000	M00455C090689		STREETS
40-0007	OIL DIST TRUCK 4900	1987	1HTLDTVR8HHA24544	CQB931	STREETS
40-0008	RANCO BELLY DUMP TRAILER	1988	1R9BSE501JL008600	CQB931	STREETS
40-0009	CHEVY 3500 UTILITY TRUCK	1993	1GBHK34N9PE224700	QTL148	STREETS
40-0010	DUMP TRUCK 4900	1992	1HTSDPBR3NH429131	CQB933	STREETS
40-0011	FORD F-550 BUCKET TRUCK	2002	1FDAX56F92ED28141	QTL149	STREETS
40-0012	INTERNATIONAL DUMP TRUCK 4	1990	1HTSDZ3R6LH263887	ARQ007	STREETS
40-0013	INTERNATIONAL TRUCK	1989	1HTLDDBR5KH676536	TWQ498	STREETS
40-0014	KODIAK SNOW BLOWER	1994	2WG03941		STREETS
40-0015	CASE LOADER	1993	JAF0102862		STREETS
40-0016	DRESSER LOADER	1993	3390144C005332		STREETS
40-0017	PLOW TRUCK	1994	1HTSDAAR3RH593743	TWQ496	STREETS
40-0018	HOMEMADE TRAILER	2016	IDTL075744AA	TWQ517	STREETS

40-0019	BIG TEX FLAT BED TRAILER	2000	16VVX1016Y1A22484	AEG580	STREETS
40-0020	CAT ROLLER 534B	1994	4JL00082		STREETS
40-0021	CEI 3 IN 1 AIR COMP/GEN/LIGHT	2001	22977	AEG580	STREETS
40-0022	MAITOU M40-4 FORKLIFT	2003			STREETS
40-0023	INT'L TANDEM DUMP TRUCK	1992	1HTGGC6RXNH429322	AEG570	STREETS
40-0024	INT'L TANDEM DUMP TRUCK	1994	1HTGGAHR1RH595011	AEG571	STREETS
40-0025	FORD F450 DUMP TRUCK	2001	1FDXW46F41ED50702	AEG572	STREETS
40-0026	CHEVROLET DUMP TRUCK	1995	1GBJC34N3SE227468	TWQ509	STREETS
40-0027	CASE 885 TRACTOR	1987			STREETS
40-0028	CHEVY 1 TON	1995	1GBKC34F8SJ115446	105A31	STREETS
40-0029	FORD 7740SL TRACTOR	1995			STREETS
40-0030	INT'L TANDEM DUMP TRUCK	1994	1HTGGAHR3RH595009	OHK931	STREETS
40-0031	TYMCO SWEEPER	2005	1FVAB6BV65DV11629	DHH234	STREETS
40-0032	INT'L SEMI TRUCK	1992	2HSFBB7R6NC058254	DHH236	STREETS
40-0033	INT'L TANDEM DUMP TRUCK	1997	1HTGGAHT2VH439081	WUC699	STREETS
40-0034	CAT ROLLER PS130	1994			STREETS
40-0035	BIG TEX TRAILER	1994	16VGX3026R1657491	DHH237	STREETS
4001	6" TRASH PUMP	1988	CH&E MODEL 2976W	SMM	WATER
4002	CHEVY ONE TON DUMP(PKUP)	1997	1GBHC34F8VF039373	818MQG	STREETS
4003	CHEVY ONE TON DUMP(PKUP)	1999	1GBJC34R2XF072450	819MQG	STREETS
4004	CHEVY 3500 UTILITY TRUCK	1993	1GBHC34J8PE227680		STREETS
4007	TOP HAT BP UTILITY TRAILER	2014	4R7BU1215ET137095		STREETS
4008	CHEV3/4 TON 4WD PICK UP	1992	1GBK34K0NE225530	133A31	ENGINEERS
4009	CHEVY DIESEL DUMP	1995	1GBJC34FXTE143884	700QEZ	STREETS
4011	WACKER COMPACTOR	1985	800150 MODEL VPG2550R		STREETS
4012	CHEVY 3500 1 TON DUMPING TR	1997	1GBHC34RVF041407	836MQG	STREETS
4016	CASE CRAWLER 1450B	1981	8381866	SMM	STREETS
4017	CLARK FT END LADER 35C	1984	472C324CB	037V24	STREETS
4018	LO-BOY TRLR A302	1996	AURA11D22TS061227	031V24	STREETS
4019	GMC BRIGADIER DUMP TRUCK	1978	TJI908V593827	271A54	WATER
4020	MAC TRUCK	2004	1M2AE06YX4N020988	355ETY	STREETS
4022	CAT ROLLER PSI130	1990	7ND00224	150V12	STREETS
4023	INT'L 684 TRACTOR	1985	B510216B010756		STREETS
4026	INGERSOLL RAND ROLLER DD-34	2006	IR04728	SMM	STREETS
4028	DRESSER GRANDER A450E	1989	12146	SMM	STREETS
4031	FLOW BOY TRAILER	1984	841286	191HNV	STREETS
4032	FRUEHAUF TANK TRAILER	1984	1H4T04221EL014710	761EUP	STREETS
4033	TRLR FAIRMONT	1991	1D173395CO	145V12	PARKS
4034	CHEV 1 TON PICK UP	1992	1GBHC34KXNE222941	341VKB	PARKS
4035	PAINT STRIPER BINCH	1985	MODEL #5-10		STREETS
4038	CHEV 3/4 TON PICK UP W/ UTILI	1991	1GCFK24K8ME218935	121A31	PARKS
4039	CASE TRAC 685 LOADER 2255	1990	B03021	SMM	PARKS
4040	JD TRAC/MWR 2030	1975	157045	SMM	STREETS
4042	TRLR HOMEMADE	1196	ID17003839CO	038V24	WATER
4046	MB COMPACTOR	1989			STREETS
4048	INGRSL RND 185CFM CMPRSR	2006	375250UIQ820		STREETS
4055	FMC TRLR WATER MACH	1988	A310673	SMM	WATER

4056	CAMEL VAC	1992	92910149	147V12	WATER
4057	SHEEPFOOT ROLLER	1955		SMM	STREETS
4059	ROTOMIST SPRAYER	1970	FMCM 10009-30060		STREETS
4061	TRAILER	1994	11YUC1923RT000226	059V24	PARKS
4064	KOHLMAN SCR PLANT	1957	MODEL 202 SER # 37402457		STREETS
4065	INTRNL SINGLE AXLE DUMP TRK	1991	1HTSDNGRXMH354505	693MQG	STREETS
4066	INTRNL SINGLE AXLE DUMP TRK	1990	1HTSDZ3R7LH263882	692MQG	STREETS
4068	INTERNATIONAL DUMP TRUCK	1987	1HTLDTVR1HHA22814	691MQG	STREETS
4069	1085C CASE EXCAV(CRUISE AIR)	1992	JAK0032673	SMM	WATER
4072	FORD F-350 PICK UP	1997	1FDJW36H2VEA45237	267A54	STREETS
4076	MD PLATE COMPACTOR A-P 200	1980	1565339		STREETS
4079	WALDEN SWEEPMASTER II SWEE	1994	SER #22833	036V24	STREETS
4080	BOMAG ROLLER 120AD-2	1993	#101170500728	SMM	STREETS
4082	BACKHOE TRLR	1975	6134	647AVS	WATER
4083	MASSET FERGUSSON TRAC LDR	1977	9A267170	SMM	WATER
4088	SWEEPSTER	1997	1.39257E+14	877HPH	STREETS
4089	SWEEPSTER LA8	1993	934755		STREETS
4090	ELGIN BROOM BADGER	2014	JALE5W165E7302922	878HPH	STREETS
4093	WELDING TRLR MILLER WLDR	1996	ID17003803CO	030V24	EQ MAINT
4095	WEED BURNER TRLR(FUEL)	1981	ID172614COLO	144V12	STREETS
4096	JD TRAC 1050	1985	CH10505014816	SMM	PARKS
4099	CHEVROLET 3/4 TON 4WD PU	1992	1GVHJ34K3NE228048	131A31	STREETS
41-0001	FORD F250 PICK UP	2002	1FTNX21F52EB51597	438UHE	EQ MAINT
41-0003	CHEVROLET 1500 PICK UP	1991	1GCEC14H1ME176664	129A31	BLDG MAINT
41-0004	RADAR TRLR	1999	ID17004045CO	058V24	EQ MAINT
41-0005	FOR FUSION	2018	3FA6P0G74JR194550	TWQ510	ADMIN
41-0006	FORD PICKUP	1993	2FTEF25N8PCA78873	155A31	BLDG MAINT
41-0007	FORD CROWN VICTORIA	2011	2FABP7BV8BX157968	433UHE	TECH
41-0008	FORD CROWN VICTORIA	2011	2FABP7BVXBX157969	435UHE	COMM DEV
41-0009	RAM 1500 CLASSIC	2019	1C6RR7FG5KS626250	WUO709	BDG CODES
4100	725DT MOWER W/3472 DECK	2009	5913460/6040337		PARKS
4101	JD LOADER 544C	1982	402359 DW	SMM	PARKS
4102	4 POD TRLR & TREE SPADE	1992	1M9DD1625LN352013	040V24	PARKS
4103	JD HP GATOR OPS 650 UTILITY	2010	M0X7VGF080180		PARKS
4104	JD 2720 UTILITY TRACTOR	2012	1LV2720HCCH510162		PARKS
4105	JD TRAC -430	1987	M00430X011328		PARKS
4106	JD TRAC 3038E W/ ATTACHMENT	2012	1XF6M10EJC0296471		PARKS
4107	JD 5400 W/ ATTACHMENTS	1998	LV2100E642707	SMM	PARKS
4109	FORD F250 3/4 TON 4WD	1999			
4110	CLARK GPS 30 MB FORKLIFT	1988	GP138MB089936835F		EQ MAINT
4114	FORD F 250	1993	2FTEF25NXPCA78874	156A31	PARKS
4115	CHEV 1/2 TON PICK UP	1990	1GCDC14Z6LZ226907	269A54	STREETS
4116	CAT LOADER	2000	6XR02536928G	SMM	STREETS
4117	DITCH WITCH TRENCH/PULL 410	2000	4T1218	SMM	PARKS
4119	PLOW DUMP TRUCK	2010	1M2AX01C9AM001453	330VKB	STREETS
4122	INTL TRUCK 1954	1983	1HTAA1953DHA22559	649AVN	STREETS
4124	MMC 2 WHEEL TRLR	1977	T77MMC0420	943HNE	WATER

4125	TYMCO STR SWPR	1997	1FDXH81C2VVA40746	597AVG	STREETS
4127	CHEV 1 TON DUMPING TRUCK	1987	1GBHR34K6HS157798	428DBI	STREETS
4129	CHEV PICK UP	1988	1GCDC14H9JZ264717	426DB1	PARKS
4130	FORD F250 PICK UP 5.8L AUTOM	1996	2FDHF25H9TCA50576	258A54	PARKS
4133	TANDEM SAM TRLR	1995	11YUH2127ST000089	428CLV	STREETS
4137	JD GRADER 672CH	2000	SER # 577445	SMM	STREETS
4138	FORD 7000 TRAC	1973	C475281	SMM	STREETS
4139	GRACO LAZER PAINT STRIPPER	2002	BA452		STREETS
4140	INTL TRUCK -WATER TRUCK	1987	1HTLDTVR3HHA22670	465DBI	STREETS
4141	JD TRACTOR 6415(PULLS 4142)	2005	L06415A454265		STREETS
4142	JD HX20 BATWING MOWER	2005	W0HX20F002899		STREETS
4154	JD TRAC-4200 W/ DECK	2000	LV4200H322095/M062CBD086064		PARKS
4155	JD UTIL TRAC W/ MOWER DECK	2006	LV2305H22496/M062CBD086065		PARKS
4156	JD UTIL TRAC W/ MOWER DECK	2006	LV 2305H224299		PARKS
4157	STUMP CUTTER	1996	92080673		PARKS
4158	CHEVY 3500 UTILITY TRUCK	1994	1GBJC34F1RE303904	696QEZ	PARKS
4159	CHEVY 3500 1 TON DUMPING TR	1995	1GBJC34N6SE227447		PARKS
4160	725DT MOWER W 3472 DECK	2011	6110182		PARKS
4166	CHEVY S10 PK	2003	1GCDT19X638243879	480QFI	PARKS
4167	MILLCREEK TOP DRESSER	2000	TD3213		PARKS
4168	AEREATOR- DEEP TINE	2000			PARKS
4169	MASSEY RIDING MOWER	2005	N-T4803		PARKS
4171	CUB CADET MOWER	2013	E13976SSN4G2200426061503		PARKS
4175	MOSQUITO SPRAYER	2006	713		STREETS
4176	LAWN VAC	2006	22672		PARKS
4177	LAWN VAC	2006	22673		PARKS
4178	JD 850 J DOZER	2007	T0850JX136278	SMM	STREETS
4179	JD COMPACT EXCAVATOR 350 W	2007	FF035DX237057 & 0612152	SMM	PARKS
4180	FORD CT8000 DIST/ TACK TRK	1980	Q81UVJA5576	724HVN	STREETS
4182	DODGE CHARGER	2006	2B3KA43G46H374459	730HVN	ADMIN
4184	FORD F150 PICK UP	2008	1FTPX14V78FB20926	736HVN	PARKS
4186	FORD F150 CAB	1997	1FTDX17W4VKB85825	284A54	BLDG CODE
4187	DODGE GRAND CARAVAN	2012	2C4RDGBG3CR33393	949WIA	LIBRARY
4188	CHEVY TAHOE	2001	1GNEK13V81J255625	689MQG	EQ MAINT
4189	BANDIT TREE CHIPPER	1994	F1JL5019BA	SMM	STREETS
4190	LEEBOY 8500 ASPALT PAVER	2007	48556	SMM	STREETS
4191	TRAILER -HOMEMADE	1985	ID1729570CO	300DAK	STREETS
4192	PJ TRLR	2009	3CVC6202792131310	544EUE	STREETS
4193	PJ TRLR	2009	3CVC6202092131309	743FHU	PARKS
4194	DECK MOWER 722DT6	2008	5819286		PARKS
4199	FORD F250	1996	2FTHF26H2TCA62281	257A54	EQ MAINT
42-0001	LZ60 CUB CADET MOWER	2015	1D304H10002		PARKS
42-0002	LZ60 CUB CADET MOWER	2015	1I044H10209		PARKS
42-0003	JD 2032 R	2015	1LV2032RCFH114768		PARKS
42-0004	JD CAB MOWER 455	2000	M00455C090679		PARKS
42-0005	GMC 1 TON DUMP BED TRUCK 3	1996	1GDHC34J3TR536362	QTL-780	PARKS
42-0006	GMC 1 TON DUMP BED TRUCK 3	1996	1GDHC34J3TRE536300	QTL-779	PARKS

42-0007	CUB CADET MOWER	2016	1B046H60045PROZ160L		PARKS
42-0008	CUB CADET MOWER	2015	1I044810231ZFLZ60		PARKS
42-0009	TOP HAT TRAILER	2016	4R7BU1418GT153081	CQH720	PARKS
42-0010	JD 2720 TRACTOR	2013	IV2720HCCH511263		PARKS
42-0011	LELY SPREADER @ GOLF COURSE	2010	MIWL2010		PARKS
42-0012	INT BUCKET TRUCK	2006	1HTMKAARX6H153870	384EUW	PARKS
42-0013	FORD 7740 SL TRACTOR	1995			PARKS
42-0014	PROFORCE BLOWER	2019	404609844		PARKS
42-0015	WORKMAN MDX	2019	404690704		PARKS
42-0016	GREENSPRO 1260 MOWER	2019	403104375		PARKS
42-0017	GREENMASTER 3300 MOWER	2019	403408354		PARKS
42-0018	REELMASTER 5410D	2019	4046564117		PARKS
42-0019	TAG 1393 54 INCH	2018			PARKS
42-0020	JD 20338 W/ SIDE COMPACT	2019	LVRG073017222		PARKS
42-0021	TAG 1395 61 INCH	2018	1A048H30045		PARKS
42-0022	CUB CADET MOWER 51 INCH	2019	1L197H30026		PARKS
42-0023	CUB CADET MOWER 51 INCH	2019	1A258H30058		PARKS
42-0024	CUB CADET MOWER		1L068H3001		PARKS
43-0001	JD GRADER 772A	1987	008988T	SMM	WATER
43-0002	FORD F-450 SUPER DUTY TRUCK	1999	1FDXF46F2XED26195	CQB932	WATER
43-0003	BOBCAT SKID STEER	1989	501944226		WATER
43-0004	GMC 3500 SL UTILITY TRUCK	1998	1GDHC34J1WF060692	HOP736	WATER
43-0005	CHEVY SILVERADO	2004	2GCEK19T141106146	TWQ511	WATER
43-0006	CHEVY S-1	1991	1GCCS14R3M8260664	128A31	WATER
43-0007	FORD 7740 TRACTOR	1994			WATER
43-0008	FORD F-450 XL SUPER DUTY V8	2003	1FDXW46923EB39221	OHK932	WATER
43-0009	FORD F-150 PICK UP	2002	1FTRW08LX2KE18562	WUO692	WATER
43-0010	INTL TANDEM DUMP TRUCK	1994	1HTGGAHR6RH593738	WUO698	WATER
4300	FORD F250	1997	3FEHF26H3VMA49036	288A54	WATER
4301	FORD 575E BACKHOE	1998	31008021	SMM	WATER
4302	INT DT 466 W/MEYERS JETTER	1987	1HTLDTVR8HH518352	303A54	WATER
4303	FORD F250	1999	1FDNF21LXXEB33317	302A54	WATER
4305	GMC TANDEM AXLE DUMP TRUC	1989	4GDT9C4C3KV801840	831MQG	WATER
4308	GMC 3500 1 TON	1991	1GDHC34K0ME527886	323A54	WATER
4311	GMC 3500	1998	1GDJK34JXWF060033	278TTW	WATER
4312	FORD F150	2000	1FTRX17W5YNB89004	623AVN	WATER
4313	TOP HAT BACKHOE TRLR	2012	4R7B02526CT115609	HOP741	WATER
4314	PJ 2- WHEEL TILT TRLT	1997	4P5HH1010V1013056	048V24	WATER
4315	CASE 9030B TRACKHOE	2001	DAC0302993	SMM	WATER
4316	JD SKD LOADER	2011	1T0326DJPBG205791	SMM	WATER
4318	TAPPING MACH	1994			WATER
4319	FORD F-250	2004	1FDNX21S54EC14774	469DBI	WATER
4320	MASSEY FERGUSSON TRAC LDR	1977	9A267170		WATER
4322	BOMAG ROLLER 120AD-2	1995	1.01171E+11	SMM	WATER
4323	FORD F250	1997	1FDHF25H6VEA60592	268A54	WATER
4324	POWER TRAIN 6500W GENER	2006	6MAR07599-13EG		WATER
4325	BUSH HOG 5' MOWER	2007	12-02579		WATER

4326	FORD F150	2008	1FTPX14B88KD09043	735HVN	WATER
4327	VACTOR MODEL 210-J6 JET/VAC	2007	2FZAATDC87AY46255	742HVN	WATER
4328	GMC DUMP TRUCK	1991	1GDM7H1J8MJ522339	123A1	WATER
4329	SEWER CAMERA -ROVER X SERIE	2013			WATER
4330	BAUER SEWER PUMP	2009	51FDP12199G001106	744FHU	WATER
4331	JD MOWER	1983	M0042X285199		WATER
4333	CAT 420E BACKHOE	2012	DJL03869	SMM	WATER
4334	CHEVY ONE TON DUMP(PKUP)	1997	1GBHC34J1VF0420203	690MQG	WATER
44-0001	CHEVY BLAZER	1993	1GNDT13W4P2211772	087A31	POLICE
44-0003	FORD EXPLOER	2016	1FM5K8AR0GGA01528	QTL-147	POLICE
44-0004	SMART RADAR TRAILER 5699	1998	1K9BS0810WK118778	595-SQR	POLICE
44-0005	SMART RADAR TRAILER 5699	1998	1K9BS0812WK118779	RAR-694	POLICE
44-0006	DODGE RAM PICK UP	2016	3C6JR6DG1GG304357	CQH244	POLICE
44-0007	DODGE RAM PICK UP	2016	3C6JR6DG3GG304358	CQH246	POLICE
44-0008	DODGE RAM PICK UP	2016	1C6RR7XT0GS337103	CQH245	POLICE
44-0009	DODGE RAM PICKUP 1500 4X4	2018	1C6RR7XT1JS248728	DHH222	POLICE
44-0010	DODGE RAM PICKUP 1500 4X4	2018	1C6RR7XT3JS248729	DHH223	POLICE
44-0011	DODGE RAM PICK UP	2018	1C6RR7XT7JS298050	TWQ515	POLICE
44-0012	DODGE RAM PICK UP	2018	16CRR7XT6JS296192	TWQ514	POLICE
44-0013	DODGE RAM PICK UP	2018	1C6RR7XT0JS294986	DHH229	POLICE
44-0014	FORD EXLPORER	2019	1FM5K8AR1KGB54962	WUO706	POLICE
4400	TASK FORCE CARS				POLICE
4403	CHEVY TAHOE 4WD	2013	1GNDK2E01DR343514	325ZSJ	POLICE
4404	CHEVY TAHOE 4WD	2014	1GNSK2E0XER176555	815MQG	POLICE
4405	CHEVY TAHOE 4WD	2014	1GNSK2E06ER177122	815MQG	POLICE
4406	CHEVY TAHOE 4WD	2014	1GNSK2E09ER178894	TWQ502	POLICE
4407	CHEVY TAHOE 4WD	2014	1GNSK2E05ER177225	TWQ501	POLICE
4408	TASK FORCE CAR				POLICE
4409	HUM V	1991	118718	020UHF	POLICE
4410	FORD CROWN VICTORIA	2011	2FABP7BV6BX157967	437UHE	POLICE
4414	FORD CROWN VICTORIA	2011	2FABP7BV8BX157971	434UHE	POLICE
4423	CHEVY MAILBU	2000	1G1ND52JXY6311885	424DBI	POLICE
4426	MERCURY MARQUIS	2000	2MEFM75W0YX726635	637AVN	POLICE
4429	FORD PICKUP	2013	1FTMF1CM9DKF05937	321ZSJ	POLICE
4434	FORD- DARE VEHICLE	1985	1FTEF15N8FPB48833	741HVN	POLICE
4438	FORD EXPEDITION 4WD	2008	1FMU16538LA07814	998UHC	POLICE
4444	FORD F150 PICK UP	2009	1FTRF12W29KC71513	279TTW	POLICE
4445	DODGE RAM 1500	1997	3B7HF13Z8VG780284	747TTC	POLICE
4447	FORD CROWN VICTORIA	2006	2FAP71W66X149376	280TTW	POLICE
4448	FORD CROWN VICTORIA	2006	2FAHP71W76X148141	281TTW	POLICE
63-0001	DRESSER/INT LOADER 510B	1986	3380130J001071	SMM	SAN
63-0002	FORD F250 PICK UP	2016	1FT7W2BT0GEB43740	QTL-781	SAN
63-0003	CHEVY 3500 UTLITY TRUCK	1994	1GBHC34N5RE313177	QTL782	SAN
63-0004	MACK TRASH TRUCK	2017	1M2LR05C5HM002011	BFQ947	SAN
63-0005	COULSON TRAILER	1992	1C9LF5032N1441028	596SQR	SAN
63-0006	INTERNATIONAL DUMP TRUCK	1994	1HTGGAHRXRG595007	TWQ497	SAN
63-0007	POLARIS BIG BOSS ATV	1993	938739-2104236		SAN

63-0008	PETERBILT SEMI TRUCK	2008	3BPZL00X78F718279	WUO702	SAN
63-0009	DADEE SCORPION TRASH TRUCK	2019			SAN
6300	AUTO TRASH TRUCK	2005	5VCDC6MF15H201816	393EUW	SAN
6304	LABRIE TRASH TRUCK	2010	1M2AU2C7AM004326	331VKB	SAN
6306	MACK LEU-613	2013	1M2AU04CADM007949	690ZDT	SAN
6307	FORD-LEACH CARDBOARD TRUCI	1995	1FDZW82E4SVA83298	766YUV	SAN
6318	CHEVY 3500 4DR UTILITY PKUP	1996	1GBHK33F3TF014429	698QEZ	SAN
6319	CHEVY 3500 4DR UTILITY PKUP	1996	1GBHK33FXTF014637	697QEZ	SAN
6321	CHEVY 1/2 TON PICK UP	2000	1GCEC14V7YE423116	624AVN	SAN
6328	INTL TANDEM DUMP TRUCK	1989	1HTZPGCR8KH639529	705QEZ	SAN
6329	INTL 4900 MID RANGE DUMP TR	1994	1HTSDAAR2RH605350	695QEZ	SAN
6330	CAT 996E LOADER	1992	099Y06904		SAN
6331	CHAMPION 780A GRADER	1994	199 194 23905		SAN
6337					

C.3 Town of Holly

1-Loader Back Hoe
1-Mid Range Dump Truck
1-Dump trailer
1-Wheeled Loader

C.4 Town of Granada

2- John Deere Back Hoe
2- Mid Range Dump Trucks
1- Skid Steer

C.5 Town of Wiley

1-John Deere Back Hoe
1-Mid Range Dump Truck
2-Rear Load Trash Trucks

C.6 Town of Hartman

Town of Hartman does not have equipment and would rely on surrounding municipalities and Prowers County to assist them before having to contract for debris management and removal equipment.

C.7 Lamar School District

1-Case Loader Back Hoe
1-Mid Range Dump Truck
1-One Ton Dump
1-CAT Skid Steer with Bucket and Sweeper
1-Case Skid Steer with Buck and Back Hoe
1-Tree Shredder
2-John Deere Tractors with Loaders
1-Massey Ferguson Loader
1-Towable Air Compressor
1-Case Loader

Appendix D: Countywide Debris Contractors

Company	County	Phone	Equipment
Carder, Inc 32625 CR 3.75 Lamar, CO 81052	Prowers	719-336-3479	Heavy Equipment Service and Rental
DeWitt Excavating 7395 US Hwy 50 Lamar, CO 81052	Prowers	719-336-4455	Heavy Equipment Service and Rental
Torres Excavation 1750 CR HH Lamar, CO 81052	Prowers	719-336-7361	Heavy Equipment Service and Rental
A-1 Rental 7215 Hwy 50 Lamar, CO 81052	Prowers	719-336-2771	Heavy Equipment Service and Rental, Pumps & Compressors, Generators
Ranchers Supply E. Hwy 50 / P.O Box 721 Lamar, CO 81052	Prowers	719-336-2236	Pumps & Machinery
Semco 7395 Hwy 50 Lamar, CO 81052	Prowers	719-336-9006	Pumps & Machinery
Air Gas 223 N. Main Lamar, CO 81052	Prowers	719-336-4439	Industrial Equipment and Sales
M R Rife Earthmoving 101 Mullen Street Lamar, CO 81052	Prowers	719-336-5300	Heavy Equipment Service and Rental
Silver Leaf Tree Service Lamar, CO 81052	Prowers	719-336-0683	Tree Service
Dashner’s Tree Trimming Lamar, CO 81052	Prowers	719-688-1599	Tree Service

Appendix E: Primary Road Clearance Priorities

E.1 Prowers County

CR 196 from the Bent County Line to US 385

CR KK from US 385 to CR 30

CR 30 from CR KK to US 50

CR 19 from CR 196 to US 50

CR 13 from CR 196 to US 50

CR 14 from US 50 to Lamar Landfill

CR 12 from US 50 to CR HH.2

Lamar Truck Bypass from US 50 to US 287

CR HH.5 from Lamar City Limits to CR 9 to US 50

CR 9 from US 50 to CR HH to Lamar City Limits

CR HH from Lamar City Limits to Bent County Line

CR 3 at HH south to Lamar Municipal Airport

CR 8 from Lamar City Limits to Kiowa County Line

CR MM.3 to CR 8

CR LL from CR 196 to Alta Vista School

CR HH.5 to Lamar 13th Street

E.2 City of Lamar

Crystal Street from US 287/50 to Colonia Avenue

Colonia Avenue to US 287/50

Commercial Street from Colonia Avenue to Maple Street

Maple Street East and West

North 2nd Street from Washington Street to Cedar Street

East Poplar from 2nd Street to US 287/50

East and West Washington Street from 13th Street to 2nd Street

6th Street from Washington Street to Mayhew Drive

10th Street from Maple Street to Cedar Street

13th Street from Washington Street to Oak Street

14th Street from Oak Street to Yucca Street

Hickory Street East and West

Oak Street East and West
East and West Park Street
East and West Cedar Street
9th Street from Oak Street to Savage Avenue
Yucca Street from 14th Street to 11th Street
Savage Avenue from 11th Street to US 287
Saddle Club Drive from Savage Avenue to US 287
Memorial Drive from US 287 to US 287
Kendall Drive
Willow Valley Way
Willow Valley Road from Memorial Drive to Cedar Street
Parkview Avenue
Parkway Drive
East Parmenter Street from CR HH to US 287

E.3 Town of Holly

North and South Main Street
North and South 1st Avenue
East and West Cheyenne Street
East and West Park Street
South 11th Street from US 50 to Cheyenne Street
North 8th Street from US 50 to Park Street
Highland Drive from West Park Street
North 7th Street from US 50 to West Park Street
North 6th Street from US 50 to West Park Street
North 10th Street from US 50 to West Park Street

E.4 Town of Granada

South Main Street from US 50 to CR 25
East and West Grooms Avenue
South Hoisington from US 50 to Broadway Avenue
South Inge from US 50
East and West Cottonwood

North Inge Street
East and West Oak

E.5 Town of Wiley

Gordon Street from CR 196
7th Street from CR 196 to US 287
Ward Street
3rd Street from Pheasant Run to US 287
Ward Street from CR 196 to 1st Street
1st Street from Ward Street to CR 196

E.6 Town of Hartman

Main Street north and south
East Scott Avenue from Main Street to CR 30

E.7 Community of Bristol

South Dugger Avenue
South and North Frederick Avenue
West and East 2nd Streets from US 385

Appendix F: Prowers County Critical Facilities

F.1 City of Lamar

FACILITY NAME	TYPE	ENTITY	ADDRESS/GPS
Prowers County EOC	EM	County Govt	2506 South Main
Prowers County Fire Station	Fire	County Govt	300 East Poplar
Prowers County Court House	Various Govt	County/State Govt	301 South Main
Prowers County Sheriff/Jail	Law Enforcement	County Govt	103 East Oak
Prowers Area Transit	Transporation	County Govt	407 East Olive
Prowers County Communicatons	911 Comms	County/City Govt	2504 South Main
Prowers County Road and Bridge	Trans/Public Works	County Govt	102 East Sherman
Prowers Medical Center	Medical	Special Dist	401 Kendall Drive
Lamar City Complex	City Govt	Local Govt	102 East Parmenter
Lamar Fire Dept	Fire/EMS	Local Govt	505 South Main
Lamar School District	Education	Special Dist	210 West Pearl
Lamar Community College	Education	State Govt	2401 South Main
CDOT	Transportation	State Govt	2500 South Main
Prowers County Annex Nursing	Medical	County Govt	1001 South Main
Prowers County Annex HS	Human Services	County Govt	1001 South Main
Lamar Water	Potable Water	Local Govt	103 North 2nd
Lamar Sanitation	Sanitation	Local Govt	103 North 2nd
Lamar Street Dept	Transporation	Local Govt	103 North 2nd
Century Tel	Communications	Private	309 South 4th
Viaero Tower	Communications	Private	38.087186, -102.604982
Verizon Tower	Communications	Private	38.089204, -102.616870
LL&P High School Sub	Utility	Local Govt	38.076133, -102.627450
LL&P College Sub	Utility	Local Govt	38.070873, -102.616321
LL&P Santa Fe Sub	Utility	Local Govt	38.089832, -102.625316
LL&P 6 mil sub and LAMSO sub	Utility	Local Govt	38.035449, -102.595415
Lamar Water Tank	Utility	Local Govt	38.036987, -102.600597
Lamar Light and Power	Utility	Local Govt	100 North 2nd

F.2 Town of Holly

FACILITY NAME	TYPE	ENTITY	ADDRESS/GPS
Holly City Complex	Town Govt	Local Govt	100 Tony Garcia Avenue
Holly Fire Dept	Fire	Special Dist	200 South 3rd
Holly Flood Dike	Flood Control	Local Govt	38.052932, -102.138881
US 50	Transportation	State	38.053322, -102.122687
US 89	Transportation	State	38.053208, -102.118562
Holly School District	Sheltering/Transporation	Special Dist	206 North 3rd
Holly Light and Power	Utility	Local Govt	38.049678, -102.120514
Prowers Road and Bridge East	Transportation/Public Works	County Govt	600 North 8th
Holly Ambulance	Medical	Special Dist	120 North 1st Avenue
Holly Medical Clinic	Medical	Private	410 West Colorado
Holly Nursing Care	Medical	Private	320 North 8th
Holly Municipal Airport	Tranportation	Local Govt	38.037366, -102.117647

F.3 Town of Granada

FACILITY NAME	TYPE	ENTITY	ADDRESS/GPS
Granada Community Center	Town Govt	Local Govt	103 South Main
Granada Fire Dept	Fire	Local Govt	105 South Main
Granada Flood Dike	Flood Control	Local Govt	38.063612, -102.318902
US 50	Transportation	State	38.062776, -102.312536
US 385	Transportation	State	38.067388, -102.310348
Granada School District	Education	Special Dist	201 South Hoisington
CDOT	Transportation	State	200 West Amache Road
Granada Water Tank	Utility	Special Dist	38.064418, -102.311296
Granada Landfill	Sanitation	Local Govt	38.049874, -102.336355

F.4 Town of Wiley

FACILITY NAME	TYPE	OWNER	ADDRESS/GPS
Wiley Fire Station	Fire	Special Dist.	103 Main Street
Wiley Consolidated School	Sheltering/Trans	Special Dist.	501 Ward Street
Wiley City Building	Local Govt	Local Govt	304 Main Street
Cell Tower	Communications	Private	38.153234, -102.721869
May Valley Water Assoc	Utility	Private	214 Main Street

F.5 Town of Hartman

FACILITY NAME	TYPE	ENTITY	ADDRESS/GPS
Hartman Fire Dept	Fire	Local Govt	206 South Main
Hartman Water tank	Utility	Local Govt	38.118877, -102.219035

F.6 Unincorporated Prowers County

FACILITY NAME	TYPE	OWNER	ADDRESS/GPS
AC/DC Sub Station	Utility	Private	38.206776, -102.528804
AT&T Facility	Communications	Private	37.924132, -102.610071
Colorado Interstate Gas	Utility	Private	37.750873, -102.745180
Lamar Municipal Airport	Transportation	Local Govt	3652 County Road GG.2
US 287	Transportation	State	37.913898, -102.612568
US 50	Transportation	State	38.091229, -102.585442
CR 196	Transportation	County Govt	38.115337, -102.586613
BNSF Railway	Transportation	Federal	38.089923, -102.617662
Granada Flood Dike	Flood Control	Local Govt	38.063500, -102.318826
Holly Flood Dike	Flood Control	Local Govt	38.053441, -102.139171
VORTAC LAA 116.9	Transportation	Federal	38.197100, -102.687541
Southeast Colorado Power	Utility	Private	3601 South Main Street Lamar
Carlton Tower	Communications	Local Govt	38.037983, -102.429909
Holly Tower	Communications	Local Govt	37.985524, -102.113239
Granada Tower	Communications	Local Govt	37.852819, -102.354944
SECPA Granada Sub	Utility	Private	38.059371, -102.287093
Prowers Rural Fire Bristol St.	Fire	Local Govt	East 2nd and South Frederick Ave.
Granada/Bristol Water	Utility	Special Dist.	38.125745, -102.310266
Arkansas River Bridge Holly	Transportation	State	38.043267, -102.118279
Arkansas River Bridge Granada	Transportation	State	38.095121, -102.310741
Arkansas River Bridge Rd 13	Transportation	Local Govt	38.096477, -102.519506
Arkansas River Bridge Rd 19	Transportation	Local Govt	38.104854, -102.411614
Arkansas River Bridge US 287	Transportation	State	38.105415, -102.618424
Lamar Tower Farm	Communications	Private/local govt	38.036440, -102.597841
Lamar Landfill	Sanitation	Local Govt	38.059773, -102.505629

Appendix G: Prowers County Community Specific Debris Estimates

G.1 City of Lamar – Total Estimated Debris 1,952,212 Cubic Yards

G.2 Town of Holly – Total Estimated Debris 234,938 Cubic Yards

G.3 Town of Granada – Total Estimated Debris 166,416 Cubic Yards

G.4 Town of Wiley – Total Estimated Debris 107,066 Cubic Yards

G.5 Town of Hartman – Total Estimated Debris 24,708 Cubic Yards

G.6 Unincorporated Prowers County – Total Estimated Debris 1,170,618 Cubic Yards

Appendix H: Prowers County Public Information Strategy for Debris Management

Public information related to debris management will be submitted to the public in as many ways as possible. Although there will be an operational public information officer designated by the Debris Project Manager, this position will work in cooperation with the Prowers County Public Information Officer (or ESF-15 when activated) to facilitate the distribution of public information. The following communication vehicles will be considered when performing this function:

CodeRED® is the county's mass notification system that is designed to keep Prowers County residents and businesses informed of emergencies and non-emergency events.

NOAA Weather Radio – NOAA Weather Radio may be used to issue civil type messages on frequency of 162.400 or 162.525. This can be activated through the EAS, IPAWS system or by contact the National Weather Service in Pueblo by calling (719) 948-9429.

Websites: Prowers County and jurisdictions inside Otero County have various websites that information can be posted on.
www.prowerscounty.net is the county's web site that is designed to keep Prowers County residents and businesses informed of events.
www.secahr.com is the Southeast Colorado All-Hazards Region website
www.ci.lamar.co.us is the City of Lamar website
www.townofholly.com is the Town of Holly website
www.townofwiley.com is the Town of Wiley website

Media – This includes local television, radio, newspapers, or community newsletters that reach the impacted area(s).

Social Media- Information will be posted on various official county social media sites including but not limited to Facebook and Twitter.

Public forums – This includes interactive meetings at a local government building(s), schools, churches, etc.

Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a call center if the size of the debris management process warrants it. This may include a direct Prowers County hotline or information may be routinely submitted to the regional 2-1-1 system.

COLORADO

Division of Homeland Security & Emergency Management

Department of Public Safety

Colorado - Southeast Region

Tactical

Interoperable Communications Plan (TICP)

April 2019 v3.4

Based on the Office of Emergency Communications TICP Template September 2013



Distribution is limited to those entities authorized by the Southeast Region of Colorado. The Point of Contact (POC) for this document is the DHSEM Regional Field Manager. Copies of this TICP should be requested via email to riley.frazee@state.co.us.

Tactical Interoperable Communications Plan Signature Page

Approved by:

Harold Self BOEM — Name/Title/Agency — 2-24-17 — Date

Chris Griffin Undersheriff BCSO — Name/Title/Agency — 2/24/17 — Date

Dean George BCSO — Name/Title/Agency — 2-24-17 — Date

Dennis Brosius SPD — Name/Title/Agency — 3-22-17 — Date

[signature] — Name/Title/Agency — 3/22/17 — Date

Riley Feazel Chief WHCSH EMS — Name/Title/Agency — 2-24-2017 — Date

Roy England Chief Campo Fire — Name/Title/Agency — 2-23-2017 — Date

Robert Morrow
Robert L Morrow Coroner — Name/Title/Agency — 2-24-2017 — Date

Jerry Casebolt Chief Pritchett Fire — Name/Title/Agency — 2/24/17 — Date

Lars Grahn Fire Chief VFD — Name/Title/Agency — 2-24-2017 — Date

CONTROLLED UNCLASSIFIED INFORMATION

Greg Gardner Asst. chief Las Animas Fire Dept 3-13-17
Name/Title/Agency Date

Bent County
John Sparano DIRECTOR AMBULANCE SERVICE March 8, 2017
Name/Title/Agency Date

Bent County
Don R Encinias - Sheriff 3/9/17
Name/Title/Agency Date

Bern Spady Director, Bent County Public Health 3-13-17
Name/Title/Agency Date

Seth Rowan - CCOEM 5-24-17
Name/Title/Agency Date

Mario Rodriguez - CCAS 6/7/17
Name/Title/Agency Date

Mario Rodriguez - OVFD 6/7/17
Name/Title/Agency Date

Terry Reeves CCSO 6-19-17
Name/Title/Agency Date

JOHN "SMOKEY" KURTZ CCSO 6-19-17
Name/Title/Agency Date

Gregory S Karle SCVF 7-11-17
Name/Title/Agency Date

Rick Fermano CJFD 7-11-17
Name/Title/Agency Date

CONTROLLED UNCLASSIFIED INFORMATION

Russell Bennett OSVFD 7-11-17
Name/Title/Agency Date

Aaron W. Eveatt Digitally signed by Aaron W. Eveatt
DN: cn=Aaron W. Eveatt, o=La Junta Fire-EMS, ou=Fire Chief, email=aeveatt@ci.la-junta.co.us, c=US
Date: 2017.02.22 11:48:08 -07'00'
Name/Title/Agency Date

Jim Collins Jim Collins Fire chief CVFD 10/15/18
Name/Title/Agency Date

Jacqueline Brown MSN, FNP Chief of PH Ops Southeast Health Group 10/10/18
Name/Title/Agency Date

Bruce L. Fickenscher 10/10/2018
Name/Title/Agency Date
Bruce Fickenscher/Southeast Area Extension/Colorado State University

Abby Weber / Agent / Bent County Extension 10/10/18
Name/Title/Agency Date

Houssin Hourieh, Superintendent
Name/Title/Agency Date
Lamar light and power
Name/Title/Agency 10-15-18
Date

CONTROLLED UNCLASSIFIED INFORMATION

Julie E. Lucero/Communication Supv./CSP — Name/Title/Agency — 10/17/18 — Date

Raymond R. Eckhoff/Regional Manager/CSP — Name/Title/Agency — 10/17/18 — Date

Joe LoBiondo — Digitally signed by Joe LoBiondo
DN: cn=Joe LoBiondo, o=Division of Fire Prevention and Control, ou=Wildland Fire Management Section, email=joseph.lobiondo@state.co.us, c=US
Date: 2018.10.24 11:50:06 -06'00'

Name/Title/Agency — 10/24/2018 — Date

[illegible], Admin, Walsh Healthcare Center — Name/Title/Agency — 10/24/18 — Date

Jessica Hutchens, Adm Asst Walsh Medical Clinic — Name/Title/Agency — 10-24-18 — Date

CAPT [illegible] CSP-Lamar — Name/Title/Agency — 10.25.18 — Date

Dusty Russell - NM*Union County Emergency Manager — Name/Title/Agency — 11.8.18 — Date

Chief Raton Fire & Emergency Services — Name/Title/Agency — 5-29-19 — Date

Karen L. Bryant, Interim CEO — Name/Title/Agency Prowers Medical Center — 12-10-2019 — Date

CONTROLLED UNCLASSIFIED INFORMATION

Record of Change

This Tactical Interoperable Communications Plan (TIC Plan) is subject to information and/or equipment updates and changes. The use of this Record of Change helps manage TIC Plan modifications throughout the life of this document. All attempts have been made to ensure the accuracy of the information within this TIC Plan as of the initial distribution date. Any subsequent adjustments should be logged and coordinated with user agencies within this Region.

Change No.	Description	Change Date	Signature

Record of Distribution

This Tactical Interoperable Communications Plan (TIC Plan) contains controlled but unclassified information. In order to maintain security and control of the distribution of the plan each document is issued a serial number for tracking and distribution of future updates.

Serial No.	Name	Agency	Date
2016-TICP-CDPS01	Riley Frazee	DHSEM – OEM	01/15/2017
2016-TICP-BAX01	Jennifer Leathers	Baca County OEM	01/15/2017
2016-TICP-BAX02	Jerry Casebolt	SER Grant Coordntr	10/10/2018
2016-TICP-BNX01	Rick Stwalley	Bent County OEM	01/15/2017
2016-TICP-CWX01	John Reitan	Crowley County OEM	01/15/2017
2016-TICP-KWX01	Teresa Witte	Kiowa County OEM	01/15/2017
2016-TICP-OTX01	Danny Chavez	Otero County OEM	01/15/2017
2016-TICP-LAJX01	Aaron Eveatt	La Junta City OEM	01/15/2017
2016-TICP-LAJX01b	Brad Davidson	La Junta City OEM	11/18/2019
2016-TICP-PWX01	Staffon Warn	Prowers OEM	01/15/2017
2016-TICP-LAMX01	Jeremy Burkhart	Lama City OEM	01/15/2017
2016-TICP- HOLX02	Larry Sitts	Holly Town OEM	01/15/2017
2016-TICP-GRAX01	Natalie Musick	Granada Town OEM	01/15/2017
2016-TICP-CDOT01	D'Wayne Gaymon	CO-CDOT	01/15/2017
2016-TICP-AMTK01	Stacy Wellers	Amtrak	01/15/2017
2016-TICP-BNSF01	Ryan Ridson	BNSF	01/15/2017
2016-TICP-BNSF02	Patrick Brady	BNSF	10/10/2018
2016-TICP-CMVR01	Eric Hale	Cimarron Valley RR	01/15/2017
2016-TICP-COIT01	Lynette Rosetta	CO - OIT	01/15/2017
2016-TICP-CDPS03	Julie Lucero	CO – CSP Dispatch	01/15/2017
2016-TICP-CDPS02	Ray Eccher	CO – CSP Dispatch	01/15/2017
2016-TICP- BSOZ02	Elissa Forgey	Baca County Dispatch	01/15/2017
2016-TICP-BSOZ03	Moriah McNeill	Baca County Dispatch	10/04/2017
2016-TICP- BSOZ03	Dean George	Baca County Dispatch	01/15/2017
2016-TICP- BESZ03	Misty Hall	Bent County Dispatch	01/15/2017
2016-TICP-CWLZ02	Leah Fox	Crowley County Dispatch	01/15/2017
2016-TICP- LJUZ02	Kim Roach	La Junta Dispatch	01/15/2017
2016-TICP- RFOZ02	Tammy Bethel	Rocky Ford Dispatch	01/15/2017
2016-TICP- PWX02	Trevor Choat	Prowers Comm Dispatch	01/15/2017
2016-TICP-ARES01	Amanda Alden	ARES	01/15/2017
2016-TICP-ARES02	Jeff Carrier	ARES	10/10/2018
2016-TICP-PBS01	Joseph Lobiondo	CO-DFPC	01/15/2017
2016-TICP-CAMX01	Leroy England	Campo Fire Dept.	01/15/2017
2016-TICP-CAMX02	Lennie Johnson	Campo Fire Dept.	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-PRIX01	Jerry Casebolt	Pritchett Fire Dept.	01/15/2017
2016-TICP-SPGX01	Bob Schaller	Springfield Fire Dept.	01/15/2017
2016-TICP-SPGX02	Chris Westphall	Springfield Fire Dept.	10/10/2018
2016-TICP-TWBX01	Lynn Orebaugh	Two Buttes Fire Dist.	01/15/2017
2016-TICP-VILX01	Lars Grahn	Vilas Fire Dept.	01/15/2017
2016-TICP-WALX01	Rex Allen	Walsh Fire Dept.	01/15/2017
2016-TICP-HMCX01	Clay Hassar	Hasty/McClave Fire Dist.	01/15/2017
2016-TICP-LABX01	Jim Pryor	Las Animas/Bent County Fire Dist.	01/15/2017
2016-TICP-CWLX01	Rick Ferraro	Crowley Vol. Fire Dept.	01/15/2017
2016-TICP-OLNX01	Russell Bennett	Olney Springs Vol. Fire Dept.	01/15/2017
2016-TICP-OLNX01	Jeff Bennett	Olney Springs Vol. Fire Dept.	10/10/2018
2016-TICP-ORDX01	Mario Rodriquez	Ordway Vol. Fire Dept. and Ambulance Srvc	01/15/2017
2016-TICP-ORDX02	Doug Hudson	Ordway Vol. Fire Dept.	10/10/2018
2016-TICP-SUGX01	Greg Karle	Sugar City Vol. Fire Dept.	01/15/2017
2016-TICP- KWX02	Jay Haase	Kiowa County Fire Dept.	01/15/2017
2016-TICP-KWX03	Howard Votruba	Kiowa County Fire Dept.	12/14/2017
2016-TICP-EADX01	David Kraft	Eads Fire Dept.	01/15/2017
2016-TICP-HASX01	Shane Lessenden	Haswell Fire Dept.	01/15/2017
2016-TICP-HASX02	Tim Wolf	Haswell Fire Dept.	10/10/2018
2016-TICP-OTX02	Jim Collins	Cheraw Fire Dept.	01/15/2017
2016-TICP-OTX03	Tim Beebe	Cheraw Fire Dept.	10/10/2018
2016-TICP-FOWX01	Matt Thompson	Fowler Fire Prot Dist.	01/15/2017
2016-TICP-MANX01	Tim Bates	Manzanola Rural Fire Prot. Dist.	01/15/2017
2016-TICP-ROCX01	Ray Gonzales	Rocky Ford Fire Dept.	01/15/2017
2016-TICP-BRSX01	Dana Musick	Bristol / Granada Fire Dept.	01/15/2017
2016-TICP-HRTX01	Dale Simmons	Hartman Fire Dept.	01/15/2017
2016-TICP-HOLX01	Austin Hazen	Holly Fire Prot. Dist.	01/15/2017
2016-TICP-WILX01	Bob Sloan	Wiley Fire Prot. Dist.	01/15/2017
2016-TICP-PCFD01	Martin Flores	Pinon Canyon Fire	01/15/2017
2016-TICP-PCFD02	Ryan Theler	Pinon Canyon Fire	10/10/2018
2016-TICP-PSF01	Thomas Eikenberry	US-USFS	01/15/2017
2016-TICP-BFP01	Adam Heberlie	US-NPS	01/15/2017
2016-TICP-SCP01	Karl Zimmermann	US-NPS	01/15/2017
2016-TICP-RGD01	Ty Webb	US-BLM	01/15/2017

Serial No.	Name	Agency	Date
2016-TICP-RGD02	Matt Norden	US-BLM	01/15/2017
2016-TICP-REDC01	Sally Broomfield	NGO-Red Cross	01/15/2017
2016-TICP-REDC02	Larry Cornett	NGO-Red Cross	01/15/2017
2016-TICP-REDC03	Kendall Shafield	NGO-Red Cross	10/10/2018
2016-TICP- OTX04	Janell Maier	Otero – SE Epi	01/15/2017
2016-TICP-OTX05	Aaron Olivieri	Otero – SE EPR	10/10/2018
2016-TICP- KWX04	Kris Stokke	Kiowa – SE EPR	01/15/2017
2016-TICP-BAX03	Jessami Graham	Baca Public Health	01/15/2017
2016-TICP- BNX02	Omer Tamir	Bent Public Health	01/15/2017
2016-TICP- OTX06	Richard Ritter	Otero Public Health	01/15/2017
2016-TICP- PWX03	Tammie Clark	Prowers Public Health	01/15/2017
2019-TICP-PWX03b	Meagan Hillman	Prowers Public Health	11/18/2019
2016-TICP-PWX04	Jolynn Idler	Prowers Public Health	10/10/2018
2016-TICP-BAX04	Laurie Wilson	Southeast Colorado Hospital District	01/15/2017
2016-TICP-BAX05	Staci Bishop	Southeast Colorado Hospital District	10/10/2018
2016-TICP- KWX05	Tristen Sheridan	Weisbrod Memorial County Hospital	01/15/2017
2016-TICP-KWX06	Charlene Korrell	Wiesbrod Memorial County Hospital	12/14/2017
2016-TICP- OTX07	Leroy Fierro	Arkansas Valley Regional Medical Center	01/15/2017
2016-TICP-PWX05	Leslie Day	Prowers Medical Center	01/15/2017
2016-TICP-PWX06	Karen Bryant	Prowers Medical Center	10/10/2018
2016-TICP-BAX06	Rita Hetrick	Walsh Hospital District	10/10/2018
2016-TICP-RTAC01	Josh Eveatt	Southeast Colorado RETAC	01/15/2017
2016-TICP-BAX07	Cherilyn England	Springfield Ambulance	01/15/2017
2016-TICP-BAX08	Riley Frazee	Walsh Ambulance	01/15/2017
2016-TICP-LABX02	John Spano	Bent County Ambulance	01/15/2017
2016-TICP-HMCX02	Cheryl Brewer	Hasty/McClave Ambulance	01/15/2017
2016-TICP- KWX07	Eunice Weber	Kiowa County Ambulance	01/15/2017
2016-TICP-OTX08	Brandon Chambers	MedTrans Ambulance	01/15/2017
2016-TICP-OTX09	Kent Darnell	MedTrans Ambulance	10/10/2018
2016-TICP-HOLX02	Terri Hetrick	Holly Ambulance	01/15/2017
2016-TICP-CARC01	Andrew Archer	Care Connect of Southern Colorado	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-CARC02	Michael Hood	Care Connect of Southern Colorado	10/10/2018
2016-TICP-FFLC01	DJ Head	Flight for Life Colorado	10/10/2018
2016-TICP-BAX09	Robert Morrow	Baca County Coroner	01/15/2017
2016-TICP- BNX03	Dave Roberts	Bent County Coroner	01/15/2017
2019-TICP-BNX03a	Jason Nichols	Bent County Coroner	11/18/2019
2016-TICP- CWX02	Karen Tomky	Crowley County Coroner	01/15/2017
2016-TICP- KWX08	Jimmy Brown	Kiowa County Coroner	01/15/2017
2016-TICP- OTX10	Robert Fowler	Otero County Coroner	01/15/2017
2016-TICP- PWX07	Joe Giodone	Prowers County Coroner	01/15/2017
2019-TICP-PWX07a	David Reid	Prowers County Coroner	11/18/2019
2016-TICP-CDPS04	Chris Pryor	CO-CSP Hazmat	01/15/2017
2016-TICP-CDPS05	TJ Steinbrunn	CO-CSP Hazmat	01/15/2017
2016-TICP-CDAG01	Dr. Nick Striegel	CO-CDA	01/15/2017
2016-TICP-CDAG02	Dr. Maggie Baldwin	CO-CDA	10/10/2018
2016-TICP-APHIS01	Dr. Greg Chavez	US-APHIS	10/10/2018
2016-TICP-LJDS01	Donna Davis	CO-CSFS	01/15/2017
2016-TICP-CDWZ01	Travis Black	CO-CPW	01/15/2017
2016-TICP-CDPZ01	Dan Kirmer	CO-CPW	01/15/2017
2016-TICP-DSFY01	Bill McCormick	CO-Dam Safety	01/15/2017
2016-TICP-DSFY02	Mark Perry	CO-Dam Safety	01/15/2017
2016-TICP-DSFY03	John Hunyadi	CO-Dam Safety	10/10/2018
2016-TICP-HMNS01	Brett Smith	Colorado Humane	01/15/2017
2016-TICP-ACE01	Karen Downey	US- USACE	01/15/2017
2016-TICP-ACE02	Jeffrey Daniels	US-USACE	01/15/2017
2016-TICP-ACE03	Dennis Garcia	US-USACE	01/15/2017
2016-TICP-ACE04	Jonathan Tague	US-USACE	10/10/2018
2016-TICP-ACE05	Shelley Dragomir	US-USACE	10/10/2018
2016-TICP-PBW01	Jennifer Stark	US-NOAA	01/15/2017
2016-TICP-PBW02	Tom Magnuson	US-NOAA	01/15/2017
2016-TICP-PBW03	Greg Heavner	US-NOAA	10/10/2018
2016-TICP-CDPS06	Tim Knabenshue	CO-CSP	01/15/2017
2016-TICP-CDPS07	Scott Copley	CO-CSP	10/10/2018
2016-TICP-DOCX01	Patsy Hartley	CO-DOC	01/15/2017
2016-TICP-DOCX02	Denny Owens	CO-DOC	10/10/2018
2016-TICP-DOCX03	Shawn Foster	CO-DOC	10/10/2018
2016-TICP-DOCX04	Tracy Nelson	CO-DOC	10/10/2018
2016-TICP-BSOZ01	David Campbell	Baca County Sheriff	01/15/2017
2016-TICP-BSOZ03	Aaron Shiplett	Baca County Sheriff	11/18/2019
2016-TICP-BSOZ02	Chris Griffin	Baca County Sheriff	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-SPPZ01	Dennis Bradburn	Springfield Police	01/15/2017
2016-TICP- SPPZ02	Aaron Shiplett	Springfield Police	10/10/2018
2016-TICP-SPPZ10	Roman Horn	Springfield Town Public Works	10/10/2018
2016-TICP-WLSZ01	Connie Bradburn	Walsh Police	01/15/2017
2016-TICP-WLSZ02	Colby Jenkins	Walsh Police	10/10/2018
2016-TICP-CAMX02	Brad Viner	Campo Police	01/15/2017
2016-TICP-BESZ01	Dave Encinias	Bent County Sheriff	01/15/2017
2016-TICP-BESZ03	Jake Six	Bent County Sheriff	11/18/2019
2016-TICP-BESZ02	Brad Jones	Bent County Sheriff	01/15/2017
2016-TICP-CWLZ01	John “Smokey” Kurtz	Crowley County Sheriff	01/15/2017
2016-TICP-KCSZ01	Casey Sheridan	Kiowa County Sheriff	01/15/2017
2016-TICP-KCSZ02	Jake Six	Kiowa County Sheriff	10/10/2018
2016-TICP-OTEZ01	Shawn Mobley	Otero County Sheriff	01/15/2017
2016-TICP-LJUZ01	Todd Quick	La Junta Police	01/15/2017
2016-TICP-RFOZ01	Mickey Bethel	Rocky Ford Police	01/15/2017
2016-TICP-FWLZ01	Jake Freidenberger	Fowler Police	01/15/2017
2016-TICP-PWRZ01	Sam Zordel	Prowers County Sheriff	01/15/2017
2016-TICP-PWRZ02	Sam Fief	Prowers County Sheriff	10/10/2018
2016-TICP-LMRZ01	Kyle Miller	Lamar Police	01/15/2017
2016-TICP-GRAX02	Dave Dougherty	Granada Police	01/15/2017
2016-TICP-MTX01	Dusty Brillhart	Morton County, KS Emergency Management	4/3/2017
2016-TICP-RMX01	Cy Howenstine	Roger Mills County, OK Emergency Management	12/01/2017
2016-TICP-CDPS02	Glen Klaich	DHSEM – Interoperable Coordinator	10/03/2018
2016-TICP-CSU01	Bruce Fickenshure	CSU Southeast Extension	10/10/2018
2016-TICP-CSU02	Abby Weber	CSU Extension – Bent County	10/10/2018
2016-TICP-CSU03	Sarah DeLarosa	CSU Extension – Baca County	10/10/2018
2016-TICP-CSU04	Marlena Griesse	CSU Extension – Otero & Crowley County	10/10/2018
2016-TICP-CSU05	Jeramy McNeely	CSU Extension – Kiowa County	10/10/2018
2016-TICP-CSU06	Kelly Roesch	CSU Extension – Prowers County	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-SEMH01	Jackie Brown	Southeast Health Group	10/10/2018
2016-TICP-KSEM01	Cathy Hernandez	Kansas State OEM	10/10/2018
2016-TICP-KSST01	Vaughn Lorenson	Stanton KS OEM	10/10/2018
2016-TICP-KSHM01	Steve Phillips	Hamilton KS OEM	10/10/2018
2016-TICP-NMEM1	Gabriel Holguin	New Mexico OEM	10/10/2018
2016-TICP-NMUC01	Dusty Russell	Union NM OEM	10/10/2018
2016-TICP-OKEM01	Traci Naile	Oklahoma OEM	10/10/2018
2016-TICP-OKCC01	David Johnson	Cimarron OK OEM	10/10/2018
2016-TICP-CDOT01	Dwayne Gaymon	CO-DOT	10/10/2018
2016-TICP-CDOT02	Robert Madrid	CO-DOT	10/10/2018
2016-TICP-CDOT03	Cary Mounty	CO-DOT	10/10/2018
2016-TICP-CDOT04	Arthur Gumke	CO-DOT	10/10/2018
2016-TICP-CDOT05	Neil Mauch	CO-DOT	10/10/2018
2016-TICP-CDOT06	Roy Darnell	CO-DOT	10/10/2018
2016-TICP-CDOT07	Joseph Dolzanie	CO-DOT	10/10/2018
2016-TICP-CDOT08	Jeremiah Buford	CO-DOT	10/10/2018
2016-TICP-BNX04	Robert Darnell	Bent County Road/Bridge	10/10/2018
2016-TICP-BNX05	Kenny Wagner	Las Animas Public Works	10/10/2018
2016-TICP-OTX11	Lex Nichols	Otero County Public Works	10/10/2018
2016-TICP-PWX08	Mark Dorenkamp	Prowers County Public Works	10/10/2018
2016-TICP-LAMX10	Pat Mason	Lamar City Public Works	10/10/2018
2016-TICP-LAMX11	Houssin Hourieh	Lamar Light and Power	10/10/2018
2016-TICP-LAJX02	Joey Gacnick	La Junta City Fire Dept.	10/10/2018
2016-TICP-KIMX01	Harold Unwin	Kim Area Vol. Fire Dept.	10/10/2018
2016-TICP-CDHS01	Charlotte Olsen	CO-DHS	10/10/2018
2016-TICP-SALV01	Kim Tate	Salvation Army – Baca County	10/10/2018
2016-TICP-SALV02	Debbie Sharpe	Salvation Army – Baca County	10/10/2018
2016-TICP-SALV03	Michelle Miranda	Salvation Army – Baca County	10/10/2018
2016-TICP-SALV04	Iain Anderson	Salvation Army – Rocky Mtn Region	10/10/2018
2016-TICP-SOBP01	Dennis Belz	Southern Baptist	10/10/2018
2016-TICP-COGC01	Brian Welsh	CO - Oil & Gas Commission	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-COGC02	Jason Kosola	CO - Oil & Gas Commission	10/10/2018
2016-TICP-FEPA01	Rebecca Broussard	US-EPA	10/10/2018
2016-TICP-CRW01	Chuck Goin	CO-Rural Water Association	10/10/2018
2016-TICP-SECP01	Telly Stanger	Southeast Colorado Power Association	10/10/2018
2016-TICP-ATMS01	Christa Mayhew	Atmos Energy	10/10/2018
2016-TICP-KDRM01	Doug Schminke	Kindermorgan	10/10/2018
2016-TICP-NSTR01	Jr. Munson	Nustar Energy	10/10/2018
2016-TICP-EPRP01	Eric Burns	Enterprise Production	10/10/2018
2016-TICP-ENTR01	Gary Kincannon	Energy Transfer	10/10/2018
2016-TICP-CORC01	Richard Selman	CoreCivic Corrections	10/10/2018
2016-TICP-CORC02	John Palomina	CoreCivic Corrections	10/10/2018
2016-TICP-DOLA01	Crestina Martinez	CO-DOLA	10/10/2018
2016-TICP-DOLA02	Chelsea Stromberg	CO-DOLA	10/10/2018
2016-TICP-BAX10	Glen “Spike” Ausmus	Baca County Commissioner	10/10/2018
2016-TICP-BAX11	Peter Dawson	Baca County Commissioner	10/10/2018
2016-TICP-BAX11a	Shiloh Freed	Baca County Commissioner	11/18/2019
2016-TICP-BAX12	Rick Butler	Baca County Commissioner	10/10/2018
2016-TICP-BAX13	Cindi Parsons	Baca County Administrator	10/10/2018
2016-TICP-BAX14	Pat Smith	Baca County Deputy Administrator	10/10/2018
2016-TICP-BNX06	Kim MacDonnell	Bent County Commissioner	10/10/2018
2016-TICP-BNX07	Jean Sykes	Bent County Commissioner	10/10/2018
2016-TICP-BNX08	Tom Wallace	Bent County Commissioner	10/10/2018
2016-TICP-BNX09	Calvin Feik	Bent County Administrator	10/10/2018
2016-TICP-CWX03	Tobe Allumbaugh	Crowley County Commissioner	10/10/2018
2016-TICP-CWX04	Frant Grant	Crowley County Commissioner	10/10/2018
2016-TICP-CWX05	Gary Gibson	Crowley County Commissioner	10/10/2018
2016-TICP-CWX06	Mike Apker	Crowley County Administrator	10/10/2018
2016-TICP-KWX09	Richard Scott	Kiowa County Commissioner	10/10/2018
2016-TICP-KWX10	Cindy McLoud	Kiowa County Commissioner	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-KWX11	Donald Oswald	Kiowa County Commissioner	10/10/2018
2016-TICP-KWX12	Tina Adamson	Kiowa County Administrator	10/10/2018
2016-TICP-OTX12	Kevin Karney	Otero County Commissioner	10/10/2018
2016-TICP-OTX13	Keith Goodwin	Otero County Commissioner	10/10/2018
2016-TICP-OTX14	Jim Baldwin	Otero County Commissioner	10/10/2018
2016-TICP-OTX15	Jean Hinkle	Otero County Administrator	10/10/2018
2016-TICP-PWX09	Tom Grasmick	Prowers County Commissioner	10/10/2018
2016-TICP-PWX10	Ron Cook	Prowers County Commissioner	10/10/2018
2016-TICP-PWX11	Wendy Buxton-Andrade	Prowers County Commissioner	10/10/2018
2016-TICP-PWX12	Janet Lundy	Prowers County Admin/Finance	10/10/2018
2016-TICP-CODE01	Christine harms	CO-Department of Education	10/10/2018
2016-TICP-BAX15	Nikki Johnson	Campo School District	10/10/2018
2016-TICP-BAX16	Bill Carwin	Pritchett School District	10/10/2018
2016-TICP-BAX17	Richard Hargrove	Springfield School District	10/10/2018
2016-TICP-BAX18	Stephanie Hund	Walsh School District	10/10/2018
2016-TICP-BAX19	Ryan Renquist	Walsh School District	10/10/2018
2016-TICP-BAX20	Corey Doss	Vilas School District	10/10/2018
2016-TICP-BNX10	Elsie Goines	Las Animas School District	10/10/2018
2016-TICP-BNX11	Terry Weber	McClave School District	10/10/2018
2016-TICP-BNX12	Rachel Dunning	McClave School District	10/10/2018
2016-TICP-CWX07	Scott Cuckow	Crowley County School District	10/10/2018
2016-TICP-CWX08	Dawn Chavez	Crowley County School District	10/10/2018
2016-TICP-KWX13	Glenn Smith	Eads School District	10/10/2018
2016-TICP-KWX14	Pamela Cole	Eads School District	10/10/2018
2016-TICP-KWX15	Lance Mosness	Plainview School District	10/10/2018
2016-TICP-KWX16	Yonda Leonard	Plainview School District	10/10/2018
2016-TICP-OTX16	Tonya Rodwell	Cheraw School District	10/10/2018

Serial No.	Name	Agency	Date
2016-TICP-OTX17	Rick Lovato	La Junta School District	10/10/2018
2016-TICP-OTX18	Jill Dellinger	La Junta School District	10/10/2018
2016-TICP-OTX19	Steven Grasmick	Fowler School District	10/10/2018
2016-TICP-OTX20	Tom Wilke	Manzanola School District	10/10/2018
2016-TICP-OTX21	Kermit Snyder	Rockyford School District	10/10/2018
2016-TICP-OTX22	Kyle Hebberd	Swink School District	10/10/2018
2016-TICP-PWX13	Ty Kemp	Granada School District	10/10/2018
2016-TICP-PWX14	Randy Holmen	Holly School District	10/10/2018
2016-TICP-PWX15	Dave Tecklenburg	Lamar School District	10/10/2018
2016-TICP-PWX16	Terri Farmer	Lamar School District	10/10/2018
2016-TICP-PWX17	Dave Eastin	Wiley School District	10/10/2018
2016-TICP-PWX18	Michelle Wallace	Wiley School District	10/10/2018
2016-TICP-CODE02	Mark Korbitz	Otero Junior College	10/10/2018
2016-TICP-CODE03	Terry Comer	Lamar Community College	10/10/2018
2016-TICP-PBX01	Jeff Reynolds	Pueblo County Radio System Manager	10/23/2018
2016-TICP-NMUC02	Chris Espinoza	Raton New Mexico Fire Chief	6/11/2019
2016-TICP-CDRMG	Michael Garner	CDR-MaGuire	7/26/2019
2016-TICP-OTX23	Tony Harviston	Otero County Public Health	11/21/2019
2016-TICP-KWX17	Renay Crain	Weisbrod Kiowa County Hospital	11/21/2019
2016-TICP-BAX21	Steve Sanchez	Southeast Colorado Hospital District	11/21/2019
2016-TICP-CODE04	Chad DeBono	Lamar Community College	11/25/2019

Plan Serial Number: 2016-TICP-CDPS01

Executive Overview

This document establishes a Tactical Interoperable Communications Plan (TICP) for the Southeast Colorado All-Hazards Region (SECAHR). The TICP is intended to document the interoperable communications resources available within the designated area, who controls each resource, and what policies or operational procedures exist for the deployment and demobilization of each resource.

Interoperability is the ability to communicate as needed, on demand, and as authorized at all levels of government across all disciplines. Interoperable assets incorporated into this TICP are:

- **Shared systems** refer to a single radio system used to provide service to several public safety or public service agencies.
  - **Intra-system shared channels** refer to common frequencies/talkgroups established and programmed into radios to provide interoperable communications among agencies using the *same* shared radio system. "Channel," in this context, refers to the name of a common frequency/talkgroup programmed into a user's radio.
- **Inter-system shared channels** (e.g., mutual-aid channels, interoperability channels, etc.) refer to common frequencies/talkgroups established and programmed into radios to provide interoperable communications among agencies using *different* radio systems.
- **Gateway systems** interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency. Dispatch consoles can function as gateways by creating patches between channels programmed into that console.
- **Mobile Repeaters** refer to deployable devices combining a radio receiver and a radio transmitter that receive a weak or low-level signal and retransmit it at a higher level or higher power, so that the signal can cover longer distances without degradation.
- **Cache radios** refer to maintaining a cache of standby radios that can be deployed to support regional incidents. These radios may be from a state, regional, or individual agency cache. These radios allow all responders to use common, compatible equipment during an incident.
- **Mobile Communications Units** (MCUs) refer to any vehicular asset that can be deployed to provide or supplement communications capabilities in an incident area. Examples of the types of communications devices an MCU can house are: subscriber and base station radios of various frequency bands, gateway devices, satellite phones, wireless computer networks, video broadcasting/receiving equipment, etc. Typically, these communications devices are permanently located or stored in the MCUs when not used. The MCU should also be able to temporarily provide the electrical power required to operate the communications devices.

Regional Strategic Planning

Overview

The regional strategy for realizing a vision of expanding communications and interoperability is founded on a commitment to partnerships. Only through strong local public safety, regional and State of Colorado partnerships will the vision become possible. State agencies, private industry and local public safety will all play significant roles in our regional strategic future.

This partnership established with this collaborative strategic planning effort must be maintained to achieve operational advantages in the future. Even the largest agencies can no longer afford comprehensive communication solutions alone. By making significant, coordinated investments in shared public safety radio communications systems both the unique and the common requirements of all six counties will be met.

Critical Success Factors

There are several factors critical to the success of the strategic vision outlined in this plan. To ensure success, the Region should:

- Commit to Long-Term Interagency Participation
- Research Long-Term Funding Options
- Provide Comprehensive Training
- Update Operational Process and Procedures
- Continue Operational Autonomy and Flexibility
- Ensure Interoperable Communications with Local, State and Federal Resources
- Leverage State DTR Efforts
- Develop Long-Term solutions in regional, statewide, and federal interoperability
- Continuously Communicate Project Goals and Risks

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COLORADO - SOUTHEAST REGION INFORMATION

PARTICIPATING JURISDICTIONS/AGENCIES/DISCIPLINES

This Tactical Interoperability Communication Plan (TIC Plan) has been created for the Southeast Colorado All Hazards Region (SECAHR) through participation of county representatives including local municipalities. The Southeast Region is defined to include Baca, Bent, Crowley, Kiowa, Otero and Prowers Counties. The plan is intended for use by first responders and may be used by governmental or non-governmental organizations and personnel requiring communications or coordination during an incident or planned event.

The jurisdictions, agencies, and disciplines represented in the TIC Plan are listed in Table 1. Additional contact information for each agency is listed in Appendix M.

PUBLIC SAFETY/SERVICE AGENCIES

TABLE 1: JURISDICTIONS, AGENCIES, AND DISCIPLINES REPRESENTED IN THE TIC PLAN

Jurisdiction	Agency	Discipline
BACA COUNTY		
Baca County	Baca County Sheriff's Office/Dispatch	Law Enforcement
Baca County	Baca County Emergency Management	Emergency Management
Baca County	Baca County Public Health	Public Health
City of Springfield	Springfield Fire Department	Fire Services
Town of Pritchett	Pritchett Fire Department	Fire Services
Southeast Colorado Hospital District	Springfield Ambulance Service	Emergency Medical Services
Walsh Hospital District	Walsh Ambulance Service	Emergency Medical Services
Walsh Hospital District	Walsh Medical Clinic	Health Services
Walsh Hospital District	Walsh healthcare Center	Health Services
Town of Walsh	Walsh Fire Dept	Fire Services
Town of Walsh	Walsh PD	Law Enforcement
Town of Campo	Campo Fire Dept	Fire Services
Town of Campo	Campo PD	Law Enforcement
Baca County	Baca County Public Health	Public Health
Two Buttes Fire Protection District	Two Buttes Fire Protection District	Fire Services
Town of Vilas	Vilas Fire Dept	Fire Services
Baca County	Baca County Road and Bridge	Road and Bridge
Southeast Colorado Hospital District	Southeast Colorado Hospital	Health Services
City of Springfield	Springfield PD	Law Enforcement
BENT COUNTY		
Bent County	Bent County Sheriff's Office	Law Enforcement
Bent County	Bent County Emergency Management	Emergency Management

Jurisdiction	Agency	Discipline
Bent County	Bent County/Las Animas Fire	Fire Service
Bent County	Bent County/Las Animas Ambulance	Emergency Medical Services
Bent/Kiowa Counties	Bent/Kiowa Counties Dispatch Center	Law Enforcement
Bent County	Hasty / McClave Fire and Ambulance	Fire and EMS Service
Bent County	Bent County Road and Bridge	Road and Bridge
City of Las Animas	Las Animas Public Works	Public Works
Bent County	Bent County Public Health	Public Health
Las Animas School	Las Animas School District	Education
CROWLEY COUNTY		
Crowley County	Crowley County EMS Ambulance	Emergency Medical Services
Crowley County	Crowley County Sheriff's Office/Dispatch	Law Enforcement
Crowley County	Crowley County Emergency Management	Emergency Management
Crowley County	Crowley County Fire	Fire Service
KIOWA COUNTY		
Kiowa County	Kiowa County Search and Rescue	Fire Service
Kiowa County	Kiowa County EMS/Ambulance	Emergency Medical Services
Sheridan Lake area	Sheridan Lake Fire Department	Fire Service
Town of Eads	Eads Fire Department	Fire Service
Town of Towner	Towner Fire	Fire Service
Town of Haswell	Haswell Fire	Fire Service
Kiowa County	Kiowa County Public Health	Public Health
Kiowa County	Weisbrod Memorial County Hospital	Health Services
Kiowa County	Kiowa County Sheriff's Office	Law Enforcement
Kiowa County	Kiowa County Emergency Management	Emergency Management
OTERO COUNTY		
Otero County	Otero County Sheriff's Office/Dispatch	Law Enforcement
Otero County	Otero County Emergency Management	Emergency Management
City of LaJunta	LaJunta EMS	Emergency Medical Services
City of LaJunta	LaJunta PD/Dispatch Center	Law Enforcement
City of Fowler	Fowler Fire Department	Fire Service
City of Fowler	Fowler PD	Law Enforcement
City of Fowler	Fowler EMS/Ambulance	Emergency Medical Services
City of Rocky Ford	Rocky Ford Fire Department	Fire Service
City of Rocky Ford	Rocky Ford PD/Dispatch Center	Law Enforcement
City of Rocky Ford	Rocky Ford EMS	Emergency Medical Services
Town of Manzanola	Manzanola Police Department	Law Enforcement
Manzanola Fire District	Manzanola Fire Department	Fire Service
Otero County	Otero Public Health	Public Health

Jurisdiction	Agency	Discipline
Otero/Bent/Crowley Counties	Ark. Valley Regional Medical Center	Health Services
Otero County	Otero / La Junta Fire Dept	Fire Services
Town of Cheraw	Cheraw Fire Dept.	Fire Services
PROWERS COUNTY		
Town of Granada	Granada Police Department	Law Enforcement
Town of Granada	Granada Fire Department	Fire Service
City of Lamar	Lamar Fire Dept and Ambulance	Fire and EMS Services
Holly Fire Protection Dist	Holly Fire Department	Fire Service
Holly Fire Protection Dist	Holly EMS/Ambulance	Emergency Medical Services
Wiley Fire Protection Dist	Wiley Fire Department	Fire Service
Prowers County	Prowers Medical Center	Health Services
Prowers County	Prowers County Public Health	Public Health
Prowers County	Prowers Road and Bridge	Road and Bridge
Prowers County	High Plains Clinic	Health Services
Otero/Bent/Crowley	Valley Wide Health	Health Services
Prowers County	Prowers County Sheriff's Office	Law Enforcement
Prowers County	Prowers County Emergency Management	Emergency Management
Prowers County	Prowers County Fire	Fire Service
City of Lamar	Lamar PD	Law Enforcement
Prowers Comm Center	City of Lamar	Dispatch
STATE OF COLORADO		
State of Colorado	Colorado Parks and Wildlife	Natural Resources
State of Colorado	Division of Homeland Security and Emergency Management	Emergency Management
State of Colorado	Colorado State Patrol	Law Enforcement
State of Colorado	Colorado Department of Transportation	Road and Bridge
State of Colorado	Colorado Bureau of Investigations	Law Enforcement
State of Colorado	Colorado State Brand Inspectors	Law Enforcement
State of Colorado	Division of Fire Prevention and Control	Fire
State of Colorado	Pueblo Regional Communications Center	Dispatch
State of Colorado	Department of Corrections	Law Enforcement
State of Colorado	Colorado State University Extension	Education
State of Colorado	Colorado State Forest Service	Education
State of Colorado	Colorado Division of Water Resources	Natural Resources
State of Colorado	Colorado Department of Education	Education
FEDERAL		

Jurisdiction	Agency	Discipline
United States	National Park Service	Natural Resources
United States	United States Forest Service	Fire/Law Enforcement
United States	Army Corps of Engineers	Engineering
United States	Bureau of Land Management	Fire/Law Enforcement
United States	United States Department of Agriculture APHIS	Natural Resources
United States	National Weather Service Pueblo	Weather Service
United States	Pinon Canyon Maneuver Site	Fire
United States	Colorado Wing Civil Air Patrol	Search and Rescue

NON-GOVERNMENTAL ORGANIZATIONS

- Trans-Care Ambulance Service
- CareConnect (REACH AIR)
- Flight for Life Colorado
- Amtrak
- Burlington Northern Santa Fe Railway
- Cimarron Valley Railroad
- Airlife Denver
- Valley-Wide Health Systems Inc.
- Corrections Corporation of America (CCA)
- High Plains Community Health Center
- Southeast Health Group
- Colorado Humane Society and SPCA Field Investigator
- Red Cross
- Salvation Army
- Viaero Wireless
- Verizon Wireless
- AT&T
- Digitcom Electronics
- Triple C Communications
- G&G Electronics
- Southeast Colorado Regional Emergency Trauma Advisory Council
- Colorado Search and Rescue Board
- Southeast Colorado Power Association
- Black Hills Energy
- Arkansas River Power Authority

TIC PLAN POINT OF CONTACT

The primary and alternate points of contact (POC) for copies of or questions regarding this plan are:

Primary:

Agency Name:	Colorado Division of Homeland Security and Emergency Management
POC Name:	Riley Frazee
Title:	Regional Field Manager
Address:	310 E. Washington Street, Lamar, CO 81052
Office Phone:	(719) 510-2388
Cell Phone:	(719) 510-2388
24/7 Phone:	(719) 544-2424
E-Mail:	riley.frazee@state.co.us

Alternate:

Agency Name:	Otero County Emergency Management
POC Name:	Danny Chavez
Title:	Director
Address:	13 West 3rd Street, Room 208, La Junta, CO 81050
Office Phone:	(719) 383-3035
Cell Phone:	(719) 241-4147
24/7 Phone:	(719) 241-4147
E-Mail:	EM@oterogov.org

SAFECOM CONTINUUM

The Department of Homeland Security's Science and Technology Directorate's office for Interoperability and Compatibility SAFECOM program worked with public safety practitioners and local communities to develop a graph depiction of the current interoperability challenges called the Interoperability Continuum. The interoperability Continuum is shown below.

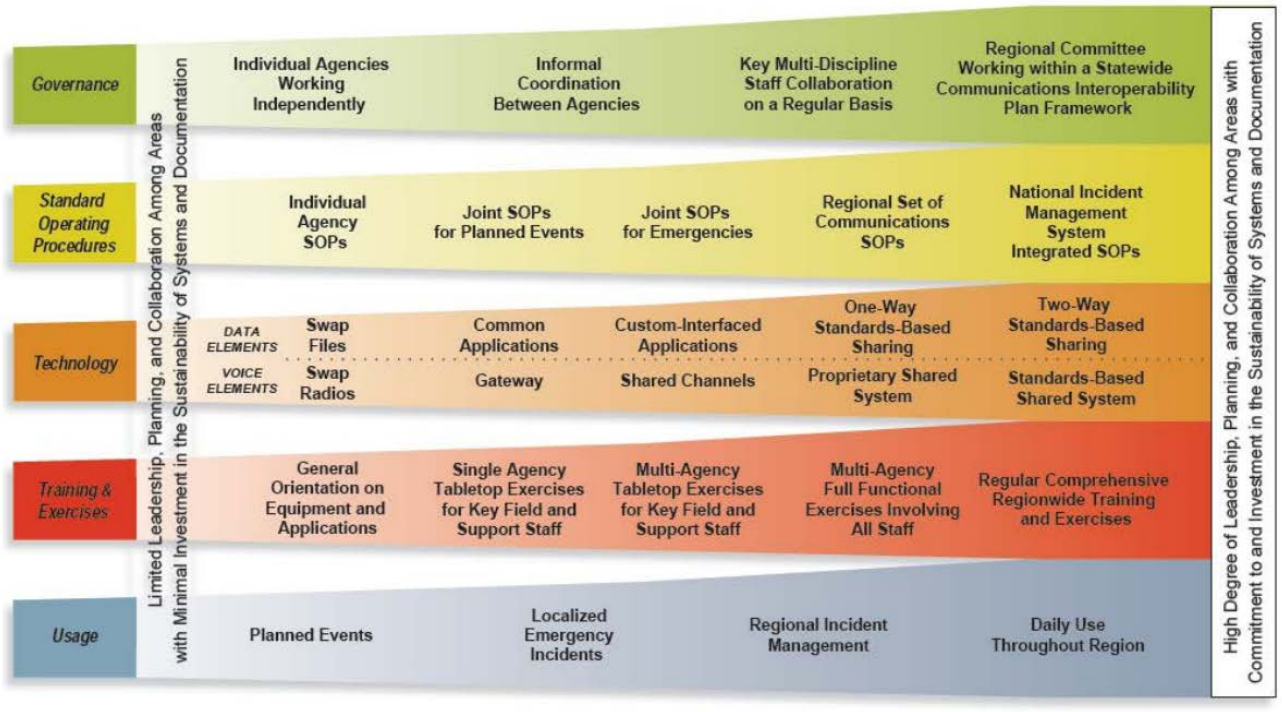


FIGURE 1: SAFECOM INTEROPERABILITY CONTINUUM

GOVERNANCE

OVERVIEW

The SECAHR TIC Plan addresses interoperable communications equipment and planning for the region. Though each agency, discipline, and jurisdiction participating in this plan is unique regarding their own interoperable communication needs and capabilities, proximity to one another, population, and shared incident/event responsibilities allow them to develop a single, consolidated regional TIC Plan rather than several individual, potentially incompatible plans.

The TIC Plan therefore consolidates information across agencies, disciplines, and jurisdictions by documenting regional communications capabilities in order to provide a usable and accurate regional tactical incident response tool.

The TICP was instituted under the authority of the Department of Local Affairs and Senate Bill 06-237. The region developed the TICP under the direction of the SECAHR Executive Board.

The SECAHR Board is comprised of voting/non-voting agency representatives in addition to the following board members:

- Baca OEM
- Bent OEM
- Crowley OEM
- Kiowa OEM
- Prowers OEM
- Otero OEM

The SOUTHEAST ALL HAZARDS REGION appointed the SECAHR REGIONAL STEERING COMMITTEE COMMUNICATIONS REPRESENTATIVE as the SECAHR POC and the PLAN Administrator.

The TIC Plan was developed under the authority of the Southeast Colorado All-Hazards Region Board. On June 7, 2010 the Southeast Region All Hazards Board appointed members to the Interoperable Communications Working Group: This working group consisted of the following:

Chris Johnson, Otero County Sheriff, 719-384-5941

Forest Frazee, Kiowa County Sheriff, 719-438-5306

Riley Frazee, Baca County Emergency Manager, 719-523-6796

Jim Faull, Prowers County Sheriff, 719-336-8050

Aaron Eveatt, La Junta Fire and EMS, 719-384-2323

This working group is designated as an advisory group to the Southeast Region All Hazards Board. Members on the Southeast Region All Hazards Board included representatives from the following public safety and public service disciplines.

- Emergency Management
- Emergency Medical Services
- Fire/Rescue
- Law Enforcement
- Public Health
- Public Works
- Hazmat
- Government Administration
- Health Care
- US Forest Service
- National Parks Service
- Parks and Wildlife
- Correctional Facilities

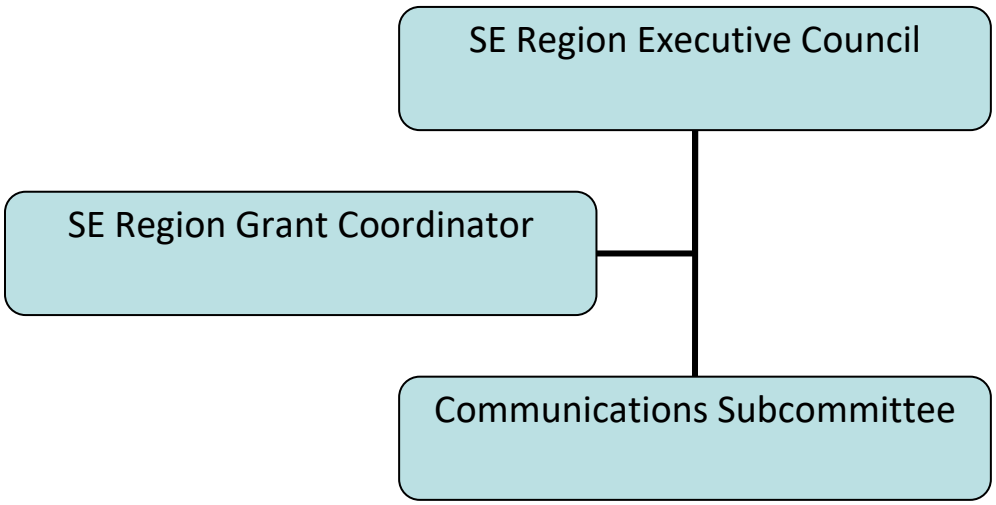


FIGURE 2: SECAHR COMMUNICATIONS GOVERNANCE ORGANIZATION CHART

GOVERNING BODY

The Executive Board are the voting members. The Executive Board elects a Chairperson, Vice-Chairperson and a Secretary according to the Executive Board bylaws. These elected members are the Executive Council that oversees issues that are specified in the bylaws. The Executive Board acknowledges Colorado is a Home Rule State. Ultimately, each voting member is governed by the county they are employed by and can choose to (or not to) participate in the TICP. The voting members that choose to participate will guide the future of the TICP.

The Executive Board has assigned responsibility of the TICP to the Communications subcommittee. The Point of Contact (POC) and or Alternate POC in the TICP are responsible for the content in the TICP and are charged with seeing the TICP is current with up-to-date information.

MEMBERSHIP

Each County should appoint a representative to the SECAHR Executive Board. Each County shall also designate an additional person to serve as a backup. This representative will be the lead for their County in representing the TICP.

RESPONSIBILITIES OF THE SOUTHEAST REGION ALL HAZARD BOARD

The Southeast Region All Hazards Emergency Management Region Board will:

- Maintain and update the TIC Plan at regular intervals; at minimum once a year or as critical updated information is identified.
- Disseminate updated plans to all participating agencies.
- Establish training requirements in support of the TICP.
- Promote interoperable communications capabilities through trained communications personnel.
- Encourage agencies to maintain Memoranda of Understanding (MOUs) and Agreements for interoperable communications.
- Promote regular interoperable equipment/solutions testing, assist agencies with test evaluations, and dissemination the results.
- Re-evaluate regional requirements as technology evolves and circumstances dictate.

MEETING SCHEDULE

The Southeast Region Communications Committee currently meets quarterly on a rotating location basis.

TICP PLAN MAINTENANCE/UPDATE AND MEETINGS

The SECAHR has the responsibility to review this document at a meeting called annually by the TICP POC. Requests for modifications or additions to this document should be submitted to the TICP POC. Updates to this document can be recommended by any of

the participating agencies, and shall be directed to the TICP POC for review. Any modifications to the TICP shall be presented to the SECAHR Executive Board. The most current version of the TIC Plan will also be posted and available for review on the SECAHR Website at http://www.secahr.com/protected.html.

AGENCY RESPONSIBILITIES AND RIGHTS

Agencies will retain the following rights and responsibilities:

- Agencies are responsible for considering and, if agreeing to, complying with MOUs and Agreements developed by the Southeast Region All Hazards Board in coordination with their respective jurisdictions.
- Authorized representatives of agencies participating in this plan have the authority to request the use of equipment, including systems and mobile assets, in accordance with Standard Operating Procedures (SOPs).
- Where applicable, agencies will be responsible for consistently maintaining, testing, and exercising connectivity to interoperable communications.
- Agencies retain the right to decide when and where to participate in interoperable communications. For example, agencies will retain the right to accept or decline a patch to a gateway system to provide interoperable communications during an incident.

PRIORITIZATION AND SHARED USE OF REGIONAL INTEROPERABILITY ASSETS

In response to events or incidents which cross over political jurisdictions, there will potentially be competing demands and priorities for interoperable communications assets.

Until such time as Incident Command is established, the lead agency designee (i.e., communications supervisor/command personnel), in cooperation with assisting agencies, will have the authority to designate the use of interoperable assets. Once Incident Command has been established, Command Staff or Communication Unit Leaders (when designated) direct the further coordination and delegation of the interoperable communications assets assigned to the event or incident in question.

Agencies should judiciously activate needed interoperable assets so as to both effectively respond to the event and/or incident and also minimize any negative impact on surrounding agencies or jurisdictions. Specifically, interoperable communications should be attempted with the following order of operations in mind (subject to variability based on the agencies involved and the nature of the event/incident):

1. Leverage face-to-face communications wherever appropriate. For example, the co-location of all Command and General Staff at the incident command post (ICP) provides the best direct communications and reduces the demand on interoperability resources.

2. Employ local communications assets until such time as either those assets become taxed or inadequate based on the nature and/or scope of the incident.

3. If response agencies are users of a shared system, utilize that shared system to establish interoperable communications.

4. If response agencies operate on disparate systems, utilize shared or mutual aid channels to establish interoperable communications.
5. If response agencies do not share systems or channels, utilize a gateway solution to establish interoperable communications.
6. Where interoperable communications cannot otherwise be established between response agencies, utilize swap or cache radios to establish operable communications for responders.
7. If no other method of interoperability can be established, relay communications through staff members.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels listed below:

1. Disasters, large scale incidents, or extreme emergencies requiring mutual aid or interagency communications.
2. Incidents where imminent danger exists to life or property.
3. Incidents requiring the response of multiple agencies.
4. Pre-planned events requiring mutual aid or interagency communications.
5. Incidents involving a single agency where supplemental communications are needed for agency use.
6. Drills, tests and exercises.

In the event of multiple simultaneous incidents within the same priority level, the resources should be allocated with the following priorities in mind:

1. Incidents with the greatest level of exigency (e.g., greater threat to life or property, more immediate need, etc.) have priority over less exigent incidents.
2. Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options.
3. When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource.

Reference to applicable policy documents, governing documents, MOUs, and sharing agreements can be found in Appendix H.

INTEROPERABILITY EQUIPMENT, POLICIES, AND PROCEDURES

This section describes all interoperable communications equipment and their associated policies and procedures in the SECAHR. Statewide interoperable communications equipment and their associated policies and procedures are detailed in 0.

Users will follow the following overarching procedures for all interoperable communications within the Southeast Region (i.e., for all interoperable communication situations regardless of the technological assets used to achieve that interoperability):

- **National Incident Management System** – Implement an Incident Command System (ICS) compliant with the National Incident Management System (NIMS) when using any regional interoperability resource.
- **National Response Framework** – Use the appropriate ICS forms needed to document a given incident, in accordance with the National Response Framework (NRF[1]).
- **Plain Language** –Avoid using radio codes, acronyms, and abbreviations as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.
- **Unit Identification** – Announce your home agency prior to announcing your unit identifier during interoperable communication situations. (i.e., "Fowler Fire 1"). Ensure all response and communications personnel can clearly identify and document each responder and each location. Note: this procedure may be superseded by function/location specific identifiers in an established ICS.
- **Channel announcement** – When agencies operating on different radio systems, respond to incidents requiring interoperability, units should finish their transmissions with which channel they are transmitting (e.g., "Fowler Fire 1, Walsh Fire 8 on MAC 12," or "Operations, Division A on Command")
- **Equipment Responsibility** – Each user and/or agency that receives a communications asset will be responsible for returning that asset and all associated accessories in reasonable working condition to the owning agency at the end of the incident. Operational expenses for assets may be incurred by the requesting agency.
- **Interoperable resources should be considered** when the day-to-day communications systems are overloaded or multiple jurisdictions are involved in a large incident or pre-planned event.

SHARED SYSTEMS

Shared systems provide public safety/service communications for agencies within the Southeast Region. "Shared system" refers to a single radio system used to provide service to several public safety or public service agencies. Table 2 lists all radio systems shared by more than one public safety or service agency operating in Southeast Region. General interoperable communications policies and procedures that

[1] http://www.fema.gov/pdf/emergency/nrf/nrf-core.pdf

apply across these systems are detailed below. Details on each system are provided in Appendix A.

TABLE 2 SOUTHEAST REGION SHARED SYSTEM(S)

Radio System Name	Make / Model	Type	Frequency Band	Owning Agency	Service Area
Colorado DTRS	**Motorola / Quantar**	P25 Digital Trunked	***700/800 MHz***	Shared Local / State	Colorado
Baca County Conventional System	**Motorola/ Quantro/ Micor/**	Analog Conventional System	***800 MHz***	Baca County / State	Baca County
Walsh Ambulance	**Hytera/ RD985**	DMR / Analog	***400 MHz***	Walsh Ambulance Service	Baca County
USDA – Forest Service	**Various**	Analog	***160 MHz***	US Forest Service	Southeast Colorado
Ligado	**Boeing**	Digital	***1500/1600 MHz***	Ligado	Nationwide
Aircraft Radio System	**Various**	Analog AM	***118 MHz / 240 MHz / 370MHz***	Multiple / FAA	Region Wide
Zello	**Various**	GSM/CDMA Cellular	***700/850/900/ 1700/1800/19 00/2100/2300***	Various Cellular Corporations	Worldwide

INTRA-SYSTEM SHARED CHANNELS

"Intra-system shared channels" refer to common frequencies/talkgroups established and programmed into radios to provide interoperable communications among agencies using the ***same*** shared radio system. "Channel," in this context, refers to the name of a common frequency/talkgroup programmed into a user's radio.

