

**CITY OF GRAND JUNCTION
MUNICIPAL CODE**

Volume IV

**A Codification of the Intergovernmental Agreements and Adopted Policies
of the City of Grand Junction, Colorado**

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42.04.010 Adoption.

Be it resolved by the Grand Junction Police Department, Grand Junction Fire Department, Palisade Police Department, Mesa County Sheriff's Office, Fruita Police Department and Clifton Fire Protection District that this chapter is duly adopted and by its adoption the intergovernmental agreement in this chapter is adopted, ratified and confirmed with the benefits and obligations therein provided.

(Res. 16-98, 2-18-98)

42.04.020 Purpose.

The purpose of this intergovernmental agreement is to provide a basic working document that describes the mission and responsibility of the Grand Junction Regional Communications Center (GJRCC).

The agreement describes the relationship that exists between the City of Grand Junction and other agencies that utilize the GJRCC ("users") to provide both enhanced 9-1-1 service and telecommunications for police, fire and emergency medical services in Mesa County.

All users recognize that the GJRCC provides the best opportunity to provide the most efficient, professional and cost effective method for providing essential telecommunications to all police, fire and public emergency medical agencies.

It is in the best interest of all people who live in or travel through Mesa County that the GJRCC continues to function as a well-equipped, well-staffed and well-trained cooperative effort in providing this essential service.

Now therefore, in consideration of the following, the parties hereto, by their signatures do covenant, contract and agree as follows in this chapter.

(Res. 16-98, 2-18-98)

42.04.030 Employee policies.

All employees of the GJRCC are employees of the Grand Junction Police Department and, therefore, must comply with all City personnel provisions and requirements, e.g., City personnel policies. In addition, employees are regulated by the Grand Junction Police Department Policy and Procedures Manual and the GJRCC Operations Procedures Manual. If a conflict exists between these policies and manuals, the City's personnel policies (Personnel Policies and Procedures Manual – PPM) will govern. The Manager of the GJRCC is a Grand Junction Police Department employee who is supervised by the Grand

Junction Police Chief or his designee. All employment decisions concerning communications center employees, including hiring, firing, discipline, promotion, etc. are the responsibility of the Police Chief or his designee and are typically made following a recommendation from the Manager.

(Res. 16-98, 2-18-98)

42.04.040 Insurance coverage.

The City's insurer provides coverage for most of the operations of the GJRCC. The GJRCC pays a proportionate share of the City's policy premium. The present City policy provides coverage for employment-related lawsuits brought by or on behalf of any current or former GJRCC employee. The City will be responsible for its employees and agrees that any user in good standing should not be liable for any employment-related lawsuits brought against such user by or on behalf of any current or former GJRCC employee so long as such user has acted in accordance with law and the policies and procedures of the GJRCC; any such expenses/costs will be part of the GJRCC operating costs. The Police Department agrees to exercise reasonable management practices in order to minimize any such expenses and costs.

(Res. 16-98, 2-18-98)

42.04.050 Policies and procedures.

The GJRCC Policy and Procedure Manual, adopted by users on August 7, 1996, is the comprehensive manual that describes adopted policies, procedures and protocols for GJRCC operations. All users shall follow the policies, procedures and protocols contained therein. This manual may be amended periodically by the Board, as recommended by the Manager and "user group."

(Res. 16-98, 2-18-98)

42.04.060 User group.

The GJRCC will maintain a "user group," constituted and functioning in accordance with GJRCC Operations Procedure Manual Sections 1.14 and 1.15. The user group shall minimally include a representative from the GJPD, MCSO, FPD, PPD; a member designated by the fire districts to represent them; a GJRCC telecommunicator selected by the Grand Junction Police Chief, two GJRCC supervisors; and one at-large representative from the GJPD, MCSO, GJFD and the GJRCC. The at-large representative shall be non-supervisory, line personnel. The purpose of the "user group" is to help the GJRCC consistently monitor the needs of all users and provide a mechanism to address concerns and modify telecommunications procedures and protocol in order to deliver the best possible service to all users.

(Res. 16-98, 2-18-98)

42.04.070 Board – Membership.

All users will be represented by the GJRCC Board. The six-person Board will consist of: the Grand Junction Police Chief who will serve as its chairman; the Grand Junction Fire Chief, the Mesa County Sheriff, the Palisade Police Chief, the Fruita Police Chief, and one member chosen by and representing the following agencies: Lower Valley FPD, Palisade Rural FPD, East Orchard Mesa FPD, Central Orchard Mesa IFPD and Clifton FPD. For the purpose of conducting the business of the Board, each Board member has a vote or half vote as follows: Mesa County Sheriff – one vote; Grand Junction Police Chief – one vote; Grand Junction Fire Chief – one vote; Palisade Police Chief – one-half vote; Fruita Police Chief – one-half vote; a member chosen by the fire districts – one-half vote.