The intra-system shared channels available within each designated shared system are included in the Communications Resource Availability Worksheet (ICS Form 217A) for that system in Appendix A.

SHARED SYSTEM POLICIES AND PROCEDURES

Use the following procedures when requesting, using, or discontinuing the use of shared communication systems:

- When an individual responder needs to interoperate with other agencies on their same shared system, the responder will notify their dispatch center. The dispatcher can then identify and designate an appropriate channel. Note that in cases where no dispatcher intervention is required, responders still notify dispatch that they are switching to a shared channel to maintain responder safety.
- Incident or Unified Command (when established) or the requesting responder will notify dispatch when the intra-system shared channels are no longer required. The dispatcher will announce the return to normal operations channels.

For extended incidents:

- The lead agency dispatcher notifies the COML/or their designee that interoperability channels are in use. The COML/or their designee incorporates any interoperable communications assignments into the Incident Radio Communications Plan (ICS Form 205).
- Each agency's dispatcher relays interoperable channel assignments to additional responding personnel/resources.
- Incident or Unified Command determines when the interoperability channels are no longer required and notifies the COML/or their designee.

Shared System Problem Identification and Resolution

During an incident:

- Report shared system problems to the incident dispatch supervisor/COML/or their designee assigned to the incident/event who will follow established agency procedures to resolve the problem.

Following an incident:

1. Report any problems with a shared system to the appropriate POC for the owning agency listed in Appendix A. The POC will be responsible for ensuring effective resolution to problems that exist with the shared system.
2. Inform the SERCC about shared system problems and their identified solutions or outstanding issues. The SERCC supports effective resolution to any remaining problems.

INTER-SYSTEM SHARED CHANNELS

"Inter-system shared channels" refer to common frequencies/talkgroups established and programmed into radios to provide interoperable communications among agencies using ***different*** radio systems. "Channel," in this context, refers to the name of a common frequency/talkgroup programmed into a user's radio.

The inter-system shared channels available within the Southeast Region are included in a Communications Resource Availability Worksheet (ICS Form 217A) in Appendix A.

Inter-System Shared Channel Policies and Procedures

Use the following procedures when requesting, using, or discontinuing the use of inter-system shared channels:

- When an individual responder needs to interoperate with other agencies on different radio systems, the responder will notify their dispatch center. The dispatcher will then coordinate with dispatch personnel from the other involved agencies to identify and assign one or more appropriate inter-system shared channel. Note that in cases where no dispatcher intervention is required, responders still notify dispatch that they are switching to a shared channel to maintain responder safety.
- Incident or Unified Command (when established) or the requesting responder will notify dispatch when the inter-system shared channels are no longer required. The dispatcher will announce the return to normal operations channels.

For extended incidents:

- The lead agency dispatcher notifies the COML or their designee that interoperability channels/talkgroups are in use. The COML or their designee incorporates any interoperable communications assignments into the Incident Radio Communications Plan (ICS Form 205).
- Each agency's dispatcher relays interoperable channel assignments to additional responding personnel/resources.
- Incident or Unified Command determines when the interoperability channels are no longer required and notifies the COML or their designee.

Mutual Aid Channel (MAC) Use

- **National Fire Mutual Aid (VFIRE21)** – This is a VHF radio frequency that is used throughout the Southeast Region for mutual aid responses and on-scene communication. Primarily used by Fire and EMS Departments, will be utilized by all agencies responding during a large-scale operation.
- **National Law Enforcement Mutual Aid (VLAW31) –** This is a VHF radio frequency that is used throughout the Southeast Region for mutual aid responses and on-scene communication. Primarily used by Law Enforcement, will also be utilized by all agencies responding during a large-scale operation.
- **Mutual Aid Talkgroups Southeast (MAC 9-12) –** These are 800 MHz radio talkgroups that are used throughout the South, South East, and South Central Regions for mutual aid responses and on-scene communication.
- **Mutual Aid Channel SRIC's (SRIC Call, SRIC Fire, SRIC Law, SRIC EMS)** – These are South Region Interoperability Channel 800 MHz radio talkgroups that are used throughout the South Region for mutual aid responses and on-scene communication.
- **Statewide MAC Talkgroup 21 (MAC 21) –** MAC21 is used throughout the state for mutual aid response and on-scene communications.

Inter-System Shared Channel Problem Identification and Resolution

During an incident:

- Report inter-system shared channel problems to the COML or their designee assigned to the incident/event who will follow established agency procedures to resolve the problem.

Following an incident:

1. Report any problems with an inter-system shared channel to the appropriate POC for the owning agency. The POC will be responsible for ensuring effective resolution to problems that exist with the inter-system shared channel.
2. Inform the SERCC about inter-system shared channel problems and their identified solutions or outstanding issues. The SERCC supports effective resolution to any remaining problems.

NATIONAL INTEROPERABILITY AND MUTUAL AID CHANNELS

In order to encourage interoperability within the public safety community, the Federal Communications Commission (FCC) has defined interoperability and mutual aid

channels available to state and local public safety agencies. Federal governmental agencies qualify for use under limited circumstances when necessary for interoperability with non-federal agencies.

National naming conventions have been established and are adopted here for Southeast Region usage.

For additional information regarding these frequencies, refer to the National Interoperability Field Operations Guide (NIFOG)[2]. Available national interoperability and mutual aid channels are documented in the ICS Form 217A in Appendix B. State guidelines directing the use of these channels mirror the federal guidelines.

National Interoperability Channels

National interoperability channels are available to agencies nationwide already holding FCC Part 90 (public safety) licenses. This includes VCALL and VTAC (VHF), 7CALL and 7TAC (700 MHz), and 8CALL and 8TAC (800 MHz) channels. Further details are provided in Appendix B.

Agencies may use these channels in mobiles and portables under a blanket authorization issued by the FCC to Part 90 licensees; only base stations need to be specifically licensed for these channels.

National Mutual Aid Channels

The FCC has also designated other frequencies for mutual aid use. These must be specifically licensed by agencies for the area in which they are used; there is no blanket authorization. Access may alternately be provided by license holders to other agencies, for example under statewide or regional licenses. Channels commonly used for mutual aid may have been licensed for other, incompatible uses in some locations. Further details are provided in Appendix B.

Two VHF mutual aid channels are of particular note in the Southeast Region:

1.1.1.1 National Fire Mutual Aid (VFIRE21)

This frequency is used throughout the Southeast Region for mutual aid responses and on-scene communications. Primarily used by Fire and EMS Departments, it will be utilized by all agencies responding during a large-scale operation.

1.1.1.2 National Law Enforcement Mutual Aid (VLAW31)

This frequency is used throughout the Southeast Region for mutual aid responses and on-scene communications. Primarily used by Law Enforcement, it will also be utilized by all agencies responding during a large-scale operation.

GATEWAYS

"Gateway" systems interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing

[2] http://www.publicsafetytools.info/nifog

radios and channels to be interconnected with the channels of other users outside of their agency. Gateways are listed in the following table. More detailed information on each gateway is provided in Appendix C.

TABLE 3: SOUTHEAST REGION GATEWAY SYSTEMS

Gateway Name	Owning Agency	Day-to-Day or Incident / Event	Make / Model	Fixed / Mobile	No. of Simultaneous Nets	No. of Ports
DHSEM ICRI	State of Colorado	INCIDENT	Incident Command Radio Interface	PORTABLE	1	4
DHSEM CPI	State of Colorado	INCIDENT	CPI SV300	MOBILE	1	2
BACA ICRI	Baca County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
BENT ICRI	Bent County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
CROWLEY ICRI	Crowley County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
KIOWA ICRI	Kiowa County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
PROWERS ICRI	Prowers County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
OTERO ICRI	Otero County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
SKYLAND	Baca County EM	DAY-TO-DAY	S-COM 7330	FIXED	1	3
MT CARMEL	Baca County EM	DAY-TO-DAY	S-COM 7330	FIXED	1	3
WALSH EMS	Walsh Ambulance	DAY-TO-DAY	S-COM 7330	FIXED	1	3
TATOR BUTTE	Baca County EM	DAY-TO-DAY	S-COM 7330	FIXED	1	3
LAMAR FIRE ROIP GATEWAY	Lamar Fire Department	DAY-TO-DAY	USB-1	FIXED	1	1
LAMAR SCHOOL SAFE	Prowers County	INCIDENT	School Safe	FIXED	1	2
ALTA VISTA SCHOOL SAFE	Prowers County	INCIDENT	School Safe	FIXED	1	2
GRANADA SCHOOL SAFE	Prowers County	INCIDENT	School Safe	FIXED	1	2

Gateway Name	Owning Agency	Day-to-Day or Incident / Event	Make / Model	Fixed / Mobile	No. of Simultaneous Nets	No. of Ports
HOLLY SCHOOL SAFE	Prowers County	INCIDENT	School Safe	FIXED	1	2
WILEY SCHOOL SAFE	Prowers County	INCIDENT	School Safe	FIXED	1	2

A dispatch console can create patches between channels programmed into that console. These consoles function as gateways and are listed in the following table. POC information for these dispatch centers is detailed in Appendix M (2).

TABLE 4: SOUTHEAST REGION CONSOLE PATCHING CAPABILITIES

Dispatch Center Name	System Name	Make / Model	Number of Consoles	Systems Accessible via Patching
Baca County	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 (VHF/DTR/800 CONV)
Bent County	State DTRS	Gai-Tronics ICP9000 Navigator	2	800 DTR
Crowley County	State DTRS	Gai-Tronics ICP9000 Navigator	2	800 DTR/800 CONV
La Junta Dispatch	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 (VHF/DTR/800 CONV)
Otero Sheriff Dispatch	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	1	1 (DTR)
Rocky Ford Dispatch	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 VHF/DTR/800 CONV
Prowers County	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 VHF/DTR/800 CONV
Pueblo CSP Dispatch	State DTRS/VHF	Motorola Gold Elite	Zone Controller	Multiple
Pueblo Inter-Agency	State DTRS/VHF	Motorola Gold Elite	4	3 (VHF/DTR)
State EOC	State DTRS/VHF/ Low Band	Motorola Gold Elite	Zone Controller	Multiple

GATEWAY LIMITATIONS

Interoperability provided through a gateway can connect participating agency responders but has the following limitations:

- The COML and/or Incident Commander or their designee must be aware that activating multiple gateways to support an incident could result in mutual interference. Interference issues are best resolved by the technical support team assigned to the gateways.

- The number of simultaneous patches that can be supported by the gateway will be limited by switch capacity and the number of lines connecting control centers and consoles. As a result, a limited number of patches involving resources at different control points can be supported simultaneously. Likewise, a limited number of patches involving resources that are accessed through a communications center console may be supported simultaneously.
- Home system coverage may limit communications for repeated channels or talkgroups. Users patched through a gateway must be within the footprint of their coverage area.
- Agencies not permanently configured on a given gateway will require additional planning to establish interoperable communications through that gateway.
- All system functionalities may not be supported in a gateway environment (e.g., emergency button, user ID displays, etc.).

Gateway Policies and Procedures

The following additional policies and procedures shall govern interoperable communications between agencies via gateways:

- **Encryption** – All encrypted radio users must operate in a "clear" mode when a gateway is used, unless otherwise arranged in advance. **Never assume encryption carries across the gateway**.
- **Monitoring** – The Incident Commander, or their designee, will ensure that each activated patch is monitored consistently while in use.
- **Technical Support** – Qualified gateway technical specialists (THSPs) or COMTs must be available for on-scene support during the deployment of mobile gateways.

Gateway Request Procedures

The agency requesting the use of a fixed or mobile gateway device for incident/event communications support should document and provide the following information to the owning gateway agency POC, on request:

- Requesting agency
- Equipment required
- Location required/access information
- Expected duration of event
- Incident/event type (e.g., flooding, etc.)
- On-scene agencies requiring interoperability
- Incident POC
- User/requestor and/or servicing dispatch contact phone number
- Additional support services requested (e.g., gateway THSP, generator, etc.)
- Known hazard information

Mobile Gateway Deployment Procedures

Upon receiving a request for the deployment of a mobile gateway, the owning agency dispatcher should follow these deployment procedures:

- Contact the on-call mobile gateway agency responsible for mobile gateway deployment.
- Dispatch the mobile gateway THSP/COMT to the incident scene.
- Inform the requesting agency that the mobile gateway is en route and provide an estimated time of arrival (ETA), if available.

The mobile gateway THSP/COMT should follow these deployment procedures:

- Provide dispatch with an ETA at the incident and method of communications while en route (e.g., designated radio channel, cell number).
- Retrieve the mobile gateway from its storage location and deliver it to the incident scene.
- Report to the COML/ or their designee or to Check-in on arrival.
- Establish patches via the mobile gateway in accordance with the Gateway Activation Procedures listed below.

Gateway Activation Procedures

Procedures for establishing communications connectivity are:

- Select a channel or talkgroup on the home system for use in the gateway patch.
- Verify the system-wide availability of required resources (coordinate among control point dispatchers).
- Provide radio call sign/designator information to connected agencies as needed.
- Assign the requested unit/agency to that channel or talkgroup.
- Connect the agency to the appropriate talkgroup.
- Announce to users that interoperability is activated.
- Identify users on the interoperability channel using their agency name and unit identifier through a roll call.
- Monitor the interoperability channel to address requests.

Gateway Deactivation Procedures

When the gateway connections are no longer required, agencies should follow these deactivation procedures:

- Confirm that there are no users still requiring use of the gateway prior to deactivation.
- Contact the monitoring dispatcher (for **fixed gateways**) or the gateway THSP/COMT (for **mobile gateways**) to request patch/gateway deactivation.
- Announce over all patched channels/talkgroups that connections will be deactivated prior to the connection being disabled.
- Return all personnel to their appropriate home system channel assignments.

Gateway Problem Identification and Resolution

During an incident:

- Report gateway problems to the owning agency dispatcher (for **fixed gateways**) or gateway THSP/COMT (for **mobile gateways**), who will follow established agency procedures to resolve the problem.

Following an incident:

1. Report any problems with the gateway to the appropriate POC for that agency listed in Appendix C. The POC will be responsible for ensuring effective resolution to problems that exist with the gateway.
2. Inform the SERCC about gateway problems and their identified solutions or outstanding issues. The SERCC supports effective resolution to any remaining problems.

Gateway Test Procedures

To ensure that equipment components of the gateway operate properly, each agency will participate in the following testing procedure:

- Representatives from multiple agencies should meet on a regular basis to test each gateway.
- Testing should include deployment (**mobile only**), setup, operation, and deactivation of each gateway.
- If an issue or problem is identified during the testing procedure, determine who will take corrective action. If the issue or problem cannot be resolved, contact the appropriate technical personnel to address the issue or problem.

MOBILE REPEATERS

A “repeater” is a combination of a radio receiver and a radio transmitter that receives a weak or low-level signal and retransmits it at a higher level or higher power, so that the signal can cover longer distances without degradation. “Mobility” of a repeater is defined as:

- *Portable*: can be carried by a person and is self-contained.
- *Transportable*: requires a vehicle to transport it and can be setup to operate external to the transport vehicle.
- *Vehicle Mounted*: mounted/ fixed in the transport vehicle and operates from within.

There are two types of repeater: a simplex repeater and a duplex repeater.

- A *simplex* repeater consists of a radio on a simplex frequency and a digital voice recorder. When a signal is received, the recorder stores the message (usually up to 60 seconds maximum.). When the received signal ends, the digital voice recorder retransmits the message on the same frequency. A commonly used term to describe this activity is “store and forward”.

- A *duplex* repeater uses two radio frequencies; a receive frequency for incoming signals and a transmit frequency, on which it retransmits the received signals. The repeater transmits and receives at the same time; i.e., simultaneously.

Mobile repeaters are listed in the following table. More detailed information on each repeater is provided in Appendix D.

TABLE 5: SOUTHEAST REGION MOBILE REPEATERS

Repeater Name	Owning Agency	Make / Model	Mobility	Frequency Band
Baca County Mobile Talkgroup Extender	Baca County OEM	Motorola	Portable	DTR/860.2125
Otero County Talkgroup Extender	Otero County OEM	Motorola	Portable	DTR/860.2125
Walsh Ambulance Service Portable 800MHz Repeater	Walsh Ambulance Service	Kenwood	Portable	800MHz

MOBILE REPEATER LIMITATIONS

The COML and/or Incident Commander must be aware that activating multiple repeaters to support an incident can result in mutual interference. Interference issues are best resolved by the technical support team assigned to the repeaters.

MOBILE REPEATER REQUEST PROCEDURES

The agency requesting the use of a repeater device for incident/event communications support should document and provide the following information to the repeater's owning agency POC, on request:

- Requesting agency
- Equipment required
- Location required/access information
- Expected duration of event
- Incident/event type (e.g., flooding, etc.)
- On-scene agencies requiring interoperability
- Incident POC
- User/requestor and/or servicing dispatch contact phone number
- Additional support services requested (e.g., repeater operator, generator, etc.)
- Known hazard information

MOBILE REPEATER DEPLOYMENT PROCEDURES

Upon receiving a request for the deployment of a repeater, the owning agency dispatcher should follow these deployment procedures:

- Contact the on-call repeater THSP/COMT responsible for repeater deployment.
- Dispatch the THSP/COMT to the incident scene.
- Inform the requesting agency that the repeater is en route and provide an ETA, if available.

The repeater THSP/COMT should follow these deployment procedures:

- Provide dispatch with an ETA at the incident and method of communications while en route (e.g., designated radio channel, cell number).
- Retrieve the repeater from its storage location and deliver it to the incident scene
- Report to the COML/ or their designee or to Check-in on arrival.
- Once on-scene, install and activate the repeater in accordance with the Mobile Repeater Activation Procedures listed below.

Mobile Repeater Activation Procedures

The COML/ or their designee will:

- Select a channel or channel pair for use in the repeater patch.
- Verify the system-wide availability of required resources (coordinate among control point dispatchers).
- Coordinate with the repeater technician the installation location for the repeater.
- Announce to the requesting agency when the repeater is operational.

The repeater THSP/COMT will:

- Install the repeater in accordance with standard safety protocols.
- Notify the COML/ or their designee when the repeater is operational.
- Perform on-site coverage tests to confirm that the repeater is providing adequate coverage for the incident.
- Continually monitor the repeater to ensure continued operation without degradation.

Mobile Repeater Deactivation Procedures

When the repeater(s) is (are) no longer required, agencies should follow these deactivation procedures:

- Contact the repeater THSP/COMT to request repeater deactivation.
- Announce over the repeater that it will be deactivated prior to disabling it.
- Direct all personnel to their appropriate home system channel assignments.

Mobile Repeater Problem ID and Resolution

During an incident:

- Report repeater problems to the repeater THSP/COMT, who will follow established agency procedures to resolve the problem.

Following an incident, the following general problem ID and resolution processes apply to all regional mobile repeaters:

1. Report any problems with the repeater to the appropriate POC for that agency listed 0. The POC will be responsible for ensuring effective resolution to problems that exist with the repeater.

2. Inform the SERCC about repeater problems and their identified solutions or outstanding issues. The SERCC supports effective resolution to any remaining problems.

Mobile Repeater Test Procedures

To ensure that equipment components of the mobile repeater operate properly, each agency will participate in the following testing procedure:

- Representatives from the owning agencies should test each repeater on a regular basis.
- Testing should include deployment, setup, operation, and deactivation of each repeater.
- If an issue or problem is identified during the testing procedure, determine the appropriate corrective action. If the issue or problem cannot be resolved, contact the appropriate technical personnel to address the issue or problem.

RADIO CACHES

A "radio cache" refers to a designated reserve of standby radios that can be deployed to support regional incidents. These radios may be from a regional cache or from a participating agency. These radios allow all responders to use common, compatible equipment during an incident. Specific caches within the Southeast Region are listed in Table 6. Detailed information on radio caches can be found in Appendix E.

TABLE 6: SOUTHEAST REGION RADIO CACHES

Radio Cache Name	Owning Agency	Make / Model	Frequency Band	Quantity
Baca County DTR Cache	Baca County OEM	Kenwood NX-5400	700/800	18
Baca County DTR Cache	Baca County OEM	Kenwood NX-5930	700/800 Mobile	2
Bent County DTR Cache	Bent County OEM	Kenwood NX-5400	700/800	20
Crowley County DTR Cache	Crowley County OEM	Kenwood NX-5400	700/800	20
Kiowa County DTR Cache	Kiowa County OEM	Kenwood NX-5400	700/800	20
Kiowa County Sheriff's Office	Kiowa County SO	Motorola XTS2500	700/800	15
Otero County DTR Cache	Otero County OEM	Kenwood NX-5400	700/800	20
Prowers County DTR Cache	Prowers County OEM	Kenwood NX-5400	700/800	10

Radio Cache Policies and Procedures

The following additional policies and procedures apply to establishing interoperable communications between agencies via radio caches:

- **Programming** – All cache radios in the region must be programmed in accordance with regional programming guidance appropriate to their make, model, type, and frequency band.

- **Charging –** Cache radios must be fully charged and ready for immediate deployment when requested. Deployed equipment includes extra batteries and/or battery chargers to support extended deployments.
- **Radio Identification –** Each radio in a radio cache will have a unique identification number (e.g., serial number, etc.) for inventory tracking.
- **Technical Support –** Qualified radio cache THSPs or COMTs may be available for on-scene support during the deployment, if the requesting agency cannot act in this capacity.
- **Equipment Return –** The requesting agency is responsible for the return of any cache radios/equipment in the condition that they were received.

Radio Cache Programming Requirements

Radio programing before an incident is a critical component to interoperability. The information below defines the requirements for programming of cache radios. Regularly deployed radios in the field should also be programmed with these talkgroups and frequencies where the radios can support.

Each party to this TICP has agreed to share their county MAC channel with each other party to this TICP. There is no need to request authorization letters for these talkgroups within the region.

It is also recommended that each county request authorization from the other counties adjacent to their jurisdiction to program the other county's MAC into their radios for interoperability.

VHF Radio Cache Guidelines

All Southeast Region VHF radio caches should follow the CCNC recommendations, but at a minimum adhere to the programming guidelines listed in Table 7.

Table 7: Programming Guidelines for Southeast Region VHF Radio Caches

Channel Name	Channel Use	Frequency (RX)	Frequency (TX)	PL Tone
VCALL10	Mutual Aid Calling	155.7525	155.7525	156.7
VTAC12	Mutual Aid Tactical	154.4525	154.4525	156.7
VLAW31W	LE Mutual Aid	155.4750	155.4750	CSQ
VLAW31	LE Mutual Aid	155.4750	155.4750	156.7
VFIRE21W	Fire Mutual Aid	154.2800	154.2800	156.7
VFIRE21	Fire Mutual Aid	154.2800	154.2800	156.7
VFIRE23W	Fire Mutual Aid	154.2950	154.2950	156.7
VFIRE23	Fire Mutual Aid	154.2950	154.2950	156.7
VFIRE22W	Fire Mutual Aid	154.2650	154.2650	156.7
VFIRE22	Fire Mutual Aid	154.2650	154.2650	156.7
VSAR16	Search and Rescue	155.1600	155.1600	156.7
VMED28	Medical	155.3400	155.3400	156.7
CSP3	Statewide Aid	154.9050	154.9050	156.7
AREA LAW	Regional	155.1300	155.1300	107.2

800 MHz Radio Cache Guidelines

All Southeast Region 800 MHz radio caches should adhere to the programming guidelines listed in Table 8.

Table 8: Programming Guidelines for Southeast Region 700 and 800 MHz Radio Caches

Channel Name	Frequency (RX)	Frequency (TX)
Mutual Aid Channel 1 Metro (M1MET)	DTR Talkgroup	
Mutual Aid Channel 2 Metro (M2MET)	DTR Talkgroup	
Mutual Aid Channel 3 Metro (M3MET)	DTR Talkgroup	
Mutual Aid Channel 4 Metro (M4MET)	DTR Talkgroup	
Mutual Aid Channel 5 Northeast (M5NE)	DTR Talkgroup	
Mutual Aid Channel 6 Northeast (M6NE)	DTR Talkgroup	
Mutual Aid Channel 7 Northeast (M7NE)	DTR Talkgroup	
Mutual Aid Channel 8 Northeast (M8NE)	DTR Talkgroup	
Mutual Aid Channel 9 Southeast (M9SE)	DTR Talkgroup	
Mutual Aid Channel 10 Southeast (M10SE)	DTR Talkgroup	
Mutual Aid Channel 11 Southeast(M11SE)	DTR Talkgroup	
Mutual Aid Channel 12 Southeast (M12SE)	DTR Talkgroup	
Mutual Aid channel 13 Southwest (M13SW)	DTR Talkgroup	
Mutual Aid channel 14 Southwest (M14SW)	DTR Talkgroup	
Mutual Aid channel 15 Southwest (M15SW)	DTR Talkgroup	
Mutual Aid channel 16 Southwest (M16SW)	DTR Talkgroup	
Mutual Aid channel 17 Northwest (M17NW)	DTR Talkgroup	
Mutual Aid channel 18 Northwest (M18NW)	DTR Talkgroup	
Mutual Aid channel 19 Northwest (M19NW)	DTR Talkgroup	
Mutual Aid channel 20 Northwest (M20NW)	DTR Talkgroup	
Mutual Aid Channel 21 Statewide (M21STW)	DTR Talkgroup	
Baca County MAC (BACA MAC)	DTR Talkgroup	
Bent County MAC (BC MAC)	DTR Talkgroup	
Crowley County MAC (CC MAC)	DTR Talkgroup	
Kiowa County MAC (KC MAC)	DTR Talkgroup	
Otero County MAC (OC MAC)	DTR Talkgroup	
Prowers County MAC (PC MAC)	DTR Talkgroup	
Las Animas County MAC (LAC MAC)	DTR Talkgroup	
Cheyenne County MAC (CHC MAC)	DTR Talkgroup	
South Regional Interoperability - Calling (SRIC CALL)	DTR Talkgroup	
South Regional Interoperability - Fire (SRIC FIRE)	DTR Talkgroup	
South Regional Interoperability - Law (SRIC LAW)	DTR Talkgroup	
South Regional Interoperability - EMS (SRIC EMS)	DTR Talkgroup	
MAC BUS SE	DTR Talkgroup	
SMPX1	851.1000 MHz	851.1000 MHz
SMPX2	851.7500 MHz	851.7500 MHz
SMPX3	852.3000 MHz	852.3000 MHz

Channel Name	Frequency (RX)	Frequency (TX)
SMPX4	852.5500 MHz	852.5500 MHz
SMPX5	853.6875 MHz	853.6875 MHz
OEM Southwest (OEM SW)	DTR Talkgroup	
OEM San Luis Valley (OEM SLV)	DTR Talkgroup	
OEM South (OEM S)	DTR Talkgroup	
OEM Southeast (OEM SE)	DTR Talkgroup	
OEM South Central (OEM SC)	DTR Talkgroup	
OEM North Central (OEM NC) – State EOC	DTR Talkgroup	
NAWAS	DTR Talkgroup	
Walsh Repeater (WALSH RP)	855.9625 MHz	810.9625 MHz
Tator Butte Repeater (TATOR)	859.2125 MHz	814.2125 MHz
Mt. Carmel Repeater (MTCARMEL)	860.2125 MHz	815.2125 MHz
Southeast Mobile Extender 1 (SEMX 1)	860.2125 MHz	860.2125 MHz
Southeast Mobile Extender 2 (SEMX 2)	860.2125 MHz	860.2125 MHz
Southeast Mobile Extender 3 (SEMX 3)	860.2125 MHz	860.2125 MHz
Baca Portable Repeater 1 (BACA RP 1)	860.2125 MHz	815.2125 MHz
Baca Portable Repeater 2 (BACA RP 2)	860.2125 MHz	815.2125 MHz
Baca Portable Repeater 3 (BACA RP 3)	860.2125 MHz	815.2125 MHz
8Call90	851.0125 MHz	806.0125 MHz
8Call90D	851.0125 MHz	851.0125 MHz
STAC	853.7875 MHz	808.7875 MHz
STACD	853.7875 MHz	853.7875 MHz
8TAC91	851.5125 MHz	806.5125 MHz
8TAC91D	851.5125 MHz	851.5125 MHz
8TAC92	852.0125 MHz	807.0125 MHz
8TAC92D	852.0125 MHz	852.0125 MHz
8TAC93	852.5125 MHz	807.5125 MHz
8TAC93D	852.5125 MHz	852.5125 MHz
8TAC94	853.0125 MHz	808.0125 MHz
8TAC94D	853.0125 MHz	853.0125 MHz
BC RP 1	860.2125 MHz	815.2125 MHz
BC RP 2	860.2125 MHz	815.2125 MHz
BC RP 3	860.2125 MHz	815.2125 MHz
7CALL50	769.24375	799. 24375
7CALL50D	769.24375	769.24375
7CALL70	773.25625	803.25625
7CALL70D	773.25625	773.25625
7TAC55	769.74375	799.74375
7TAC55D	769.74375	769.74375
7TAC75	773.75625	803.75625
7TAC75D	773.75625	773.75625

Radio Cache Request Procedures

The agency requesting the use of a radio cache for incident/event communications support should document and provide the following information to the owning agency POC, on request:

- Requesting agency
- Equipment required
- Location required/access information
- Expected duration of event
- Incident/event type (e.g., flooding, etc.)
- On-scene agencies requiring interoperability
- Incident POC
- User/requestor and/or servicing dispatch contact phone number
- Additional support services requested (e.g., radio cache THSP, etc.)
- Known hazard information

Radio Cache Deployment Procedures

Upon receiving a request for the deployment of a radio cache, the owning agency dispatcher should follow these deployment procedures:

- Contact the on-call THSP/COMT responsible for radio cache deployment.
- Dispatch the radio cache THSP to the incident scene.
- Inform the requesting agency that the radio cache is en route and provide an ETA, if available.

The radio cache THSP/COMT should follow these deployment procedures:

- Provide dispatch with an ETA at the incident and method of communications while en route (e.g., designated radio channel, cell number).
- Retrieve the radio cache from its storage location and deliver it to the incident scene.
- Report to the COML/ or their designee or to Check-in on arrival.
- Sign the cache over to the requesting agency for incident use or, if assigned to remain on scene, coordinate radio cache deployment procedures with the Communications Unit.

Radio Cache Distribution Procedures

The requesting COML/ or their designee will:

- Support radio deployments on-scene
- Maintain a record of each user and agency to whom a radio and associated accessories have been distributed
- Document the identification number of each radio deployed
- Document the channels in use

- Provide a brief overview/introduction of the radio and the relevant portions of the communications plan (e.g., short list of channel assignments, “cheat sheets,” etc.) to those receiving a cache radio.
- Each user and/or agency that receives a radio from the radio cache will be responsible for returning that radio and all associated accessories to the cache at the end of the incident.

Radio Cache Demobilization Procedures

When the radio cache is no longer required, agencies should follow these demobilization procedures:

- Return all cache radios and associated accessories to the Communications Unit, when established, or to the COML/ or their designee.

The COML/ or their designee will:

- Inventory all radios and accessories returned to the cache.
- Determine if any radios or associated accessories have not been returned. Note the user and agency to which the missing radio/accessories were distributed. Provide this information to the Incident Commander or their designee.
- If the missing radios cannot be recovered at the incident scene, provide this information to the radio cache POC for resolution.
- Return all equipment is similar condition as deployed (e.g. remove any incident programming).

Radio Cache Problem Identification and Resolution

During an incident:

- Report radio cache problems to the radio cache THSP/COMT who will follow established agency procedures to resolve the problem.

Following an incident:

1. Report any problems with the radio cache to the appropriate POC for that agency listed in Appendix E. The POC will be responsible for ensuring effective resolution to problems that exist with the radio cache.
2. Inform the SERCC about radio cache problems and their identified solutions or outstanding issues. The SERCC supports effective resolution to any remaining problems.

MOBILE COMMUNICATIONS UNITS

A mobile communications Unit (MCU) (also known as a Mobile Communications Center (MCC), Mobile Communications Vehicle (MCV), or Mobile Emergency Operations Center (MEOC) refers to any vehicular asset that can be deployed to provide or supplement communications capabilities in an incident area. Examples of the types of communications devices an MCU can house are: subscriber and base station radios of various frequency bands, gateway devices, satellite phones, wireless computer networks, video broadcasting/receiving equipment, etc. Typically, these

communications devices are permanently located/stored in the MCUs when not used. The MCU should also be able to temporarily provide the electrical power required to operate the communications devices. Detailed technical specifications on each MCU are provided in Appendix F.

TABLE 9: SOUTHEAST REGION MOBILE COMMUNICATIONS UNITS

MCU ID / Designator	Owning Agency	Deployment Area
Baca County Command Bus	Baca County Sheriff's Office	Southeast Region
La Junta Fire / Police Trailer	La Junta Fire / Police Departments	Otero County
Prowers County Command	Prowers County OEM	Southeast Region
DHSEM OEM SUV	State of Colorado	Statewide
DOC Mobile Command	State of Colorado Department of Corrections	Statewide
RMHAM	Rocky Mountain Ham	Statewide

MCU POLICIES AND PROCEDURES

The following additional policies and procedures apply to establishing interoperable communications between agencies via MCUs:

- **Equipment Return** – The requesting agency is responsible for the return of any MCUs in the condition that they were received and/or as dictated by existing Memoranda of Agreement (MOAs).
- **Resource Modifications** – The requesting agency is not allowed to change anything in the MCU without written permission of the owning agency.
- **Technical Support** – Qualified MCU THSPs or COMTs must be available for on-scene support during the deployment of MCUs.

1.1.1.3 MCU REQUEST PROCEDURES

The agency requesting the use of an MCU for incident/event communications support should document and provide the following information to the owning agency POC, on request:

- Requesting agency
- Equipment required
- Location required/access information
- Expected duration of event
- Incident/event type (e.g., flooding, etc.)
- On-scene agencies requiring interoperability
- Incident POC
- User/requestor and/or servicing dispatch contact phone number
- Additional support services requested (e.g., MCU THSP, generator, etc.)
- Known hazard information

1.1.1.4 GENERAL MCU DEPLOYMENT PROCEDURES

Upon receiving a request for the deployment of an MCU, the owning agency dispatcher should follow these deployment procedures:

- Contact the on-call MCU THSP/COMT responsible for MCU deployment.
- Determine the availability of the resource to fulfill the request
- Dispatch the MCU THSP/COMT to the incident scene, if available.
- Inform the requesting agency that the MCU is en route and provide an ETA, if available.

The MCU THSP/COMT should follow these deployment procedures:

- Provide dispatch with an ETA at the incident and method of communications while en route (e.g., designated radio channel, cell number).
- Retrieve the MCU from its storage location and deliver it to the incident scene.
- Report to the COML/ or their designee or to Check-in on arrival.
- Prepare the MCU for operations and, if assigned to remain on scene, supervise its use.

1.1.1.5 GENERAL MCU ACTIVATION PROCEDURES

When the MCU arrives on the scene, the MCU THSP/COMT will coordinate the placement of the MCU with the IC or their designee. The MCU THSP/COMT and IC will cooperatively determine the best placement of the MCU to support the incident.

The MCU THSP/COMT will activate systems needed and brief all personnel using the MCU on the operation and safety procedures.

Each Agency is encouraged to develop an operations manual to cover the startup, use, and shut down of the MCU and each system included.

1.1.1.6 GENERAL MCU DEACTIVATION PROCEDURES

When the MCU is no longer required, agencies should follow these deactivation procedures prior to demobilizing the MCU:

- Inventory all MCU equipment before leaving the incident scene to determine if equipment is accounted for. Provide this information to the Incident Commander/designee.
- Properly configure the MCU for mobilization, ensuring that all equipment is stowed and secured.

1.1.1.7 GENERAL MCU PROBLEM IDENTIFICATION AND RESOLUTION

During an incident:

- Report MCU problems to the MCU THSP/COMT who will follow established agency procedures to resolve the problem.

Following an incident:

1. Report any problems with the MCU to the appropriate POC for that agency listed in 0. The POC will be responsible for ensuring effective resolution to problems that exist with the MCU.
2. Inform the SERCC about MCU problems and their identified solutions or outstanding issues. The SERCC supports effective resolution to any remaining problems.

Specific MCU Policies and Procedures

In addition to the above policies and procedures which applies to all MCU's, there are additional specific policies and procedures for each MCU listed below.

1.1.1.8 Baca County Sheriff's Office Bus MCU Deployment Procedures

Deployment Procedure

To request deployment or activation, contact the Baca County Sheriff's Office by calling 719-523-6677.

Activation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Deactivation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Problem Identification and Resolution

Notify the THSP who accompanies the MCU or follow the detailed operations manual located within the MCU.

1.1.1.9 La Junta Fire/Police MCU Deployment Procedures

Deployment Procedure

To request deployment or activation, contact the La Junta City Emergency Management Director by calling 719-384-2323.

Activation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Deactivation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Problem Identification and Resolution

Notify the THSP who accompanies the MCU or follow the detailed operations manual located within the MCU.

1.1.1.10 Prowers County MCU Deployment Procedures

Deployment Procedure

To request deployment or activation, contact the Prowers County Office of Emergency Management Director by calling 719-688-4701 or Dispatch at 719-336-3977.

Activation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Deactivation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Problem Identification and Resolution

Notify the THSP who accompanies the MCU or follow the detailed operations manual located within the MCU.

1.1.1.11 DHSEM RFM SUV MCU DEPLOYMENT PROCEDURES

Deployment Procedure

To request deployment or activation, contact the Southeast Regional Field Manager by calling (719) 510-2388 or the State Emergency Line 24/7 at (303) 279-8855

Activation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Deactivation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Problem Identification and Resolution

Notify the THSP who accompanies the MCU or follow the detailed operations manual located within the MCU.

1.1.1.12 DOC MCU DEPLOYMENT PROCEDURES

Deployment Procedure

To request deployment or activation, contact the Department of Corrections Emergency Manager by calling (719) 429-7129 or the State Emergency Line 24/7 at (303) 279-8855

Activation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Deactivation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Problem Identification and Resolution

Notify the THSP who accompanies the MCU or follow the detailed operations manual located within the MCU.

1.1.1.13 RMHAM / ROCKY MOUNTAIN HAM MCU DEPLOYMENT PROCEDURES

Deployment Procedure

To request deployment or activation, contact the Regional AUX COMM Manager by calling (719) 994-1897 or the State Emergency Line 24/7 at (303) 279-8855

Activation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Deactivation Procedure

Follow the direction of the THSP who accompanies the MCU and the operations manuals located within the MCU.

Problem Identification and Resolution

Notify the THSP who accompanies the MCU or follow the detailed operations manual located within the MCU.

CELLULAR EMERGENCY RESPONSE SERVICES

RULES OF USE

Do not deploy these assets as a primary communications means unless necessary. Use these devices only when other communications methods have failed or are not possible. These assets, although free for official government use, do incur costs for carriers and are a limited resource. If your incident/event will be of short duration, please carefully consider the use of these assets. Points of Contact for cellular providers and emergency cellular services are listed in Appendix M (3).

RESPONSE REQUEST

When the above assets are needed, provide the following information:

- Name
- Agency/Department
- Kind and expected duration of incident
- Is this a capacity or coverage issue?

- What service is needed? Voice, data, or both?
- Specific GPS coordinates or address that needs coverage (Incident Command or Field Operations)
- Location equipment can be set up (may need a T1 line for operation)
- Contact information
- Responsible Party (Command)

Response Time and Backhaul Costs

Response time for these assets is approximately 12-15 hours depending on drive time and weather conditions. Cell on Wheels (COWs) and Cell on Light Trucks (COLTs) can take up to 24 hours to deploy.

If a microwave connection cannot be made to the equipment, a high-speed internet line will be needed, at a cost to be borne by the requesting agency.

Sprint Emergency Response

The **Sprint Emergency Response Team (ERT) is a national resource** providing short-term communications to federal, state/local public safety, law enforcement, military and private sector entities when communications are critical. Sprint ERT has over 15 years' experience, providing support in over 6,100 deployments nationwide.

Points of Contact for cellular providers and emergency cellular services are listed in Appendix M (3). Please contact Sprint Wireless via the 800 number first.

Table 10Sprint Emergency Response Resources

Resource	Service	Description	Details
SatCOLTT	CDMA Cellular Service, Voice, PTT, 4G LTE, 911 call routing	800MHz/1900MHz BTS, 1.8M Auto-Acquisition Satellite System	Optional End User devices as required
Fly Away	Voice, Video, Data, 40Mbps, Wireless or wired, 3G EVDO	1.5m to 2.4m Satellite Antenna System	Optional Services: Cellular Voice, 3G EVDO, LMR Interop and End user devices to fulfill mission
Go Kit T	Cellular, PTT, 3G/4G LTE Data, Tracking	Cellular Devices with PTT, Hot Spot capabilities	Cellular Dialing, Push to Talk, one to one, one to many. Data Applications and Tracking
Multi-Media LMR Interop	Cloud Radio, Share Information, Data, Text Voice	Integrated Mutualink T, Deployable Mutualink T, JPST ACUM	Interoperability between Cellular PTT and LMR Radio systems

Sprint Emergency Response Teams can be contact by calling 1-888-639-0020 or by using your GETS card to call 254-295-2200 or by emailing ERTRequests@spring.com

VIAERO EMERGENCY RESPONSE

Points of Contact for cellular providers and emergency cellular services are listed in Appendix M (3). Please contact Viaero Wireless via the 800 number first.

VERIZON EMERGENCY RESPONSE

VERIZON WIRELESS

The Verizon Crisis Response Network consists of both state and nation-wide emergency response assets that provide voice and data communications free of charge to prolonged incident/search & rescue operations. A combination of the resources listed may be deployed dependent upon availability and the criteria outlined in the policies and procedures below.

TABLE 11: VERIZON EMERGENCY RESPONSE RESOURCES

Resource	Service	Description	Details
Technicians	Increase Cell Capacity	-----	Call to Schedule
Cell Phone Cache	Cell Communications	Cell Phones	Call for Details
Repeater and Trailer (RAT)	Amplifies Existing Cell Signal	Repeater and Trailer	Fast to deploy. Repeats amplified signal. Needs existing signal in area but no line of sight.
Cell on Wheels (COWS)	Provides Cell Network Signal	Trailer with Tower	Can be self-powered. Needs line of sight microwave path to tower or multiple T1 Lines for voice and data. 24-48 hour deployment
Cell on Light Truck (COLT)	Provides Cell Network Signal	Truck Cell Tower	Same as COW
Field Deployable Satellites	Satellite Comm	Mobile Rugged Cases	Can be shipped FedEx overnight and setup in minutes Does not need cell infrastructure
Mobile Office Units	Provides Mass Communication Capability	Communications with Workspace	From 2 to 23 workstations with heating/cooling, wall mounted TV's data and VOIP phones.
Inflatable Comm Shelters	Provides Mass Communication Capability	Deployable Structure With Satellite Comm	Inflates in 15 minutes. Standard unit accommodates 12 personnel with work spaces, full data and voice communications. Has a floor, solid doors, windows, LED lighting, heating and cooling.

Points of Contact for cellular providers and emergency cellular services are listed in 0 (M.3). Please contact Verizon Wireless via the 800 number first.

** *Local jurisdictions are encouraged to coordinate with their established provider representatives for local events: however, the U.S. Department of Homeland Security – National Coordinating Center for Telecommunications will assist jurisdictions with referrals to corporate level contacts for wireless/wireline service provider representatives if needed.*

The NCC Watch can be reached 24/7 at 1-703-235-5080 or email NCC@hq.dhs.gov

TEXT MESSAGING

During times of cellular system overload or when you are on the fringe of the cellular network text messaging can work better than voice calls. Text messaging will often go through when calls will not connect. If you can text, do so. You can also send a text message from your computer to a single or multiple cellular phones at one time.

To send a text message from an email type the recipient address as it specifies in Appendix P. Type your message in the body of the email and send the email to the user(s). Be sure to put who sent the text as your email address does not always appear. Appendix P has listed the most commonly used cellular text messaging address in the United States.

CONFERENCE CALLS

Conference calls can play an important part in preparedness, response and recovery actions. Conference calls area a good way to bring participants together without making them drive hours for a meeting that may last only a few minutes. The Colorado Department of Public Safety issues each field manager a conference call bridge that is toll free for the participants calling from a land line. The region also has two additional conference call numbers that have been setup for use by any emergency response agency within the region. These are free conference call bridges or lines.

TABLE 12: SE CONFERENCE CALL INFORMATION

Name	Phone	Moderator Code	Participant Code	Conference Line Functions
SE CALL 1:	218-339-7800	782 3729	351 8332	Freeconference.com
SE CALL 2:	712-770-4010	6927	712255	Freeconferencecall.com
DHSEM	1-877-820-7831	TBD	TBD	DHSEM SE Field Manager Use ONLY
SERHCC	563-999-2090	TBD	518469	Southeast Region Health Care Coalition

REGIONAL EMERGENCY RESOURCE STAFFING

4.1 ICS COMMUNICATIONS UNIT POSITIONS

Job descriptions and qualified personnel for each Communications Unit position are detailed below.

4.1.1 DISPATCH CENTER

Communications Coordinator (COMC) – Functions as a frequency coordinator for the region and works with the COML to coordinate with other dispatch centers and incident commanders to prevent/resolve interference issues in support of the incident communication plan. Locally, the jurisdictional dispatch center supervisor or dispatcher may act as the COMC. Coordinators may also work in conjunction with EOCs at the region/county, state, or federal level.

4.1.2 At an Incident/Event

Communications Unit Leader (COML) – Manages the technical and operational aspects of the Communications Function during an incident or event. Develops National Incident Management System (NIMS)/Incident Command System (ICS) Form 205 Incident Radio Communications Plan and supervises the Communications Unit.

Incident Communications Technician (COMT) – Deploys advanced equipment and keeps it operational throughout the incident/event.

Incident Communications Center Manager (INCM) – Supervises the operational aspects of the Incident Communications Center (ICC) (mobile unit and/or fixed facility). During an incident, the ICC is designed to absorb incident traffic in order to separate that traffic from the day-to-day activities of the dispatch center. The ICC is typically located at the incident command post (ICP) in a fixed site, tent, trailer, mobile communications unit.

Radio Operator (RADO) – Staffs a radio at the ICC and is responsible for documenting incoming radio and telephone messages. Incident Dispatchers or Tactical Dispatchers are used as RADOs.

Technical Specialist (THSP) – Allows for the incorporation of personnel who may not be formally qualified in any specific NIMS/ICS position. THSPs may include local agency Radio Technicians (as opposed to the COMT), Auxiliary Communicators, Telephone Specialists, Gateway Specialists, Data/IT Specialists, and or Cache Radio Specialists.

The following table lists contact information of the Regional Emergency Resource Personnel for each Communications Unit position.

4.2 EMERGENCY COMMUNICATIONS RESOURCE DIRECTORY

The Emergency Resource Directory establishes a list of public safety personnel who will respond to fill the Communications Unit positions.

Identified personnel must train and exercise to a regional response level.

The following table lists contact information of the Regional Emergency Resource Personnel for each Communications Unit position.

Table 13: Regional Emergency Resource Personnel

	Name	Agency	Address	Phone	Email
COMC					
COML	Riley Frazee	DHSEM	310 E. Washington Lamar, CO 81052	719-510-2388	riley.frazee@state.co.us
	Jerry Casebolt	SECAHR	Sterling, CO	719-353-2695	Jerry.casebolt@secahr.com
COMT					

	Name	Agency	Address	Phone	Email
INCM					
RADO					
Cache THSP					
Gateway THSP	Rick May	ARES		719-688-2057	Kc0hh@yahoo.com
	Jeremy Burkhart	Lamar Fire			Jeremy.burkhart@ci.lamar.co.us
	Riley Frazee	DHSEM		719-510-2388	Riley.frazee@state.co.us
Other THSP	Craig Grice	Prowers Rural Fire		719-691-9568	cdgrice@gmail.com
	Jeremy Burkhart	Lamar Fire			Jeremy.burkhart@ci.lamar.co.us
	Lynette Rosetta	State OIT		719-250-5300	Lynette.rosetta@state.co.us
	Amanda Alden	ARES		719-994-1897	Amanda.alden@live.com
	Jeff Carrier	ARES		719-214-5084	K0jsc.jeff@gmail.com

4.3 AUXILIARY COMMUNICATIONS

Auxiliary Communications groups, supporting either emergency operations or planned events, are composed of knowledgeable individuals who are familiar with various aspects of radio communications in their area of responsibility and who can provide multiple and redundant communication avenues in case of emergency deployment. Members may also be able to address problems/issues associated with their radio systems that may arise as a result of the emergency. Auxiliary communicators can be a valuable backup communications resource for both planned and unplanned events.

Auxiliary communications can use a variety of frequency bands that typically include systems such as amateur radio, citizens band radio, satellite communications (SATCOM), general mobile radio service (GMRS), family radio service (FRS), and multi-use radio service (MURS). All auxiliary communicators have a lot of expertise to bring to the operations planning stages, but for the most part are used only when primary communications become significantly disrupted or are to be used for a planned event (such as an exercise).

The following general guidelines should be met to ensure auxiliary communicators work seamlessly with NIMS/ICS personnel in an EOC or out in the field:

- Auxiliary communicators should be formally trained on NIMS/ICS prior to working with public safety personnel. At a minimum, ICS-100, 200, 700 and 800 should have been completed by the individual. Should additional training be required for these communicators, it should be documented as such within an SOP, MOU or MOA.
- While most auxiliary communicators are volunteers, all auxiliary communicators must follow the directions of the COML and/or their designee.
- The COML should brief auxiliary communicators on what is expected of them during an activation so they are fully aware of their requirements. This way, should they be unable to accept those requirements, the COML can make a decision as to whether or not that individual should participate during the incident/event.
- Auxiliary communicators should only use the NIMS/ICS forms authorized by FEMA, during training or an activation, to ensure standardization with the rest of the command staff administrative procedures.
- Unless authorized by the emergency manager, or the COML, the auxiliary communicators should not bring their organization/club brand, or their personal equipment, into an operational environment.
- If several different auxiliary communications groups are available in an area, consider creating a coalition group. Representatives from several groups can sometimes work more effectively than only one group. Designate one auxiliary communications coordinator to work directly with the COML under these conditions.

Auxiliary communications does not involve encryption, so anything they may send could be listened to by the average citizen. No sensitive information should ever be sent via auxiliary communications because it could end up in the newspaper the next day.

Auxiliary Communications groups active in the region include:

- Amateur Radio Emergency Services (ARES)
- Army Military Auxiliary Radio System (MARS)
- Salvation Army Team Emergency Radio Network (SATERN)

Points of contact for active Auxiliary Communications groups are listed in Table 14.

TABLE 14: AUXILIARY COMMUNICATIONS POINTS OF CONTACT

Organization	Name/Location	Phone	E-Mail/Notes	Call Sign
STATE OF COLORADO				
ARES	Robert B. Wareham	888-936-2666	N0ESQ@robertwareham.com	N Ø ESQ
MARS	Emit Hurdelbrink /Aurora Neal Tew/Pueblo	303-324-3416 719-248-0936 800-633-1128	w0uaw@att.net neal.a.tew@gmail.com Army MARS HQ/Fort Huachuca AZ	W Ø UAW
SATERN	John Strobel Bill Feist	719-564-7312 601-564-4399	jnstro@hotmail.com bill.feist@uss.salvationarmy.org	K Ø PAL WB 8 BZH
ARES REGION 4 / DISTRICT 1 – BACA, BENT, CROWLEY, KIOWA, OTERO, PROWERS COUNTIES				
ARES	Amanda Alden Region 4 & 5 EC	719-994-1897	amanda.alden@live.com	K 1 DDN
ARES	Jeff Carrier Region 4 & 5 Dep. EC	719-214-5084	k0jsc.jeff@gmail.com	K Ø JSC
ARES	Jayson Quilantan Region 4, Otero County	719 994-1897	kc0itf@gmail.com	KC Ø ITF
AMERICAN RADIO RELAY LEAUGE (ARRL)				
Main Number		860-594-0200	emergency@arrl.org	
Fax		860-594-0259		
Emergency Preparedness Manager		860-594-0222		
Radio Station W1AW		860-594-0268		
REACT INTERNATIONAL – SOUTHEAST COLORADO REACT 6250				
REACT	Riley Frazee	719-252-3118	secoreact@gmail.com	KC0YWX/ WQOG361

TABLE 15: AMATEUR RADIO OPERATORS

Name	Location	Phone	Class	Call Sign
Riley Frazee	Walsh, CO	719-510-2388	General	KC Ø YWX
Harold Self	Springfield, CO		Advanced	KB Ø CAR
Alanda Babb	Springfield, CO		Technician	KD Ø HXN
Moriah Bradburn	Springfield, CO		Technician	KD Ø MQJ
Tommy Litke	Springfield, CO		General	N Ø PAZ
Butch George	Walsh, CO		Advanced	KB Ø DI
Dean George	Walsh, CO		General	KD Ø HXQ
Robert Morrow	Walsh, CO		Technician	KD Ø HXS
Elissa Forgey	Walsh, CO		Technician	KD Ø MQK
Connie Bradburn	Walsh, CO		Technician	KD Ø HXO
Dennis Bradburn	Springfield, CO		Technician	KD Ø HXP
Johnny Gudgel	Campo, CO		Technician	KC 5 JDP
Fred Tanner	Campo, CO		General	WA Ø BAL
Kenny Haddock	Two Buttes, CO		Advanced	WD Ø HVG
Day Drury	Hasty, CO		Extra	N Ø DAY
John Dortch	Hasty, CO		Advanced	WA Ø VOG
Nicholas Schwindt	Las Animas, CO		Extra	KC Ø BGA
Lawrence Schwindt	Las Animas, CO		Technician	KC Ø CMX
Brian England	Las Animas, CO		Technician	KD Ø TKL
Donald Chatelain	Las Animas, CO		Advanced	KE Ø WC
Brian England	Las Animas, CO		Technician	KD Ø TKL
Carl Schroeder	Ordway, CO		Extra	AB Ø AD
Bill O'Hare	Ordway, CO		Technician	KC Ø RWN
Mark Carlson	Ordway, CO		Extra	N Ø IR
Jason Kiefer	Ordway, CO		General	N Ø WOW
William Galbraith	Olney Springs, CO		Extra	K Ø RP
Julian Fierro, III	Ordway, CO		General	K Ø JSF
Avraham Fasik	Crowley, CO		Technician	KD Ø MXL
Adrian Moll	Crowley, CO		General	KD Ø MXM
Howard Votruba	Sheridan Lake, CO		Technician	KE Ø WMW
Jerry Henderson	La Junta, CO		Extra	AC Ø HV
Melvin Risenhoover	La Junta, CO		General	KA Ø TSK
Harold Vance	La Junta, CO		Technician	KA Ø ULD
Jon De'Lorenzo	La Junta, CO		Technician	KB Ø MFI
Jayson Quilantan	La Junta, CO		Extra	KC Ø ITF
Loretta Jacob	La Junta, CO		Technician	KC Ø NOQ
Charles Jacob	La Junta, CO		General	KC Ø NOR
Marc Mitchell	La Junta, CO		Technician	KC Ø RWL
Alan Wadleigh	La Junta, CO		Technician	KC Ø VGS
Roland Keller	La Junta, CO		General	KC Ø VGT
Paul Grindstaff Sr.	La Junta, CO		Advanced	KG 5 DX

Arthur Roos Jr.	La Junta, CO		Extra	N Ø QKE
Harold Pfannenschmid	La Junta, CO		Advanced	W Ø ZZS
Don Rizzuto	La Junta, CO		General	WD Ø BEZ
Brett Dellinger	La Junta, CO		Technician	KE Ø LKK
Kelly Block	La Junta, CO		General	KE Ø LLC
Shawn Mobley	La Junta, CO		Technician	KE Ø VUR
Steven Vandiver	La Junta, CO		Technician	KJ 4 TRB
Kevin Lindahl	Rocky Ford, CO		Technician	KC Ø RIY
Owen Hixon	Rocky Ford, CO		General	KC Ø RIZ
Matthew Wallace	Rocky Ford, CO		Technician	KD Ø YCO
Robert Lovisone	Manzanola, CO		General	K Ø URU
Amber James	Manzanola, CO		Technician	KD Ø REG
Luke James	Manzanola, CO		General	KD Ø REH
Paul Dinsmore	Manzanola, CO		General	KD Ø YDG
Richard Wolgram	Fowler, CO		General	KC Ø ZOO
Garvin O'Hare	Cheraw, CO		Extra	AC Ø AU
Robert Bounds	Model, CO		General	N Ø NFI
Wayne Hudson	Lamar, CO		Extra	K 5 ZG
Brian McCoy	Lamar, CO		Technician	K 9 POF
Harry Ford III	Lamar, CO		Technician	KB Ø NQG
Rick May	Lamar, CO	719-688-2057	Extra	KC Ø HH
Anthony Compton	Lamar, CO		Technician	KG 4 ULK
Dawn Vanhook	Lamar, CO		Technician	N Ø IEL
Jane May	Lamar, CO	719-336-2057	General	N Ø IEO
Craig Grice	Lamar, CO	719-691-9568	General	W Ø CDG
Lee Robinson	Lamar, CO		Extra	W Ø IDX
Roy Menzel	Lamar, CO		General	W 2 RGL
Gary Oxley	Lamar, CO		Extra	WA Ø AAU
Sharron Woodward	Wiley, CO		Technician	KD Ø KVC
Gary Woodward	Wiley, CO		Technician	KD Ø KVD
Troy Smith	Wiley, CO		Extra	W Ø CTS
Clenard Molder	Holly, CO		Technician	KB Ø WQX
David Setliff	Bristol, CO		General	W Ø WFM

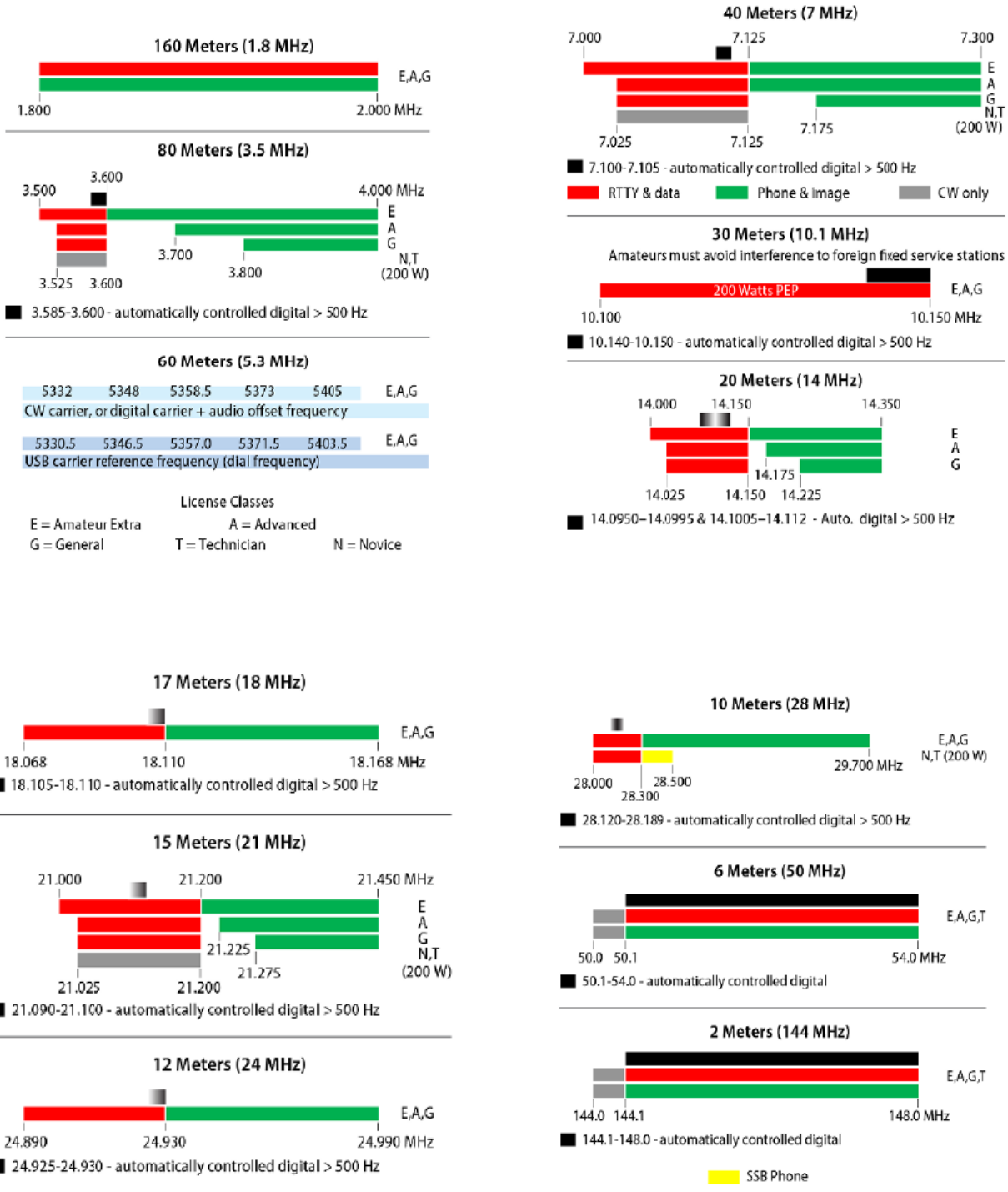
TABLE 16: AMATEUR RADIO CLUBS

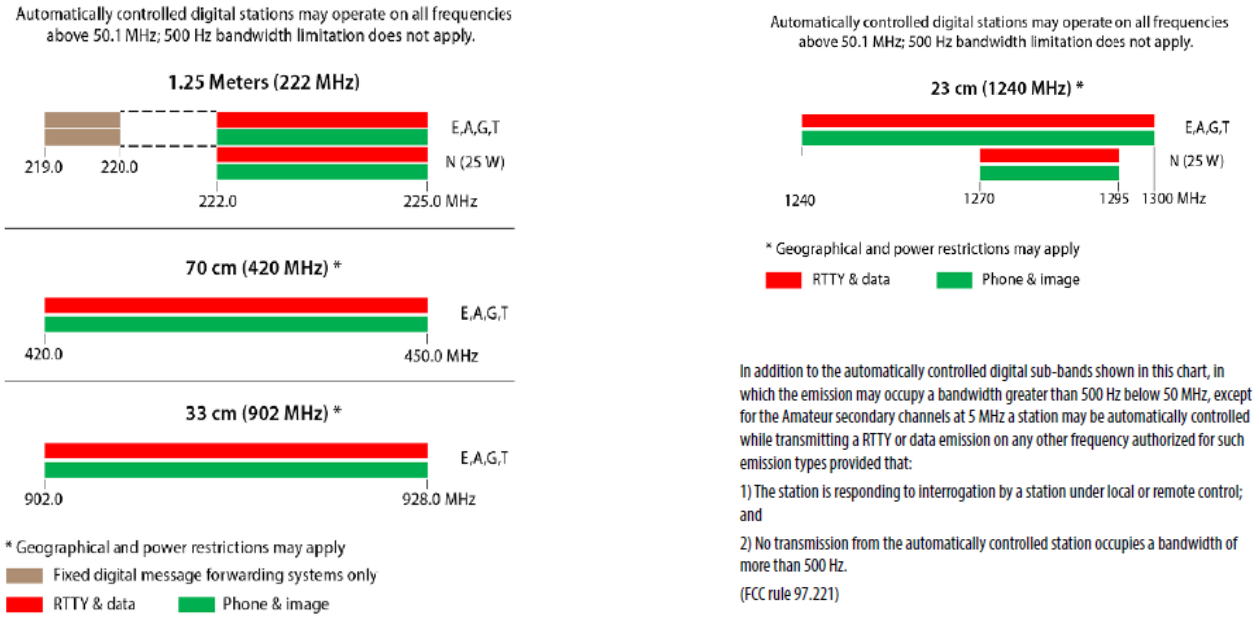
Club Name	Trustee	Location	Call Sign
Baca County Div of Emerg Amateur Radio Communications	Riley Frazee	Walsh, CO	KZ Ø DEM
Arkansas Valley Amateur Radio Club	Jayson Quilantan	La Junta, CO	W Ø KEV
Dave Horn Memorial ARC	Wayne Hudson	Lamar, CO	K 5 JZN
Lamar Area Amateur Radio Club	Rick May	Lamar, CO	N Ø LAR
Fun Machine Linked Repeater System	Jeffrey Carrier	Canon City, CO	WE Ø FUN
Rocky Mountain Ham Radio	John Maxwell	Lakewood, CO	N Ø SZ

TABLE 17: COLORADO AMATEUR RADIO NETS

Net Name	Dates	Times	Frequency	
HF FSK Net	1st, 3rd, 5th Sundays	0730	3590 kHz	
HF PSK-31	2nd, 4th Sundays	0830	3590 kHz	
HF CW	2nd, 4th Sundays	0730	3570 kHz	
ARES HF SSB	Every Sunday	0800	3.810 MHz / 3.928 MHz	
HF SSB BKUP	Every Sunday	0800	7.235 MHz	
VHF FM Net	Every Sunday	2000	145.310 – (88.5)	IRLP 9871
VHF SSB	Every Monday	1900	144.220 MHz	
Southern Colorado Traffic Net	Daily	2000	146.970 – (100.0)	
Central Colorado Traffic Net	Daily	1930	Colorado Connection Repeaters	
Columbine Net	Daily	1900	3989 kHz	
High Noon Net	Daily	1200	7240 kHz	
Colorado Radio Weather Net	Daily	0630-0730	3989 kHz / 146.940 – (103.5) in Denver	
Southwest Traffic Net	Daily	2130 CST	3.935 MHz	
Colorado RACES Net	Sundays & Tuesdays	0100 Z	3990.5 kHz	
El Paso County Races Net	Tuesdays	1930	147.345 +	
Pikes Peak ARES Net	Tuesday	1900	146.970 – (100.0)	
Midday Severe Weather Net	Daily	1230	146.970 – (100.0)	Pikes Peak FM Association
Hard Water Net	Monday	1900	146.700 – CSQ or 146.520	Arkansas Valley Amateur Radio Club
RMHAM TBO	1st Sunday	1900	Rocky Mtn Wide	TG 700
K0ECT Radio Net	Every Friday	0900 MDT	K0ECT Repeaters	IRLP 3885

4.3.1 AMATEUR RADIO SPECTRUM





In addition to the automatically controlled digital sub-bands shown in this chart, in which the emission may occupy a bandwidth greater than 500 Hz below 50 MHz, except for the Amateur secondary channels at 5 MHz a station may be automatically controlled while transmitting a RTTY or data emission on any other frequency authorized for such emission types provided that:

1) The station is responding to interrogation by a station under local or remote control; and

2) No transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz.

(FCC rule 97.221)

Amateur Radio Bands (US) - continued

All licensees except Novice are authorized all modes on the following frequencies:	
2300-2310 MHz	47.0-47.2 GHz
2390-2450 MHz	76.0-81.0 GHz
3300-3500 MHz	122.25-123.0 GHz
5650-5925 MHz	134-141 GHz
10.0-10.5 GHz	241-250 GHz
24.0-24.25 GHz	All above 275 GHz

Amateur Radio Power Limits (US)

FCC Rule 97.313

(a) An amateur station must use the minimum transmitter power necessary to carry out the desired communications.

(b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

[60 meters: 100W PEP ERP; 30 meters: 200W PEP; additional restrictions apply under certain conditions, and to Novice and Technician licensees.]

FIGURE 3: AMATEUR RADIO SPECTRUM

Detailed Frequency Allocation

US Amateur Transmitter Power Limits

At all times, transmitter power must be the minimum necessary to carry out the desired communications. Unless otherwise noted, the maximum power output is 1500 watts PEP. Novice/Technicians are limited to 200 watts PEP on HF bands. Geographical power restrictions apply to the 70 cm, 33 cm and 23 cm bands; see The FCC Rule Book for details.

160 Meters

General, Advanced, Amateur Extra licensees:
1.800-2.000 MHz: CW, Phone, Image, RTTY/Data

80 Meters

Novice and Technician classes:
3.525-3.600 MHz: CW Only
General class:
3.525-3.600 MHz: CW, RTTY/Data
3.800-4.000 MHz: CW, Phone, Image
Advanced class:
3.525-3.600 MHz: CW, RTTY/Data
3.700-4.000 MHz: CW, Phone, Image
Amateur Extra class:
3.500-3.600 MHz: CW, RTTY/Data
3.600-4.000 MHz: CW, Phone, Image

60 Meters: Five Specific Channels
The FCC has granted hams secondary access on USB only to five discrete 2.8-kHz-wide channels. Amateurs cannot cause inference to and must accept interference from the Primary Government users. The
NTIA says that hams planning to operate on 60 meters "must assure that their signal is transmitted on the channel center frequency." This means that amateurs should set their carrier frequency 1.5 kHz lower than the channel center frequency.
General, Advanced and Amateur Extra classes:

Channel Center	**Amateur Tuning Frequency**
5332 kHz	5330.5 kHz
5348 kHz	5346.5 kHz
5358.5 kHz	5357.0 kHz
5373 kHz	5371.5 kHz
5405 kHz (common US/UK)	5403.5 kHz

Effective March 5, 2012, amateurs are permitted to use digital modes that comply with emission designator
60H0J2B, which includes PSK31 as well as any RTTY signal with a bandwidth of less than 60 Hz. They may also use modes that comply with emission designator 2K80J2D, which includes any digital mode with a bandwidth of 2.8 kHz or less whose technical characteristics have been documented publicly, per Part 97.309(4) of the FCC Rules. Such modes would include PACTOR I, II or III, 300-baud packet, MFSK16,

MT63, Contestia, Olivia, DominoEX and others with a maximum effective radiated power (ERP) of 100 W. Radiated power must not exceed the equivalent of 100 W PEP transmitter output power into an antenna with a gain of 0 dBd.

40 Meters
Novice and Technician classes:
7.025-7.125 MHz : CW only
General class:
7.025-7.125 MHz : CW, RTTY/Data
7.175-7.300 MHz:: CW, Phone, Image
Advanced class:
7.025-7.125 MHz : CW, RTTY/Data
7.125-7.300 MHz:: CW, Phone, Image
Amateur Extra class:
7.000-7.125 MHz : CW, RTTY/Data
7.125-7.300 MHz:: CW, Phone, Image

Note: Phone and Image modes are permitted between 7.075 and 7.100 MHz for FCC licensed stations in ITU Regions 1 and 3 and by FCC licensed stations in ITU Region 2 West of 130 degrees West longitude or South of 20 degrees North latitude. See Sections 97.305(c) and 97.307(f)(11). Novice and Technician licensees outside ITU Region 2 may use CW only between 7.025 and 7.075 MHz and between 7.100 and 7.125 MHz. 7.200 to 7.300 MHz is not available outside ITU Region 2. See Section 97.301(e). These exemptions do not apply to stations in the continental US.

30 Meters
Maximum power, 200 watts PEP. Amateurs must avoid interference to the fixed service outside the US.
General, Advanced, Amateur Extra classes:
10.100-10.150 MHz: CW, RTTY/Data

20 Meters
General class:
14.025 -14.150 MHz CW, RTTY/Data
14.225 -14.350 MHz: CW, Phone, Image
Advanced class:
14.025 -14.150 MHz CW, RTTY/Data
14.175 -14.350 MHz: CW, Phone, Image
Amateur Extra class:
14.000 - 14.150 MHz CW, RTTY/Data
14.150 -14.350 MHz: CW, Phone, Image

17 Meters
General, Advanced, Amateur Extra classes:
18.068-18.110 MHz: CW, RTTY/Data
18.110-18.168 MHz: CW, Phone, Image
15 Meters
Novice and Technician classes:
21.025-21.200 MHz: CW Only
General class:

21.025-21.200 MHz: CW, RTTY/Data
21.275-21.450 MHz: CW, Phone, Image
Advanced class:
21.025-21.200 MHz: CW, RTTY/Data
21.225-21.450 MHz: CW, Phone, Image
Amateur Extra class:
21.000-21.200 MHz: CW, RTTY/Data
21.200-21.450 MHz: CW, Phone, Image

12 Meters
General, Advanced, Amateur Extra classes:
24.890-24.930 MHz: CW, RTTY/Data
24.930-24.990 MHz: CW, Phone, Image

10 Meters
Novice and Technician classes:
28.000-28.300 MHz: CW, RTTY/Data--Maximum power 200 watts PEP
28.300-28.500 MHz: CW, Phone--Maximum power 200 watts PEP
General, Advanced, Amateur Extra classes:
28.000-28.300 MHz: CW, RTTY/Data
28.300-29.700 MHz: CW, Phone, Image

6 Meters
All Amateurs except Novices:
50.0-50.1 MHz: CW Only
50.1-54.0 MHz: CW, Phone, Image, MCW, RTTY/Data

2 Meters
All Amateurs except Novices:
144.0-144.1 MHz: CW Only
144.1-148.0 MHz: CW, Phone, Image, MCW, RTTY/Data

1.25 Meters
The FCC has allocated 219-220 MHz to amateur use on a secondary basis. This allocation is only for fixed digital message forwarding systems operated by all licensees except Novices. Amateur operations must not cause interference to, and must accept interference from, primary services in this and adjacent bands. Amateur stations are limited to 50 W PEP output and 100 kHz bandwidth. Automated Maritime Telecommunications Systems (AMTS) stations are the primary occupants in this band. Amateur stations within 398 miles of an AMTS station must notify the station in writing at least 30 days prior to beginning operations. Amateur stations within 50 miles of an AMTS station must get permission in writing from the AMTS station before beginning operations. The FCC requires that amateur operators provide written notification including the station's geographic location to the ARRL for inclusion in a database at least 30 days before beginning operations. See Section 97.303(e) of the FCC Rules.
Novice (*Novices are limited to 25 watts PEP output)*, *Technician, General, Advanced, Amateur Extra classes:*
222.00-225.00 MHz: CW, Phone, Image, MCW, RTTY/Data

70 Centimeters

All Amateurs except Novices:
420.0-450.0 MHz: CW, Phone, Image, MCW, RTTY/Data

33 Centimeters
All Amateurs except Novices:
902.0-928.0 MHz: CW, Phone, Image, MCW, RTTY/Data

23 Centimeters
Novice class:
1270-1295 MHz: CW, phone, Image, MCW, RTTY/Data (maximum power, 5 watts PEP)
All Amateurs except Novices:
1240-1300 MHz: CW, Phone, Image, MCW, RTTY/Data

Higher Frequencies:
All modes and licensees (except Novices) are authorized on the following bands [FCC Rules, Part 97.301(a)]:
2300-2310 MHz
2390-2450 MHz
3300-3500 MHz
5650-5925 MHz
10.0-10.5 GHz
24.0-24.25 GHz
47.0-47.2 GHz
76.0-81.0 GHz
122.25 -123.00 GHz
134-141 GHz
241-250 GHz
All above 300 GHz

1.8000 – 2.0000	DX Night, Late Night
3.4000 – 4.0000	DX Night, Local Day
5.0600 – 5.4500	DX Night, Regional Day
7.000 – 7.3500	DX Night, Regional Day, DX Day
10.1000 – 10.1500	DX Night, DX Day
14.000 – 14.3500	DX Day
18.0680 – 29.700	DX Mid-Day

FIGURE 4: BAND RECOMMENDATIONS BASED ON TIME OF DAY

TABLE 18: SOUTHEAST REACT TEAM ROSTER

Name	Location	Phone	Licenses	REACT ID#
Riley Frazee	Walsh, CO	719-252-3118	General/GMRS	21357
Tom Eikenberry	Springfield, CO	719-353-2372	General/GMRS	21356
Dennis Bradburn	Springfield, CO	719-353-1047	Technician/GMRS	
Moriah Bradburn	Springfield, CO	719-353-1911	Technician/GMRS	
Lucas Walker	Springfield, CO	719-353-1266	GMRS	
Howard Votruba	Sheridan Lake, CO	719-691-5421	GMRS	
James "JC" Forgey	Walsh, CO	719-353-1072	GMRS	
Jay Schalger	Walsh, CO	719-523-3378	GMRS	
Butch George	Walsh, CO	719-529-3825	Advanced/GMRS	
Dean George	Walsh, CO	719-353-1603	General/GMRS	
Troy Smith	Wiley, CO	719-691-3085	General	
David Setliff	Lamar, CO		FRS/MURS/CB	

TABLE 19: SOUTHEAST REACT NETS

Net Name	Dates	Times	Frequency	
SOUTHEAST REACT NET	Every Thursday Night	2015	462.675/467.675 141.3	Primary Net
SOUTHEAST PREPAREDNESS NET	1ST and 3rd Thursdays	2020	CB CH 3 - 26.985 FRS CH 3 – 462.6125 MURS CH 3 – 151.940 146.420	Channel 3 Check Ins

5 CASM

The Communication Assets Survey and Mapping (CASM) tool provides the ability for representatives of public safety agencies within an urban area or State to collect, store, and visualize data about agencies, communication assets, and how agencies use those assets. CASM is a web-based application, accessible via the Office of Emergency Communications Public Safety Technical Assistance Tools website (http://publicsafetytools.info).

APPENDIX A: SHARED SYSTEMS

Detailed information on shared systems available for use within the region is listed in subsequent pages of Appendix A. The table below lists the shared systems.

Radio System Name	Make / Model	Type	Frequency Band	Owning Agency	Service Area
Colorado DTRS	**Motorola / Quantar**	P25 Digital Trunked	***700/800 MHz***	Shared Local / State	Colorado
Baca County Conventional System	**Motorola/ Quantro/ Micor/**	Analog Conventional System	***800 MHz***	Baca County / State	Baca County
Walsh Ambulance	**Hytera/ RD985**	DMR / Analog	***400 MHz***	Walsh Ambulance Service	Baca County
USDA – Forest Service	**Various**	Analog	***160 MHz***	US Forest Service	Southeast Colorado
MSAT	**Boing**	Digital	***1500/1600 MHz***	Ligado	Nationwide
Aircraft Radio System	**Various**	Analog AM	***118 MHz / 240 MHz / 370MHz***	Multiple / FAA	Region Wide
Zello	**Various**	GSM/CDMA Cellular	***700/850/900/ 1700/1800/19 00/2100/2300***	Various Cellular Corporations	Worldwide

.

DTRS

Responsible Agency

This radio system is owned or managed by a combination of local, regional and state assets.

Service Area

Statewide

System Description

Radio System Make	Motorola Astro Smart Zone
Trunked/Conventional/Both	Trunked
Radio System Model	P25
Radio System Software Version	7.X
Radio System Frequency Band	700/800MHz
P25 Compliant	Yes
ISSI Compliant	Yes
Encryption Supported	ADP, DES and AES
Wideband/Narrowband/Both	Narrowband
Simulcast	Yes

Agencies Sharing System

- Local, State and Federal

Common Channels in the Region

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **800 MHz DTR**	Description **Digital Trunked Radio System**

	Channel Configuration	**Channel Name/Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**RX Freq N or W or Talkgroup ID**	**RX Tone / NAC**	**TX Freq N or W**	**Tx Tone / NAC**	**Mode A, D. or M**	**Notes**
1	800MHz DTR	MAC9SE	All Agencies / Mutual Aid	4008				D	
2	800MHz DTR	MAC10SE	All Agencies / Mutual Aid	4009				D	
3	800MHz DTR	MAC11SE	All Agencies / Mutual Aid	4010				D	
4	800MHz DTR	MAC12SE	All Agencies / Mutual Aid	4011				D	
5	800MHz DTR	STMAC21	Statewide / Mutual Aid	4020				D	
6	800MHz DTR	MAC BUS SE	School Transportation SE					D	SE Area Education
7	800MHz DTR	BACA MAC	All SE Agencies / Mutual Aid	349				D	Baca County
8	800MHz DTR	PC MAC	All SE Agencies / Mutual Aid	294				D	Prowers County
9	800MHz DTR	KC MAC	All SE Agencies / Mutual Aid	319				D	Kiowa County
10	800MHz DTR	BC MAC	All SE Agencies Mutual Aid	273				D	Bent County
11	800MHz DTR	OC MAC	All SE Agencies / Mutual Aid	226				D	Otero County
12	800MHz DTR	CC MAC	All SE Agencies / Mutual Aid	370				D	Crowley County
13	800MHz DTR	LAC MAC	All S/SE Agencies / Mutual Aid	1207				D	Las Animas County
14	800MHz DTR	CHCMAC	Kiowa County / Mutual Aid	394				D	Cheyenne County
15	800MHz DTR	LC MAC	Crowley County / Mutual Aid	494				D	Lincoln County
16	800MHz DTR	PUB MAC	All S/SE Agencies / Mutual Aid	4271				D	Pueblo County
17	800MHz DTR	EMS MAC	EMS Agencies / Statewide	168				D	
23	800MHz DTR	ER MAC	Hospitals EMS/ Statewide	8161				D	
24	800MHz DTR	EMS SE	All SE Medical / Mutual Aid	165				D	
25	800MHz DTR	OEM SE	All SE OEM / EOC - EOC	219				D	
26	800MHz DTR	OEM NC	State EOC	1217				D	North Central OEM
27	800MHz DTR	CHD SE	All SE Public Health / Operations	137				D	
28	800MHz DTR	SE NET	All SE Dispatch / PSAP – PSAP	3999				D	

29	800MHz DTR	NAWAS	All SE Dispatch/OEM / ALERT	2797				D	Linked with Phones
30	800MHz DTR	BACA OPS 1	All SE Agencies / Operations	355				D	Baca Operations 1
31	800MHz DTR	BACA OPS 2	All SE Agencies / Operations	362				D	Baca Operations 2

Common Channels in the Region

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **800 MHz DTR**	Description **Digital Trunked Radio System**

	Channel Configuration	**Channel Name/Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**RX Freq N or W or Talkgroup ID**	**RX Tone / NAC**	**TX Freq N or W**	**Tx Tone / NAC**	**Mode A, D. or M**	**Notes**
32	800MHz DTR	BKL Law	Bent Kiowa LE / Law Enforcement	273				D	
33	800MHz DTR	CSP 2C	All SE LE / Law Enforcement	2524				D	State Law Enfor…
34	800MHz DTR	SECH	All SE EMS / Medical	143				D	Springfield Hospital
35	800MHz DTR	PMC	All SE EMS / Medical	137				D	Lamar Hospital
36	800MHz DTR	AVRMC	All SE EMS / Medical	79				D	La Junta Hospital
37	800MHz DTR	WSBRD	All SE EMS / Medical	150				D	Eads Hospital
38	800MHz DTR	SRIC CALL	All S/SE Agencies / Mutual Aid	4453				D	South Region
39	800MHz DTR	SRIC FIRE	All S/SE Agencies / Mutual Aid	4454				D	South Region
40	800MHz DTR	SRIC LAW	All S/SE Agencies / Mutual Aid	4455				D	South Region
41	800MHz DTR	SRIC EMS	All S/SE Agencies / Mutual Aid	4456				D	South Region

Other Shared System Notes

Mutual Aid channels may be used under the following circumstances:

- During emergency situations in which a vehicle is out of its home area and unable to access the local dispatch center using the Primary Dispatch Communications channel/talkgroup of that area (mutual-aid communications).
- In isolated critical situations during which prolonged use of the Primary Dispatch Communications channel/talkgroup would not be feasible due to other primary dispatch communications traffic.
- When a common emergency channel is required for base/mobile and mobile/mobile communications among agencies in a region or in an adjacent region.
- Multi-agency involvement in an emergency situation such as riots, civil unrest, hot pursuits, etc. for coordination, command and control via a single dispatch center.
- Individual agency loss of the primary dispatch channel.
- Limited portable radio use for surveillance and stake-out operations such that it does not cause interference to other agencies.
- Tactical communications in the event secondary use of a channel compromises its primary function for an extended duration.

Notes on Common Channels:

- MAC 1 MET: This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the METRO region. Includes: Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, and Jefferson Counties.
- MAC 5 NE: This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the NORTHEAST region. Includes: Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld and Yuma Counties
- MAC 9 SE: This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the SE region. Includes: Baca, Bent, Chaffee, Cheyenne, Crowley, Custer, El Paso, Fremont, Huerfano, Kiowa, Lake, Las Animas, Otero, Park, Prowers, Pueblo, and Teller Counties.
- MAC 10 SE: This talkgroup has been initially allocated to Fire agencies for mutual aid coordination and communications.

- MAC 11 SE: This talkgroup has been initially allocated to Law Enforcement agencies for mutual aid coordination and communications.
- MAC 12 SE: This talkgroup has been initially allocated to EMS agencies for mutual aid coordination and communications.
- MAC 13 SW: This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the SW region. Includes: Alamosa, Archuleta, Conejos, Costilla, Delores, Delta, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, and San Miguel Counties.
- MAC 17 NW: This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the NW region. Includes: Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt, and Summit counties.
- MAC 21: This statewide talkgroup will be used for intra-state mutual aid coordination and communications. This talkgroup is available for use when no other Mutual Aid Talkgroup is available.
- MAC BUS SE: This Statewide talkgroup will be used for mutual aid coordination and communications with and among the southeast region. This talkgroup is to be used for out-of-region travel by member schools; school districts and other educational facilities when in the course of transporting students to and from school related events and activities outside of their normal areas of operations. *ONLY busses from the SE Region (Baca, Bent, Chaffee, Crowley, Custer, El Paso, Fremont, Huerfano, Kiowa, Lake, Las Animas, Otero, Park, Prowers, Pueblo, Teller Counties) Will be authorized with the MAC BUS SE channel.
  - **EMS MAC: Statewide EMS Mutual Aid RETAC EMS Statewide.**
  - **ER MAC: Statewide ER Mutual Aid RETAC Hospital Statewide**
  - **CHD SE: County Health Department Southeast**

- SIMPLEX: Five statewide simplex channels have been assigned for on scene direct radio to radio communications as needed. Channels must use APCO 25 Common Air Interface digital signaling, use a channel spacing of 12.5 KHz, a transmit deviation of 2.5 KHz, be programmed for Network ID $293 and operated at Output power levels of 3 Watts or less.
  - **SMPX1 (Frequency 851.1000)**
  - **SMPX2 (Frequency 851.7500)**
  - **SMPX3 (Frequency 852.3000)**
  - **SMPX4 (Frequency 852.5500)**
  - **SMPX5 (Frequency 853.6875)**

- Calling Channel -8CALL90 the calling channel shall be used to contact other users in the Region for the purpose of requesting incident related information and assistance. This channel shall not be used as an ongoing working channel. Once contact is made, an agreement upon which tactical channel to use is recommended for continued communications.
  - **8TAC90 Subscriber Frequency RX 851.0125 TX 806.0125**
- TACTICAL CHANNELS 8TAC91 - 8TAC94, 8TAC91-8TAC94 AND 8TAC91D – 8TAC94D channels are reserved for use by those agencies in need of conducting inter-agency communications. Incidents requiring multiagency participation will be coordinated over these channels by the agency controlling the incident. Individual tactical channels may be designated for use by various services on an incident basis by the controlling agency. In the event of multiple incidents requiring the use of these channels, channels shall be designated by mutual agreement between controlling agencies.
  - **8TAC91 Subscriber Frequency RX 851.5125 TX 806.5125**
  - **8TAC92 Subscriber Frequency RX 852.0125 TX 807.0125**
  - **8TAC93 Subscriber Frequency RX 852.5125 TX 807.5125**
  - **8TAC94 Subscriber Frequency RX 853.0125 TX 808.0125**

- STAC There are no fixed repeater sites for this channel. Portable repeaters are also allowed to use STAC for temporary repeater operations. In no case shall control of these channels remain with any single agency beyond the termination of a declared emergency event. This channel may be used to communicate with medical aircraft in the area. This channel will have a 12.5 KHz channel spacing and a transmit deviation of 2.5 KHz with a transmit and receive continuous tone coded squelch of 156.7 Hz.
  - **STAC Subscriber Frequency RX 853.7875 TX 808.7875**

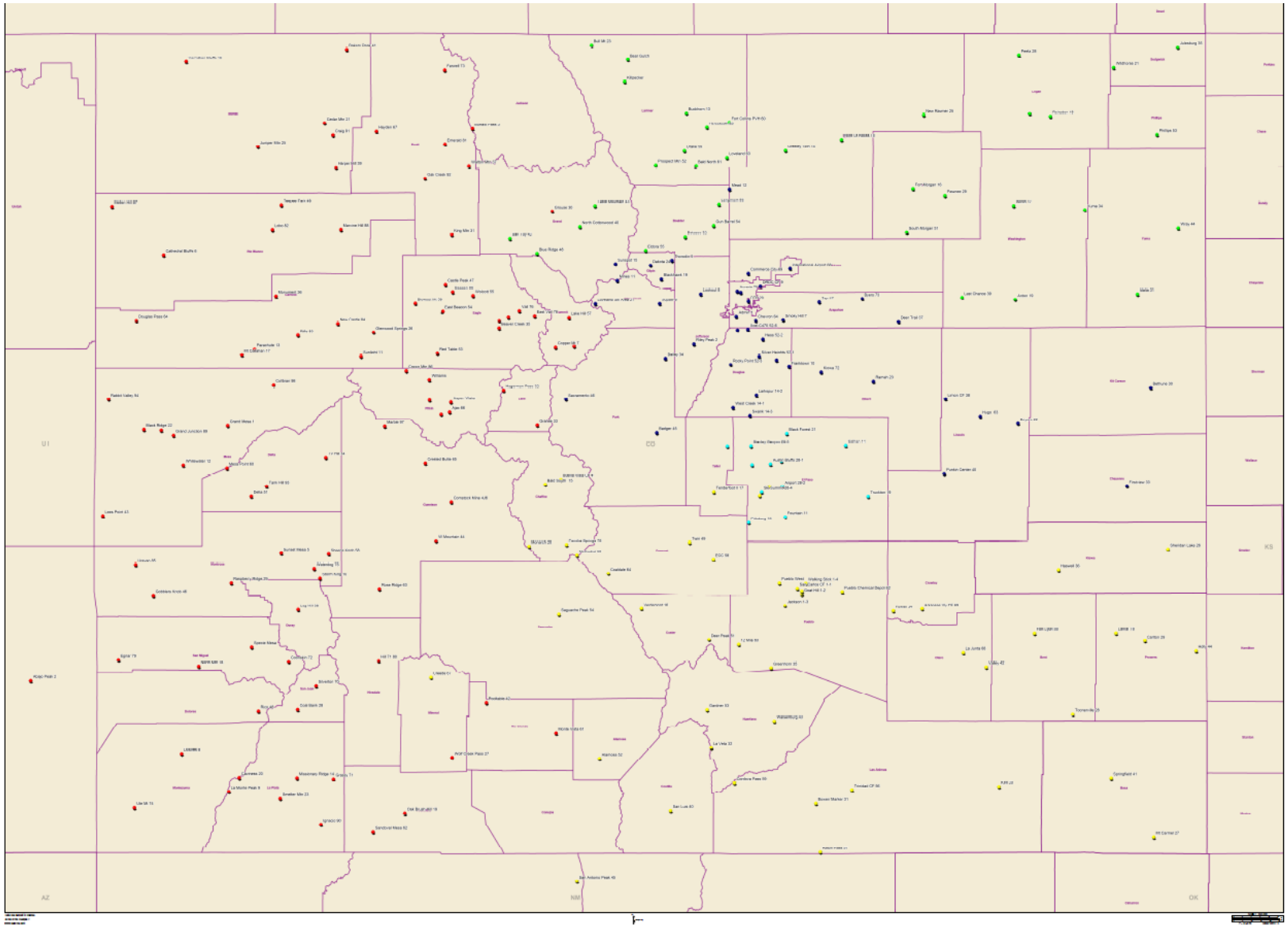


FIGURE 5: COLORADO DTR SITES

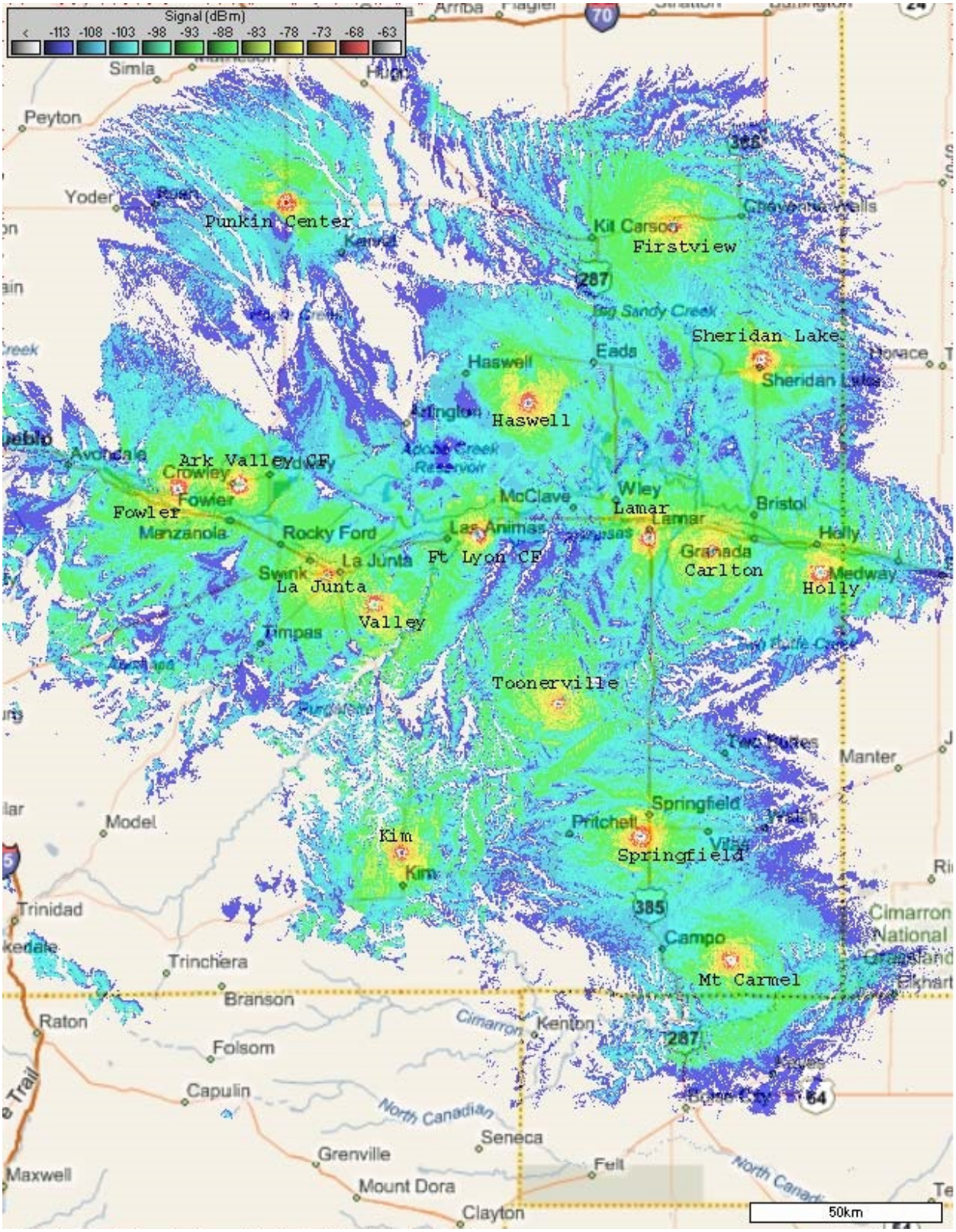


FIGURE 6: SOUTHEAST REGION 800MHZ DTRS COVERAGE MAP

Responsible Agency

This radio system is owned or managed by Baca County.

Name: Jennifer Leathers
Title: Director of Emergency Management
Address: 741 Main Street, Springfield, CO 81073
Phone: 719-529-0471
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov

Service Area

Baca County / Eastern Las Animas County / Northern Cimarron County

Number of Radios

No. of Mobile Radios on this System	300
No. of Portable Radios on this System	300

System Description

Radio System Make	Motorola
Trunked/Conventional/Both	Conventional
Radio System Model	Quantro, Micor, Quantar, MSF-5000
Radio System Software Version	N/A
Radio System Frequency Band	800 MHz
P25 Compliant	No
ISSI Compliant	No
No. of Channels	2
Encryption Supported	No
Year Installed	Various
Repeated/Simplex/Both	Both
Analog/Digital/Both	Analog
Wideband/Narrowband/Both	Wideband
Voted	No
Simulcast	No

Agencies Sharing System

- Campo Fire Department
- Campo Police Department
- Pritchett Fire Department
- Baca County Sheriff's Office
- Baca County Emergency Management
- US Forest Service
- Springfield Police Department
- Springfield Fire Department
- Springfield Ambulance Service
- Walsh Police Department
- Walsh Fire Department
- Walsh Ambulance Service
- Walsh Fire Department
- Two Buttes Fire Protection District
- Prowers Rural Fire Department
- Holly Fire Department

Other Shared System Notes

Tower sites:

- Walsh
- Mt. Carmel
- Tator Butte
- Springfield
- Skyland

- **Intra-System Shared Channels**

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **800 MHz**	Description **Baca County 800 Conventional**

	Channel Configuration	**Channel Name/Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**RX Freq N or W**	**RX Tone / NAC**	**TX Freq N or W**	**Tx Tone / NAC**	**Mode A, D. or M**	**Notes**
1	Repeater Pair	WALSH REPEATER	All SE Agencies / Operations	855.9625 W	D343N	810.9625 W	D343N	A	Walsh Water Tower
2	Simplex Base / Mobile	WASLH RP TA	All SE Agencies / Operations	855.9625 W	D343N	855.9625 W	D343N	A	Simplex
3	Repeater Pair	TATOR BUTTE	All SE Agencies / Operations	859.2125 W	D343N	814.2125 W	D343N	A	SW of Pritchett
4	Repeater Pair	MT. CARMEL	All SE Agencies / Operations	860.2125 W	136.5	815.2125 W	136.5	A	SE of Campo
5	Repeater Pair	8TAC91	Nationwide / Tactical	851.5125 W	156.7	806.5125 W	156.7	A	SW of Springfield
6	Simplex Base / Mobile	8TAC91D	Nationwide / Tactical	851.5125 W	156.7	851.0125 W	156.7	A	Simplex
7	Repeater Pair	8TAC93	Nationwide / Tactical	852.5125 W	156.7	807.5125 W	156.7	A	E of Walsh
8	Simplex Base / Mobile	8TAC93D	Nationwide / Tactical	852.5125 W	156.7	852.5125 W	156.7	A	Simplex
9	Simplex Base / Mobile	TALK AROUND	All SE Agencies / Simplex	859.2125 W	D343N	859.2125 W	D343N	A	Countywide Simplex
10	Mobile Extender	SE MOBEX 1	All SE Agencies / Extender	860.2125 W	88.5	860.2125 W	88.5	A	Mobile Extender
11	Portable Repeater	BC RP 1	Southeast Agencies	860.2125 W	885	815.2125 W	88.5	A	Portable Repeater
12	Portable Repeater	BC RP 2	Southeast Agencies	860.2125 W	127.3	815.2125 W	127.3	A	Portable Repeater
13	Portable Repeater	BC RP 3	Southeast Agencies	860.2125 W	156.7	815.2125 W	156.7	A	Portable Repeater
14	Portable Repeater	STAC	Statewide	853.7875 W	156.7	808.7875 W	156.7	A	Portable Repeater
15	Portable Repeater	8CALL90	Nationwide / Calling	851.0125 W	156.7	806.0125 W	156.7	A	Portable Repeater
16	Portable Repeater	8TAC91	Nationwide / Tactical	851.5125 W	156.7	806.5125 W	156.7	A	Portable Repeater
17	Portable Repeater	8TAC92	Nationwide / Tactical	852.0125 W	156.7	807.0125 W	156.7	A	Portable Repeater
18	Portable Repeater	8TAC93	Nationwide / Tactical	852.5125 W	156.7	807.5125 W	156.7	A	Portable Repeater
19	Portable Repeater	8TAC94	Nationwide / Tactical	853.0125	156.7	808.0125 W	156.7	A	Portable Repeater

Notes on Common Channels:

- WALSH REPEATER: Conventional standalone repeater that is located in Walsh on the Water tower. This repeater serves as the primary dispatch and operational channel for Walsh Fire and Walsh EMS. This repeater is on Generator backup and is linked to WEMS VHF and WEMS DISPATCH.
- TATOR BUTTE REPEATER: This is Conventional standalone repeater that is located southwest of Pritchett on Tator Butte. It is just inside Las Animas County. This repeater serves to provide portable and mobile coverage into the Carrizo Canyon Area.
- MT. CARMEL REPEATER: This is a Conventional standalone repeater that is located Southeast of Campo near the intersection of Baca County roads G and 39. This repeater is utilized to provide conventional coverage in the Southeast part of Baca County. This system shares the tower and antenna with the 800 DTRS radio system and is connected via a gateway to UTAC43D and VTAC11 and has the ability to link with DTRS on BACAOPS2 If needed.
- 8TAC91: The Conventional standalone repeater is located SW of Springfield and is co-located with the 800 DTRS system. This repeater is used for tactical operations nearly countywide. This system also serves as the interoperability channel for agencies from outside the area assisting Baca County and other First Response agencies. This repeater is on Generator Backup.
- 8TAC93: This Conventional standalone repeater is located East of Walsh on top of the Skyland Grain Elevator near Baca County Road 49 and US Hwy 160. This system serves as interoperability between Stanton County Kansas Fire and EMS. The system is also linked with UTAC42D and VTAC13 and has the ability to link with DTRS on BACAOPS1 if needed.
- TALKAROUND: This is the Baca County simplex or talk around channel. It is used countywide and is also the output or talk around of Tator Butte.
- SEMOBEX 1: This is the Southeast All Hazards Region Mobile Extender channel that is licensed to Baca County. This channel is the output of the Mt. Carmel Repeater but with a different tone to prevent interference. This channel can be used an additional simplex channel if need but is primarily for utilizing and extending 800DTR talkgroups into buildings or areas without coverage utilizing the FutureCom Mobile Extenders.
- PORTABLE REPEATER: Walsh Ambulance has purchased a suitcase Repeater that is capable of utilizing multiple channels. Only one channel can be utilized at a single time. Those channels above that are highlighted in grey are programmed into the portable repeater and available for deployment.

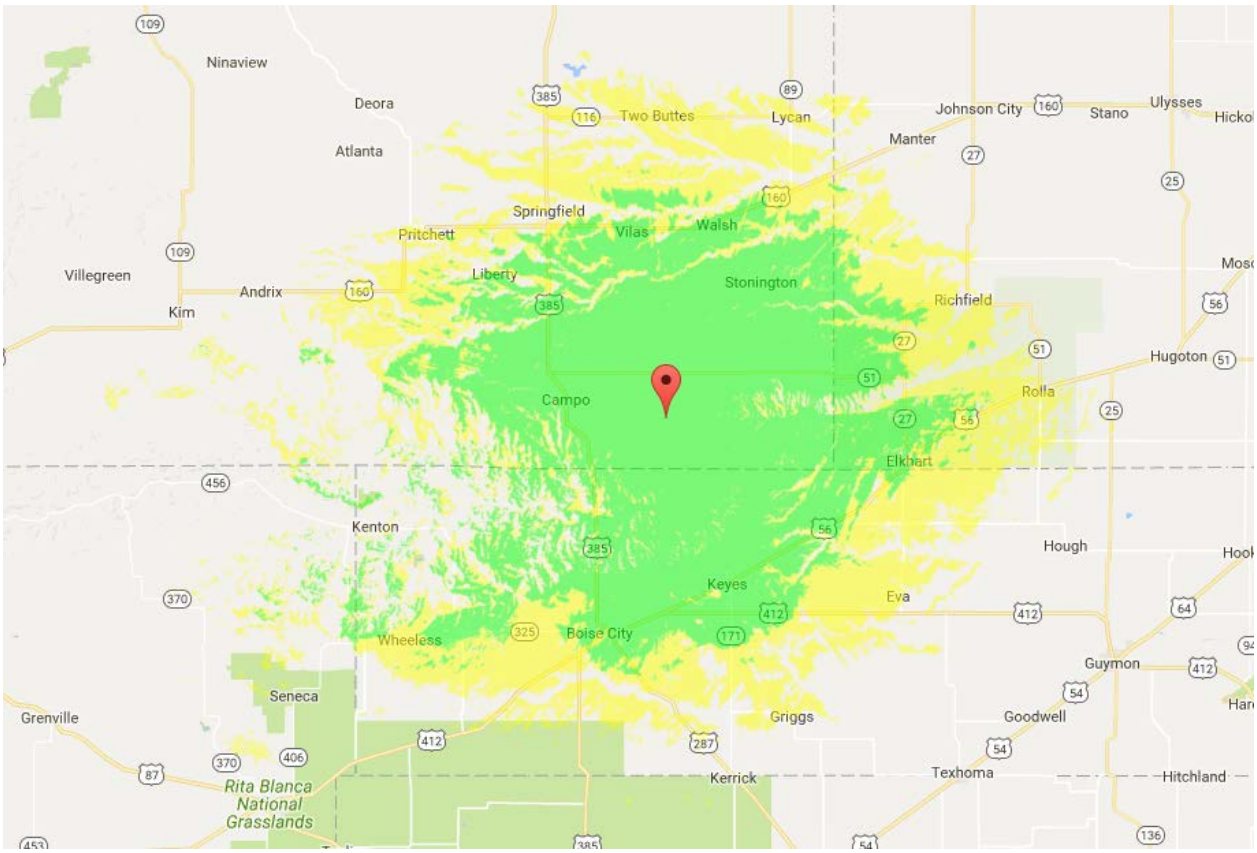


FIGURE 7: BACA COUNTY 800 CONVENTIONAL MAP – MT CARMEL SITE

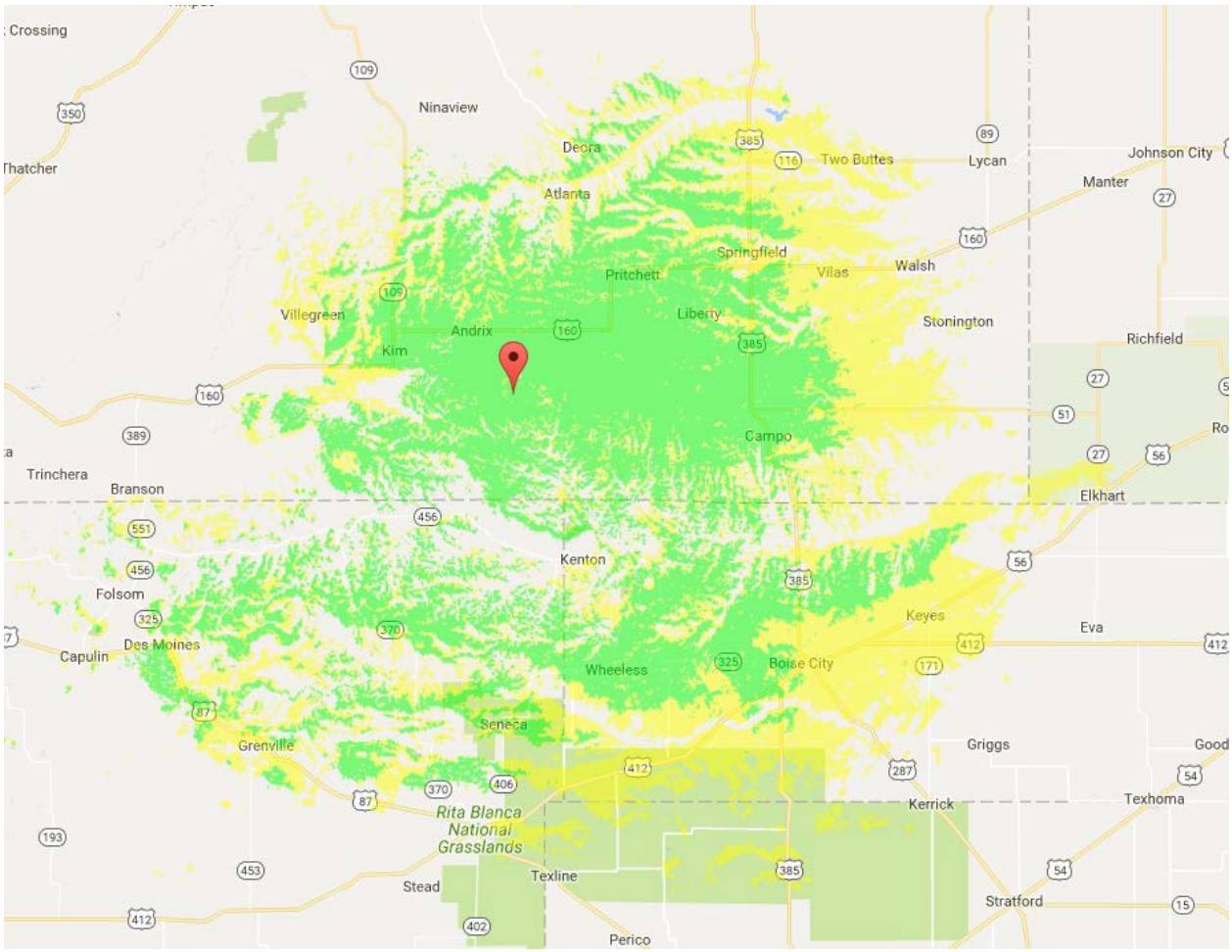


FIGURE 8: BACA COUNTY 800 CONVENTIONAL MAP – TATOR BUTTE SITE

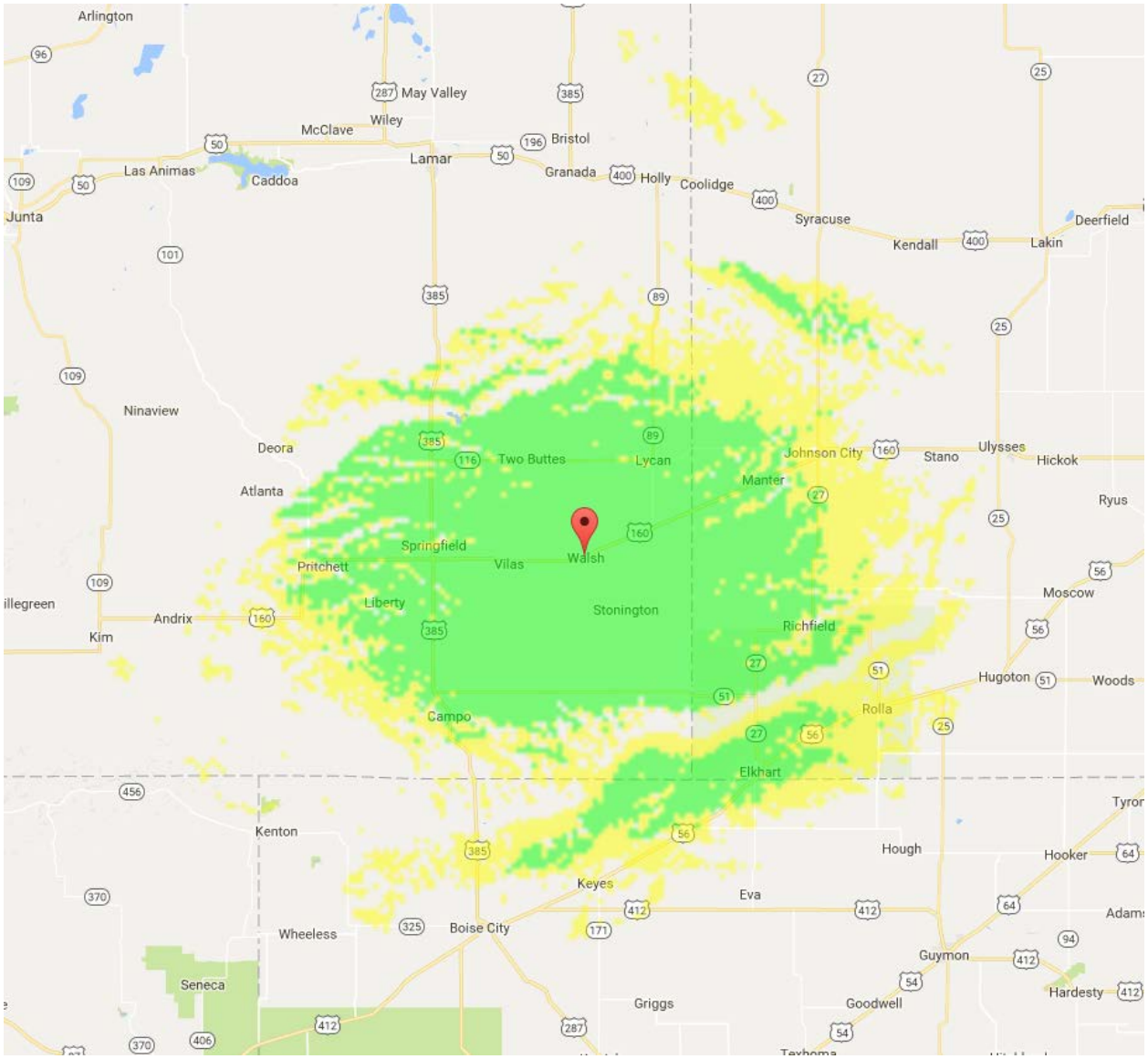


FIGURE 9: BACA COUNTY 800 CONVENTIONAL MAP – WALSH REPEATER SITE

WALSH AMBULANCE SERVICE RADIO NETWORK

Responsible Agency

This radio system is owned or managed by the Walsh Ambulance Service.

Name: Riley Frazee
Title: Chief
Address: P.O. Box 206, Walsh, CO 81090
Phone: 719-252-3118
24/7 Phone: 719-523-6677
Email riley.frazee@walshems.com

Service Area

Baca County Area

Number of Radios

No. of Mobile Radios on this System	50
No. of Portable Radios on this System	50

System Description

Radio System Make	Hytera/Vertex
Trunked/Conventional/Both	Digital Mobile Radio (DMR)
Radio System Model	Hytera RD985 / VXR-7000U
Radio System Software Version	N/A
Radio System Frequency Band	UHF 400MHz
P25 Compliant	No
ISSI Compliant	No
No. of Channels	26
Encryption Supported	Yes
Year Installed	2014 / 2017
Repeated/Simplex/Both	Both
Analog/Digital/Both	Both
Wideband/Narrowband/Both	Narrowband
Voted	No
Simulcast	No

Agencies Sharing System

- Walsh Ambulance Service
- Walsh Fire Department
- Walsh Police Department
- Town of Walsh
- Walsh Healthcare Center
- Walsh Medical Clinic
- Keyes Ambulance Service
- Morton County Ambulance Service
- Stanton County Hospital

Other Shared System Notes

Tower sites:

- Walsh
- Two Buttes
- Mt. Carmel
- Tator Butte
- Manter

- **Intra-System Shared Channels**

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **400 MHz**	Description **Walsh Ambulance Service 400MHz**

	Channel Configuration	**Channel Name/Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**RX Freq N or W**	**RX Tone / NAC**	**TX Freq N or W**	**Tx Tone / NAC**	**Mode A, D. or M**	**Notes**
	400MHz Analog	WALSH EMS	Walsh EMS / Operations	460.1875 N	118.8	465.1875 N	118.8	A	Linked to VHF/800
	400MHz Analog	WALSH DIR	Walsh EMS / Talk Around	460.1875 N	118.8	460.1875 N	118.8	A	
	400MHz Analog	2BUTTES EMS	Two Buttes EMS Ops	453.3375	D506N	458.3375	D506N	A	Linked to 800
	400MHz Analog	2BUTTES DIR	Two Buttes Talk Around	453.3375	D506N	453.3375	D506N	A	
	400MHz Analog	MT CARMEL EMS	Mt Carmel EMS Ops	453.6875	D506N	458.6875	D506N	A	Linked to 800
	400MHz Analog	CARMEL DIR	Mt Carmel Talk Around	453.6875	D506N	453.6875	D506N	A	
	400MHz Analog	MANTER EMS	Manter KS EMS Ops	453.5625	D506N	458.5625	D506N	A	Linked to 800
	400MHz Analog	MANTER DIR	Manter Talk Around	453.5625	D506N	453.5625	D506N	A	
	400MHz Analog	TATOR EMS	Tator Butte EMS Ops	453.4125	D506N	458.4125	D506N	A	Linked to 800
	400MHz Analog	TATOR DIR	Tator Butte Talk Around	453.4125	D506N	453.4125	D506N	A	
	400MHz DMR	WEMS DMR DIS	Walsh EMS / Operations	460.1875 N	CC 1	465.1876 N	SLOT 1	D	Group 719810
	400MHz DMR	WEMS DMR TAC	Walsh EMS / Tactical	460.1875 N	CC 1	465.1875 N	SLOT 2	D	Group 719812
	150MHZ Analog	WALSH TAC 1	Walsh EMS/Tactical	154.0100 N	D506N	159.1650 N	D506N	A	
	400MHz Analog	UHF WIDE AREA	Walsh EMS / Nationwide	451.8000 N	118.8	451.8000 N	118.8	A	Nationwide
	400MHz Analog	MED COMMAND	Walsh EMS / Command	451.8125 N	118.8	451.8125 N	118.8	A	
	400MHz Analog	TRIAGE	Walsh EMS / Triage	456.8125 N	118.8	456.8125 N	118.8	A	
	400MHz Analog	TRANSPORT	Walsh EMS / Transport	456.8000 N	118.8	456.8000 N	118.8	A	
	400MHz Analog	TREATMENT	Walsh EMS / Treatment	464.5000 N	118.8	464.5000 N	118.8	A	
	400MHz Analog	STAGING	Walsh EMS / Staging	469.5000 N	118.8	469.5000 N	118.8	A	
	400MHz Analog	MED TAC 1	Walsh EMS / Tactical	464.5500 N	118.8	464.5500 N	118.8	A	
	400MHz Analog	MED TAC 2	Walsh EMS / Tactical	469.5500 N	118.8	469.5500 N	118.8	A	
	400MHz Analog	UTAC42	Baca County / Nationwide	453.7125 N	156.7	458.7125 N	118.8	A	Linked to 8TAC93
	150MHz Analog	WEMS VHF	Walsh EMS / Operations	153.9650 N	118.8	153.9650 N	118.8	A	
	150MHz Analog	WVHF WIDE	Walsh EMS/ Nationwide	151.6250 N	118.8	151.6250 N	118.8	A	Nationwide

	150MHz Analog	WEMS SAR 1	Search and Rescue / EMS	151.5125 N	156.7	151.5125N	156.7	A	
	150MHz Analog	WEMS SAR 2	Search and Rescue / EMS	151.7000 N	156.7	151.7000N	156.7	A	
	150MHz Analog	WEMS SAR 3	Search and Rescue / EMS	158.4000 N	156.7	158.4000 N	156.7	A	
	150MHz Analog	WEMS SAR 4	Search and Rescue / EMS	158.4075 N	156.7	158.4075 N	156.7	A	
	150MHz Analog	VHF TAC	Walsh EMS / Operations	151.5050 N	D343N	151.5050 N	D343N	A	
	400MHz Analog	WHC 1	Walsh Healthcare Center 1	451.1875	D032N	451.1875	D032N	A	Primary Nurse Call
	400MHz Analog	WHC 2	Walsh Healthcare Center 2	456.1875	D125N	456.1875	D125N	A	Secondary
	400MHz Analog	WHC 3	Walsh Healthcare Center 3	451.5875	D245N	451.5875	D245N	A	Third
	400MHz Analog	WHC 4	Walsh Healthcare Center 4	456.5875	D331N	456.5875	D331N	A	Maintenance
	150MHz Analog	EM DISPTACH	Baca County Dispatch	153.8450 N	156.7	153.8450 N	156.7	A	Baca County
	150MHz Analog	EM TAC 1	Baca County Tac 1	156.1800 N	136.5	156.1800 N	136.5	A	Baca County
	150MHz Analog	EM TAC 2	Baca County Tac 2	155.8200 N	127.3	155.8200 N	127.3	A	Baca County
	150MHz Analog	AREA LAW	Baca County Area Law	155.1300 N	CSQ	155.1300 N	107.2	A	Baca County
	150MHz Analog	WALSH CITY	Walsh Utilities	154.0850 N	CSQ	154.0850 N	CSQ	A	Town of Walsh

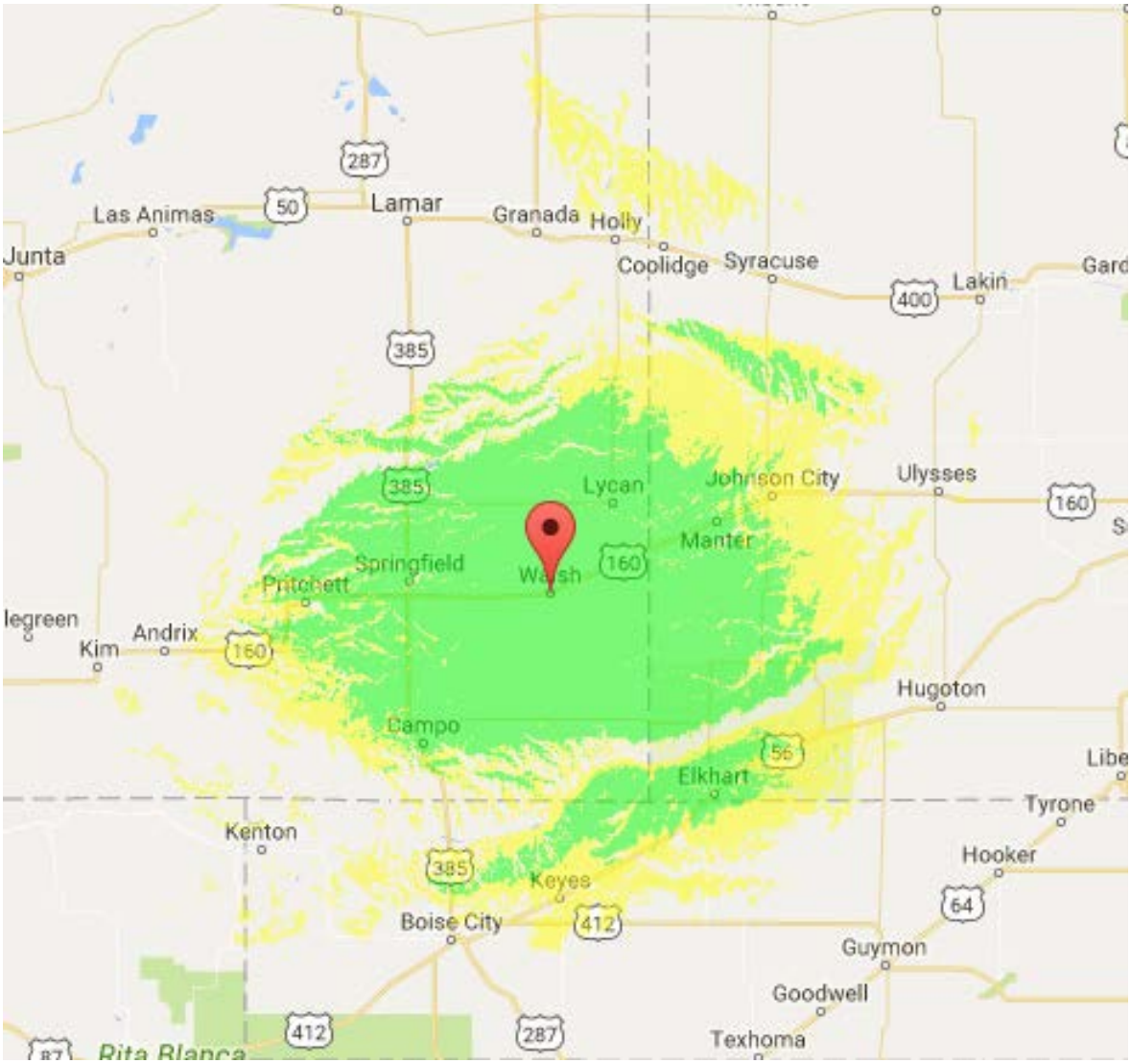


FIGURE 10: WALSH EMS COVERAGE MAP - WALSH SITE 400MHZ & 150MHZ WALSH TAC

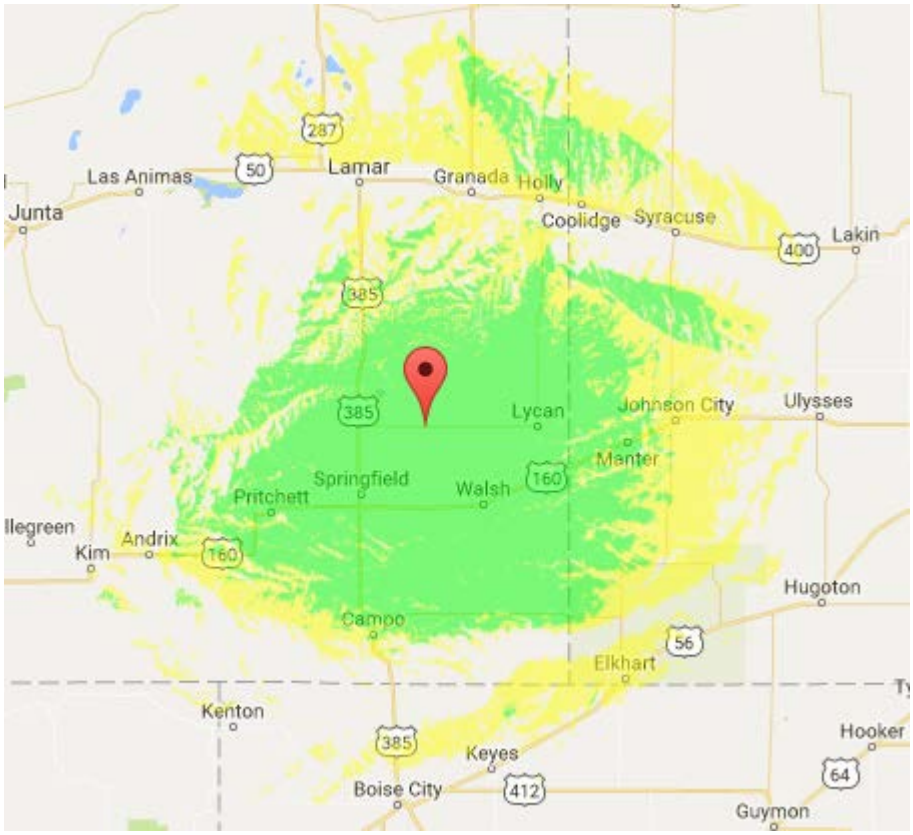


FIGURE 11: TWO BUTTES EMS COVERAGE MAP – TWO BUTTES 400MHZ

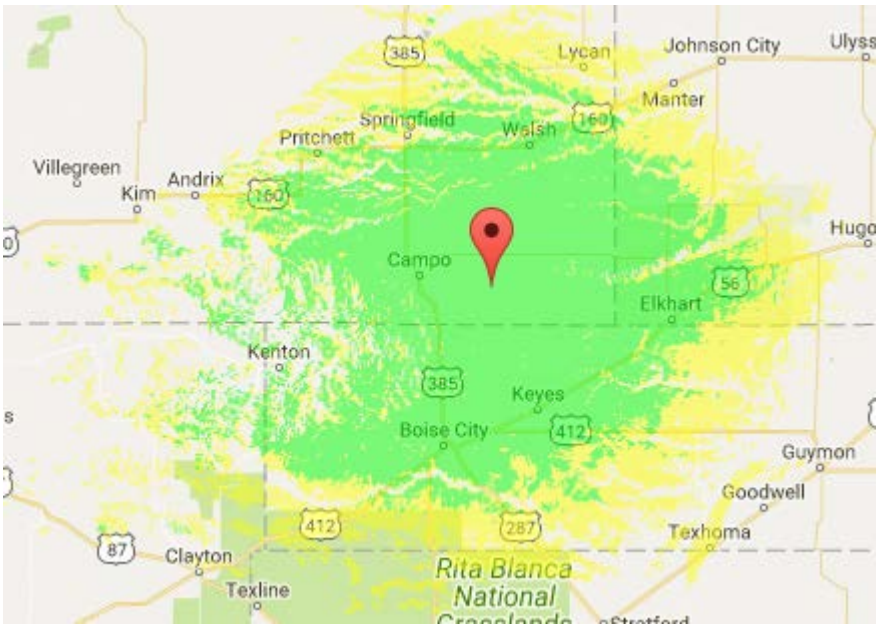


FIGURE 12: MT. CARMEL EMS COVERAGE MAP – MT. CARMEL 400MHZ



FIGURE 13: MANTER EMS COVERAGE MAP – MANTER 400MHZ

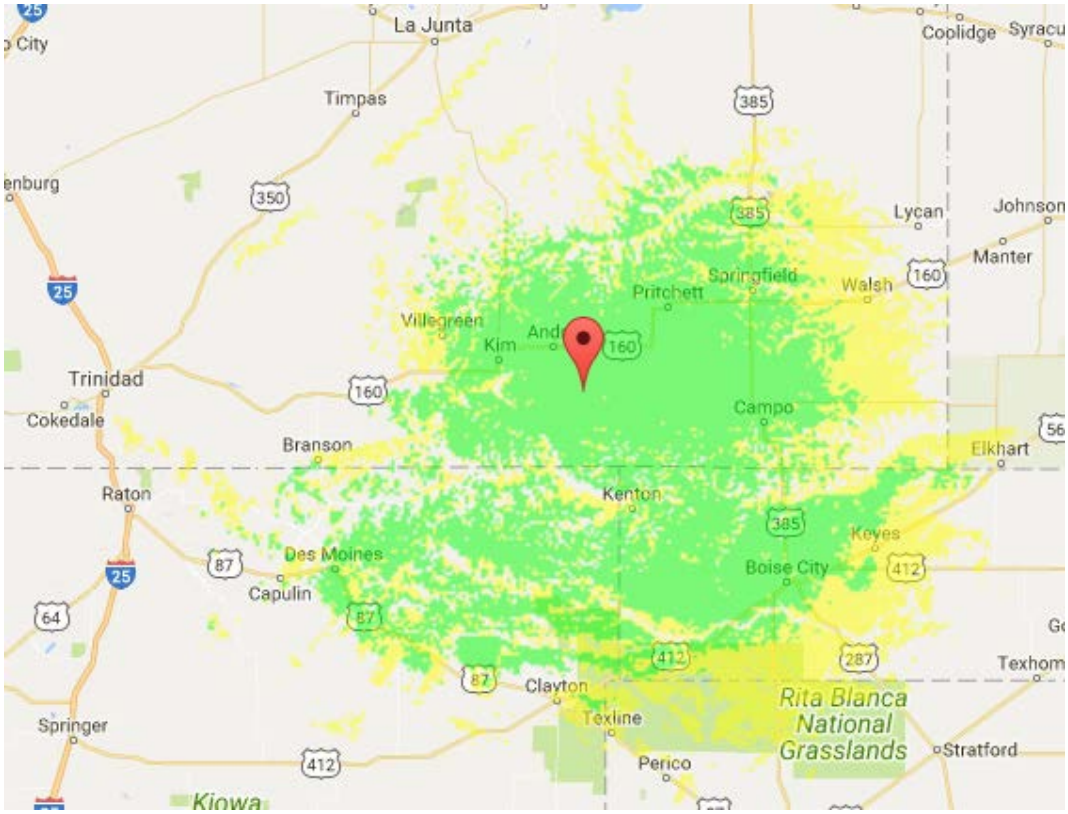


FIGURE 14: TATOR BUTTE EMS COVERAGE MAP – TATOR 400MHZ

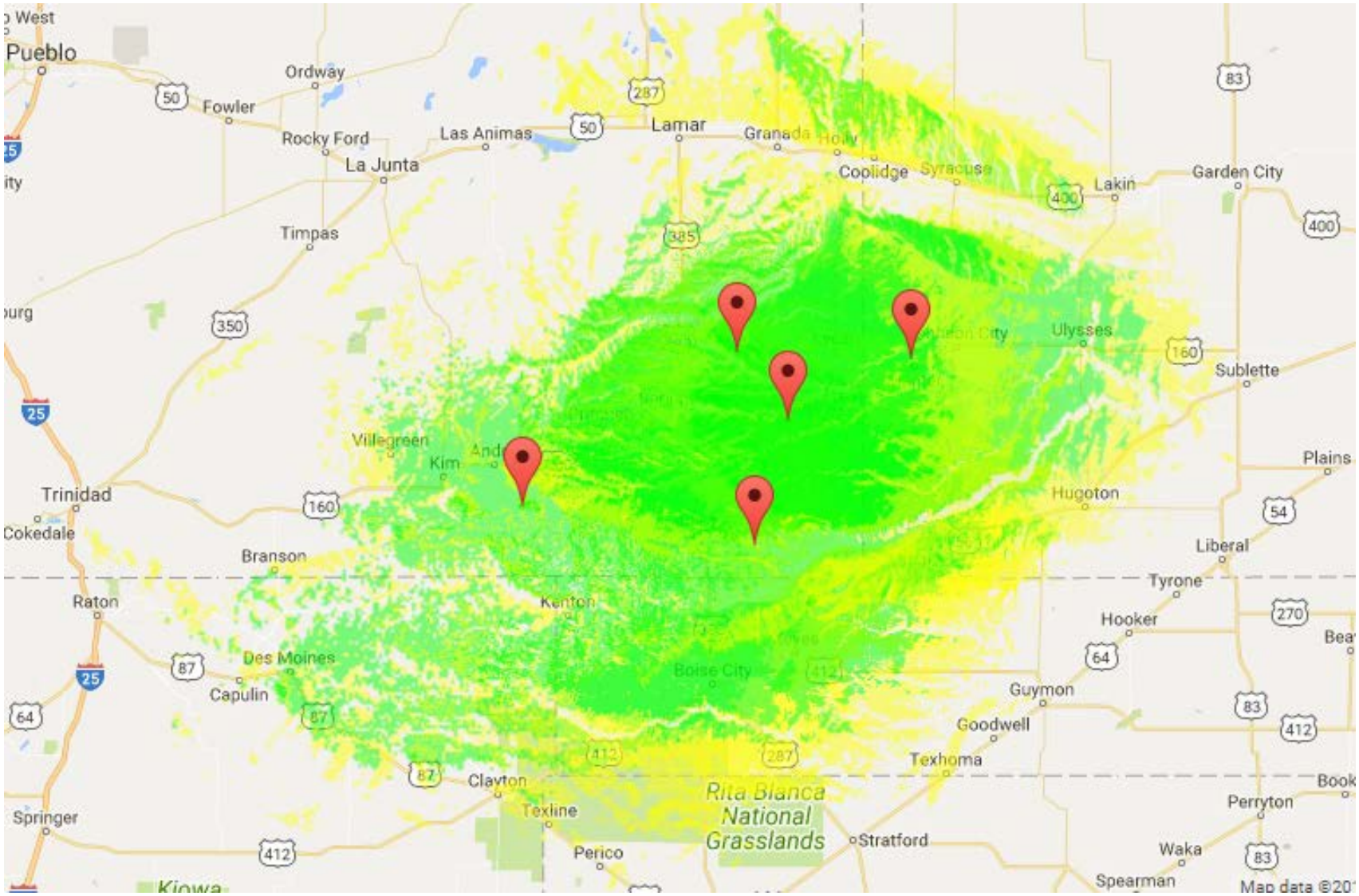


FIGURE 15: WALSH EMS UHF 400MHZ COMBINED RADIO SITE MAP

Responsible Agency

This radio system is owned or managed by the various Federal Land Management Agencies.

Name:
Title:
Address:
Phone:
24/7 Phone:
Email

Service Area

Southeast Colorado

Number of Radios

No. of Mobile Radios on this System	500
No. of Portable Radios on this System	500

System Description

Radio System Make	Various
Trunked/Conventional/Both	Conventional
Radio System Model	Various
Radio System Software Version	N/A
Radio System Frequency Band	NTIA 160 MHz
P25 Compliant	No
ISSI Compliant	No
No. of Channels	Multiple
Encryption Supported	No
Year Installed	Various
Repeated/Simplex/Both	Both
Analog/Digital/Both	A
Wideband/Narrowband/Both	Narrowband
Voted	No
Simulcast	No

Agencies Sharing System

- Bureau of Land Management
- National Park Service
- Other Federal Land Agencies

Other Shared System Notes

Tower sites:

- Tator Butte
- Springfield
- Campo
- Elkhart, KS
- Picketwire
- La Junta
- Timpas

- **Intra-System Shared Channels**

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **160 MHz**	Description **Federal Land Management Agencies**

	Channel Configuration	**Channel Name/Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**RX Freq N or W**	**RX Tone / NAC**	**TX Freq N or W**	**Tx Tone / NAC**	**Mode A, D. or M**	**Notes**
1	NTIA	GRASS DIR	Federal Land Mgt Agencies	170.5000 N	CSQ	170.5000 N	110.9	A	DIRECT
2	NTIA	NGL TATOR BUTTE	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	156.7	A	POTATO BUTTE
3	NTIA	NGL PICKETWIRE	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	123.0	A	PICKETWIRE
4	NTIA	NGL TIMPAS	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	131.8	A	LA JUNTA
5	NTIA	NGL SPRINGFIELD	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	136.5	A	SPRINGFIELD
6	NTIA	NGL ELKHART KS	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	167.9	A	ELKHART
7	NTIA	NGL CAMPO	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	146.2	A	CAMPO
8	NITA	NGL PORT	Federal Land Mgt Agencies	170.5000 N	CSQ	164.8000 N	192.8	A	PORTABLE
9	NTIA	GOV WORK	Federal Land Mgt Agencies	168.6125 N	CSQ	168.6125 N	123.0	A	DIRECT
10	NTIA	PSF WORK	Federal Land Mgt Agencies	163.7125 N	CSQ	163.7125 N	131.8	A	DIRECT
11	NIFC	A/G35 SE PRIMARY	Colorado SE Primary Air to Ground Firefighting	167.2250 N	CSQ	167.2250 N	CSQ	A	Changes Yearly -2016
12	NIFC	A/G28 SE SECONDRY	Colorado SE Secondary Air to Ground Fire Fighting	170.0000 N	CSQ	170.0000 N	CSQ	A	Changes Yearly -2016
13	NIFC	A/G02 KS PRIMARY	Kansas Primary Air to Ground Fire Fighting	166.6375 N	CSQ	166.6375 N	CSQ	A	Changes Yearly -2016
14	NIFC	A/G06 KS SECONDRY	Kansas Secondary Air to Ground Fire Fighting	166.8000 N	CSQ	166.8000 N	CSQ	A	Changes Yearly -2016
15	NIFC	A/G35 KS THIRD	Kansas Third Air to Ground Fire Fighting	167.2250 N	CSQ	167.2250 N	CSQ	A	Changes Yearly -2016
16	NIFC	A/A1 CO PRIMARY	CO07 Air to Air Primary	121.075 A	CSQ	121.075 A	CSQ	A	Changes Yearly -2016
17	NIFC	A/A2 CO SECONRY	CO07 Air to Air Secondary	119.575 A	CSQ	119.575 A	CSQ	A	Changes Yearly -2016
18	NIFC	A/A3 CO THIRD	CO07 Air to Air Third	126.350 A	CSQ	126.350 A	CSQ	A	Changes Yearly -2016
19	NIFC	A/A1 KS PRIMARY	KS01 Air to Air Primary	127.575 A	CSQ	127.575 A	CSQ	A	Changes Yearly -2016
20	NIFC	NATL FLF	Flight Following	168.6500 N	CSQ	168.6500 N	110.9	A	

21	NIFC	GUARD 1	Flight Following	168.6250 N	CSQ	168.6250 N	110.9	A	
22	NIFC	SAN IS DIR	Federal Land Mgt Agencies	169.9000 N	CSQ	169.9000 N	110.9	A	DIRECT
23	NTIA	SAN 12-MILE	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	136.5	A	12 MILE RPTR
24	NTIA	SAN BURN TIM	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	141.3	A	BURNT TIMBER
25	NTIA	SAN TWIN	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	131.8	A	FS TWIN RPT
26	NTIA	SAN BADITO	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	167.9	A	BADITO CONE
27	NTIA	SAN ADOBE	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	156.7	A	ADOBE
28	NTIA	SAN DEER PEAK	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	123.0	A	DEER PEAK
29	NTIA	SAN CORDOVA	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	146.2	A	CORDOVA PASS
30	NTIA	SAN PORT	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	192.8	A	PORTABLE
31	NTIA	SAN QUAIL	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	110.9	A	QUAIL
32	NTIA	SAN METH	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	103.5	A	METHODIST
33	NTIA	SAN COAL CMP	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	114.8	A	COAL CAMP
34	NTIA	SAN BRIS CON	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	107.2	A	BRISTOL CONE
35	NTIA	SAN JACK HALL	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	141.3	A	JACK HALL
36	NTIA	SAN BASM	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	127.3	A	BASAM
37	NTIA	SAN S PEAK	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	151.4	A	SOUTH PEAK
38	NTIA	SAN ZION	Federal Land Mgt Agencies	169.9000 N	CSQ	164.9125 N	162.2	A	ZION MTN.
39	NTIA	PIKE DIRECT	Federal Land Mgt Agencies	171.1375 N	CSQ	171.1375 N	110.9	A	DIRECT
40	NTIA	PIKE NTWIN	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	123.0	A	NORTH TWIN
41	NTIA	PIKE INDIAN	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	131.8	A	INDIAN CREEK
42	NTIA	PIKE MT EVANS	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	136.5	A	EVANS MOUNTN
43	NTIA	PIKE GREEN MTN	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	146.2	A	GREEN MT.
44	NTIA	PIKE DVHD	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	156.7	A	DEVILS HEAD
45	NTIA	PIKE ALMAGRE	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	167.9	A	ALMAGRE
46	NTIA	PIKE STANLEY	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	103.5	A	STANLEY CANYN
47	NTIA	PIKE MT ROSA	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	100.0	A	MT. ROSA
48	NTIA	PIKE LK GEORGE	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	107.2	A	LAKE GEORGE
49	NTIA	PIKE TOPAZ	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	114.8	A	TOPAS MTN
50	NTIA	PIKE DICKS PK	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	127.3	A	DICKS PEAK
51	NTIA	PIKE SHEPRDGE	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	141.3	A	SHEEP RIDGE

52	NTIA	PIKE PORT	Federal Land Mgt Agencies	171.1375 N	CSQ	164.9875 N	192.8	A	PORTABLE
53	NTIA	BLM METH/TWIN	Federal Land Mgt Agencies	173.6750 N	CSQ	164.6250 N	156.7	A	METHODIST
54	NTIA	BLM PISGAH	Federal Land Mgt Agencies	173.6750 N	CSQ	164.6250 N	141.3	A	PSGAH
55	NTIA	BLM DIR	Federal Land Mgt Agencies	173.6750 N	CSQ	173.6750 N	156.7	A	DIRECT
56	NTIA	FIRE TAC 7	Federal Land Mgt Agencies	169.2875 N	CSQ	169.2875 N	103.5	A	TAC
57	NTIA	FIRE TAC 8	Federal Land Mgt Agencies	172.5875 N	CSQ	172.5875 N	110.9	A	TAC
58	NIFC	NIFC TAC 1	Federal Land Mgt Agencies	168.0500 N	CSQ	168.0500 N	156.7	A	TAC
59	NIFC	NIFC TAC 2	Federal Land Mgt Agencies	168.2000 N	CSQ	168.2000 N	167.9	A	TAC
60	NIFC	NIFC TAC 3	Federal Land Mgt Agencies	168.6000 N	CSQ	168.6000 N	192.8	A	TAC
61	STATE CO	DFPC CMD	Federal Land Mgt Agencies	155.4600 N	156.7	159.4575 N	156.7	A	COMMAND
62	STATE CO	DFPC T-1	Federal Land Mgt Agencies	154.6800 N	156.7	154.6800 N	156.7	A	TAC
63	STATE CO	DFPC T-2	Federal Land Mgt Agencies	154.6950 N	156.7	154.6950 N	156.7	A	TAC
64	STATE CO	DFPC T-3	Federal Land Mgt Agencies	154.8300 N	156.7	154.8300 N	156.7	A	TAC
65	STATE CO	DFPC T-4	Federal Land Mgt Agencies	154.9200 N	156.7	154.9200 N	156.7	A	TAC
66	STATE CO	CSFS WORK	Federal Land Mgt Agencies	151.3400 N	CSQ	151.3400 N	156.7	A	TAC

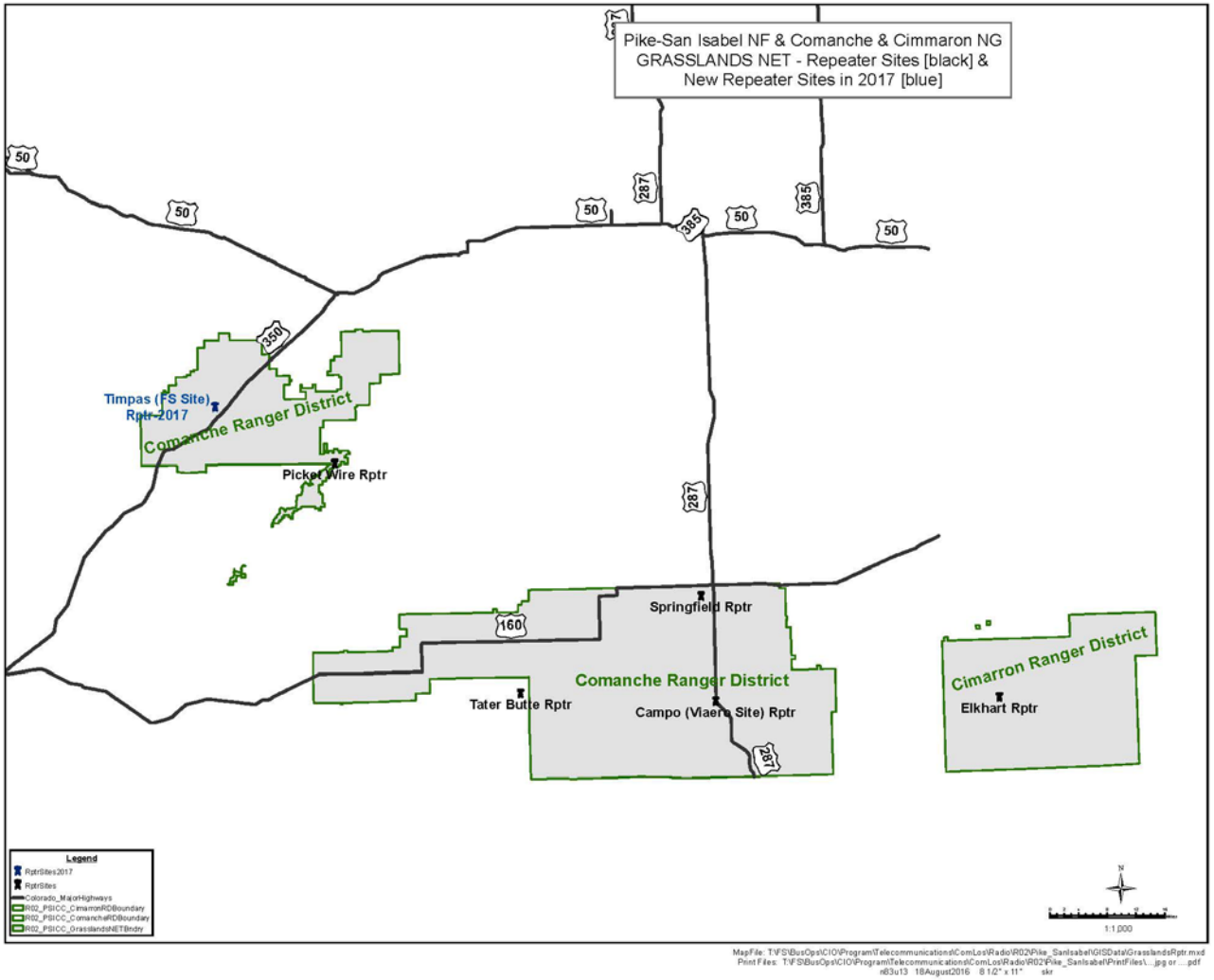


FIGURE 16: COMANCHE & CIMARRON GRASSLANDS NET MAP

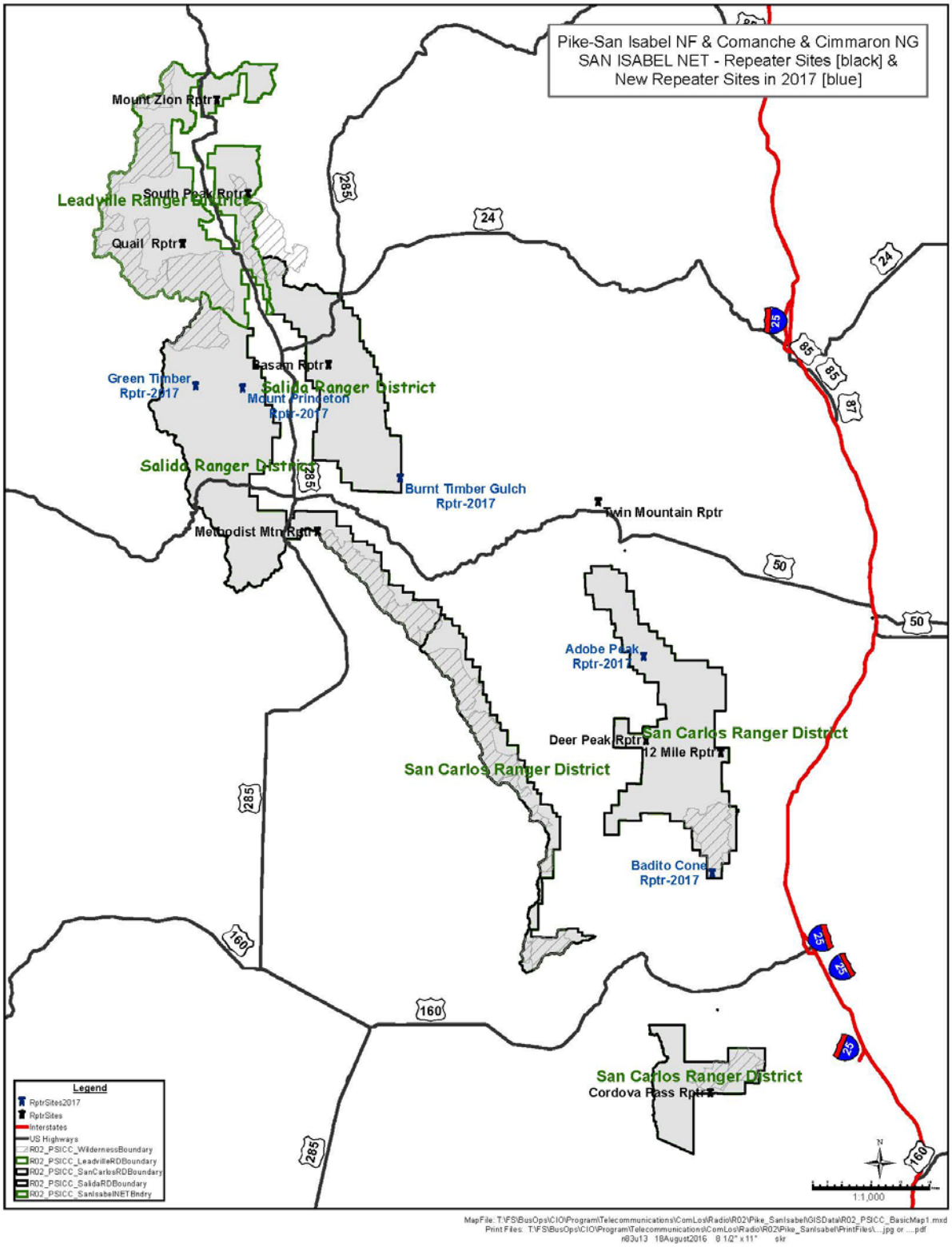


FIGURE 17: SAN ISABEL NET MAP

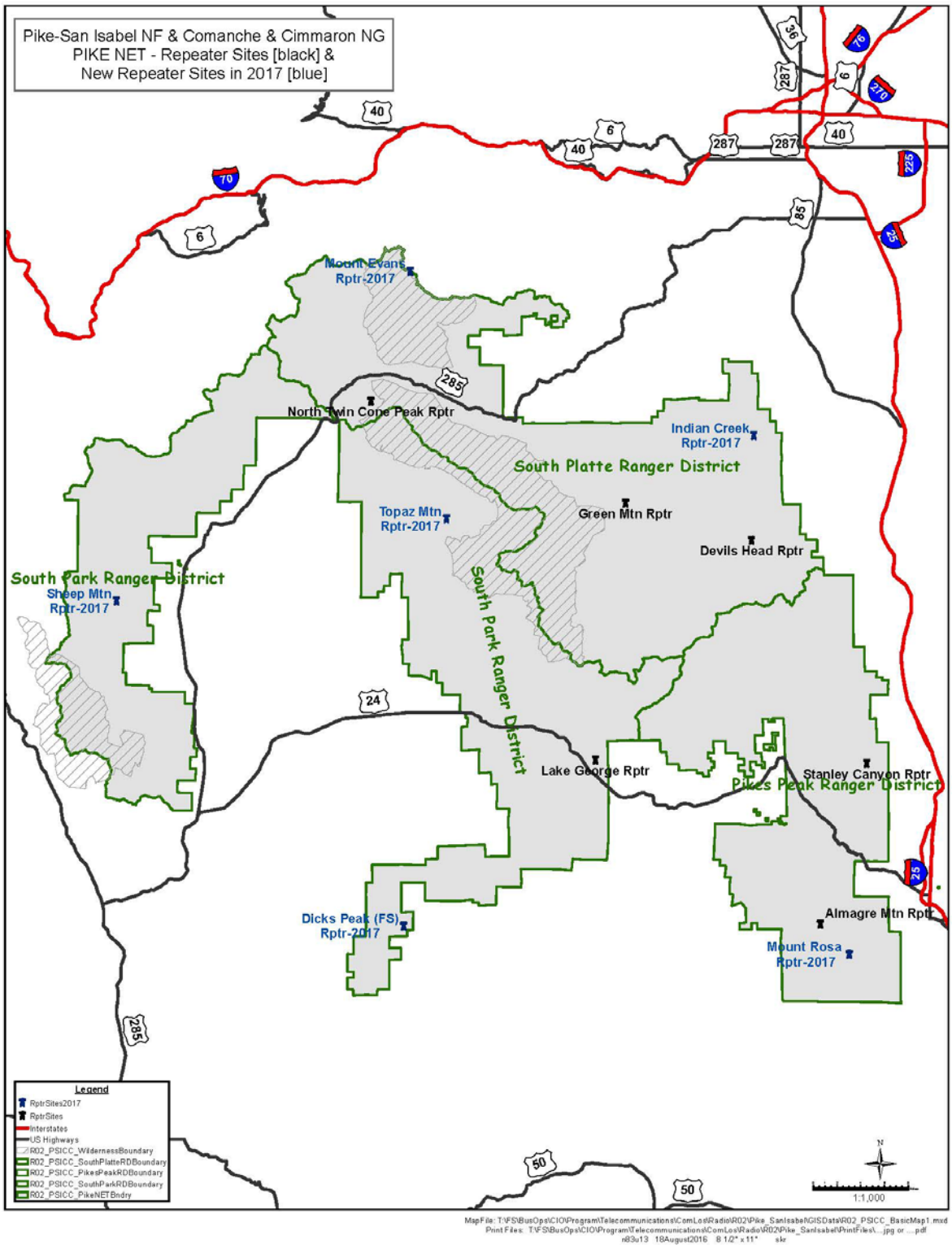


FIGURE 18: PIKE NET MAP

MSAT SMART SATELLITE SYSTEM

Responsible Agency

This radio system is managed by the Colorado Division of Homeland Security and Emergency Management.

Name: Riley Frazee
Title: Regional Field Manager
Address: 310 E. Washington Street, Lamar, CO 81052
Phone: 719-510-2388
24/7 Phone: 719-544-2424
Email Riley.frazee@state.co.us

Service Area

North America

Number of Radios

No. of Mobile Radios on this System	13
No. of Portable Radios on this System	1

System Description

Radio System Make	Ligado
Trunked/Conventional/Both	Trunked
Radio System Model	Boeing
Orbital Locations	101.3°W, 107.3°W
Radio System Frequency Band	L-Band 1500/1600 MHz
P25 Compliant	No
ISSI Compliant	No
No. of Channels	9,999
Encryption Supported	Yes
Year Installed	1995 updated 2011
Repeated/Simplex/Both	Repeated
Analog/Digital/Both	D
Wideband/Narrowband/Both	W
EOL DC Power	12,000 Watts
Simulcast	No

Agencies Sharing System

Other Shared System Notes

Tower sites: Satellite

Through a public-private partnership pioneered by the Department of Justice and the FBI, Ligado has partnered with federal, state and local agencies to create SMART (Satellite Mutual Aid Radio Talkgroups). SMART enables one-to-many, Push-to-Talk 'dispatch style' communications among homeland security officials, law enforcement, emergency responders and public safety officials. Using SMART, public safety agencies establish interoperable communications to coordinate responses between cooperating agencies.

Ligado's satellite network today provides pervasive coverage in sparsely populated areas across North America. It is capable of handling many simultaneous PTT calls, ensuring public safety officials can communicate even when call volumes spike during emergencies. The satellite network also offers further protection from the congestion and damage typically suffered by ground networks in winds, fires, floods, and earthquakes.

Real-time status and location data can be shared without tying up valuable voice communications channels. With no user intervention required, the system will automatically route SMART voice and data traffic via the most reliable network available, whether satellite or custom-built terrestrial. If other commercial terrestrial networks are damaged, destroyed or congested, Ligado's satellite and ground-based system allows us to allocate incremental capacity to specific areas where there is a need for short-term, high capacity communication. These enhanced logistics will allow emergency operations to become more efficient and effective, decreasing response times and saving lives.

Ligado Satellite Systems Offer Telephony, Data, and PTT radio services to Regional Field Managers, the State EOC and Directors at Colorado Emergency Management.

- **Intra-System Shared Channels**

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band **L-Band 1500/1600MHz**		Description **SMART Talkgroups**
	Purpose	**Channel Name / Trunked Radio System TalkGroup**	**Eligible Users / Assignments**	**Manager**	**Monitor**	**Inquiries SOP/ Application**
LOCAL TALKGROUPS						
1.	Colorado Emergency Management	COEM-1	State Emergency Management	Riley Frazee	CO State EOC	Riley.frazee@state.co.us
REGIONAL SMART TALKGROUPS						
2.	Southwestern Public Safety	SWSMART	AZ, CA, CO, NM, NV, OK, TX, UT	Contra Costa County Fire Protection Dist	Contra Costa County 911	SWSMART@cccfpd.org
3.	Western Public Safety	W-SMART	AK, AZ, CA, CO, HI, ID, NM, NV, OR, UT, WA, WY	California Emergency Management Agency	CA State EOC	WSMART@oes.ca.gov
4.	Northeastern Public Safety	NESMART	CT, DE, MA, ME, NH, NY, NJ, PA, RI, VT	Connecticut State Police	CT State Police HQ	NESMART@po.state.ct.us
5.	Mid-Atlantic Public Safety	M-SMART	DC, DE, MD, PA, VA, WV	Allegany County Dept of Public Safety & Homeland Security	Allegany County 9-1-1	MSMART@allconet.org
6.	Southeastern Public Safety	SESMART	AL, AR, DC, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV	Fairfax County Communications Fire/Rescue	Fairfax County VA EOC	SESMART@fairfaxcounty.gov
7.	Gulf States Public Safety	G-SMART	AL, FL, LA, MS, TX, PR, USVI	LA Gov's Office of Homeland Security and Emergency Preparedness	LA State EOC	GSMART@OHSEP.Louisiana.gov
8.	Midwestern Public Safety	MWSMART	IA, IL, IN, KS, KY, MI, MN, MO, OH, ND, NE, SD, WI, WV	Indiana Department of Homeland Security	IN State EOC	MWSMART@dhs.IN.gov
9.	Northwestern Public safety	NWSMART	AK, CA, ID, MT, OR, WA, WY	WA State Emergency Management Division	WA State EOC	NWSMART@emd.wa.gov
10.	Central U.S. Public Safety	CUSEC-1	AL, AR, IL, IN, KY, MS, MO, TN	Central U.S. Earthquake Consortium	IN State EOC	CUSEC-1@cusec.org

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **L-Band 1500/1600MHz**	Description **SMART Talkgroups**

	Purpose	**Channel Name / Trunked Radio System TalkGroup**	**Eligible Users / Assignments**	**Manager**	**Monitor**	**Inquiries SOP/ Application**
NATIONWIDE SMART TALKGROUPS						
11.	EMS	E-SMART	All EMS	Kentucky Dept for Public Health	Medical Center EMS, Bowling Green, KY	EMSMART@ky.gov
12.	Fire Service	F-SMART	All Fire Services	Charlottesville Fire Dept	Charlottesville-UVA-Albermarle County Emergency Comm Center	FSMART@charlottesville.org
13.	Critical Infrastructure	I-SMART	Gov't/Private Sector Critical Infrastructure	Seattle Public Utilities	Seattle Public Utilities, Operations Response Center	ISMART-SPU@seattle.gov
14.	Public Safety	J-SMART	All Gov't Public Safety	DOJ-Wireless Management Office	FBI-New York	SMART@usdoj.gov
15.	Law Enforcement	L-SMART	All Law Enforcement	U.S. Marshals Service	USMS Comms Center – HQ	LSMART@usdoj.gov
16.	USAR	U-SMART	All USAR Entities	Montgomery County Fire and Rescue Service	Incident Support Team will monitor 24/7 when US&R is deployed	USMART@mdtf1.net
17.	Public Health	NPHST-1	State PH Agencies	Kentucky Dept for Public Health	CDC-DEOC	NPHST@ky.gov
18.	Public Health	NPHST-2	All Health/Medical Faciltiies	Kentucky Dept for Public Health	CDC-DEOC	NPHST@ky.gov
19.	DOJ Tactical Ops	SMART-T	DOJ Law Enforcement Only	DOJ-Wireless Management Office	TBD: Event Based	SMART@usdoj.gov
INTERNATIONAL SMART TALKGROUPS						
20.	Can/Am Cross Border	CAB-ALL	All Gov't and Public Safety USA and Canada	DOJ-Wireless Management Office	FBI-New York	CSRhelp@lightsquared.com
21.	Can/Am Federal	CAB-FLE	Federal Law Enforcemnt USA and Canada	DOJ-Wireless Management Office	FBI-New York	CSRhelp@lightsquared.com
22.	Can/Am Tactical	CAB-TAC	All Gov't and Public Safety USA and	DOJ-Wireless Management Office	FBI-New York	CSRhelp@lightsquared.com

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **L-Band 1500/1600MHz**	Description **SMART Talkgroups**

	Purpose	**Channel Name / Trunked Radio System TalkGroup**	**Eligible Users / Assignments**	**Manager**	**Monitor**	**Inquiries SOP/ Application**
			Canada			
23.	East Mex/Am Interop	MAB-1	TBD	TBD	TBD	CSRhelp@lightsquared.com
24.	Cen Mex/Am Interop	MAB-2	TBD	TBD	TBD	CSRhelp@lightsquared.com
25.	West Mex/Am Interop	MAB-3	TBD	TBD	TBD	CSRhelp@lightsquared.com

Radio channel names as listed in this Table are required.
A=Analog, D=Digital, M=Multimode; N=Narrowband, W=Wideband

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **Various Satellite Systems**	Description **Other Satellite Systems**

	Agency	**Point of Contact**	**Provider**	**Phone Number**	**Notes**
1.	State OEM	Riley Frazee	MSAT / Ligado	1-866-374-1173 or 600-701-3554	Southeast Regional Field Manager
2.	Prowers OEM	Staffon Warn	GlobalStar	1+254-381-3891	
3.	Southeast Colo Hospital	Laurie Wilson	Iridium	011-881-623-486-984	Iridium
4.	National Weather Service	Jennifer Stark	InMarSat	011-870-776-325-829	iSatPhone Pro
5.	State OEM		MSAT / Ligado	1-866-213-1750 or 600-701-3323	
6.	State OEM	Cory Stark	MSAT / Ligado	1-866-261-2421 or 600-701-3370	North Central Regional Field Manager
7.	State OEM		MSAT / Ligado	1-877-265-6205 or 600-701-3325	Field Services Assistant
8.	State OEM	Trevor Denney	MSAT / Ligado	1-877-602-4004 or 600-701-3350	Southwest Regional Field Manager
9.	State OEM	Drew Petersen	MSAT / Ligado	1-866-300-0337 or 600-701-3408	West Regional Field Manager
10.	State OEM	Christe Coleman	MSAT / Ligado	1-866-273-6481 or 600-701-3486	South Regional Field Manager
11.	State OEM	Mark Boley	MSAT / Ligado	1-877-410-3807 or 600-701-3496	South Central Regional Field Manager
12.	State OEM	David Osborn	MSAT / Ligado	1-866-292-7704 or 600-701-3551	San Luis Valley Regional Field Manager
13.	State OEM	Kevin Kuretich	MSAT / Ligado	1-866-248-0317 or 600-701-3583	Northeast Regional Field Manager

** Instructions and information on utilizing satellite communications systems is located in Appendix O of this TIC Plan.*

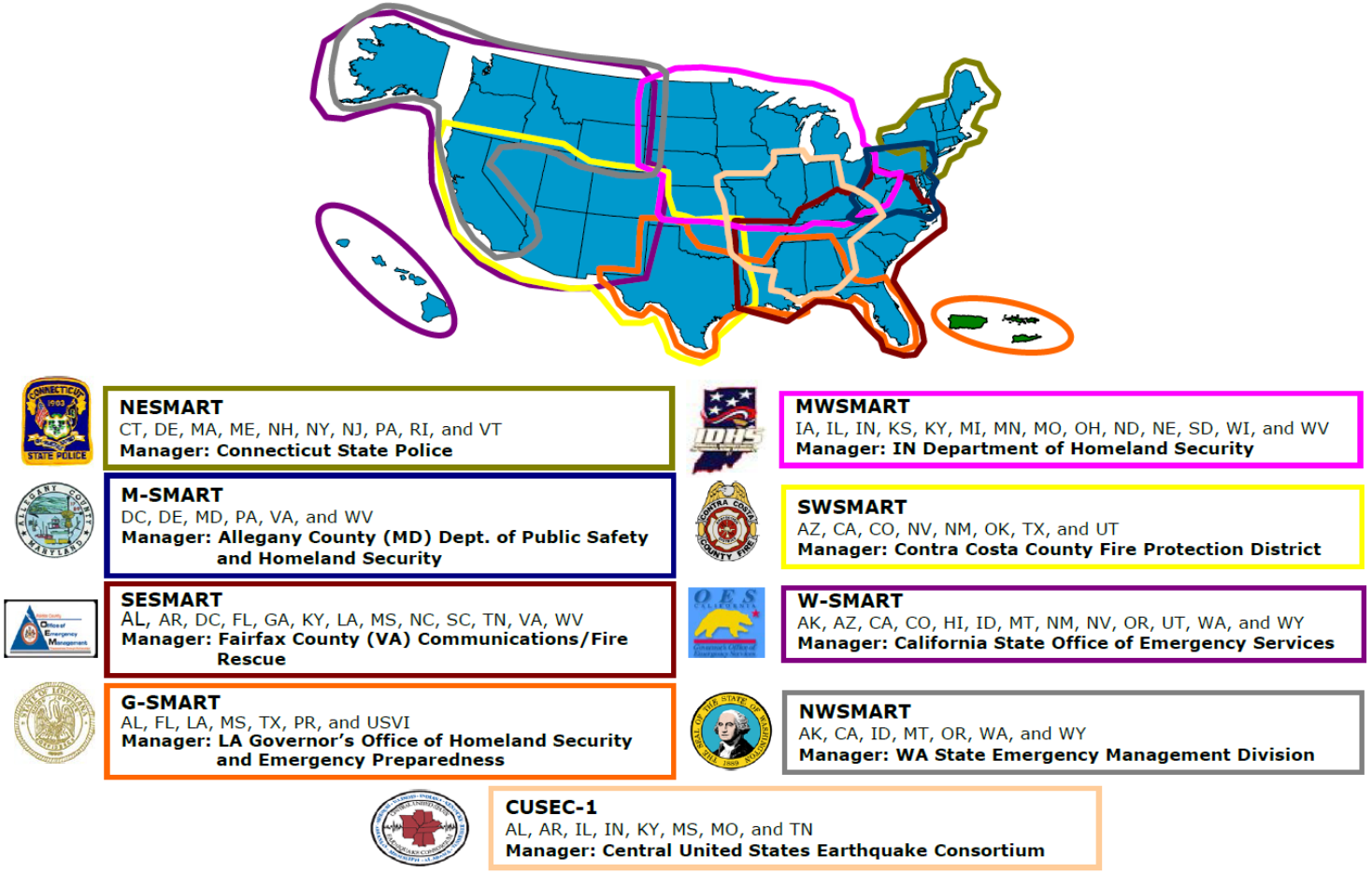


FIGURE 19: MSAT REGIONAL SMART TALKGROUP MAP

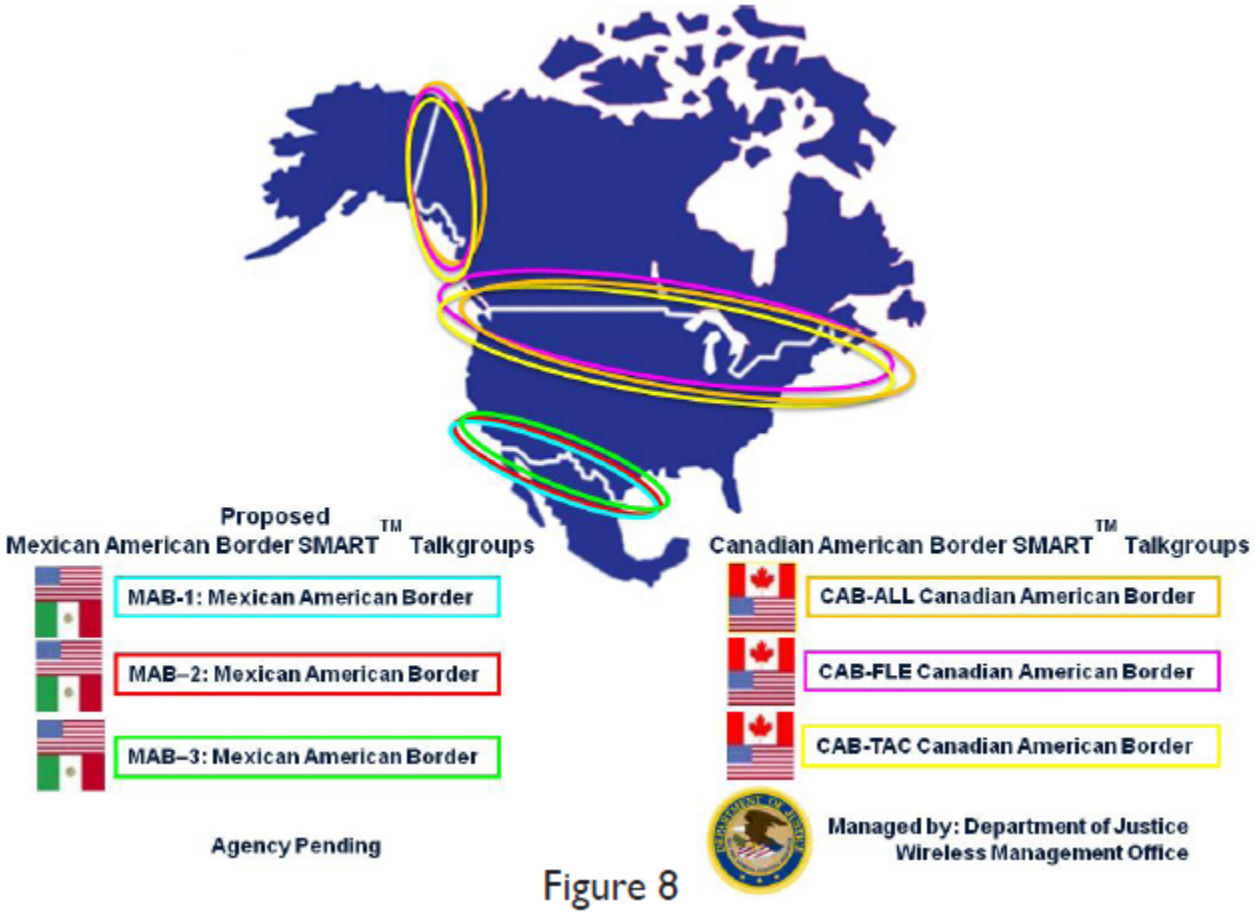


FIGURE 20: MSAT BORDER SMART TALKGROUP MAP

MSAT Network Coverage: MSAT telephone and PTT coverage stretches across all of North America, Central America, the Caribbean, and Hawaii. Coverage is now provided by eight (8) beams on the new satellite

The MSAT network recognizes beam numbers 0-7. The launch of the new satellite increased the number of beams of coverage from 6 to 8. However, the MSAT mobile terminals can only recognize up to 5 beam numbers. As a result, beam numbers 0 and 5 are duplicated. Though they are different beams, the Alaska and Southeast beams will appear on a local user's handset as beam 5. The same is true for the Hawaii and Northeast beams which will appear on a local user's handset as beam 0 (see illustration below).

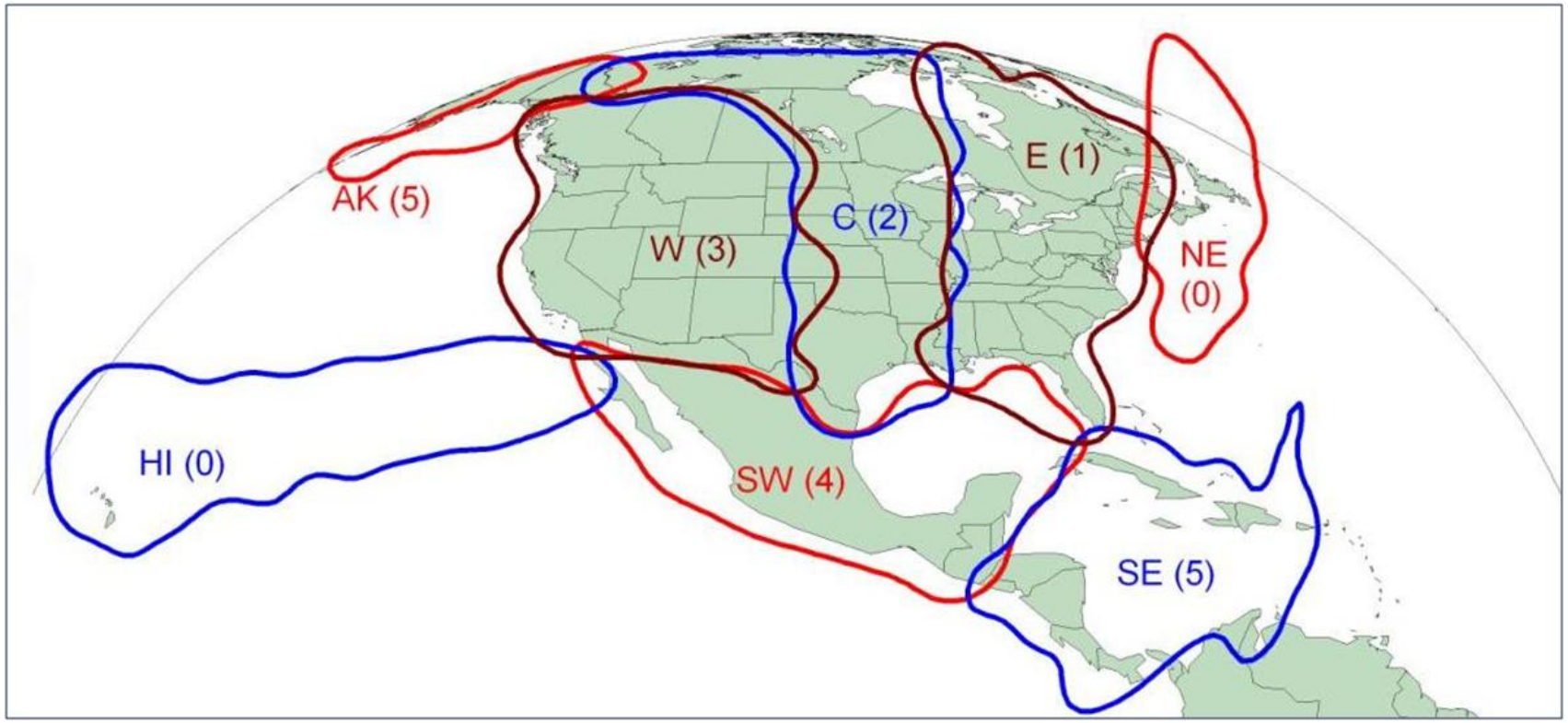


FIGURE 21: MSAT BEAM COVERAGE

AIRCRAFT RADIO SYSTEM

Responsible Agency

This radio system is owned or managed by multiple agencies in the Southeast Region

Name:
Title:
Address:
Phone:
24/7 Phone:
Email

Service Area

Southeast Colorado

Number of Radios

No. of Mobile Radios on this System	
No. of Portable Radios on this System	

System Description

Radio System Make	Various
Trunked/Conventional/Both	Conventional
Radio System Model	Various
Radio System Software Version	N/A
Radio System Frequency Band	FCC
P25 Compliant	No
ISSI Compliant	No
No. of Channels	Multiple
Encryption Supported	No
Year Installed	Various
Repeated/Simplex/Both	Simplex
Analog/Digital/Both	A
Wideband/Narrowband/Both	Wideband
Voted	No
Simulcast	No

- **Intra-System Shared Channels**

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A			Frequency Band **Various**			Description **Aircraft Radio Systems**			
	Channel Configuration	**Channel Name**	**Eligible Users / Assignments**	**RX Freq N or W**	**RX Tone / NAC**	**TX Freq N or W**	**Tx Tone / NAC**	**Mode A, D. or M**	**Notes**
1	CTAF	SPRINGFIELD	AIRCRAFT	122.900	CSQ	122.900	CSQ	AM	UNICOM
2	APPROACH	SPRINGFIELD	AIRCRAFT	133.400	CSQ	133.400	CSQ	AM	DENVER
3	DEPART	SPRINGFIELD	AIRCRAFT	127.850	CSQ	127.850	CSQ	AM	ALBUQUERQUE
4	MILI APPROACH	SPRINGFIELD	AIRCRAFT	377.175	CSQ	377.175	CSQ	AM	DENVER
5	MILI DEPART	SPRINGFIELD	AIRCRAFT	285.470	CSQ	285.470	CSQ	AM	ALBUQUERQUE
6	AWOS	SPRINGFIELD	AIRCRAFT	NA	NA	NA	NA	NA	719-523-4516
7	CTAF	LAS ANIMAS	AIRCRAFT	122.900	CSQ	122.900	CSQ	AM	
8	ASOS	LAS ANIMAS	AIRCRAFT	135.525	CSQ	135.525	CSQ	AM	
9	CTAF	EADS	AIRCRAFT	122.900	CSQ	122.900	CSQ	AM	
10	CTAF	LA JUNTA	AIRCRAFT	123.000	CSQ	123.000	CSQ	AM	
11	ASOS	LA JUNTA	AIRCRAFT	135.525	CSQ	135.525	CSQ	AM	719-384-5961
12	APP/DEP	LA JUNTA	AIRCRAFT	128.375	CSQ	128.375	CSQ	AM	
13	RCO	LA JUNTA	AIRCRAFT	122.600	CSQ	122.600	CSQ	AM	
14	RCAG	LA JUNTA	LOW AIRCRAFT	128.370	CSQ	128.370	CSQ	AM	
15	RCAG	LA JUNTA	5 HIGH	132.220	CSQ	132.220	CSQ	AM	
16	RCAG	LA JUNTA	LOW AIRCRAFT	133.400	CSQ	133.400	CSQ	AM	
17	CTAF	MELON/ROCKYFORD	AIRCRAFT	122.900	CSQ	122.900	CSQ	AM	
18	ASOS	MELON/ROCKYFORD	AIRCRAFT	135.525	CSQ	135.525	CSQ	AM	
19	CTAF	LAMAR MUNI	AIRCRAFT	122.800	CSQ	122.800	CSQ	AM	
20	ASOS	LAMAR MUNI	AIRCRAFT	135.625	CSQ	135.625	CSQ	AM	719-336-3854
21	APP/DEP	LAMAR MUNI	AIRCRAFT	133.400	CSQ	133.400	CSQ	AM	
22	MILI APP/DEP	LAMAR MUNI	AIRCRAFT	377.175	CSQ	377.175	CSQ	AM	
23	RCO	LAMAR MUNI	AIRCRAFT	122.100	CSQ	122.100	CSQ	AM	
24	CTAF	HOLLY	AIRCRAFT	122.800	CSQ	122.800	CSQ	AM	

25	EMERGENCY	EMERGENCY	AIRCRAFT	121.500	CSQ	121.500	CSQ	AM	(LAMAR-RCAG)
26	MILITARY EMERG	EMERGENCY	AIRCRAFT	243.000	CSQ	243.000	CSQ	AM	
27	VOR LAA	LAMAR	AIRCRAFT VOR	116.900	CSQ	116.900	CSQ	AM	
28	ARTCC	ARTCC LA JUNTA	AIRCRAFT	133.400	CSQ	133.400	CSQ	AM	
29	ARTCC	ARTCC EASTONVILLE	AIRCRAFT	128.375	CSQ	128.375	CSQ	AM	122.9
30	AIR OPS SAR[1]	STATEWIDE	AIR OPERATIONS	123.100	CSQ	123.100	CSQ	AM	
31	USCG/MIL OPS[2]	NATIONWIDE	AIR OPERATIONS	345.000	CSQ	345.000	CSQ	AM	

CTAF – Common Traffic Advisory Frequency - Is the name given to the VHF radio frequency used for air-to-air communication at US, Canadian and Australian non-towered airports.
AWOS – Automated Weather Observing System
ASOS – Automated Surface Observing System – Units are automated sensor suites that are designed to serve meteorological and aviation observing needs.
APP/DEP – Approach and Departure
RCO – Remote Communications Outlet - are remote aviation band radio transceivers, established to extend the communication capabilities of Flight Information Centers (FIC) and Flight Service Stations (FSS).
RCAG – Radio Communication Air-to-Ground
[1] Civilian Air Operations – May not be used for tests or exercises
[2] Military and United States Coast Guard initial contact only, then move to 282.800MHz AM or other working channel

ZELLO NETWORK RADIO

Responsible Agency

This radio system is owned or managed by multiple agencies in the Southeast Region

Name:
Title:
Address:
Phone:
24/7 Phone:
Email

Service Area

Nationwide

Number of Radios

No. of Mobile Radios on this System	
No. of Portable Radios on this System	

System Description

Radio System Make	Various
Trunked/Conventional/Both	GSM/CDMA/Android/Apple/Blackberry
Radio System Model	Various
Radio System Software Version	N/A
Radio System Frequency Band	FCC
P25 Compliant	No
ISSI Compliant	No
No. of Channels	Multiple
Encryption Supported	No
Year Installed	Various
Repeated/Simplex/Both	Repeated
Analog/Digital/Both	DIGITAL
Wideband/Narrowband/Both	Narrowband
Voted	No
Simulcast	No

- **Intra-System Shared Channels**

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A			Frequency Band **Various**	Description **Zello Network Radio**
	Channel Configuration	**Channel Name**	**Eligible Users / Assignments**	**NOTES**
1	Zello	CHERAW FIRE	Cheraw Fire Department and Members –	Linked to their VHF Paging Channel
2	Zello	COEM FIELD SERVICES	DHSEM Field Managers	This channel is for the Field Services Section at the Colorado Division of Homeland Security and Emergency Management
3	Zello	FRONT RANGE GMRS	GMRS Linked Repeater	This is the Zello Channel linked to the GMRS Front Range Repeater in the Denver Metro Area.
4	Zello	LFD ALL	Lamar Fire Department	This is the Zello Channel for Lamar Fire Department. This zello channel is linked to monitoring their LFD paging channel in Lamar using a ROIP
5	Zello	REACT Colorado	Radio Emergency Associated Communications Team	This is for all REACT Teams and Members in Colorado to coordinate response and support activities. This is also used for nets as needed.
6	Zello	SE FIRST TEAM	Southeast State Agencies	This is for all Southeast Colorado First In Response State Team members which comprises of State agency leadership at the regional level.
7	Zello	SECO GMRS USERGROUP	Southeast Colorado GRMS Users	This is for all Southeast Colorado GMRS license users. It is linked via a ROIP Box to the VLS675 Repeater in Baca County
8	Zello	SECOLORADO INTEROPERABILITY	All Southeast Agencies	All Southeast Colorado agencies to allow for interoperability between agencies over a large geographical area off of the DTR system.
9	Zello	SOUTHEAST REGIONAL EMs	Southeast Emergency Managers	This channel is for the Emergency Managers in the Southeast Region to
10	Zello	WALSH RPTR	Walsh Fire/EMS	This channel is for Walsh Fire and EMS coordination and is connected to the UHF Repeater located on the Walsh Watertower.
ZELLO lets you use your phone as a walkie-talkie or two-way radio as long as you have a network or WiFi connection. Users can join channels and instantly send voice messages or photos, and the app even works over older 2G networks. Interop boxes can be purchased and installed to linked to Land Mobile Radios to increase interoperability and create larger networks and increase coverage area of radio systems.				

APPENDIX B: INTER-SYSTEM SHARED CHANNELS

Detailed information on shared channels available for use within the region is listed in the following table to include shared channel names and frequency/talkgroup details for each shared channel.

1. VHF INTEROPERABILITY CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1.	Simplex	VLAW31W (NLEC)	Law Enforcement	155.4750 W	CSQ	155.4750 W	156.7	A	
2.	Simplex	VLAW31	Law Enforcement	155.4750 N	CSQ	155.4750 N	156.7	A	
3.	Simplex	VLAW32	Law Enforcement	155.4825 N	156.7	155.4825 N	156.7	A	
4.	Simplex	CSP 3	Law Enforcement	154.9050 N	156.7	154.9050 N	156.7	A	Statewide Aid
5.	Simplex	VFIRE21W (FERN 1)	Fire	154.2800 W	156.7	154.2800 W	156.7	A	
6.	Simplex	VFIRE21	Fire	154.2800 N	156.7	154.2800 N	156.7	A	
7.	Simplex	VFIRE22W (FERN 2)	Fire	154.2950 W	156.7	154.2950 W	156.7	A	
8.	Simplex	VFIRE22	Fire	154.2950 N	156.7	154.2950 N	156.7	A	
9.	Simplex	VFIRE23W (FERN 3)	Fire	154.2650 W	156.7	154.2650 W	156.7	A	
10.	Simplex	VFIRE23	Fire	154.2650 N	156.7	154.2650 N	156.7	A	
11.	Simplex	VFIRE24	Fire	154.2725 N	156.7	154.2725 N	156.7	A	
12.	Simplex	VFIRE25	Fire	154.2875 N	156.7	154.2725 N	156.7	A	
13.	Simplex	VFIRE26	Fire	154.3025 N	156.7	154.2725 N	156.7	A	
14.	Simplex	VSAR16	SAR	155.1600 N	CSQ	155.1600 N	127.3	A	
15.	Simplex	VSAR235	SAR	155.2350 N	CSQ	155.2350 N	127.3	A	
16.	Simplex	VSAR175	SAR	155.1750 N	CSQ	155.1750 N	127.3	A	
17.	Simplex	VSAR205	SAR	155.2050 N	CSQ	155.2050 N	127.3	A	
18.	Simplex	VSAR220	SAR	155.2200 N	CSQ	155.2200 N	127.3	A	
19.	Simplex	VSAR265	SAR	155.2650 N	CSQ	155.2650 N	127.3	A	
20.	Simplex	VSAR280	SAR	155.2800 N	CSQ	155.2800 N	127.3	A	
21.	Simplex	VSAR295	SAR	155.2950 N	CSQ	155.2950 N	127.3	A	
22.	Simplex	VMED28	EMS	155.3400 N	156.7	155.3400 N	156.7	A	
23.	Simplex	VMED29	EMS	155.3475 N	156.7	155.3475 N	156.7	A	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
24.	Simplex Base / Mobile	VCALL10	Any Public Safety	155.7525 N	CSQ	155.7525 N	156.7	A	
25.	Simplex Base / Mobile	VTAC12	Any Public Safety	154.4525 N	CSQ	154.4525 N	156.7	A	
26.	Simplex Base / Mobile	VTAC11	Any Public Safety	151.1375 N	CSQ	151.1375 N	156.7	A	
27.	Simplex Base / Mobile	VTAC13	Any Public Safety	158.7375 N	CSQ	158.7375 N	156.7	A	
28.	Simplex Base / Mobile	VTAC14	Any Public Safety	159.4725 N	CSQ	159.4725 N	156.7	A	
29.	Tactical Repeater	VTAC17	Any Public Safety	161.8500 N	CSQ	157.2500 N	156.7	A	
30.	Simplex Base / Mobile	VTAC17D	Any Public Safety	161.8500 N	CSQ	161.8500 N	156.7	A	
31.	Tactical Repeater	VTAC33	Any Public Safety	159.4725 N	CSQ	151.1375 N	136.5	A	
32.	Tactical Repeater	VTAC34	Any Public Safety	158.7375 N	CSQ	154.4525 N	136.5	A	
33.	Tactical Repeater	VTAC35	Any Public Safety	159.4725 N	CSQ	158.7375 N	136.5	A	
34.	Tactical Repeater	VTAC36	Any Public Safety	151.1375 N	CSQ	159.4725 N	136.5	A	
35.	Tactical Repeater	VTAC37	Any Public Safety	154.4525 N	CSQ	158.7375 N	136.5	A	
36.	Tactical Repeater	VTAC38	Any Public Safety	158.7375 N	CSQ	159.4725 N	136.5	A	
37.	Simplex	COSAR1	Search and Rescue	151.5125 N	156.7	151.5125 N	156.7	A	Statewide SAR
38.	Simplex	COSAR2	Search and Rescue	151.7000 N	156.7	151.7000 N	156.7	A	Statewide SAR
39.	Simplex	COSAR3	Search and Rescue	158.4000 N	156.7	158.4000 N	156.7	A	Statewide SAR
40.	Simplex	COSAR4	Search and Rescue	158.4075 N	156.7	158.4075 N	156.7	A	Statewide SAR
41.	Simplex	AREA LAW	Law Enforcement	155.1300 N	CSQ	155.1300 N	107.2	A	SE Region Law
42.	Simplex	RR POLICE	Law Enforcement	161.2050 N	CSQ	161.2050 N	CSQ	A	Railroad Police Ch 073

Radio channel names as listed in this Table are required.
A=Analog, D=Digital, M=Multimode; N=Narrowband, W=Wideband
VTAC11-12, VTAC33-34, and VTAC36-37 may not be used in Puerto Rico or the USVI.
VTAC33-38 recommended for deployable tactical repeater use only (FCC Station Class FB2T)
VTAC36-38 are preferred; VTAC33-35 should be used only when necessary due to interference.
All Channels on this 217A are narrowband only. Limited to 3 Watts ERP North of Line A or East of Line C.
VTAC17/VTAC17D Only: Base stations: 50 watts max, antenna HAAT 400 feet max. Mobile Stations: 20 watts max, antenna HAAT 15 feet max. These channels are for tactical use and may not be operated on board aircraft in flight. These channels use only narrowband FM and are available only in certain inland areas at least 100 miles from a major waterway. These channels use the same frequencies as VHF Marine Channel 25, which uses wideband FM. Use only where authorized. “Blanket authorization” does not apply-use of these channels must be licensed, or authorized by STA and are also limited to 3 watts ERP North of Line A or East of Line C.
VTAC and VCALL Channels are the only channels listed that are interoperable Channels all other channels require licensing to use. Rules for use of these channels are contained in 47 CFR 90.20 and NTIA Manual Section 4.3.11 & 7.3.6.

FEDERAL INTEROPERABILITY CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **Nationwide Plan**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
43.	Repeated	NC 1CALL	Federal Gov't Agency	169.5375 N	CSQ	164.7125 N	167.9	A	Incident Calling
44.	Repeated	IR 1	Federal Gov't Agency	170.0125 N	CSQ	165.2500 N	167.9	A	Incident Command
45.	Repeated	IR 2	Federal Gov't Agency	170.4125 N	CSQ	165.9625 N	167.9	A	Medical Evacuation
46.	Repeated	IR 3	Federal Gov't Agency	170.6875 N	CSQ	166.5750 N	167.9	A	Logistics Control
47.	Repeated	IR 4	Federal Gov't Agency	173.0375 N	CSQ	167.3250 N	167.9	A	Interagency Convoy
48.	Simplex	IR 5	Federal Gov't Agency	169.5375 N	CSQ	169.5375 N	167.9	A	Incident Calling
49.	Simplex	IR 6	Federal Gov't Agency	170.0125 N	CSQ	170.0125 N	167.9	A	Incident Command
50.	Simplex	IR 7	Federal Gov't Agency	170.4125 N	CSQ	170.4125 N	167.9	A	Medical Evacuation
51.	Simplex	IR 8	Federal Gov't Agency	170.6875 N	CSQ	170.6875 N	167.9	A	Logistics Control
52.	Simplex	IR 9	Federal Gov't Agency	173.0375 N	CSQ	173.0375 N	167.9	A	Interagency Convoy
53.	Simplex	LE A	Federal Law Agencies	167.0875 N	CSQ	167.0875 N	167.9	A	Calling
54.	Repeated	LE 1	Federal Law Agencies	167.0875 N	CSQ	162.0875 N	167.9	A	Tactical
55.	Repeated	LE 2	Federal Law Agencies	167.2500 N	CSQ	162.2650 N	$68F	D	Tactical
56.	Repeated	LE 3	Federal Law Agencies	167.7500 N	CSQ	162.8375 N	$68F	D	Tactical
57.	Repeated	LE 4	Federal Law Agencies	168.1125 N	CSQ	163.2875 N	$68F	D	Tactical
58.	Repeated	LE 5	Federal Law Agencies	168.4625 N	CSQ	163.4250 N	$68F	D	Tactical
59.	Simplex	LE 6	Federal Law Agencies	167.2500 N	CSQ	167.2500 N	$68F	D	Tactical
60.	Simplex	LE 7	Federal Law Agencies	167.7500 N	CSQ	167.7500 N	$68F	D	Tactical
61.	Simplex	LE 8	Federal Law Agencies	168.1125 N	CSQ	168.1125 N	$68F	D	Tactical
62.	Simplex	LE 9	Federal Law Agencies	168.4625 N	CSQ	168.4625 N	$68F	D	Tactical
63.	Repeated	NC 2	Federal Gov't Agency	410.2375 N	CSQ	419.2375 N	167.9	A	Calling
64.	Repeated	IR 10	Federal Gov't Agency	410.4375 N	CSQ	419.4375 N	167.9	A	Ad hoc assignment
65.	Repeated	IR 11	Federal Gov't Agency	410.6375 N	CSQ	419.6375 N	167.9	A	Ad hoc assignment
66.	Repeated	IR 12	Federal Gov't Agency	410.8375 N	CSQ	419.8375 N	167.9	A	SAR Incident Commnd
67.	Simplex	IR 13	Federal Gov't Agency	413.1875 N	CSQ	413.1875 N	167.9	A	Ad hoc assignment
68.	Simplex	IR 14	Federal Gov't Agency	413.2125 N	CSQ	413.2125 N	167.9	A	Interagency Convoy
69.	Simplex	IR 15	Federal Gov't Agency	410.2375 N	CSQ	410.2375 N	167.9	A	Incident Calling Direct

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **Nationwide Plan**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
70.	Simplex	IR 16	Federal Gov't Agency	410.4375 N	CSQ	410.4375 N	167.9	A	Ad hoc assignment
71.	Simplex	IR 17	Federal Gov't Agency	410.6375 N	CSQ	410.6375 N	167.9	A	Ad hoc assignment
72.	Simplex	IR 18	Federal Gov't Agency	410.8375 N	CSQ	410.8375 N	167.9	A	SAR Incident Direct
73.	Simplex	LE B	Federal Law Agencies	414.0375 N	CSQ	414.0375 N	167.9	A	Calling
74.	Repeated	LE 10	Federal Law Agencies	409.9875 N	CSQ	418.9875 N	167.9	D	Tactical
75.	Repeated	LE 11	Federal Law Agencies	410.1875 N	CSQ	419.1875 N	$68F	D	Tactical
76.	Repeated	LE 12	Federal Law Agencies	410.6125 N	CSQ	419.6125 N	$68F	D	Tactical
77.	Simplex	LE 13	Federal Law Agencies	414.0625 N	CSQ	414.0625 N	$68F	D	Tactical
78.	Repeated	LE 14	Federal Law Agencies	414.3125 N	CSQ	414.3125 N	$68F	D	Tactical
79.	Simplex	LE 15	Federal Law Agencies	414.3375 N	CSQ	414.3375 N	$68F	D	Tactical
80.	Simplex	LE 16	Federal Law Agencies	409.9875 N	CSQ	409.9875 N	167.9	A	Tactical
81.	Simplex	LE 17	Federal Law Agencies	410.1875 N	CSQ	410.1875 N	$68F	D	Tactical
82.	Simplex	LE 18	Federal Law Agencies	410.6125 N	CSQ	410.6125 N	$68F	D	Tactical

Radio channel names as listed in this Table are required.
A=Analog, D=Digital, M=Multimode; N=Narrowband, W=Wideband
Default operations should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.
All Channels on this page are NARROWBAND only.

These channels may not be used for state/state, state/local, or local/local interoperability. A Federal entity must be involved when these are used.

The State of Colorado and the US Department of the Interior have reached an agreement which allows Colorado state, tribal and local public safety agencies to utilize a group of Federal Interoperability VHF and UHF radio frequencies. The frequencies are designated to be used only for incidents when state, tribal or local agencies are working in conjunction with one of our Federal partners. The frequencies are not authorized for routine or administrative uses. Permission to use the frequencies must be obtained from Colorado's Statewide Interoperability Coordinator (SWIC), (720) 852-6717 or (303) 918-1131.
Frequencies usage is defined as follows:
The Federal Interoperability Channels identified in the following table may be used within the State of Colorado by public safety agencies at all levels of government subject to the conditions listed in Section 4.3.16 of the NTIA Manual. LE channels will be identified with Continuous Tone-Controlled Squelch Systems (CTCSS), frequency 167.9 Hz, and/or Network Access Code (NAC) $68F. IR calling channels will not use CTCSS but CTCSS 167.9 may be used on other IR channels as needed.

UHF INTEROPERABILITY CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1.	Repeater	UCALL40	Any Public Safety	453.2125 N	156.7	458.2125 N	156.7	A	
2.	Simplex	UCALL40D	Any Public Safety	453.2125 N	156.7	453.2125 N	156.7	A	
3.	Repeater	UTAC 41	Any Public Safety	453.4625 N	156.7	458.4625 N	156.7	A	
4.	Simplex	UTAC 41D	Any Public Safety	453.4625 N	156.7	453.4625 N	156.7	A	
5.	Repeater	UTAC 42	Any Public Safety	453.7125 N	156.7	458.7125 N	156.7	A	Skyland Linked
6.	Simplex	UTAC 42D	Any Public Safety	453.7125 N	156.7	453.7125 N	156.7	A	
7.	Repeater	UTAC 43	Any Public Safety	453.8625 N	156.7	458.8625 N	156.7	A	
8.	Simplex	UTAC 43D	Any Public Safety	453.8625 N	156.7	453.8625 N	156.7	A	Mt Carmel Linked
9.	Simplex	CLEER	Law Enforcement	460.4250 N	CSQ	460.4250 N	156.7	A	Statewide
10.	Simplex	RETAC 9	EMS / Hospital	462.9500 N	CSQ	462.9500 N	156.7	A	Southeast RETAC MCI
11.	Simplex	STATE MED	EMS / Hospital	462.9750 N	CSQ	462.9750 N	CSQ	A	Statewide EMS
12.	Repeater / Simplex	MED 1	EMS / Hospital	463.0000 N		468.0000 N		A	
13.	Repeater / Simplex	MED 11	EMS / Hospital	463.00625 N		468.00625 N		A	
14.	Repeater / Simplex	MED 12	EMS / Hospital	463.0125 N		468.0125 N		A	
15.	Repeater / Simplex	MED 13	EMS / Hospital	463.01875 N		468.01875 N		A	
16.	Repeater / Simplex	MED 2	EMS / Hospital	463.0250 N		468.0250 N		A	
17.	Repeater / Simplex	MED 21	EMS / Hospital	463.03125 N		468.03125 N		A	
18.	Repeater / Simplex	MED 22	EMS / Hospital	463.0375 N		468.0375 N		A	
19.	Repeater / Simplex	MED 23	EMS / Hospital	463.04375 N		468.04375 N		A	
20.	Repeater / Simplex	MED 3	EMS / Hospital	463.0500 N		468.0500 N		A	
21.	Repeater / Simplex	MED 31	EMS / Hospital	463.05625 N		468.05625 N		A	
22.	Repeater / Simplex	MED 32	EMS / Hospital	463.0625 N		468.0625 N		A	
23.	Repeater / Simplex	MED 33	EMS / Hospital	463.06875 N		468.06875 N		A	
24.	Repeater / Simplex	MED 4	EMS / Hospital	463.0750 N		468.0750 N		A	
25.	Repeater / Simplex	MED 41	EMS / Hospital	463.08125 N		468.08125 N		A	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
26.	Repeater / Simplex	MED 42	EMS / Hospital	463.0875 N		468.0875 N		A	
27.	Repeater / Simplex	MED 43	EMS / Hospital	463.09375 N		468.09375 N		A	
28.	Repeater / Simplex	MED 5	EMS / Hospital	463.1000 N		468.1000 N		A	
29.	Repeater / Simplex	MED 51	EMS / Hospital	463.10625 N		468.10625 N		A	
30.	Repeater / Simplex	MED 52	EMS / Hospital	463.1125 N		468.1125 N		A	
31.	Repeater / Simplex	MED 53	EMS / Hospital	463.11875 N		468.11875 N		A	
32.	Repeater / Simplex	MED 6	EMS / Hospital	463.1250 N		468.1250 N		A	
33.	Repeater / Simplex	MED 61	EMS / Hospital	463.13125 N		468.13125 N		A	
34.	Repeater / Simplex	MED 62	EMS / Hospital	463.1375 N		468.1375 N		A	
35.	Repeater / Simplex	MED 63	EMS / Hospital	463.14375 N		468.14375 N		A	
36.	Repeater / Simplex	MED 7	EMS / Hospital	463.1500 N		468.1500 N		A	
37.	Repeater / Simplex	MED 71	EMS / Hospital	463.15625 N		468.15625 N		A	
38.	Repeater / Simplex	MED 72	EMS / Hospital	463.1625 N		468.1625 N		A	
39.	Repeater / Simplex	MED 73	EMS / Hospital	463.16875 N		468.16875 N		A	
40.	Repeater / Simplex	MED 8	EMS / Hospital	463.1750 N		468.1750 N		A	
41.	Repeater / Simplex	MED 81	EMS / Hospital	463.18125 N		468.18125 N		A	
42.	Repeater / Simplex	MED 82	EMS / Hospital	463.1875 N		468.1875 N		A	
43.	Repeater / Simplex	MED 83	EMS / Hospital	463.19375 N		468.19375 N		A	
44.	Repeater / Simplex	MED 9*	EMS / Hospital	462.9500 N		467.9500 N		A	
45.	Repeater / Simplex	MED 91*	EMS / Hospital	462.95625 N		467.95625 N		A	
46.	Repeater / Simplex	MED 92*	EMS / Hospital	462.9625 N		467.9625 N		A	
47.	Repeater / Simplex	MED 93*	EMS / Hospital	462.96875 N		467.96875 N		A	
48.	Repeater / Simplex	MED 10*	EMS / Hospital	462.9750 N		467.9750 N		A	
49.	Repeater / Simplex	MED 101*	EMS / Hospital	462.98125 N		467.98125 N		A	
50.	Repeater / Simplex	MED 102*	EMS / Hospital	462.9875 N		467.9875 N		A	
51.	Repeater / Simplex	MED 103*	EMS / Hospital	462.99375 N		467.99375 N		A	

Radio channel names as listed in this Table are required.
A=Analog, D=Digital, M=Multimode; N=Narrowband, W=Wideband

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
All UHF Colorado Emergency Medical Services (EMS) Radios should have the following channels programmed into them. MED 1, MED 2, MED 3, MED 4, MED 5, MED 6, MED 7, MED 8, MED 9, MED 10, MED 12, MED 22, MED 32, MED 42, MED 52, MED 62, MED 72, MED 82 All UHF Colorado Emergency Medical Services (EMS) Radios should have the ability to select the following CTCSS Tones on each channel. A=88.5, B=94.8, C=136.5, D=141.3, E=151.4 UCALL40-UTAC43 are all NARROWBAND Only. Limited to 3 watts ERP North of Line A or East of Line C. These channels are covered by “Blanket Authorization” for mobile operations. Med 1 – Med 103: Direct mode: receive & Transmit on “Mobile RX” freq.; add “D” to channel name. Repeater mode: mobile transmits on “Mobile TX” freq., receives on “Base & Mobile TX: Freq. CTCSS as required by local plan. *Used primarily for dispatch; may be used for mutual aid. 47CFR90.20(d)(65).									

LOW BAND INTEROPERABILITY CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
14.	Repeated	LLAW1	Law Enforcement	39.4600 W	CSQ	45.8600 W	156.7	A	
15.	Simplex	LLAW1D	Law Enforcement	39.4600 W	CSQ	39.4600 W	156.7	A	
16.	Repeated	LFIRE2	Fire (Proposed)	39.4800 W	CSQ	45.8800 W	156.7	A	
17.	Simplex	LFIRE2D	Fire (Proposed)	39.4800 W	CSQ	39.4800 W	156.7	A	
18.	Repeated	LLAW3	Law Enforcement	45.8600 W	CSQ	39.4600 W	156.7	A	
19.	Simple	LLAW3D	Law Enforcement	45.8600 W	CSQ	45.8600 W	156.7	A	
20.	Repeated	LFIRE4	Fire (Proposed)	45.8800 W	CSQ	39.4800 W	156.7	A	
21.	Simplex	LFIRE4D	Fire	45.8800 W	CSQ	45.8800 W	156.7	A	
22.	Simplex	CO ST A	EOC – Emergency	45.2400 W	CSQ	45.2400 W	107.2	A	Microwave Linked
23.	Simplex	CO ST B	EOC – Emergency	45.2800 W	CSQ	45.2800 W	107.2	A	Microwave Linked
24.	Simplex	RED CROSS	Red Cross	47.4200 W	CSQ	47.4200 W	CSQ	A	

Radio channel names as listed in this Table are required.
A=Analog, D=Digital, M=Multimode; N=Narrowband, W=Wideband

700 MHZ INTEROPERABILITY CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band 700 MHZ	Description STATEWIDE CHANNEL PLAN

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1.	Repeater Pair	7CALL50	Calling Channel*	769.24375	$F7E	799.24375	$293	D	
2.	Simplex Base / Mobile	7CALL50D	Calling Channel*	769.24375	$F7E	769.24375	$293	D	
3.	Repeater Pair	7CALL70	Calling Channel***	773.25625	$F7E	803.25625	$293	D	
4.	Simplex Base / Mobile	7CALL70D	Calling Channel***	773.25625	$F7E	773.25625	$293	D	
5.	Repeater Pair	7TAC55	General Public Safety	769.74375	$F7E	799.74375	$293	D	
6.	Simplex Base / Mobile	7TAC55D	General Public Safety	769.74375	$F7E	769.74375	$293	D	
7.	Repeater Pair	7TAC75	General Public Safety	773.75625	$F7E	803.75625	$293	D	
8.	Simplex Base / Mobile	7TAC75D	General Public Safety	773.75625	$F7E	773.75625	$293	D	
9.	Repeater Pair	7TAC51	General Public Safety	769.14375	$F7E	799.14375	$293	D	
10.	Simplex Base / Mobile	7TAC51D	General Public Safety	769.14375	$F7E	769.14375	$293	D	
11.	Repeater Pair	7TAC52	General Public Safety	769.64375	$F7E	799.64375	$293	D	
12.	Simplex Base / Mobile	7TAC52D	General Public Safety	769.64375	$F7E	769.64375	$293	D	
13.	Repeater Pair	7TAC53	General Public Safety	770.14375	$F7E	800.14375	$293	D	
14.	Simplex Base / Mobile	7TAC53D	General Public Safety	770.14375	$F7E	770.14375	$293	D	
15.	Repeater Pair	7TAC54	General Public Safety	770.64375	$F7E	800.64375	$293	D	
16.	Simplex Base / Mobile	7TAC54D	General Public Safety	770.64375	$F7E	770.64375	$293	D	
17.	Repeater Pair	7TAC56	General Public Safety	770.24375	$F7E	800.24375	$293	D	
18.	Simplex Base / Mobile	7TAC56D	General Public Safety	770.24375	$F7E	770.24375	$293	D	
19.	Repeater Pair	7GTAC57	Other Public Service	770.99375	$F7E	800.99375	$293	D	
20.	Simplex Base / Mobile	7GTAC57D	Other Public Service	770.99375	$F7E	770.99375	$293	D	
21.	Repeater Pair	7MOB59	Mobile Repeater	770.89375	$F7E	800.89375	$293	D	
22.	Simplex Base / Mobile	7MOB59D	Mobile Repeater	770.89375	$F7E	770.89375	$293	D	
23.	Repeater Pair	7LAW61	Law Enforcement	770.39375	$F7E	800.39375	$293	D	
24.	Simplex Base / Mobile	7LAW61D	Law Enforcement	770.39375	$F7E	770.39375	$293	D	
25.	Repeater Pair	7LAW62	Law Enforcement	770.49375	$F7E	800.49375	$293	D	
26.	Simplex Base / Mobile	7LAW62D	Law Enforcement	770.49375	$F7E	770.49375	$293	D	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band 700 MHZ			Description STATEWIDE CHANNEL PLAN		
	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
27.	Repeater Pair	7TAC71	General Public Safety	773.10625	$F7E	803.10625	$293	D	
28.	Simplex Base / Mobile	7TAC71D	General Public Safety	773.10625	$F7E	773.10625	$293	D	
29.	Repeater Pair	7TAC72	General Public Safety	773.60625	$F7E	803.60625	$293	D	
30.	Simplex Base / Mobile	7TAC72D	General Public Safety	773.60625	$F7E	773.60625	$293	D	
31.	Repeater Pair	7TAC73	General Public Safety	774.10625	$F7E	804.10625	$293	D	
32.	Simplex Base / Mobile	7TAC73D	General Public Safety	774.10625	$F7E	774.10625	$293	D	
33.	Repeater Pair	7TAC74	General Public Safety	774.60625	$F7E	804.60625	$293	D	
34.	Simplex Base / Mobile	7TAC74D	General Public Safety	774.60625	$F7E	774.60625	$293	D	
35.	Repeater Pair	7TAC76	General Public Safety	774.25625	$F7E	804.25625	$293	D	
36.	Simplex Base / Mobile	7TAC76D	General Public Safety	774.25625	$F7E	774.25625	$293	D	
37.	Repeater Pair	7GTAC77	Other Public Service	774.85625	$F7E	804.85625	$293	D	
38.	Simplex Base / Mobile	7GTAC77D	Other Public Service	774.85625	$F7E	774.85625	$293	D	
39.	Repeater Pair	7 M O B79	Mobile Repeater	774.50625	$F7E	804.50625	$293	D	
40.	Simplex Base / Mobile	7 M O B79D	Mobile Repeater	774.50625	$F7E	774.50625	$293	D	
41.	Repeater Pair	7LAW81	Law Enforcement	774.00625	$F7E	804.00625	$293	D	
42.	Simplex Base / Mobile	7LAW81D	Law Enforcement	774.00625	$F7E	774.00625	$293	D	
43.	Repeater Pair	7LAW82	Law Enforcement	774.35625	$F7E	804.35625	$293	D	
44.	Simplex Base / Mobile	7LAW82D	Law Enforcement	774.35625	$F7E	774.35625	$293	D	
45.	Repeater Pair	7FIRE83	Fire	773.50625	$F7E	803.50625	$293	D	
46.	Simplex Base / Mobile	7FIRE83D	Fire	773.50625	$F7E	773.50625	$293	D	
47.	Repeater Pair	7FIRE84	Fire	773.85625	$F7E	803.85625	$293	D	
48.	Simplex Base / Mobile	7FIRE84D	Fire	773.85625	$F7E	773.85625	$293	D	
49.	Repeater Pair	7MED86	E M S	773.00625	$F7E	803.00625	$293	D	
50.	Simplex Base / Mobile	7MED86D	E M S	773.00625	$F7E	773.00625	$293	D	
51.	Repeater Pair	7MED87	E M S	773.35625	$F7E	803.35625	$293	D	
52.	Simplex Base / Mobile	7MED87D	E M S	773.35625	$F7E	773.35625	$293	D	
53.	Repeater Pair	7 D A T A89	Mobile Data **	774.75625	$F7E	804.75625	$293	D	
54.	Simplex Base / Mobile	7 D A T A89D	Mobile Data **	774.75625	$F7E	774.75625	$293	D	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band 700 MHZ			Description STATEWIDE CHANNEL PLAN		
	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
55.	Repeater Pair	7AG58	Air - Ground	769.13125	$F7E	799.13125	$293	D	
56.	Simplex Base / Mobile	7AG58D	Air - Ground	769.13125	$F7E	769.13125	$293	D	
57.	Repeater Pair	7AG60	Air - Ground	769.63125	$F7E	799.63125	$293	D	
58.	Simplex Base / Mobile	7AG60D	Air - Ground	769.63125	$F7E	769.63125	$293	D	
59.	Repeater Pair	7AG67	Air - Ground	770.13125	$F7E	800.13125	$293	D	
60.	Simplex Base / Mobile	7AG67D	Air - Ground	770.13125	$F7E	800.13125	$293	D	
61.	Repeater Pair	7AG68	Air - Ground	770.63125	$F7E	800.63125	$293	D	
62.	Simplex Base / Mobile	7AG68D	Air - Ground	770.63125	$F7E	800.63125	$293	D	
63.	Repeater Pair	7AG78	Air - Ground	773.11875	$F7E	803.11875	$293	D	
64.	Simplex Base / Mobile	7AG78D	Air - Ground	773.11875	$F7E	773.11875	$293	D	
65.	Repeater Pair	7AG80	Air - Ground	773.61875	$F7E	803.61875	$293	D	
66.	Simplex Base / Mobile	7AG80D	Air - Ground	773.61875	$F7E	773.61875	$293	D	
67.	Repeater Pair	7AG85	Air - Ground	774.11875	$F7E	804.11875	$293	D	
68.	Simplex Base / Mobile	7AG85D	Air - Ground	774.11875	$F7E	774.11875	$293	D	
69.	Repeater Pair	7AG88	Air - Ground	774.61875	$F7E	804.61875	$293	D	
70.	Simplex Base / Mobile	7AG88D	Air - Ground (LZ)****	774.61875	$F7E	774.61875	$293	D	
71.	Itinerant *****	700 DEM	Emergency Management	769.05625	$F7E	769.05625	$293	D	Baca & Kiowa
72.	Itinerant *****	700 LAW	Law Enforcement	769.06875	$F7E	769.06875	$293	D	Baca & Kiowa
73.	Itinerant *****	700 FIRE	Fire Department	799.05625	$F7E	799.05625	$293	D	Baca & Kiowa
74.	Itinerant *****	700 EMS	Medical	799.06875	$F7E	799.06875	$293	D	Baca & Kiowa
75.	Itinerant *****	700 OTHER	All Other Agencies	774.99375	$F7E	774.99375	$293	D	Baca & Kiowa
76.	Itinerant *****	700 TALK	Talk Around 700	804.99375	$F7E	804.99375	$293	D	Baca & Kiowa

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band 700 MHZ			Description STATEWIDE CHANNEL PLAN		
	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
* Recommended as PRIMARY calling channel for 700 MHz Band. ** Voice communications are permitted on 7 D A T A 89 / 7 D A T A 89D on a secondary basis - 90.531(b)(1)(i). *** Recommended as SECONDARY calling channel or INCIDENT calling channel for 700 MHz band. 7AG58-7AG88: TX NAC: $293 (659 10). RX NAC $F7E (3966 10). These channels are reserved for air-ground communications to be used by low-altitude aircraft and ground based stations: See FCC rule 90.531(7). (i) Airborne use of these channels is limited to aircraft flying at or below 457 meters (1500 feet) above ground level. (ii) Aircraft are limited to 2 watts effective radiated power (ERP) when transmitting while airborne on these channels. (iii) Aircraft may transmit on either the mobile or base transmit side of the channel pair. (iv) States are responsible for the administration of these channels. These are NOT nationwide interoperability channels. **** 7AG88D is recommended for Landing Zone use. Radio channel names as listed in this Table are required. A=Analog, D=Digital, M=Mixed Mode; N=Narrowband, W=Wideband ***** Itinerant 700 MHz Frequencies are limited to 2 Watts transmit power.									

800 MHZ INTEROPERABILITY CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **800 MHZ**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	**Channel Name / Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**Rx Freq N or W**	**Rx Tone / NAC**	**Tx Freq N or W**	**Tx Tone / NAC**	**Mode A, D, or M**	**Notes**
1.	800 DTR	BACA MAC	All County Agencies					D	Baca County
2.	800 DTR	BC MAC	All County Agencies					D	Bent County
3.	800 DTR	CC MAC	All County Agencies					D	Crowley County
4.	800 DTR	KC MAC	All County Agencies					D	Kiowa County
5.	800 DTR	OC MAC	All County Agencies					D	Otero County
6.	800 DTR	PC MAC	All County Agencies					D	Prowers County
7.	800 DTR	SRIC CALL	Regional					D	
8.	800 DTR	SRIC FIRE	Regional					D	
9.	800 DTR	SRIC LAW	Regional					D	
10.	800 DTR	SRIC EMS	Regional					D	
11.	800 DTR	MAC 9 thru 12	SE Region					D	
12.	800 DTR	MAC 21	Statewide					D	
13.	800 DTR	ER MAC	Statewide ER					D	
14.	800 DTR	EMS MAC	Statewide EMS					D	
15.	800 DTR	OEM SE	Regional					D	
16.	800 DTR	SE NET	PSAP to PSAP					D	
17.	Simplex Base / Mobile	SMPX1	Statewide	851.1000 N	$293	851.1000 N	$293	D	Fire & Air to Ground Med
18.	Simplex Base / Mobile	SMPX2	Statewide	851.7500 N	$293	851.7500 N	$293	D	Law Enforcement
19.	Simplex Base / Mobile	SMPX3	Statewide	852.3000 N	$293	852.3000 N	$293	D	EMS
20.	Simplex Base / Mobile	SMPX4	Statewide	852.5500 N	$293	852.5500 N	$293	D	Public Works
21.	Simplex Base / Mobile	SMPX5	Statewide	853.6875 N	$293	853.6875 N	$293	D	Incident Specific
22.	Repeater Pair	STAC	Statewide	853.7875 N	156.7	808.7875 N	156.7	A	
23.	Simplex Base / Mobile	STACD	Statewide	853.7875 N	156.7	853.7875 N	156.7	A	
24.	Repeater Pair	8CALL90	Any Public Safety	851.0125 W	CSQ	806.0125 W	156.7	A	
25.	Simplex Base / Mobile	8CALL90D	Any Public Safety	851.0125 W	CSQ	851.0125 W	156.7	A	
26.	Repeater Pair	8TAC91	Any Public Safety	851.5125 W	CSQ	806.5125 W	156.7	A	See NIFOG for rules of use.
27.	Simplex Base / Mobile	8TAC91D	Any Public Safety	851.5125 W	CSQ	851.5125 W	156.7	A	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band **800 MHZ**			Description **STATEWIDE CHANNEL PLAN**		
	Channel Configuration	**Channel Name / Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**Rx Freq N or W**	**Rx Tone / NAC**	**Tx Freq N or W**	**Tx Tone / NAC**	**Mode A, D, or M**	**Notes**
28.	Repeater Pair	8TAC92	Any Public Safety	852.0125 W	CSQ	807.0125 W	156.7	A	
29.	Simplex Base / Mobile	8TAC92D	Any Public Safety	852.0125 W	CSQ	852.0125 W	156.7	A	
30.	Repeater Pair	8TAC93	Any Public Safety	852.5125 W	CSQ	807.5125 W	156.7	A	
31.	Simplex Base / Mobile	8TAC93D	Any Public Safety	852.5125 W	CSQ	852.5125 W	156.7	A	
32.	Repeater Pair	8TAC94	Any Public Safety	853.0125 W	CSQ	808.0125 W	156.7	A	
33.	Simplex Base / Mobile	8TAC94D	Any Public Safety	853.0125 W	CSQ	853.0125 W	156.7	A	
34.	Mobile Extender	SEMX 1	Any Public Safety	860.2125 W	88.5	860.2125 W	88.5	A	Baca, Kiowa, Prowers
35.	Mobile Extender	SEMX 2	Any Public Safety	860.2125 W	127.3	860.2125 W	127.3	A	Otero, Bent, Crowley
36.	Mobile Extender	SEMX 3	Any Public Safety	860.2125 W	156.7	860.2125 W	156.7	A	Future Expansion
37.	Portable Repeater	BC RP 1	Southeast Public Safety	860.2125 W	88.5	815.2125 W	88.5	A	Portable
38.	Portable Repeater	BC RP 2	Southeast Public Safety	860.2125 W	127.3	815.2125 W	127.3	A	Portable
39.	Portable Repeater	BC RP 3	Southeast Public Safety	860.2125 W	156.7	815.2125 W	156.7	A	Portable

Radio channel names as listed in this Table are required.
A=Analog, D=Digital, M=Mixed Mode; N=Narrowband, W=Wideband
8CALL90-8TAC94: CTCSS 156.7 (5A) receive and transmit. Channel names were ICALL, ITAC1-ITAC4. Wideband FM 20K0F3E before and after rebanding.

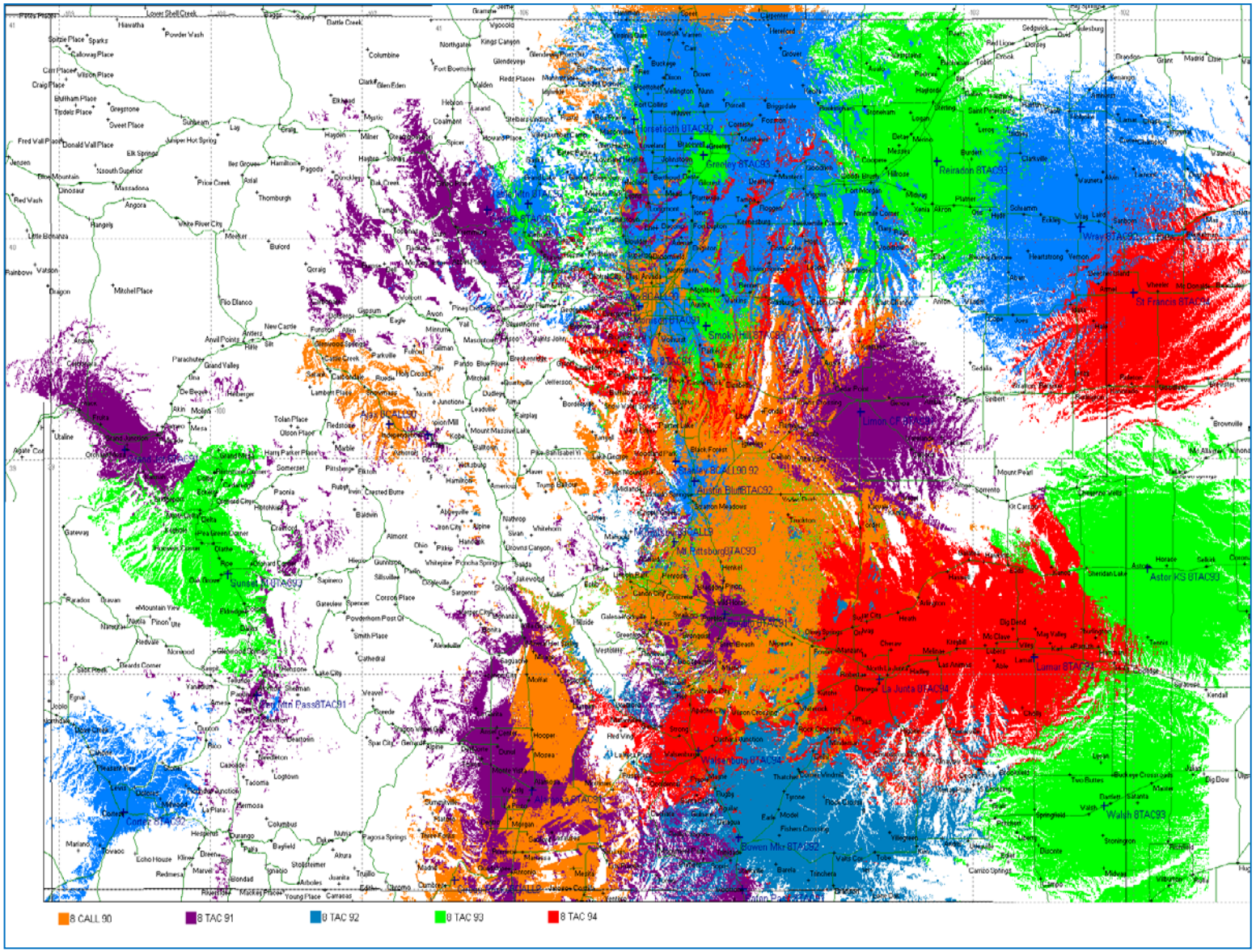


FIGURE 22: STATE OF COLORADO 8CALL/8TAC COVERAGE MAP

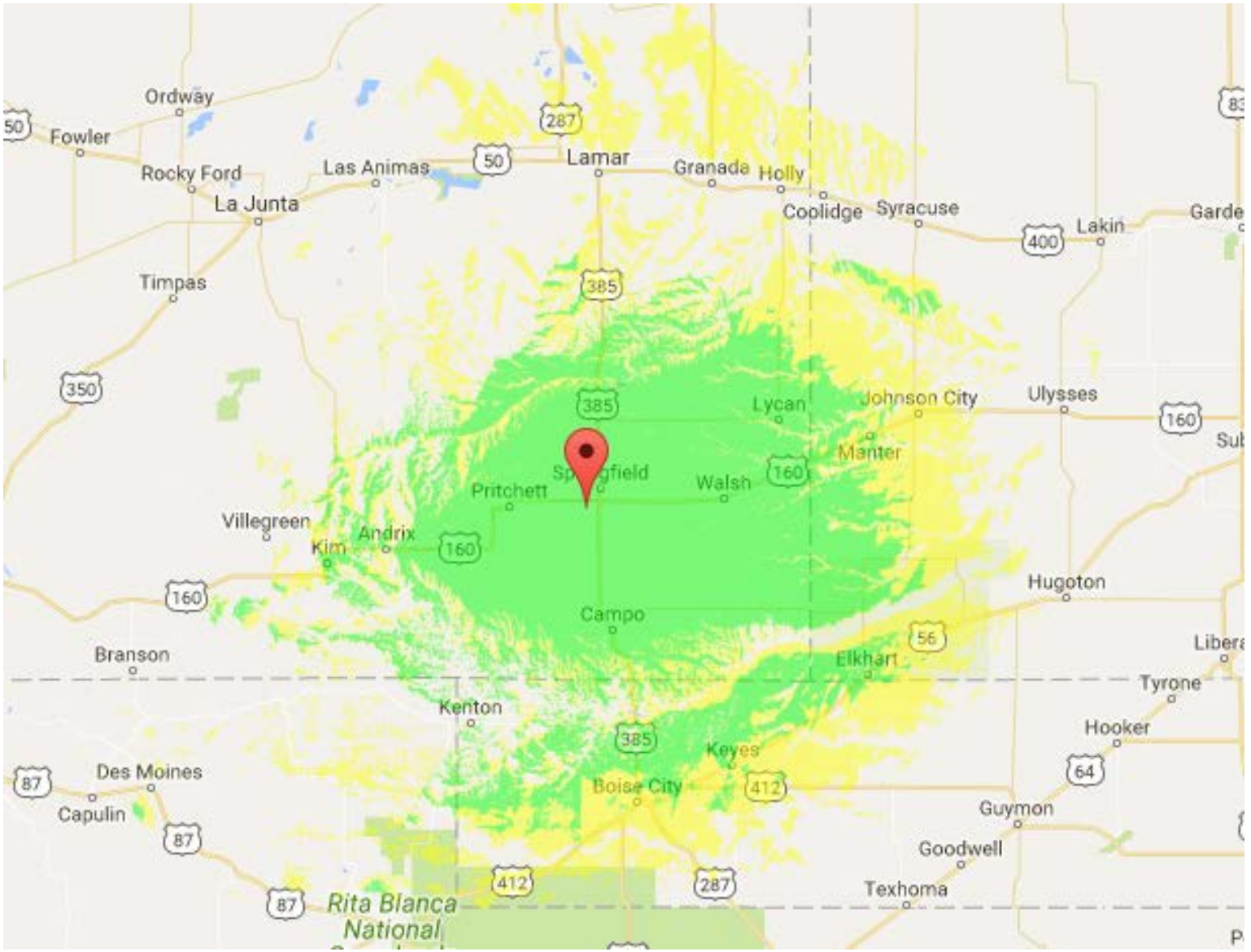


FIGURE 23: 8TAC91 COVERAGE MAP – SPRINGFIELD SITE

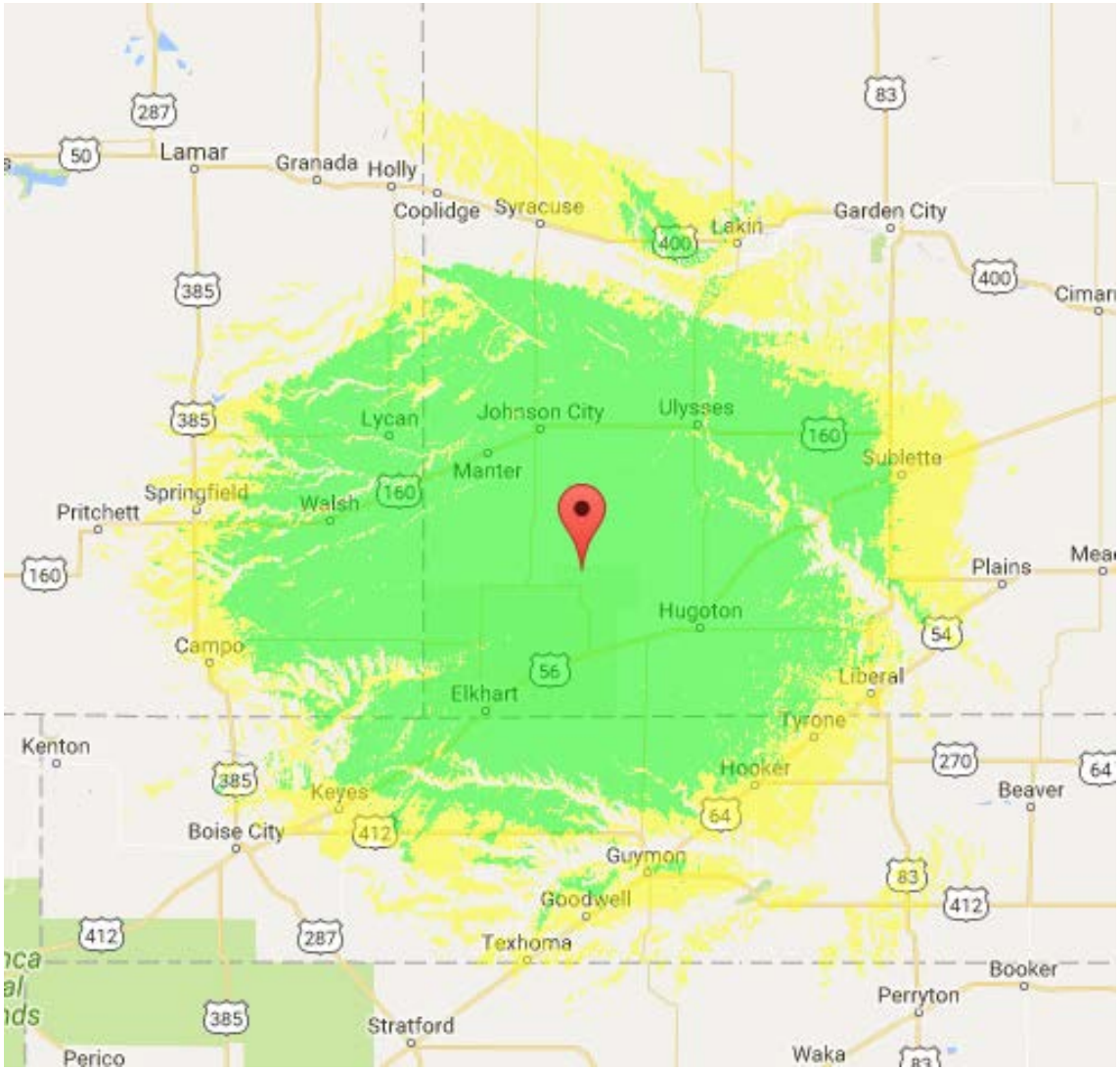


FIGURE 24: 8TAC91/8CALL90 COVERAGE MAP - RICHFIELD KS SITE

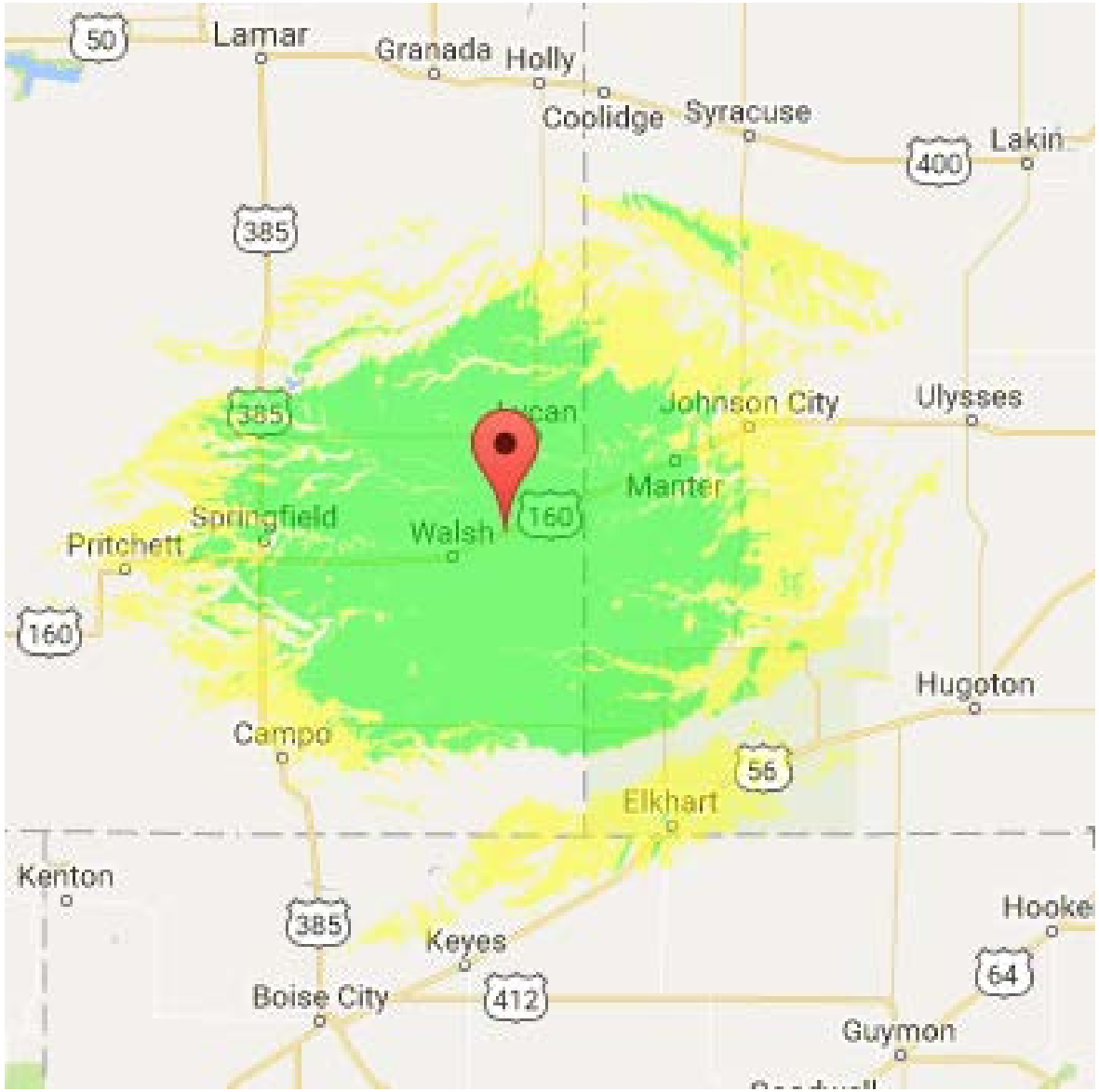


FIGURE 25: 8TAC93 COVERAGE MAP – SKYLAND GRAIN SITE

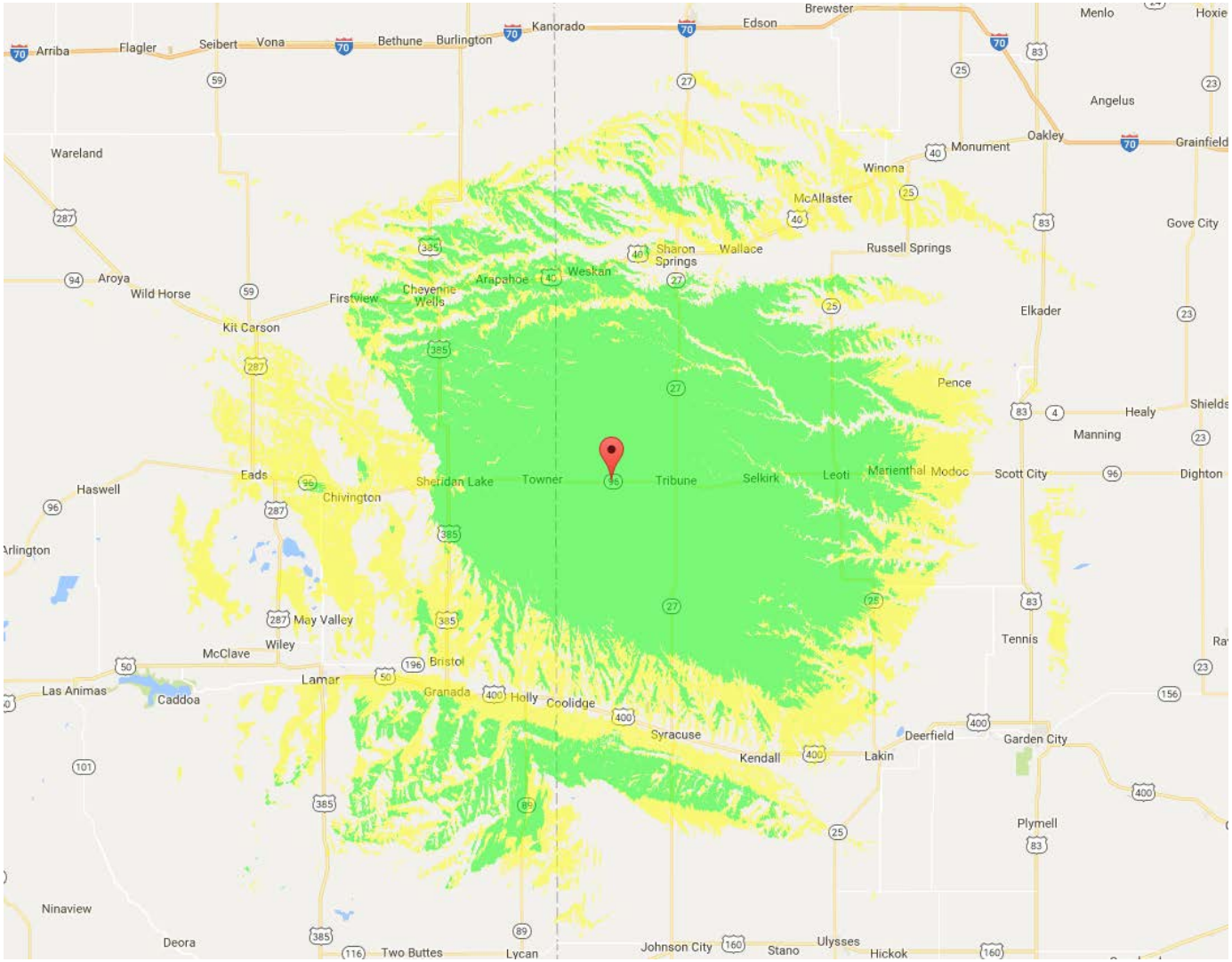


FIGURE 26: 8TAC93/8CALL90 COVERAGE MAP – ASTOR, KS SITE

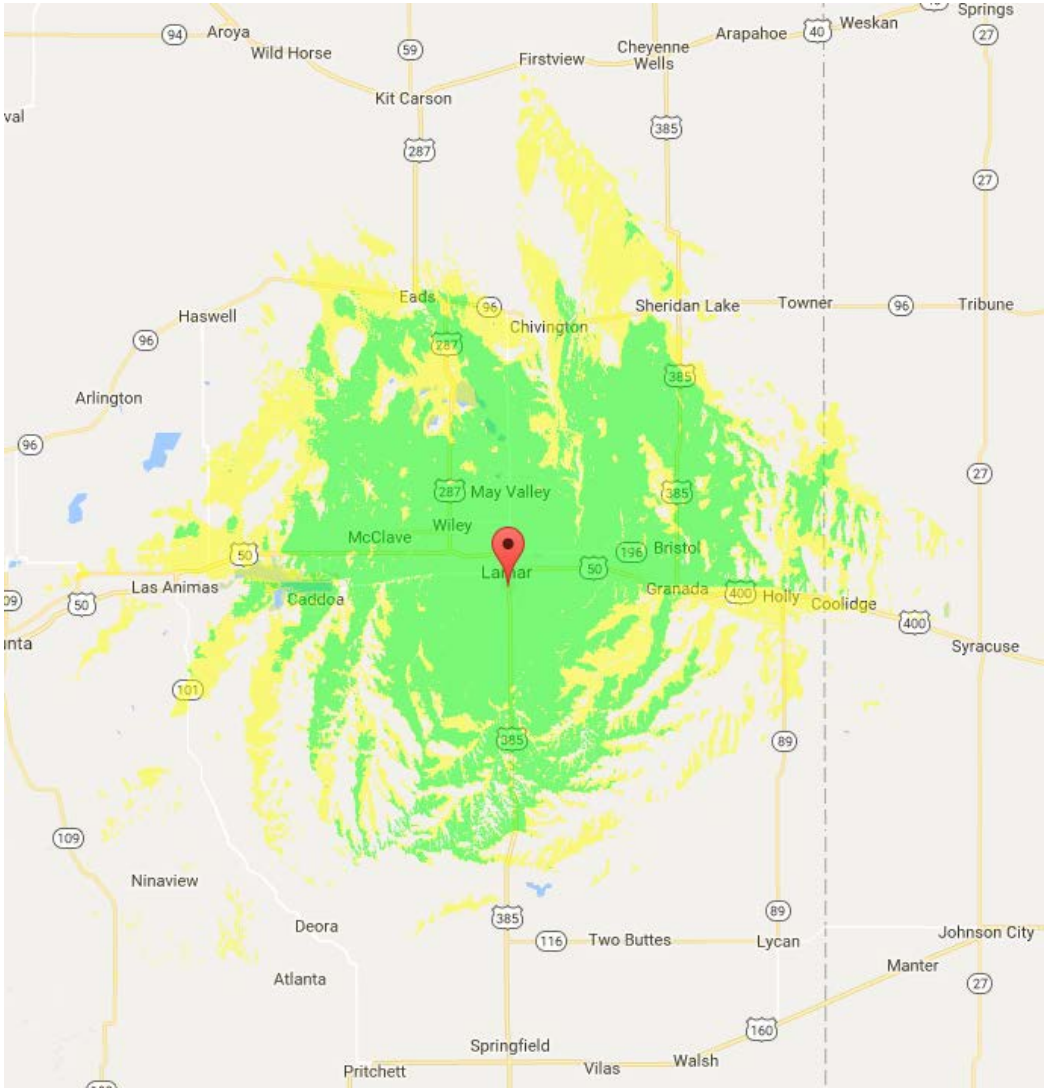


FIGURE 27: 8TAC94 COVERAGE MAP - LAMAR SITE

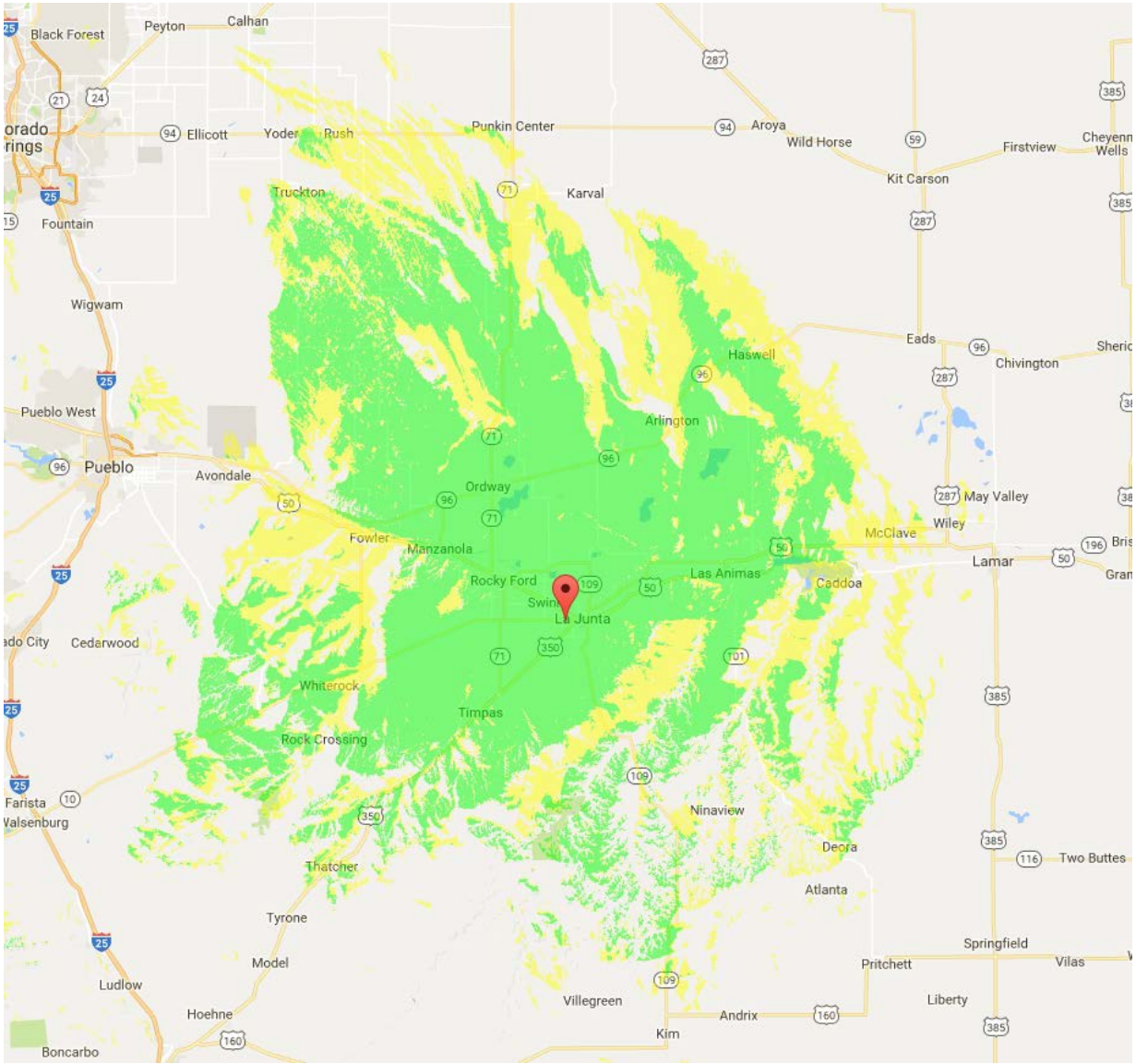


FIGURE 28: 8TAC94 COVERAGE MAP – LA JUNTA SITE

COLORADO STATE A.R.E.S. REGION 4 DISTRICT 1 (R4D1) CHANNELS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **Colorado State A.R.E.S. R4D1 Channel Plan**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1.	Repeater	PLEASANT HTS KC0HH	Baca/Bent/Prowers	146.6100 W	123.0	146.0100 W	123.0	A	IRLP Node 3774 Linked to Lamar
2.	Repeater	LAMAR KC0HH	Prowers/Bent/Kiowa	449.5000 W	123.0	444.5000 W	123.0	A	IRLP Node 3774 Linked to Frick
3.	Repeater	LAMAR	Prowers	449.2000 W	162.2	444.2000 W	162.2	A	RD982 Operating in Mixed Mode
4.	DMR Repeater	LAMAR	Prowers	449.2000 N	TS1	444.2000 N	TS1	D	Dynamic on Brandmeister Link
5.	DMR Repeater	LAMAR	Prowers	449.2000 N	TS 2	449.2000 N	TS2	D TG 1	Local TG Only
6.	Repeater	2 BUTTES KZ0DEM	Baca/Prowers	147.3300 W	118.8	147.9300 W	118.8	A	IRLP 7142 Linked to KZ Frick
7.	Repeater	KZ FRICK KZ0DEM	Baca/Bent/Prowers	449.2000 W	118.8	444.2000 W	118.8	A	IRLP 7142 Linked to 2 Buttes
8.	Repeater	WALSH KC0YWX	Baca	147.2125 W	118.8	144.5125 W	118.8	A	KC0YWX Repeater Local
9.	Repeater	TATOR KZ0DEM	Baca/Las Animas	146.6400 N	118.8	146.0400 W	118.8	A	KZ0DEM Tator Butte Repeater
10.	Simplex	BCSMX	Baca County Simplex	445.9250 W	118.8	445.9250 W	118.8	A	Baca County Simplex
11.	DMR Simplex	SERDMRSX	Southeast Region DMR	446.5125 N	CC1	446.5125 N	TS1	D TG810	Southeast Region DMR Simplex
12.	DMR Repeater	SHERIDAN SE	Sheridan Lake SE	446.7500 N	CC7	441.7500 N	TS2	D TG 718	Southeast DMR Linked
13.	DMR Repeater	SHERIDAN SO	Sheridan Lake South	446.7500 N	CC7	441.7500 N	TS2	D TG 719	South DMR Linked
14.	DMR Repeater	SHERIDAN RM	Sheridan Lake Rocky Mtn	446.7500 N	CC7	441.7500 N	TS1	D TG 700	Rocky Mountain Wide Linked
15.	DMR Repeater	SPRINGFIELD SE	Baca EOC Southeast	446.7625 N	CC7	441.7625 N	TS2	D TG 718	SE DMR Linked
16.	DMR Repeater	SPRINGFIELD SO	Baca EOC South	446.7625 N	CC7	441.7625 N	TS2	D TG719	South DMR Linked
17.	DMR Repeater	SPRINGFIELD RM	Baca EOC Rocky Mtn	446.7625 N	CC7	441.7625 N	TS1	D TG700	Rocky Mountain Wide Linked
18.	Repeater	LA JUNTA W0KEV	Otero/Bent/Crowley	146.7000 W	CSQ	146.1000 W	CSQ	A	System Fusion Repeater
19.	Repeater	ARK VALLEY W0KEV	Otero/Bent/Crowley	449.6500 W	100.0	444.6500 W	100.0	A	Ark Valley Repeater Local La Junta
20.	Repeater	LA JUNTA K0KEV DSTR	DSTAR La Junta	449.7000 N		444.7000 N		D	DSTAR Network
21.	Simplex	2 METER SMPX	Nationwide Calling	146.5200 W	CSQ	146.5200 W	100.0	A	Nationwide Simplex Calling
22.	Simplex	SKYWARN SMPX	Southeast Region	146.5500 W	CSQ	146.5500 W	100.0	A	Weather Spotting Simplex
23.	Simplex	70CM SMPX	Nationwide Calling	446.0000 W	CSQ	446.0000 W	100.0	A	70cm Simplex Nationwide
24.	Packet Radio	PACKET	Nationwide Packet	145.0100 W	CSQ	145.0100 W	100.0	D	Nationwide Packet
25.	Repeater	ULYSSES K0ECT	K0ECT Repeater System	444.5250 W	141.3	449.5250 W	141.3	A	Ulysses KS Linked K0ECT System
26.	Repeater	ULYSSES 2M RPT	Ulysses KS K0ECT	147.0600 W	CSQ	147.6600 W	141.3	A	Ulysses Local NOT LINKED
27.	Repeater	SYRACUSE K0ECT	K0ECT Repeater System	444.0000 W	141.3	449.0000 W	141.3	A	Syracuse KS Linked K0ECT Systm

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **Colorado State A.R.E.S. R4D1 Channel Plan**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
28.	Repeater	SYRACUSE KA0TAO	SYRACUSE UHF	443.1250 W	100.0	448.1250 W	100.0	A	Syracuse KS Not Linked
29.	Repeater	SYRACUSE KA0TAO	SYRACUSE VHF	146.7750 W	CSQ	146.1750 W	CSQ	A	Syracuse KS Not Linked
30.	Repeater	ELKHART CAPROCK	Caprock Intertie System	444.9250 W	88.5	449.9250 W	88.5	A	KS/TX/OK Caprock Link System
31.	Repeater	TRIBUNE REPEATER	Tribune Repeater	442.1750 W	156.7	447.1750 W	156.7	A	Tribune KS Greeley, CO K0WPM
32.	Repeater	BOISE CAPROCK	Caprock Intertie System	147.3300 W	88.5	147.9300 W	88.5	A	KS/TX/OK Caprock Link System
33.	Repeater	2M N5BOP NM	Des Moines NM	146.8500 W	100.0	146.2500 W	100.0	A	Des Moines Repeater
34.	Repeater	70CM N5BOP NM	Des Moines NM	444.8000 W	77.0	449.8000 W	77.0	A	Des Moines Repeater
35.	Simplex	CO 2M SSB	Statewide 2 Meter SSB	144.2000 W	USB	144.2000 W	USB	A	Statewide SSB Net
36.	High Frequency	SATERN NET	Salvation Army Network	14.2650	SSB	14.2650	SSB	A	Statewide Salvation Army Net
37.	High Frequency	ARES HF NET	HF Net Freq ARES	3.810	SSB	3.810	SSB	A	HF Net Frequency
38.	High Frequency	RACES STATEWIDE	Statewide RACES Net	3.990.5	SSB	3.990.5	SSB	A	Statewide RACES Net
39.	High Frequency	ARES STATEWIDE	Statewide ARES Net	3.928.0	SSB	3.928.0	SSB	A	Statewide ARES Net
40.	High Frequency	CO WX NET	Statewide Weather Net	3.945	SSB	3.945	SSB	A	Statewide Weather net 0630 daily
41.	High Frequency	80M HF CW NET	Statewide HF CW Net	3.713	CW	3.713	CW	A	CW Statewide Net
42.	High Frequency	80M HF DIGITAL NET	Statewide HF Digital Net	3.615		3.615		D	Digital Network
43.	High Frequency	40M HF DIGITIAL NET	Statewide HF Digital Net	7.063		7.063		D	Digital Network
44.	High Frequency	ALT HF ARES NET	Alternate HF ARES Net	7.235	SSB	7.235	SSB	A	Alternate State ARES Network
45.	High Frequency	ALT RACES 40M	Alternate HF RACES Net	7.250	SSB	7.250	SSB	A	Alt. 40M RACES Network
46.	DMR Repeater	PUEBLO ARES 1	Pueblo County	447.9500 N	CC8	442.9500 N	TS 1	D TG696969	Pueblo ARES 1
47.	DMR Repeater	PUEBLO ARES 2	Pueblo County	447.9500 N	CC8	442.9500 N	TS 2	D TG696969	Pueblo ARES 2
48.	Repeater	K0JSC FUN MACHINE	Pueblo County	449.9750 W	100.0	444.9750 W	100.0	A	Voted System
49.	Repeater	K0JSC BOONE FUN	Pueblo County	447.2750 W	100.0	442.2750 W	100.0	A	Boone Linked Repeater
50.	Simplex	10m USB CALLING	Nationwide	28.4000 W	USB	28.4000 W	USB	A	10 M USB
51.	Simplex	10m FM CALLING	Nationwide	29.6000 W	FM	29.6000 W	FM	A	10 M FM
52.	Simplex	6M USB CALLING	Nationwide	50.1250 W	USB	50.1250 W	USB	A	6 M USB
53.	Simplex	6M FM CALLING	Nationwide	52.5250 W	FM	52.5250 W	FM	A	6 M FM
54.	Simplex	2M FM-APRS	Nationwide	144.3900 W	FM	144.3900 W	FM	A	2 M FM APRS

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **Colorado State A.R.E.S. R4D1 Channel Plan**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
55.	Simplex	1.25 M FM CALLING	Nationwide	223.5000 W	FM	223.5000 W	FM	A	1.25 M FM
56.	Simplex	70CM USB CALLING	Nationwide	432.1000 W	USB	432.1000 W	USB	A	70 CM USB Calling Channel
57.	Simplex	33CM CALLING	Nationwide	927.5000 W	FM	927.5000 W	FM	A	33 CM Calling
58.	Simplex	23CM CALLING	Nationwide	1294.5000 W	FM	1294.5000 W	FM	A	23 CM Calling

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25 or DMR) or "M" indicating mixed mode. All channels are show.

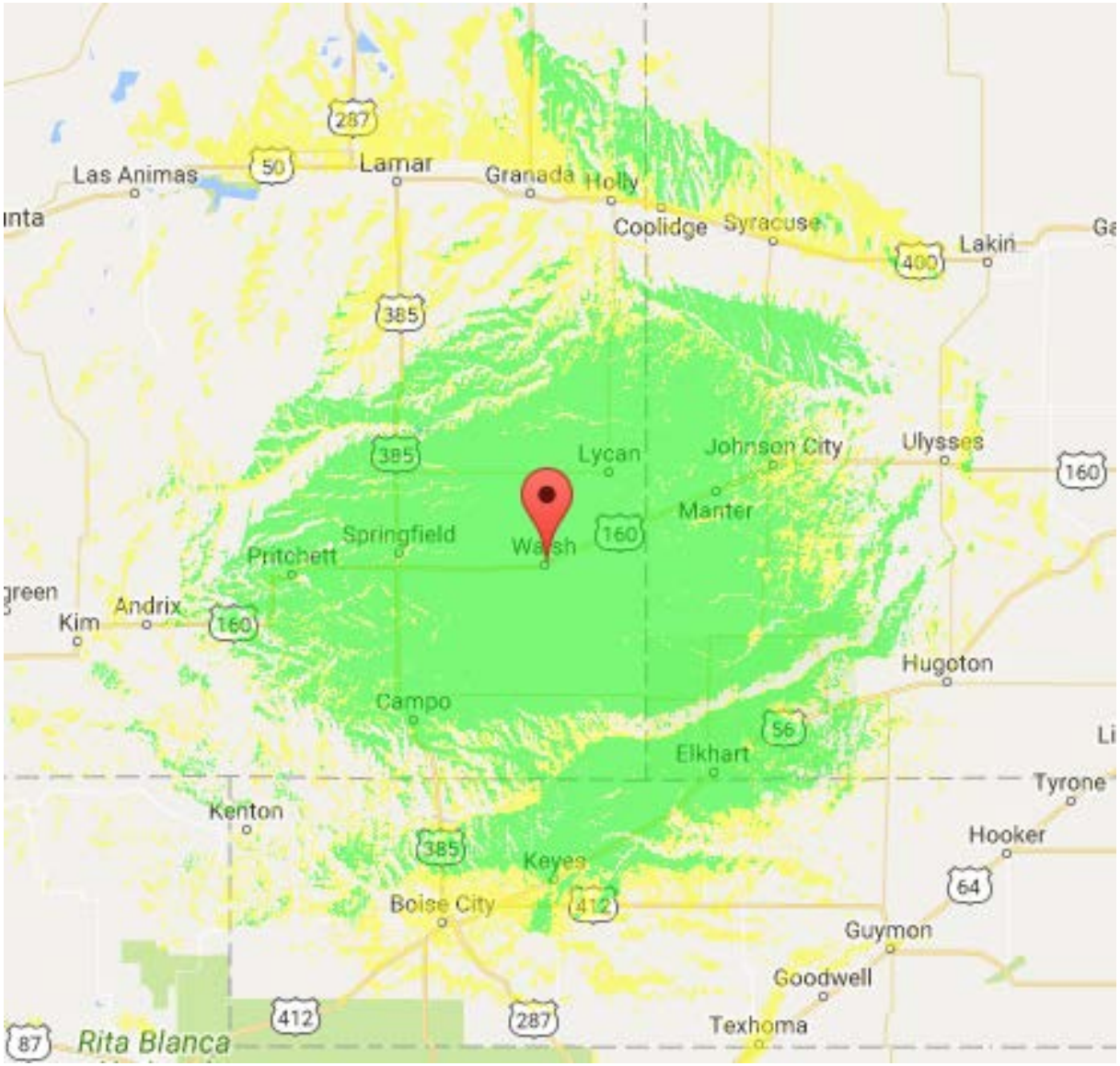


FIGURE 29 : KC0YWX REPEATER – WALSH

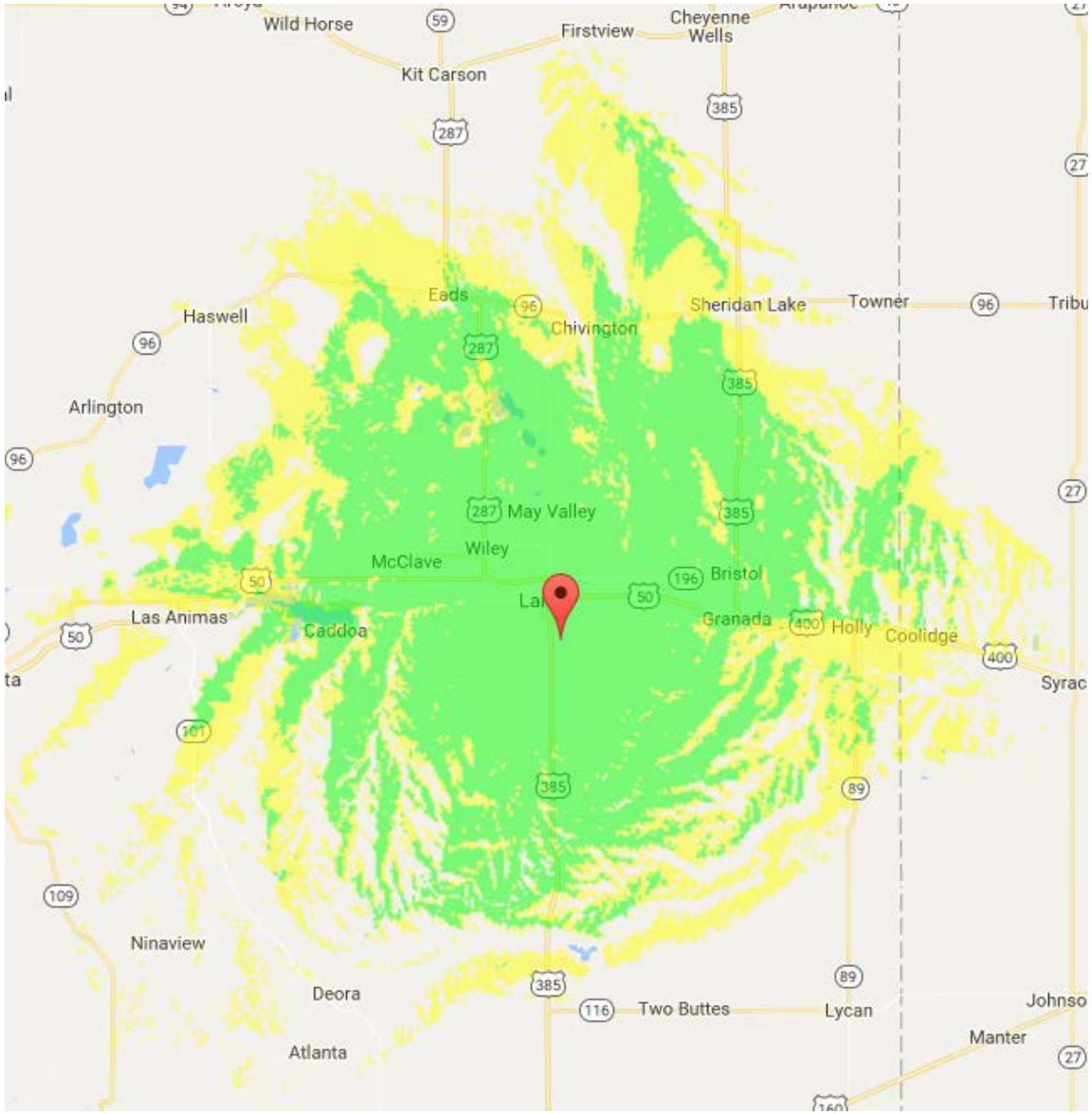


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FIGURE 30: KC0HH REPEATER – LAMAR

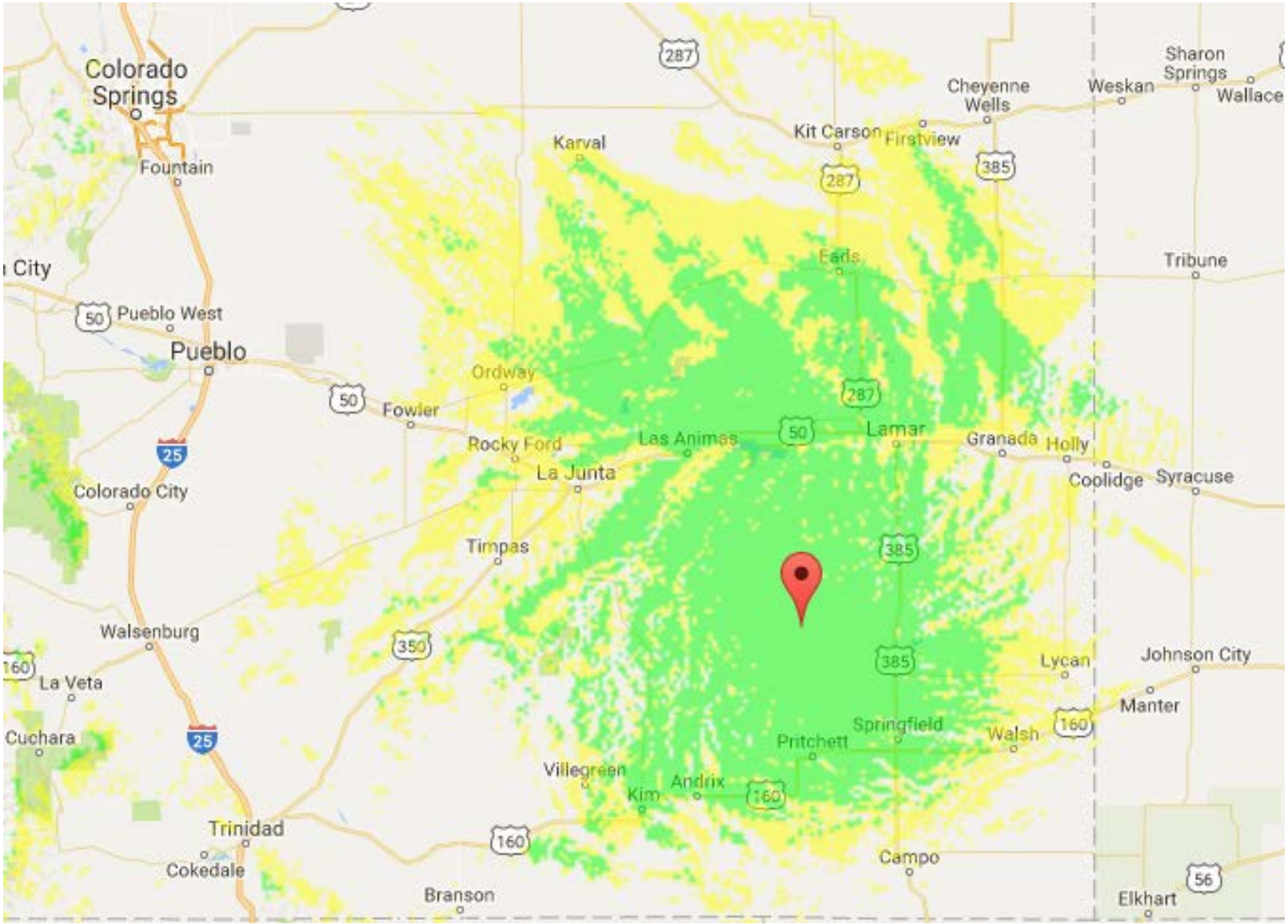

FIGURE 31: KC0HH REPEATER – FRICK

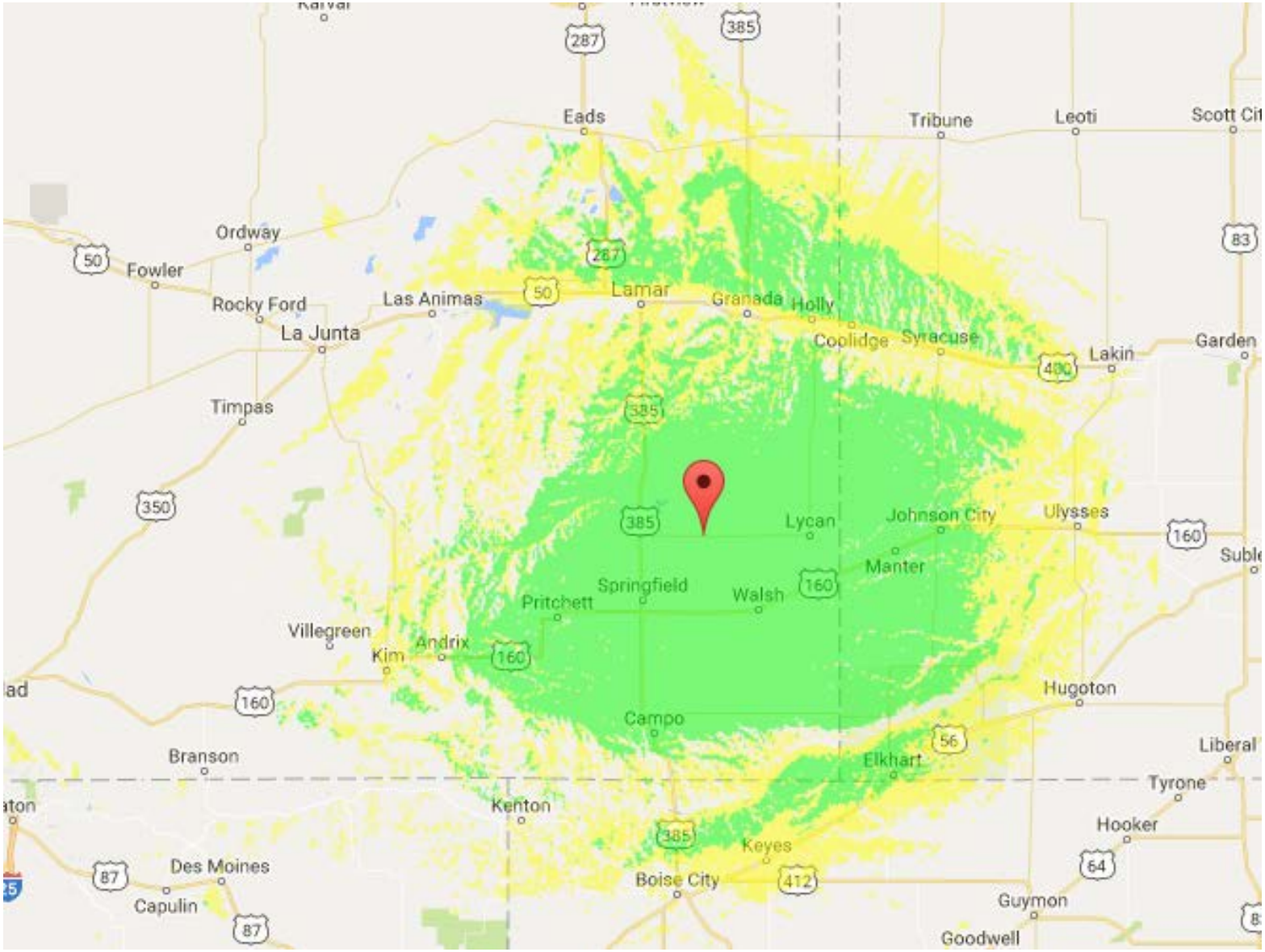

FIGURE 32: KZ0DEM REPEATER – TWO BUTTES

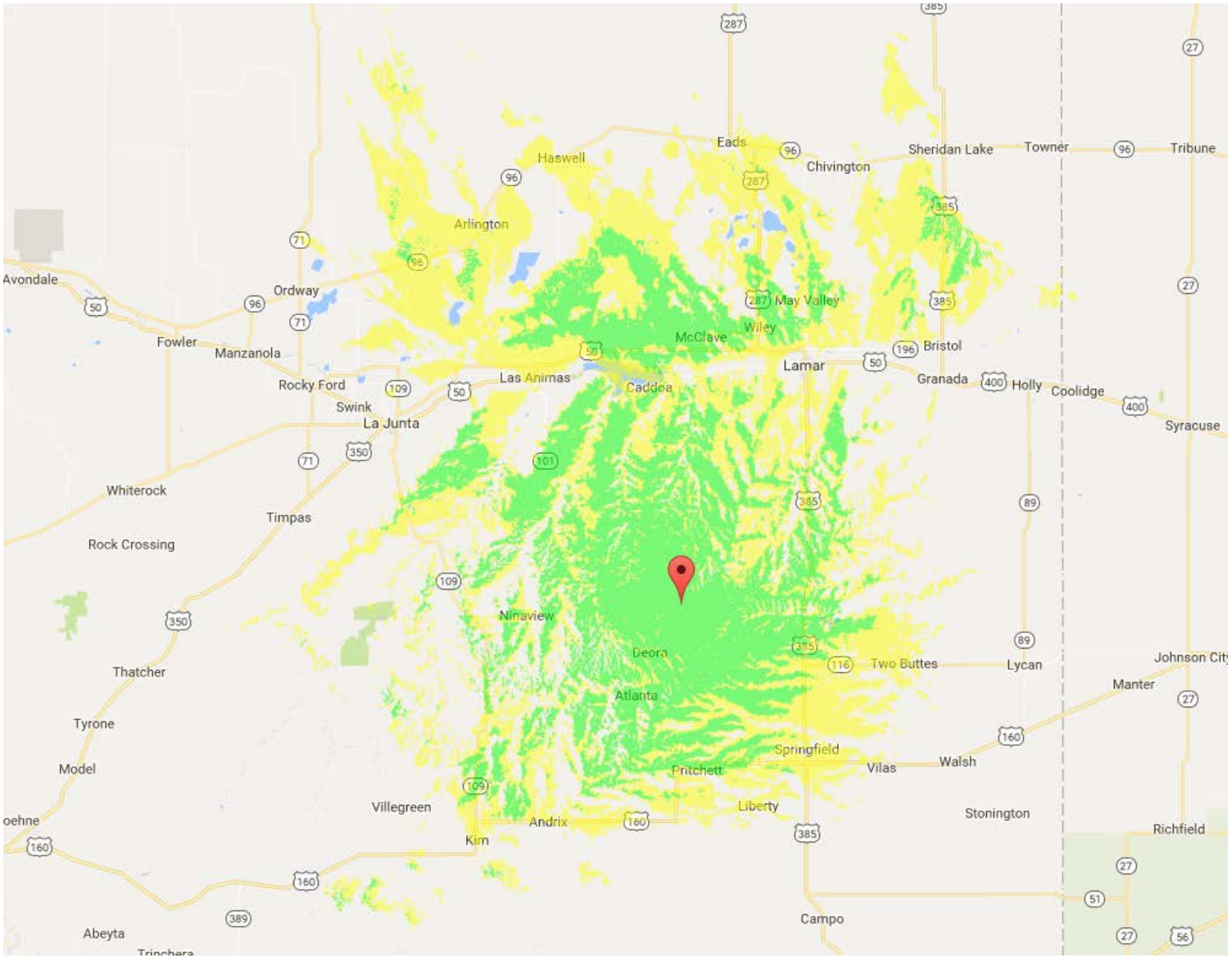

FIGURE 33: KZ0DEM REPEATER – FRICK

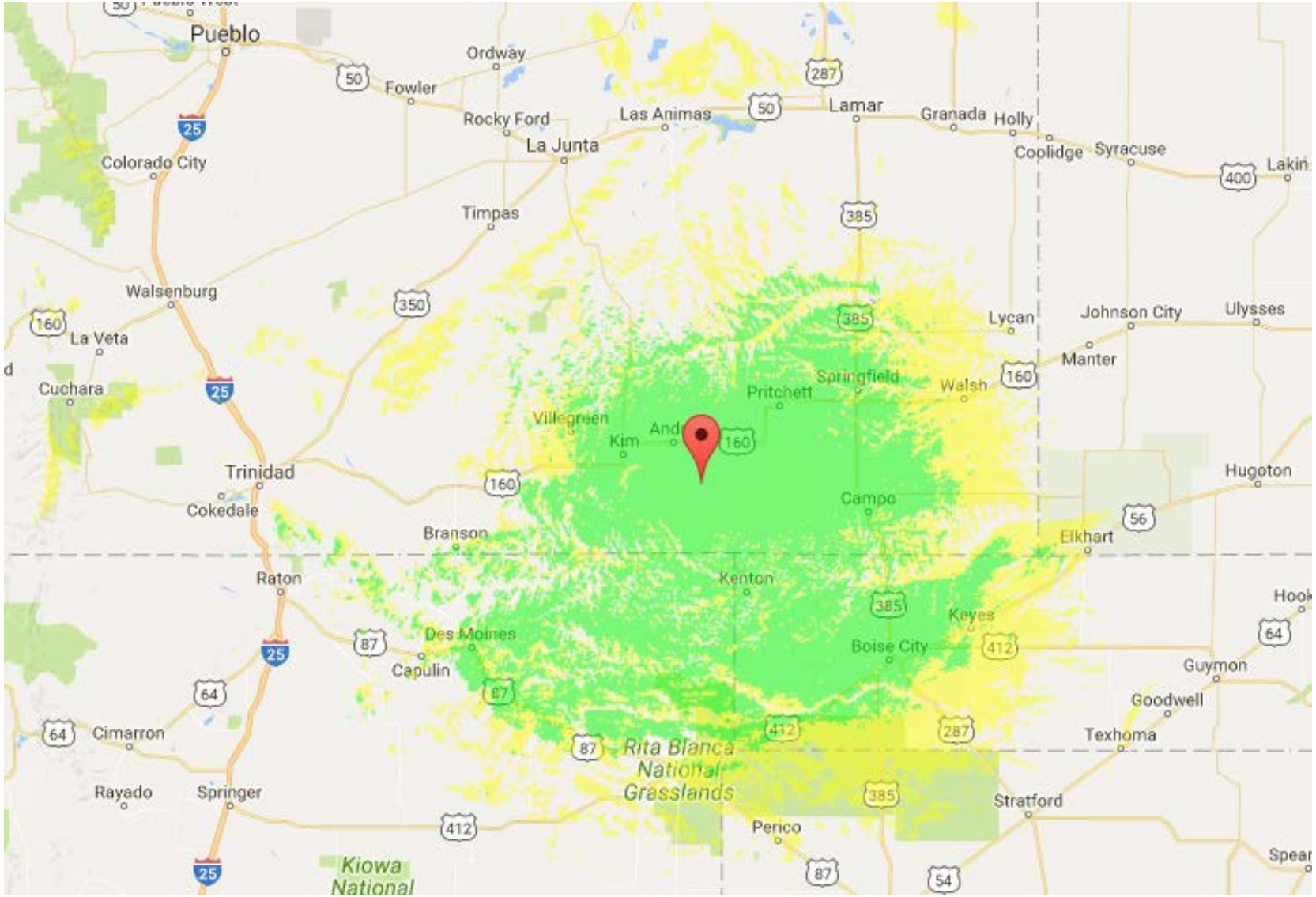

FIGURE 34: KZ0DEM REPEATER – TATOR BUTTE

Automatic Link Establishment (ALE) **http://HFLink.net**

Emergency/Disaster Relief Interoperation Voice Channels (kHz, USB*):

Netcall: HFL	
3791.0	14346.0
3996.0	18117.5
5375.0	21432.5
7185.5	24932.0
7296.0	28312.5

Text Message Channels (kHz, USB*)

Netcall: HFN	
3596.0	18106.0
7102.0	21096.0
10145.5	24926.0
14109.0	28146.0

- Carrier reference frequency (center of ALE signal offset +1625 Hz)

CIVIL AIR PATROL (CAP) RADIO SYSTEM

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1.	SIMPLEX	CC 1	Command & Control	141.5750 N	127.3/ $4F9	141.5750 N	127.3/ $4F9	M	Command & Control 1
2.	SIMPLEX	CC 2	Command & Control	141.0000 N	131.8/ $526	141.0000 N	131.8/ $526	M	Command & Control 2
3.	SIMPLEX	AIR 1	Air to Air 1	149.2750 N	141.3/ $585	149.2750 N	141.3/ $585	M	Air to Air 1 Simplex
4.	SIMPLEX	AIR 2	Air to Air 2	150.5625 N	151.4/ $5EA	150.5625 N	151.4/ $5EA	M	Air to Air 2 Simplex
5.	SIMPLEX	AIR-GRND	Air to Ground	141.02500 N	CSQ	141.0250 N	CSQ	A	Air to Ground
6.	SIMPLEX	GUARD 1	CAP Guard 1	150.2250 N	162.2/ $656	150.2250 N	162.2/ $656	M	CAP Guard 1 Simplex
7.	SIMPLEX	TAC 1	Tactical 1	139.8750 N	173.8/ $6CA	139.8750 N	173.8/ $6CA	M	Tactical 1 Simplex
8.	REPEATER	LAMAR CO	Lamar Repeater	148.1250 N	136.5	143.5500 N	136.5	A	Linked Statewide
9.	REPEATER	ALAMOSA	Pool Table	148.1250 N	151.4	143.5500 N	151.4	A	Linked Statewide
10.	REPEATER	BRECKENRIDGE	Breck Repeater	148.1500 N	123.0	143.7000 N	123.0	A	Linked Statewide
11.	REPEATER	CHERRY CREEK	Denver Metro	148.1250 N	156.7	143.5500 N	156.7	A	Linked Statewide
12.	REPEATER	CORTEZ	Abajo Peak – CO/UT	148.1250 N	146.2	143.5500 N	146.2	A	Linked Statewide
13.	REPEATER	COLO SPRINGS	Colorado Springs	148.1250 N	118.8	143.5500 N	118.8	A	Linked Statewide
14.	REPEATER	CRAIG	Craig Repeater	148.1250 N	123.0	143.5500 N	123.0	A	Linked Statewide
15.	REPEATER	DENVER	Mt. Morrison	148.1500 N	156.7	143.7000 N	156.7	A	Linked Statewide
16.	REPEATER	DURANGO	Missionary Ridge	148.1500 N	103.5	143.7000 N	103.5	A	Linked Statewide
17.	REPEATER	EAGLE	Castle Peak	148.1250 N	110.9	143.5500 N	110.9	A	Linked Statewide
18.	REPEATER	FORT COLLINS	Fort Collins	148.1250 N	107.2	143.5500 N	107.2	A	Linked Statewide
19.	REPEATER	GLENWOOD SPGS	Sunlight Peak	148.1500 N	107.2	143.7000 N	107.2	A	Linked Statewide
20.	REPEATER	GRAND JUNCTION	Black Ridge	148.1500 N	146.2	143.7000 N	146.2	A	Linked Statewide
21.	REPEATER	GUNNISON	Tenderfoot Mountain	148.1250 N	127.3	143.5500 N	127.3	A	Linked Statewide

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **VHF**	Description **STATEWIDE CHANNEL PLAN**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
22.	REPEATER	LIMON	Limon Repeater	148.1500 N	127.3	143.7000 N	127.3	A	Linked Statewide
23.	REPEATER	MONTROSE	Storm King Mountain	148.1250 N	141.3	143.5500 N	141.3	A	Linked Statewide
24.	REPEATER	NUCLA	Raspberry Ridge	148.1500 N	141.3	143.7000 N	141.3	A	Linked Statewide
25.	REPEATER	SALIDA	Salida	148.1500 N	151.4	143.7000 N	151.4	A	Linked Statewide
26.	REPEATER	STEAMBOAT	Walton Peak	148.1500 N	114.8	143.7000 N	114.8	A	Linked Statewide
27.	REPEATER	STERLING	Sterling	148.1250 N	131.8	143.5500 N	131.8	A	Linked Statewide
28.	REPEATER	TRINIDAD	Trinidad	148.1500 N	110.9	143.7000 N	110.9	A	Linked Statewide
29.	REPEATER	CO SPGS UNIV PRK	University Park	148.1500 N	118.8/ $4A4	143.7000 N	118.8/ $4A4	A	Linked Statewide

The Colorado Wing of the Civil Air Patrol (CAP) Conducts their Radio Net Calls on Monday, Wednesday, Friday evenings at 1900 local time.
A=Analog, D=Digital, M=Multimode; N=Narrowband, W=Wideband

WEATHER RADIO, GENERAL MOBILE RADIO SERVICE (GMRS) & FRS, CB, MARINE & OTHER

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1.	GMRS Repeater	WALSH 550	GMRS Licensed Users	462.5500 W	156.7	467.5500 W	156.7	A	25 Watt – North Fork Grain
2.	GMRS Simplex	550 DIR	GMRS Licensed Users	462.5500 W	156.7	462.5500 W	156.7	A	
3.	GMRS Repeater	SPRINGFIELD 575	GMRS Licensed Users	462.5750 W	141.3	467.5750 W	141,3	A	25 Watt – Elkhart COOP
4.	GMRS Simplex	575 DIR	GMRS Licensed Users	462.5750 W	141.3	462.5750 W	141.3	A	
5.	GMRS Repeater	VILAS 675	GMRS Licensed Users *	462.6750 W	141.3	467.6750 W	141.3	A	50 Watt – E. Vilas EMERGENCY
6.	GMRS Repeater	675 LINK	GMRS Licensed Users *	462.6750 W	D145N	467.6750 W	D145N	A	50 Watt – E. Vilas (LINKED)
7.	GMRS Simplex	675 DIR	GMRS Licensed Users	462.6750 W	141.3	462.6750 W	141.3	A	
8.	GMRS Repeater	TATOR 700	GMRS Licensed Users	462.7000 W	141.3	467.7000 W	141.3	A	50 Watt – Tator Butte
9.	GMRS Simplex	700 DIR	GMRS Licensed Users	462.7000 W	141.3	462.7000 W	141.3	A	
10.	GMRS Repeater	2BUTES625	GMRS Licensed Users	462.6250 W	141.3	467.6250 W	141.3	A	50 Watt – Two Buttes
11.	GMRS Simplex	625 DIR	GMRS Licensed Users	462.6250 W	141.3	462.6250 W	141.3	A	
12.	GMRS Repeater	BRNDN 700	GMRS Licensed Users	462.7000 W	141.3	467.7000 W	141.3	A	40 Watt – Brandon
13.	GMRS Repeater	700 LINK	GMRS Licensed Users	462.7000 W	D145N	467.7000 W	D145N	A	40 Watt – Brandon (LINKED)
14.	GMRS Repeater	NORTH 725	Front Range GMRS*1	462.7250 W	D036N	467.7250 W	D036N	A	40 Watt – North Denver
15.	GMRS Repeater	METRO 700	Front Range GMRS*1	462.7000 W	D036N	467.7000 W	D036N	A	40 Watt – Denver Metro
16.	GMRS Repeater	MET700LNK	Front Range GMRS*1	462.7000 W	D145N	467.7000 W	D145N	A	40 Watt – Denver Metro (LINKED)
17.	GMRS Repeater	METRO 600	Front Range GMRS*1	462.6000 W	D036N	467.6000 W	D036N	A	40 Watt – Denver Metro
18.	GMRS Repeater	SOUTH 675	Front Range GMRS*1	462.6750 W	D036N	467.6750 W	D036N	A	40 Watt – South Denver
19.	GMRS Simplex	GMRS 1	GMRS Licensed Users	462.5500 W	118.8	462.5500 W	118.8	A	
20.	GMRS Simplex	GMRS 2 – White Dot	GMRS Licensed Users	462.5750 W	118.8	462.5750 W	118.8	A	
21.	GMRS Simplex	GMRS 3	GMRS Licensed Users	462.6000 W	118.8	462.6000 W	118.8	A	
22.	GMRS Simplex	GMRS 4 – Black Dot	GMRS Licensed Users	462.6250 W	118.8	462.6250 W	118.8	A	
23.	GMRS Simplex	GMRS 5	GMRS Licensed Users	462.6500 W	118.8	462.6500 W	118.8	A	
24.	GMRS Simplex	GMRS 6 – Orange Dot	GMRS Licensed Users	462.6750 W	141.3	462.6750 W	141.3	A	Nationwide Emergency - Travel
25.	GMRS Simplex	GMRS 7	GMRS Licensed Users	462.7000 W	118.8	462.7000 W	118.8	A	
26.	GMRS Simplex	GMRS 8	GMRS Licensed Users	462.7250 W	118.8	462.7250 W	118.8	A	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
27.	FRS SIMPLEX	FRS 1	Unlicensed / GMRS	462.5625 N	CSQ	462.5625 N	CSQ	A	GMRS 5 Watt – FRS 2 Watt
28.	FRS SIMPLEX	FRS 2	Unlicensed / GMRS	462.5875 N	CSQ	462.5875 N	CSQ	A	GMRS 5 Watt – FRS 2 Watt
29.	FRS SIMPLEX	FRS 3	Unlicensed / GMRS	462.6125 N	CSQ	462.6125 N	CSQ	A	GMRS 5 Watt – FRS 2 Watt
30.	FRS SIMPLEX	FRS 4	Unlicensed / GMRS	462.6375 N	CSQ	462.6375 N	CSQ	A	GMRS 5 Watt – FRS 2 Watt
31.	FRS SIMPLEX	FRS 5	Unlicensed / GMRS	462.6625 N	CSQ	462.6625 N	CSQ	A	GMRS 5 Watt – FRS ½ Watt
32.	FRS SIMPLEX	FRS 6	Unlicensed / GMRS	462.6875 N	CSQ	462.6875 N	CSQ	A	GMRS 5 Watt – FRS 2 Watt
33.	FRS SIMPLEX	FRS 7	Unlicensed / GMRS	462.7125 N	CSQ	462.7125 N	CSQ	A	GMRS 5 Watt – FRS ½ Watt
34.	FRS SIMPLEX	FRS 8	Unlicensed	467.5625 N	CSQ	467.5625 N	CSQ	A	FRS ½ Watt Max Power
35.	FRS SIMPLEX	FRS 9	Unlicensed	467.5875 N	CSQ	467.5875 N	CSQ	A	FRS ½ Watt Max Power
36.	FRS SIMPLEX	FRS 10	Unlicensed	467.6125 N	CSQ	467.6125 N	CSQ	A	FRS ½ Watt Max Power
37.	FRS SIMPLEX	FRS 11	Unlicensed	467.6375 N	CSQ	467.6375 N	CSQ	A	FRS ½ Watt Max Power
38.	FRS SIMPLEX	FRS 12	Unlicensed	467.6625 N	CSQ	467.6625 N	CSQ	A	FRS ½ Watt Max Power
39.	FRS SIMPLEX	FRS 13	Unlicensed	467.6875 N	CSQ	467.6875 N	CSQ	A	FRS ½ Watt Max Power
40.	FRS SIMPLEX	FRS 14	Unlicensed	467.7125 N	CSQ	467.7125 N	CSQ	A	FRS ½ Watt Max Power
41.	WWG22	WX 1	Weather Radio Broadcast	162.5500 W	CSQ	Prohibited	N/A	A	TRIBUNE KS 300 WATTS
42.	WNG664	WX 2	Weather Radio Broadcast	162.4000 W	CSQ	Prohibited	N/A	A	SPRINGFIELD 1000 WATTS
43.	WEATHER	WX 3	Weather Radio Broadcast	162.4750 W	CSQ	Prohibited	N/A	A	
44.	WWG44	WX 4	Weather Radio Broadcast	162.4250 W	CSQ	Prohibited	N/A	A	FOWLER 100 WATTS
45.	WXN81	WX 5	Weather Radio Broadcast	162.4500 W	CSQ	Prohibited	N/A	A	ULYSSES KS 1000 WATTS
46.	WWG23	WX 6	Weather Radio Broadcast	162.5000 W	CSQ	Prohibited	N/A	A	LA JUNTA 100 WATTS
47.	KWN60	WX 7	Weather Radio Broadcast	162.5250 W	CSQ	Prohibited	N/A	A	LAMAR 1000 WATTS
48.	WEATHER	WX 8	Future Use	161.6500 W	CSQ	Prohibited	N/A	A	Marine 21B – Canada
49.	WEATHER	WX 9	Future Use	161.7750 W	CSQ	Prohibited	N/A	A	Marine 83B – Canada
50.	WEATHER	WX 10	Future Use	163.2750 W	CSQ	Prohibited	N/A	A	NOT USED
51.	Citizen Band	CB CH 1	Unlicensed	26.9650 W	CSQ	26.9650 W	CSQ	AM	
52.	Citizen Band	CB CH 2	Unlicensed	26.9750 W	CSQ	26.9750 W	CSQ	AM	
53.	Citizen Band	CB CH 3	Unlicensed	26.9850 W	CSQ	26.9850 W	CSQ	AM	
54.	Citizen Band	CB CH 4	Unlicensed	27.0050 W	CSQ	27.0050 W	CSQ	AM	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
55.	Citizen Band	CB CH 5	Unlicensed	27.0150 W	CSQ	27.0150 W	CSQ	AM	
56.	Citizen Band	CB CH 6	Unlicensed	27.0250 W	CSQ	27.0250 W	CSQ	AM	
57.	Citizen Band	CB CH 7	Unlicensed	27.0350 W	CSQ	27.0350 W	CSQ	AM	
58.	Citizen Band	CB CH 8	Unlicensed	27.0550 W	CSQ	27.0550 W	CSQ	AM	
59.	Citizen Band	CB CH 9	Unlicensed	27.0650 W	CSQ	27.0650 W	CSQ	AM	EMERGENCY
60.	Citizen Band	CB CH 10	Unlicensed	27.0750 W	CSQ	27.0750 W	CSQ	AM	
61.	Citizen Band	CB CH 11	Unlicensed	27.0850 W	CSQ	27.0850 W	CSQ	AM	
62.	Citizen Band	CB CH 12	Unlicensed	27.1050 W	CSQ	27.1050 W	CSQ	AM	
63.	Citizen Band	CB CH 13	Unlicensed	27.1150 W	CSQ	27.1150 W	CSQ	AM	
64.	Citizen Band	CB CH 14	Unlicensed	27.1250 W	CSQ	27.1250 W	CSQ	AM	
65.	Citizen Band	CB CH 15	Unlicensed	27.1350 W	CSQ	27.1350 W	CSQ	AM	
66.	Citizen Band	CB CH 16	Unlicensed	27.1550 W	CSQ	27.1550 W	CSQ	AM	
67.	Citizen Band	CB CH 17	Unlicensed	27.1650 W	CSQ	27.1650 W	CSQ	AM	North-South Travelers
68.	Citizen Band	CB CH 18	Unlicensed	27.1750 W	CSQ	27.1750 W	CSQ	AM	
69.	Citizen Band	CB CH 19	Unlicensed	27.1850 W	CSQ	27.1850 W	CSQ	AM	East-West Travelers
70.	Citizen Band	CB CH 20	Unlicensed	27.2050 W	CSQ	27.2050 W	CSQ	AM	
71.	Citizen Band	CB CH 21	Unlicensed	27.2150 W	CSQ	27.2150 W	CSQ	AM	
72.	Citizen Band	CB CH 22	Unlicensed	27.2250 W	CSQ	27.2250 W	CSQ	AM	
73.	Citizen Band	CB CH 23	Unlicensed	27.2550 W	CSQ	27.2550 W	CSQ	AM	
74.	Citizen Band	CB CH 24	Unlicensed	27.2350 W	CSQ	27.2350 W	CSQ	AM	
75.	Citizen Band	CB CH 25	Unlicensed	27.2450 W	CSQ	27.2450 W	CSQ	AM	
76.	Citizen Band	CB CH 26	Unlicensed	27.2650 W	CSQ	27.2650 W	CSQ	AM	
77.	Citizen Band	CB CH 27	Unlicensed	27.2750 W	CSQ	27.2750 W	CSQ	AM	
78.	Citizen Band	CB CH 28	Unlicensed	27.2850 W	CSQ	27.2850 W	CSQ	AM	
79.	Citizen Band	CB CH 29	Unlicensed	27.2950 W	CSQ	27.2950 W	CSQ	AM	
80.	Citizen Band	CB CH 30	Unlicensed	27.3050 W	CSQ	27.3050 W	CSQ	AM	
81.	Citizen Band	CB CH 31	Unlicensed	27.3150 W	CSQ	27.3150 W	CSQ	AM	
82.	Citizen Band	CB CH 32	Unlicensed	27.3250 W	CSQ	27.3250 W	CSQ	AM	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
83.	Citizen Band	CB CH 33	Unlicensed	27.3350 W	CSQ	27.3350 W	CSQ	AM	
84.	Citizen Band	CB CH 34	Unlicensed	27.3450 W	CSQ	27.3450 W	CSQ	AM	
85.	Citizen Band	CB CH 35	Unlicensed	27.3550 W	CSQ	27.3550 W	CSQ	AM	
86.	Citizen Band	CB CH 36	Unlicensed	27.3650 W	CSQ	27.3650 W	CSQ	AM	
87.	Citizen Band	CB CH 37	Unlicensed	27.3750 W	CSQ	27.3750 W	CSQ	AM	
88.	Citizen Band	CB CH 38	Unlicensed	27.3850 W	CSQ	27.3850 W	CSQ	AM	
89.	Citizen Band	CB CH 39	Unlicensed	27.3950 W	CSQ	27.3950 W	CSQ	AM	
90.	Citizen Band	CB CH 40	Unlicensed	27.4050 W	CSQ	27.4050 W	CSQ	AM	
91.	MURS Simplex	MURS 1	Unlicensed	151.8200 N	CSQ	151.8200 N	136.5	A	2 Watt Max Power
92.	MURS Simplex	MURS 2	Unlicensed	151.8800 N	CSQ	151.8800 N	167.9	A	2 Watt Max Power
93.	MURS Simplex	MURS 3	Unlicensed	151.9400 N	CSQ	151.9400 N	203.5	A	2 Watt Max Power
94.	MURS Simplex	MURS BLUE	Unlicensed	154.5700 W	CSQ	154.5700 W	162.2	A	2 Watt Max Power – Blue DOT
95.	MURS Simplex	MURS GREEN	Unlicensed	154.6000 W	CSQ	154.6000 W	156.7	A	2 Watt Max Power – Green DOT
96.	DOT / STAR	RED DOT	License Required	151.6250 N	CSQ	151.6250 N	123.0	A	Itinerant[1] Use Only
97.	DOT / STAR	PURPLE DOT	License Required	151.9550 N	CSQ	151.9550 N	167.9	A	Business
98.	DOT / STAR	BROWN DOT	License Required	464.5000 N	CSQ	464.5000 N	151.4	A	35 Watt Max Power Itinerant[1] Use
99.	DOT / STAR	BROWN IN DOT	License Required	469.5000 N	CSQ	469.5000 N	151.4	A	35 Watt Max Power Itinerant[1] Use
100.	DOT / STAR	YELLOW DOT	License Required	464.5500 N	CSQ	464.5500 N	179.9	A	35 Watt Max Power Itinerant[1] Use
101.	DOT / STAR	YELLOW IN DOT	License Required	469.5500 N	CSQ	469.5500 N	179.9	A	35 Watt Max Power Itinerant[1] Use
102.	DOT / STAR	J DOT	License Required	467.7625 N	CSQ	467.7625 N	DPL 703	A	2 Watt Max Power
103.	DOT / STAR	K DOT	License Required	467.8125 N	CSQ	467.8125 N	DPL 152	A	2 Watt Max Power
104.	DOT / STAR	SILVER STAR	License Required	467.8500 N	CSQ	467.8500 N	110.9	A	2 Watt Max Power
105.	DOT / STAR	GOLD STAR	License Required	467.8750 N	CSQ	467.8750 N	77.0	A	2 Watt Max Power
106.	DOT / STAR	RED STAR	License Required	467.9000 N	CSQ	467.9000 N	131.8	A	2 Watt Max Power
107.	DOT / STAR	BLUE STAR	License Required	467.9250 N	CSQ	467.9250 N	186.2	A	2 Watt Max Power
108.	DOT / STAR	PINK DOT	License Required	42.9800 N	CSQ	42.9800 N	146.2	A	2 Watt Max Power
109.	MARINE	01A	Lower Mississippi Only	156.0500	CSQ	156.0500	CSQ	A	
110.	MARINE	05A	New Orleans & Seattle	156.2500	CSQ	156.2500	CSQ	A	

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
111.	MARINE	06	Intership Safety	156.3000	CSQ	156.3000	CSQ	A	
112.	MARINE	07A	Commercial	156.3500	CSQ	156.3500	CSQ	A	
113.	MARINE	08	Commercial Intership	156.4000	CSQ	156.4000	CSQ	A	
114.	MARINE	09	Boater Calling	156.4500	CSQ	156.4500	CSQ	A	
115.	MARINE	10	Commercial	156.5000	CSQ	156.5000	CSQ	A	
116.	MARINE	11	Commercial	156.5500	CSQ	156.5500	CSQ	A	VTS in Some Areas
117.	MARINE	12	Port Operations	156.6000	CSQ	156.6000	CSQ	A	VTS in Some Areas
118.	MARINE	13	Intership Navigation	156.6500	CSQ	156.6500	CSQ	A	Ships >20m Listen to this Ch.
119.	MARINE	14	Port Operations	156.7000	CSQ	156.7000	CSQ	A	VTS in Some Areas
120.	MARINE	15	Environmental RX only	156.7500	CSQ	XXXX	CSQ	A	Used by Class C EPIRBs.
121.	MARINE	16	International Distress	156.8000	CSQ	156.8000	CSQ	A	Ships required, USCG Monitors
122.	MARINE	17	Government Maritime	156.8500	CSQ	156.8500	CSQ	A	Local/State Gov't Maritime Patrols
123.	MARINE	18A	Commercial	156.9000	CSQ	156.9000	CSQ	A	
124.	MARINE	19A	Commercial	156.9500	CSQ	156.9500	CSQ	A	
125.	MARINE	20	Port Operations (Duplex)	161.6000	CSQ	157.0000	CSQ	A	Repeated – Port Operations
126.	MARINE	20A	Port Operations	157.0000	CSQ	157.0000	CSQ	A	
127.	MARINE	21A	US Coast Guard Only	157.0500	CSQ	157.0500	CSQ	A	Ground to Maritime SAR
128.	MARINE	22A	USCG Liaison & Safety	157.1000	CSQ	157.1000	CSQ	A	
129.	MARINE	23A	USCG Only	157.1500	CSQ	157.1500	CSQ	A	
130.	MARINE	24	Marine Operator	161.8000	CSQ	157.2000	CSQ	A	Public
131.	MARINE	25	Marine Operator	161.8500	CSQ	157.2500	CSQ	A	Public
132.	MARINE	26	Marine Operator	161.9000	CSQ	157.3000	CSQ	A	Public
133.	MARINE	27	Marine Operator	161.9500	CSQ	157.3500	CSQ	A	Public
134.	MARINE	28	Marine Operator	162.0000	CSQ	157.4000	CSQ	A	Public
135.	MARINE	63A	Commercial Port Ops	156.1750	CSQ	156.1750	CSQ	A	VTS only in Lower Mississippi
136.	MARINE	65A	Port Operations	156.2750	CSQ	156.2750	CSQ	A	
137.	MARINE	66A	Port Operations	156.3250	CSQ	156.3250	CSQ	A	
138.	MARINE	67	Commercial Bridge-Bridge	156.3750	CSQ	156.3750	CSQ	A	Intership Only

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A	Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**

	Channel Configuration	Channel Name / Trunked Radio System Talkgroup	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Notes
139.	MARINE	68	Non-Commercial	156.4250	CSQ	156.4250	CSQ	A	
140.	MARINE	69	Non-Commercial	156.4750	CSQ	156.4750	CSQ	A	
141.	MARINE	70	Digital Selective	156.5250	CSQ	156.5250	CSQ	A	No - Voice Calling
142.	MARINE	71	Non-Commercial	156.5750	CSQ	156.5750	CSQ	A	
143.	MARINE	72	Non-Commercial	156.6250	CSQ	156.6250	CSQ	A	Intership Only
144.	MARINE	73	Port Operations	156.6750	CSQ	156.6750	CSQ	A	
145.	MARINE	74	Port Operations	156.7250	CSQ	156.7250	CSQ	A	
146.	MARINE	77	Port Operations	156.8750	CSQ	156.8750	CSQ	A	Intership Only
147.	MARINE	78A	Non-Commercial	156.9250	CSQ	156.9250	CSQ	A	
148.	MARINE	79A	Commercial	156.9750	CSQ	156.9750	CSQ	A	Non-Commercial in Great Lakes
149.	MARINE	80A	Commercial	157.0250	CSQ	157.0250	CSQ	A	Non-Commercial in Great Lakes
150.	MARINE	81A	US Government EPA	157.0750	CSQ	157.0750	CSQ	A	Environmental Protection Only
151.	MARINE	82A	US Government Only	157.1250	CSQ	157.1250	CSQ	A	
152.	MARINE	83A	US Coast Guard Only	157.1750	CSQ	157.1750	CSQ	A	Ground to Air SAR Working Ch.
153.	MARINE	84	Marine Operator	161.8250	CSQ	157.2250	CSQ	A	Public
154.	MARINE	85	Marine Operator	161.8750	CSQ	157.2750	CSQ	A	Public
155.	MARINE	86	Marine Operator	161.9250	CSQ	157.3250	CSQ	A	Public
156.	MARINE	87	Marine Operator	157.3750	CSQ	157.3750	CSQ	A	Public
157.	MARINE	88A	Commercial	157.4250	CSQ	157.4250	CSQ	A	Intership Only
158.	MARINE	AIS 1	Automatic ID System	161.9750	CSQ	161.9750	CSQ	A	AIS Only
159.	MARINE	AIS 2	Automatic ID System	162.0250	CSQ	162.025	CSQ	A	AIS Only
160.	INTER-SQUAD	ISR1	Military	396.87500	Selectable	396.87500	Selectable	M	Inter Squad Radio – Military Only
161.	INTER-SQUAD	ISR2	Military	397.12500	Selectable	397.12500	Selectable	M	Inter Squad Radio – Military Only
162.	INTER-SQUAD	ISR3	Military	397.17500	Selectable	397.17500	Selectable	M	Inter Squad Radio – Military Only
163.	INTER-SQUAD	ISR4	Military	397.37500	Selectable	397.37500	Selectable	M	Inter Squad Radio – Military Only
164.	INTER-SQUAD	ISR5	Military	397.42500	Selectable	397.42500	Selectable	M	Inter Squad Radio – Military Only
165.	INTER-SQUAD	ISR6	Military	397.00000	Selectable	397.00000	Selectable	M	Inter Squad Radio – Military Only
166.	INTER-SQUAD	ISR7	Military	397.55000	Selectable	397.55000	Selectable	M	Inter Squad Radio – Military Only

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A									Frequency Band **HF/VHF/UHF**	Description **GMRS/FRS/Weather/CB/Marine**
	Channel Configuration	**Channel Name / Trunked Radio System Talkgroup**	**Eligible Users / Assignments**	**Rx Freq N or W**	**Rx Tone / NAC**	**Tx Freq N or W**	**Tx Tone / NAC**	**Mode A, D, or M**	**Notes**	
167.	INTER-SQUAD	ISR8	Military	397.95000	Selectable	397.95000	Selectable	M	Inter Squad Radio – Military Only	
168.	INTER-SQUAD	ISR9	Military	398.05000	Selectable	398.05000	Selectable	M	Inter Squad Radio – Military Only	
169.	INTER-SQUAD	ISR10	Military	399.42500	Selectable	399.42500	Selectable	M	Inter Squad Radio – Military Only	
170.	INTER-SQUAD	ISR11	Military	399.47500	Selectable	399.47500	Selectable	M	Inter Squad Radio – Military Only	
171.	INTER-SQUAD	ISR12	Military	399.72500	Selectable	399.72500	Selectable	M	Inter Squad Radio – Military Only	
172.	INTER-SQUAD	ISR13	Military	399.92500	Selectable	399.92500	Selectable	M	Inter Squad Radio – Military Only	
173.	INTER-SQUAD	ISR14	Military	399.97500	Selectable	399.97500	Selectable	M	Inter Squad Radio – Military Only	

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency narrow or wide band.
Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or "M" indicating mixed mode. All channels are show.
*Nationwide traveler’s assistance; if CTCSS is required, try 141.3 Hz.
*1 Front Range GMRS Users Repeater – Private Repeaters Must request Assistance to Use
[1] Itinerant is a Station that is operated temporarily at different locations.

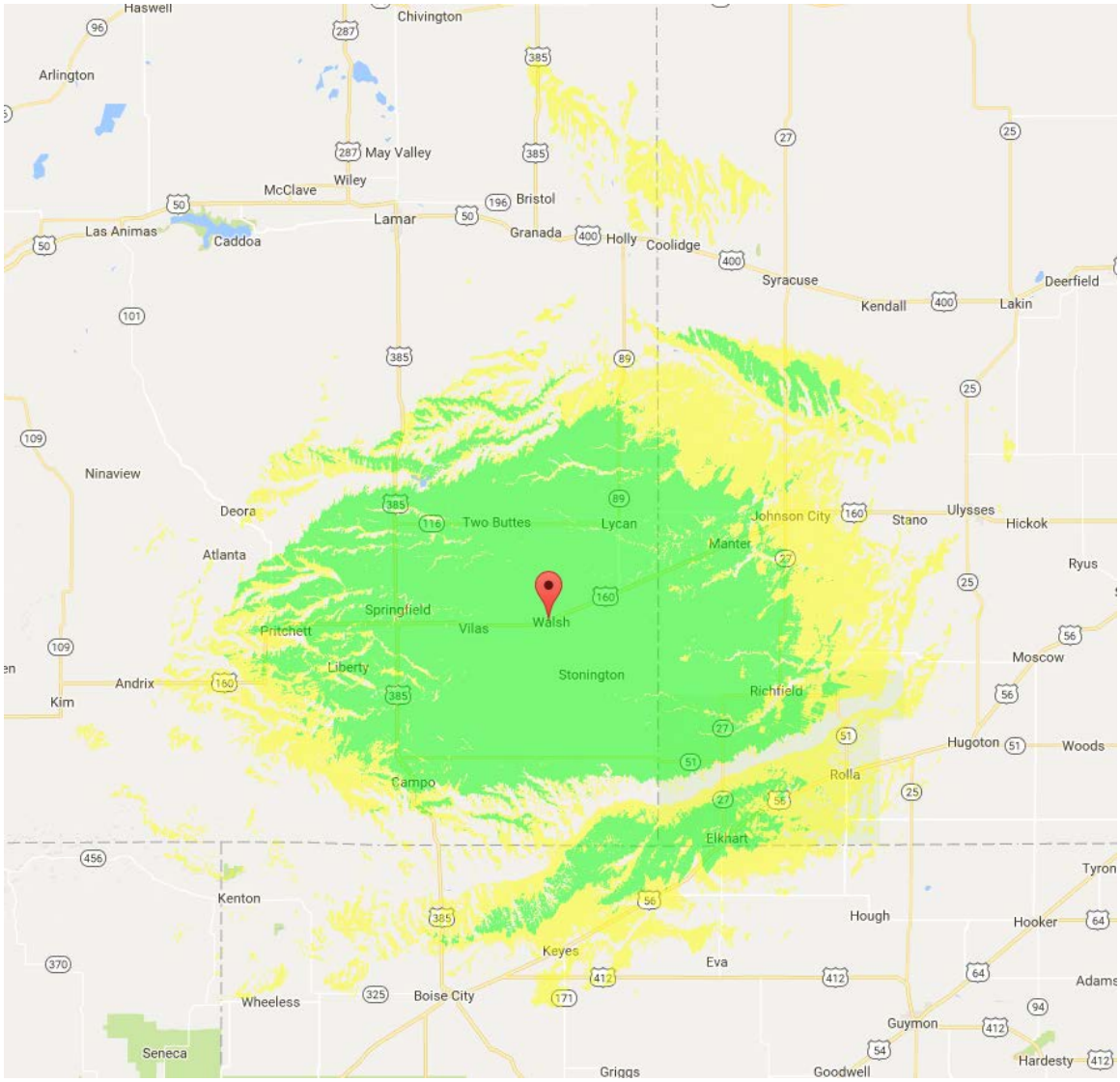

FIGURE 35: GMRS COVERAGE MAP - WALSH 550 SITE

CONTROLLED UNCLASSIFIED INFORMATION

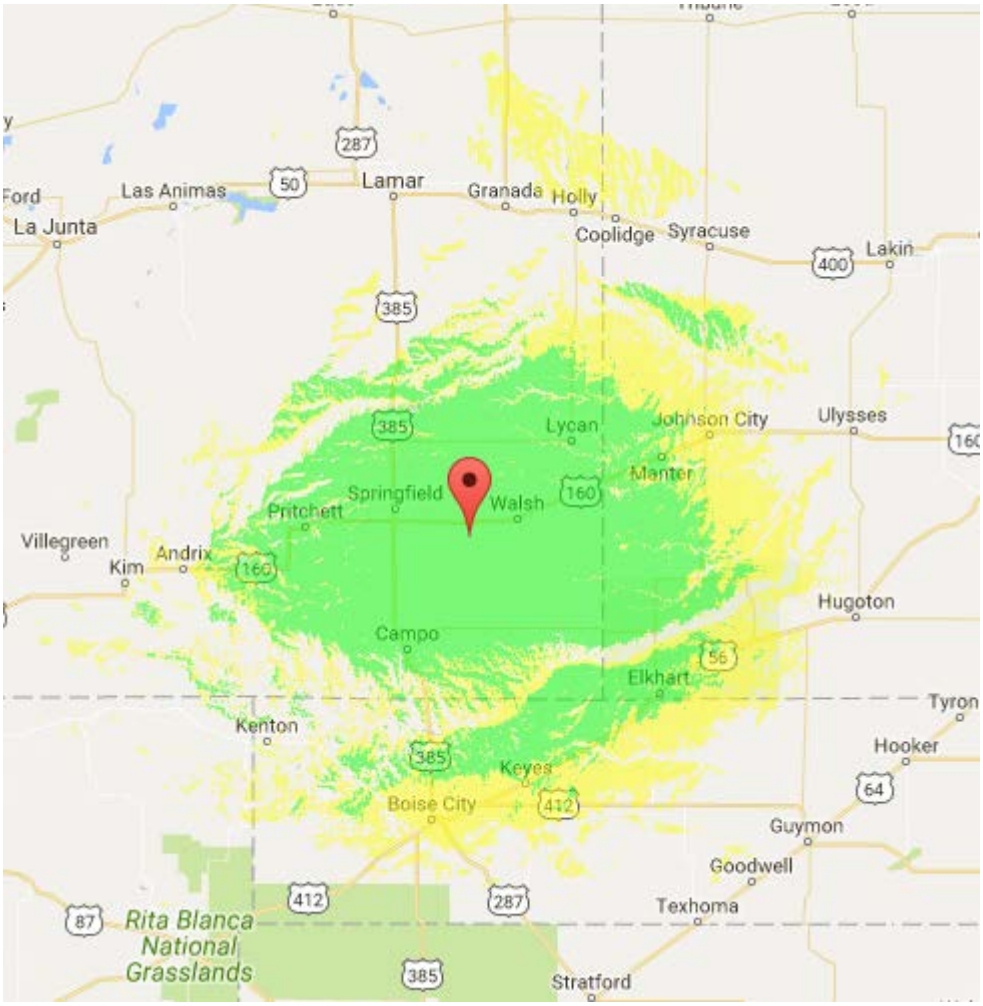

FIGURE 36: GMRS COVERAGE MAP - VILAS 675 SITE

CONTROLLED UNCLASSIFIED INFORMATION

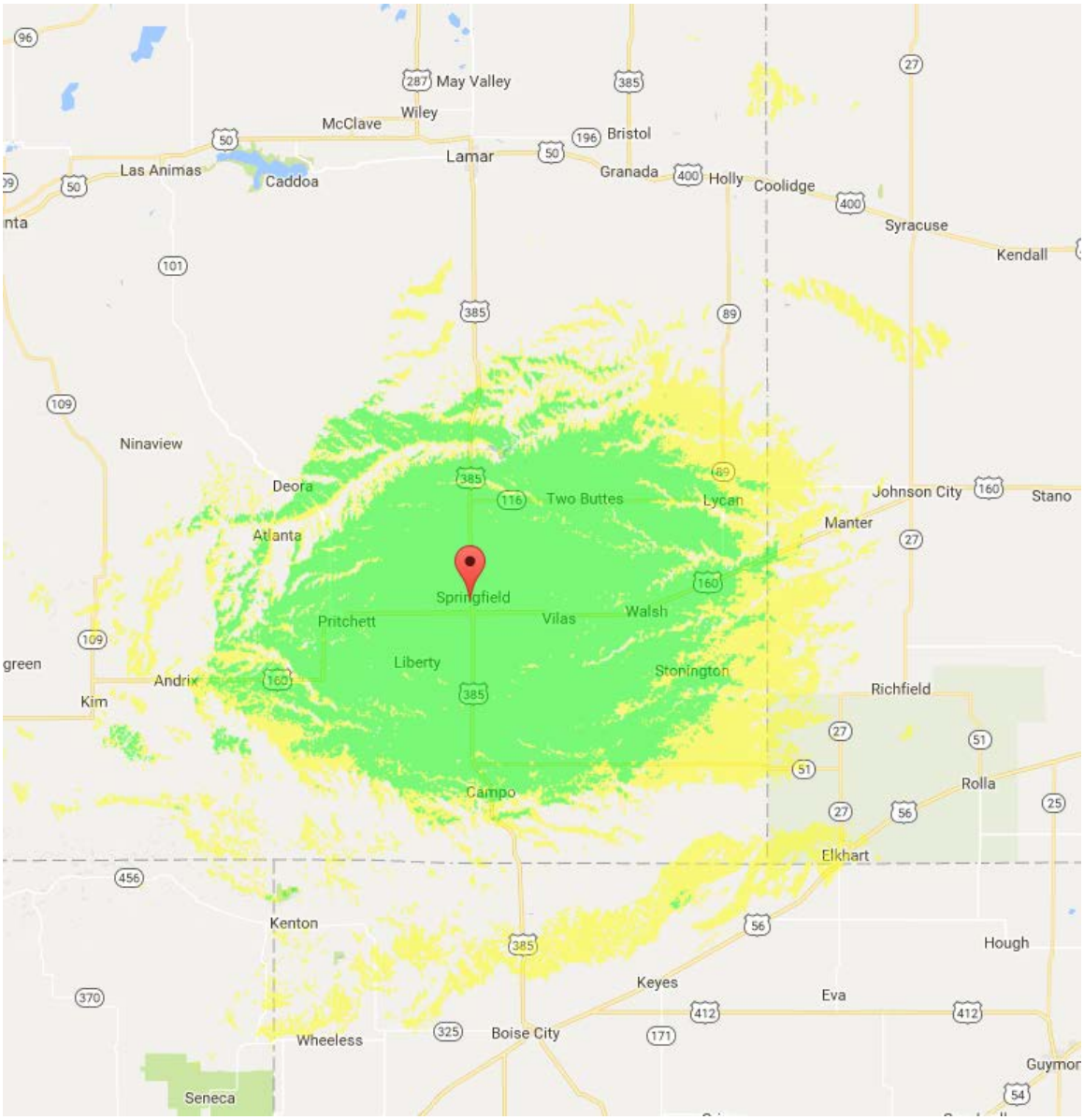

FIGURE 37: GMRS COVERAGE MAP - SPRINGFIELD 575 SITE

CONTROLLED UNCLASSIFIED INFORMATION

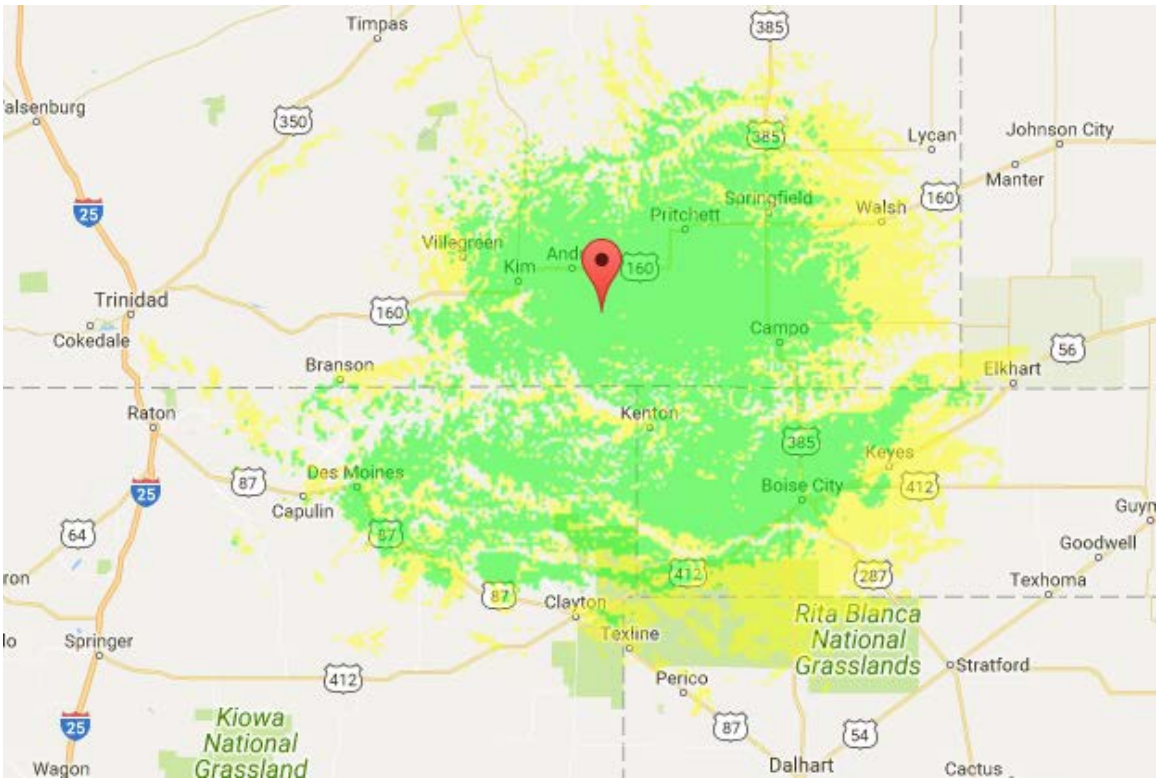

FIGURE 38: GMRS COVERAGE MAP – TATOR BUTTE 700 SITE

CONTROLLED UNCLASSIFIED INFORMATION

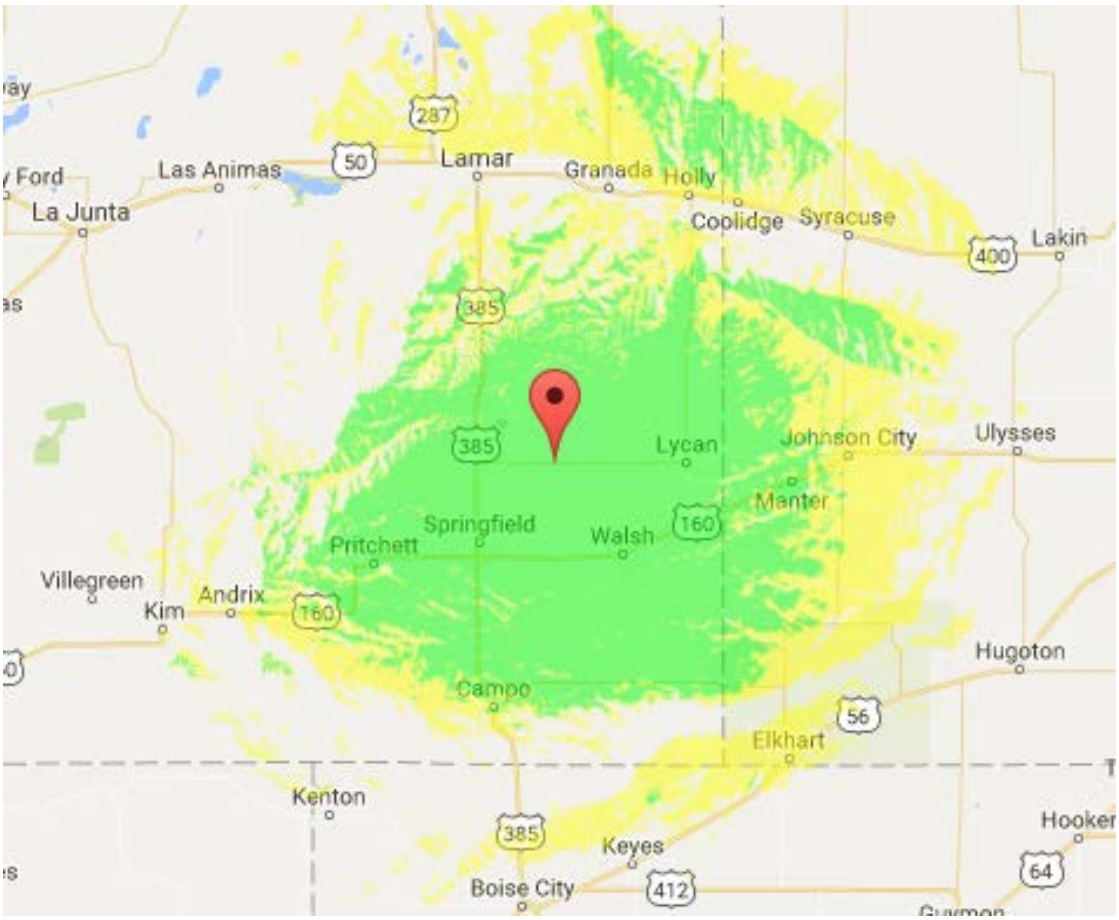

FIGURE 39: GMRS COVERAGE MAP – TWO BUTTES 625 SITE

CONTROLLED UNCLASSIFIED INFORMATION

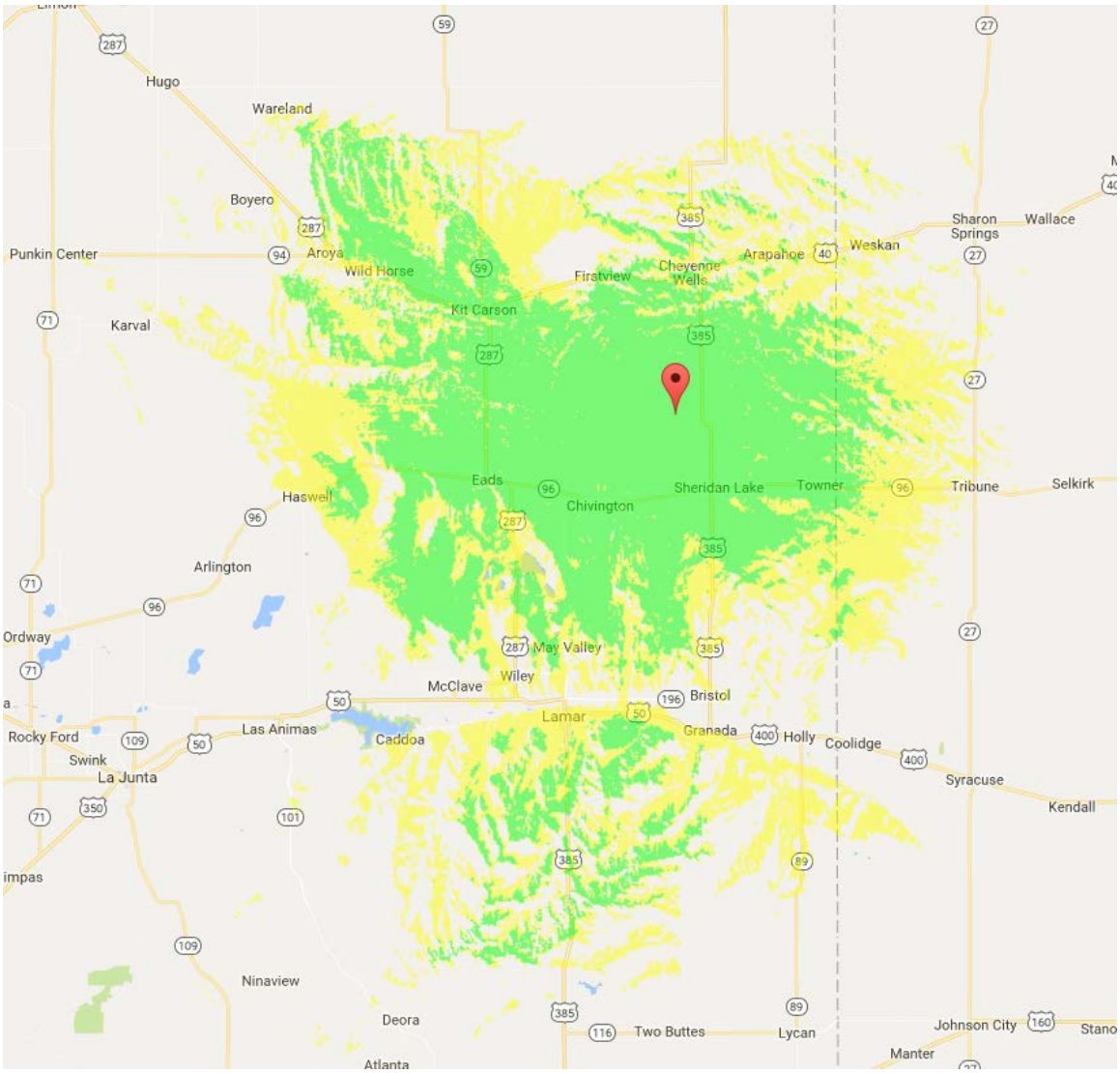

FIGURE 40: GMRS COVERAGE MAP – BRANDON 700 SITE

CONTROLLED UNCLASSIFIED INFORMATION

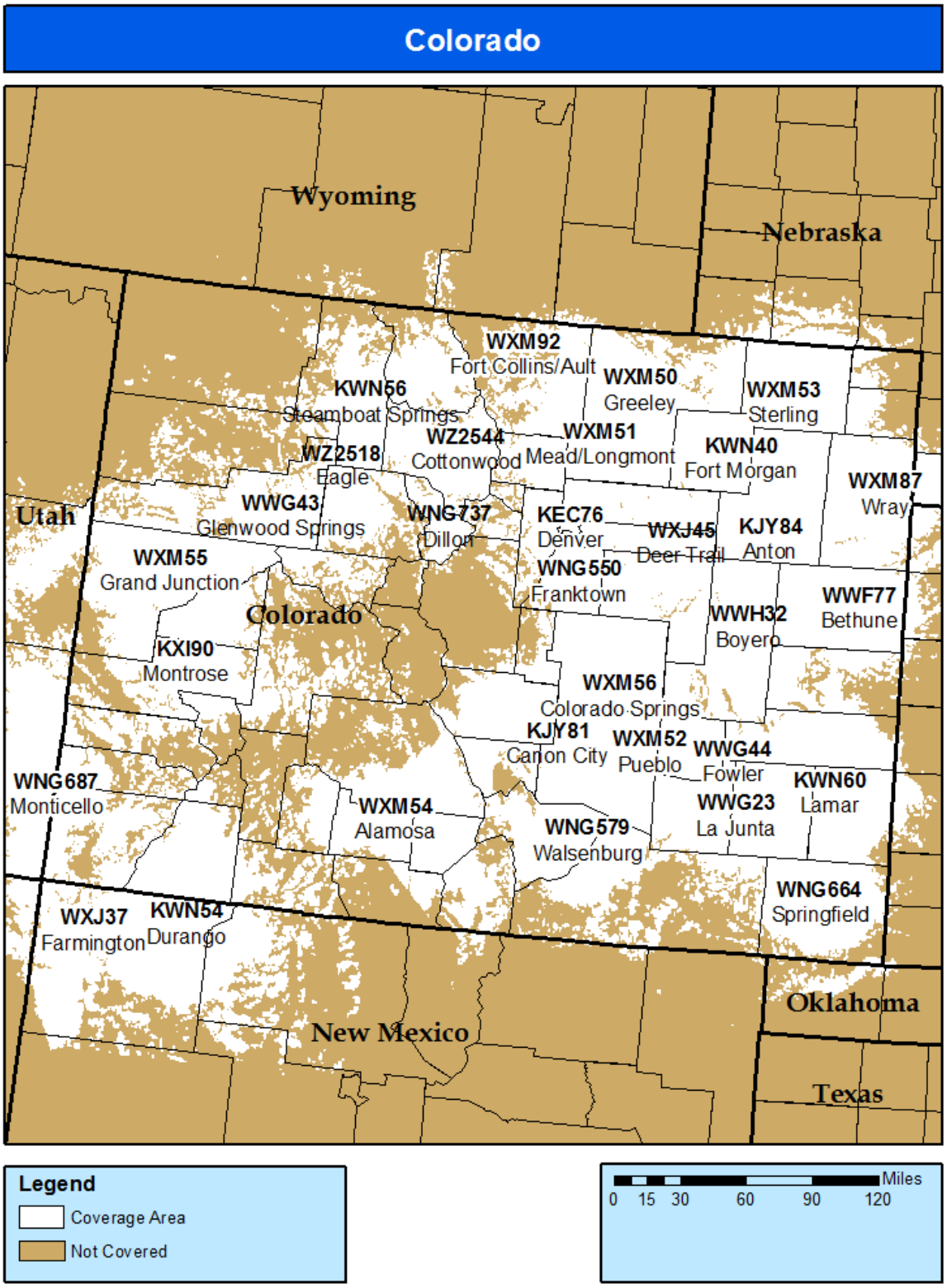

FIGURE 41: NWS WEATHER RADIO COVERAGE MAP

CONTROLLED UNCLASSIFIED INFORMATION

TABLE 20: NOAA ALL-HAZARDS ALERT RADIO - EVENT CODES

Weather Related Events	NWR-SAME Code	Status
Blizzard Warning	BZW	Operational
Coastal Flood Watch	CFA	Operational
Costal Flood Warning	CFW	Operational
Dust Storm Warning	DSW	Operational
Flash Flood Watch	FFA	Operational
Flash Flood Warning	FFW	Operational
Flash Flood Statement	FLS	Operational
High Wind Watch	HWW	Operational
Huricane Watch	HUA	Operational
Hurricane Statement	HLS	Operational
Severe Thunderstorm Watch	SVA	Operational
Severe Thunderstorm Warning	SVR	Operational
Severe Weather Statement	SVS	Operational
Severe Marine Warning	SMW	Operational
Special Weather Statement	SPS	Operational
Tornado Watch	TOA	Operational
Tornado Warning	TOR	Operational
Tropical Storm Watch	TRA	Operational
Tropical Storm Warning	TRW	Operational
Tsunami Watch	TSA	Operational
Tsunami Warning	TSW	Operational
Winter Storm Watch	WSA	Operational
Winter Storm Warning	WSW	Operational
Non-Weather Related Events	**NWR-SAME Code**	**Status**
Emergency Action Notification	EAN	Operational
Emergency Action Termination	EAT	Operational
National Information Center	NIC	Operational

CONTROLLED UNCLASSIFIED INFORMATION

State and Location Codes		
Avalanche Watch	AVA	Operational
Child Abduction Emergency	CAE	Operational
Civil Danger Warning	CDW	Operational
Civil Emergency Message	CEM	Operational
Earthquake Warning	EQW	Operational
Evacuation Immediate	EVI	Operational
Fire Warning	FRW	Operational
Hazardous Materials Warning	HMW	Operational
Law Enforcement Warning	LEW	Operational
Local Area Emergency	LAE	Operational
911 Telephone Outage Emergency	TOE	Operational
Nuclear Power Plant Warning	NUW	Operational
Radiological Hazard Warning	RHW	Operational
Shelter in Place Warning	SPW	Operational
Volcano Warning	VOW	Operational
Administrative Events	**NWR-SAME Code**	**Status**
Administrative Message	ADR	Operational
National Periodic Test	NPT	Operational
Network Message Notification	NMN	Operational
Practice/Demo Warning	DMO	Operational
Required Monthly Test	RMT	Operational
Required Weekly Test	RWT	Operational

APPENDIX C: GATEWAYS

Detailed information on gateways available for use within the region is listed in subsequent pages of Appendix C. The table below lists the owning or managing agency, gateway names, make/model and whether the device is fixed or mobile.

Gateway Name	Owning Agency	Day-to-Day or Incident / Event	Make / Model	Fixed / Mobile	No. of Simultaneous Nets	No. of Ports
DHSEM ICRI	State of Colorado	INCIDENT	Incident Command Radio Interface	PORTABLE	1	4
DHSEM CPI	State of Colorado	INCIDENT	CPI SV300	MOBILE	1	2
BACA ICRI	Baca County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
BENT ICRI	Bent County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
CROWLEY ICRI	Crowley County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
KIOWA ICRI	Kiowa County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4
PROWERS ICRI	Prowers County EM	INCIDENT	Incident Command Radio Interface	PORTABLE	2	4

CONTROLLED UNCLASSIFIED INFORMATION

DHSEM ICRI

Equipment Location

This gateway is located in the Southeast Regional Field Manager Response Vehicle.

Responsible Agency

This gateway is owned or managed by the Colorado Division of Homeland Security and Emergency Management

Name: Riley Frazee
Phone: 719-510-2388
24/7 Phone: 719-544-2424
Email riley.frazee@state.co.us

Service Area

State of Colorado

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	1
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	1
Type of Radios	1-Bendix King KNG-250 VHF 1-Motoroal XTS2500 700/800MHz 1-Motorola APX6500 700/800MHz
Frequency Band(s)	VHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood Two Prong Cable (Universal)

Other Gateway Notes

This gateway is located in the Regional Field Manager Vehicle

CONTROLLED UNCLASSIFIED INFORMATION

DHSEM CPI SV300

Equipment Location

This gateway is located and mounted in the Southeast Regional Field Manager Response Vehicle.

Responsible Agency

This gateway is owned or managed by the Colorado Division of Homeland Security and Emergency Management

Name: Riley Frazee
Phone: 719-510-2388
24/7 Phone: 719-544-2424
Email riley.frazee@state.co.us

Service Area

State of Colorado

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	CPI SV300
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	1
No. of Available Ports	2
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	1
Type of Radios	1-Motorola XTL5000 VHF 1-MSAT G2 Satellite Radio
Frequency Band(s)	VHF
Cables Supplied (list all)	1-Motorola XTL5000 Cable 1-MSAT G2 Cable

Other Gateway Notes

This gateway is located in the Regional Field Manager Vehicle and links the MSAT radio to VHF.

CONTROLLED UNCLASSIFIED INFORMATION

BACA OEM ICRI

Equipment Location

This gateway is located at the Baca County EMA Office at 29400 US Hwy 287, Springfield, CO.

Responsible Agency

This gateway is owned or managed by the Baca County Emergency Management

Name: Jennifer Leathers
Phone: 719-529-0471
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov

Service Area

Baca County & Southeast Colorado All-Hazards Region

Time to Deploy (hours)

2 Hours

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	2
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	0
Type of Radios	1-Bendix King DPH5102X VHF 1-Motorola APX7500 VHF/700/800MHz 1-Motorola XTS2500 UHF
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood NX-5400

Other Gateway Notes

This gateway is located in the Emergency Management Office

CONTROLLED UNCLASSIFIED INFORMATION

BENT OEM ICRI

Equipment Location

This gateway is located at the Bent County Courthouse located at 725 Bent Ave. In Las Animas. It is in the EMA Director's Office

Responsible Agency

This gateway is owned or managed by the Bent County Emergency Management

Name: Rick Stwalley
Phone: 719-980-0068
24/7 Phone: 719-456-1363
Email rick.stwalley@bentcounty.net

Service Area

Bent County & Southeast Colorado All-Hazards Region

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	2
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	0
Type of Radios	1-Bendix King DPH5102X VHF 1-Motorola APX7500 VHF/700/800MHz 1-Motorola XTS2500 UHF
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood NX-5400

Other Gateway Notes

This gateway is located in the Emergency Management Office

CONTROLLED UNCLASSIFIED INFORMATION

CROWLEY OEM ICRI

Equipment Location

This gateway is located at the Crowley County EMA Office located at 611 E. 9th Street in Ordway, CO.

Responsible Agency

This gateway is owned or managed by the Crowley County Emergency Management

Name: John Reitan
Phone: 719-469-0048
24/7 Phone: 719-267-5555
Email john.reitan@crowleycounty.net

Service Area

Crowley County & Southeast Colorado All-Hazards Region

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	2
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	0
Type of Radios	1-Bendix King DPH5102X VHF 1-Motorola APX7500 VHF/700/800MHz 1-Motorola XTS2500 UHF
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood NX-5400

Other Gateway Notes

This gateway is located in the Emergency Management Office

CONTROLLED UNCLASSIFIED INFORMATION

KIOWA OEM ICRI

Equipment Location

This gateway is located at the Kiowa County EMA Office at 1305 Goff Street in Eads, CO.

Responsible Agency

This gateway is owned or managed by the Kiowa County Emergency Management

Name: Teresa Witte
Phone: 719-688-5403
24/7 Phone: 719-688-0506
Email twittedem@gmail.com

Service Area

Kiowa County & Southeast Colorado All-Hazards Region

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	2
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	0
Type of Radios	1-Bendix King DPH5102X VHF 1-Motorola APX7500 VHF/700/800MHz 1-Motorola XTS2500 UHF
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood NX-5400

Other Gateway Notes

This gateway is located in the Emergency Management Office

CONTROLLED UNCLASSIFIED INFORMATION

OTERO OEM ICRI

Equipment Location

This gateway is located in the Otero County/La Junta City Fire/Police Mobile Command trailer located at the La Junta City Building at 601 Colorado Ave, La Junta, CO

Responsible Agency

This gateway is owned or managed by the Otero County Emergency Management

Name: Danny Chavez
Phone: 719-241-4147
24/7 Phone: 719-241-4147
Email em@oterogov.org

Service Area

Otero County & Southeast Colorado All-Hazards Region

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	2
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	0
Type of Radios	1-Bendix King DPH5102X VHF 1-Motorola APX7500 VHF/700/800MHz 1-Motorola XTS2500 UHF
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood NX-5400

Other Gateway Notes

This gateway is located in the Emergency Management Office

CONTROLLED UNCLASSIFIED INFORMATION

PROWERS OEM ICRI

Equipment Location

This gateway is located at the Prowers County EMA Office located at 2506 South Main Street in Lamar, CO.

Responsible Agency

This gateway is owned or managed by the Prowers County Emergency Management

Name: Staffon Warn
Phone: 719-688-4701
24/7 Phone: 719-336-3977
Email staffon.warn@prowerscounty.net

Service Area

Prowers County & Southeast Colorado All-Hazards Region

Time to Deploy (hours)

1 Hour

Gateway Description

Make/Model	ICRI
Fixed/Mobile	Mobile
No. of Simultaneous Patches/Nets	2
No. of Available Ports	4
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	0
Type of Radios	1-Bendix King DPH5102X VHF 1-Motorola APX7500 VHF/700/800MHz 1-Motorola XTS2500 UHF
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-Bendix King 1-Motorola XTS/MTX/HT1000 1-Motorola APX Handheld 1-Kenwood NX-5400

Other Gateway Notes

This gateway is located in the Emergency Management Office

CONTROLLED UNCLASSIFIED INFORMATION

SKYLAND GATEWAY

Equipment Location

This gateway is located at the Skyland Grain East of Walsh on top of the Grain Elevator.

Responsible Agency

This gateway is owned or managed by the Baca County Emergency Management

Name: Jennifer Leathers
Phone: 719-529-0471
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov

Service Area

This Gateway provides interoperable VHF/UHF/800 Conventional/800 DTR Coverage to the Eastern Half of Baca County as well as western parts of Stanton and Morton Counties in Kansas

Time to Deploy (hours)

Always On

Gateway Description

Make/Model	SCOM 7330
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	3
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	3
Type of Radios	1-Vertex VX-6000 VHF Radio (VTAC13) 1-Vertex VXR-7000U UHF Repeater (UTAC42) 1-Motorla Quantar 800MHz Repeater (8TAC93)
Frequency Band(s)	VHF/UHF/800MHz/DTR
Cables Supplied (list all)	1-VXR-7000 Cables 1-VX-6000 1-Motorola Quantar

Other Gateway Notes

This gateway is located at Skyland Grain Elevator.
Link On/Off - # 9212* 800 Radio On/Off - #3232* UHF Radio On/Off - #4343* VHF Radio On/Off - #5454*

MT CARMEL GATEWAY

Equipment Location

This gateway is located at the Mt. Carmel DTR site South and East of Campo

Responsible Agency

This gateway is owned or managed by the Baca County Emergency Management

Name: Jennifer Leathers
Phone: 719-529-0471
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov

Service Area

This Gateway provides interoperable VHF/UHF/800 Conventional/ Coverage to the Southern Half of Baca County as well as western parts of Stanton and Morton Counties in Kansas and Cimarron County in Oklahoma.

Time to Deploy (hours)

Always On.

Gateway Description

Make/Model	SCOM 7330
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	3
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	3
Type of Radios	1-Vertex VX-6000 VHF Radio (VTAC11) 1-Vertex VXR-7000U UHF Radio (UTAC43) 1-Motorla Quantar 800 (Mt Carmel)
Frequency Band(s)	VHF/UHF/800MHz/DTR
Cables Supplied (list all)	1-VX-6000 Cables 1-VXR-7000U Cable 1-Motorola Quantar

Other Gateway Notes

This gateway is located at Mt. Carmel DTR Radio Tower Link On/Off - #9121* 800 Radio On/Off - #2323* UHF Radio On/Off - #3434* VHF Radio On/Off - #4545*

TATOR BUTTE GATEWAY

Equipment Location

This gateway is located at the Tator Butte Radio site South and West of Pritchett

Responsible Agency

This gateway is owned or managed by the Baca County Emergency Management

Name: Jennifer Leathers
Phone: 719-529-0471
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov

Service Area

This Gateway provides interoperable VHF/UHF/800 Conventional/ Coverage to the Western Half of Baca County as well as eastern parts Las Animas County in Colorado and Northwestern Parts of Union County in New Mexico.

Time to Deploy (hours)

Always On.

Gateway Description

Make/Model	SCOM 7330
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	3
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	3
Type of Radios	1-Vertex VX-6000 VHF Radio (VTAC11) 1-Vertex VXR-7000U UHF Radio (UTAC43) 1-Motorla Quantar 800 (Mt Carmel)
Frequency Band(s)	VHF/UHF/800MHz/DTR
Cables Supplied (list all)	1-VX-6000 Cables 1-VXR-7000U Cable 1-Motorola Quantar

Other Gateway Notes

This gateway is located at Mt. Carmel DTR Radio Tower. Link On/Off - #9121* 800 Radio On/Off - #2323* UHF Radio On/Off - #3434* VHF Radio On/Off - #4545*

WALSH EMS GATEWAY

Equipment Location

This gateway is located at the Walsh Water Tower (400 N Kansas Street)

Responsible Agency

This gateway is owned or managed by the Walsh Ambulance Service.

Name: Riley Frazee
Phone: 719-252-3118
24/7 Phone: 719-523-6677
Email riley.frazee@walshems.com

Service Area

Walsh Area

Time to Deploy (hours)

Always On.

Gateway Description

Make/Model	SCom 7330
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	3
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	3
Type of Radios	1-Motorola CDM1250 VHF Radio (153.9650 118.8) 1-Hytera RD985 (460.1875 / 118.8) 1-Motorola XTL1500 (855.9625 / 343)
Frequency Band(s)	VHF/UHF/800MHz
Cables Supplied (list all)	1-CDM1250 1-Hyter RD985 1-Motorola XTL Series

Other Gateway Notes

This gateway is located at Walsh Water Tower.

369* = 800 Link On, 963* = 800 Link Off, 333* = 800 PTT Enabled, 111* = 800 PTT Disabled, 147* = VHF Link Enabled, 741* = VHF Link Disabled

CONTROLLED UNCLASSIFIED INFORMATION

TWO BUTTES EMS GATEWAY

Equipment Location

This gateway is located at the Two Buttes tower three miles west of Two Buttes

Responsible Agency

This gateway is owned or managed by the Walsh Ambulance Service.

Name: Riley Frazee
Phone: 719-252-3118
24/7 Phone: 719-523-6677
Email riley.frazee@walshems.com

Service Area

Two Buttes Area, Including Two Buttes State Wildlife Area

Time to Deploy (hours)

Always On.

Gateway Description

Make/Model	SCom 7330
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	3
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	3
Type of Radios	1-Vertex VXR-7000U 1- 1-Motorola XTL1500 (855.9625 / 343)
Frequency Band(s)	UHF/800MHz
Cables Supplied (list all)	1-Vertex VXR-7000U 1-Motorola XTL Series

Other Gateway Notes

This gateway is located at Two Buttes Tower

147* = 800Mhz Link Enabled, 555* = 800Mhz Link Disabled, 111* = 800Mhz PTT Disabled, 333* = 800Mhz PTT Enabled

LAMAR FIRE ROIP GATEWAY

Equipment Location

This gateway is located at the Lamar Fire Station #1

Responsible Agency

This gateway is owned or managed by the Lamar Fire Department.

Name: Jeremey Burkhart
Phone: 719-688-4321
24/7 Phone: 719-336-3977
Email jeremy.burkhart@ci.lamar.co.us

Service Area

Lamar Area / Nationwide

Time to Deploy (hours)

Always On.

Gateway Description

Make/Model	Tigertronics Signalink USB / Motorola XTL2500
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	1
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	1
Type of Radios	1-Motorola XTL2500 (Lamar FD)
Frequency Band(s)	800MHz DTR
ROIP Network / Information	Zello Channel LFD All

Other Gateway Notes

This gateway is located at Lamar Fire Station 1.

CONTROLLED UNCLASSIFIED INFORMATION

ALTA VISTA SCHOOL SAFE

Equipment Location

This gateway is located at the Alta Vista School (North of Lamar).

Responsible Agency

This gateway is owned or managed by the Prowers County Sheriff's Office.

Name: Dave Tecklenburg
Phone: 719-336-3251
24/7 Phone: 719-336-3977
Email Dave.tecklenburg@lamarschools.org

Service Area

Lamar School District

Time to Deploy (hours)

<1 Minute

Gateway Description

Make/Model	School Safe
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	0
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	2
Type of Radios	
Frequency Band(s)	VHF to 800MHz DTR
Cables Supplied (list all)	Permanent VHF to DTR AREA LAW to PC MAC

Other Gateway Notes

Fixed unit for interconnection from School radio system to Public Safety. Prowers County Comm has the ability to activate or de-activate the system at the request of responders or school personnel. The fixed patch channel is PC MAC.

GRANADA SCHOOL SAFE

Equipment Location

This gateway is located at the Granada School

Responsible Agency

This gateway is owned or managed by the Granada School District.

Name: Ty Kemp
Phone: 719-734-5492
24/7 Phone: 719-336-3977
Email Ty.kemp@granadaschools.org

Service Area

Granada School District

Time to Deploy (hours)

<1 Minute

Gateway Description

Make/Model	School Safe
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	1
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	2
Type of Radios	
Frequency Band(s)	VHF to 800MHz DTR
Cables Supplied (list all)	Permanent AREA LAW to PC MAC

Other Gateway Notes

Fixed unit for interconnection from School radio system to Public Safety.

CONTROLLED UNCLASSIFIED INFORMATION

HOLLY SCHOOL SAFE

Equipment Location

This gateway is located at the Holly School

Responsible Agency

This gateway is owned or managed by the Holly School District.

Name: Randy Holmen
Phone: 719-537-6616
24/7 Phone: 719-336-3977
Email r.holmen@hollyschool.org

Service Area

Holly School District

Time to Deploy (hours)

<1 Minute

Gateway Description

Make/Model	School Safe
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	1
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	2
Type of Radios	
Frequency Band(s)	VHF to 800MHz DTR
Cables Supplied (list all)	Permanent AREA LAW to PC MAC

Other Gateway Notes

Fixed unit for interconnection from School radio system to Public Safety.

CONTROLLED UNCLASSIFIED INFORMATION

WILEY SCHOOL SAFE

Equipment Location

This gateway is located at the Wiley School

Responsible Agency

This gateway is owned or managed by the Prowers County Sheriff's Office.

Name: Dave Eastin
Phone: 719-829-4806
24/7 Phone: 719-336-3977
Email Dave.eastin@wileyschool.org

Service Area

Wiley School District

Time to Deploy (hours)

<1 Minute

Gateway Description

Make/Model	School Safe
Fixed/Mobile	Fixed
No. of Simultaneous Patches/Nets	1
No. of Available Ports	1
No. of Ports for Donor Radios	0
No. of Pre-connected Radios	2
Type of Radios	
Frequency Band(s)	VHF to 800MHz DTR
Cables Supplied (list all)	Permanent AREA LAW to PC MAC

Other Gateway Notes

Fixed unit for interconnection from School radio system to Public Safety.

CONTROLLED UNCLASSIFIED INFORMATION

SOUTHEAST REGION CONSOLE PATCHES

A dispatch console can create patches between channels programmed into that console. These consoles function as gateways and are listed in the following table. POC information for these dispatch centers is detailed in Appendix M (3).

TABLE C-1: SOUTHEAST REGION CONSOLE PATCHING CAPABILITIES

Dispatch Center Name	System Name	Make / Model	Number of Consoles	Systems Accessible via Patching
Baca County	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 (VHF/DTR/800 CONV)
Bent County	State DTRS	Gai-Tronics ICP9000 Navigator	2	800 DTR
Crowley County	State DTRS	Gai-Tronics ICP9000 Navigator	2	800 DTR/800 CONV
La Junta Dispatch	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 (VHF/DTR/800 CONV)
Otero Sheriff Dispatch	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	1	1 (DTR)
Rocky Ford Dispatch	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 VHF/DTR/800 CONV
Prowers County	State DTRS/VHF	Gai-Tronics ICP9000 Navigator	2	3 VHF/DTR/800 CONV
Pueblo CSP Dispatch	State DTRS/VHF	Motorola Gold Elite	Zone Controller	Multiple
Pueblo Inter-Agency	State DTRS/VHF	Motorola Gold Elite	4	3 (VHF/DTR)
State EOC	State DTRS/VHF/ Low Band	Motorola Gold Elite	Zone Controller	Multiple

Each site lists the available interoperability channels that are available, but due to console configuration not all of the channels may be able to be interconnected or even available if other channels are in use.

Place a request to the agency, and explain your purpose. This will allow the Agency to better assist in meeting your needs. Patching of DTR talkgroups can be accomplished by any center in the region that has the needed talkgroups and does not need to be the local communications center.

Baca County 9-1-1 Center

This Console is owned and managed by Baca County Sheriff's Office

Name: Dean George
Title: Director
Phone: 719-523-6677
24/7 Phone: 719-523-4511
Email dgeorge@bacacountyco.gov

Service Area

All of Baca County

Available interoperability channels

• BACA MAC	• BC MAC (BENT MAC)
• MAC 9 SE	• VLAW31
• SE NET	• AREA LAW
• 8TAC91	• EM DISPATCH
• 8TAC93	• VFIRE21
• SMPX 2	• WALSH REPEATER
• NAWAS	• TATOR BUTTE REPEATER
• STAC	• MT CARMEL REPEATER
• PC MAC (PROWERS MAC)	• M21 ST W
• LAC MAC (LAS ANIMAS MAC)	• SFLD LG
• BACA LAW 1	• BACA LAW 2
• BACA LAW 3	• SFLD EMS
• VILAS FD	• 2 BUTTES FD
• SFLD FD	• WALSH FD
• CAMPO FD	• PRTCH FD

Bent County 9-1-1 Center

This Console is owned and managed by Bent County Sheriff's Office

Name: Misty Hall
Title: Director
Phone: 719-456-0796
24/7 Phone: 719-456-1363
Email Misty.hall@bentcounty.net

Service Area

All of Bent And Kiowa Counties

Available interoperability channels

• BC MAC (BENT COUNTY)	• HMFD (HASTY McCLAVE)
• KC MAC (KIOWA COUNTY)	• OC MAC (OTERO COUNTY)
• BC LAW	• SE NET
• KIOWA LE	• JMR OPS (JOHN MARTIN)
• PCSO (Prowers SO)	• DOW A12 (WILDLIFE)
• CHEN LAW 2 (CHEYENNE COUNTY)	• CSP 2C
• LINCOLN LAW	• MAC 9 SE
• BKL LAW	• MAC 10 SE
• E BKL LAW	• MAC 11 SE
• LABC FD (LAS ANIMAS FIRE)	• MAC 12 SE
• PC MAC (PROWERS COUNTY)	•

Crowley County 9-1-1 Center

This Console is owned and managed by Crowley County Sheriff's Office

Name: Leah Fox
Title: Director
Phone: 719-267-5236
24/7 Phone: 719-267-5236
Email captain@crowleycounty.net

Service Area

All of Crowley County

Available interoperability channels

• CC MAC (CROWLEY COUNTY)	• MAC 11 SE
• OC MAC (OTERO COUNTY)	• MAC 12 SE
• PUB MAC (PUEBLO COUNTY)	• MAC21 (STATEWIDE)
• LINC MAC (LINCOLN COUNTY)	• 8TAC94
• KC MAC (KIOWA COUNTY)	• SIMPX 1
• CSP 2C	• SE NET
• MAC 9 SE	• NAWAS
• MAC 10 SE	•

La Junta Dispatch Center

This Console is owned and managed by the City of La Junta

Name: Kim Roach
Title: Director
Phone: 719-384-2525
24/7 Phone: 719-384-2525
Email kroach@ci.la-junta.co.us

Service Area

Eastern Otero County (La Junta Police & Fire)

Available interoperability channels

• OC MAC (OTERO COUNTY)	• OCSO (OTERO SHERIFF)
• MAC 9 SE	• OCSO ENCRYPTED
• MAC10 SE	• LJ FD
• MAC 11 SE	• LJ FD ENCRYPTED
• MAC 12 SE	• LJ FD TAC
• SE NET	• LJ PD
• 8TAC94	• LJ PD ENCRYPTED
• SMPX 1	• LJ PD TAC
• SMPX2	• LJ PD TAC ENCRYPTED
• CSP 2C	• LG 1
• LG 2	• LJ FD VHF (PAGING)
• CHERAW FD (VHF)	• NAWAS

Rocky Ford Dispatch Center

This Console is owned and managed by Rocky Ford Fire Department

Name: Tammy Bethel
Title: Director
Phone: 719-254-3321
24/7 Phone: 719-254-3344
Email tbethel@rockyfordpd.com

Service Area

Western Otero County (Fowler, Rocky Ford, Manzanola)

Available interoperability channels

• OC MAC (OTERO COUNTY)	• SE NET
• CC MAC (CROWLEY COUNTY)	• CSP 2C
• MAC 9 SE	• RFFD (ROCKY FORD)
• MAC 10 SE	• LJFD (LA JUNTA)
• MAC 11 SE	• RFDTAC (ROCKY FORD)
• FPD (FOWLER)	• OCSO (OTERO COUNTY)
• FFD (FOWLER)	•

CONTROLLED UNCLASSIFIED INFORMATION

Otero County Sheriff' Office

This Console is owned and managed by Otero County Sheriff's Office

Name: Shawn Mobley
Title: Sheriff
Phone: 719-384-5941
24/7 Phone: 719-469-7928
Email smobley@oterogov.org

Service Area

Otero County Sheriff's Office

Available interoperability channels

• OC MAC (OTERO COUNTY)	• CSP 2C
• OCSO	• SE NET
• OCSO ENCRYPTED	• RF PD (ROCKYFORD PD)
• 8TAC94	• LJ PD
• SMPX3	• LJ PD ENCRYPTED
• SO TAC	• FOWLER PD
• MAC 9 SE	• RF FD (ROCKY FORD FD)
• MAC 10 SE	• BC MAC (BENT COUNTY)
• MAC 11 SE	• CC MAC (CROWLEY COUNTY)
• MAC 12 SE	• OC RB (OTERO COUNTY RB)

Prowers Comm Center

This Console is owned and managed by the City of Lamar.

Name: Trevor Choat
Title: Director
Phone: 719-336-3977
24/7 Phone: 719-688-2372
Email Trevor.choat@ci.lamar.co.us

Service Area

All of Prowers County

Available interoperability channels

• PC MAC (PROWERS COUNTY)	• MAC 11SE
• 8TAC94	• MAC 12SE
• NAWAS	• STAC
• CO ST A (DODES)	• SE NET
• MAC 9SE	• BACA MAC (BACA COUNTY)
• MAC 10SE	• BC MAC (BENT COUNTY)
• KC MAC (KIOWA COUNTY)	• CSP 2C

Pueblo CSP Regional Comm Center

This Console is owned and managed by Colorado Department of Public Safety / Colorado State Patrol.

Name: Raymond R. Eccher Jr
Title: Regional Manager
Phone: 719-288-2615
24/7 Phone: 719-544-2424
Email raymond.eccher@state.co.us

Service Area

South and Southeast Region Area / CSP District 2

Available interoperability channels

• MAC 9	• KC MAC (KIOWA COUNTY)
• MAC 10	• LAC MAC (LAS ANIMAS COUNTY)
• MAC 11	• CHC MAC (CHEYENNE COUNTY)
• MAC 12	• SE NET
• MAC 21	• NAWAS
• BACA MAC (BACA COUNTY)	• CSP 2C
• BC MAC (BENT COUNTY)	• CSP STW
• CC MAC (CROWLEY COUNTY)	• PC MAC (PROWERS COUNTY)
• OC MAC (OTERO COUNTY)	

Pueblo Inter-Agency

This Console is owned and managed by BLM USFS

Name: Eric Toft
Title: Lead Dispatch
Phone: 719-553-1600
Email: etoft@blm.gov

Service Area

National Forest and designated Grassland areas in Southeast Colorado all of Kansas

Available interoperability channels

• MAC 9	• MAC 14
• MAC 10	• MAC 15
• MAC 11	• MAC 21
• MAC 13	• SE NET

State EOC

This Console is owned and managed by Colorado Department of Public Safety / Division of Homeland Security and Emergency Management

Name: Chris Sorensen
Title: Operations Manager
Phone: 720-413-6184
Email: chris.sorensen@state.co.us

Service Area

State of Colorado

Available interoperability channels

• MAC 9 SE	• MAC 21ST
• MAC 10SE	• SE NET
• MAC 11SE	• CSP STW
• MAC 12SE	• CO ST A (Low Band)
• NAWAS	• CO ST B (Low Band)
• NC OEM	• SE OEM

APPENDIX D: MOBILE REPEATERS

Information on mobile repeaters available for use within the region is listed in subsequent pages of Appendix D. The table below lists the owning or managing agency, repeater make/model, mobility, frequency band and quantity of each repeater.

Repeater Name	Owning Agency	Make / Model	Mobility	Frequency Band
Baca County Mobile Talkgroup Extender	Baca County OEM	Motorola	Portable	DTR/860.2125
Otero County Talkgroup Extender	Otero County OEM	Motorola	Portable	DTR/860.2125
Walsh Ambulance Portable Repeater	Walsh EMS	Kenwood	Portable	800MHz Analog

CONTROLLED UNCLASSIFIED INFORMATION

BACA COUNTY MOBILE TALKGROUP EXTENDER

Equipment Location

This repeater is located at 29400 US Hwy 287, Springfield, CO 81073

Responsible Agency

This repeater is owned or managed by: Baca County Emergency Management

Name: Jennifer Leathers
Title: Emergency Manager
Address: 741 Main Street, Springfield, CO 81073
Phone: 719-529-0371
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov,

Service Area

Southeast Region: Primary for Baca, Prowers, Kiowa Counties

Time to Deploy (hours)

1 Hour

Repeater Description:

Make/Model	Motorola XTL 2500
Mobility	Portable
Frequency Band(s)	DTR 800 MHz
Analog/Digital/Mixed Mode	Mixed
Transmitter Power Output (watts)	10 – 35 watts
Type of Power Source Required	AC or DC
Total Weight (pounds)	~ 40 Pounds
Container Type	Hard case
Antenna Type	Omni Magnetic Mounts
Setup Time After Arrival (hours)	1 – 2 Hours

Repeater Frequencies

Radio System Name	Channel Name	Tx Freq	Tx Tone	Rx Freq	Rx Tone
DTR	Various	N/A	N/A	N/A	N/A
Mobile Extender	SEMX 1	860.2125	88.5	860.2125	88.5

OTERO COUNTY MOBILE TALKGROUP EXTENDER

Equipment Location

This repeater is located at 601 Colorado Avenue. La Junta, CO 81050

Responsible Agency

This repeater is owned or managed by: Otero County Emergency Management

Name: Danny Chavez
Title: Emergency Manager
Address: La Junta, CO 81050
Phone: 719-241-4147
24/7 Phone: 719-241-4147
Email em@oterogov.org

Service Area

Southeast Region: Primary for Otero, Bent, Crowley Counties

Time to Deploy (hours)

1 Hour

Repeater Description:

Make/Model	Motorola XTL 2500
Mobility	Portable
Frequency Band(s)	DTR 800 MHz
Analog/Digital/Mixed Mode	Mixed
Transmitter Power Output (watts)	10 – 35 watts
Type of Power Source Required	AC or DC
Total Weight (pounds)	~ 40 Pounds
Container Type	Hard case
Antenna Type	Omni Magnetic Mounts
Setup Time After Arrival (hours)	1 – 2 Hours

Repeater Frequencies

Radio System Name	Channel Name	Tx Freq	Tx Tone	Rx Freq	Rx Tone
DTR	Various	N/A	N/A	N/A	N/A
Mobile Extender	SEMX 2	860.2125	127.3	860.2125	127.3

CONTROLLED UNCLASSIFIED INFORMATION

WALSH EMS PORTABLE REPEATER

Equipment Location

This repeater is located at 400 N. Kansas Street, Walsh, CO 81090

Responsible Agency

This repeater is owned or managed by: Walsh EMS

Name: Riley Frazee
Title: EMS Cheif
Address: Walsh, CO 81090
Phone: 719-252-3118
24/7 Phone: 719-252-3118
Email riley.frazee@walshems.com

Service Area

Southeast Region: Primary Portable Repeater for Southeast Colorado

Time to Deploy (hours)

1 Hour

Repeater Description:

Make/Model	COMM-LINK
Mobility	Portable
Frequency Band(s)	800 MHz
Analog/Digital/Mixed Mode	Analog
Transmitter Power Output (watts)	35 watts
Type of Power Source Required	AC or DC
Total Weight (pounds)	~ 40 Pounds
Container Type	Hard case
Antenna Type	6db Omni Clamp Mount
Setup Time After Arrival (hours)	1 – 2 Hours

Repeater Frequencies

Radio System Name	Channel Name	Tx Freq	Tx Tone	Rx Freq	Rx Tone
Portable Repeater	BC RP 1	860.2125 W	88.5	815.2125 W	88.5
Portable Repeater	BC RP 2	860.2125 W	127.3	815.2125 W	127.3
Portable Repeater	BC RP 3	860.2125 W	156.7	815.2125 W	156.7
Portable Repeater	STAC	853.7875 W	156.7	808.7875 W	156.7
Repeater also has 8CALL90, 8TAC91, 8TAC92, 8TAC93, 8TAC94					

CONTROLLED UNCLASSIFIED INFORMATION

APPENDIX E: RADIO CACHES

Information on radio caches available for use within the region is listed in subsequent pages of Appendix E. The table below lists the owning or managing agency, cache, frequency band and quantity of radios in each cache.

Radio Cache Name	Owning Agency	Make / Model	Frequency Band	Quantity
Baca County DTR Cache	Baca County OEM	Kenwood NX-5400	700/800	18
Baca County DTR Cache	Baca County OEM	Kenwood NX-5930	700/800 Mobile	2
Bent County DTR Cache	Bent County OEM	Kenwood NX-5400	700/800	20
Crowley County DTR Cache	Crowley County OEM	Kenwood NX-5400	700/800	20
Kiowa County DTR Cache	Kiowa County OEM	Kenwood NX-5400	700/800	20
Kiowa County Sheriff's Office	Kiowa County SO	Motorola XTS2500	700/800	15
Otero County DTR Cache	Otero County OEM	Kenwood NX-5400	700/800	20
Prowers County DTR Cache	Prowers County OEM	Kenwood NX-5400	700/800	10

CONTROLLED UNCLASSIFIED INFORMATION

BACA CACHE

Equipment Location

This radio cache is located at 29400 US Hwy 287, Springfield, CO 81073

Responsible Agency

This radio cache is owned or managed by: Baca County Emergency Management

Name: Jennifer Leathers
Title: Emergency Manager
Address: 741 Main Street, Springfield, CO 81073
Phone: 719-529-0471
24/7 Phone: 719-523-6677
Email jleathers@bacacountyco.gov

Service Area

Baca County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Kenwood NX-5400
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	18 Portables, 2 Mobiles
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

BENT CACHE

Equipment Location

This radio cache is located at the Bent County Courthouse located at 725 Bent Ave. In Las Animas. It is in the EMA Director's Office

Responsible Agency

This radio cache is owned or managed by: Bent County Emergency Management

Name: Rick Stwalley
Title: Emergency Manager
Address: 725 Bent Avenue, Las Animas, CO 81054
Phone: 719-980-0068
24/7 Phone: 719-456-1363
Email Rick.stwalley@bentcounty.net

Service Area

Bent County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Kenwood NX-5400
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	20 Portables
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

CROWLEY CACHE

Equipment Location

This radio cache is located at Crowley County EOC at 611 E. 9th Street Ordway, CO 81063

Responsible Agency

This radio cache is owned or managed by: Bent County Emergency Management

Name: John Reitan
Title: Emergency Manager
Address: 611 E. 9th Street, Ordway, CO 81063
Phone: 719-469-0048
24/7 Phone: 719-267-5555
Email john.reitan@crowleycounty.net

Service Area

Crowley County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Kenwood NX-5400
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	20 Portables
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

CONTROLLED UNCLASSIFIED INFORMATION

KIOWA CACHE

Equipment Location

This radio cache is located at the Kiowa County CSU Extension Office at the Kiowa County Courthouse. The address is 1305 Goff Street, Eads, CO 81036

Responsible Agency

This radio cache is owned or managed by: Kiowa County Emergency Management

Name: Teresa Witte
Title: Emergency Manager
Address: P.O. Box 172 / 1305 Goff Street, Eads, CO 81036
Phone: 719-688-5403
24/7 Phone: 719-688-0506
Email twittedem@gmail.com

Service Area

Kiowa County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Kenwood NX-5400
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	20 Portables
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

CONTROLLED UNCLASSIFIED INFORMATION

KIOWA CACHE

Equipment Location

This radio cache is located at the Kiowa County CSU Extension Office at the Kiowa County Courthouse. The address is 1305 Goff Street, Eads, CO 81036

Responsible Agency

This radio cache is owned or managed by: Kiowa County Emergency Management

Name: Teresa Witte
Title: Emergency Manager
Address: P.O. Box 172 / 1305 Goff Street, Eads, CO 81036
Phone: 719-688-5403
24/7 Phone: 719-688-0506
Email twittedem@gmail.com

Service Area

Kiowa County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Motorola XTS2500
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	15 Portables
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

CONTROLLED UNCLASSIFIED INFORMATION

OTERO CACHE

Equipment Location

This radio cache is located at Otero County EMA Office at 13 W 3rd Street in La Junta, CO.

Responsible Agency

This radio cache is owned or managed by: Otero County Emergency Management

Name: Danny Chavez
Title: Emergency Manager
Address: 13 W 3rd Street Room 212, La Junta, CO 81050
Phone: 719-241-4147
24/7 Phone: 719-241-4147
Email em@oterogov.org

Service Area

Otero County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Kenwood NX-5400
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	20 Portables
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

PROWERS CACHE

Equipment Location

This radio cache is located at Prowers County EMA Office and EOC at 2506 South Main Street in Lamar, CO.

Responsible Agency

This radio cache is owned or managed by: Prowers County Emergency Management

Name: Staffon Warn
Title: Emergency Manager
Address: 2506 South Main Street, Lamar, CO 81052
Phone: 719-688-4701
24/7 Phone: 719-336-3977
Email Staffon.warn@prowerscounty.net

Service Area

Prowers County & Southeast Region Area

Time to Deploy (hours)

Less than 1 hour

Cache Description:

Make(s)/Model(s)	Kenwood NX-5400
Frequency Band(s)	700/800 MHz
Analog/Digital/Mixed Mode	M
No. of Radios in Cache	10 Portables
No. of Available Channels/Talkgroups	Programed to CCNC recommendations
No. of Spare Batteries	0

Channels or Talkgroups Programmed on Cache

Programed to CCNC recommendations.

CONTROLLED UNCLASSIFIED INFORMATION

APPENDIX F: MOBILE COMMUNICATIONS UNITS

Detailed information on mobile communications units (MCUs) available within the region is listed in subsequent pages of Appendix F.

MCU ID / Designator	Owning Agency	Deployment Area
Baca County Command Bus	Baca County Sheriff's Office	Southeast Region
La Junta Fire / Police Trailer	La Junta Fire / Police Departments	Otero County
Prowers County Command	Prowers County OEM	Southeast Region
DHSEM OEM SUV	State of Colorado	Statewide
DOC Mobile Command	State of Colorado Department of Corrections	Statewide
RMHAM	Rocky Mountain Ham	Statewide

CONTROLLED UNCLASSIFIED INFORMATION

BACA COUNTY MOBILE COMMAND BUS

Equipment Location

This Mobile Communications Unit is located at 265 E 2nd Ave in Springfield, CO

Responsible Agency

This Mobile Communications Unit is owned or managed by the Baca County Sheriff's Office

Name: Dave Campbell
Title: Sheriff
Address: 265 E 2nd Ave, Springfield, CO 81073
Phone: 719-523-6677
24/7 Phone: 719-523-4511
Email dcampbell@bacacountyco.gov

Service Area

This Mobile Communications Unit is available for deployment throughout the Southeast Region

Time to Deploy (hours)

4 Hours

System Type and Capacity

Make/Model/Manufacturer	MCI Bus
Deployment Method	Own Power
Deployment Method (Other)	Agency Deployed
Setup Time After Arrival (hours)	2 Hours
Total Length (feet)	40 feet
Total Weight (pounds)	54,000 pounds
Tactical Dispatch Capability	Yes
No. of Dispatch Positions/Consoles	2
Satellite Data Systems	No
No. of Phone Lines	0
Microwave Capability	No
Cellular PBX Capability	No
FAX Capability	No
IT/Computer System Capability	No

CONTROLLED UNCLASSIFIED INFORMATION

Local Area Network (LAN) Capability	No
No. of Desktop Workstations	0
No. of Laptop Workstations	2
Conference Room Capacity (seats)	0
Internet Access	Yes Viaero 4G Air Card
Network Access Speed	4G Cellular
Video Teleconferencing Systems	No
Video Surveillance Capability	No
Generator Output (watts)	5500 Watts
RF TV Reception Capability	No
Towers	0

Other Mobile Communications Unit Equipment Notes



FIGURE 42: BACA COUNTY MOBILE COMMAND BUS

CONTROLLED UNCLASSIFIED INFORMATION

LA JUNTA FIRE/POLICE MOBILE COMMAND

Equipment Location

This Mobile Communications Unit is located La Junta City Building at 601 Colorado Ave, La Junta, CO

Responsible Agency

This Mobile Communications Unit is owned or managed by City of La Junta.

Name: Joey Gacnick & Todd Quick
Title: Fire Chief & Police Chief
Address: 601 Colorado Avenue / P.O. Box 489
Phone: 719-384-2323
24/7 Phone: 719-384-2525
Email jgacnick@ci.la-junta.co.us / tquick@ci.la-junta.co.us

Service Area

This Mobile Communications Unit is available for deployment throughout the Southeast Region

Time to Deploy (hours)

4 Hours

System Type and Capacity

Make/Model/Manufacturer	Express Wagon / Wells Cargo
Deployment Method	Bumper Pull (needs prime mover 1 ton)
Deployment Method (Other)	Agnecy Deployed
Setup Time After Arrival (hours)	2 Hours
Total Length (feet)	28’
Total Weight (pounds)	10,000 pounds
Tactical Dispatch Capability	Yes
No. of Dispatch Positions/Consoles	2
Satellite Data Systems	No
No. of Phone Lines	0
Microwave Capability	No
Cellular PBX Capability	Has Cellular BDA
FAX Capability	No
IT/Computer System Capability	Yes

CONTROLLED UNCLASSIFIED INFORMATION

Local Area Network (LAN) Capability	Yes
No. of Desktop Workstations	1
No. of Laptop Workstations	6
Conference Room Capacity (seats)	0
Internet Access	Yes Verizon 4G Jet Pack
Network Access Speed	4G
Video Teleconferencing Systems	No
Video Surveillance Capability	Yes
Generator Output (watts)	12,000K or 50Amp RV service
RF TV Reception Capability	No
Towers	No

Other Mobile Communications Unit Equipment Notes



FIGURE 43: LA JUNTA FIRE / LA JUNTA POLICE MOBILE COMMAND

CONTROLLED UNCLASSIFIED INFORMATION

PROWERS COUNTY MOBILE COMMAND

Equipment Location

This Mobile Communications Unit is located at 100 South Frederick Street in Bristol, CO.

Responsible Agency

This Mobile Communications Unit is owned or managed by the Prowers County Emergency Management

Name: Staffon Warn
Title: Emergency Manager
Address: 2506 South Main Street, Lamar, CO 81052
Phone: 719-688-4701
24/7 Phone: 719-336-3977
Email staffon.warn@prowerscounty.net

Service Area

This Mobile Communications Unit is available for deployment throughout the Southeast Region

Time to Deploy (hours)

1 Hour

System Type and Capacity

Make/Model/Manufacturer	2002 30’ Prowler
Deployment Method	Bumper Pull (needs prime mover) may be able to deliver
Deployment Method (Other)	Primer Mover
Setup Time After Arrival (hours)	1 Hour
Total Length (feet)	30
Total Weight (pounds)	6,000
Tactical Dispatch Capability	Yes
No. of Dispatch Positions/Consoles	1 Mounted Astro Mobile, 7 Command Positions
Satellite Data Systems	No
No. of Phone Lines	0
Microwave Capability	No
Cellular PBX Capability	0
FAX Capability	No
IT/Computer System Capability	Yes

CONTROLLED UNCLASSIFIED INFORMATION

Local Area Network (LAN) Capability	Yes – WI-FI (Prowers County)
No. of Desktop Workstations	0
No. of Laptop Workstations	0
Conference Room Capacity (seats)	0
Internet Access	Wireless WI-FI
Network Access Speed	1.5 Mbs
Video Teleconferencing Systems	No
Video Surveillance Capability	No
Generator Output (watts)	10,000
RF TV Reception Capability	Yes
Towers	12’

Other Mobile Communications Unit Equipment Notes

ALSO HAS AN ADDITIONAL DEPLOYABLE 50’ MOBILE COMMUNICATIONS TOWER THAT CAN BE DEPLOYED.



FIGURE 44: PROWERS COUNTY MOBILE COMMAND

CONTROLLED UNCLASSIFIED INFORMATION

DHSEM RFM SUV MOBILE COMMUNICATIONS UNIT

Equipment Location

This Mobile Communications Unit is located at 420 N Ohio Street in Walsh, CO.

Responsible Agency

This Mobile Communications Unit is owned or managed by the Colorado Division of Homeland Security and Emergency Management

Name: Riley Frazee
Title: Regional Field Manager
Address: 310 E. Washington Street, Lamar, CO 81052
Phone: 719-510-2388
24/7 Phone: 719-544-2424
Email riley.frazee@state.co.us

Service Area

This Mobile Communications Unit is available for deployment throughout the Southeast Region

Time to Deploy (hours)

15 Minutes

System Type and Capacity

Make/Model/Manufacturer	2013 Ford Expedition
Deployment Method	4x4
Deployment Method (Other)	NA
Setup Time After Arrival (hours)	15 Minutes
Total Length (feet)	17.25
Total Weight (pounds)	6,000
Tactical Dispatch Capability	Yes
No. of Dispatch Positions/Consoles	0
Satellite Data Systems	Yes
No. of Phone Lines	3
Microwave Capability	No
Cellular PBX Capability	No
FAX Capability	No
IT/Computer System Capability	Yes

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Local Area Network (LAN) Capability	Yes – Verizon & Viaero
No. of Desktop Workstations	0
No. of Laptop Workstations	1
Conference Room Capacity (seats)	0
Internet Access	Yes
Network Access Speed	3G/4G/MSAT
Video Teleconferencing Systems	No
Video Surveillance Capability	No
Generator Output (watts)	NA
RF TV Reception Capability	No
Towers	No

Other Mobile Communications Unit Equipment Notes



FIGURE 45: DHSEM RFM SUV MOBILE COMMUNICATIONS UNIT

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DOC MOBILE COMMAND

Equipment Location

This Mobile Communications Unit is located at the East Canon Prison Complex in Canon City

Responsible Agency

This Mobile Communications Unit is owned or managed by the Department of Corrections

Name: Denny Owens
Title: Emergency Manager
Address: 1250 Academy Park Loop, Colorado Springs, CO 80906
Phone: 719-429-7724
24/7 Phone: Same
Email denny.owens@state.co.us

Service Area

This Mobile Communications Unit is available for deployment throughout the Southeast Region

Time to Deploy (hours)

2 Hours

System Type and Capacity

Make/Model/Manufacturer	
Deployment Method	Towed
Deployment Method (Other)	
Setup Time After Arrival (hours)	< 1 Hour
Total Length (feet)	30 feet plus tow vehicle
Total Weight (pounds)	
Tactical Dispatch Capability	Yes
No. of Dispatch Positions/Consoles	4
Satellite Data Systems	No
No. of Phone Lines	N/A
Microwave Capability	No
Cellular PBX Capability	No
FAX Capability	No

CONTROLLED UNCLASSIFIED INFORMATION

IT/Computer System Capability	Yes
Local Area Network (LAN) Capability	No
No. of Desktop Workstations	0
No. of Laptop Workstations	3
Conference Room Capacity (seats)	5 – 6
Internet Access	No
Network Access Speed	N/A
Video Teleconferencing Systems	No
Video Surveillance Capability	No
Generator Output (watts)	
RF TV Reception Capability	No
Towers	No

Other Mobile Communications Unit Equipment Notes

- DOC will deliver to incident scene and provide THSP to assist in the activation, operation, and deactivation of the MCU and equipment.
- If Patsy Hartley is not available contact Sev Vasquez, Special Operations Response Team Commander at 720-390-9825.



FIGURE 46: DOC MOBILE COMMAND UNIT

CONTROLLED UNCLASSIFIED INFORMATION

ROCKY MOUNTAIN HAM RADIO

Equipment Location

This Mobile Communications Unit is located in the Denver Metro area but is deployable to the Southeast Region.

Responsible Agency

This Mobile Communications Unit is owned or managed by Rocky Mountain Ham

Name: Robert Wareham
Title: ARES – Colorado Section Emergency Coordinator
Address:
Phone: 303-470-3451
24/7 Phone: 303-470-3451
Email n0esq@robertwareham.com

Service Area

This Mobile Communications Unit is available for deployment throughout the Southeast Region

Time to Deploy (hours)

4 Hours

System Type and Capacity

Make/Model/Manufacturer	Haulmark Trailer
Deployment Method	Towed
Deployment Method (Other)	
Setup Time After Arrival (hours)	4 Hour + 4 Hour Travel Time
Total Length (feet)	26 feet plus tow vehicle
Total Weight (pounds)	11,000 Pounds
Tactical Dispatch Capability	Yes
No. of Dispatch Positions/Consoles	4
Satellite Data Systems	Yes (26mbps down, 4mbps up)
No. of Phone Lines	6
Microwave Capability	Yes
Cellular PBX Capability	Yes
FAX Capability	Yes
IT/Computer System Capability	Yes

Local Area Network (LAN) Capability	Yes
No. of Desktop Workstations	5
No. of Laptop Workstations	0
Conference Room Capacity (seats)	4
Internet Access	Yes
Network Access Speed	4G (Sprint, T-Mobile, Verizon, AT&T)
Video Teleconferencing Systems	Yes
Video Surveillance Capability	Yes
Generator Output (watts)	6500
RF TV Reception Capability	Yes
Towers	No

Other Mobile Communications Unit Equipment Notes

Satellite Internet, Terrestrial 4G Internet from Sprint, T-Mobile, Verizon and AT&T and PSTN Telephones, 4 Independent station locations, Broadcast TV and Satellite TV, fixed wireless hotspsot capability as well as remotely deployable, wired VOIP telephones, HF, VHF, UHF, D-STAR, MotoTRBO, Packet, Pactor 1/2/3, FM & SSB, Full battery backup.



FIGURE 47: RMHAM COMMUNICATIONS TRAILER

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APPENDIX G: STATE OWNED AND OPERATED INTEROPERABILITY ASSETS

This section describes all statewide interoperable communications equipment and their associated policies and procedures for the State of Colorado.

Users will follow the following overarching procedures for all interoperable communications within Colorado (i.e., for all interoperable communications situations regardless of the technological assets used to achieve that interoperability):

- **National Incident Management System** – Implement an Incident Command System (ICS) compliant with the National Incident Management System (NIMS) when using any regional interoperability resource.
- **National Response Framework** – Use the appropriate ICS forms needed to document a given incident, in accordance with the National Response Framework (NRF).
- **Plain Language** –Avoid using radio codes, acronyms, and abbreviations as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.
- **Unit Identification** – Announce your home agency prior to announcing your unit identifier during interoperable communications situations.

MUTUAL AID COMMUNICATIONS

Use of an Incident Command System compliant with the National Incident Management System (NIMS) is required for use of any interoperability resource. All Communications shall be in plain language. Encryption is not allowed on the CCNC Mutual Aid Channels!

Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Requests for assistance or backup should clarify the reason for the request. Agency name shall precede unit identifier, i.e. CSP 6A.

HIERARCHY

The lowest common mutual aid talkgroup should always be utilized. The mutual aid talkgroups are ranked from lowest to highest as follows:

- Individual User Agency and local mutual aid talkgroup,
- Countywide Mutual Aid talkgroups,
- Regional Interoperability talkgroups (RICs)
- Regional Mutual Aid talkgroups, (MACs, RETACS)
- Statewide Mutual Aid talkgroups.

Finally the use of statewide tactical (STAC) and the National Interoperability channels (8CALL90, 8CALL90D 8TAC91-8TAC94, and 8TAC91D-8TAC94D) should be used.

In the case of a large scale multi-agency incident when NIMS has been activated and the Communications Unit Leader determines that communications resources beyond those assigned to the region are required, resources from other regions may be coordinated for use by notifying the CSP Dispatch center in that region.

PUBLIC SAFETY COMMUNICATIONS DISPATCH CENTER RESPONSIBILITIES

The Public Safety Communications Dispatch Center of the Agency initiating the incident is responsible for all primary dispatch tasks unless the decision is made by the Incident Commander or the Incident Dispatch Center to transfer the responsibilities to another Center. The Incident Dispatch Center is responsible for audio patching of talkgroups and relaying pertinent information including; who is involved; which talkgroups are patched; and who is in command.

Public Safety Communications Dispatch Center (Com-To-Com) Talkgroups

Five regional talkgroups have been established between communications centers and mobile command vehicles to effectively supply necessary information for any public safety situation that arises for the safety and welfare of the citizens of the State of Colorado. The talkgroup will only be placed on Public Safety Communications Dispatch positions or mobile dispatch/command vehicles. These talkgroups are configured as "Fast Start" talkgroups in the Zone Controller; therefore subscriber units in mobile command vehicles or non-connected Public Safety Communications Dispatch positions will only receive audio for these talkgroups if resources are available for their site affiliation. The Talkgroups are identified as: Metro Net - Includes Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, and Jefferson counties.

NE Net - Includes Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma counties.

SE Net - Includes Baca, Bent, Chaffee, Crowley, Custer, El Paso, Fremont, Huerfano, Kiowa, Lake, Las Animas, Otero, Park, Powers, Pueblo, and Teller counties.

NW Net - Includes Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt and Summit counties. SW Net - Includes Alamosa, Archuleta, Conejos, Costilla, Delores, Delta, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, and San Miguel counties.

The agencies contained in each regional group will be responsible for the recording of any interchange on their talkgroup.

To call within the same region use the agency name and talkgroup identification. Always state the called agency first. Example: "Douglas from Arapahoe on Metro Net" To call outside of your talkgroup region, go to that agency's regional talkgroup using the agency name and talkgroup identifier.

Audio Patching

Audio patching is most effective for patching like resources, i.e., conventional resource to conventional resource, 700/800 MHz talkgroups to 700/800 MHz talkgroups. CCNC does not recommend patching conventional UHF or VHF channels to 700/800 MHz talkgroups as conventional users do not hear trunking system status tones, may start their voice traffic before trunking voice channels are granted and therefore are not

guaranteed their transmission has been sent. Audio patches have a risk factor for adversely affecting trunked radio system operations. If temporary audio patches are required to the Statewide DTR System, it is highly recommended that the personnel implementing the audio patch be trained in the operational techniques necessary for proper patch communications. Audio patches shall be removed as soon as the need for the patch has ended. No permanent audio patches shall be implemented on the Statewide DTR System without a recommendation from the CCNC Technical Committee and approval from the CCNC Executive board.

If an agency desires to have a permanent or even a reoccurring audio patch, they shall complete a "Permanent Audio Patch Request Form" and mail/deliver the original to Consolidated Communications Network of Colorado, Inc., 9008 North U.S. Highway 85, Unit E, Littleton, CO., 80125-9915.

The CCNC Technical Committee will review the request at the next scheduled meeting and make a recommendation to the CCNC Executive Board. If the CCNC Technical Committee recommends approval of the application, the application shall be forwarded to the Executive Board of Directors who may approve the application. If the Executive Board of Directors does not approve the application, the CCNC Technical Committee will notify the applicant as to the reason(s) for the denial.

CCNC COUNTY MUTUAL AID/EMERGENCY

Talkgroups

Each county is assigned a specific County Mutual Aid/Emergency Talkgroup (County MAC) for intra-county communications activity including but not limited to activities and uses for the direct benefit of a county's public safety agencies to include (not limited to) EOC/EOP operations, training, simulations, and travel.

School Districts and their public transportation vehicles for communications to an emergency communications center; or in support of school district transportation resources utilized by public safety personnel during an emergency event.

All County MAC talkgroups are intended for the utilization by a county and/or intra-county communications activity, and are not to be utilized in lieu of an agency(s) establishment of participation in the CCNC, or to serve as a primary channel for an entity.

The Primary PSAP in the county with the annual largest call volume shall be the agency authorized to provide written authorization for non-county agencies to have the County Mac programmed in their subscriber units.

County MACs that have been shared with surrounding counties may also be used for inter-county mutual aid responses with coordination from the PSAP handling the incident.

CCNC, its Operations Committee and/or the System Administrator may suspend use of the talkgroup; if any individual, agency, or organization is improperly using the County MAC talkgroup.

REGIONAL INTEROPERABILITY CHANNEL (RIC) TALKGROUPS

Each All Hazards Region may request RIC Talkgroups to be utilized for interoperable communications within their All Hazards Region by following the process. Each region may also request specialized talkgroups for encrypted communications. These could be assigned to SWAT, HAZMAT, Task Forces, or other specialized disciplines. The region requesting the encrypted talkgroup will be responsible for managing the encryption keys for that talkgroup but will follow the procedure ENCRYPTION, for determining the Encryption Key ID.

NORTH CENTRAL ALL HAZARDS REGION INTEROPERABILITY

Talkgroups –Network First

The following talkgroups have been set aside specifically for use by agencies that are a part of the North Central All-Hazards Region. These talkgroups interconnect users from various systems (i.e. VHF, UHF, 800 MHz, etc.) for interoperability among various disciplines. These talkgroups are only to be used within the ten (10) county (Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin and Jefferson) North Central All Hazards Region.

Currently, the following systems are interconnected:

M/A-COM EDACS (Denver International Airport, City & County of Denver, City of Aurora, City of Lakewood, Westminster-Arvada, and West Metro Fire District) Colorado DTR (CCNC) Boulder Conventional VHF Evergreen Conventional UHF Clear Creek Conventional VHF Federal Government Agencies (FBI/US Marshals). With this interconnectivity, there are some special operational caveats that users need to be aware of:

These talkgroups cannot be patched to each other or any other talkgroups from a console, ACU-1000 or similar device. Radio coverage is limited to the user's "Home" system coverage area. These talkgroups will not extend your normal radio coverage. There will be a noticeable delay in the radio transmission between systems. Avoid speaking immediately after pressing the push to talk button. An extra few seconds should be allowed before speaking.

Not all communications centers will routinely monitor these talkgroups. DTR communications centers that are hard wire connected to a Zone Controller console port are required to monitor Metro Net. Trunking control features and indicators (i.e. talk permit tone) are not passed between disparate systems. These talkgroups are to be used for inter-agency and inter-discipline use as a means of direct communications. It is recommended that these talkgroups be programmed into subscriber units along with the appropriate MAC channels wherever possible with the exception of Metro Net. The talkgroup descriptions and allocations are recommended for operational use; however individual events will govern the actual assignment and usage of any interoperability channel. **For Day-To-Day Usage** follow the defined descriptions as listed in Talkgroup/channel Descriptions below.

For **Incident Command Usage t**he talkgroups channels will be assigned by the Incident Commander following the priorities listed in the Incident Response/Usage Section following the talkgroup/channel descriptions. The North Central All Hazards Region has been divided into four quadrants, using Interstate 70 (I70) as the North and South dividing line and Interstate 25 (I25) as the East and West dividing line.

Procedures for establishing communications connectivity include the following:

- Utilize your agency's internal procedures for establishing connectivity between the agencies.
- Verify operation of the Network First resource by conducting radio checks between participating dissimilar radio systems, (i.e. M/A-COM system radio to VHF radio and/or UHF Radio and/or DTR System Radio). The Network First resource should be checked for activity prior to use - either by the dispatcher or Scene Commander.
- Users should identify themselves on the interoperability channel using their agency name and unit identifier (e.g., Boulder PD 125, North Washington Engine 32, etc.).

NETWORK FIRST TALKGROUP DESCRIPTIONS

Day-To-Day Usage

For day to day usage the following descriptions determine resource usage:

GOLD 1: This talkgroup has been established for interoperability for Command and Control between agencies within the North Central All Hazards Region. This also has been designated the contact channel for users.

GOLD 2: This talkgroup has been established for interoperability as a secondary Command and Control channel between agencies within the North Central All Hazards Region. On a secondary basis this talkgroup may also be used as a tactical channel as determined by the incident commander.

SILVER: This talkgroup has been established for interoperability between Denver, Auraria, Glendale and the State.

BLUE NE: This talkgroup has been established for interoperability between Law Enforcement Agencies within the North Central All Hazards Region that lay north of I70 and east of I25.

RED NE: This talkgroup has been established for interoperability between Fire and EMS Agencies within the North Central All Hazards Region that lay north of I70 and east of I25.

BLUE NW: This talkgroup has been established for interoperability between Law Enforcement Agencies within the North Central All Hazards Region that lay north of I70 and west of I25.

RED NW: This talkgroup has been established for interoperability between Fire and EMS Agencies within the North Central All Hazards Region that lay north of I70 and west of I25.

BLUE SE: This talkgroup has been established for interoperability between Law Enforcement Agencies within the North Central All Hazards Region that lay south of I70 and east of I25.

RED SE: This talkgroup has been established for interoperability between Fire and EMS Agencies within the North Central All Hazards Region that lay south of I70 and east of I25.

BLUE SW: This talkgroup has been established for interoperability between Law Enforcement Agencies within the North Central All Hazards Region that lay south of I70 and west of I25.

RED SW: This talkgroup has been established for interoperability between Fire and EMS Agencies within the North Central All Hazards Region that lay south of I70 and west of I25.

GRAY: This talkgroup has been established for interoperability between Federal agencies and agencies within the North Central All Hazards Region.

METRO NET: In addition to the above talkgroups, the Metro Net talkgroup has been setup for communications center-to-communications center interoperability. It is not intended for this talkgroup to be programmed into field subscriber units, except for mobile dispatch/command vehicles.

GREEN 1 and GREEN 2: These talkgroups have been established for interoperability between EMS and Health Care Agencies only.

Incident Response/Usage

Incidents crossing political jurisdictions will potentially have competing demands and priorities for interoperable communications assets. Until such time as Incident Command is established, the lead agency designee (i.e., communications supervisor/command personnel), in collaboration with their counterparts in other involved agencies, will have the authority to designate the use of interoperable assets. Once Incident Command has been established, Communications Unit Leaders can be contacted for further coordination and delegation of the interoperable communications.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels below:

- Disaster, large-scale incident or extreme emergency requiring mutual aid or interagency communications incidents where imminent danger exists to life or property
- Incidents requiring the response of multiple agencies
- Pre-planned events requiring mutual aid or interagency communications
- Drills, tests, and exercises.

In the event of multiple simultaneous incidents within the same priority, the resources should be allocated according to the following:

- Incidents with the greatest threat to life or property have priority over incidents with less immediate needs

- Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options
- When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource. These are interoperability channels in the region that are reserved for intercommunications in situations requiring the coordination of multiple public safety entities.

Examples of Proper Use of the Interoperability Channels include:

- Use as working channels for multiple fire departments fighting a fire together
- For coordination during a police chase through multiple jurisdictions where the agencies have no other communications link with each other
- For communications during extended joint operations between multiple police agencies such as drug operations, riots, etc.
- For coordination during recovery operations after a disaster such as a tornado when local, state, and federal officials require a common communications link.

Examples of Improper Use of the Interoperability Channels include:

- To support the administrative functions of a fire department having a mutual aid agreement with an adjacent fire department
- To provide "move up" capability when a fire unit leaves its own coverage area
- To provide an extra working channel for a public safety agency supporting a special event
- To provide a surveillance channel between members of the same public safety agency

Other rules of use include:

- **National Incident Management System (NIMS)** - Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource.
- **Plain Language** - All Communications shall be in plain language. Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Requests for assistance or backup should clarify the reason for the request.
- **Unit Identification** - Agency name shall precede unit identifier, i.e., operations, logistics, command, information, liaison, i.e., "Denver Police 211".

Southwest All Hazards Region Include SW RIC A and SW RIC D

The talkgroups SW RIC A, SW RIC B, SW RIC C, and SW RIC D have been set aside specifically for use by agencies that are a part of the Southwest All-Hazards Region to be used according to their user policies. These talkgroups are only to be used within the (5) county (Archuleta, Dolores, La Plata, Montezuma, and San Juan) Southwest All Hazards Region.

REGIONAL MUTUAL AID CHANNEL (MAC) TALKGROUPS

CCNC has geographically divided the state into five (5) Mutual Aid Communications Areas:

- **METRO** comprised of Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, and Jefferson counties;
- **NORTHEAST** comprised of Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma counties;
- **SOUTHEAST** comprised of Baca, Bent, Chaffee, Crowley, Custer, El Paso, Fremont, Huerfano, Kiowa, Lake, Las Animas, Otero, Park, Powers, Pueblo, and Teller counties;
- **SOUTHWEST** comprised of Alamosa, Archuleta, Conejos, Costilla, Delores, Delta, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, and San Miguel counties;
- **NORTHWEST** comprised of Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt and Summit counties.

Each MAC Region has four (4) mutual aid talkgroups assigned to the geographic area for multi-agency coordination. All Regional MAC Talkgroups (MAC 1 through MAC 20) are available for use within their geographic area by all CCNC agencies operating in that area. The following MAC talkgroup descriptions and allocations are recommended for operational usage however individual events will govern the actual assignment and usage of any MAC channel within its operating area.

While the following talkgroups have been outlined for use in these regions, not all counties or agencies within those counties are operating on the Statewide DTR System. Some State agencies only have the first talkgroup (calling channel) for every region programmed in their subscribers.

MAC 1 MET thru MAC 4 MET (METRO)

MAC Talkgroups for use in Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, and Jefferson counties.

MAC 1 MET

This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the METRO region. This talkgroup can be used by non-public safety agencies for mutual aid coordination and communications or by any metro public safety agency whose assigned talkgroup may already be in use.

MAC 2 MET

This talkgroup has been initially allocated to Fire Agencies for mutual aid coordination and communications. In addition the following agency specific mutual aid talkgroups have been established.

MAC 3 MET

This talkgroup has been initially allocated to Law Enforcement Agencies for mutual aid coordination and communications. In addition the following agency specific mutual aid talkgroups have been established.

MAC 4 MET

This talkgroup has been initially allocated to EMS Agencies for mutual aid coordination and communications.

MAC 5 NE thru MAC 8 NE (Northeast)

MAC Talkgroups for use in Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma counties.

MAC 5 NE

This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the NE region. This talkgroup can be used by non-public safety agencies for mutual aid coordination and communications or by any NE public safety agency whose assigned talkgroup may already be in use.

MAC 6 NE

This talkgroup has been initially allocated to Fire agencies for mutual aid coordination and communications.

MAC 7 NE

This talkgroup has been initially allocated to Law Enforcement agencies for mutual aid coordination and communications.

MAC 8 NE

This talkgroup has been initially allocated to EMS agencies for mutual aid coordination and communications.

MAC 9 SE thru MAC 12 SE (Southeast)

MAC Talkgroups for use in Baca, Bent, Chaffee, Crowley, Custer, El Paso, Fremont, Huerfano, Kiowa, Lake, Las Animas, Otero, Park, Powers, Pueblo, and Teller counties.

MAC 9 SE

This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the SE region. This talkgroup can be used by non-public safety agencies for mutual aid coordination and communications or by any SE public safety agency whose assigned talkgroup may already be in use.

MAC 10 SE

This talkgroup has been initially allocated to Fire agencies for mutual aid coordination and communications.

MAC 11 SE

This talkgroup has been initially allocated to Law Enforcement agencies for mutual aid coordination and communications.

MAC 12 SE

This talkgroup has been initially allocated to EMS agencies for mutual aid coordination and communications.

MAC 13 SW thru MAC 16 SW (Southwest)

MAC Talkgroups for use in Alamosa, Archuleta, Conejos, Costilla, Delores, Delta, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan, and San Miguel counties.

MAC 13 SW

This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the SW region. This talkgroup can be used by non-public safety agencies for mutual aid coordination and communications or by any SW public safety agency whose assigned talkgroup may already be in use.

MAC 14 SW

Adopted November 10, 2010 this talkgroup has been initially allocated to Fire agencies for mutual aid coordination and communications.

MAC 15 SW

This talkgroup has been initially allocated to Law Enforcement agencies for mutual aid coordination and communications.

MAC 16 SW

This talkgroup has been initially allocated to EMS agencies for mutual aid coordination and communications.

MAC 17 NW thru MAC 20 NW (Northwest)

MAC Talkgroups for use in Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt and Summit counties.

MAC 17 NW

This talkgroup will be used for inter-regional mutual aid coordination and communications. This also has been designated the contact channel for any subscriber user coming into the region who needs to communicate with an agency within the NW region. This talkgroup can be used by non-public safety agencies for mutual aid

coordination and communications or by any NW public safety agency whose assigned talkgroup may already be in use.

MAC 18 NW

This talkgroup has been initially allocated to Fire agencies for mutual aid coordination and communications.

MAC 19 NW

This talkgroup has been initially allocated to Law Enforcement agencies for mutual aid coordination and communications.

MAC 20 NW

This talkgroup has been initially allocated to EMS agencies for mutual aid coordination and communications.

CO MAC 21 (Statewide)

MAC Talkgroups for use in any county or counties. This talkgroup will be used for intra-state mutual aid coordination and communications. This talkgroup is available for use when no other Mutual Aid Talkgroups are available to meet the communications needs.

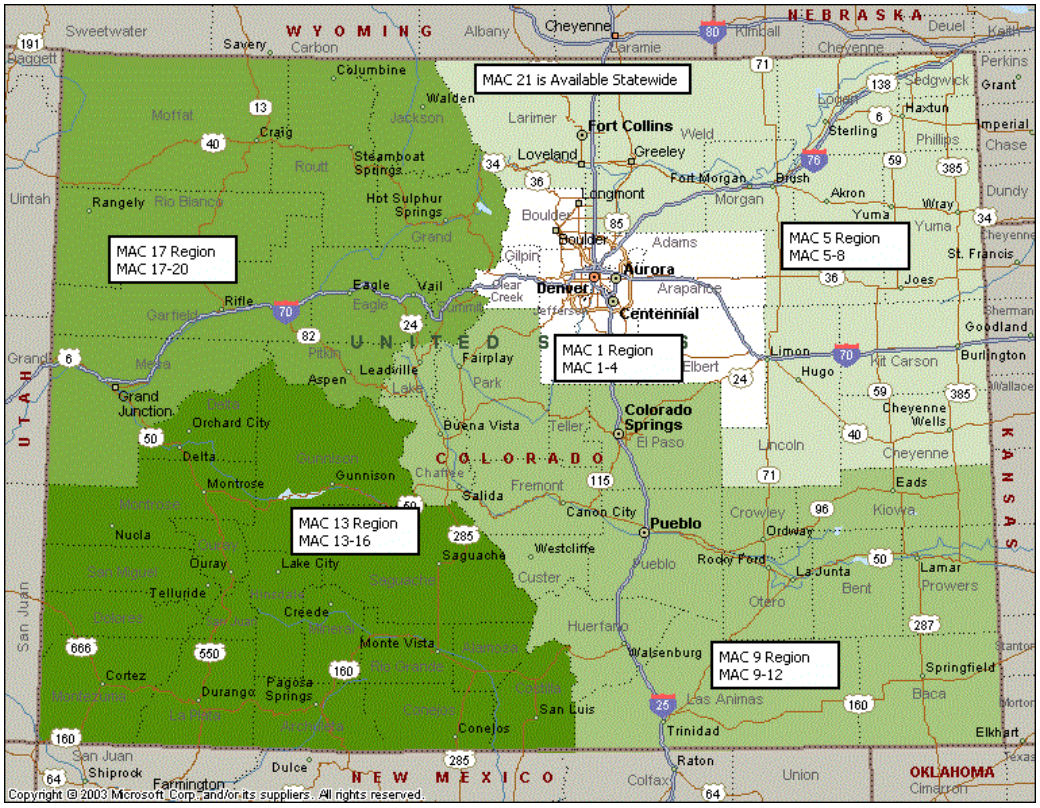

FIGURE 48: COLORADO STATE MAC MAP

CONTROLLED UNCLASSIFIED INFORMATION

REGIONAL EMERGENCY MEDICAL AND TRAUMA ADVISORY

Council (RETAC) Regional Mutual Aid

The following talkgroups have been assigned for Emergency Medical Services (EMS) mutual aid coordination and communications within the various RETAC regions as assigned throughout Colorado. While the following talkgroups have been outlined for use in these regions, not all counties or agencies within the region are operating on the Statewide DTR System.

EMS MH

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Mile-High RETAC Mutual Aid Region: Adams, Arapahoe, Broomfield, Denver, Douglas, and Elbert counties.

EMS NE

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Northeastern Colorado RETAC Mutual Aid Region: Jackson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma counties.

EMS PP

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Plains to Peaks RETAC Mutual Aid Region: Cheyenne, El Paso, Kit Carson, Lincoln, and Teller counties.

EMS SE

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Southeast Colorado RETAC Mutual Aid Region: Baca, Bent, Crowley, Kiowa, Otero, and Prowers counties.

EMS S

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Southern Colorado RETAC Mutual Aid Region: Custer, Fremont, Huerfano, Las Animas, and Pueblo counties.

EMS FH

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Foothills RETAC Mutual Aid Region: Boulder, Clear Creek, Gilpin, Grand, and Jefferson counties.

EMS CM

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Central Mountain RETAC Mutual Aid Region: Chaffee, Eagle, Lake, Park, Pitkin, and Summit counties.

EMS NW

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Northwest Colorado RETAC Mutual Aid Region: Garfield, Mesa, Moffat, Rio Blanco, and Routt counties.

EMS SLV

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the San Luis Valley RETAC Mutual Aid Region: Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache counties.

EMS SW

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Southwest RETAC Mutual Aid Region: Archuleta, Dolores, La Plata, Montezuma, and San Juan counties.

EMS W

This talkgroup has been initially allocated for EMS mutual aid coordination and communications within the Western RETAC Mutual Aid Region: Delta, Hinsdale, Gunnison, Montrose, Ouray and San Miguel counties.

EMS MAC

This talkgroup has been initially allocated for EMS mutual aid coordination and communications Statewide.

ER MAC

This talkgroup has been initially allocated to EMS agencies for mutual aid coordination and communications with Hospital Emergency Departments Statewide.

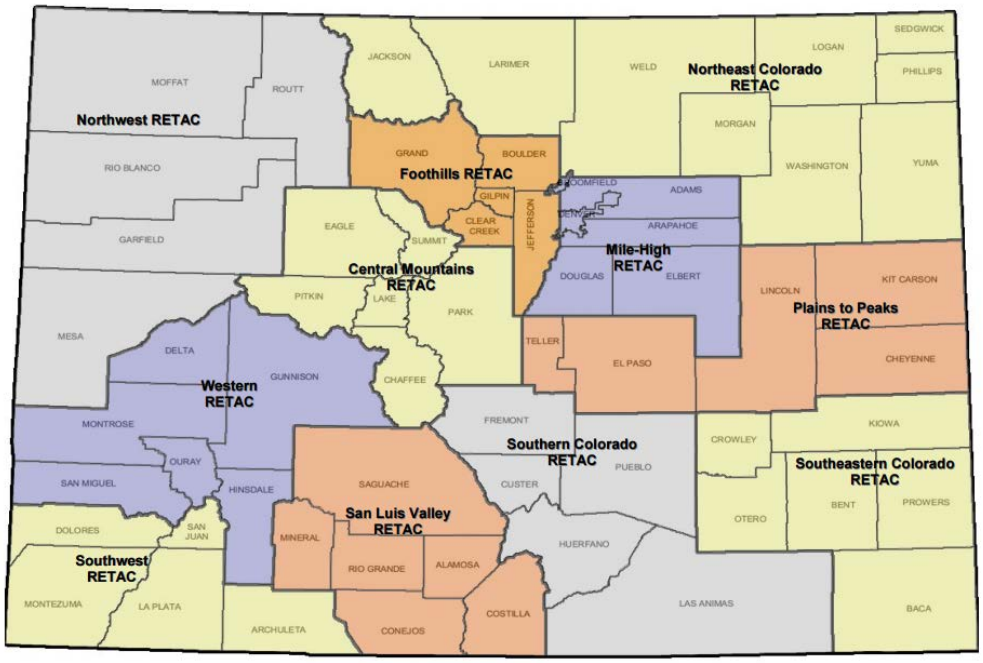

FIGURE 49: COLORADO RETAC MAP

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COUNTY HEALTH DEPARTMENTS

The following talkgroups have been assigned for County Health Departments (CHD) emergency management, mutual aid coordination and communications within the All-Hazards Emergency Management Regions as assigned throughout Colorado. While the following talkgroups have been outlined for use in these regions, not all counties or agencies within the region are operating on the Statewide DTR System.

CHD NE

County Health Department Northeast has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the Northeast All-Hazards Emergency Management Region: Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma counties.

CHD NC

County Health Department North Central has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the North Central All-Hazards Emergency Management Region: Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin and Jefferson counties.

CHD SC

County Health Department South Central has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the South Central All-Hazards Emergency Management Region: Chaffee

CHD S

County Health Department South has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the South All-Hazards Emergency Management Region: Custer, Fremont, Huerfano, Las Animas, and Pueblo counties.

CHD SE

County Health Department Southeast has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the Southeast All-Hazards Emergency Management Region: Baca, Bent, Crowley, Kiowa, Otero, and Prowers counties.

CHD NW

County Health Department Northwest has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the Northwest All-Hazards Emergency Management Region: Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt and Summit counties.

CHD W

County Health Department West has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the West All-Hazards Emergency Management Region: Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel counties.

CHD SW

County Health Department Southwest has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the Southwest All-Hazards Emergency Management Region: Archuleta, Dolores, La Plata, Montezuma, and San Juan Counties.

CHD SL

County Health Department San Luis Valley has been initially allocated to County Health Departments (CHD) emergency management, mutual aid coordination and communications within the San Luis Valley All-Hazards Emergency Management Region: Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache counties.

STATE PATROL

The following talkgroups have been assigned for the Colorado State Patrol within the Southeast All-Hazards Emergency Management Region. Each state patrol troop has a primary dispatch and tactical channel assigned to it for use.

CSP2C

This is the primary dispatch channel for State Patrol and other state law enforcement agencies such as Colorado Parks and Wildlife, Parole, Probation etc. This channel is used as a Car-to-Base channel. This channel is used in the Counties of Baca, Bent, Cheyenne, Crowley, Kiowa, Otero, Prowers and portions of Las Animas and Lincoln.

CSP STW

This is the State Patrol Statewide Channel. This channel is used mostly as the travel channel for CSP and other state law enforcement agencies. This channel is shared within the region for interoperability with state law enforcement agencies as well.

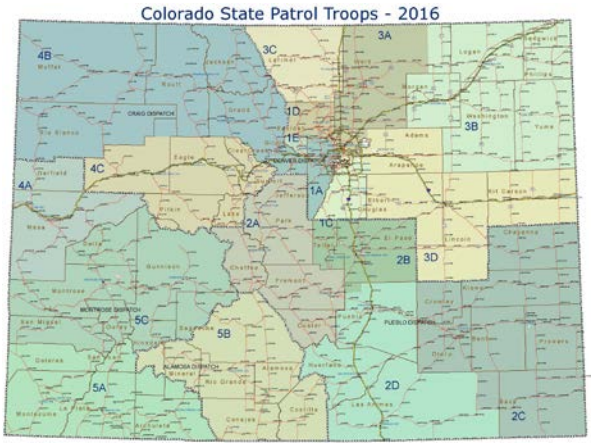

FIGURE 50: COLORADO STATE PATROL TROOP MAP

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STATE OEM CHANNELS

The following talkgroups have been assigned for emergency management, mutual aid coordination and communications within the All-Hazards Emergency Management Regions as assigned throughout Colorado. While the following talkgroups have been outlined for use in these regions, not all counties or agencies within the region are operating on the Statewide DTR System.

OEM SE

Office of Emergency Management Southeast has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the Southeast All-Hazards Emergency Management Region: Baca, Bent, Crowley, Kiowa, Otero & Prowers counties.

OEM S

Office of Emergency Management South has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the South All-Hazards Emergency Management Region: Custer, Fremont, Huerfano, Las Animas & Pueblo counties.

OEM NE

Office of Emergency Management Northeast has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the Northeast All-Hazards Emergency Management Region: Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld & Yuma counties.

OEM SLV

Office of Emergency Management San Luis Valley has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the San Luis Valley All-Hazards Emergency Management Region: Alamosa, Conejos, Costilla, Mineral, Rio Grande & Saguache counties.

OEM SW

Office of Emergency Management Southwest has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the Southwest All-Hazards Emergency Management Region: Archuleta, Dolores, La Plata, Montezuma & San Juan counties.

OEM W

Office of Emergency Management West has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the West All-Hazards Emergency Management Region: Delta, Hinsdale, Gunnison, Montrose, Ouray & San Miguel counties.

OEM NW

Office of Emergency Management Northwest has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the Northwest All-Hazards Emergency Management Region: Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt, Summit counties.

OEM NC

Office of Emergency Management North Central has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the North Central All-Hazards Emergency Management Region: Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Elbert, Gilpin & Jefferson counties.

OEM SC

Office of Emergency Management South Central has been initially allocated to State Emergency Management and County Emergency Management, mutual aid coordination and communications within the South Central All-Hazards Emergency Management

Region: Chaffee, El Paso, Lake, Park & Teller counties.

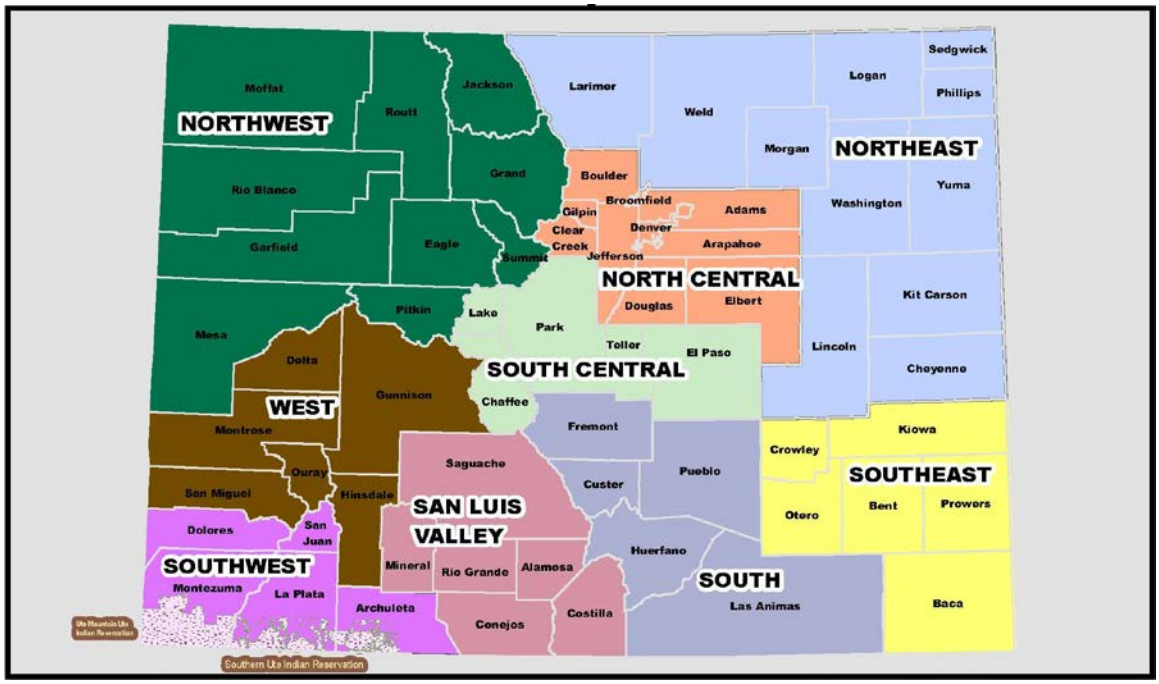

FIGURE 51: ALL-HAZARDS REGION MAP

NAWAS

The National Alert and Warning System is a telephone system used to convey warnings to the Federal, State and Local governments. In Colorado there are 31 NAWAS warning points. The State Warning Point has been designated as The Denver State Dispatch

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Center. The phone system is also connected via a gateway at the State EOC to the 800 MHz DTR network and utilizes this channel on the DTR system.

TABLE 21: NAWAS CIRCUIT LOCATIONS

Agency	Location	Station #	Agency	Location	Station #
Colorado State Patrol	Lakewood	Control	Colorado Springs Fire Department Dispatch	Colorado Springs	22
Colorado State Patrol	Pueblo	1	National Weather Service	Goodland KS	23
Colorado State Patrol	Grand Junction	3	Fort Carson Military Police	Fort Carson	24
Colorado State Patrol	Alamosa	4	Jeffco Sheriff	Golden	25
National Weather Service	Pueblo	5	Douglas County Sheriff	Castle Rock	26
Greeley/Weld County Communications	Greeley	6	Morgan County Comm Center	Frot Morgan	27
Boulder OEM	Boulder	7	La Junta Police Dispatch	La Junta	28
Grand Junction DOE	Grand Junction	9	Colorado State Patrol	Montrose	29
Littleton Communications	Littleton	11	Elpaso County Sheriff	Colorado Springs	30
Prowers County Dispatch	Lamar	12	Denver County EOC	Denver	
Durango Central Dispatch	Durango	13	Littleton Fire Station 2	Littleton	
Sterling Police Department	Sterling	14	Denver County Comm Center	Denver	
Colorado State Patrol	Craig	15	CSP Control Center	Denver	
Chaffee County Sheriff's Office	Salida	16	National Weather Service	Boulder	
Larimer County Sheriff's Office	Fort Collins	18	Boulder Alternate EOC	Boulder	
Aspen-Pitkin County Comm Center	Aspen	19	Summit County OEM	Frisco	
Lincoln County Sheriff's Office	Limon	20	CO Division of Emergency Mgt	Centennial	
Adams County Communications Centr	Commerce City	21	State Civil Defense EOC	Golden	
These locations are copper phone circuit locations. The Colorado Division of Homeland Security and Emergency Management also maintains a DTR Radio link to this circuit and some additional dispatch centers, mobile command centers, emergency managers and other first response agencies may have access to this network via their 800 DTRS radio on the NAWAS channel. Tests are conducted twice daily at 1000 and 2000 hours.					

ENCRYPTION

Encryption is the process of encoding “Plain language” messages into “Secure” messages that are broadcast over the air in a format that is unintelligible to anyone not authorized to receive it. To receive the message information, you must have the proper Encryption Key to decode the message. To use encryption, the radio must be model capable and programmed for encrypted operation. Encryption may be a software-based option, such as Motorola’s “Advanced Digital Privacy” (ADP) or a hardware-based option such as “Data Encryption Standard” (DES), “Advanced Encryption Standard” (AES) or other variations. Encryption can be used on conventional channels or trunked talkgroups unless prohibited by rules and/or regulations. Encryption is not permitted on CCNC Mutual Aid Channels or on Calling Channels such as 8CALL90. Agencies using encryption can only communicate with other encrypted agencies if they have the same type of encryption and the same Encryption Key.

The Encryption Key is a parameter used in conjunction with a cryptographic algorithm to encode “Plain language” into “Secure” or to decode “Secure” into “Plain language.” The Encryption Key can be changed by the using agency whenever they see the need to change it.

Encryption Keys are identified by a numeric label known as the “Encryption Key ID.” The “Encryption Key ID” is used in equipment programming to associate a particular Encryption Key with the proper channels and/or talkgroups. When an “Encryption Key” is changed the “Encryption Key ID” doesn’t change. To effectively assign your “Encryption Keys” to the desired channels/talkgroups, each “Encryption Key” must have a unique “Encryption Key ID”. The unique “Encryption Key ID” also allows you to share your encrypted functionality with other users that have equipment with the same encryption functionality by sharing only the “Encryption Key ID”. The authorized user can program their equipment for encryption using your “Encryption Key ID” and you can load the actual “Encryption Key”, keeping the “Encryption Key” secure.

Agencies wishing to use encryption on their talkgroups should contact the DTRMC @ (303) 764-7975 to receive a unique “Encryption Key ID”. The DTRMC will need to know: How many encryption keys your agency will be using, what talkgroups will be encryption capable, and what keys will be used for what talkgroups. The DTRMC does not manage your actual “Encryption Keys”, they only assign a range of “Encryption Key IDs” for you to use with your talkgroups. They assign the range of “Encryption Key IDs” to avoid duplication of “Encryption Key IDs” which could cause communications problems for the DTR system or its users.

CCNC recommends that you use an Encryption Key Management Plan such as those outlined by PSWN the DTRMC will assign a “Common Key” for each type of encryption used on the DTR System. Encryption is allowed on the “Five Statewide Simplex Channels” but only in the “Operator Selectable” configuration.

The “Common Key” may be used for interoperable communications on the “Five Statewide Simplex Channels” or other talkgroups that you have in common with other agencies that have the same type of encryption capability. When using encryption in mutual aid situations you should ensure that all the responding agencies are capable of the same type of encryption.

The following Statewide Encrypted channels are available to allow for coordination of resources for a major event with multiple agencies, jurisdictions and or disciplines responding:

ADP EC – Statewide encrypted coordination talkgroup using ADP encryption,
DES EC – Statewide encrypted coordination talkgroup using DES encryption,
AES EC– Statewide encrypted coordination talkgroup using AES encryption.

Any agency that has the corresponding encryption capability in their subscriber equipment may use the talkgroup for coordination of resources for a major event with multiple agencies, jurisdictions and or disciplines responding: Encryption is not allowed on the CCNC Mutual Aid Channels.

TRAVELING BETWEEN MUTUAL AID REGIONS

All users traveling across mutual aid regions including Prisoner/Jail transport vehicles are required to change to an agency defined talkgroup for traveling when leaving their immediate jurisdiction. This is due to system loading considerations. Agencies should avoid broadcasting their dispatch channel around the state in areas that were not designed for the additional talkgroup loading.

HOSPITAL TALKGROUPS

Many Hospitals/Trauma centers throughout the state have been assigned talkgroups (Hospital Talkgroups). Check with the State of Colorado EMS Telecommunications Liaison, (303) 692-2536, for the current listing of hospital talkgroups available for your response area.

STATEWIDE SIMPLEX CHANNELS

Five statewide simplex channels have been assigned for on scene direct radio to radio communications as needed. Channels must use APCO 25 Common Air Interface digital signaling, use a channel spacing of 12.5 KHz, a transmit deviation of 2.5 KHz, be programmed for Network ID $293 and operated at Output power levels of 3 Watts or less. Encryption is allowed on these channels using the “Common Key” for your encryption type. The “Common Key” may be used for interoperable communications on these channels. When using encryption in mutual aid situations you should ensure that all the responding agencies are capable of your type of encryption and are using the “Common Key.”

The naming convention for these channels is as follows:

SMPX1 (Subscriber Frequency RX 851.1000 TX 851.1000)
SMPX2 (Subscriber Frequency RX 851.7500 TX 851.7500)
SMPX3 (Subscriber Frequency RX 852.3000 TX 852.3000)
SMPX4 (Subscriber Frequency RX 852.5500 TX 852.5500)
SMPX5 (Subscriber Frequency RX 853.6875 TX 853.6875)

800 MHz National Interoperability Channels

These channels are allocated as required channels under the FCC Rules & Regulations as well as the Region 7 800 MHz RPC plan for all users in the NPSPAC (National Public

Safety Planning Advisory Committee) frequency band. These channels may be used in Repeater Mode as described below or in Direct Mode for on scene conventional radio to radio communications. These channels will have 25 KHz channel spacing and a transmit deviation of 5.0 KHz with a continuous tone coded squelch of 156.7 Hz.

CHANNEL USE

Plain language will be used on all five National Interoperability Channels at all times, and the use of unfamiliar terms, phrases or codes will be kept to a minimum, unless deemed necessary for security purposes. The use of these channels for intra-system normal dispatch and routine agency operations is strictly prohibited. Normally, the five National Interoperability Channels are to be used only for activities requiring communications between agencies not sharing any other compatible communications system. Under emergency situations, one or more tactical channels may be assigned by the controlling agency at the time of the incident.

Calling Channel – 8CALL90

This channel will have a 25 KHz channel spacing and a transmit deviation of 5 KHz with transmit and receive continuous tone coded squelch of 156.7 Hz.

The calling channel shall be used to contact other users in the Region for the purpose of requesting incident related information and assistance. This channel shall not be used as an ongoing working channel. Once contact is made, an agreement upon which tactical channel to use is recommended for continued communications. Repeaters are currently located at: Green Mountain; Colorado Springs/Pittsburg; El Paso County/Stanley; and Cheyenne, WY. In Kansas these repeaters are located on each tower in the State of Kansas.

8CALL90 Subscriber Frequency RX 851.0125 TX 806.0125
8CALL90D Subscriber Frequency RX 851.0125 TX 851.0125

TACTICAL CHANNELS 8TAC91 - 8TAC94

8TAC91-8TAC94 AND 8TAC91D – 8TAC94D channels are reserved for use by those agencies in need of conducting inter-agency communications. Incidents requiring multi-agency participation will be coordinated over these channels by the agency controlling the incident. Individual tactical channels may be designated for use by various services on an incident basis by the controlling agency. In the event of multiple incidents requiring the use of these channels, channels shall be designated by mutual agreement between controlling agencies.

8TAC91

This channel will have a 25 KHz channel spacing and a transmit deviation of 5 KHz with transmit and receive continuous tone coded squelch of 156.7 Hz. Repeaters are currently located at: Mt. Morrison, Pueblo state shop, Limon, Raton Pass, Springfield, and Alamosa. In Kansas near the Colorado border this repeater is located near Richfield, KS in Morton County East of Stonington, CO.

8TAC91 Subscriber Frequency RX 851.5125 TX 806.5125
8TAC91D Subscriber Frequency RX 851.5125 TX 851.5125

8TAC92

This channel will have a 25 KHz channel spacing and a transmit deviation of 5 KHz with transmit and receive continuous tone coded squelch of 156.7 Hz.

Repeaters are currently located at: Aurora/Hampden & Parker, El Paso County/Stanley, Horsetooth, Bowen Marker, and Chevron.

8TAC92 Subscriber Frequency RX 852.0125 TX 807.0125
8TAC92D Subscriber Frequency RX 852.0125 TX 852.0125

8TAC93

This channel will have a 25 KHz channel spacing and a transmit deviation of 5 KHz with a transmit and receive continuous tone coded squelch of 156.7 Hz. Repeaters are currently located at: Smoky Hill, Weld @35th, Colorado Springs/Pittsburg, Skyland/Walsh, and Reiradon. In Kansas near the Colorado border this repeater is located near Astor, KS in Greeley County East of Sheridan Lake, CO.

8TAC93 Subscriber Frequency RX 852.5125 TX 807.5125
8TAC93D Subscriber Frequency RX 852.5125 TX 852.5125

8TAC94

This channel will have a 25 KHz channel spacing and a transmit deviation of 5 KHz with transmit and receive continuous tone coded squelch of 156.7 Hz.

Repeaters are currently located at: Riley Peak; Lamar state shop; La Junta; and Cheyenne, WY.

8TAC94 Subscriber Frequency RX 853.0125 TX 808.0125
8TAC94D Subscriber Frequency RX 853.0125 TX 853.0125

700 MHZ NATIONAL INTEROPERABILITY CHANNELS

These channels are allocated under the FCC Rules & Regulations as required channels by the Region 7 700 MHz Regional Plans for all users using the public safety 700 MHz frequency band.

These channels must comply with the ANSI/TIA/EIA-102 (Project 25) Common Air Interface. These channels will have 12.5 KHz channel spacing and a transmit deviation of 2.5 KHz with a Network ID of $293. All subscriber units will use the following defaults: Talkgroup ID is $0001 Manufacturer's ID is $00. Message ID for unencrypted messages is $0000. Encryption Algorithm ID for unencrypted messages is $80.

Encryption Key ID for unencrypted messages is $0000.

These channels may be used in Repeater Mode as described below or in Direct Mode for on scene conventional digital radio to radio communications. Both Repeater Mode and Direct Mode are required in the subscriber. Plain language will be used on all National Interoperability Channels at all times, and the use of unfamiliar terms, phrases or codes will be kept to a minimum, unless deemed necessary for security purposes. The use of these channels for intra-system normal dispatch and routine agency operations is strictly prohibited. Normally, the National Interoperability Channels are to

be used only for activities requiring communications between agencies not sharing any other compatible communications system. Under emergency situations, one or more Tactical Channels may be assigned by the controlling agency at the time of the incident. Encryption is not allowed on the Calling Channel but may be used on the other channels by complying with the procedures stated in the Region 7 700 MHz Regional Plan.

Calling Channel - 7CALL50 & 7CALL70

The calling channel shall be used to contact other users in the Region for the purpose of requesting incident related information and assistance. These channels shall not be used as ongoing working channels. Once contact is made, an agreement upon which tactical channel to use is recommended for continued communications. These channels may be used in Repeater Mode as described above or in Direct Mode for on scene conventional digital radio to radio communications. Both Repeater Mode and Direct Mode of both channels are required in the subscriber.

7CALL50 Subscriber Frequency RX 769.24375 TX 799. 24375
7CALL50D Subscriber Frequency RX 769.24375 TX 769.24375
7CALL70 Subscriber Frequency RX 773.25625 TX 803.25625
7CALL70D Subscriber Frequency RX 773.25625 TX 773.25625

Currently there are no repeaters for this channel installed for operation in Colorado.

General Public Safety Tactical Channel - 7TAC55 & 7TAC75

These channels are reserved for use by those public safety agencies in need of conducting inter-agency communications. These tactical channels may be designated for use by various services on an incident basis by the controlling agency under NIMS. Incidents requiring multi-agency participation will be coordinated for this channel by the agency controlling the incident. In the event of multiple incidents requiring the use of these channels, channels shall be designated by mutual agreement between controlling agencies. These channels may be used in Repeater Mode as described above or in Direct Mode for on scene conventional digital radio to radio communications.

Both Repeater Mode and Direct Mode of both channels are required in the subscriber.

7TAC55 Subscriber Frequency RX 769.74375 TX 799.74375
7TAC55D Subscriber Frequency RX 769.74375 TX 769.74375
7TAC75 Subscriber Frequency RX 773.75625 TX 803.75625
7TAC75D Subscriber Frequency RX 773.75625 TX 773.75625

Currently there are no repeaters for this channel installed for operation in Colorado.

Other Public Service Tactical Channel – 7GTAC57 & 7GTAC77

This channel is reserved for use by those public service agencies in need of conducting inter-agency communications. This tactical channel may be designated for use by various services on an incident basis by the controlling agency under NIMS. Incidents requiring multi-agency participation will be coordinated for this channel by the agency controlling the incident. In the event of multiple incidents requiring the use of these channels, channels shall be designated by mutual agreement between controlling agencies. This channel may be used in Repeater Mode as described above or in Direct

Mode for on scene conventional digital radio to radio communications. Both Repeater Mode and Direct Mode of both channels are required in the subscriber.

7GTAC57 Subscriber Frequency RX 770.99375 TX 800.99375
7GTAC57D Subscriber Frequency RX 770.99375 TX 770.99375
7GTAC77 Subscriber Frequency RX 774.85625 TX 804.85625
7GTAC77D Subscriber Frequency RX 774.85625 TX 774.85625

Currently there are no repeaters for this channel installed for operation in Colorado.

Mobile Repeater Tactical Channel – 7MOB59 & 7MOB79D

There are no fixed repeater sites for these channels. These channels are dedicated to operating on scene portable repeaters for temporary operations or for Direct Mode on scene communications. In no case shall control of these channels remain with any single agency beyond the termination of a declared event. These channels may be used in Repeater Mode as described above or in Direct Mode for on scene conventional digital radio to radio communications. Both Repeater Mode and Direct Mode of both channels are required in the subscriber.

7MOB59 Subscriber Frequency RX 770.89375 TX 800.89375
7MOB59D Subscriber Frequency RX 770.89375 TX 770.89375
7MOB79 Subscriber Frequency RX 774.50625 TX 804.50625
7MOB79D Subscriber Frequency RX 774.50625 TX 774.50625

STATEWIDE CHANNEL – STAC, STACD

There are no fixed repeater sites for this channel. Portable repeaters are also allowed to use STAC for temporary repeater operations. In no case shall control of these channels remain with any single agency beyond the termination of a declared emergency event.

This channel may also be utilized with the ACU-1000 to patch VHF/UHF channels.

STACD is intended to be used at low power in simplex analog mode for SWAT, DIVE teams, etc. This channel may be used to communicate with medical aircraft in the area. This channel will have a 12.5 KHz channel spacing and a transmit deviation of 2.5 KHz with transmit and receive continuous tone coded squelch of 156.7 Hz.

STAC Subscriber Frequency RX 853.7875 TX 808.7875
STACD Subscriber Frequency RX 853.7875 TX 853.7875

AIRCRAFT COMMUNICATIONS

Use of trunked talkgroups on DTR by aircraft is only allowed for authorized radios which are installed as fixed radios in the aircraft. The operation of DTR radios onboard aircraft is governed by Title 47 of the Code of Federal Regulations (CFR) Part 90 Private Land Mobile Radio Services §90.423. As authorized in §90.423(a) (4), to minimize the interference potential to the DTR system, radios operated in aircraft must be limited to 3 watts Effective Radiated Power (ERP), shall not be used when the aircraft's elevation exceeds 3,000 feet above ground level (AGL), and shall have the radio ID assigned to the "Aircraft" Radio User Site Access Profile in the User Configuration Manager (UCM).

The “Aircraft” Radio User Site Access Profile will only allow aircraft radios to be used at a pre-determined set of sites on the DTRS.

Aircraft radio operators should be aware that the Doppler Effect may significantly degrade their aircraft’s DTR radio performance when traveling at speeds greater than approximately 150 knots. Due to frequency reuse, statewide coverage for DTR radios in aircraft is not guaranteed, and operators of aircraft DTR radios are encouraged to become familiar with the coverage of the system in their normal operating area while in the air and on the ground. Due to the limited number of sites available for use by aircraft DTR radios, once an aircraft gets close to the ground, DTR coverage may be degraded depending on its proximity to the available sites. If DTR coverage is not available the only channels available for aircraft air to ground communications are conventional analog simplex channels STACD, 8CALL90D, 8TAC91D, 8TAC92D, 8TAC93D, 8TAC94D and conventional simplex P25 digital channels SMPX 1 through SMPX 5.

Any portable radio that can operate on DTR carried aboard an aircraft shall be turned off prior to the aircraft taking off, this includes any radio typically assigned to units that perform duties on the ground including but not limited to all law enforcement radios, fire service radios or EMS radios. These radios may only be turned back on once the aircraft has landed.

A request to use a radio on DTR in an aircraft shall first be presented to the CCNC Technical Committee by submitting the COLORADO STATEWIDE DIGITAL TRUNKED RADIO (DTR) SYSTEM AIRCRAFT OPERATION APPLICATION.

The request will be reviewed and a recommendation passed on to the CCNC Executive Board.

The CCNC Executive Board will receive this recommendation from the CCNC Technical Committee, and has the final approval authority for the request.

As a note: Medical Helicopters in the Southeast Region primarily use Simplex 1 (SMPX 1) as their air-to-ground frequency. The air medical helicopters also have the ability to use specific talkgroups on certain towers within the State of Colorado, the only tower with aircraft capabilities in Southeast Colorado is Toonerville in Southeast Bent County.

Table 22: Aircraft DTR Sites in Colorado

Abajo	Delta	Mesa Point
Auroria	DIA	Marble
Black Ridge	Egnar	San Luis
Buffalo Pass	Eldora	Sandoval
Byers	Farwell	Sheeps Knob
Castle	Gun Barrell	South Morgan
Cathedral	Kiowa	State Capital
Commerce City	Longmont	Ute Mountain
Toonerville		

1. STATE OWNED SHARED SYSTEM

Radio System Name	Owning Agency	Make/Model	Frequency Band	Type	Service Area
Digital Trunked Radio System (DTRS)	State of Colorado/ Various	Motorola	800 MHz	DTRS	Statewide

CONTROLLED UNCLASSIFIED INFORMATION

	State Emergency Operations Center **Mission Capability Sets** **ESF-02-0121 – Site on Wheels (SOW)**

ACTIVATION PROCEDURES

LOCAL / STATE ACTIVATION PROCEDURES

NORMAL HOUR ACTIVATION PROCEDURES

1. DHSEM/OEM is the lead agency charged with activation and mobilization of resources outside local / regional mutual aid or auto aid capability at a State Level. Any resource may deploy within its area or responsibility when requested locally.
2. The Agency Having Jurisdiction should **request** the activation of a **Site on Wheel** using the Request for Assistance form.
3. SEOC Operations will validate the request of the **Site on Wheel** with the Agency Having Jurisdiction through direct communications or through the DHSEM/OEM Field Manager.
4. DHSEM/OEM Operations Section will task **ESF-2 Colorado Department of Information & Technology in conjunction with ESF-3 Colorado Department of Transportation and the National Guard Branch** for availability & specific mission capability.
5. SEOC ESF-2 in conjunction with ESF-3 and the National Guard Branch will complete RFA / ICS-213-rr and coordinate deployment of requested mission.
6. SEOC Plans Section will send the completed Request for Assistance or ICS-213rr as an official resource order and instructions for deployment to the Agency Having Jurisdiction.
7. DHSEM/OEM is responsible for communication with Agencies having Jurisdiction (AHJ) to determine status of ongoing incident and their initial needs through the DHSEM/OEM Field Manager and /or DHSEM/OEM Operations.
8. Local/Regional DHSEM/OEM representatives are the primary points of contact with AHJ. DHSEM/OEM Field Manager serves as the primary communication link to the State DHSEM/OEM and serve as the State's local line officer.

AFTER HOURS ACTIVATION PROCESS

1. At the onset of an incident, local and tribal jurisdictions should call the Office of Emergency Management (OEM), Duty Officer at 303-472-4046 or the State Emergency Line at 303-279-8855
2. Provide the following information:
3. Location of the incident
4. Type of Incident
5. Local resources and support committed
6. Any state resource support needs (if known)
7. The Duty Officer or Emergency Line Attendant will contact the Regional Field Manager and relay pertinent information.
8. The Field Manager will activate as needed for the incident and begin communicating with the local/tribal emergency manager on coordination needs for the requested resource and follow normal duty hour process.

FEDERAL ACTIVATION PROCEDURES

ESF / AGENCY	MISSION PACKAGE NAME / IDENTIFIER

ESF-2 Department Of Information and Technology	ESF-02-0121-Site On Wheels (SOW)

TASK & PURPOSE	MISSION FUNCTION
● To provide mobile communications capability in areas where minimal communications exists due to loss of tower site, geographical area or large scale incident.	● Support Incident Communications ● Standalone communications module ● Response & Recovery Operations
SUPPORTING ESF'S / AGENCIES	**MISSION CAPABILITY LIMITATIONS**
● ESF-1 Public Works ● ESF-3 Colorado Department of Transportation ● ESF-5 Colorado Office of Emergency Management ● ESF-7 Colorado Office of Emergency Management ● Department of Military and Veteran Affairs	● Requires Micro-Wave Link or T1 Line for 6 Channel trunking site from a zone controller

RECOMMENDED PERSONNEL	RECOMMENDED EQUIPMENT
2 Personnel ● Requires 2 personnel for set-up & demobilization ● Requires 1 person to remain onsite during operation	SOW - Trailer & Mast / Tower ● Trailer 21' in Length – GVWR less than 20,000 lbs. ● Bumper hitch towable – All electric braking system includes leveling jacks and outriggers ● Tower raised and lowered hydraulically or electronically - Max height 60' ● Meets TIA/EIA-222-G specifications for unguyed permanent antenna sites when loaded with antennas ● Climate controlled equipment shelter ● 12 KW generator ● Power Entry Module with 200-Amp Manual Transfer Switch, ACDATA surge suppressor and main transitional ground lug. ● (6) 700 Mhz. Repeater P25 Trunking Sites ● (6) Base Radios, with (6) power supplies and amplifiers ● (10) APX700 /800/VHF multiband radios, chargers & batteries ● (1) Site Controller, used to assign channel resources to subscribers ● (1) Site Router with T1 interface & Site Network Level 2 Switch ● (1) 700 Mhz. 6 channel cavity combiner ● (1) 700 Mhz. transmit filter with power monitor ● (1) 700 Mhz. receive multi-coupler & pre-selector ● RF Distribution Panel to interface transmit combiner and multi-coupler ● (5) 800 Mhz. Conventional Repeaters ● (1) UHF Conventional Repeater & VHF Conventional Repeater ● Gateway Device – VHF/UHF, radio, telephone, Satcom, HF radio interface using adapters or modules ● (1) Laptop Computer w/ CD/DVD Player, Network Adapter, Operating System compactable with software to operate equipment, USB Ports, Serial Ports, AC Power adapter and rugged carrying case

SUPPORT REQUIREMENTS	WORKS WITH OTHER CAPABILITIES
● Diesel fuel for on-board generator (100 Gallon Tank) ● Can operate on 110/220 AC Electrical Power ● Antenna Gains for 700/800 Mhz. shall be 6dB or greater. ● Antenna Gains for VHF/UHF shall be 3 dB or less ● Antenna systems may be multiband and utilize combiners ● Lightning protection and grounding must be provided	● State & Federal IMT's ● County EOC's / ICP's ● Response & Recovery Packages ● Civil Support Team
N-HOUR SEQUENCE	**SPECIAL INSTRUCTIONS**
● D-24	● Towing requires a 2 5/16" Ball.

COST PER / 12 HR. OPERATIONAL PERIOD

PERSONNEL	EQUIPMENT	TOTAL COST ESTIMATE
$1,200.00 Mob/demob $600.00 operation period	**$0.00**	**$600.00**

CONTROLLED UNCLASSIFIED INFORMATION

State Emergency Operations Center
Mission Capability Sets
ESF-02-0129 / 800 MHz Support Cache Package

ACTIVATION PROCEDURES

LOCAL / STATE ACTIVATION PROCEDURES

NORMAL HOUR ACTIVATION PROCEDURES

1. DHSEM/OEM is the lead agency charged with activation and mobilization of resources outside local / regional mutual aid or auto aid capability at a State Level. Any resource may deploy within its area or responsibility when requested locally.
2. The Agency Having Jurisdiction should request the activation of a **800 MHz Support Cache Package** using the Request for Assistance form.
3. SEOC Operations will validate the request of the **800 MHz Support Cache Package** with the Agency Having Jurisdiction through direct communications or through the DHSEM/OEM Field Manager.
4. DHSEM/OEM Operations Section will task DHSEM Communications Manager for availability & specific mission capability.
5. SEOC – DHSEM Communication Manager will acquire and send the activated **800 MHz Support Cache Package** a Request for Assistance or ICS-213rr as an official resource order and instructions for deployment to the Agency Having Jurisdiction.
6. DHSEM/OEM is responsible for communication with Agencies having Jurisdiction (AHJ) to determine status of ongoing incident and their initial needs through the DHSEM/OEM Field Manager and /or DHSEM/OEM Operations.
7. Local/Regional DHSEM/OEM representatives are the primary points of contact with AHJ. DHSEM/OEM Field Manager serves as the primary communication link to the State DHSEM/OEM and serves as the State's local line officer.

AFTER HOURS ACTIVATION PROCESS

1. At the onset of an incident, local and tribal jurisdictions should call the Office of Emergency Management (OEM), Duty Officer at 303-472-4046 or the State Emergency 24 Hour Line at 303-279-8855
2. Provide the following information:
   - Location of the incident
   - Type of Incident
   - Local resources and support committed
   - Points of Contacts for ICP / EOC activated
   - Any state resource support needs (if known)
3. The Duty Officer or State Emergency 24 Hour Line Attendant will contact the Regional Field Manager and relay pertinent information.
4. The Field Manager will activate as needed for the incident and begin communicating with the local/tribal emergency manager on coordination needs.
5. The Field Manager will gather support materials and equipment and respond to the location designated by the local/tribal AHJ
6. The Field Manager will contact DHSEM/OEM Operations and provide initial information of the

incident. 7. Liaison support will begin immediately upon activation.
FEDERAL ACTIVATION PROCEDURES

ESF / AGENCY	MISSION PACKAGE NAME / IDENTIFIER
	ESF-02-0129-800 MHz SUPPORT CACHE PACKAGE

TASK & PURPOSE	MISSION FUNCTION
● To provide mobile communications in support of state or local emergency operations by providing equipment or supplies to aid in response and recovery following a natural or man-made disaster.	● Incident Support ● IMT Support ● Local EOC Support ● State EOC Support ● Disaster Recovery operations support ● Communications Support
SUPPORTING ESF'S / AGENCIES	**MISSION CAPABILITY LIMITATIONS**
● ESF-02 Department of Information and Technology ● ESF-05 Division of Homeland Security & Emergency Management ● ESF-13 Colorado State Patrol	● 800/700 DTR Mutual Aid ● 700 SOW Site Capable
RECOMMENDED PERSONNEL	**RECOMMENDED EQUIPMENT**
(1) Communications Unit Leader at requesting jurisdiction.	● (1) 6 Bank Gang charger. ● (10) 2500 XTS 800 MHz Radios with Antenna ● (20) Batteries
SUPPORT REQUIREMENTS	**WORKS WITH OTHER CAPABILITIES**
●	● Local Agencies ● State Agencies
N-HOUR SEQUENCE	**SPECIAL INSTRUCTIONS**
● N+6	● Agency Having Jurisdiction / Requesting Agency is responsible for all replacement or repair costs. ● Agency Having Jurisdiction / Requesting Agency is responsible for all transportation costs of the radio cache. ● Dimension of Case – 21"W x 13"H x 32"L – 60 Lbs.

COST PER DAY / HOUR		
PERSONNEL	**EQUIPMENT**	**TOTAL COST ESTIMATE**
$0.00	**$0.00**	**$0.00**





CONTROLLED UNCLASSIFIED INFORMATION

State Emergency Operations Center Mission Capability Sets
ESF-02-0094 / Mobile Communication Center Support Package

ACTIVATION PROCEDURES

LOCAL / STATE ACTIVATION PROCEDURES

NORMAL HOUR ACTIVATION PROCEDURES

1. DHSEM/OEM is the lead agency charged with activation and mobilization of resources outside local / regional mutual aid or auto aid capability at a State Level. Any resource may deploy within its area or responsibility when requested locally.
2. The Agency Having Jurisdiction should request the activation of a **Mobile Communication Center Support Package** using the Request for Assistance form.
3. SEOC Operations will validate the request of the **Mobile Communication Center Support Package** with the Agency Having Jurisdiction through direct communications or through the DHSEM/OEM Field Manager.
4. DHSEM/OEM Operations Section will task ESF-7 Resource Management (Colorado Division of Fire Prevention and Control) for availability & specific mission capability.
5. SEOC ESF-7 (Division of Fire Prevention and Control) will acquire and send the activated **Mobile Communication Center Support Package** a Request for Assistance or ICS-213rr as an official resource order and instructions for deployment to the Agency Having Jurisdiction.
6. DHSEM/OEM is responsible for communication with Agencies having Jurisdiction (AHJ) to determine status of ongoing incident and their initial needs through the DHSEM/OEM Field Manager and /or DHSEM/OEM Operations.
7. Local/Regional DHSEM/OEM representatives are the primary points of contact with AHJ. DHSEM/OEM Field Manager serves as the primary communication link to the State DHSEM/OEM and serve as the State's local line officer.

AFTER HOURS ACTIVATION PROCESS

1. At the onset of an incident, local and tribal jurisdictions should call the Office of Emergency Management (OEM), Duty Officer at 303-472-4046 or the State Emergency Line at 303-279-8855
2. Provide the following information:
   - Location of the incident
   - Type of Incident
   - Local resources and support committed
   - Any state resource support needs (if known)
3. The Duty Officer or Emergency Line Attendant will contact the Regional Field Manager and relay pertinent information. The
4. The Field Manager will activate as needed for the incident and begin communicating with the local/tribal emergency manager on coordination needs for the requested resource and follow normal duty hour process.

FEDERAL ACTIVATION PROCEDURES

ESF / AGENCY	MISSION PACKAGE NAME / IDENTIFIER
	ESF-02-0094-MOBILE COMMUNICATION CENTER PACKAGE

TASK & PURPOSE	MISSION FUNCTION
● To provide mobile communications in support of state or local emergency operations by providing equipment or supplies to aid in response and recovery following a natural or man-made disaster.	● Incident Command Post Support ● Area Command Support ● Local EOC Support ● State EOC Support ● IMT Support ● Disaster Recovery operations support ● Communications Support
SUPPORTING ESF'S / AGENCIES	**MISSION CAPABILITY LIMITATIONS**
● 2, 4, 5, 6, 7, 6, 9, 10, 13, 14	● Set-up location near utility hook -up or fuel supply ● Communications compatible with local systems ● Logistical Support ● Required area for placement of vehicle or trailer
RECOMMENDED PERSONNEL	**RECOMMENDED EQUIPMENT**
(1) Driver/Operator (1) IT Support Staff	● Custom bus, motor home ,trailer or SUV ● Digital PBX System ● Radio VHF, UNF, 800 Transceivers ● Internet Access ● Voice/Radio over IP ● Broadband Internet access via Satellite ● Camera and Video System ● Computer work stations ● Basic personnel needs (restroom, refrigerator, microwave)
SUPPORT REQUIREMENTS	**WORKS WITH OTHER CAPABILITIES**
● May require billeting and meal support ● Fuel for extended deployment >3-4 days	● Local Agencies ● State Agencies ● Forward EOC
N-HOUR SEQUENCE	**SPECIAL INSTRUCTIONS**
● N+24	● Be able to operate in environment with little to no basic services ● Provide own generation and fuel supply for 3 days ● Type I estimated footprint 530 sq feet ● Type II estimated footprint 400 sq feet ● Type III estimated footprint 350 sq feet + tow vehicle ● Type IV estimated footprint 100 sq feet

COST PER DAY / HOUR		
PERSONNEL	**EQUIPMENT**	**TOTAL COST ESTIMATE**
$1,200.00	**$2,500.00**	**$3,700.00**

CONTROLLED UNCLASSIFIED INFORMATION

APPENDIX H: POLICY DOCUMENTS, GOVERNING DOCUMENTS, MOUS, AND MAAS

1. THE CONSOLIDATED COMMUNICATIONS NETWORK OF COLORADO, INC. (CCNC) WEBSITE:

HTTPS://CCNCINC.ORG/INDEX.PHP

CCNC POLICIES AND PROCEDURES

https://drive.google.com/folderview?id=0B-rhkyQ5WYGmfmpVeUVwa3A4WGtYLTg4VmVVNU9YQng2TjNSN01IU0FTbEk5MFZhUzhHWXM&usp=sharing

THE NATIONAL INTEROPERABILITY FIELD OPERATIONS GUIDE (NIFOG)

http://publicsafetytools.info/nifog_info/nifog_info.php

AMATEUR RADIO GUIDE TO DMR

http://www.trbo.org/docs/Amateur_Radio_Guide_to_DMR.pdf

APPENDIX I: INCIDENT COMMAND SYSTEM PLANNING

This appendix contains ICS Forms website links and a table that describes the forms that may be used during an incident for incident command system (ICS) planning.

- ICS Forms can be found at the following website: http://training.fema.gov/EMIWeb/IS/ICSResource/ICSResCntr_Forms.htm
- Updated 2010 ICS Forms are available at: http://www.fema.gov/pdf/emergency/nims/ics_forms_2010.pdf
- Word-fillable forms on FEMA website: http://training.fema.gov/EMIWeb/IS/ICSResource/icsforms.htm
- Older versions of ICS Forms are available on the National Wildfire Coordinating Group (NWCG) website: http://www.nwcg.gov/pms/forms/icsforms.htm

ICS FORM	DESCRIPTION
ICS Form 201	**Purpose:** The Incident Briefing form provides the Incident Commander (and the Command and General Staffs assuming command of the incident) with basic information regarding the incident situation and the resources allocated to the incident. It also serves as a permanent record of the initial response to the incident. **Preparation:** The briefing form is prepared by the Incident Commander for presentation to the incoming Incident Commander along with a more detailed oral briefing. **Distribution:** After the initial briefing of the Incident Commander and General Staff members, the Incident Briefing is duplicated and distributed to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Planning and Logistic Section Unit Leaders.
ICS Form 205	**Purpose:** The Incident Radio Communications Plan provides in one location information on all radio frequencies assignments for each operational period. The plan is a summary of information obtained from the Radio Requirement Worksheet (ICS Form 216) and the Radio Frequency Assignment Worksheet (ICS Form 217). Information from the Radio Communications Plan on frequency assignment is normally placed on the appropriate Assignment List (ICS Form 204). **Preparation:** The Incident Radio Communications Plan is prepared by the Communications Unit Leader and given to the Planning Section Chief. **Distribution:** The Incident Radio Communications Plan is duplicated and given to all recipients of the Incident Objectives form including the Incident Communications Center. Information from the plan is placed on Assignment List.
ICS Form 210	**Purpose:** The Status Change form is used by the Incident Communications Center Message to record status change information received on resources assigned to the incident. **Preparation:** The form is completed by radio/telephone operators who receive status change information from individual resources, Task Forces, Strike Teams, and Division/Group Supervisors. Status information could also be reported by Staging Area and Helibase Managers or fixed-wing facilities. **Distribution:** The Status Change Card is a two-part form. The original is given to the Resources Unit, and the Communications Unit retains a second (pink) copy.
ICS Form 213	**Purpose:** The General Message form is used by:

ICS FORM	DESCRIPTION
	1.Incident dispatchers to record incoming messages which cannot be orally transmitted to the intended recipients 2.Command Post and other incident personnel to transmit messages to the Incident Communications Center for transmission via radio or telephone to the addressee 3.Incident personnel to send any message or notification to incident personnel which required a hard-copy delivery Initiation of the Form: The General Message form may be initiated by incident dispatchers and any other personnel on an incident. **Distribution:** Upon completion, the General Message may be: 1.Hand carried to the addressee 2.Hand carried to the incident Communications Center for transmission
ICS Form 214	**Purpose:** The Unit Log is used to record details of unit strike team activity. The files of these logs provide a basic reference to extract information for inclusion in an after-action report. **Preparation:** A Unit Log is initiated and maintained by Command Staff members, Division/Group Supervisors, Air Operations Group/Strike Team/Task Force Leaders, and Unit Leaders. Completed logs are forwarded to supervisors who provide to the Documentation Unit. **Distribution:** The Documentation Unit maintains a file of all Unit Logs. It is necessary that one copy of each log be submitted to the Documentation Unit.
ICS Form 216	**Purpose:** The Radio Requirements Worksheet is used to develop the total number of portable radios required for each Division/Group and Branch. It provides a listing of all units assigned to each Division, and thus depicts the total incident radio needs. **Preparation:** The worksheet is prepared by the Communications Unit for each operational period and can only be completed after specific resource assignments are made and designated on Assignment Lists. This worksheet need not be used if the Communications Unit Leader can easily obtain the information directly from Assignment Lists. **Distribution:** The worksheet is for internal use by the Communications Unit and therefore there is no distribution of the form.
ICS Form 217A	**Purpose:** The Radio Frequency Assignment Worksheet is used by the Communications Unit Leader to assist in determining frequency allocation. **Preparation:** Cache radio frequencies available to the incident are listed on the form. Major agency frequencies assigned to the incident should be added to the bottom of the worksheet. **Distribution:** The worksheet, prepared by the Communications Unit, is for internal use.
ICS Form 309	**Purpose:** The Comm Log records the details of message traffic and is used by either an individual or a Net Control Operator (NCO). These logs provide the basic reference from which to extract communications traffic history. **Preparation:** The Comm Log is initiated and maintained by the Net Control Operator (NCO) or the individual operator (e.g. a field communicator). Completed logs are submitted to the supervisor who forwards them to the Documentation Unit. **Distribution:** The Documentation Unit maintains a file of all Comm Logs. All completed original forms MUST be forwarded to the Documentation Unit.

APPENDIX J: REFERENCE MATERIALS

Reference Sources

- *Office of Emergency Communications Public Safety Technical Assistance Tools* www.publicsafetytools.info

  The Office of Emergency Communications maintains a website containing a number of tools, resources, and training opportunities for public safety communications professionals. Resources include:

  - The *National Emergency Communications Plan* (NECP) is a strategic plan that sets goals and identifies key national priorities to enhance governance, planning, technology, training and exercises, and disaster communications capabilities. The NECP provides recommendations, including milestones, to help emergency response providers and relevant government officials make measurable improvements in emergency communications over the next three years.

  - The *National Interoperability Field Operations Guide* (NIFOG) is a collection of technical, operational, and regulatory reference material for radio technicians responsible for radios that can be used in disaster response applications, and for emergency communications planners.

- *Federal Emergency Management Agency (FEMA).* http://www.fema.gov

  - The Department of Homeland Security *Target Capability List* (TCL) describes the capabilities related to the four homeland security mission areas: Prevent, Protect, Respond, and Recover. It defines and provides the basis for assessing preparedness. It also establishes national guidance for preparing the Nation for major all-hazards events, such as those defined by the National Planning Scenarios.

- *Colorado Division of Homeland Security and Emergency Management* *http://www.dhsem.state.co.us*

  - Provides leadership and support to Colorado communities to prevent, protect, mitigate, respond and recover from all-hazard events including acts of terrorism.

- *Colorado*

  - The Colorado *Statewide Communications Interoperability Plan* (SCIP) is a strategic plan designed to provide a framework for the state to identify strategic initiatives intended to enhance emergency communications interoperability throughout the State. Colorado has an approved SCIP that addresses designated critical elements for statewide interoperability and a process to frequently update the SCIP as progress is made and new initiatives emerge.

APPENDIX K: GLOSSARY

Item/Acronym	Definition
ACS	Auxillary Communications Services
AMR	American Medical Response
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
ARRL	Amateur Radio Relay League
AUXCOMM	Auxillary Communications
CASM	Communication Assets Survey and Mapping
CB	Citizens Band
CCNC	Consolidated Communications Network of Colorado
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
COEM	Colorado Office of Emergency Management
COLTs	Cell on Light Trucks
COMC	Communications Coordinator
COML	Communications Unit Leader
COMT	Incident Communications Technician
Console Patching	Ability to connect channels via dispatch consoles
COW	Communications on Wheels
CTCSS	Continuous Tone-Coded Squelch System
DCS	Digital Coded Squelch
DHS	Department of Homeland Security
DHSEM	Department of Homeland Security Emergency Management
DOC	Department of Corrections
DOT	Department of Transportation
DTRS	Digital Trunked Radio System
EM	Emergency Management
EMA	Emegency Management Agency
EMCOMM	Emergency Communications
EMS	Emergency Medical Services
EOC	Emergency Operations Center
ESB	Emergency Services Bureau

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Item/Acronym	Definition
ETA	Estimated Time of Arrival
ESF	Emergency Support Function
FCC	Federal Communications Commission
FD	Fire Department
FEMA	Federal Emergency Management Agency
Fixed	Term referring to a communications asset that is permanently housed in a given location (i.e., is not mobile).
FOG	Field Operations Guide
FRS	Family Radio Service
GETS	Government Emergency Telecommunications Service
GIS	Geographic Information System
GMRS	General Mobile Radio Service
GPS	Global Positioning System
IAP	Incident Action Plan
HAZMAT	Hazardous Materials
HF	High Frequency
IARU	International Amateur Radio Union
IC	Incident Command
ICC	Incident Communications Center
ICP	Incident Command Post
ICS	Incident Command System
ICTAP	Interoperable Communications Technology Assistance Program
ID	Identification
INCM	Incident Communications Center Manager
Inter-agency	Located or occurring between two or more agencies
Interoperable	Ability of a system to use the parts or equipment of another system
IT	Information Technology
LASO	Las Animas Sheriff's Office
LE	Law Enforcement
MAC	Mutual Aid Channel
MARS	Army Military Auxiliary Radio System
MCC	Mobile Communications Center

Item/Acronym	Definition
MCU	Mobile Communications Unit
MEOC	Mobile Emergency Operations Center
MHz	Abbreviation for megahertz. 5 MHz = 5,000,000 Hz or 5,000 kHz.
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MURS	Multi-use Radio Service
Mutual Aid	Personnel, equipment, or services provided to another jurisdiction
NAC	Network Access Code
NIFOG	National Interoperability Field Operations Guide
NIMS	National Incident Management System
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NRF	National Response Framework
NTIA	National Telecommunications and Information Administration
NWS	National Weather Service
OEC	Office of Emergency Communications
OEM	Office of Emergency Management
PD	Police Department
POC	Point of Contact
Portable	Term referring to a mobile communications asset that can be carried by a person and is self contained.
PSAP	Public Safety Answering Point
PSTN	Public Switched Telephone Network
PWD	Public Works Department
RACES	Radio Amateur Civil Emergency Service
RADO	Radio Operator
RIC	Regional Interoperability Channel / Talkgroup
RF	Radio Frequency
SECAHR	Southeast Colorado All-Hazards Region
SAR	Search and Rescue
SATCOM	Satellite Communications
SATERN	Salvation Army Team Emergency Radio Network
SCIP	Statwide Communications interoperability Plan

Item/Acronym	Definition
SEOC	State Emergency Operations Center
SLV	San Luis Valley
SO	Sheriff's Office
SOP	Standard Operating Procedure
SERCC	Southeast Region Communications Committee
SRIC	South Region Interoperability Channel
STR	Strategic Technology Reserve
SWR	Standing Wave Ratio
Talkgroup	Term usually used with trunked radio systems. A talkgroup is a predefined list of radios/users assigned a unique ID which allows them to communicate with each other over the trunked radio system.
TERT	Telecommunicator Emergency Response Task Force
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
Transportable	Term referring to a mobile communications asset that requires a vehicle to transport it and can be set up to operate external to the transport vehicle.
UHF	Ultra-High Frequency – Range of 300 to 3,000 MHz. For public safety LMR, usually refers to two bands. 380 to 470 MHz (low) and 470 to 512 MHz (high).
ULS	Universal Licensing System
Vehicle-Mounted	Term referring to a mobile communications asset that is mounted/fixed in the transport vehicle and operates from within.
VFD	Volunteer Fire Department
VHF	Very High Frequency – For public safety LMR, usually refers to VHF High Band with a range of 136 to 164 MHz. VHF Low Band has a frequency range of 30 to 50 MHz.
VOM	Volt-Ohm Milliammeter
WPS	Wireless Priority Servce

APPENDIX L: ICS FORM 205

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) OTHER TEMPLATES

During the initial response to an incident the incident management may expand rapidly with limited staff to perform key functions. The following templates were developed to give the initial incident commander a tool to improve communications during the initial operational period or until trained personnel can develop comprehensive communications plans.

The IC will use the template to have a record of the communications on an incident. These templates provide a list of possible available talk paths to choose from. It is recommended that the first network be set up is the command net. While most incidents are handled on normal channels, this can continue, but when you get more than three agencies or assign different divisions or groups a command channel for the leaders will assist in the communications.

An example of how this can work is as follows:

A major motor vehicle accident has occurred with a hazardous material tank truck. Fire EMS and Police initially respond. The agencies set up a command post and begin activities. With three agencies the IC establishes the Command network for the agency leads while each agency continues to operate on their normal channels. A HAZMAT team arrives and requests a channel to use. The IC looks at the template and selects and available channel that the HAZMAT team has available and write “HAZMAT” next to that channel in the **“Assignment”** block on the template.

As each new division, group, or agency comes into the incident this continues and the IC has a record, and users don’t self-assign communications channels and lose communications.

CONTROLLED UNCLASSIFIED INFORMATION

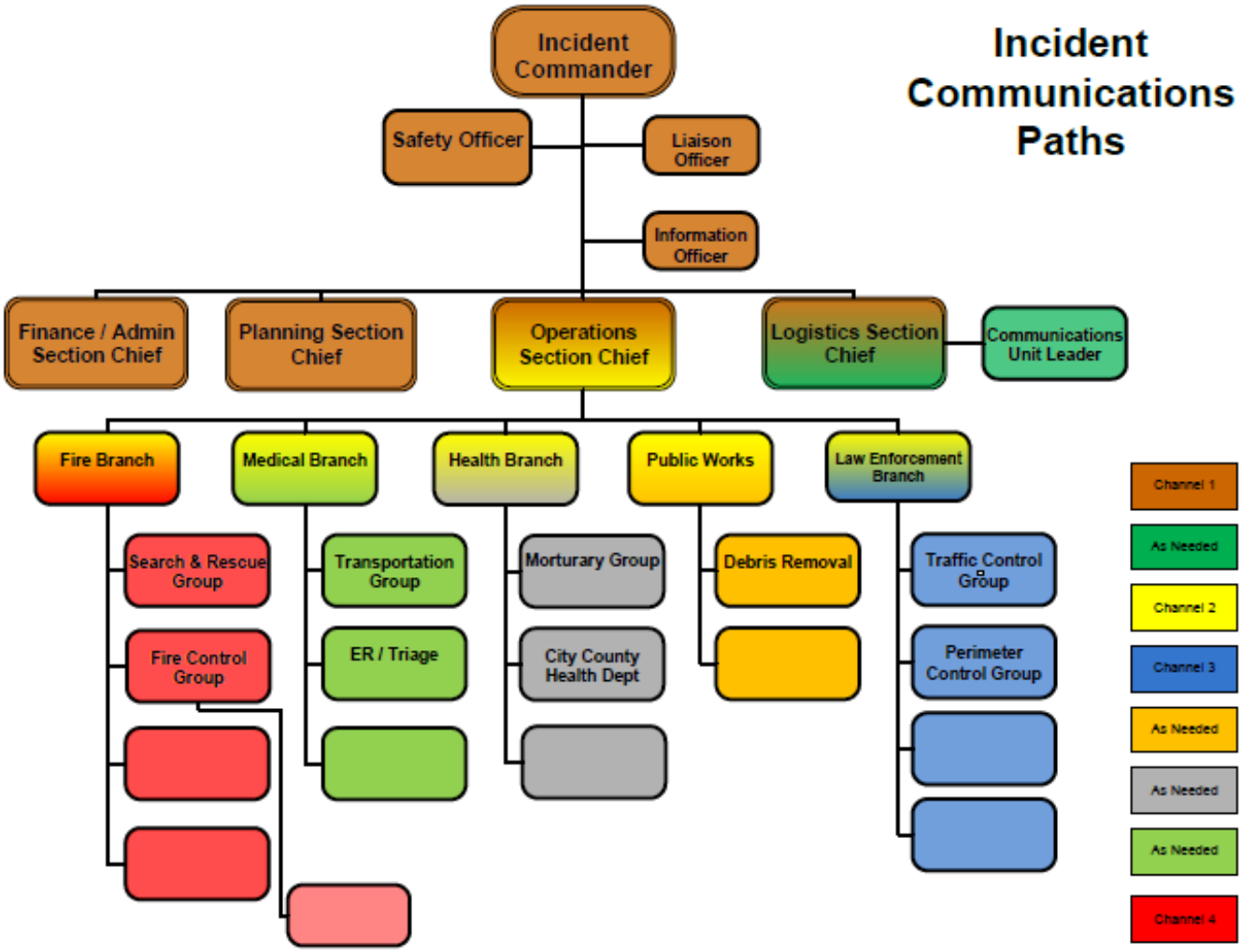

FIGURE 52: INCIDENT COMMUNICATIONS PATHS

On the next pages are four Southeast All Hazards Region templates weighted for Law Enforcement, Fire, EMS, and Other for use by an IC.

CONTROLLED UNCLASSIFIED INFORMATION

1. INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) LAW ENFORCEMENT TEMPLATE

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
		Command	_____ MAC		DTR		TG _____		D	Use Local County MAC
			SRIC LAW		DTR		TG 4455		D	
			MAC11SE		DTR		TG 4010		D	
			VLAW31W (NLEC)		155.4750 W	CSQ	155.4750 W		A	
			VLAW31		155.4750 N	CSQ	155.4750 N	156.7	A	
			CSP 3		154.9050 N	156.7	154.9050 N	156.7	A	Statewide LE
			SIMPLEX 2	On Scene	851.7500 N	$293	851.7500 N	$293	D	Local communications
			AREA LAW	On Scene	155.1300 N	107.2	155.1300 N	107.2	A	Local communications
			CLEER	On Scene	460.4250 N	CSQ	460.4250 N	156.7	A	Local communications

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) FIRE TEMPLATE

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
		Command	_____ MAC		DTR		TG _____		D	Use Local County MAC
			SRIC FIRE		DTR		TG 4454		D	
			MAC10SE		DTR		TG 4009		D	
			VFIRE21W (FERN 1)		154.2800 W	156.7	154.2800 W	156.7	A	
			VFIRE21		154.2800 N	156.7	154.2800 N	156.7	A	
			VFIRE22W (FERN 2)		154.2950 W	156.7	154.2950 W	156.7	A	
			VFIRE22		154.2950 N	156.7	154.2950 N	156.7	A	
			VFIRE23W (FERN 3)		154.2650 W	156.7	154.2650 W	156.7	A	
			VFIRE23		154.2650 N	156.7	154.2650 N	156.7	A	
			SIMPLEX 3	On Scene	852.3000 N	$293	852.3000 N	$293	D	Local team communications

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) EMS TEMPLATE

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
		Command	_____ MAC		DTR		TG _____		D	Use Local County MAC
			SRIC EMS		DTR		TG 4456		D	
			MAC12SE		DTR		TG 4011		D	
			EMS SE		DTR		TG 165		D	
			EMS MAC		DTR		TG 168		D	
			VMED28		155.3400	156.7	155.3400	156.7	A	
			SIMPLEX 4	On Scene	852.5500 N	$293	852.5500 N	$293	D	Local team communications
			RETAC 9	On Scene	462.9500 N	CSQ	462.9500 N	156.7	A	Local team communications
			SIMPLEX 1	Air-Ground	851.1000 N	$293	851.1000 N	$293	D	Medivac Helicopters
			MED COMMAND	On Scene	451.8125 N	118.8	451.8125 N	118.8	A	
			TRIAGE	On Scene	456.8125 N	118.8	456.8125 N	118.8	A	
			TRANSPORT	On Scene	456.8000 N	118.8	456.8000 N	118.8	A	
			TREATMENT	On Scene	464.5000 N	118.8	464.5000 N	118.8	A	
			STAGING	On Scene	469.5000 N	118.8	469.5000 N	118.8	A	

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:		Signature:
ICS 205	**IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) SAR (SEARCH AND RESCUE) TEMPLATE

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
		Command	_____ MAC		DTR		TG _____		D	Use Local County MAC
			COSAR 1		151.5125 N	156.7	151.5125 N	156.7	A	
			CO SAR 2		151.7000 N	156.7	151.7000 N	156.7	A	
			CO SAR 3		158.4000 N	156.7	158.4000 N	156.7	A	
			CO SAR 4		158.4075 N	156.7	158.4075 N	156.7	A	
			VSAR16		155.1600 N	CSQ	155.1600 N	127.3	A	
			VSAR235		155.2350 N	CSQ	155.2350 N	127.3	A	
			VSAR175		155.1750 N	CSQ	155.1750 N	127.3	A	
			VSAR205		155.2050 N	CSQ	155.2050 N	127.3	A	
			VSAR265		155.2650 N	CSQ	155.2650 N	127.3	A	
			VSAR280		155.2800 N	CSQ	155.2800 N	127.3	A	
			VSAR295		155.2950 N	CSQ	155.2950 N	127.3	A	
			IR 18		410.8375 N	CSQ	410.8375 N	167.9	A	FEDERAL SAR
			CAP AIR-GRND		141.0250 N	CSQ	141.0250 N	CSQ	A	

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) PUBLIC HEALTH TEMPLATE

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
		Command	_____ MAC		DTR		TG _____		D	Use Local County MAC
			CHD SE		DTR		TG 137		D	
			SECH		DTR		TG 143		D	
			PMC		DTR		TG 137		D	
			AVRMC		DTR		TG 79		D	
			WSBRD		DTR		TG 150		D	
			ER MAC		DTR		TG 8161		D	
			MAC 21 STW		DTR		TG 4020		D	

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) OTHER TEMPLATE

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
		Command	_____ MAC	Staff and Leaders	DTR				D	Use Local County MAC
			SRIC CALL		DTR				D	Calling
			MAC9SE		DTR				D	Calling
			MAC 21		DTR				D	Statewide
			VSAR16		155.1600 N	156.7	155.1600 N	156.7	A	
			VCALL10		155.7525 N	CSQ	155.7525 N	156.7	A	
			VTAC12		154.4525 N	CSQ	154.4525 N	156.7	A	
			STAC		853.7875 N	156.7	808.7875 N	156.7	A	
			STACD		853.7875 N	156.7	853.7875 N	156.7	A	
			SMPX1		851.1000 N	$293	851.1000 N	$293	D	
			SMPX2		851.7500 N	$293	851.7500 N	$293	D	
			SMPX3		852.3000 N	$293	852.3000 N	$293	D	
			SMPX4		852.5500 N	$293	852.5500 N	$293	D	
			SMPX5		853.6875 N	$293	853.6875 N	$293	D	

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) OTHER TEMPLATE (CONT'D)

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
			8CALL90		851.0125 W	CSQ	806.0125 W	156.7	A	Calling/Coordination
			8CALL90D		851.5125 W	CSQ	851.5125 W	156.7	A	
			8TAC91	Springfield	851.5125 W	CSQ	806.5125 W	156.7	A	Springfield
			8TAC91D		851.5125 W	CSQ	851.5125 W	156.7	A	
			8TAC92		852.0125 W	CSQ	807.0125 W	156.7	A	
			8TAC92D		852.0125 W	CSQ	852.0125 W	156.7	A	
			8TAC93		852.5125 W	CSQ	807.5125 W	156.7	A	Walsh
			8TAC93D		852.5125 W	CSQ	852.5125 W	156.7	A	
			8TAC94		853.0125 W	CSQ	808.0125 W	156.7	A	La Junta, Lamar
			8TAC94D		853.0125 W	CSQ	853.0125 W	156.7	A	

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS FORM 205) OTHER TEMPLATE (CONT'D)

1. Incident Name	2. Date/Time Prepared:	3. Operational Period:
	Date:	Date From: Date To:
	Time:	Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/ NAC	TX Freq N or W	Tx Tone/ NAC	Mode (A, D, or M)	Remarks
			7CALL50		769.24375 N	$F7E	799.24375 N	$293	D	
			7CALL50D		769.24375 N	$F7E	769.24375 N	$293	D	
			7CALL70		773.25625 N	$F7E	803.25625 N	$293	D	
			7CALL70		773.25625 N	$F7E	773.25625 N	$293		
			7TAC55		769.74375 N	$F7E	799.74375 N	$293	D	
			7TAC55D		769.74375 N	$F7E	769.74375 N	$293	D	
			7TAC75		773.75625 N	$F7E	803.75625 N	$293	D	
			7TAC75D		773.75625 N	$F7E	773.75625 N	$293		

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name:	Signature:
ICS 205 **IAP Page**	Date/Time:

CONTROLLED UNCLASSIFIED INFORMATION

ICS Form 205 Instructions

Purpose: The Incident Radio Communications Plan (ICS 205) provides information on all radio frequency or trunked radio system talkgroup assignments for each operational period. The plan is a summary of information obtained about available radio frequencies or talkgroups and the assignments of those resources by the Communications Unit Leader for use by incident responders. Information from the Incident Radio Communications Plan on frequency or talkgroup assignments is normally placed on the Assignment List (ICS 204).

Preparation: The ICS 205 is prepared by the Communications Unit Leader and given to the Planning Section Chief for inclusion in the Incident Action Plan.

Distribution: The ICS 205 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit. Information from the ICS 205 is placed on Assignment Lists.

Notes:

- The ICS 205 is used to provide, in one location, information on all radio frequency assignments down to the Division/Group level for each operational period.
- The ICS 205 serves as part of the IAP.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Date/Time Prepared**	Enter date prepared (month/day/year) and time prepared (using the 24-hour clock).
3	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
4	**Basic Radio Channel Use**	Enter the following information about radio channel use:
	Zone Group	
	Channel Number	Use at the Communications Unit Leader's discretion. Channel Number (Ch #) may equate to the channel number for incident radios that are programmed or cloned for a specific Communications Plan, or it may be used just as a reference line number on the ICS 205 document.
	Function	**Enter the Net function each channel or talkgroup will be used for (Command, Tactical, Ground-to-Air, Air-to-Air, Support, Dispatch).**
	Channel Name/Trunked Radio System Talkgroup	Enter the nomenclature or commonly used name for the channel or talkgroup such as the National Interoperability Channels which follow DHS frequency Field Operations Guide (FOG).
	Assignment	**Enter the name of the ICS Branch/Division/Group/Section to which this channel/talkgroup will be assigned.**
	RX (Receive) Frequency (N or W)	Enter the Receive Frequency (RX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W"

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Block Number	Block Title	Instructions
		designating wideband emissions. The name of the specific trunked radio system with which the talkgroup is associated may be entered across all fields on the ICS 205 normally used for conventional channel programming information.
	RX Tone/NAC	Enter the Receive Continuous Tone Coded Squelch System (CTCSS) subaudible tone (RX Tone) or Network Access Code (RX NAC) for the receive frequency as the mobile or portable subscriber would be programmed.
	TX (Transmit) Frequency (N or W)	Enter the Transmit Frequency (TX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions.
	TX Tone/NAC	Enter the Transmit Continuous Tone Coded Squelch System (CTCSS) subaudible tone (TX Tone) or Network Access Code (TX NAC) for the transmit frequency as the mobile or portable subscriber would be programmed.
	Mode (A, D, or M)	Enter "A" for analog operation, "D" for digital operation, or "M" for mixed mode operation.
	Remarks	Enter miscellaneous information concerning repeater locations, information concerning patched channels or talkgroups using links or gateways, etc.
5	**Special Instructions**	Enter any special instructions (e.g., using cross-band repeaters, secure voice, encoders, private line (PL) tones, etc.) or other emergency communications needs). If needed, also include any special instructions for handling an incident within an incident.
6	**Prepared by** (Communications Unit Leader) • Name • Signature • Date/Time	Enter the name and signature of the person preparing the form, typically the Communications Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).

CONTROLLED UNCLASSIFIED INFORMATION

APPENDIX M: POINTS OF CONTACT

1. TICP AGENCY POINTS OF CONTACT (ALL INCLUSIVE)

Agency	County	Contact	Phone #	Email
BACA COUNTY				
Baca County Sheriff's Office	Baca	Dave Campbell	719-523-6677	dcampbell@bacaccountyco.gov
Baca County Emergency Management	Baca	Jennifer Leathers	719-529-0471	jleathers@bacacountyco.gov
Baca County Public Health	Baca	Jessami Caddick	719-563-0980	jcaddick@bacacountyco.gov
Springfield Fire Department	Baca	Bob Schaller	719-523-4121	Bschaller300@hotmail.com
Pritchett Fire Department	Baca	Jerry Casebolt	719-353-2695	Tnt1291@yahoo.com
Springfield Ambulance Service	Baca	Cherylin England	719-523-2186	cengland@sechosp.org
Southeast Colorado Hospital District	Baca	Laura Wilson	719-523-2172	lwilson@sechosp.org
Walsh Ambulance Service	Baca	Riley Frazee	719-252-3118	Riley.frazee@walshems.com
Walsh Hospital District	Baca	Rita Hetrick	719-324-5262	Rita.hetrick@walshhealthcarecenter.com
Walsh Fire Department	Baca	Rex Allen	719-529-9361	Walshfd05@gmail.com
Walsh Police Department	Baca	Colby Jenkins	719-781-1100	Walshpdw1@yahoo.com
Springfield Police Department	Baca	Aaron Shiplett	719-523-6241	Sp2@Springfieldco.gov
Campo Fire Department	Baca	Leory England	719-787-2416	Ldenglandj8@gmail.com
Two Buttes Fire Protection District	Baca	Lynn Orebaugh	719-326-5911	Lynn_orebaugh@hotmail.com
Vilas Fire Department	Baca	Lars Grahn	719-529-0636	Blackknight_42@hotmail.com
Baca County Road and Bridge	Baca	Spike Ausmus	719-529-0181	sausmus@bacacountyco.gov
BENT COUNTY				
Bent County Sheriff's Office	Bent	Daven Encinias	719-456-1363	Bent.sheriff@bentcounty.net
Bent County Emergency Management	Bent	Rick Stwalley	719-662-1200	Rick.stwalley@bentcounty.net
Bent County/Las Animas Fire Protection Dist	Bent	Jim Pryor	719-456-1110	pryorjim@htoamil.com
Bent County/Las Animas Ambulance	Bent	John Spano	719-456-1915	bcambulance@bentcounty.net
Hasty McClave Fire District	Bent	Clay Hassar	719-829-4000	Chaser98@hotmail.com
Las Animas Public Works	Bent	Kenny Wagner	719-456-2571	Lapw1@bentcounty.net
Bent County Public Health	Bent	Omer Tamir	719-456-0517	otamir@bcns.net
CROWLEY COUNTY				
Crowley County Sheriff's Office	Crowley	Smokey Kurtz	719-267-5230	sheriff@crowleycounty.net

CONTROLLED UNCLASSIFIED INFORMATION

Agency	County	Contact	Phone #	Email
Crowley County Emergency Management	Crowley	John Reitan	719-469-0048	john.reitan@crowleycounty.net
Crowley County Ambulance Service	Crowley	Mario Rodriguez	719-267-5230	mario@crowleycounty.net
Crowley County Fire Department	Crowley	Mario Rodriguez	719-267-5230	mario@crowleycounty.net
Crowley Fire Department	Crowley	Rick Ferraro	719-267-5222	crowleyvfd@gmail.com
Olney Springs Fire Department	Crowley	Russell Bennett	719-267-5222	Bennett_russ_81@yahoo.com
Sugar City Fire Department	Crowley	Greg Karle	719-267-5222	karleboy@msn.com
KIOWA COUNTY				
Kiowa County Sheriff's Office	Kiowa	Casey Sheridan	719-438-5411	csheridan@kiowasheriff.net
Kiowa County Ambulance Service	Kiowa	Eunice Weber	719-438-5900	kcas@plainsonline.net
Kiowa County Fire Department	Kiowa	Jay Haase	719-691-5016	Jhaase1@icloud.com
Eads Fire Department	Kiowa	David Craft	719-438-5500	eadsfiredept@yahoo.com
Towner Fire Department	Kiowa	Monte Stum	719-691-5147	
Haswell Fire Department	Kiowa	Shane Lessenden	719-691-5841	Spds_livestock@hotmail.com
Kiowa County Public Health	Kiowa	Tammie Clark	719-336-8721	pcphdirector@prowerscounty.net
Weisbrod Memorial County Hospital	Kiowa	Char Korrell	719-291-8198	Char.korrell@kchd.org
Kiowa County Emergency Management	Kiowa	Teresa Witte	719-438-2288	twittedem@gmail.com
Sheridan Lake Fire Department	Kiowa	Vern Harris	719-691-5340	
OTERO COUNTY				
Otero County Sheriff's Office	Otero	Shawn Mobley	719-384-5941	smobley@oterogov.org
Otero County Emergency Management	Otero	Danny Chavez	719-241-4147	em@oterogov.org
La Junta Fire and EMS	Otero	Joey Gacnick	719-469-0419	jgacnick@ci.la-junta.co.us
La Junta Police Department	Otero	Todd Quick	719-384-2525	tquick@ci.la-junta.co.us
Fowler Fire Department	Otero	Matt Thompson	719-248-2265	matt@fowlerfire.org
Fowler Police Department	Otero	Jake Freidenberger	719-263-5161	fcpolicedept@centurytel.net
Rocky Ford Fire and EMS	Otero	Ray Gonzales	719-254-3322	rgonzales@ci.rockyford.co.us
Manzanola Police Department	Otero	Victor Lopez	719-462-5544	
Manzanola Fire Department	Otero	Tim Bates	719-462-5555	Tbates5088@yahoo.com
Otero/Crowley County Public Health	Otero/Crowley	Richard Ritter	719-383-3045	rritter@oterogov.org
Arkansas Valley Regional Medical Center	Otero	Leroy Fierro	719-383-6260	lfierro@avrmc.org
Cheraw Fire Department	Otero	Jim Collins	719-853-6013	Jtcollins5252@gmail.com

CONTROLLED UNCLASSIFIED INFORMATION

Agency	County	Contact	Phone #	Email
Otero County Public Works	Otero	Lex Nichols	719-383-3035	lnichols@oterogov.org
PROWERS COUNTY				
Prowers County Sheriff's Office	Prowers	Sam Zordel	719-336-8050	szordel@prowerscounty.net
Prowers County Emergency Management	Prowers	Staffon Warn	719-688-4701	Staffon.warn@prowerscounty.net
Lamar City Emergency Management	Prowers	Jeremy Burkhart	719-336-4321	Jeremy.burkhart@ci.lamar.co.us
Town of Holly Emergency Management	Prowers	Larry Sitts	719-688-1663	harpositts@gmail.com
Town of Granada Emergency Management	Prowers	Natalie Musick	719-734-5444	Natalie.musick@gmail.com
Lamar/Prowers Dispatch	Prowers	Trevor Choat	719-336-3977	Trevor.choat@ci.lamar.co.us
Granada Police Department	Prowers	Dave Dougherty	719-734-5211	granadapd@secom.net
Lamar Fire EMS	Prowers	Jeremy Burkhart	719-336-4321	Jeremy.burkhart@ci.lamar.co.us
Lamar Police Department	Prowers	Kyle Miller	719-336-4341	Kyle.miller@ci.lamar .co.us
Holly Fire Protection District	Prowers	Craig Shank	719-688-6203	hollyfiredept@hotmail.com
Holly Ambulance Service	Prowers	Teri Hetrick	719-537-0712	terihetrick@hotmail.com
Wiley Fire Protection District	Prowers	Bob Sloan	719-829-4925	wileyfiredept@hotmail.com
Prowers Medical Center	Prowers	Leslie Day	719-336-6736	Leslie.day@prowersmedical.com
Prowers County Public Health	Prowers	Tammie Clark	719-336-8721	pcphdirector@prowerscounty.net
Prowers County Road and Bridge	Prowers	Mark Dorenkamp	719-336-5536	Mark.dorenkamp@prowerscounty.net
Lamar Light and Power	Prowers	Houssin Hourieh	719-336-7456	hhourieh@lamarlp.com
High Plains Clinic	Prowers	Cecilia Bohl	719-336-0261	Cecilia.bohl@highplainschc.net
Prowers County Rural Fire	Prowers	Staffon Warn	719-688-4701	Staffon.warn@prowerscounty.net
REGIONAL AGENCIES				
Regional Public Health	Southeast	Kris Stokke	719-688-4464	stokkris@yahoo.com
Regional Epidemiologist	Southeast	Janell Maier	719-383-2340	Southeastepi@gmail.com
Regional Public Health	Southeast	Aaron Olivieri	719-383-3087	seepr@ocphd.org
Southeast Region Grant Coordinator	Southeast	Jerry Casebolt	719-353-2643	jcasebolt@bacacounty.net
Southeast RETAC	Southeast	Josh Eveatt	719-468-0711	jeveatt@secretac.com
STATE AGENCIES				
DHSEM SE Region	Baca, Prowers	Riley Frazee	719-510-2388	riley.frazee@state.co.us

CONTROLLED UNCLASSIFIED INFORMATION

Agency	County	Contact	Phone #	Email
	Bent, Kiowa, Crowley, Otero,			
Colorado Department Of Corrections	Colorado	Denny Owens	719-429-7724	Denny.owens@state.co.us
Colorado Parks and Wildlife – Wildlife	Colorado	Travis Black	719-336-6603	Travis.black@state.co.us
Colorado DOC/Parole	Colorado	Tracy Nelson	719-469-2545	Tracy.nelson@state.co.us
Colorado State Parks	Colorado	Dan Kirmer	719-829-1801	Daniel.kirmer@state.co.us
Colorado State Patrol/Regional Communications Manager	Pueblo	Raymond Eccher	719-288-2615	raymond.eccher@state.co.us
Colorado State Patrol/Captain	Baca, Prowers Bent, Kiowa, Crowley, Otero, Cheyenne	Tim Knabenshue	719-336-7403	tim.knabenshue@ state.co.us
Colorado Department of Transportation	Region 2	D'Wayne Gaymon	719-251-7809	dwayne.gaymon@state.co.us
Colorado Department of Transportation	Baca, Prowers, Kiowa	Cary Mount	719-248-8768	cary.mount@state.co.us
Colorado Department of Transportation	Bent, Otero, Crowley	Wayne Gumke	719-384-7597	Wayne.gumke@state.co.us
Colorado Office of Information Technologies	Southeast	Lynette Rosetta	719-336-3546	Lynette.rosetta@state.co.us
Colorado Division of Fire Prevention & Control	Southeast	Joseph Lobiondo	719-466-3341	Joseph.lobiondo@state.co.us
FEDERAL AGENCIES				
U.S. Forest Service	Pueblo	Eric Toft	719-553-1639	ertoft@fs.fed.us
U.S. Forest Service	Pueblo	Cindy French	719-248-8965	clfrench@fs.fed.us
U.S. Forest Service	Pueblo	Scott Bovey	719-553-1639	sbovey@fs.fed.us
U.S. Forest Service	Springfield	Thomas Eikenberry	719-523-1703	teikenberry@fs.fed.us
National Park Service	Bents Fort	Adam Heberlie	719-383-5014	Adam_heberlie@nps.gov
National Park Service	Sand Creek	Karl Zimmermann	719-438-5916	Karl_zimmermann@nps.gov
Army Corps of Engineers	John Martin	Jonathan Tague	719-336-3476	jonathan.b.tague@usace.army.mil
Army Corps of Engineers	Albuquerque	Shelly Dragomir	505-342-3266	Shelly.d.ramos@usace.army.mil

Agency	County	Contact	Phone #	Email
National Weather Service	Southeast	Jennifer Stark	719-948-9429	Jennifer.stark@noaa.gov
National Weather Service	Southeast	Greg Heavener	719-948-9429	greg.heavener@noaa.gov
NON-GOVERNMENTAL ORGINIZATIONS				
Red Cross Chapter for South Eastern Colorado (South, South East, South Central regions)	South, Southeast, South Central Regions	Sally Broomfield	800-417-0495/ 719-785-2724	Sally.broomfield@redcross.org
Red Cross Chapter for South Eastern Colorado	Southeast Region	Kendall Shafield	719-306-2925	Kendall.shafield@redcross.org
Amateur Radio Emergency Services (ARES)	Colorado	24 HR Response	800-936-2666	N/A
Colorado Auxiliary Emergency Communications Unit (AUXCOM)	Colorado	Robert Wareham – State Coordinator	303-470-3451	rbwareham@coloradoauxcomm.us
Army MARS	Aurora Pueblo	Emit Hurdelbrink Neal Tew Army MARS HQ/Fort Huachuca AZ	303-324-3416 719-248-0936 800-633-1128	w0uaw@att.net neal.a.tew@gmail
Salvation Army Team Emergency Radio Network (SATERN)	Colorado	John Strobel (K0PAL) Bill Feist (WB8BZH)	719-564-7312 601-564-4399	jnstro@hotmail.com bill.feist@uss.salvationarmy.org
DigitCom Electronics	South Southeast	Bob Benz	719-384-8553	Bob.benz@digitcomelectronics.com j.coates@digitcomelectronics.com
WDSL (DBA Wireless Data Service)	South Southeast	Mark Balsick	719-545-3905 719-240-2287	mark@wdsl.us
MedTrans Ambulance Service	Southeast	Kent Darnell	719-316-1402	medtransems@gmail.com
Care Connect (REACHAIR)	Southeast	Michael Hood	970-248-0673	michael.hood@REACHAir.com
Flight for Life Colorado	Southeast	DJ Head	720-321-3924	djhead@centura.org
Colorado Humane Society SCPA	Southeast	Bret Smith	720-241-7111	bsmith@coloradohumane.org
CoreCivic	CCCF	Richard Selman	719-267-3548	richard.selman@corecivic.com
CoreCivic	Bent County	John Palomino	719-456-2610	john.palomino@corecivic.com

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2. DISPATCH CENTERS

County	Agency	Contact	Phone	Email
Nationwide	Burlington Northern Santa Fe	Comm Center	1-800-832-5452	N/A
Colorado	State Warning Point – CSP Denver Dispatch	Comm Center	303-279-8855	N/A
Colorado	CIAC	Comm Center	720-852-6758 720-852-6705	N/A
Colorado	Watch Center	Comm Center	303-239-4360	N/A
Colorado	Flight For Life	Comm Center	720-321-3900	N/A
California	CareConnect (REACHAir)	Comm Center	1-877-441-6655	N/A
Baca	Baca County Sheriff's Office	Dean George	719-523-4511	dgeorge@bacacountyco.gov
Bent/Kiowa	Bent County Sheriff's Office	Brad Jones	719-456-0796	Brad.jones@bentcounty.net
Crowley	Crowley County Sheriff's Office	Leah Fox	719-267-5230	captain@crowleycounty.net
Otero	Otero County Sheriff's Office	Shawn Mobley	719-384-5941	smobley@oterogov.org
Otero	La Junta Police Department	Kim Roach	719-384-2525	kroach@ci.la-junta.org
Otero	Rocky Ford Police Department	Tammy Bethel	719-254-3344	tbethel@rockyfordpd.com
Prowers	City of Lamar / Prowers Comm	Trevor Choat	719-336-3977	trevor.choat@ci.lamar.co.us
Las Animas	Trinidad Communications Center	Rita Mantelli	719- 846-4441	rita.mantelli@trinidad.co.gov
Southeast Region	Colorado State Patrol Communications Center	Ray Eccher	719-288-2615	raymond.eccher@state.co.us
Pueblo	Pueblo Sheriff Office 911 Communications Center	Lisa Shorter	719-583-6250	shorter@co.pueblo.co.us
Colorado	Federal Communications Center	Eric Toft	719-553-1639	ertoft@fs.fed.us
Colorado	Federal Communications Center	Cindy French	719-553-1615	cfrench@fs.fed.us

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3. NON-GOVERNMENTAL ORGANIZATION CONTACT INFORMATION

Agency	Name	Position	Phone	Email
GENERAL				
Sprint	Crisis Response Dispatch With GETS card Caseu Muilenburg	-- -- West Region ERT	888-639-0020 206-290-4793	ERTRequests@sprint.com Casy.Muilenburg@Sprint.com
Verizon	Crisis Response Dispatch Amy Dugan Todd Dreiling David Walsh Tim Fornstrom	--- Local Director -- -- Network Support	800-981-9558 970-222-7073 719-661-8550 303-358-8000 303-877-0003	 amy.dugan@verizonwireless.com todd.dreiling@verizonwireless.com David.walsh@verizonwireless.com tim.fornstrom@verizonwireless.com
Viaero Wireless	German Carrasco	Regional Government Rep	719-691-5717 1877-484-2376	german.carrasco@viaero.com
AT&T	State Government Contact	24/7 Dispatch	1866-541-9791	
Eastern Slope Telephone	Patricia White	General Manager/CEO	719-743-2460 719-760-0682	patw@esta.coop
SECOM			1888-925-7695	
Centurylink	Paula Carazzai	Regional POC	303-992-4374 303-505-8090	paula.g.carazzai@centurylink.com

APPENDIX N: PRIORITY TELECOMMUNICATIONS PROGRAMS

For assistance and information on all DHS Office of Emergency Communications Priority Telecommunications programs, contact the DHS Priority Telecommunications Service Center at 1-866-627-2255 or 703-676-2255 or gwids@saic.com

GETS – Government Emergency Telecommunications Service

http://www.dhs.gov/gets

(see next page for GETS access info)

WPS – Wireless Priority Service

http://www.dhs.gov/wps

(see next page for WPS access info)

GETS and WPS provide priority on voice networks – not data.

Government Emergency Telecommunications Service Card

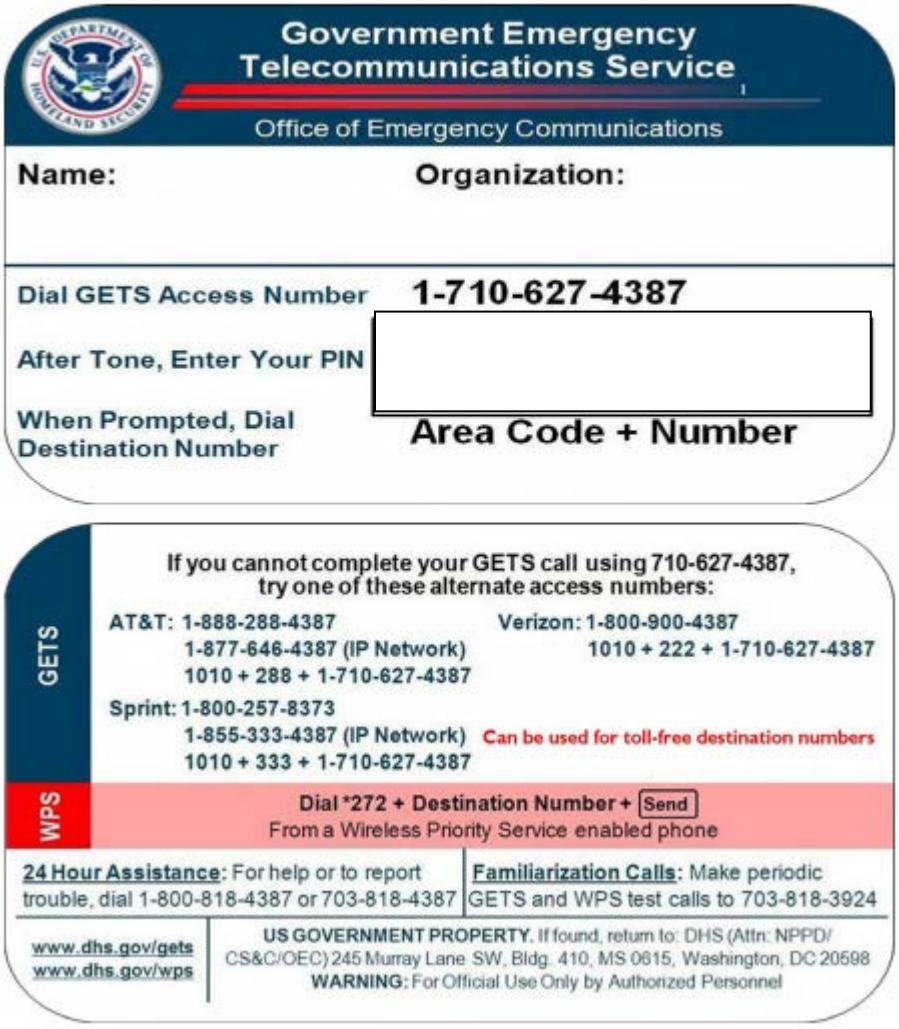

FIGURE 53: GETS CARD

Satellite Phone Dialing Instructions

Iridium PIN (default) is 1 1 1 1

(enter when powering-on the Iridium Subscriber Unit)

From a US Landline

Two-Stage Dialing: 1-480-768-2500, at prompt 12-digit Iridium number

To an Iridium phone directly as an International Call

011 + 8816xxxxx (Iridium Phone Number)

To an Iridium phone via toll call to Chandler AZ ("two-stage dialing"):

1-480-768-2500, follow prompts to enter Iridium phone number

To an M4 phone directly as an International Call

011 + 870 + 76xxxxxxx (Mobile Number)

From an M4 or BGAN: [Note - Cannot call Toll-Free numbers]

To a US Phone number:

00 + 1 + (10-digit US phone number) + #

To an Iridium phone directly

00 + 8816xxxxxxx (Iridium Phone Number) + #

To an M4 phone directly

00 + 870 + 76xxxxxxx (Mobile Number) + #

From an Iridium provisioned commercially

To a US Phone number

00 + 1 + xxx.xxx.xxxx (US phone number)

To an Iridium phone directly

00 + 8816xxxxxxx (Iridium Phone Number)

To an M4 phone directly

00 + 870 + 76xxxxxxx (Mobile Number)

Test call - no airtime charge: 00 + 1 + 480.752.5105

From an Iridium provisioned by D O D

ISU (Iridium Subscriber Unit) to DSN

00 + 696 + (DSN Area Code) + (DSN 7-digit number)

ISU to U.S. Domestic

00 + 697 + (U.S. Area Code) + (7-digit US number)

ISU to International Long Distance (ILD)

00 + 698 + (Country Code) + ("National Destination Code" or "City Code") + (Subscriber Number)

ISU to INMARSAT

00 + 698 + 870 + (INMARSAT subscriber number)

ISU to Local Hawaii

00 + 699 + (7-digit local commercial number)

1-800 toll-free 00 + 699 + 1+ 800 + (7-digits)

ISU to ISU, handset-to-handset

00 + (12-digit ISU subscriber number, e.g., 8816 763-xxxxx)

INMARSAT Country Code

All INMARSAT satellite telephones now use country code 870.
The Ocean Region Codes were discontinued January 1, 2009:

871 Atlantic Ocean Region – East [A O R-East]

872 Pacific Ocean Region [P O R]

873 Indian Ocean Region [I O R]

874 Atlantic Ocean Region – West [A O R-West]

Inmarsat Customer Care Helpline - international direct dialing from USA to London, United Kingdom: 011 44 20 7728 1030

MSAT Instructions

To receive a telephone call when **INCOMING CALL** is displayed on the handset and you hear an audible ringing, press the SEND button (marked with green lettering). To end the call, press the END button (marked with red lettering).
Note: Telephone calls can be dialed/received in PTT mode when the radio is idle.

To place a telephone call:

• Use the dial pad to enter the desired 10-digit number (area code + number) and press the SEND button (marked with green lettering).

• To end the call, press the END button (marked with red lettering).

When making a call between two MSAT-G2s, use the MSAT-G2's associated area code (600) to make the call. Using the 600 area code keeps the phone call inside the LightSquared network and the call goes through faster than if calling the toll-free number.

When making a call from a MSAT-G2 to any satellite phone programmed with an international phone number or to any other international phone number (i.e., one that does not use the North American numbering/dialing plan), dial (011) + (country code) + (exchange) + (number).

When dialing from a regular phone to a MSAT-G2 unit, use the following dialing procedure:

1. Attempt to make the call by dialing the MSAT-G2's toll-free number

2. If unsuccessful, attempt to dial using the MSAT-G2's non-toll-free number (currently area code 703 or 571).

3. As a final resort, dial using the MSAT-G2's non-toll-free number [(703) or (571)] with a GETS Card

4. If calling the MSAT-G2 from any telephone programmed with an international phone number (such as an Iridium phone), the call must be placed to the MSAT-G2's non toll-free number; American toll-free numbers cannot be called from a phone number that is not on the North American numbering plan.

Because Automatic Number Identification (ANI or "Caller ID") is not transmitted by the LightSquared network, calls from the MSAT-G2 will be blocked by any phone number with Blocked Caller ID rejection service.

411 – When dialing 411 with an MSAT-G2, you will be connected to LightSquared's Network Operations Center. The operator will attempt to assist you using Internet yellow/white pages; you will not be connected with a "true" 411 service. All 411 calls are free.

911 –When dialing 911 with the MSAT-G2, you will not be directly connected with 911 in your area. Instead the call will be directed to an Intrado emergency call intercept center, which will then patch you through to 911 in your area. Because LightSquared equipment does not transmit Automatic Location Information (ALI) or Automatic Number Identification (ANI) when making telephone calls, you will need to provide the call center with your current address or GPS location for them to identify the appropriate 911 Center for your needs. (You can also call your local 911 Center or Public Safety Answering Point if you have that direct-dial telephone number.) All 911 calls are free.

611 – Dialing 611 will make a free test call to LightSquared's Network Operations Center.

Globalstar Instructions

International Dialing Instructions

Dial "+", followed by the Country Code, followed by the rest of the phone number

+1-985-327-7500 <== This will always reach the Globalstar USA/Canada Help center, and will work wherever you are in the world

+1-254-xxx-xxxx <== This is an example of calling another Globalstar phone

+33-xxxxxxxxxx <== this will call a phone number in France (country code 33). Use the same dialing pattern throughout the world.

If you put the "+" sign and the country code before the phone number, you can always use the same dialing sequence wherever you travel

Globalstar complies with the International "+" Dialing Standard for dialing phone numbers.

Dialing instructions and other usage tips are provided in the user's manual which is supplied with each Globalstar phone. Following are some simple instructions.

Handheld Phone (GSP-1700, GSP-1600, Telit SAT550, Ericsson R290)
Press and hold the "0" (ZERO) key.

At first, the digit ZERO will be displayed, and this will then change to the "+" symbol.

AFTER the "+" is displayed, enter the country code and the phone number of the phone that you are trying to reach.

For example:
In order to call to the USA, dial "+", then "1" for the North American "country code" and then the area code and phone number of the destination.

+1-905-712-7197 is therefore the correct number to dial for the Globalstar USA Customer Care center

Universal:
The "+" prefix works wherever you have Globalstar service.

When a phone number is preceded by "+", the gateway automatically analyzes the phone number and, if necessary, either translates the "+Country_Code" to the correct dialing sequence

or it strips off the "+Country_Code" characters if international dialing is not required for reaching the destination phone number.

APPENDIX P: TEXT MESSAGING ADDRESSES

Text Messaging Gateway Addresses

"number" is the 10-digit mobile telephone number, unless 11-digit is specified	
Alltel	SMS: number@sms.alltelwireless.com MMS: number@mms.alltelwireless.com
AT&T	SMS: number@txt.att.net MMS: number@mms.att.net
Bell Canada	SMS & MMS: number@text.bel.ca
Boost Mobile	SMS: number@sms.myboostmobile.com MMS: number@myboostmobile.com
C Spire Wireless	SMS & MMS: number@cspire.com
Cricket Wireless	SMS: number@sms.mycricket.com MMS: number@mms.mycricket.com
Metro PCS	SMS & MMS: number@mymetropcs.com Or number@metropcs.sms.us
Qwest	SMS & MMS: number@questmp.com
SouthernLinc Wireless	SMS: number@page.southernlinc.com MMS: number@mms.southernlinc.com
Sprint	SMS & MMS: number@messaging.springpcs.com
T-Mobile	SMS & MMS: number@tmomail.net
Telus Communications	SMS & MMS: number@msg.telus.com
TracFone	SMS & MMS: number@mmst5.tracfone.com
U.S. Cellular	SMS: number@email.uscc.net MMS: number@mms.uscc.net
Viaero Wireless	SMS: number@viaerosms.com MMS: number@mmsviaero.com
Verizon	SMS: number@vtext.com MMS: number@vzwpix.com
Virgin Mobile	SMS: number@vmobl.com

	MMS: number@vmpix.com
XIT Communications	SMS: number@sms.xit.net
Iridium	SMS: number@msg.iridium.com

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APPENDIX Q: CTCSS TONES AND CODES

Freq. (Hz)	Motorola Code	NIFC & CA Fire*	Freq. (Hz)	Motorola Code	NIFC & CA Fire*
67.0	XZ	17	136.5	4Z	4
69.3**	WZ		141.3	4A	13
71.9	XA	18	146.2	4B	5
74.4	WA	19	151.4	5Z	14
77.0	XB	20	156.7	5A	6
79.7	WB	21	162.2	5B	15
82.5	YZ	22	167.9	6Z	7
85.4	YA	23	173.8	6A	29
88.5	YB	24	179.9	6B	30
91.5	ZZ	25	186.2	7Z	31
94.8	ZA	26	192.8	7A	16
97.4	ZB	27	203.5	7B	32
100.0	1Z	9	206.5	8Z	
103.5	1A	8	210.7	M2	
107.2	1B	10	218.1	M3	
110.9	2Z	1	225.7	M4	
114.8	2A	11	229.1	9Z	
118.8	2B	28	233.6	M5	
123.0	3Z	2	241.8	M6	
127.3	3A	12	250.3	M7	
131.8	3B	3	254.1	QZ	

*California FIRESCOPE tone list, used by NIFC and CA fire agencies

**69.4 in some radios

Some military radios utilize a NATO tone of 150.0Hz

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APPENDIX R: DCS CODES

Normal	Inverted		Normal	Inverted		Normal	Inverted		Normal	Inv.
023	047		155	731		325	526		516	432
025	244		156	265		331	465		523	246
026	464		162	503		332	455		526	325
031	627		165	251		343	532		532	343
036	172		172	036		346	612		546	132
043	445		174	074		351	243		565	703
047	023		205	263		364	131		606	631
051	032		212	356		365	125		612	346
053	452		223	134		371	734		624	632
054	413		225	122		411	226		627	031
065	271		226	411		412	143		631	606
071	306		243	351		413	054		632	624
072	245		244	025		423	315		654	743
073	506		245	072		431	723		662	466
074	174		246	523		432	516		664	311
114	712		251	165		445	043		703	565
115	152		252	462		446	255		712	114
116	754		255	446		452	053		723	431
122	225		261	732		454	266		731	155
125	365		263	205		455	332		732	261
131	364		265	156		462	252		734	371
132	546		266	454		464	026		743	654
134	223		271	065		465	331		754	116
143	412		274	145		466	662			
145	274		306	071		503	162			
152	115		311	664		506	073			
032	051		315	423						

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APPENDIX S: STANDARD PHONETIC ALPHABET AND ITS EQUIVALENTS

Character	International	Law Enforcement	Morse Code
A	Alpha	Adam	
B	Bravo	Boy	
C	Charlie	Charles	
D	Delta	David	
E	Echo	Edward	
F	Foxtrot	Frank	
G	Golf	George	
H	Hotel	Henry	
I	India	Ida	
J	Juliett	John	
K	Kilo	King	
L	Lima	Lincoln	
M	Mike	Mary	
N	November	Nora	
O	Oscar	Ocean	
P	Papa	Paul	
Q	Quebec	Queen	
R	Romeo	Robert	
S	Sierra	Sam	
T	Tango	Tom	
U	Uniform	Union	
V	Victor	Victor	
W	Whiskey	William	
X	Xray	Xray	

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Y	Yankee	Young	
Z	Zulu	Zebra	
1	One		
2	Two		
3	Three		
4	Four		
5	Five		
6	Six		
7	Seven		
8	Eight		
9	Niner		
0	Zero		

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APPENDIX T: PRO-WORDS AND Q CODES

Pro-word	Explanation
Affirmative	Permitted, Granted, Yes
All After	Say again all which is part of your transmission after
All Before	Say again all which part of your transmission before
Break	I hereby indicate the separation of messages, also used to communicate I desire you to stop your transmission
By Authority of	Name of official who is authorizing the transmission
Correct	You are correct, or whatever you have transmitted is correct
Correction	An error has been made in the transmission. Transmission will continue with the last word correctly transmitted. The correct version is _____.
Disregard this Message	This transmission is in error. Disregard it. This Proword shall not be used to cancel any message completely transmitted and for which receipt or acknowledgement has been received.
Drill	This Proword will be the first word in the body of all drill or exercise messages.
Figures	Numeral or numbers follow.
From	The originator of this message is indicated by the Name or callsign immediately following this word
Incorrect	You are incorrect. The correct message is _____.
I Read Back	The following is my response to your instructions. I read back everything exactly as transmitted
I Say Again	I am repeating transmission or portion indicated
I Spell	I shall spell the next word phonetically
I Verify	That which follows has been verified at your request and is repeated. To be used only as a reply to Verify
Message Follows	A message which requires recording is about to follow.
More to Follow	I have more messages, traffic, or information for you
Negative	Not received or understood, No
Out	This is the end of my transmission to you and no answer is required or expected. After the Proword "Out" all stations will pause for a five-second interval to listen for

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	stations desiring to break-in.
Over	This is the end of my transmission to you and a response is necessary. Go ahead, transmit.
Read Back	Repeat this entire transmission exactly as received
Relay (To)	Transmit this message to the intended recipient as I am not able to communicate directly with them.
Roger	I have received you last transmission satisfactorily. The Proword “Roger” is also used by stations confirming receipt of message and by Net Control when checking stations into a net
Say Again	Repeat all of your last transmission.
Speak Faster	Your transmission is too slow, increase speed of transmission
Speak Slower	Your transmission is too fast, decease speed of transmission
Time	Zulu or Local Time in military format
To	The intended recipient of the message, immediately following to will be the identification of the recipient.
Unknown Station	The identity of the station with whom I am attempting to establish communications is unknown
Verify	Verify entire message (or portion if indicated) and send the correct version.
Wait	I must pause for a few seconds
Wait-Out	I must wait for [X] minutes (expressed in numerals)
Word After	Repeat the word after.
Word Before	Repeat the word before.
Words Twice	Communication is difficult, Transmit each phase twice. This Proword may be used an order, request or as information.

Code	Question	Answer or Statement
QRA	What is the name (or call sign) of your station?	The name (or call sign) of my station is…
QRG	Will you tell me my exact frequency (or that of…)?	Your exact frequency (or that of…) is…. kHz or MHz
QRH	Does my frequency vary?	Your frequency varies
QRI	How is the tone of my transmission?	The tone of your transmission is (Good, Variable, Bad)
QRJ	How many voice contacts do you want to make?	I want to make …. Voice contacts.
QRK	What is the readability of my signals (or those of…)?	The readability of your signals is (1 to 5)
QRL	Are you busy?	I am busy. Please do not interfere
QRM	Do you have interference?	I have interference or No interference
QRN	Are you troubled by Static?	I am (not) troubled with static.
QRO	Shall I increase power?	Increase power
QRP	Shall I decrease power?	Decrease power
QRQ	Shall I send Faster?	Send faster (….wpm)
QRS	Shall I send more slowly?	Send more slowly (….wpm)
QRT	Shall I stop sending?	Stop Sending
QRU	Have you anything for me?	I have nothing for you
QRV	Are you ready?	I am Ready
QRW	Shall I inform … That you are calling him on …kHz or MHz?	Please inform… that I am calling him on… kHz or MHz
QRX	When will you call me again?	I will call you again at … (hours) on … kHz or MHz.
QRZ	Who is calling me?	You are being called by … on … kHz or MHz
QSA	What is the strength of my signals (or those of …)?	The strength of your signals (or those of …) is (1 to 5).
QSB	Are my signals fading?	Your signals are fading

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QSD	IS MY KEYING DEFECTIVE?	YOUR KEYING IS DEFECTIVE
QSG	SHALL I SEND… TELEGARMS (MESSAGES) AT A TIME?	SEND … TELEGRAMS (MESSAGES) AT A TIME.
QSK	CAN YOU HEAR ME BETWEEN YOUR SIGNALS?	I CAN HEAR YOU BETWEEN MY SIGNALS
QSL	CAN YOU ACKNOWLEDGE RECEIPT?	I AM ACKNOWLEDGING RECEIPT.
QSM	SHALL I REPEATER THE LAST MESSAGE WHICH I SENT YOU?	REPEATER THE LAST MESSAGE YOU SENT.
QSN	DID YOU HEAR ME (OR… (CALL SIGN) ON …KHZ OR…. MHZ?	I DID HEAR (OR CALL SIGN) ON ---KHZ OR… MHZ
QSO	CAN YOU COMMUNICATE WITH .. DIRECT (OR BY RELAY)?	I CAN COMMUNICATE WITH .. DIRECT (OR BY RELAY THROUGH…)
QSP	WILL YOU RELAY TO….	I WILL RELAY TO….
QSQ	HAVE YOU A DOCTOR ON BOARD (OR IS… (NAME OF PERSON) ON BOARD) ?	I HAVE A DOCTOR ON BOARD (OR…(NAME OF PERSON) ON BOARD).
QSR	SHALL I REPEATER THE CALL ON THE CALLING FREQUENCY?	REPEAT YOUR CALL ON THE CALLING FREQUENCY; DID NOT HEAR YOU (OR HAVE INTERFERENCE).
QSS	WHAT WORKING FREQUENCY WILL YOU USE?	I WILL USE THE WORKING FREQUENCY …KHZ OR MHZ.
QSU	SHALL I SEND OR REPLY ON THIS FREQUENCY?	SEND OR REPLY ON THIS FREQUENCY
QSV	SHALL I SEND A SERIES OF VS ON THIS FREQUENCY (OR ON …KHZ OR MHZ)?	SEND A SERIES OF VS ON THIS FREQUENCY (OR ON … KHZ OR MHZ).
QSW	WILL YOU SEND ON THIS FREQUENCY OR ON …KHZ OR MHZ?	I AM GOING TO SEND ON THIS FREQUENCY (OR ON … KHZ OR MHZ).
QSX	WILL YOU LISTEN TO….	I WILL LISTEN OR AM LISTENING TO…
QSY	SHALL I CHANGE TRANSMISSION TO ANOTHER FREQUENCY?	CHANGE TRANSMISSION TO ANOTHER FREQUENCY (ON … KHZ OR MHZ).
QSZ	SHALL I SEND EACH WORD OR GROUP MORE THAN ONCE?	SEND EACH WORD OR GROUP TWICE (OR…TIMES).
QTA	SHALL I CANCEL MESSAGE NUMBER …?	CANCEL MESSAGE NUMBER….
QTB	DO YOU AGREE WITH MY COUNTING OF WORDS?	I DO NOT AGREE WITH YOUR COUNTING OF WORDS; I WILL REPEAT THE FIRST LETTER

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		OR DIGIT OF EACH WORD OR GROUP
QTC	HOW MANY MESSAGES DO YOU HAVE TO SEND?	I HAVE .. MESSAGES FOR YOU (OR FOR …)
QTD		

APPENDIX U: P25 DIGITAL CODES

NAC – Network Access Code

$293	659	Default NAC
$F7E	3966[1º]	Receiver will unsquelch with any incoming NAC
$F7E	3967[1º]	A repeater with this NAC will allow all incoming signals to be repeated with NAC intact

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TGID – Talkgorup ID

$0001	1_{10}	Default
$0000	0_{10}	No-one, talkgroup with no users – used for individual call
$FFFF	65535_{10}	A repeater with this NAC will allow all incoming signals to be repeated with the NAC intact

Unit ID

$000000	0_{10}	Default
$000001-$98767F	1_{10}-991807_{10}	No-one, talkgroup with no users – used for individual call
$989680-$FFFFFE	10000000_{10}-16777214_{10}	A repeater with this NAC will allow incoming signals to be repeated with the NAC intact
$FFFFF	16777215_{10}	Designates everyone – used when implementing a group call with TGID3

Note: Project 25 system administrators should be aware of possible Unit ID conflicts when conducting operations with neighboring jurisdictions. System administrators should coordinate Unit IDs with agencies likely to operate on their system(s) to address any radio Unit ID conflicts.

"$" Indicates hexadecimal values, "10" subscript indicates decimal value.

APPENDIX V: DIGITAL MOBILE RADIO (DMR) INFORMATION

1. TIME-SLOTS (TS)

DMR Tier II/Tier III occupies a 12.5 kHz bandwidth that two channels share using Time-Division Multiple Access (TDMA). This results in spectrum efficiency of 6.25 kHz per channel. Comparing the spectrum efficiency of DMR to a wideband analog FM, DMR only uses 25% of the bandwidth per talk channel. Each channel can carry either voice and/or data depending on system design. The two time slots are called Time Slot 1 (TS1) and Time Slot 2 (TS2).

This means one repeater allows two separate channels at the same time. Currently most DMR repeater system implementations utilize both channels for voice and some limited text messaging. Typically, one channel (time slot) is used for wide-area and the second is local and regional talkgroups. For repeater operators, a single two-slot TDMA repeater offers a significant savings over two standalone repeaters to obtain two separate communication channels as only one repeater, one duplexer, and one antenna system is required. The utilization of TDMA offers about a 40% battery savings on transmit, extending talking time over non-TDMA and analog transmissions for portable users. The two-slot TDMA implemented in DMR uplinks (portable/mobile to repeater) uses a 30-ms window for each time slot, the 30-ms is further divided into a 27.5-ms frame and a 2.5-ms gap. This means when transmitting, your transmitter is only turned on for 27.5ms every 60ms, resulting in extended battery life for portables. The DMR repeater (downlink) transmits a continuous data stream even if only one timeslot is being used; the 2.5-ms uplink gap is replaced with a CACH burst (Common Announcement Channel) that is used for channel management and low speed signaling. The 27.5-ms frame consists of a total of 264-bits; 108-bit payload, 48-bit SYNC or embedded signaling, and a second 108-bit payload for a total of 216-bits of payload per frame. The vocoder must compress 60-ms of audio with FEC (forward error correction) into 216-bits of data for transmission. The 2.5ms-gap is used for guard time to allow PA ramping and propagation delay.

2. COLOR CODES

DMR Repeaters use Color Codes (CC) much like analog repeaters use CTCSS (PL) or DCS. To access a repeater, you must program your radio to use the same CC as the repeater. There are 16 different CCs (CC0-CC15). The use of Color Codes is not optional on DMR Systems. If your Color Code is not set correctly, you will not be able to access the repeater. The only real purpose of using different Color Codes is when multiple repeaters operating on the same frequency have overlapping coverage areas.

3. TALKGROUPS

Talkgroups (TG) are a way for groups of users to share a time slot (one-to-many) without distracting and disrupting other users of the same time slot. It should be noted that only one talkgroup can be using a time slot at a time. If your radio is not programmed to listen to a talkgroup, you will not hear that talkgroup's traffic.

DMR also supports private calls (one-to-one), encryption and data.

For simplex traffic, the accepted standard is to use TG99 on TS1 with CC1.

Host Network	TG	TS	Assignment
BRANDMEISTER	91	2	WORLDWIDE
BRANDMEISTER	93	2	NORTH AMERICA
BRANDMEISTER	310	2	TAC 310
BRANDMEISTER	311	2	TAC 311
BRANDMEISTER	312	2	TAC 312
BRANDMEISTER	313	2	TAC 313
BRANDMEISTER	314	2	TAC 314
BRANDMEISTER	315	2	TAC 315
BRANDMEISTER	316	2	TAC 316
BRANDMEISTER	317	2	TAC 317
BRANDMEISTER	318	2	TAC 318
BRANDMEISTER	319	2	TAC 319
BRANDMEISTER	3108	2	COLORADO STATE WIDE (STATIC)
BRANDMEISTER	310815	1	K0JSC FUN MACHINE LINK (STATIC)
BRANDMEISTER	3100	2	USA NATIONWIDE
BRANDMEISTER	31080	2	COLORADO CHAT
BRANDMEISTER	31082	2	COLORADO – LINK
BRANDMEISTER	31083	2	COLORADO SEVERE WEATHER
BRANDMEISTER	31084	2	NOCO MOUNTAIN FRONT RANGE
BRANDMEISTER	31085	2	SKI CONTRY ARC
BRANDMEISTER	31086	2	WESTERN COLORADO
BRANDMEISTER	31088	2	COLORADO HD
BRANDMEISTER	31079	2	ALERT RADIO
BRANDMEISTER	31203	2	KANSAS LINK
BRANDMEISTER	31327	2	LAS VEGAS
BRANDMEISTER	31600	2	USA-AREA 0
BRANDMEISTER	31601	2	USA-AREA 1
BRANDMEISTER	31602	2	USA-AREA 2
BRANDMEISTER	31603	2	USA-AREA 3
BRANDMEISTER	31604	2	USA-AREA 4
BRANDMEISTER	31605	2	USA-AREA 5
BRANDMEISTER	31606	2	USA-AREA 6
BRANDMEISTER	31607	2	USA-AREA 7
BRANDMEISTER	31608	2	USA-AREA 8

BRANDMEISTER	31609	2	USA-AREA 9
BRANDMEISTER	31648	2	DMR INFO NETWORK
BRANDMEISTER	31652	2	RV'ING HAMS
BRANDMEISTER	31088	2	COLO HOTSPOT DISCUSSION
BRANDMEISTER	31623	2	PUBLIC SAFETY RAG CHEW
BRANDMEISTER	31200	2	SW KANSAS ARES
BRANDMEISTER	9112	2	EMCOM 9112
BRANDMEISTER	3740	2	REACT
BRANDMEISTER	3140	2	OKLAHOMA STATEWIDE
BRANDMEISTER	31400	2	OKLAHOMA TAC
BRANDMEISTER	31408	2	OKLAHOMA WEATHER
BRANDMEISTER	31563	2	WYOMING SEVERE WEATHER
BRANDMEISTER	3148	2	TEXAS STATEWIDE
RMHAM	700	1	Rocky Mounty Wide
RMHAM	718	1	Southeast Region
RMHAM	719	1	Southern Colorado Regional
RMHAM	720	1	Central Region (Denver)
RMHAM	721	1	Northern Colorado Regional
RMHAM	710	1	Denver Local (Lookout Mtn UHF Only)
RMHAM	750	1	Boulder Analog Connection
RMHAM	100	1	Cheyenne, WY Local Talkgorup
WALSH EMS	719810	1	WEMS Operations
WALSH EMS	719812	2	WEMS Tactical
WLSH SCHL ADMIN	5262	1	WALSH SCHOOL ADMIN
WLSH SCHL BUS	52621	2	WALSH SCHOOL BUS
WLSH SCHL MTNT	52622	2	WALSH SCHOOL MAINTENANCE
VLS SCHL ADMIN	6738	2	VILAS SCHOOL ADMIN
VLS SCHL BUS	67381	1	VILAS SCHOOL BUS
EB SCHOOLS	52623	1	EAST BACA SCHOOLS COMM TG
WALSH TOWN	5411	2	WALSH TOWN SERVICES
WALSH HLTHCARE	5266	1	WALSH HEALTHCARE SERVICES
REACT	3740	1	REACT RADIO COMMS
PUEBLO ARES	696969	TS1	ARES 1
PUEBLO ARES	696969	TS2	ARES 2
NOCO DMR	3171	TS2	Northern Colorado DMR Group

4. SUBSCRIBER ID

To program a subscriber unit (Portable or Mobile) you will need a subscriber ID. For amateur radio the DMR-MARC website [http://www.dmr-marc.net] handles issuance of all subscriber IDs for amateur users and repeaters. Click on Contact Us in the top right corner of their page and follow the instructions. IDs are assigned based upon your geographic location (Country/State).

If you have multiple radios that will be on the air at the same time, you will need a subscriber ID for each. If you have a mobile and portable and are going to be only transmitting on one at a time, they can share subscriber IDs. Some brands of radios will not listen to traffic from another radio with the same subscriber ID. This can be advantageous with feedback issues and a disadvantage if you loan the radio to a friend you will not be able to communicate.

APPENDIX W: FIRSTNET[3]

Signed into law on February 22, 2012, The Middle Class Tax Relief and Job Creation Act created the First Responder Network Authority (FirstNet). The law gives FirstNet the mission to build, operate and maintain the first high-speed, nationwide wireless broadband network dedicated to public safety. FirstNet will provide a single interoperable platform for emergency and daily public safety communications.

This broadband network will fulfill a fundamental need of the public safety community as well as the last remaining recommendation of the 9/11 Commission. FirstNet will bring 21st century tools to tens of thousands of organizations and individuals that respond to emergencies at the local, state, tribal and federal levels.

The FirstNet organization is the first of its kind. Never before has Congress established an independent government authority with a mandate to provide specialized communication services for public safety. Using nationwide 700 MHz spectrum, FirstNet will put an end to decades-long interoperability and communications challenges and help keep our communities and emergency responders safer.

The law gives FirstNet a blueprint for its mission. It outlines processes and guidelines that FirstNet must follow in building the network. FirstNet is tasked with cost-effectively creating a nationwide network and providing wireless services to public safety agencies across the country. Through the assessment of fees, FirstNet must generate sufficient funds to enable the organization to operate, maintain and improve the network each year.

Congress made history by allocating valuable spectrum and up to $7 billion in funding for the construction of the FirstNet network. To create a nationwide network, all 56 U.S. states and territories must have a radio access network that is connected to the FirstNet core network. To contain costs, FirstNet is tasked with leveraging existing telecommunications infrastructure and assets. This includes exploring public/private partnerships that can help support and accelerate the creation of this new advanced wireless network.

FirstNet is an independent authority within the U.S. Department of Commerce's National Telecommunications and Information Administration. FirstNet is governed by a 15-member Board consisting of the Attorney General of the United States, the Secretary of Homeland Security, the Director of the Office of Management and Budget, and 12 members appointed by the Secretary of Commerce. The FirstNet Board is composed of representatives from public safety; local, state and federal government; and the wireless industry. These dedicated individuals bring their expertise, experience and commitment to serving public safety and meeting the FirstNet mission.

FirstNet is a new and growing organization. The search for talent to fill management, outreach and technical positions is actively underway. We invite you to support our mission and visit our website regularly to follow our progress.

When FirstNet launches the NPSBN, the network will initially provide mission-critical, high-speed data and video services that will supplement today's LMR networks. The network is also expected to provide non-mission critical voice at launch. Public safety entities will continue to rely on their LMR networks for mission critical voice features – such as Group Communications and Direct-Mode – that are needed in an emergency response setting. In the near term, public safety entities will need to maintain and/or upgrade their current LMR radio system.

[3] http://www.firstnet.gov/

Radio System Authorization Form

On this _____day of _____, 20_____; this authorizing agency hereby authorizes the agency and/or private service below to program the following frequencies and/or talkgroups into their radio for use as needed.

Authorizing Agency: _____

Address: _____

City: _____State: _____ Zip: _____

Authorizing Agency Contact Name: _____

Telephone Number: _____ Email Address: _____

Name of Agency Authorized to use talkroup(s) or channel(s): _____

Any special conditions: _____

_____

_____

Talkgroups Authorized:

Channel Screen Display	Channel Name	Talkgroup #

Channels Authorized:

Display Screen	Channel Name	RX Freq	RX Tone	TX Freq	TX Tone

Authorized by: _____ Title: _____

Signature: _____ Date: _____

If this is not a blanket letter, a Radio System Authorization Form must be obtained from the grantor for each agency to program channels and/or talkgroups into their radios. Encryption authorization is included with an encrypted talkroup. Authorizations remain in good standing and in effect until cancellation is given in writing by the owning agency.

The grantor is not responsible for any costs associated with programming of the radios with specific talkgroups or channels. The grantee will assume all costs and responsibility for legally using the radios.

Grantee Signature: _____ Date: _____

APPENDIX Y: FREQUENCY LISTS – SOUTHEAST COLORADO AND MUTUAL AID

Channel Name	Receive Freq	Receive Tone	Transmit Freq	Receive Tone	Wide / Narrow	Notes:
EM DISPATCH	153.8450	156.7	153.8450	156.7	N	Baca County Emergency Services Dispatch
EM TAC 1	156.1800	136.5	156.1800	136.5	N	Baca County Emergency Management Tactical 1
EM TAC 2	155.8200	127.3	155.8200	127.3	N	Baca County Emergency Management Tactical 2
AREA LAW	155.1300	CSQ	155.1300	107.2	N	Tornado Siren Activation and Dispatch Monitors
WALSH RP	855.9625	D343	810.9625	D343	W	Walsh Repeater on Water Tower 400 N. Kansas Street
TATOR RP	859.2125	D343	814.2125	D343	W	Tator Butte Repeater SW of Pritchett
MT CARMEL	860.2125	136.5	815.2125	136.5	W	Mt. Carmel SE of Campo
WEMS DISP	460.1875	118.8	465.1875	118.8	N	Walsh EMS Dispatch
WEMS DIR	460.1875	118.8	460.1875	118.8	N	Walsh EMS Direct/Talk-Around
2BTES EMS	453.3375	D506	458.3375	D506	N	Two Buttes EMS Repeater/Dispatch
MT CRML EMS	453.6875	D506	458.6875	D506	N	Mt Carmel EMS Repeater/Dispatch
MANTER EMS	453.5625	D506	458.5625	D506	N	Manter KS EMS Repeater/Dispatch
TATOR EMS	453.4125	D506	458.4125	D506	N	Tator Butte EMS Repeater/Dispatch
WEMS VHF	153.9650	118.8	158.9625	118.8	N	Walsh EMS VHF
SPGFCT	154.1000	CSQ	154.1000	CSQ	N	City of Springfield Utilities
WLSH CT	154.0850	CSQ	154.0850	CSQ	N	City of Walsh Utilities
BENT SO	154.7100	210.7	155.8500	CSQ	N	Bent County Sheriff's Office (Siren activations)

CONTROLLED UNCLASSIFIED INFORMATION

HSTY FD	154.3550	CSQ	153.7700	CSQ	N	Hasty McClave Fire Department
LABC FD	154.3400	CSQ	154.3400	CSQ	N	Las Animas / Bent County Fire Department
LA SCH DIST	155.2350	CSQ	155.2350	CSQ	W	Las Animas School District
KIOWA RB G	155.83500	156.7	158.8650	156.7	N	Kiowa County Road and Bridge Galatea
KIOWA RB S	155.83500	CSQ	158.8650	CSQ	N	Kiowa County Road and Bridge Sheridan Lake
OTERO SO	155.6400	CSQ	155.6400	CSQ	N	Otero County Sheriff's Office
OTERO SRVS	154.1150	179.9	158.8800	179.9	N	Otero County Services
FOWLR TWN	154.0250	123.0	155.8050	123.0	N	Town of Fowler Services
LJ FIRE	154.4450	CSQ	154.4450	CSQ	N	La Junta Fire Pagers
RKYFD FD	155.0250	107.2	153.9800	107.2	N	Rocky Ford Fire Department
CHERAWFD	159.1800	100.0	153.7925	100.0	N	Cheraw Fire Department Dispatch
CFD CH2	154.2275	100.0	154.2275	100.0	N	Cheraw Fire Department Channel 2 Simplex
CFD CH3	154.0025	100.0	154.0025	100.0	N	Cheraw Fire Department Channel 3 Simplex
CFD MOBEX	158.8425	100.0	158.8425	100.0	N	Cheraw Fire Mobile Repeater
PRWR RFD	154.3700	186.2	153.83000	186.2	N	Prowers Rural Fire Department (Carlton Tower)
HOLLY FD	155.0850	127.3	153.7850	127.3	N	Holly Fire Department
LAMAR FD	154.4000	100.0	153.9500	100.0	N	Lamar Fire and EMS
PRWRS SO	155.1300	107.2	155.5650	107.2	N	Prowers Sheriff's Office (Carlton Tower)
LAMAR PD	155.0400	203.5	153.7400	203.5	N	Lamar Police Department
WILEY FD	154.4300	88.5	153.8900	88.5	N	Wiley Fire Department

PRWR RB	156.1950	146.2	159.0150	146.2	N	Prowers Road and Bridge Department
LAMR LP	158.2500	123.0	153.0800	123.0	N	Lamar Light and Power
LMRSC BUS	47.4600	CSQ	47.4600	CSQ	W	Lamar School District Busses
HOLLY CT	154.0400	CSQ	154.0400	CSQ	N	Holly City Utilities
LACNTY FIRE	154.4150	CSQ	154.0100	107.2	N	Las Animas County Fire
OK FIRE	154.1300	CSQ	154.1300	100.0	N	Oklahoma State Fire (All Fire Departments)
OK AID	155.4900	CSQ	155.4900	156.7	N	Oklahoma Mutual Aid (All Agencies)
CIMRN SO	155.6100	162.2	158.8500	162.2	N	Cimarron County Oklahoma Sheriff's Office (Fire & EMS)
CMRN EMS	453.0250	82.5	458.0250	82.5	N	Cimarron County EMS (Boise City & Keyes)
CMRN RB	156.0750	CSQ	156.0750	162.2	N	Cimarron County Oklahoma Road and Bridge Department
BOISE SCHL	155.2200	CSQ	155.2200	CSQ	N	Boise City School District
TX CO GUY	154.9800	118.8	155.8350	118.8	N	Texas County Oklahoma Fire Guymon Tower
TX CO TXH	154.9800	110.9	155.8350	110.9	N	Texas County Oklahoma Fire Texhoma Tower
GUYMON ER	462.9500	136.5	462.9500	136.5	N	Guymon Emergency Room Hospital
GUYMON FD	158.8050	167.9	155.0850	167.9	N	Guymon Fire & EMS
HARDESTY	154.1450	203.5	154.1450	203.5	N	Hardesty Fire Department
HOOKER EMS	154.0250	136.5	155.7450	136.5	N	Hooker Oklahoma EMS
TX CO SO	155.1900	123.0	159.0300	123.0	N	Texas County Sheriff's Office
TX SO 2	154.8750	CSQ	154.8750	CSQ	N	Texas County Sheriff Law Tactical
GUYMON PD	155.5800	156.7	159.1500	156.7	N	Guymon Police Department

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TX CO EMA	156.0450	100.0	159.1350	100.0	N	Texas County Emergency Management Agency
MORTON SO	156.2100	162.2	158.9700	162.2	N	Morton County Sheriff's Office
MRTN EMS FD	155.7900	162.2	153.9950	162.2	N	Morton County EMS and Fire
ELKHRT SCHL	464.3250	CSQ	469.3250	162.2	N	School Busses
MRTN RB	155.9400	CSQ	153.8150	162.2	N	Morton County Road and Bridge
STANTON SO	155.6700	D023	158.9100	D023	N	Stanton County SO/Fire/EMS Paging Dispatch Only
STANTON RB	158.8350	192.8	153.8150	192.8	N	Stanton County Road and Bridge
JOHNSON SCH	158.7600	D071	153.9800	D071	N	Johnson/Stanton County Schools
JOHNSN CTY	155.0550	D023	158.8650	D023	N	Johnson City Services
HAMLTN SO N	158.8500	D143	156.0300	D143	N	Hamilton County SO North Tower
HAMLTN SO S	154.8600	D143	158.9700	D143	N	Hamilton County SO South Tower
HAMLTN FD	154.1450	103.5	150.7900	103.5	N	Hamilton County Kansas Fire Department
HAMLTN RB	154.1150	210.7	158.9550	210.7	N	Hamilton County Kansas Road and Bridge
SYRCS EMS	155.2050	123.0	151.1000	123.0	N	Syracuse Kansas EMS
SYRCS CTY	154.9650	D703	154.9650	D703	N	Syracuse Kansas City Services
SYRC SCHL	161.9700	CSQ	161.9700	CSQ	N	Syracuse Kansas School USD 494
SYRC SC 2	155.2650	CSQ	155.2650	CSQ	N	Syracuse Kansas School USD 494 CH 2
HMLTN HOSP	155.3400	103.5	155.3400	103.5	N	Hamilton County Hospital
GREELEY SO	155.1900	CSQ	159.0900	CSQ	N	Greeley County Kansas Sheriff's Office
GREELEY RB	151.1300	CSQ	159.0450	CSQ	N	Greeley County Kansas Road and Bridge

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TRIBUNE FD	155.0250	CSQ	155.0250	CSQ	N	Tribune Fire and EMS
UNION SO	155.62500	110.9	154.7850	110.9	N	Union County New Mexico Sheriff's Office
UNION FD	158.8650	110.9	155.8500	110.9	N	Union County New Mexico Fire Department
UNION RB	154.1150	110.9	159.0600	110.9	N	Union County New Mexico Road and Bridge
CLAYTON FD	153.9800	127.3	153.9800	127.3	N	Clayton New Mexico Fire Department
CLAYTON PD	158.7450	123.0	158.7450	123.0	N	Clayton New Mexico Police Department
CLAYTN SCHL	155.0400	CSQ	155.0400	CSQ	N	Clayton New Mexico School District
DS MNES FD	158.8350	110.9	154.0550	110.9	N	Des Moines New Mexico Fire and EMS
NM EMERG	154.9200	CSQ	154.9200	127.3	N	New Mexico State Emergency
NM FIRE	154.3100	CSQ	154.3100	127.3	N	New Mexico State Fire
NM SAR 2	151.3700	CSQ	151.3700	127.3	N	NM State Search and Rescue CH 2 – CH 1 MRA
NM SAR 3	159.2850	CSQ	159.2850	127.3	N	NM State Search and Rescue CH 3
NM LAW	155.5500	CSQ	155.5500	127.3	N	NM State Law Enforcement Mutual Aid
CARSN ADMN	169.1750	CSQ	169.1750	CSQ	N	Carson National Forest Administration
CRSN BNDRY	169.1750	CSQ	169.9750	146.2	N	Carson National Forest – Boundary Peak
CRSN CERRO	169.1750	CSQ	169.9750	114.8	N	Carson National Forest – Cerro Vista
CRSN CRUCES	169.1750	CSQ	169.9750	118.8	N	Carson National Forest – Cruces Basin
CRSN DEADM	169.1750	CSQ	169.9750	136.5	N	Carson National Forest – Deadman Lookout
CRSN KIOWA	169.1750	CSQ	169.9750	127.3	N	Carson National Forest – Kiowa Mountain
CRSN MSTNAS	169.1750	CSQ	169.9750	103.5	N	Carson National Forest – Mestanas Mesa

CRSN MOGTE	169.1750	CSQ	169.9750	131.8	N	Carson National Forest – Mogote Peak
CRSN MOJINO	169.1750	CSQ	169.9750	123.0	N	Carson National Forest – Mojino
CRSN ORTIZ	169.1750	CSQ	169.9750	107.2	N	Carson National Forest – Ortiz Peak
CRSN PICURIS	169.1750	CSQ	169.9750	110.9	N	Carson National Forest – Picuris Mountain
CRSN ANTNO	169.1750	CSQ	169.9750	151.4	N	Carson National Forest – San Antonio Mountain
CRSN VIGAS	169.1750	CSQ	169.9750	141.3	N	Carson National Forest – Vigas
MT CAPULIN	165.4500	CSQ	165.4500	CSQ	N	Mt. Capulin National Monument
MT CAPULN 2	166.6375	CSQ	166.6375	CSQ	N	Mt. Capulin National Monument

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APPENDIX Z: TIME CONVERSION CHART

UTC/ZULU	PST/ALDT	PDT/MST	MDT/CST	CDT/EST	EDT/AST	ALS	HST
2400/0000	1600	1700	1800	1900	2000	1500	1400
0100	1700	1800	1900	2000	2100	1600	1500
0200	1800	1900	2000	2100	2200	1700	1600
0300	1900	2000	2100	2200	2300	1800	1700
0400	2000	2100	2200	2300	2400/0000	1900	1800
0500	2100	2200	2300	2400/0000	0100	2000	1900
0600	2200	2300	2400/0000	0100	0200	2100	2000
0700	2300	2400/0000	0100	0200	0300	2200	2100
0800	2400/0000	0100	0200	0300	0400	2300	2200
0900	0100	0200	0300	0400	0500	2400/0000	2300
1000	0200	0300	0400	0500	0600	0100	2400/0000
1100	0300	0400	0500	0600	0700	0200	0100
1200	0400	0500	0600	0700	0800	0300	0200
1300	0500	0600	0700	0800	0900	0400	0300
1400	0600	0700	0800	0900	1000	0500	0400
1500	0700	0800	0900	1000	1100	0600	0500
1600	0800	0900	1000	1100	1200	0700	0600
1700	0900	1000	1100	1200	1300	0800	0700
1800	1000	1100	1200	1300	1400	0900	0800
1900	1100	1200	1300	1400	1500	1000	0900
2000	1200	1300	1400	1500	1600	1100	1000
2100	1300	1400	1500	1600	1700	1200	1100
2200	1400	1500	1600	1700	1800	1300	1200
2300	1500	1600	1700	1800	1900	1400	1300
LEGEND							

PST=Pacific Standard Time
PDT=Pacific Daylight Time
MST=Mountain Standard Time
MDT=Mountain Daylight Time
CST=Central Standard Time
CDT=Central Daylight Time
EST=Eastern Standard Time
EDT= Eastern Daylight Time
ALST=Alaskan Standard Time
ALDT=Alaskan Daylight Time
AST=Atlantic Standard Time
HST=Hawaiian Standard Time

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Community Wildfire Protection Plan
Crowley County Fire

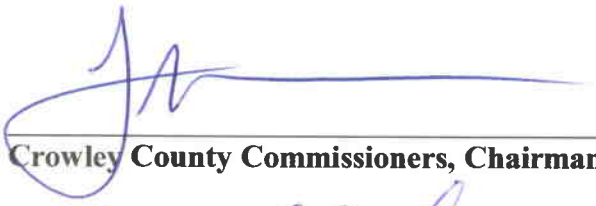
July 20, 2011

(Appendix B Addition: 2013)



Plan Approval –

The County approves the Community Wildfire Protection Plan dated July 20, 2011.



05-10-11

Crowley County Commissioners, Chairman — **Date**



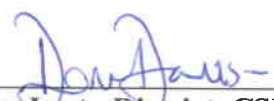
08-10-11

Crowley County Sheriff — **Date**



08/10/11

Crowley County Office of Emergency Management — **Date**



8/10/11

La Junta District, CSFS, District Forester — **Date**

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Community Wildfire Protection Plan
Crowley County

July 20, 2011

Overview

Community Wildfire Protection Plans (CWPP) are authorized and defined in Title I of the *Healthy Forests Restoration Act (HFRA)* passed by Congress on November 21, 2003 and signed into law by President Bush on December 3, 2003.

The Healthy Forest Restoration Act (HFRA) places renewed emphasis on community planning by extending a variety of benefits to communities with a wildfire protection plan in place. Critical among these benefits are - 1) The option to establish localized definitions and boundaries for areas having high Risk (potential), Hazards (fuels) and Values; and 2), The opportunity to help shape management priorities for federal and non-federal lands within the planning area.

The CWPP, as described in the Act, brings together diverse local interests to discuss their mutual concerns for public safety, community sustainability and natural resources. It offers a positive, solution-oriented environment in which to address challenges such as local firefighting capacity, the need for defensible space around homes (and areas of value), and where and how to prioritize land management.[1] (Colorado State Forest Service, 2005. Community Wildfire Protection Plans: Guidelines for Implementation. 4 pages.)

The purpose of this document is to provide stakeholders and those living in Crowley County with an overview of the wildland fire risks, hazards and values within the planning area; recommend possible courses of action to reduce the impacts of wildfire in the planned area; and to share a current action plan.

Background

Partners and stakeholders in Crowley County have participated in Annual Wildfire Operating Plans since 2009, with a 'Regional' AWOP (Baca, Bent, Cheyenne, Crowley, Kiowa, Otero and Prowers counties) in place in 2010.

Participants

Participants since the onset through direct meeting participation and/or email notifications and updates include the Crowley County Sheriff, the Crowley County Commissioners, the Crowley County Office of Emergency Management, the Crowley County Emergency Medical Services, and the Crowley County Volunteer Fire Department - including Olney Springs Volunteer Fire Department, Crowley Volunteer Fire Department, Ordway Volunteer Fire Department and Sugar City Volunteer Fire Department. These same individuals also represent their communities. Federal and state partners notified or that have participated over time include the the Bureau of Land Management, Colorado Division of Wildlife, and Colorado State Forest Service. Assisting with the mapping to jpg format was the Crowley County Clerk's Office. The Bent's Old Fort National Historic

Site, National Park Service, although not in the county, are updated as they are a federal partner in southeast Colorado. CDOT representation is also present. Additional participants are always welcome.

Meeting dates include – 5/4/11 Mapping assessment meeting; 5/24/11 Core Group maps update and CWPP narrative; 6/8/11 Maps review & Firewise (Ordway); and, 7/20/11 – CWPP draft review & 2011-12 Annual Plan.

(Participants included: Russell Bennett, Larry Reeves, Gary Gibson, Miles Clark, David Ragsdale, Shari Dietz, Jason Karle, Greg Karle, Reed Chapman, George Kern, Brandy DeLange, Mario Rodriquez, John Palomino, Donna Davis, Tobe Allumbaugh, Frank Grant, Mike Smith, Travis Griffin, and Jordan DePrist.

Plan Components

A. Wildland Urban Interface (WUI)

Crowley County's highest concern areas are the communities and all development near the communities including but not limited to the Arkansas Valley Correctional Facility, the Crowley County Correctional facility, the Crowley County Heritage Center, the feed lots, a privately owned produce structure and the local community cemeteries; the recreational areas including Lake Meredith, Lake Henry, Ordway Reservoir and the Colorado Division of Wildlife managed areas; the railroad/high-use travel corridors in the county; the Arkansas River watershed/tributaries and irrigation ditches/laterals for water quality, the abandoned irrigation ditches/laterals that run throughout the county with their high fuel load concern; and the Bureau of Land Management parcels in the county.

The communities are Olney Springs (incorporated) population 345; Crowley (incorporated) population 167; Ordway, the county seat (incorporated) population 1,080; and Sugar City (incorporated) population 258. There is an unincorporated area, Grantham Subdivision with a population of 40. The Arkansas Valley Correction Facility population is 1,007 and the Crowley County Correctional Facility population is 1,620.

The total Crowley County population including the two correctional facilities is 5,823. Crowley County is 800 square miles in size.

General - The County is rural with population centers around the communities. Major state highways cross the county N-S (U.S. Highway 71, State Highway 167, and State Highway 207) and E-W (U.S. Highway 96). The V and S Railroad also comes into the county at the west edge and runs parallel to Highway 96 to it's exit point at the east end of the county. Two interstate high pressure gas lines run diagonally through both the eastern and western portions of the county (the western is near Olney Springs and the eastern is five miles east of Sugar City). The Arkansas River runs along and creates the southwest border of the county. Creeks in the county include Bob Creek, Breckenridge Creek, Horse Creek, and Adobe Creek. The major recreational areas are Lake Meredith, Lake Henry, the Olney Springs Reservoir and the Ordway Reservoir. Vegetation is generally sage, Conservation Reserve Program (CRP) grasses, short-grass prairie, riparian cottonwood/willow along with non-native Russian olive, Siberian (Chinese) elm and tamarisk, former farmland and croplands. The Bureau of Land Management parcels are also dotted within the county. Some State Land parcels are managed by the Colorado Division of Wildlife.

B. Preparedness to Respond to Wildland Fire

The Crowley County Fire Department along with the volunteer fire departments in Olney Springs, Crowley, Ordway and Sugar City serve and protect 5,823 residents and 800 square miles within the county. The county utilizes a central dispatch center with Enhanced 911 services (E-911). Also, within the county there is protection

from the Fowler Fire Protection District (at Lane 1 and Lane 3 at County Road K), and the Manzanola Fire Protection District (at Lane 10-15 to Road C).

The Crowley County Volunteer Fire Department has approximately 58 volunteers. Along with the community departments they are Olney Springs VFD (12), Crowley VFD (13), Ordway VFD (18), and Sugar City VFD (15) (question total number of volunteers)

The County has a CSFS/Crowley County Equipment Agreement with a Type 4 Engine housed at Sugar City Volunteer Fire Department.

Crowley County has a signed 2001 mutual aid agreement with all Baca, Bent, Kiowa, Otero and Prowers county fire departments and rural fire protection districts.

Crowley County has a signed Agreement for Cooperative Wildfire Protection with the Colorado State Forest Service, (CSFS #109).

Crowley County signed a regional Annual Wildfire Operating Plan (AWOP) with Baca, Kiowa, Otero counties, the United States Forest Service, the United States Park Service, the Bureau of Land Management, the Colorado State Forest Service, in 2009. In 2010, Cheyenne and Prowers counties were added as signatures to the AWOP, (located at www.coloradoforests.CO - Click on Local Forester, then La Junta District, then Fire Program).

Crowley County is a signature to the Colorado Office of Emergency Management Master Intergovernmental Mutual Aid Agreement (64 counties).

Crowley County has a Fire Ban Ordinance (Refer to the AWOP appendix for a copy of existing county ordinances).

Crowley County can initiate fire bans as appropriate. Incorporated communities have agreed to be a part of the overall county fire ban placement and rescission process.

Crowley County has an Office of Emergency Management with an active County Director who also coordinates with other Area Emergency Management Office's and State Resources.

C. Community Risk Analysis (Risk, Fuels, Values) and Wildfire Mitigation Assessment Mapping

(See Appendix A for a complete discussion of the risk analysis and assessment mapping for Crowley County)

Areas
1 – Communities, Correctional Facilities, & Growth Areas (HHH)
2 – Lake Meredith, Lake Henry, Ordway Reservoir, Olney Springs Reservoir, BLM parcels (HHH)
3 – Railroads/Travel Corridors (HHH)
4 – River Drainages/Watersheds/Irrigation Ditches/Laterals (HHH)

5 – Seasonal Lakes/Recreation (including diversion dams on irrigation canals, irrigational Laterals/Ditches) (MHH)
6 – Travel Corridors (Risk H/M/L, Fuel M/L, Value H)
7 – River Drainages, diversion dams on irrigation canals, irrigational ditches/laterals, less public access (LHH)
8 – High Value Agricultural Areas & BLM parcels (LHH, LMH & LLH)
9 – Rural Areas (LHH, LMH & LLH)

Note Abbreviations – High (H), Medium (M), Low (L)
Note Abbreviations – HHH means High Risk, High Fuel, High Value. LMH means Low Risk, Medium Fuel, High Value.

Discussion – Areas rated HHH are of highest priority due to risk, fuels and values in Crowley County. Areas with 2 HHs are also of high concern. For example, high fuels and high values can easily create a scenario taxing limited resources. Risk may be low or medium however a large wildfire would still create a potential economic burden to the taxpayer in the county. The same could apply to high risk and high values – although the fuel is not rated high, it does not preclude the event causing significant resource depletion.

Areas rated with two or three Ls are of concern and should be considered when funding or resource opportunities arise, however they are not the highest priority.

Therefore, Crowley County's Mapped high concern 'Red Zones' might include Areas 1, 2, 3, 4 (three HHH's). Areas 5 through 9 with two HH's are of concern; Areas 8 and 9 with only one H are not an immediate priority.

Due to typical county wind driven fire events and other fire behavior factors including high temperatures, low relative humidity, dry ignitable flashy fuels; along with distance and immediate access to many rural locations and the nature of volunteer fire organizations with manpower/response factors to consider – arbitrary lines have been drawn around the zones. For example, one mile either side of a travel corridor in a 'typical' fire scenario may be more than enough buffer. However in a wind driven event, during drought, or late in the season when vegetation is cured – a one-mile 'buffer' may not be sufficient. Six miles may not be sufficient. For planning purposes, we are allowing flexibility with our zone boundaries to allow the overall goal of fire prevention/mitigation needs to be addressed.

D. Fuels Definition and Treatment Methods Discussion

Hazard Fuel Definitions –

High Fuels are defined as Riparian (cottonwood/willow, tamarisk, Russian olive, Siberian (Chinese) elm); Drainage ditches/laterals; Conservation Reserve Program grasses (CRP); stubble/crop residue; weeds/tumbleweeds; dwellings (greater than five/section); and/or man-made windbreaks (greater than five/section).

Medium fuels include short and medium grass prairie; prairie sand/sage; fencerow tumbleweeds; dwellings (1-5 per section) and/or man-made windbreaks (1-5 per section).

Low fuels are defined as non-irrigated cropland, fallow, zero dwellings; and/or zero man-made windbreaks.

General Fuels Treatment Methods –

Riparian Treatments (cottonwood and non-native tamarisk, Russian olive, Siberian (Chinese) elm) include combinations of mechanical removal, chemical treatment, exotic insect introductions (tamarisk), firewood (cottonwood), wood chipping, pile burning, and/or hauling away brush.

High and Medium fuel grasses; stubble/crop residue, sand sage, weeds/tumbleweeds treatments may include mechanical methods (mowing, various grazing strategies (cattle, goats, etc)), and/or prescribed burning.

Dwellings and/or man-made windbreaks/plantings treatments may include mowing around structures, breaking up continuous ground fuels and/or ladder fuels, thinning, deadwood removal (see structural ignitability for dwelling concepts).

In- use irrigation laterals/ditches are similar in treatment to riparian areas treatments. Abandoned irrigation ditches/laterals create an unusual fuel treatment need. The nature of the ditch lends itself to deep fuel through wind driven material accumulation, and growth of volunteer fuel due to water accumulation during natural rain events. Permanent fuel removal treatment options have been and continue to be explored. High maintenance to expensive land-filling are potential options in high concern areas. Public opinion/input would also be part of the equation, as the 'green' corridors may be or are perceived to be potential aesthetic and/or wildlife habitat value areas.

E. Structural Ignitability Reduction Discussion

Firewise Awareness –

Public awareness of Firewise concepts and self-implementation of applicable concepts may help landowners potentially reduce the risk of structural ignitability in the event of an encroaching wildfire.

Firewise Concepts include - Are You At Risk!, Access, Water Supply, Defensible Space, Trees and Shrubs, Construction Design and Materials, Interior Safety, and What to do When….

Target Audiences and Outreach -

Targets are homeowners, rural businesses, and as appropriate, community, county, state, and federal entities in Crowley County.

Long-Term Implementation Plan (5-Year)

(See Appendix B for specific Annual Workplan.)

General Discussion -

Broad, long-term mitigation strategies discussed at our various meetings included:

- Initiating public awareness in Firewise Concepts (i.e., Are You At Risk!, Access, Water Supply, Defensible Space, Trees and Shrubs, Construction Design and Materials, Interior Safety, and 'What to do When…'). Target audiences could include community and rural homeowners, rural businesses, and government entities, as appropriate.

- Providing 'General Outdoor Fire Safety' brochures/information to various publics (smoking, outdoor camping fires, trash burning, agricultural burning and other controlled burns, spark arresters, etc). Target audiences could include community and rural homeowners, rural businesses, recreational users, tourists, highway corridor travelers, and railroad personnel.

- Provide overall information/awareness about Fire Bans, Red Flag Warnings.

Tactics for the accomplishing the above included –

- Initiating countywide information outreach (Examples - Firewise, Fire Bans, Controlled Burns) through local Cable TV coverage, Crowley County web-site alerts, newspaper articles (examples - the Ordway New Era, The Weekly, The Rocky Ford Gazette, the La Junta Democrat, and the Pueblo Chieftain), highway signages, county fair booth participation, local event opportunities, (Fire Prevention Week, annual volunteer displays, Senior Citizen events, community events, etc.).

- Providing educational material including Firewise 3-ring binder availability for check out to homeowners (library/fire department); booklets and/or handouts for local events; CDs/PDFs for distribution; Firewise educational handouts for schools.

- Providing Firewise presentations or trainings and/or Homeowner Homestead Assessments (example *Living with Fire – A Guide for the Homeowner)* to interested volunteer groups/clubs to support public awareness and public inquiry.

Annual workplans could include components of the above and/or additional updated ideas and suggestions as appropriate for the mitigation effort that year.

Long-Term Mitigation Strategies Discussed By Area -

Long-term mitigation strategies (ideas) for the different areas identified in the Crowley County Mitigation Assessment Map were discussed at our various meeting, and are listed below. Mitigation includes utilizing a potential mix of tools and resources, generally categorized as - A) Education and Outreach; B) Rules/Restrictions/Ordinances, and Enforcement; C) Prevention Planning; D) Fuel Mitigation; E) Grants and Administration.

1 – Communities, Correctional Facilities & Growth Areas (HHH)

Concern – High Risk, High Fuels, High Values

Mitigation -

Education and Outreach – Present Firewise Concept to various Public/Groups/Organizations (examples – Civic/Ag Clubs, fire departments, prison administration); Inform publics on Fire Bans, Red Flag Warning definitions; Inform publics on safe recreational fire use; Inform publics on safe controlled burn use.

County Ordinance – The County has a fire ban process in place

Prevention Planning – Signage in the county (Low/Medium/High fire danger, example)

Fuel Mitigation – Consider example like fuel breaks in high fuel areas or breaking up fuel continuity.

Consider Grants - Potential Colorado Community Forest Restoration Grants; Wildland Urban Interface/State Fire Assistance (WUI/SFA) grants; other grant opportunities.

Administration - Partnerships with other entities and their programs (i.e. Storm Ready).

2 – Lake Meredith, Lake Henry, Ordway Reservoir, Olney Springs Reservoir, BLM parcels (HHH)

Concern – High Risk, High Fuels, High Values

Mitigation -

Education **–** Signage

Rules/Restrictions, Ordinances & Enforcement – Work with DOW/BLM/County

Prevention Planning – Internal & in partnership

Fuel Mitigation – Site by site basis (examples - fuel breaks, breakup lateral and vertical fuel continuity). Revegetation when needed. Partnerships.

Grants – - Potential Colorado Community Forest Restoration Grants; Wildland Urban Interface/State Fire Assistance (WUI/SFA) grants; other grant opportunities.

Administration - Partnerships with other entities and their programs.

3 – Railroads/Travel Corridors (HHH)

Concern – High Risk, High Fuels, High Values

Mitigation -

Education **–** Signage for public corridors

Ordinances & Enforce – Colorado Department of Transportation/V&S Railroad/County

Fuel Mitigation -

CDOT – Hwy 71, 167, 207 & 96 – mowing

V & S Railroad –

County – Spraying &/or mowing

Adjoining private properties

Grants – Potential Colorado Community Forest Restoration Grants; Wildland Urban Interface/State Fire Assistance (WUI/SFA) grants; other grant opportunities.

Administration - Partnerships with other entities and their programs.

4 – River Drainages/Watersheds/Irrigation Ditches/Laterals (HHH)

Concern – High Risk, High Fuels, High Values

Mitigation -

Education **–** Watershed Protection/Water Quality, reduce threat of Large High-Intensity Fires, Wildlife Habitat, preserve ecological function where applicable, restoration, maintenance, utilization of small diameter woody material (firewood, etc)

Ordinances – County Fire Ban

Fuel Mitigation - Site by site basis (examples - fuel breaks, breakup lateral and vertical fuel continuity). Revegetation when needed.

Grants - Potential Colorado Community Forest Restoration Grants; Wildland Urban Interface/State Fire Assistance (WUI/SFA) grants; other grant opportunities.

Administration - Partnerships with other entities and their programs.

5 – Seasonal Lakes/Recreation (diversion dams on irrigation canals, irrigational laterals) (MHH)

Concern – Medium Risk, High Fuels, High Values

Mitigation -

(Same as Area 2 Above)

6 – Travel Corridors (Risk H/M/L, Fuel M/L, Value H)

Concern – High Risk, Medium/Low Fuels, High Values

Mitigation -

(Same as Area 3 above)

7 – River Drainages, diversion dams on irrigation canals, irrigational laterals - less public access (LHH)

Concern – Low Risk, High Fuels, High Values

Mitigation -

(Same as Area 4 above)

8 – High Value Agricultural Areas & BLM Parcels (LHH, LMH & LLH)

Concern – Low Risk; May be High, Medium or Low Fuels; High Values

Mitigation – Areas with two H's are of concern and should be considered when funding or resource opportunities arise.

Mitigation - Areas rated with two or three Ls are of concern and should be considered when funding or resource opportunities arise, however they are not the highest priority

9 – Rural Areas (LHH, LMH & LLH)

Concern – Low Risk; May be High Medium or Low Fuels; High Values

Mitigation – Areas with two H's are of concern and should be considered when funding or resource opportunities arise.

Mitigation - Areas rated with two or three Ls are of concern and should be considered when funding or resource opportunities arise, however they are not the highest priority

Appendix A:

Crowley County Community Wildfire Protection Planning
Fire Protection Assessment

Crowley County Community Wildfire Protection Planning
Fire Protection Assessment*

Ordway, Colorado

May 4, 2011

Team: Crowley County Partners

Objectives: Complete a fire protection assessment of Crowley County, assigning High, Medium, or Low ratings on these components:

1. Risk (potential for ignition): human activity and lightening

2. Hazard (potential to burn): fuels and topography

3. Values (potential for loss): natural or developed areas where loss or destruction by wildfire would be unacceptable.

4. Fire occurrence history.

Process: Using Crowley County map as the base:

1. **Risk layer**: make a clear overlay outlining areas of high risk in red, medium risk in blue, everything else will be low risk. Areas of high risk are those containing the most potential for a **fire to start due to human activity or lightning**; medium risk areas are those containing substantial potential for fire starts, but less than the high risk areas.

2. **Hazard layer**: make a second clear overlay marking areas of high hazard in red, medium hazard in blue, and all else is low hazard.

   The following definitions of high, medium, and low hazard ratings were determined:

Fuels & Topography	Low	Medium	High
Fuels	Non-Irrigated Cropland Fallow	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Drainage Ditches/Laterals Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5 per section	Greater than 5 per section
Windbreaks, Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

3. **Value layer**: make a third clear overlay showing high value areas in red, medium value areas in blue, and all else is considered low value. High value areas are those containing the most **values whose loss to wildfire would be unacceptable**. Medium areas contain substantial values to be protected from wildfire, but fewer than the high value areas.

4. Place the 3 clear overlays showing risk, hazard, and values on top of each other and put a fourth clear overlay on top of them. Draw adjusted boundaries on the top overlay. Mark the resulting compartments with **H, M, or L (High, Medium or Low) for Risk, Hazard, or Value**. Finally, number these compartments.

5. Copy final compartment boundaries, compartment numbers, and 3-letter ratings with black marker onto county map.

6. Complete Fire Protection Assessment forms for each compartment, documenting the compartment number, its ratings, and what risks and values are present.

7. This document, along with the fire Protection Assessment forms, and the final map is the Fire Protection Assessment package. The map may be digitized to produce a GIS map.

Uses & Examples: **The areas marked on map as H H H (high risk, high hazard, high value) become the priority areas for prevention work, pre-attack planning, suppression resource placement, funding requests, mitigation, and other resource work planning.**

Further fire protection assessments within the compartments may be mapped, in finer detail, to support on-the-ground work, such as prescribed fire, training, prevention events (schools, county fair, festivals, parades, booths, etc.), public education, homestead wildfire mitigation, fuel breaks, signing, and other projects.

* The Wildfire Mitigation Assessment exercise outlines the first five steps in the eight-step Community Wildfire Protection Plan (CWPP) process initiated under the National Fire Plan.
* Additionally the Society of American Foresters outline for CWPP process.

Fire Protection Assessment
For
Crowley County, Colorado

Area number _____ Rating: Risk _____ Hazard _____ Value _____

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

___ Debris burning (Trash/Pit burning)
___ Travel corridors
___ Railroads
___ Lightning
___ Electric fences
___ Powerlines
___ Community/rural intermix
___ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
___ Hunting (Seasonal Fall/Winter)
___ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
___ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
___ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks,			

Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

___ People/Life
___ Residential/commercial development
___ Wildlife habitat
___ Wilderness (designated)
___ Wild & Scenic rivers
___ Visual resources
___ Political values/Historical
___ Range/grazing
___ Scenic byways
___ Hog Farms
___ Federal/State Public Lands
___ Rare and endangered wildlife
___ Rare and endangered plants
___ Water/riparian areas
___ Watershed
___ Soils
___ Minerals
___ Cultural resources
___ Timber
___ Developed recreation
___ Dispersed recreation
___ Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

Communities, Correctional Facilities, & Growth Areas

Area number ____1_____ Rating: Risk __H___ Hazard __H___ Value __H___

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

___ Debris burning (Trash/Pit burning)
___ Travel corridors
___ Railroads
___ Lightning
___ Electric fences
___ Powerlines
_X_ Community/rural intermix
___ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
___ Hunting (Seasonal Fall/Winter)
___ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
___ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
_X_ Landfills
___ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
_X_ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks, Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_	People/Life	___	Rare and endangered wildlife
_X_	Residential/commercial development	___	Rare and endangered plants
___	Wildlife habitat	___	Water/riparian areas
___	Wilderness (designated)	___	Watershed
___	Wild & Scenic rivers	___	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
___	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	___	Dispersed recreation
___	Federal/State Public Lands	___	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

Lake Meredith, Lake Henry, Ordway Reservoir, Olney Springs Reservoir, BLM Parcels

Area number ____2_____ Rating: Risk __H__ Hazard __H__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

___ Debris burning (Trash/Pit burning)
___ Travel corridors
___ Railroads
___ Lightning
___ Electric fences
___ Powerlines
___ Community/rural intermix
___ Off-highway vehicles
_X_ Recreation
_X_ Campgrounds
_X_ Water Recreation &/or fishing
_X_ Hunting (Seasonal Fall/Winter)
_X_ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
_X_ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
___ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks,			

Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

___	People/Life	___	Rare and endangered wildlife
___	Residential/commercial development	___	Rare and endangered plants
_X_	Wildlife habitat	_X_	Water/riparian areas
___	Wilderness (designated)	_X_	Watershed
___	Wild & Scenic rivers	___	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
___	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	_X_	Dispersed recreation
_X_	Federal/State Public Lands	___	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

Railroads/Travel Corridors

Area number ____3_____ Rating: Risk __H__ Hazard __H__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

___ Debris burning (Trash/Pit burning)
_X_ Travel corridors

_X_ Railroads
___ Lightning
___ Electric fences

___ Powerlines
___ Community/rural intermix
___ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
___ Hunting (Seasonal Fall/Winter)
___ Trails

___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
_X_ Feedlot

___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
___ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks, Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_	People/Life	___	Rare and endangered wildlife
_X_	Residential/commercial development	___	Rare and endangered plants
___	Wildlife habitat	___	Water/riparian areas
___	Wilderness (designated)	___	Watershed
___	Wild & Scenic rivers	___	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
___	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	___	Dispersed recreation
_X_	Federal/State Public Lands	___	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

River Drainages/Watersheds/Irrigation Ditches/Laterals

Area number ____4_____ Rating: Risk __H__ Hazard __H__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

_X_ Debris burning (Trash/Pit burning)
_X_ Travel corridors
_X_ Railroads
___ Lightning
___ Electric fences
___ Powerlines
_X_ Community/rural intermix
___ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
___ Hunting (Seasonal Fall/Winter)
___ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
___ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
___ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks, Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_	People/Life	___	Rare and endangered wildlife
_X_	Residential/commercial development	___	Rare and endangered plants
_X_	Wildlife habitat	_X_	Water/riparian areas
___	Wilderness (designated)	_X_	Watershed
___	Wild & Scenic rivers	___	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
___	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	___	Dispersed recreation
___	Federal/State Public Lands	___	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

Seasonal Lakes/Recreation (diversion dams on irrigation canals, irrigational laterals)

Area number ____5_____ Rating: Risk __M__ Hazard __H__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

___ Debris burning (Trash/Pit burning)
___ Travel corridors
___ Railroads
___ Lightning
___ Electric fences
___ Powerlines
___ Community/rural intermix
___ Off-highway vehicles
_X_ Recreation
_X_ Campgrounds
_X_ Water Recreation &/or fishing
_X_ Hunting (Seasonal Fall/Winter)
_X_ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
___ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
___ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks,			

Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_ People/Life	___ Rare and endangered wildlife
_X_ Residential/commercial development	___ Rare and endangered plants
_X_ Wildlife habitat	_X_ Water/riparian areas
___ Wilderness (designated)	_X_ Watershed
___ Wild & Scenic rivers	___ Soils
___ Visual resources	___ Minerals
___ Political values/Historical	___ Cultural resources
___ Range/grazing	___ Timber
___ Scenic byways	___ Developed recreation
___ Hog Farms	_X_ Dispersed recreation
_X_ Federal/State Public Lands	___ Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

Travel Corridors

Area number ____6_____ Rating: Risk __H/M/L__ Hazard __M/L__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

___ Debris burning (Trash/Pit burning)
_X_ Travel corridors

_X_ Railroads
___ Lightning
___ Electric fences

_X_ Powerlines
_X_ Community/rural intermix
___ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
___ Hunting (Seasonal Fall/Winter)
___ Trails

___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
_X_ Feedlot

___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
_X_ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Drainage Ditches Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks, Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_	People/Life	___	Rare and endangered wildlife
_X_	Residential/commercial development	___	Rare and endangered plants
___	Wildlife habitat	___	Water/riparian areas
___	Wilderness (designated)	___	Watershed
___	Wild & Scenic rivers	___	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
___	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	___	Dispersed recreation
_X_	Federal/State Public Lands	___	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

River Drainages (diversion dams on irrigation canals, irrigational laterals)

Area number ____7_____ Rating: Risk __L__ Hazard __H__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

_X_ Debris burning (Trash/Pit burning)
_X_ Travel corridors
_X_ Railroads
___ Lightning
___ Electric fences
___ Powerlines
_X_ Community/rural intermix
___ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
___ Hunting (Seasonal Fall/Winter)
___ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
___ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
_X_ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks,			

Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_	People/Life	___	Rare and endangered wildlife
_X_	Residential/commercial development	___	Rare and endangered plants
_X_	Wildlife habitat	_X_	Water/riparian areas
___	Wilderness (designated)	_X_	Watershed
___	Wild & Scenic rivers	___	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
___	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	___	Dispersed recreation
___	Federal/State Public Lands	___	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Fire Protection Assessment
For
Crowley County, Colorado

High Value Argricultural Areas & BLM Parcels
Rural Areas

Area number ___8 & 9____ Rating: Risk __L__ Hazard __H/M/L__ Value __H__

RISK COMPONENTS (POTENTIAL FOR IGNITION) PRESENT IN THIS AREA:

_X_ Debris burning (Trash/Pit burning)
_X_ Travel corridors
___ Railroads
___ Lightning
___ Electric fences
___ Powerlines
___ Community/rural intermix
_X_ Off-highway vehicles
___ Recreation
___ Campgrounds
___ Water Recreation &/or fishing
_X_ Hunting (Seasonal Fall/Winter)
___ Trails
___ National/State Historic Sites
___ Sunflower Harvest (October)
___ Grain Elevators
___ Willow Creek Corridor
___ Feedlot
___ Children with matches
___ Electronic sites (Substations, Radio Cell Phone Towers)
___ Oil/gas/mining/propane
___ Construction sites
___ MaintenanceProjects/ Canal Projects
___ Landfills
_X_ Agricultural burning
___ Scenic Areas
___ Fireworks
___ Party areas
___ Firewood cutting
___ Other High Population Centers
___ Wheat Harvest (June-July)
___ Wind Generators
___ Power Generation Coal
___ Manufacturing/Industrial areas/parks

HAZARD COMPONENT (POTENTIAL TO BURN):

Fuels & Topography	Low	Medium	High
			Drainage Ditches
Fuels	Non-Irrigated Cropland	Short grass prairie Medium grass Prairie Prairie Sand/Sage Fence Row Tweeds Stubble	Riparian (cottonwood, tamarisk, R. Olive, S. Elm) CRP grass/NPS Weeds/tumbleweeds(former farm ground) Canyons/Cliffs/Creeks
Dwellings (as fuel)	0 per section	1-5per section	Greater than 5 per section
Windbreaks,			

Living Snow Fences	1 per section	1-5 per section	Greater than 5 per section

VALUES PRESENT IN THIS AREA (POTENTIAL FOR LOSS):

_X_	People/Life	___	Rare and endangered wildlife
_X_	Residential/commercial development	___	Rare and endangered plants
_X_	Wildlife habitat	___	Water/riparian areas
___	Wilderness (designated)	___	Watershed
___	Wild & Scenic rivers	_X_	Soils
___	Visual resources	___	Minerals
___	Political values/Historical	___	Cultural resources
_X_	Range/grazing	___	Timber
___	Scenic byways	___	Developed recreation
___	Hog Farms	___	Dispersed recreation
___	Federal/State Public Lands	_X_	Windbreaks, living snow fences

*Prairie Wildlife – All High Value –
Assess with DOW, as applying mitigation strategies
National Threatened and Endangered List – Least Tern, Piping Plover.
National Species of Concern – Mountain plover, Blacktailed Prairie Dog, Swift Fox, Ferruginous Hawk, Massasauga Rattlesnake, Arkansas Darter (fish).
Colorado State Threatened – Burrowing Owl, Lesser Prairie Chicken.

Appendix B:

2011-12 Annual Workplan
2013/14 Workplans

Crowley County Community Wildfire Protection Plan
2011-12 Annual Work plan

The purpose of the Community Wildfire Protection Plan is to provide stakeholders and those living in Crowley County with an overview of the wildland fire risks, hazards and values within the planning area; recommend possible courses of action to reduce the impacts of wildfire in the planned area; and to share a current action plan.

The main goals for 2011-12 are to: 1) share the CWPP and Mitigation Assessment Map with the community at large (city/town councils, fire departments, local prisons administrations, local conservation district, and other boards); 2) Note mitigation efforts already done in the county, for future partnering and grant potentials; review the Firewise message and possibly do a mitigation assessment exercise with the fire departments; 3) Partner with the six-county region Homeland Security Board fire danger signage grant proposal; and 4) As available, share the CWPP and Mitigation Assessment Maps at local clubs/events (via club presentations, media, local events, and the County Fair).

There is no funding for this plan at this time. Potential grant applications may be considerations (For example, an IMR National Fire Plan Community Assistance Grant from the Department of Interior, National Park Service may become available for application or the Wildland Urban Interface/State Fire Assistance grants (WUI/SFA).

To this end, the CWPP group has identified action items and completion dates for 2011-12. Action items are generally categorized under - A) Education and Outreach; B) Rules/Restrictions/Ordinances, and Enforcement; C) Prevention Planning; D) Fuels Mitigation; E) Grants and Administration.

A. Education and Outreach

1. Share the CWPP and Mitigation Assessment Maps with the community-at-large.
   - Who - Donna Davis, Gary Gibson, Fire Chiefs and Team
   - What - Attend meetings to share
   - Where - Olney Springs, Crowley, Ordway, Sugar City, fire departments, conservation district, CCWA, Arkansas Valley Correctional Facility, Crowley County Correctional Facility
   - When - 4th Quarter 2011 & 1st Quarter 2012
   - Costs - TBD

2. Crowley County Days & Fair information booth with pamphlets/handouts, as available. Consider Rocky Ford Fair, Fowler Missouri Days. Consider Senior Centers presentations (Ordway, Olney Springs, Sugar City, Heritage Center).
   - Who - Team (possibly with other entities)
   - What - Work with existing clubs at fairs to display CWPP/Firewise
   - Where - Crowley County Fair; and Senior Centers
   - When - 3rd Quarter 2012
   - Costs - TBD

3. Media Releases
   Who - Donna Davis, Gary Gibson & Team
   What - CWPP - Crowley County Mitigation Assessment Map and Annual Plan.
   Where - Local County Papers
   When - 2011-12
   Costs - TBD

4.Fire Prevention Education
   Who - Fire Departments
   What - Fire Prevention Education
   Where - Local Schools Ordway (Elementary, High School), CDS, Kid's Campus
   When - Education Week
   Costs - TBD

5.Fire Ecology Educational Box
   Who - Donna Davis & Team/Teachers (Science Clubs, etc)
   What - Teacher Educational Material
   Where - At Lamar Division of Wildlife Office
   When - As available
   Costs - No Cost

B. Rules/Restrictions/Ordinances, and Enforcement

1. News releases during high fire danger (review Planning and Zoning ordinances)
   Who - Gary Gibson, Larry Reeves & Team
   What - News Release(s)
   Where - Local media
   When - As conditions change

C. Prevention Planning

D. Fuels Mitigation and Re-vegetation

1. Identify and compile list of mitigation projects already done – consider application of future partnerships and grants (correctional facilities, town councils, local governmental agencies, etc).

   Who - Gary Gibson, Larry Reeves, Donna Davis & Team
   What - Identify completed projects for future partnering and grants
   (Example - Correctional Facility)
   Where - Countywide
   When - 2011
   Costs - TBD

2. Firewise review and mitigation assessment exercise on property with each interested fire department.
   Who - Donna Davis & Team
   What - Review Firewise and do an on ground mitigation assessment on a property.
   Where - Fire Departments
   When - 2012
   Costs - TBD

.

E. Grants and Administration

1. Current partnership and grant application.
   - Who - Larry Reeves & Team
   - What - Partnering with six-county region Homeland Security Board pursuing a grant for purchase of Fire Danger Signages.
   - Where - Countywide
   - When - 2012
   - Costs - TBD

2. Meetings/CWPP maintenance
   - Who - Gary Gibson, Donna Davis, Larry Reeves, Fire Chiefs
   - What - updates/developments
   - Where - TBD
   - When - Twice annually - AWOP Meeting update and mid-year.
   - Costs - TBD

3. Grants
   - Who - Team
   - What - Apply for grant(s) as partners and educational &/or mitigation as opportunities arise.

Crowley County Community Wildfire Protection Plan
2013-14nnual Work plan

A. Education and Outreach

1. Continue to share the CWPP, Mitigation Assessment Maps & 2013/14 Annual Workplans, Firewise U.S.A. criteria with the community-at-large.
   - Who - Donna Davis, Gary Gibson, Fire Chiefs and Team
   - What - Attend meetings to share
   - Where - County Commissioners, Chamber of Commerce, Olney Springs, Crowley, Ordway, Sugar City, fire departments, conservation district, CCWA, Arkansas Valley Correctional Facility, Crowley County Correctional Facility
   - When - Year-round 2013/14
   - Costs - TBD

2. Crowley County Days (July 20-27, 2013 & 4th weekend in July 2014) - Firewise banner during Fire Department BBQ with pamphlets/handouts, as available.

   Consider Arkansas Valley Fair (August 23-17, 2013 & August 2014), Fowler Missouri Days (July).

   Consider Crowley Chamber Annual Banquet, Ordway (January); Town of Crowley Antique Tractor Show (April); Crowley County Auction (May); Crowley County 4th of July Rodeo (July); Crowley County Art Show (July); Crowley County Fireman Oktoberfest (October); Crowley County Chamber Parade of Lights (December, if applicable).

   Consider Firewise.org bookmarks – library, county courthouse, etc.

   Senior Center presentations (Ordway, Olney Springs, Sugar City, Heritage Center).

   - Who - Team (possibly with other entities)
   - What - Work with existing clubs at fairs to display CWPP/Firewise.org materials
   - Where - Various
   - When - Year-round 2013/14
   - Costs - TBD

3. Media Releases
   - Who - Donna Davis, Gary Gibson & Team
   - What - CWPP - Crowley County Mitigation Assessment Maps and 2013/14 Annual Plan; Firewise messages, as needed.
   - Where - Ordway New Era
   - When - 2013/14
   - Costs - TBD

4. Fire Prevention Education - Firewise.org educational material
   - Who - Fire Departments
   - What - Fire Prevention Education
   - Where - Local Schools Ordway (Elementary, High School), CDS, Kid's Campus
   - When - Fire Education Week

Costs - TBD

5. Fire Ecology Educational Box; Firewise.org educational material;
Firewise Program – Engaging Youth in Reducing Wildfire Risk
Who - Donna Davis & Team/Teachers (Science Clubs, etc)
What - Teacher Educational Material
Where - At Lamar Division of Wildlife Office
When - As available
Costs - No Cost

B. Rules/Restrictions/Ordinances, and Enforcement

1. News releases during high fire danger (review Planning and Zoning ordinances)
Who - Gary Gibson, Larry Reeves & Team
What - News Release(s)
Where - Local media
When - As conditions change

C. Prevention Planning

D. Fuels Mitigation and Re-vegetation

1. Identify and compile list of mitigation projects already done – consider application of future partnerships and grants (correctional facilities, town councils, local governmental agencies, etc).

Who - Gary Gibson, Larry Reeves, Donna Davis & Team
What - Identify completed projects for future partnering and grants
(Example - Correctional Facility)
Where - Countywide
When - 2013/14
Costs - TBD

2.Firewise review and mitigation assessment exercise on property with each interested fire department.
Who - Donna Davis & Team
What - Review Firewise and do an on ground mitigation assessment on a property.
Where - Fire Departments
When - 2013/14
Costs - TBD

.

F. Grants and Administration

1. Current partnership and grant application.
Who - Larry Reeves & Team
What - Partner with six-county region Homeland Security Board pursuing grants when applicable.
Where - Countywide
When - 2013/14
Costs - TBD

2. Meetings/CWPP maintenance
Who - Gary Gibson, Donna Davis, Larry Reeves, Fire Chiefs

What - updates/developments
Where - TBD
When - Annually
Costs - TBD

3. Grants
   Who - Team
   What - Apply for grant(s) as partners and educational &/or mitigation as opportunities arise.

   Communities and prisons do various mitigation projects – Mitigation at Olney Springs pond, and mowing for example.

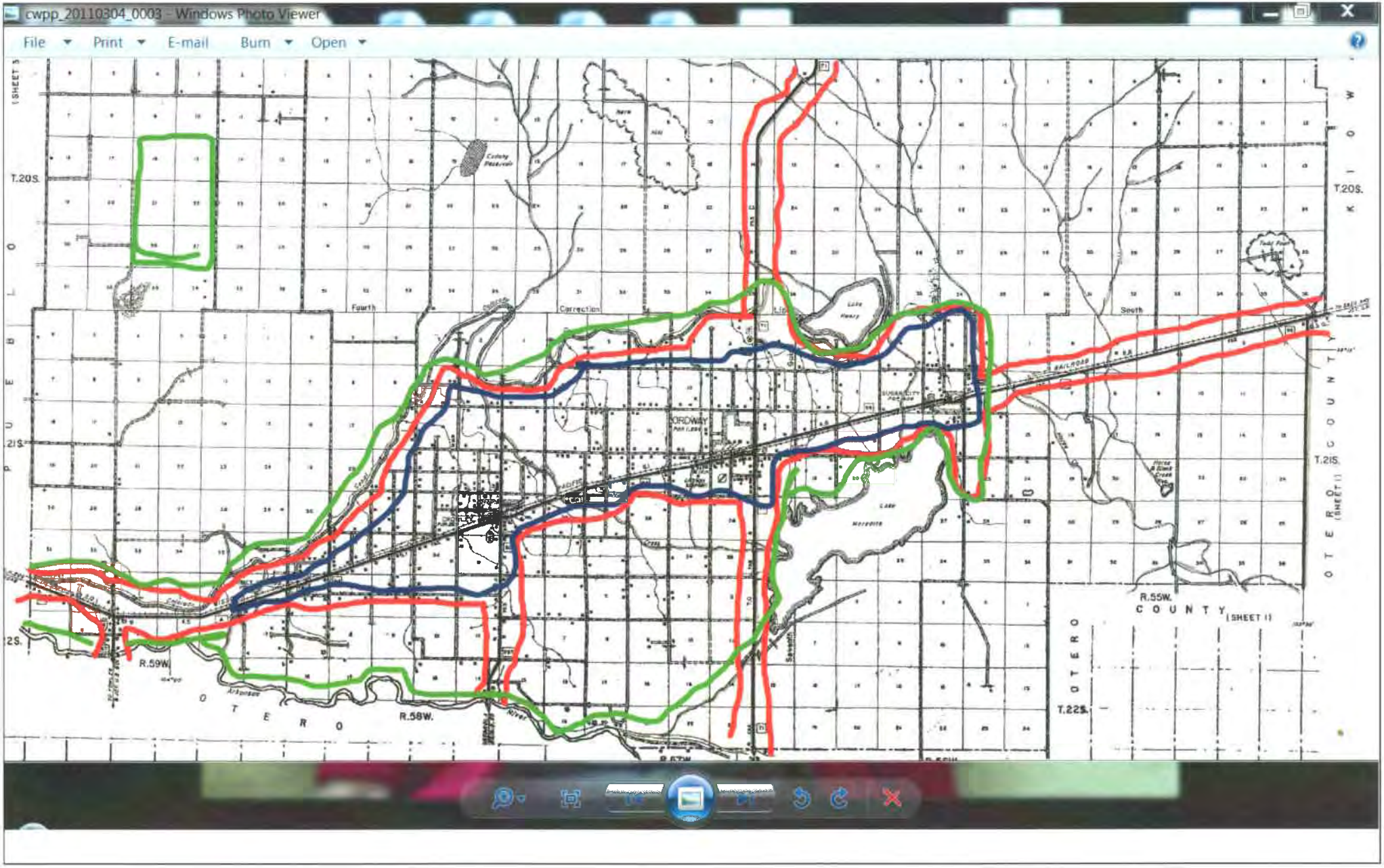
   Various mitigation projects in the county were suggested. They included - tire removals, weed mowing in various locations, elm groove thinning, ditch thinning/cleaning, railroad right-a-ways, highway right-a-ways, tamarisk removal. The Firewise message to landowners, along with individual fuel mitigation, was a need throughout the county.

Appendix C:

CWPP Crowley County Maps

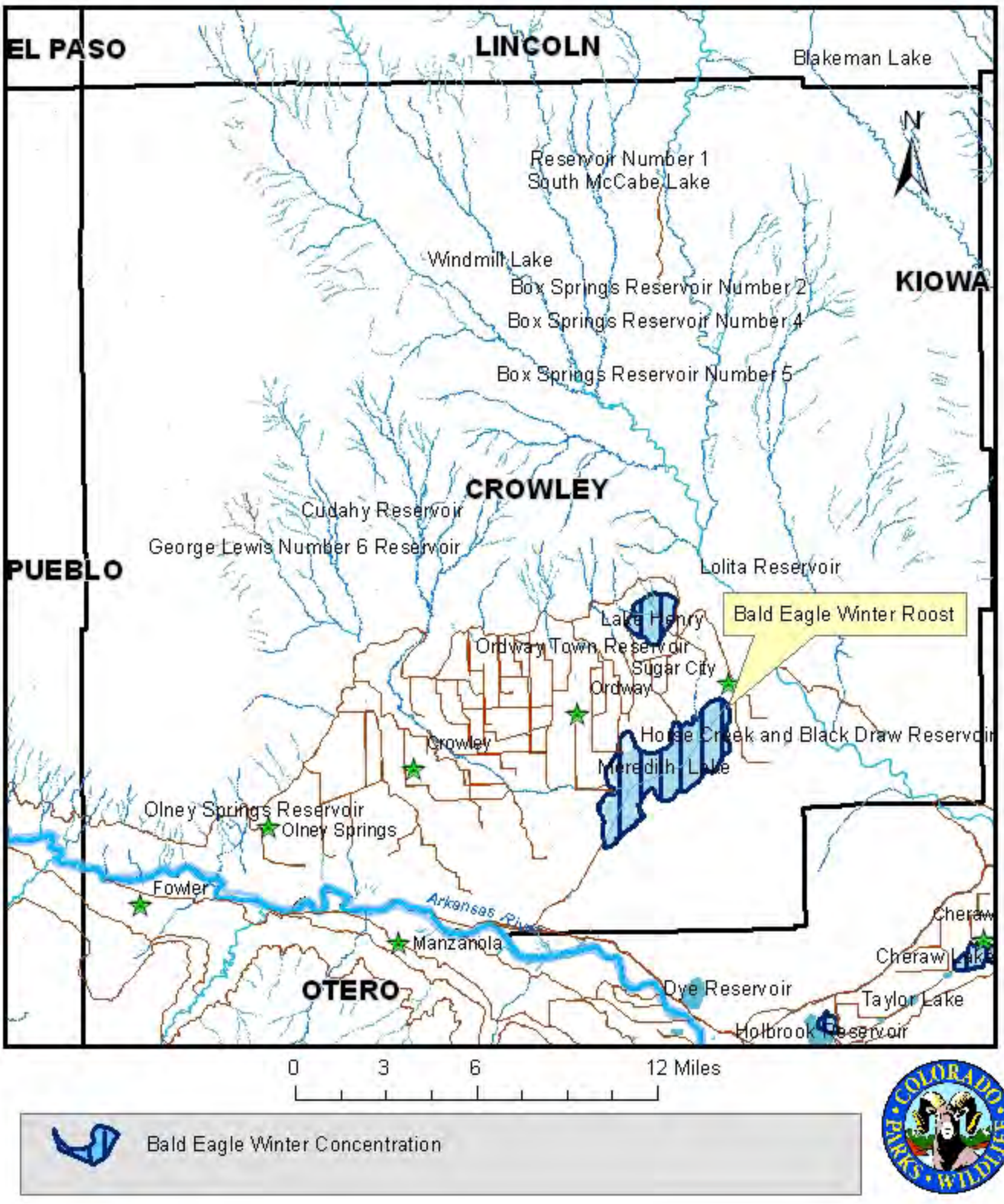
CWPP - Wildfire Mitigation Assessment Mapping

Crowley County



Red = Risk (Potential for Ignition)
Green = Hazard (Potential to Burn)
Blue = Values (Potential for Loss)

Crowley County High-Value Wildlife Map -2011



Community Wildfire Protection Plan Maps

La Junta District, Colorado State Forest Service

Maps developed from August to October, 2012

Donna Davis, District Forester
Justin Kearse, CWPP/GPS Forestry Aide

Final Summary – by County Version

Crowley County Maps

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Foreword

This document contains maps that have been produced for the 2012 Community Wildfire Protection Plan work done by the La Junta District of the Colorado State Forest Service. The fuel types identified herein and the classification of areas is based on a field survey performed by the La Junta District between August and October 2012, and is intended to help with identifying mitigation projects in the future.

Data collection and description

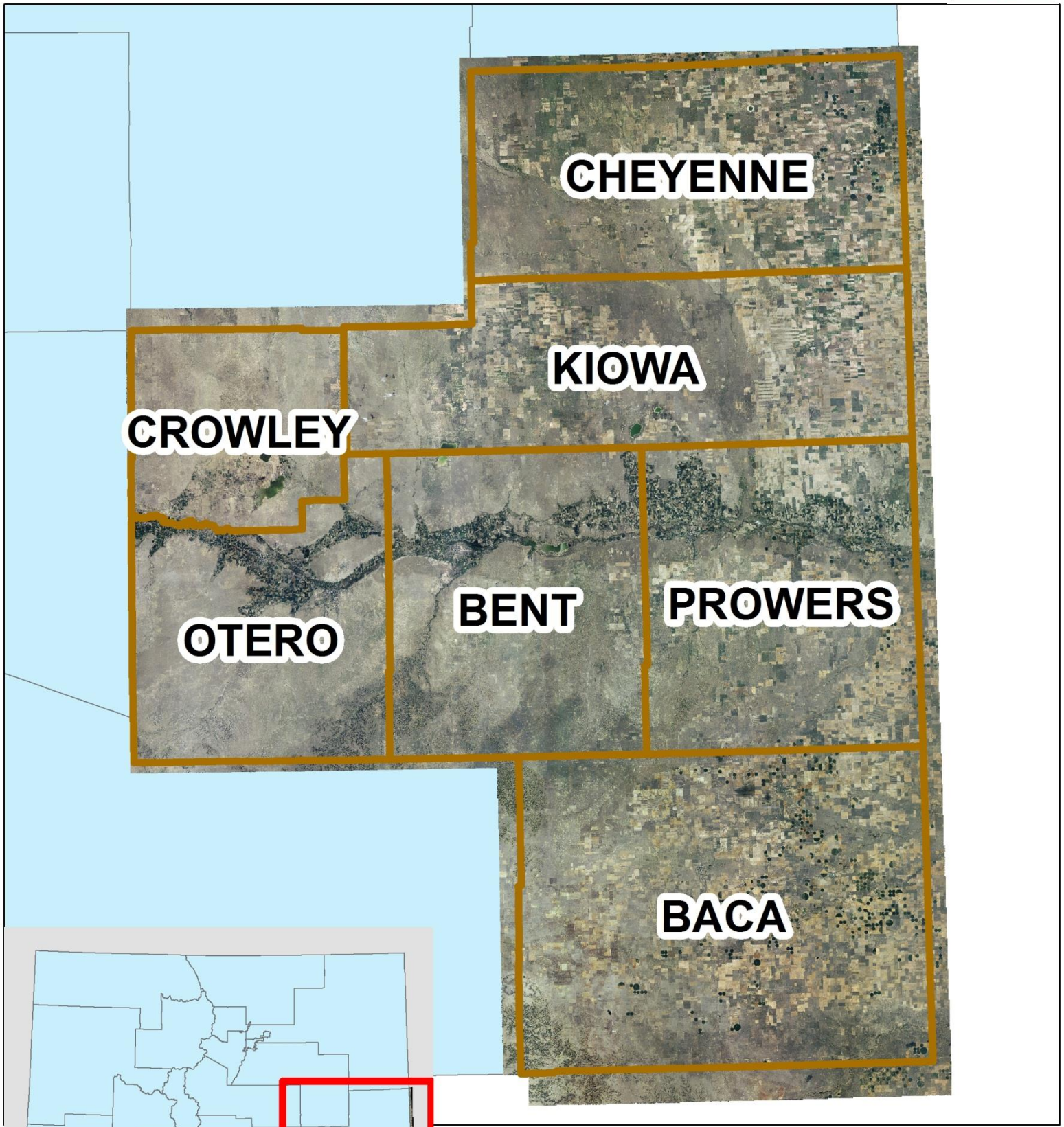
The data collection that took place identified fuel concerns as outlined in earlier phases of developed CWPPs for the different counties. Data was collected by paper note-taking and by digital entry using a field GPS unit, and identified: the fuel type, the fuel concern level (based on how significant that fuel was rated by earlier phases of CWPP development), the percent of the surface covered, and the approximate size of any woody vegetation. The maps and the data they represent are only developed as a part of the CWPP process to assist with future management decisions, and may or may not be fit for any other purpose (Data collection was based on visual identification from a windshield survey, with follow up review by CWPP partners. Visual information collected is just a snapshot in time, accuracy is not guaranteed.).

Details about the maps

The document here is segmented by county, and then has the fuel class and fuel type maps for each community. There are additional maps for communities where large areas of data were collected in order to make key regions more legible, and to serve functional purposes in representing the data. A legend is included after the maps for identifying fuel types, as well as a key to reference the numbers assigned to the fuel types.

For any questions or comments, contact the Colorado State Forest Service, La Junta District.

Counties In La Junta District



Aerial imagery shown is a mosaic produced from 2011 NAIP orthoimagery. This map is intended to serve as a reference for locating the counties within the district and the district within Colorado.

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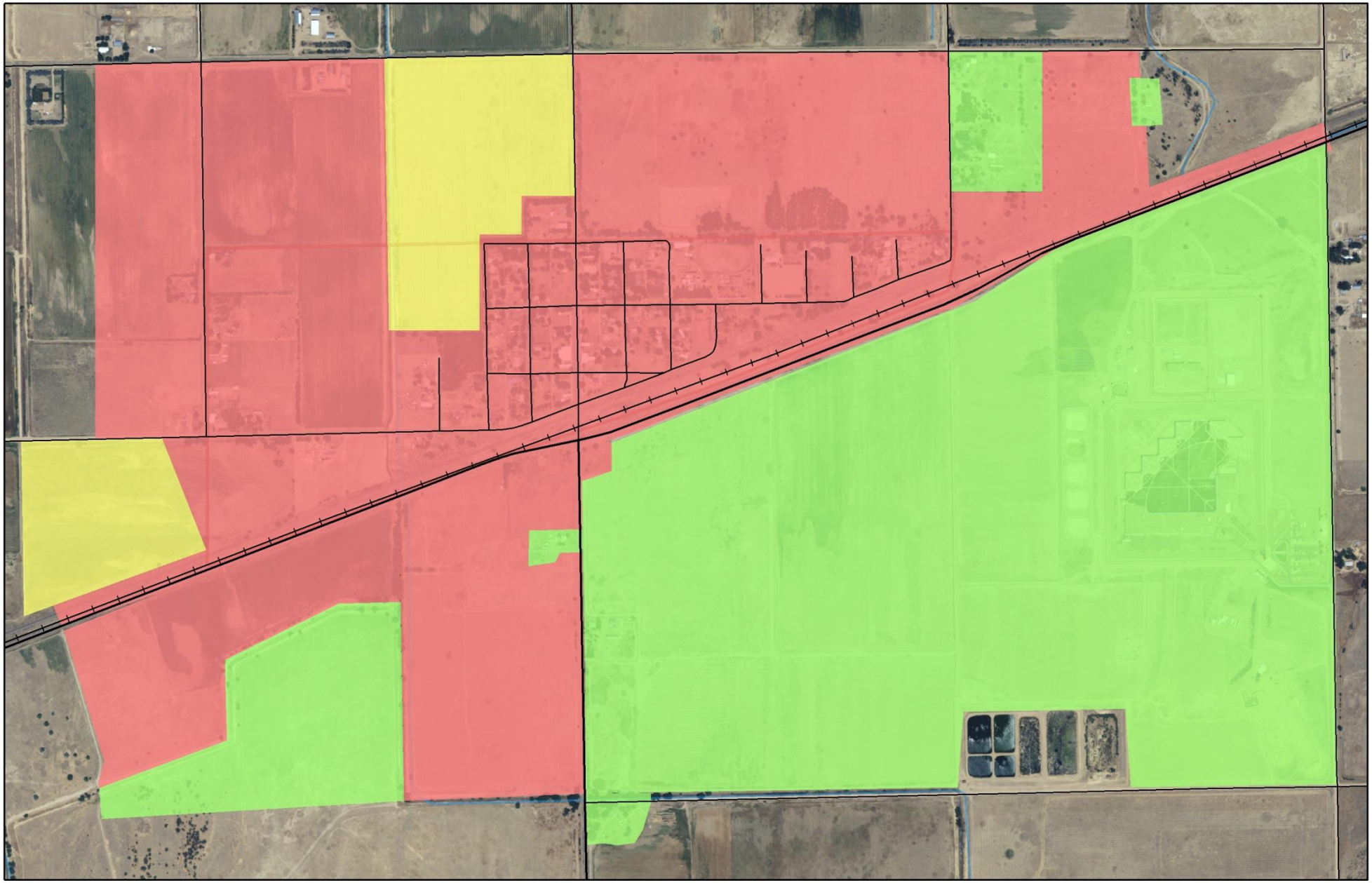
Vegetative Fuels Around Crowley



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Prepared October 26, 2012 By:
Colorado State Forest Service, La Junta District
Based on windshield survey and
visual identification August - October 2012

See Appendix for a legend identifying
the types by color and number.
Aerial imagery displayed is 2011 NAIP orthoimagery.

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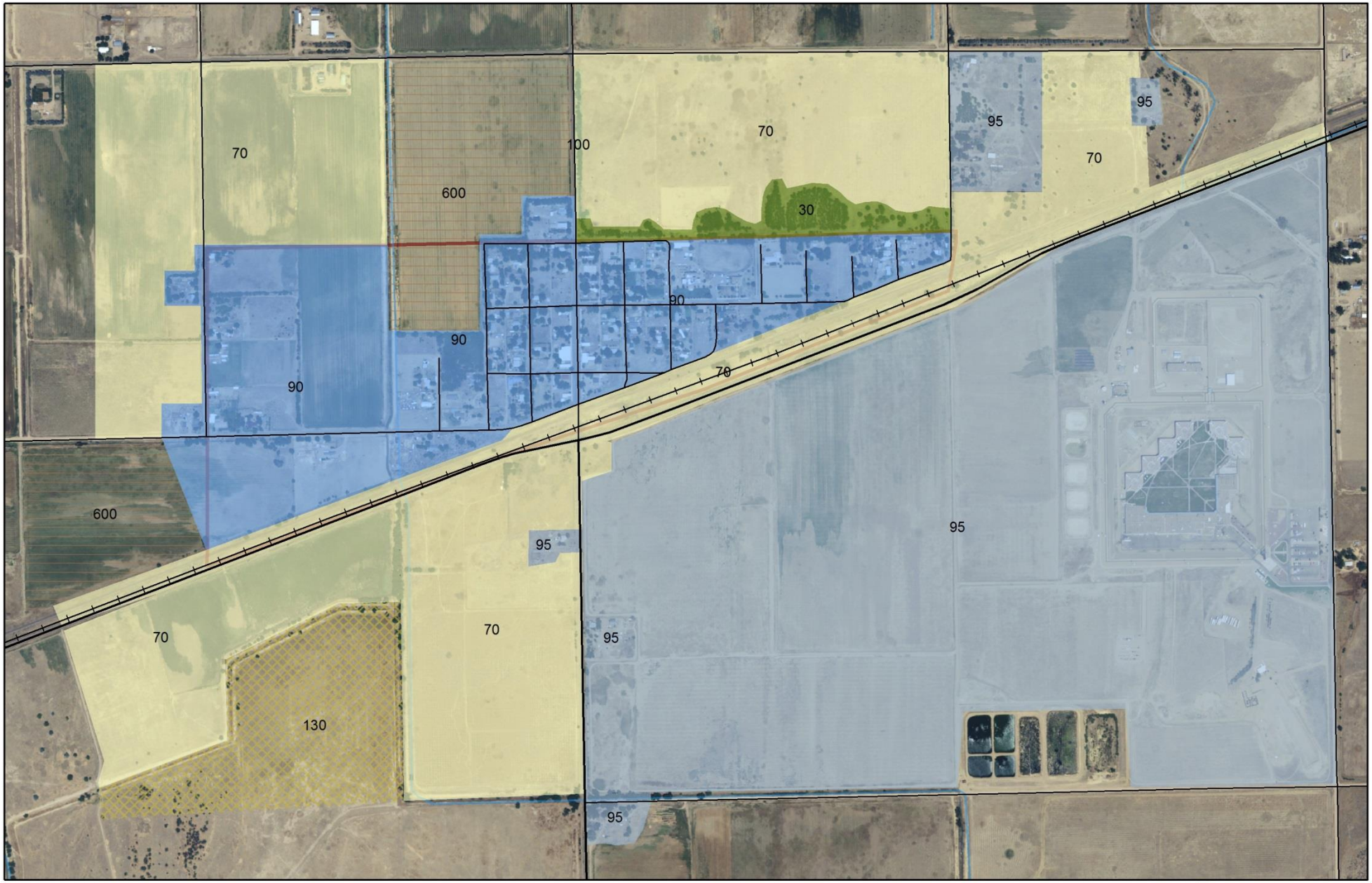
Risk Class

- High
- Medium
- Low



Colorado State Forest Service

Vegetative Fuels Around Crowley



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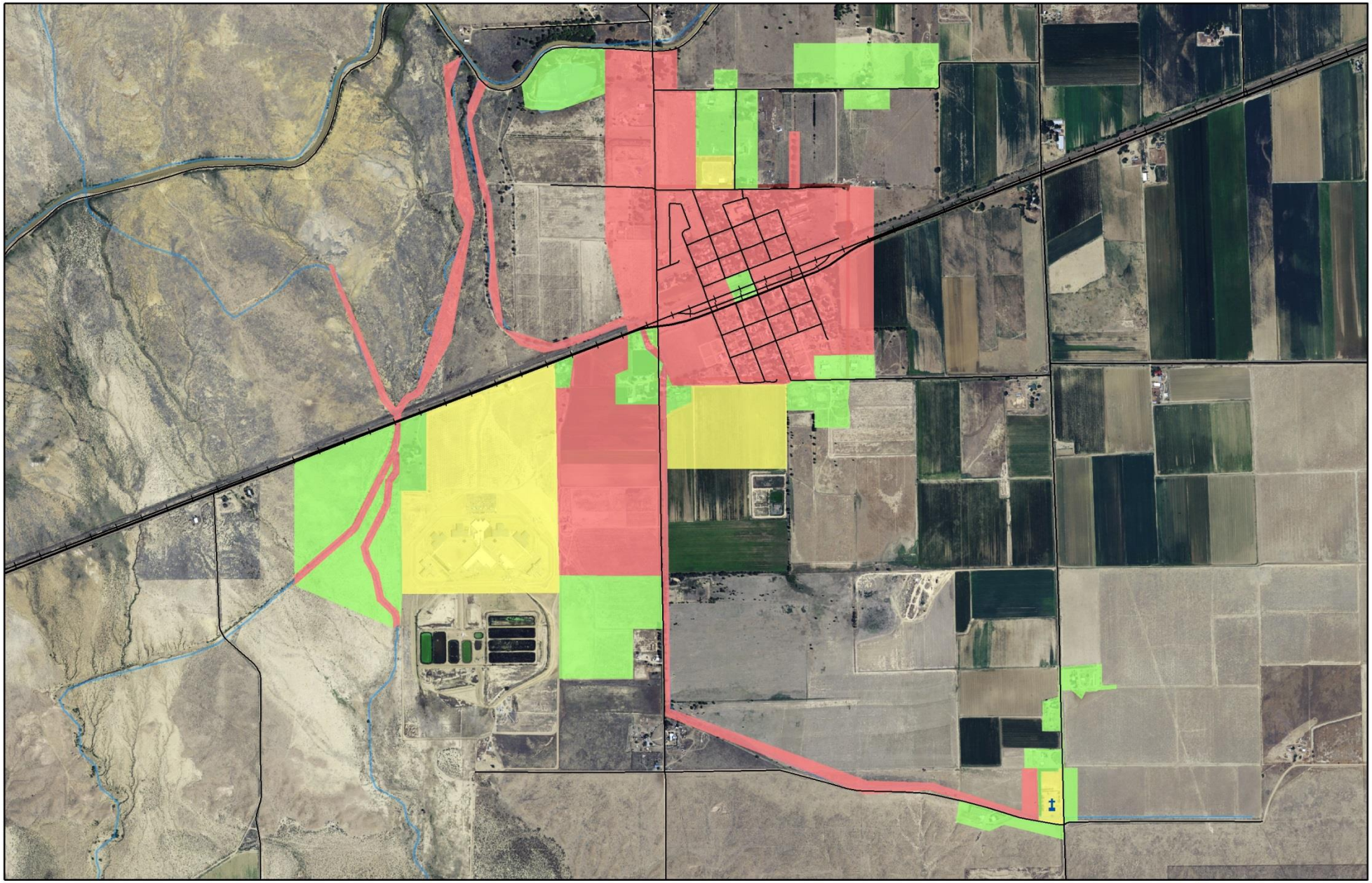
Colorado State Forest Service

Vegetative Fuels Around Olney Springs



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0 0.5 1 Miles

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- Medium
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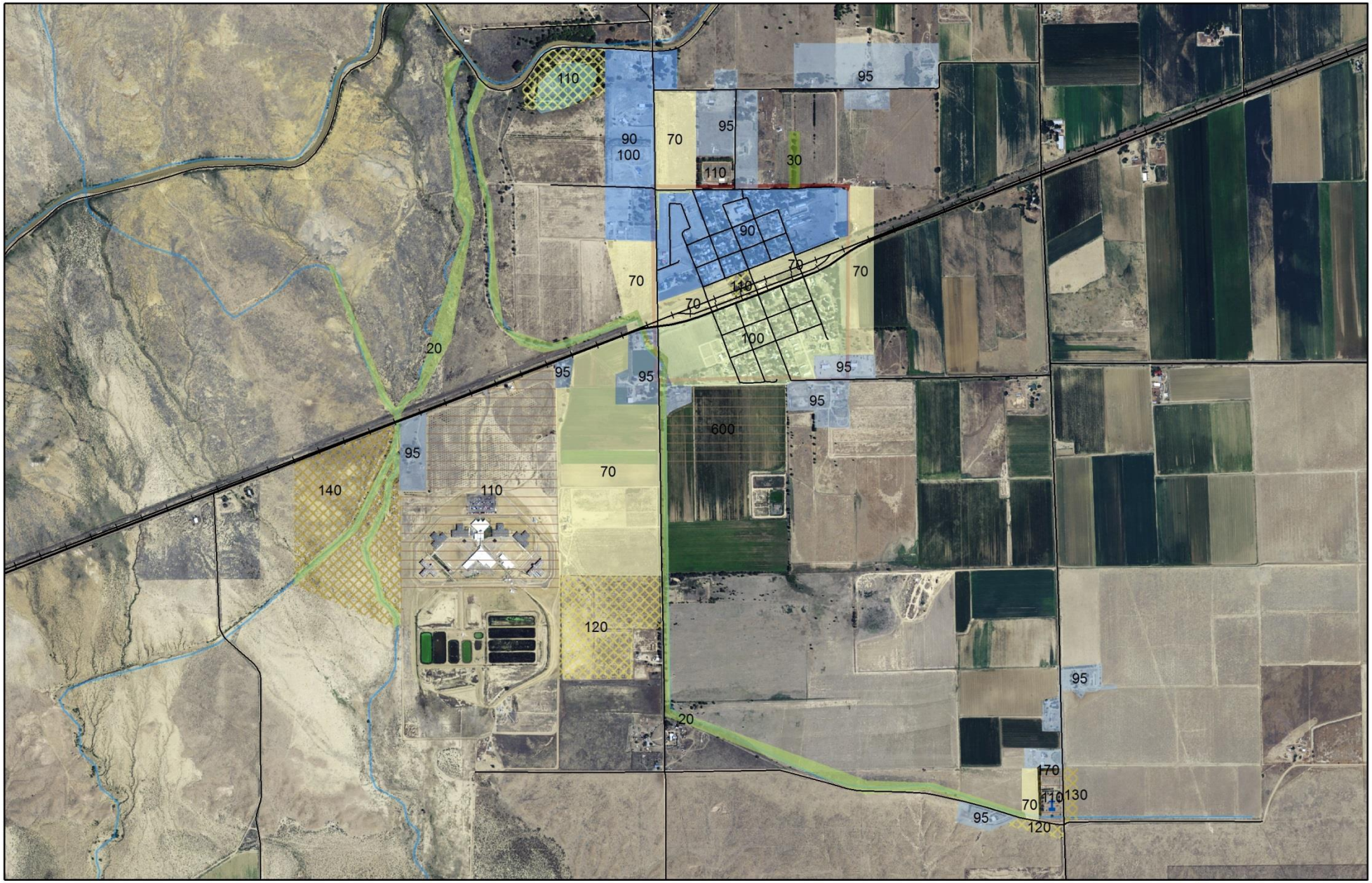
Colorado State Forest Service

Vegetative Fuels Around Olney Springs



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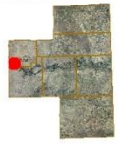
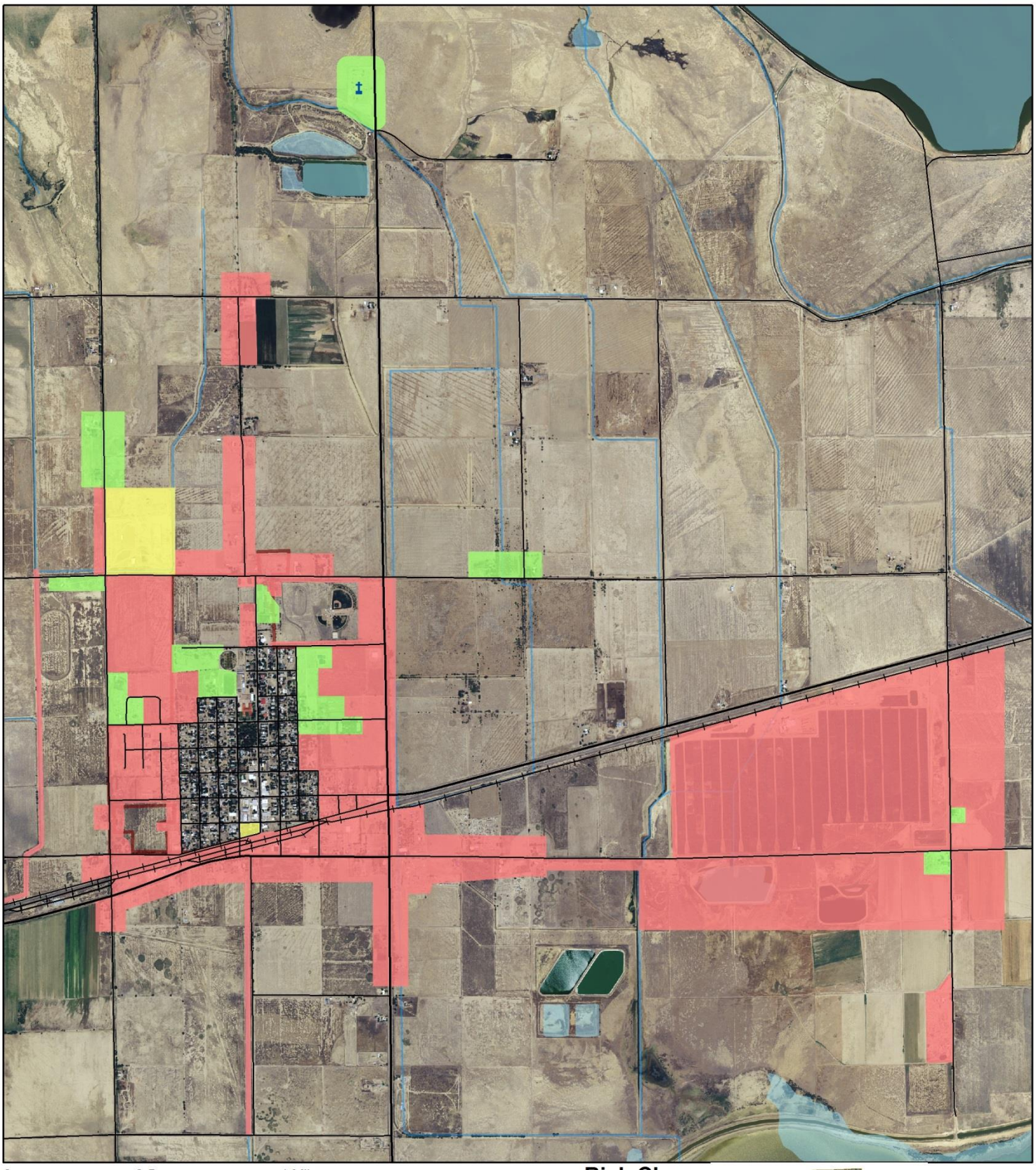


Colorado State Forest Service

Vegetative Fuels Around Ordway



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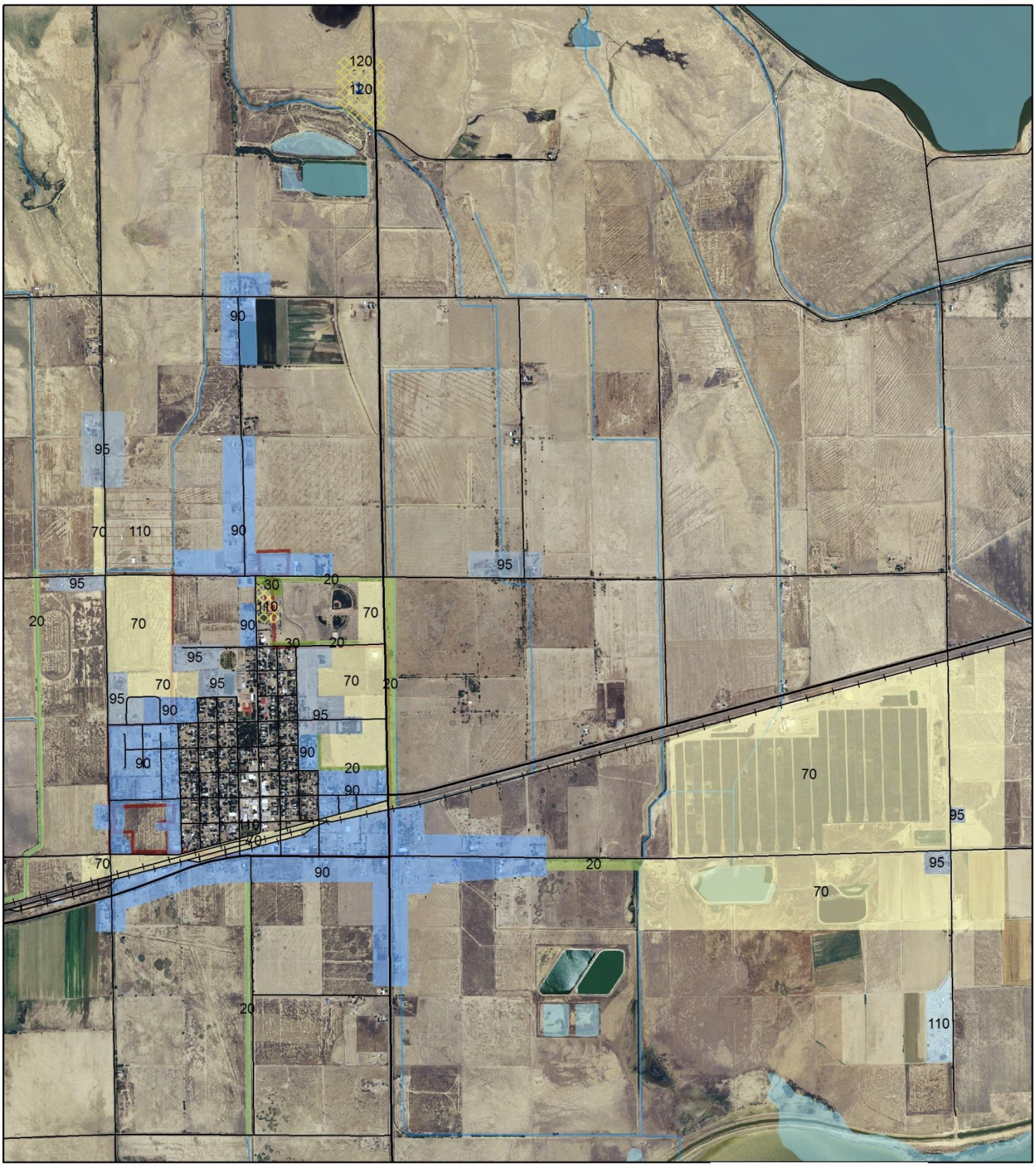
Colorado State Forest Service

Vegetative Fuels Around Ordway



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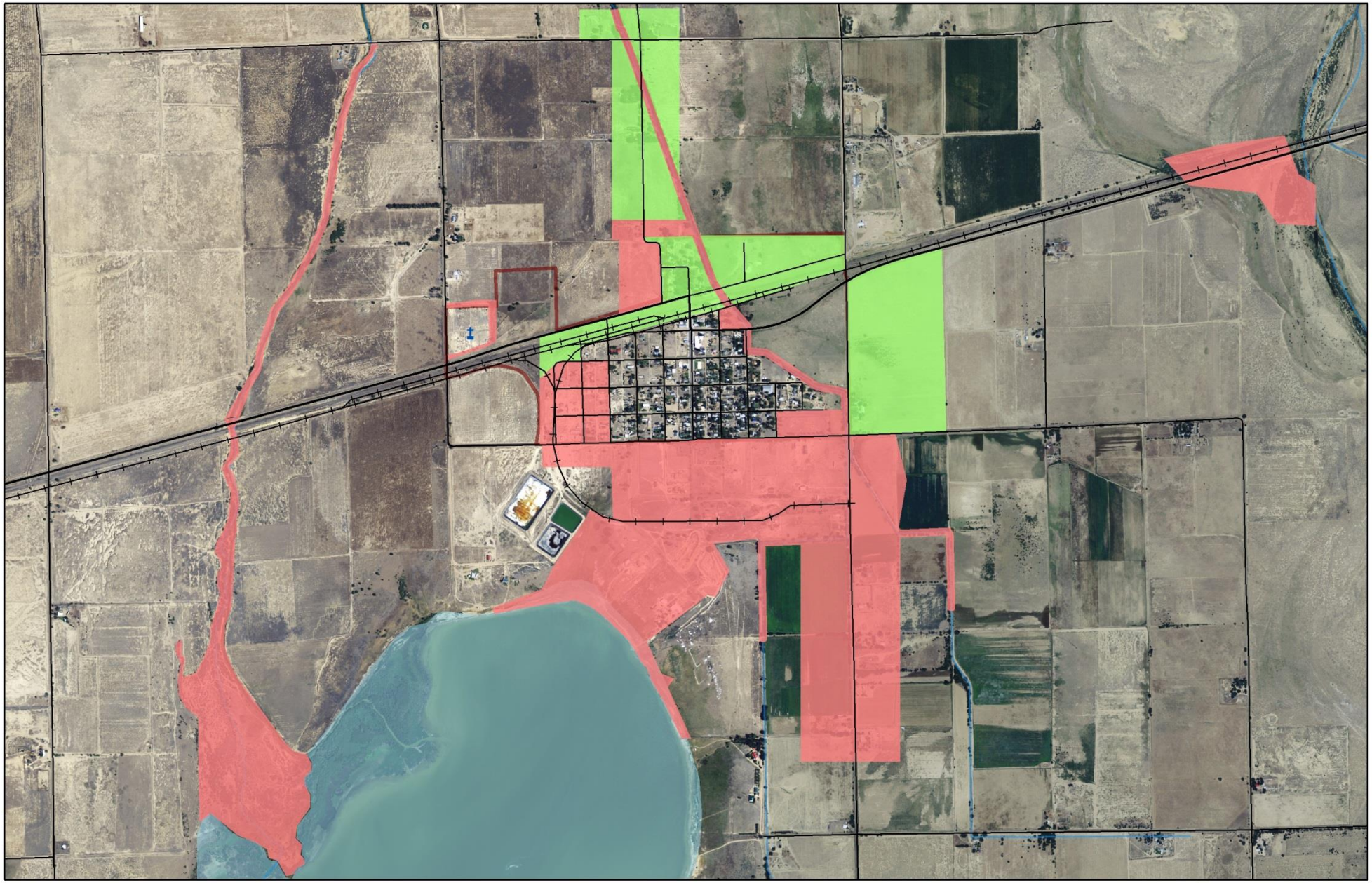
Colorado State Forest Service

Vegetative Fuels Around Sugar City



N

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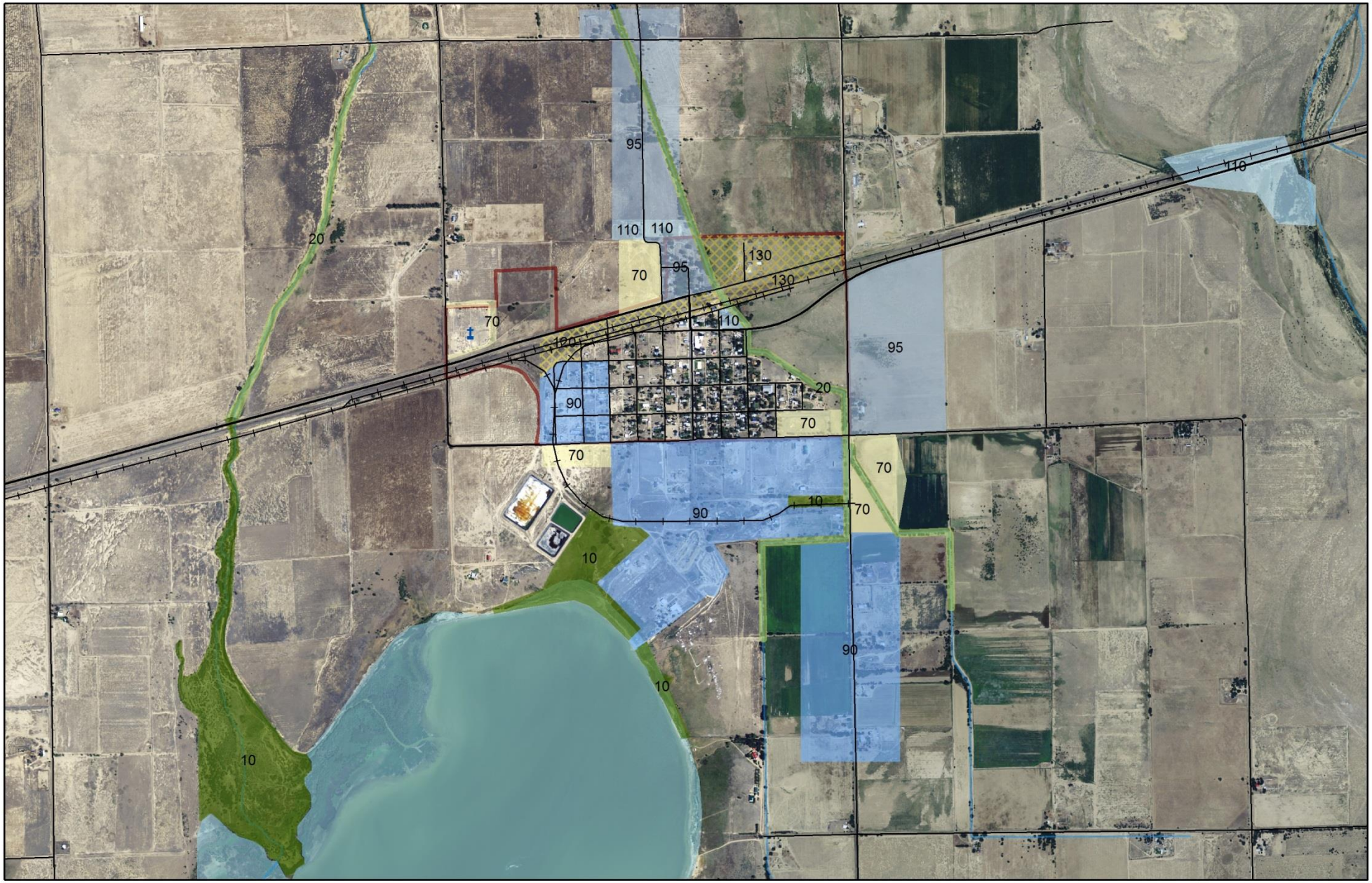
Colorado State Forest Service

Vegetative Fuels Around Sugar City



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Colorado State Forest Service

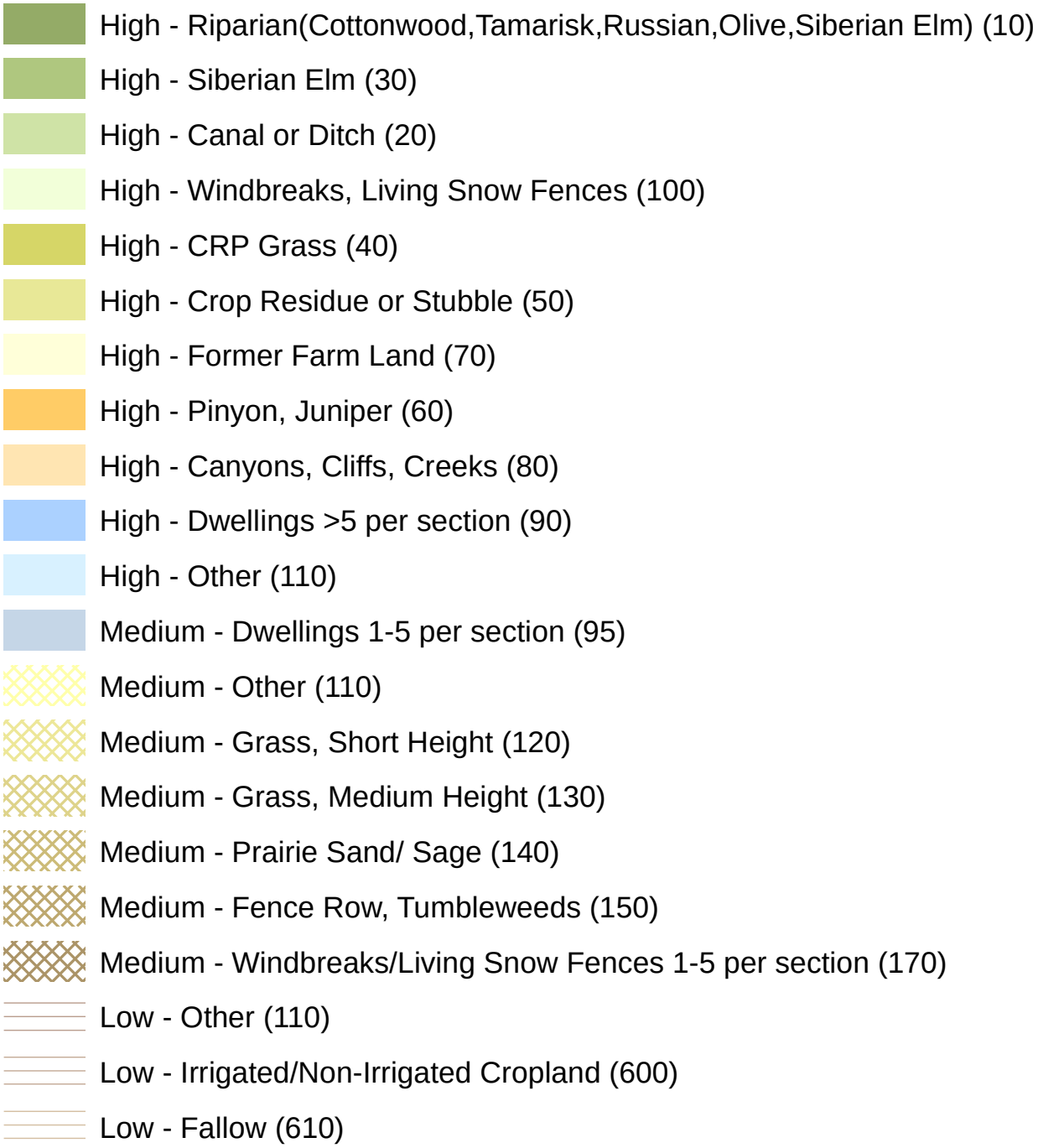
Legend

Cemeteries

Railroad Lines (1:100,000 scale)

Towns

Fuel Type



Code	Description
10	Riparian(Cottonwood,Tamarisk,Russian Olive,Siberian Elm)
20	Canal or Ditch
30	Siberian Elm
40	CRP Grass
50	Crop Residue or Stubble
60	Pinyon/juniper
70	Former Farm Land
80	Canyons/Cliff/Creeks
90	Dwellings >5 per section
95	Dwellings 1-5 per section
100	Windbreaks or Living Snow Fences
110	Other
120	Grass, Short Height
130	Grass, Medium Height
140	Prairie Sand/ Sage
150	Fence Row Tumbleweeds
170	Windbreaks/Living Snow Fences 1-5 per section
600	Irrigated/Non-Irrigated Cropland
610	Fallow

AGREEMENT
FOR
COOPERATIVE WILDFIRE PROTECTION

This Agreement is made by and between CROWLEY COUNTY, Colorado acting through its Board of County Commissioners and JOHN "SMOKEY" KURTZ, the Sheriff of the County and the State of Colorado acting by and through the Department of Public Safety for the benefit of the Division of Fire Prevention and Control.

A. AUTHORITIES

C.R.S. § 24-33.5-707.	Local and Interjurisdictional Disaster Agencies and Services
C.R.S. § 24-33.5-709	Local Disaster Emergencies
C.R.S. § 24-33.5-1201.	Division of Fire Prevention and Control
C.R.S. § 24-33.5-1202.	Definitions
C.R.S. § 24-33.5-1203.	Duties of Division
C.R.S. § 24-33.5-1217.5.	Minimum Prescribed Burning Standards
C.R.S. § 24-33.5-1218.	Cooperation with Governmental Units
C.R.S. § 24-33.5-1219.	Wildland Fires – Duty of Sheriff to Report
C.R.S. § 24-33.5-1220.	Funds Available – Emergency Fire Fund
C.R.S. § 24-33.5-1221.	State Responsibility Determined
C.R.S. § 24-33.5-1222.	Cooperation by Counties
C.R.S. § 24-33.5-1223.	Sheriffs to Enforce
C.R.S. § 24-33.5-1224.	Limitation of State Responsibility
C.R.S. § 24-33.5-1225.	Emergencies
C.R.S. § 24-33.5-1226.	Wildfire Emergency Response Fund
C.R.S. § 24-33.5-1228.	Colorado Firefighting Air Corps
C.R.S. § 29-1-101, *et seq.*	Local Government Budget Law
C.R.S. § 29-22.5-101, *et seq.*	Wildland Fire Planning
C.R.S. § 30-10-512.	Sheriff to Act as Fire Warden
C.R.S. § 30-10-513.	Duties of Sheriff – Coordination of Fire Suppression Efforts for Forest, Prairie, or Wildland fire - expenses
C.R.S. § 30-10-516.	Sheriffs to Preserve Peace – Command Aid
C.R.S. § 30-11-107(1) (o).	Powers of the Board of County Commissioners

B. RECITALS

1. In accordance with C.R.S. § 29-22.5-103(3)(a), the DFPC is designated the lead Colorado State Agency for Wildland Fire suppression as identified in the Colorado State emergency operations plan.

2. In accordance with C.R.S. § 24-33.5-1203(1)(h), the DFPC provides technical assistance, upon request, to the County, the Sheriff, and Fire Departments on local fire safety matters such as fire prevention, fire protection, fire investigation, and emergency medical services.

3. In accordance with C.R.S. § 24-33.5-1203(1)(k) and (m), the DFPC, upon request, assists the County, the Sheriff, and Fire Departments' efforts to procure, inspect, and maintain Wildland Fire resources and equipment, and the County, the Sheriffs and Fire Departments' efforts to organize, train, and equip personnel to detect, contain, and extinguish Wildland Fires.

4. In accordance with the *Statewide Cooperative Wildland Fire Management and Stafford Act Response Agreement for the State of Colorado*, as amended, the DFPC facilitates input of eligible Fire Department, County, Sheriff and State Wildfire resources into the ROSS or successor system(s), from which those resources can be ordered when needed. DFPC also administers and manages the IQS program, which is used to track NWCG qualifications for Fire Department, County, Sheriff, and State personnel and enters such personnel into the ROSS or successor system(s).

5. In accordance with C.R.S. §§ 24-33.5-1203(1)(m), 24-33.5-1231, and other applicable statutes, the DFPC administers certain State and Federal programs related to the County, the Sheriff, and Fire Departments' Wildland Fire duties and responsibilities such as the FEPP Program, DFPC engine program, and other grant programs.

6. In accordance with C.R.S. § 24-33.5-1228, the DFPC manages the Colorado firefighting air corps.

7. In accordance with C.R.S. § 29-22.5-103(1)(a), the chief of the fire department in each fire protection district in the state is responsible for the management of Wildland Fires that occur within the boundaries of his or her district and that are within the capability of the fire district to control or extinguish.

8. In accordance with C.R.S. § 29-22.5-103(2)(a), the Sheriff is the fire warden of the county and is responsible for the planning for, and the coordination of, efforts to suppress County Responsibility Fires. Further, pursuant to C.R.S. § 29-22.5-103(2)(b), the Sheriff is responsible for appointing a Local Incident Management Team to provide the command and control infrastructure required to manage a County Responsibility Fire, and for assuming financial responsibility for the Wildland Firefighting efforts on behalf of the County in compliance with the terms of the Local Government Budget Law of Colorado, C.R.S. § 29-1-101, *et seq*.

9. In accordance with C.R.S. § 29-22.5-104(1), the Sheriff may develop and update as necessary a wildfire preparedness plan for the unincorporated areas of the county in cooperation with any fire district with jurisdiction over such unincorporated areas.

10. In accordance with C.R.S. § 30-10-516, the Sheriff is responsible for preserving the peace within the county.

11. In accordance with C.R.S. § 30-10-513(2), with the Sheriff's concurrence, the DFPC may assume any of the Sheriff's Wildland Fire duties or responsibilities.

12. In accordance with C.R.S. §§ 29-22.5-103(3)(c), in the case of a wildland fire that exceeds the capability of the county to control or extinguish, the division may assist the sheriff in controlling or extinguishing such fires, and may assume command of such incidents with the concurrence of the sheriff under a unified command structure.

13. In accordance with C.R.S. §§ 29-22.5-103(2)(c) and 30-10-513(1)(d), in the case of a State Responsibility Fire, the Sheriff and the DFPC are required to enter into an agreement concerning the transfer of authority and responsibility for fire suppression and the retention of responsibilities under a Unified Command Structure.

C. PURPOSE

The purpose of this agreement is to detail process and procedures on how the Parties work together to implement Statute, and prevent, prepare for, respond to, and bill for wildland fire in Colorado.

D. DEFINITIONS

"Agency Administrator The chief executive officer (or designee) of the agency or jurisdiction that has responsibility for the incident.

"Agency Representative." An individual assigned to an incident from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident.

"Agreement." This *Agreement for Cooperative Wildfire Protection*.

"Assumption of Fire Control Duty Agreement." A written agreement between the County, the Sheriff, and the DFPC concerning the scope of the transfer of authority and responsibility for fire management and the retention of responsibilities over a Wildland Fire between the County and the Sheriff to the DFPC. The Assumption of Fire Control Duty Agreement may allocate costs and shall articulate any authority delegated to the DFPC by the Sheriff and any authority and duties retained by the Sheriff. This definition also includes the agreement that addresses the return of duties from DFPC to the Sheriff.

"Colorado Cooperative Wildland Fire Management and Stafford Act Response." Agreement between the State and Federal Land Management Agencies that defines roles and responsibilities related to wildland fire.

"Colorado Emergency Operations Line." The Colorado Department of Public Safety's point of contact for the County and the Sheriff to report Wildland Fires or to request any all-hazard assistance. This number will connect the caller with the on-duty communications personnel of the Colorado Department of Public Safety who will then notify the appropriate DFPC Battalion Chief or CDPS personnel

"Colorado Prescribed Fire Planning and Implementation Policy Guide." The DFPC's annual guide that provides standardized procedures specifically associated with the planning and implementation of prescribed fire, accessible via DFPC Battalion Chiefs.

"County." CROWLEY County, Colorado acting through its Board of County Commissioners.

"County AOP." The *County Annual Operating Plan* is a planning document between the County, the Sheriff, the DFPC, Federal land agencies, and other possible participants, adopted on an annual basis. The County AOP documents how interagency cooperation is to be implemented within the County. The County AOP shall be drafted by DFPC in cooperation with the County, but substantially in the form attached as Exhibit A.

"County Responsibility Fire." A Wildland Fire occurring on non-federal lands in the unincorporated area of the county outside the boundaries of a fire protection district or a Wildland Fire that exceeds the capabilities of a fire protection district to contain, control or extinguish.

"DFPC" or "Division." The Colorado Division of Fire Prevention and Control.

"DFPC Analysis Form." The analysis form used by the DFPC and the Sheriff to evaluate whether a Wildland Fire meets the criteria to be elevated to a State Responsibility Fire or may otherwise qualify for State coordinated financial assistance attached as Exhibit B

"DFPC Battalion Chief." DFPC regional field representative, or his or her designee. Formerly Regional Fire Management Officer.

"Disaster." Pursuant to C.R.S. § 24-33.5-703(3), the occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural cause or cause of human origin, including but not limited to a Wildland Fire, existing in the state or in any county, city, town, or district in the state.

"EFF." Means the Emergency Fire Fund as defined in C.R.S. § 24-33.5-1202(3.8) and § 24-33.5-1220, *et seq*.

"FEPP Program." The Federal Excess Personal Property Program enacted by Congress under the Federal Property and Administrative Services Act of 1949 (June 30, 1949, Pub. L. 152, Ch. 288, 63 Stat. 377) and the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. § 2101 *et seq*.) through which DFPC is responsible for building and maintaining fire equipment in the State of Colorado.

"Fire Department." Pursuant to C.R.S. § 24-33.5-1202(3.9), the duly authorized fire protection organization of a town, city, county, or city and county, a fire protection district, or a metropolitan district or county improvement district that provides fire protection.

"Incident Commander." Pursuant to C.R.S. § 29-22.5-102(2), the individual responsible for the overall management of the incident including developing incident objectives and managing all incident operations, by virtue of explicit legal, agency, or delegated authority.

"IQS." The Incident Qualification System developed by the National Association of State Foresters. IQS is a software program that allows the user to track incident qualifications, experience, tasks books and fitness levels for organization/agency personnel.

"Local Incident Management Team." Pursuant to C.R.S. § 29-22.5-102(4), a single or multi-agency team of capable individuals formed and managed at the local or county level and created or activated when necessary to provide the command and control infrastructure required to manage a major or complex incident requiring a significant number of local and mutual aid resources.

"Mutual Aid Agreement." Pursuant to C.R.S. § 29-22.5-102(5), a written agreement between or among federal, state, and local agencies in which the agencies agree to assist one another upon request by furnishing such resources as personnel and equipment.

"NFIRS." The National Fire Incident Reporting System or its successor system.

"NIMS." Pursuant to C.R.S. § 29-22.5-102(6), the National Incident Management System is the national command and management system developed by the U.S. Department of Homeland Security to provide a unified approach to incident management.

"NWCG." The National Wildfire Coordinating Group.

"Party" or "Parties." "Party" means the County, or the Sheriff, or the DFPC and "Parties" means the County, the Sheriff and the DFPC.

"Prescribed Burning." Pursuant to C.R.S. § 24-33.5-1202(8.3), the application of fire, in accordance with a written prescription for vegetative fuels, under specified environmental conditions while following appropriate precautionary measures that ensure public safety and that is confined to a predetermined area to accomplish public safety or land management objectives. The term excludes controlled agricultural burns and controlled ditch burns.

"ROSS." The Resource Ordering and Status System chartered by the National Wildfire Coordinating Group and managed by the U.S. Forest Service. ROSS is a nationwide, web-based database system that tracks all tactical, logistical, service and support resources mobilized by the incident dispatch community.

"Sheriff." The Sheriff of the county, or his or her designee.

"State." The State of Colorado.

"State Responsibility Fire." A County Responsibility Fire that exceeds the County and the Sheriff's capability to control or extinguish as exhibited by the DFPC Analysis Form and for which DFPC has assumed fire control duty as provided in the Assumption of Fire Control Duty Agreement and determined that the fire meets the criteria for EFF, or for State-coordinated financial assistance.

"Unified Command" or "Unified Command Structure." Pursuant to C.R.S. § 29-22.5-102(8), the incident commanders representing agencies or jurisdictions that share responsibility for the incident manage the response from a single incident command post, allowing agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability.

"Wildland Area." Pursuant to C.R.S. § 29-22.5-102(9), an area in which development is essentially nonexistent, except for roads, railroads, power lines, and similar infrastructure, and in which structures, if present, are widely scattered.

"Wildland Fire." Pursuant to C.R.S. § 29-22.5-102(10), an unplanned or unwanted fire in a Wildland Area, including unauthorized human-caused fires, out-of-control prescribed fires, and all other fires in Wildland Areas where the objective is to extinguish the fire. For purposes of this Agreement, Wildland Fire also includes fires in the Wildland Urban Interface area.

"Wildfire." For purposes of this Agreement, Wildfire has the same meaning as Wildland Fire.

E. ACKNOWLEDGEMENT OF SUPPLEMENTS TO THIS AGREEMENT

County AOPs, Assumption of Fire Control Duty Agreements, Cost Share Agreements, their successor documents, or other supplements to this Agreement further describe the working relationships, financial arrangements and joint activities not otherwise specified under the terms of this Agreement.

F. HIERARCHY AND PRECEDENCE FOR AGREEMENTS

The provisions of this Agreement shall govern the relationship of the Parties. In the event of conflicts or inconsistencies between this Agreement and other agreements between the Parties, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

1. The Colorado Special Provisions;
2. The provisions of the main body of this Agreement, and any amendments thereto;

3. Executed EFF Agreement for EFF Counties;

The hierarchy of precedence for other agreements may be identified in the County AOP.

G. AGREEMENT

Section 1. PLANNING

1.1 ***County AOP.*** Prior to April 1 of each year, the Parties, along with other agencies having Wildland Fire responsibilities within the county, shall jointly prepare, review, update, execute, and distribute a new AOP or formally extend the current agreement by executing a new signature page. The DFPC Battalion Chief shall arrange the date and location of the County AOP meeting(s), and shall be the lead coordinator and facilitator of the County AOP process. The Parties acknowledge and agree that with the Sheriff's consent, Fire Departments may participate in County AOP meeting(s). However, the Parties may revise the County AOP to comport with the County's emergency operations plan, Mutual Aid Agreements, community wildfire protection plans, county wildfire preparedness plan, or any other agreements with Fire Departments or other governmental entities. Failure to execute a County AOP by the April 1 deadline will not result in a penalty to any Party pursuant to this agreement.

1.2 ***AOP Extension.*** If the Parties are unable to meet the requirements of 1.1, one or more 30-day extensions may be granted upon the mutual consent of the DFPC Battalion Chief and the County Sheriff and written notice sent to all the AOP Parties in the prior year's County AOP.

1.3 ***Intergovernmental Agreement Concerning Local Fires.*** County is encouraged to develop and execute an agreement between County and local fire protection districts to establish, at a minimum, a process to elevate a fire from local responsibility to a County Responsibility Fire. The Parties acknowledge that such local agreements may impact County's roles and responsibilities and may need to be addressed in other agreements between the Parties, including but not limited to cost share agreements and assumption of fire control duty agreements.

Section 2. ROLES AND RESPONSIBILITIES IN A COUNTY RESPONSIBILITY FIRE

2.1 ***County and Sheriff Responsibilities.*** The County and Sheriff are fiscally and operationally responsible, respectively, for a County Responsibility Fire as described in C.R.S. §§ 29-22.5-103 (2)(b) and 30-11-107(1)(o). Thereby, for the duration of a County Responsibility Fire and pursuant to any applicable emergency operations plan, Mutual Aid Agreements, community wildfire protection plans, county wildfire preparedness plans, cost share agreement, or other agreements between the County and Fire Departments or other governmental entities, the Sheriff shall appoint a Local Incident Management Team to provide the command and control infrastructure necessary to manage a County Responsibility Fire. The Local Incident Management Team may consist of a single individual serving as Incident Commander. On behalf of the County, the Sheriff shall assume financial responsibility for Wildland Fire

suppression efforts and the authority for the ordering, monitoring and tracking the costs of resources subject to compliance with State law. Nothing in this agreement authorizes any county fire warden, firefighter, or county officer to obligate the State for payment of any money without prior state approval.

2.2 ***DFPC Responsibilities.*** The State's principal role during a County Responsibility Fire is to support the County and the Sheriff in their response to the Wildland Fire. Thereby, for the duration of a County Responsibility Fire, the DFPC shall administer certain State programs related to the County and Sheriff's Wildland Fire duties and responsibilities, such as the Wildfire Emergency Response Fund program set forth in C.R.S. § 24-33.5-1226 and the Colorado Firefighting Air Corps program created pursuant to C.R.S. § 24-33.5-1228. If requested by the Sheriff, the DFPC shall appoint an Agency Representative who shall provide technical assistance to the Sheriff and the appointed Local Incident Management Team. Further, the DFPC shall reply to all requests for State personnel, resources, and equipment from the County, Sheriff, or the Local Incident Management Team, even if the DFPC cannot provide the requested personnel, resources, and/or equipment. DFPC may enter into separate agreements with the County and the Sheriff to provide the requested personnel, resources, and/or equipment. Nothing in this agreement authorizes any DFPC employee to obligate the County for payment of any money without prior County approval.

2.3 **Parties Mutual Responsibilities**. No Party shall delay suppression efforts while deciding jurisdictional responsibilities for fires in which suppression is the appropriate management response.

Section 3. ROLES AND RESPONSIBILITIES IN A STATE RESPONSIBILITY FIRE

3.1 ***Procedure for Elevating a County Responsibility Fire to a State Responsibility Fire.*** Pursuant to C.R.S. § 30-10-513, when the Sheriff determines that a County Responsibility Fire exceeds the County's capability to control or extinguish, the Sheriff shall request assistance from DFPC through the Colorado Emergency Operations Line or by any other available means of communication the Sheriff so chooses. Following such a request for assistance, the DFPC and the Sheriff will assess the fire situation utilizing the DFPC Analysis Form. The Wildland Fire shall be elevated to a State Responsibility Fire when both the DFPC Analysis threshold has been met and the Parties have entered into an Assumption of Fire Control Duty Agreement whereby the Parties will allocate responsibilities related to fire suppression responsibilities and financial responsibilities.

If the County participates in the Emergency Fire Fund program, the DFPC shall assess whether the Wildland Fire qualifies for Emergency Fire Fund assistance by following the procedures outlined in the County's Memorandum of Understanding: For Participation in the Colorado Emergency Fire Fund or successor agreement.

3.2 ***County and Sheriff Responsibilities.*** For the duration of a State Responsibility Fire, the Sheriff, at the Sheriff's discretion, may serve or appoint someone to serve as an Agency Administrator. The Sheriff's Agency Administrator shall, at the Sheriff's discretion, in consultation and cooperation with DFPC's Agency Administrator, appoint an Incident

Commander. The Sheriff's Agency Administrator shall work collaboratively with DFPC's Agency Administrator to identify objectives and concerns to share with the Incident Commander. If the Sheriff elects to not serve as or appoint an Agency Administrator, the Sheriff shall serve as or appoint an Agency Representative. Nothing in this agreement authorizes any county fire warden, firefighter, or county officer to obligate the State for payment of any money without prior state approval.

3.3 ***DFPC Responsibilities.*** For the duration of a State Responsibility Fire, the DFPC shall administer EFF and/or State funds for fire management costs and appoint an Agency Administrator who shall represent the State in accordance with the delegation of authority from the DFPC Director. The ordering, monitoring, and tracking of resources and costs will be performed by the Incident Commander, or whoever is delegated to do so by the Agency Administrator(s). DFPC's Agency Administrator shall, in consultation and cooperation with any appointed Sheriff's Agency Administrator, appoint an Incident Commander. The DFPC Agency Administrator shall work collaboratively with any appointed Sheriff Agency Administrator to identify objectives and concerns to share with the Incident Commander. Nothing in this agreement authorizes any DFPC employee to obligate the County for payment of any money without prior County approval.

3.4 ***Parties' Mutual Responsibilities.*** In the case of a State Responsibility Fire, the Parties shall enter into the following separate agreements specifically addressing, at a minimum, the bulleted subjects:

<u>Assumption of Fire Control Duty Agreement (County to State):</u>

- Transfer of authority and responsibility for fire suppression to DFPC;
- Specific limitations to the fire control duty assumed by DFPC;
- Description of the powers and responsibilities retained by the County and Sheriff and those transferred to the DFPC.

<u>Assumption of Fire Control Duty Agreement (State to County):</u>

- Criteria and procedures to be utilized by the Parties to determine when the County and the Sheriff will again be capable of containing, controlling or extinguishing the Wildfire allowing the State Responsibility Fire to be lowered to a County Responsibility Fire.

<u>Cost Share Agreements:</u>

- Outline of the Parties' various financial responsibilities and the authority for the ordering and monitoring of resources.

Because the Parties may maintain separate legal and functional authority and responsibility related to a State Responsibility Fire, responsibility for tasks beyond fire suppression may be included or excluded from the agreements described above upon agreement of the Parties. Both Parties agree that all incident-related activities, including non-suppression activities, shall, at a minimum, be communicated to the incident commander and to other coordinating entities.

No Party shall delay suppression efforts while deciding jurisdictional responsibilities for fires in

which suppression is the appropriate management response.

3.5 ***Appeal of Determination of State Responsibility Fire.*** Review of the DFPC Director's decision on whether or not to elevate a fire to a State Responsibility Fire will be in accordance with the provisions of C.R.S. § 24-4-106.

Section 4. WILDFIRE PREPAREDNESS

4.1 ***County and Sheriff Responsibilities.*** The County and the Sheriff shall comply with the Wildland fire planning responsibilities as set forth in C.R.S. § 29-22.5-101, *et seq.* and the provisions of C.R.S. §§ 30-10-513 and 30-10-513.5. The County and the Sheriff agree to identify for DFPC any designated individuals other than the Sheriff with the authority to make wildfire preparedness decisions. The County and Sheriff agree to work collaboratively with the DFPC's Battalion Chief in the coordination of DFPC resources and training. The County and Sheriff agree to cooperate in organizing, training, equipping, and maintaining of Wildland firefighting forces within the county. The County and Sheriff agree to communicate with local Fire Departments, as needed, to ensure relevant information is available to the County, the Sheriff, and local Fire Departments. The County and Sheriff may enter into agreements with local Fire Departments that identify the procedures necessary to transition financial and overall management of a Wildland Fire from the local Fire Department to the Sheriff, define control capabilities, and establish cost-share principles.

4.2 ***DFPC Responsibilities.*** The DFPC shall assist the County and the Sheriff, upon request, in organizing and training County, Sheriff, and cooperator forces to prevent, detect, contain, control, and extinguish Wildland Fires. Through administration of the FEPP program, the DFPC shall assist the County and the Sheriff in the procurement, inspection, and arrangement for maintenance of major Wildland Fire equipment. To the extent grant programs are available, the DFPC shall also administer grant programs to assist the County and the Sheriff in acquiring Wildland Fire equipment, training, and suppression support. The DFPC shall encourage and provide assistance in the development of County Wildland Fire plans pursuant to C.R.S. § 29-22.5-101(1)(d). The DFPC shall work with the County and the Sheriff in the coordination of the DFPC resources and training. The DFPC shall also manage and administer the IQS program and provide the County, the Sheriff, and Fire Departments with IQS access, training, program guidelines, and terms of use. The DFPC may inspect records for the purposes of verifying NWCG qualifications for Fire Department, County, and State personnel.

Section 5. WILDFIRE PREVENTION

5.1 ***County Responsibilities.*** Pursuant to C.R.S. § 30-15-401(1)(n.5)(I), the County may ban open fires within the county. In considering multi-county or statewide open burning restrictions that impact other counties pursuant to C.R.S. § 24-33.5-1225, the County will inform the DFPC so that the DFPC may aid the counties in advising the Governor in issuing a proclamation against open burning and/or public movements in any area of the State spanning multiple counties to avoid overbroad burn bans. The County shall, to the extent possible, include and follow the public use restrictions outlined in the County AOP. The County agrees to work cooperatively with the DFPC to coordinate public fire prevention messages provided to the

media as outlined in the County AOP.

5.2 ***DFPC Responsibilities.*** The DFPC shall confer with the County about the need for fire restrictions, and upon determining the need for restrictions on open burning and/or public movements affecting more than one county, recommend to the Governor the imposing or lifting of restrictions for burning and/or public movements, and inform affected counties of the Governor's decision. The DFPC, in cooperation with the County, shall coordinate public fire prevention messages provided to the media and public as outlined in the County AOP. To the extent that DFPC resources and funding are available, DFPC may assist the County in its wildfire prevention efforts, including, but not limited to, fuels reduction and public education activities.

Section 6. WILDFIRE DETECTION AND NOTIFICATION

6.1 ***Sheriff Responsibilities***. The Sheriff shall comply with the reporting provisions set forth in C.R.S. § 24-33.5-1219 and its notification responsibilities as outlined in the County AOP. The reporting requirements may be satisfied after the fact through the NFIRS or its successor system.

6.2 ***DFPC Responsibilities***. The DFPC shall immediately forward all notifications it receives of possible Wildland Fire within the county to the Sheriff, or the Sheriff's designee, for further action as outlined in the County AOP.

Section 7. INVESTIGATIONS

The Sheriff shall conduct, or cause to be conducted, an investigation as to the cause of all State Responsibility Fires in order for the DFPC to facilitate reimbursement of costs expended in fire suppression efforts. The Sheriff shall endeavor to provide the DFPC with a copy of a preliminary investigation report concerning the cause and origin of the fire within thirty (30) calendar days after the Wildland Fire is controlled, or as soon as practicable thereafter. The Sheriff shall provide a final report upon the conclusion of the investigation but not later than nine (9) months after the date the Wildland Fire is declared contained to aid the DFPC in meeting the one year reporting deadline for recovering federal grant monies or other reimbursements. If the Sheriff cannot provide the final report within nine (9) months, the Sheriff shall provide a written notice to the DFPC no later than nine (9) months after the date the Wildland Fire is declared contained regarding: 1) the status of the investigation; 2) when the final report will be complete; and 3) whether charges have been filed or an arrest has been made. The Sheriff shall also provide periodic updates to the DFPC, on the status of the investigation until the final report is provided if requested by the DFPC. If the Sheriff does not provide the final report or written notice to the DFPC as described above, the DFPC may not be able to recover grant monies or other reimbursements. Notwithstanding the foregoing, the Sheriff shall not be responsible for conducting investigations on any federally owned or managed lands. DFPC may provide technical assistance and qualified investigators to assist the Sheriff as needed.

Section 8. REPORTING

8.1 ***All Parties Agree.*** The Parties recognize that Wildland fire management funding is tied to accurate and complete statistical reporting, and will work together to encourage fire response agencies within the County to report statistical wildfire data to the DFPC via the NFIRS or its successor system.

8.2 ***Sheriff Responsibilities.*** The Sheriff shall report, or cause to be reported, to the DFPC all County Responsibility Fires utilizing the NFIRS or its successor system.

8.3 ***DFPC Responsibilities.*** The DFPC shall use the data obtained pursuant to Section 8.1 and 8.2 for required federal reporting and to apply for grant funding as available. DFPC shall maintain such data for at least two (2) years. Further, the DFPC shall assist the County and Sheriff with training regarding the NFIRS or its successor system.

Section 9. PRESCRIBED BURNING

Prior to performing any Prescribed Burning in the county, the Party undertaking such Prescribed Burning shall develop a prescribed fire plan. The Parties shall inform one another prior to performing Prescribed Burning. The Parties shall follow the *Colorado Prescribed Fire Planning and Implementation Policy Guide* for any Prescribed Burning in the county, unless the County has adopted guidelines or standards meeting or exceeding the standards enumerated in C.R.S. § 24-33.5-1217.5. DFPC may upon request, assist the County with personnel and resources for the purposes of prescribed burning planning, preparation, and/or implementation. The DFPC may enter into an agreement with the County and/or the Sheriff to provide Prescribed Burning services pursuant to C.R.S. § 24-33.5-1217(6)(a).

All notices of Prescribed Burning shall meet or exceed the current DFPC guidelines and standards. At a minimum, the DFPC Battalion Chief and County Sheriff's Office shall be notified.

Section 10. BILLING AND PAYMENT

10.1 ***General Provisions.*** The Parties shall ensure that the County and/or the Sheriff are parties to any Mutual Aid Agreements, cost share agreements, or other agreements that apportion any Wildland Fire expenses to the County and/or the Sheriff and those agreements shall comply with State law.

10.2 ***County Responsibility.*** It is the County's responsibility to pay costs incurred during an incident in accordance with any cost share agreements the County is a Party to. Regardless of whether or not a cost share has been negotiated on a County responsibility fire, County acknowledges that County shall encumber and pay all incident expenses that were authorized by the County, subject to agreements with other entities. County acknowledges that DFPC serves as coordinator for inter-jurisdictional wildfire billing in Colorado.

10.3 ***DFPC Responsibility.*** Upon request, DFPC may assist counties in gathering supporting documentation of incident costs. It is DFPC's responsibility to pay costs incurred during an incident in accordance with cost share agreements they are Party to. DFPC shall

encumber and pay all incident expenses that were authorized by DFPC. Any invoice from DFPC to the County and/or the Sheriff for any expense incurred by any agency for a Wildland Fire occurring in the county shall include appropriate supporting documentation. DFPC serves as the coordinator for all inter-jurisdictional Wildland fire billing in Colorado, and may charge the county and the sheriff a cost of overhead fee at a rate that adequately offsets the cost of providing the billing services. The rate will not exceed ten percent (10%) of the total amount billed to the County, based on actual costs.

Section 11. GENERAL PROVISIONS

11.1 ***Term.*** The Term of this Agreement shall commence on the date the last Party signs and shall remain in effect for five (5) years from that date. Any Party shall have the right to terminate its participation under this Agreement by providing one-year advance written notice to the other Parties to this Agreement.

11.2 ***Repeal of Prior Agreements.*** This Agreement, upon full execution, shall repeal and replace any other prior agreements between the Parties relating to cooperative Wildfire protection within the county.

11.3 ***Amendments or Extensions.*** Amendments or extensions, save any subject to rulemaking, within the scope of this Agreement shall only be made by mutual consent of the Parties to this Agreement by issuance of a written modification, signed and dated by all Parties to this Agreement, prior to any changes taking effect. No Party is obligated to fund any changes not properly approved in advance.

11.4 ***Notices.*** All notices, requests, demands, or other communications under this Agreement shall be in writing and shall be deemed effective upon delivery, if delivered personally, or three (3) calendar days after mailing if deposited in the U.S. Mail, postage prepaid, and addressed to the respective parties as follows:

DFPC: Division Director
690 Kipling Street, #2000
Lakewood, Colorado 80215

County: CROWLEY
603 MAIN ST. STE. 2
ORDWAY, CO 81063

Sheriff: JOHN "SMOKEY" KURTZ
110 E. 6TH STREET
ORDWAY CO. 81063

11.5 **Entire Understanding**. This Agreement represents the complete integration of all understandings between the Parties related to the Work, and all prior representations and understandings related to the Work, oral or written, are merged into this Agreement. Prior or

contemporaneous additions, deletions, or other changes to this Agreement shall not have any force or effect whatsoever, unless embodied herein.

11.6 Digital Signatures. If any signatory signs this agreement using a digital signature in accordance with the Colorado State Controller Contract, Grant and Purchase Order Policies regarding the use of digital signatures issued under the State Fiscal Rules, then any agreement or consent to use digital signatures within the electronic system through which that signatory signed shall be incorporated into this Agreement by reference.

11.7 Third Party Beneficiaries. Except for the Parties' respective successors and assigns described in **§ 17.A,** this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to this Agreement, and do not create any rights for such third parties.

11.8 Waiver. A Party's failure or delay in exercising any right, power, or privilege under this Agreement, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

11.9 CORA Disclosure. To the extent not prohibited by federal law, this Agreement and the performance measures and standards required under §24-106-107, C.R.S., if any, are subject to public release through the CORA.

11.10 Colorado Special Provisions. COLORADO SPECIAL PROVISIONS (COLORADO FISCAL RULE 3-3). These Special Provisions apply to all contracts except where noted in italics.

(a) FUND AVAILABILITY. §24-30-202(5.5), C.R.S.

Financial obligations of the State payable after the current State Fiscal Year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

(b) GOVERNMENTAL IMMUNITY.

Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

(c) INDEPENDENT PARTY.

County shall perform its duties hereunder as an independent Party and not as an employee. Neither County nor any agent or employee of County shall be deemed to be an agent or employee of the State. County shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as

expressly set forth herein. **County and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for County or any of its agents or employees. County shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Agreement. County shall (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (ii) provide proof thereof when requested by the State, and (iii) be solely responsible for its acts and those of its employees and agents.**

(d) COMPLIANCE WITH LAW.

County shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

(e) CHOICE OF LAW, JURISDICTION, AND VENUE.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Agreement. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

(f) PROHIBITED TERMS.

Any term included in this Agreement that requires the State to indemnify or hold County harmless; requires the State to agree to binding arbitration; limits County's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Agreement shall be construed as a waiver of any provision of §24-106-109 C.R.S. Any term included in this Agreement that limits County's liability that is not void under this section shall apply only in excess of any insurance to be maintained under this Agreement, and no insurance policy shall be interpreted as being subject to any limitations of liability of this Agreement.

(g) SOFTWARE PIRACY PROHIBITION.

State or other public funds payable under this Agreement shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. County hereby certifies and warrants that, during the term of this Agreement and any extensions, County has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that County is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Agreement, including, without limitation, immediate termination of this Agreement and any remedy consistent with federal copyright laws or applicable licensing restrictions.

(h) EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. §§24-18-201 and 24-50-507, C.R.S.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Agreement. County has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of County's services and County shall not employ any person having such known interests.

(i) VENDOR OFFSET AND ERRONEOUS PAYMENTS. §§24-30-202(1) and 24-30-202.4, C.R.S.

[*Not applicable to intergovernmental agreements*] Subject to §24-30-202.4(3.5), C.R.S., the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: **(i)** unpaid child support debts or child support arrearages; **(ii)** unpaid balances of tax, accrued interest, or other charges specified in §§39-21-101, *et seq.*, C.R.S.; **(iii)** unpaid loans due to the Student Loan Division of the Department of Higher Education; **(iv)** amounts required to be paid to the Unemployment Compensation Fund; and **(v)** other unpaid debts owing to the State as a result of final agency determination or judicial action. The State may also recover, at the State's discretion, payments made to County in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by County by deduction from subsequent payments under this Agreement, deduction from any payment due under any other contracts, grants or agreements between the State and County, or by any other appropriate method for collecting debts owed to the State.

(j) PUBLIC CONTRACTS FOR SERVICES. §§8-17.5-101, *et seq.*, C.R.S.

[Not applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services] County certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Agreement, through participation in the E-Verify Program or the State verification program established pursuant to §8-17.5-102(5)(c), C.R.S., County shall not knowingly employ or contract with an illegal alien to perform work under this Agreement or enter into a contract with a Subcontractor that fails to certify to County that the Subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement. County **(i)** shall not use E-Verify Program or the program procedures of the Colorado Department of Labor and Employment ("Department Program") to undertake pre-employment screening of job applicants while this Agreement is being performed, **(ii)** shall notify the Subcontractor and the contracting State agency or institution of higher education within three days if County has actual knowledge that a Subcontractor is employing or contracting with an illegal alien for work under this Agreement, **(iii)** shall terminate the subcontract if a Subcontractor does not stop employing or contracting with the illegal alien within three days of receiving the notice, and **(iv)** shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to §8-17.5-102(5), C.R.S., by the Colorado Department of Labor and Employment. If County

participates in the Department program, County shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that County has examined the legal work status of such employee, and shall comply with all of the other requirements of the Department program. If County fails to comply with any requirement of this provision or §§8-17.5-101, *et seq.*, C.R.S., the contracting State agency, institution of higher education or political subdivision may terminate this Agreement for breach and, if so terminated, County shall be liable for damages.

(k) PUBLIC CONTRACTS WITH NATURAL PERSONS. §§24-76.5-101, *et seq.*, C.R.S.

County, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that County **(i)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(ii)** shall comply with the provisions of §§24-76.5-101, *et seq.*, C.R.S., and **(iii)** has produced one form of identification required by §24-76.5-103, C.R.S. prior to the Effective Date of this Agreement.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

CROWLEY **COUNTY, COLORADO:**

Board of County Commissioners:

By: _____
Chair

T.E. (TOBE) ALLUMBAUGH
CHAIRMAN, BOARD OF COMMISSIONERS
Print Name & Title of
Authorized Officer

ATTEST:
(SEAL)

Melinda Carter
County Clerk

County Sheriff: JOHN "SMOKEY" KURTZ

By: _____
Sheriff

STATE OF COLORADO:
Jared Polis, GOVERNOR

Department of Public Safety, Division of Fire Prevention and Control

By: _____
Michael C. Morgan
DFPC Director