(Res. 16-98, 2-18-98)

42.04.080 Board – Meetings.

The Board will meet a minimum of three times per year. A meeting will be called in June of each year to discuss cost allocation methods, formulas and to discuss any changes to the same. A meeting will be called each September to review the GJRCC's proposed budget for the following year and a meeting will

be called in January to conduct miscellaneous business. The chairman may call a meeting on his own or at the request of any Board members at any time. All Board meetings will be conducted according to the Open Meetings Law. Meeting agendas and meeting minutes will be maintained and distributed to all members. A quorum of three and one-half votes is needed to vote on and pass any motion. The Board may act on budgets or budgetary items without a quorum being present if the Board is unable to produce enough members to constitute three and one-half votes after two meetings have been called, with proper notification provided to members and a deadline for Board action of October 1st has passed.

(Res. 16-98, 2-18-98)

42.04.090 Cost allocation.

Cost allocation to all users currently is and remains a fee based on "calls for service." That cost allocation method and all factors involving costs and expenses being passed on to users, pro rata, will be reviewed at each June meeting. Any changes in cost allocation methods or factors must be finalized by December 31st of the year proposed and will not take effect until January 1st of the year after the year finalized. Should a new public safety agency approach the GJRCC and request inclusion as a "user," the chairman will call a meeting of the Board, and after the Board's approval of the request, the Board will establish a "buy in" cost/assessment that the new user must pay to the GJRCC before service is provided.

(Res. 16-98, 2-18-98)

42.04.100 Budgeting process.

On alternating years and in conjunction with the City of Grand Junction's budgeting process, the chairman will distribute a two-year GJRCC budget to the Board and schedule a GJRCC meeting date during September, to be held no sooner than one week after distribution. The Manager and chairman will present said budget and respond to questions regarding line items. The Board will adopt a budget which will require three and one-half votes for passage. Should the budget not be adopted by October 1st of the budget year, the chairman shall take one of the following actions:

- (a) Amend the budget to the extent necessary to obtain a minimum of three and one-half votes for passage;
- (b) Notify the Grand Junction City Manager that the GJRCC Board is at a budget impasse. Upon notification the Manager will take the necessary steps to attempt to obtain the support from the governmental bodies (either elected or appointed) that represent at least three and one-half Board member votes. If such support is received, the Grand Junction City Manager will advise the chairman that the submitted budget, or a budget amended by the involved governmental bodies is to be implemented for the GJRCC for the next two-year budget cycle; or
- (c) Should a GJRCC budget not be passed by December 1st by either the GJRCC Board or implemented by the governmental bodies as described in subsection (b) of this section, the chairman shall amend the GJRCC budget to equal a "bottom line" operating number equal to the last year's approved budget plus an amount not to exceed three percent. Such a budget shall be considered final and all users will pay their associated costs based on the current cost allocation (calls for service) method.

The GJRCC budget shall contain a contingency fund, set at a level determined by the Board. Exigent circumstances can occur which impact the GJRCC budget between budget preparation cycles that exhaust contingency funding. Such circumstances are predicted to be major equipment failure or personnel shortages that require unforeseen overtime costs. Upon determining that exigent circumstances have or will occur, the chairman shall notify the Board and schedule an emergency meeting. At that meeting the chairman shall recommend an amended budget to address the exigency. The Board shall pass this amended budget following the same procedures identified to pass the regular two-year operating budget. Cost allo-

cation to user agencies to meet exigent circumstances shall be at the same level and using the same methodology as used to determine basic user fees for the current year.

(Res. 16-98, 2-18-98)

42.04.110 Telephone Safety Authority Board.

The Grand Junction Emergency Telephone Safety Authority Board (GJETSAB) continues to operate under all statutory provisions and continues to meet and operate in accordance with law and past practice.

(Res. 16-98, 2-18-98)

42.04.120 Counterpart copies.

This agreement may be executed in counterpart copies provided all members of the Board sign causing this agreement to take effect. This agreement shall be in full force and effect as if all members signed the same copy, if counterpart copies are used.

(Res. 16-98, 2-18-98)

42.04.130 Agreement binding.

This agreement shall be and remain binding and in effect until it is amended or terminated by three and one-half affirmative votes of the Board.

(Res. 16-98, 2-18-98)

Chapter 42.08

HAZARD MITIGATION PLAN

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Article I. General Provisions

42.08.010 Executive summary.

The purpose of natural hazards mitigation is to reduce or eliminate long-term risk to people and property from natural hazards. Mesa County's original mitigation plan was completed in 2004 and approved by FEMA in January 2005. This revised plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000, which requires a five-year revision in order to achieve eligibility for the Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

The Mesa County Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following local governments, special districts, and authorities that participated in the planning process and who identified future mitigation projects for their jurisdiction. Additional jurisdictions participated in the planning process but did not define a specific project (see participant list):

Mesa County	Lower Valley Fire Protection District
City of Grand Junction	5-2-1 Drainage Authority
City of Fruita	Plateau Valley Fire Protection District
Town of Collbran	Grand Junction FD and Grand Junction Rural FPD
Town of Palisade	

The County's planning process followed a methodology prescribed by FEMA, and much of the information contained in this plan was developed using jurisdictional information, plans and documents. Many of the forms used in this planning process were taken from other jurisdictional plans including the Summit County Multi-Hazard Mitigation Plan. (Summit County, 2008)

Mesa County's process began with the formation of a Hazard Mitigation Planning Committee (HMPC) comprised of key stakeholders from Mesa County, participating jurisdictions, and State and federal agencies. The HMPC conducted a risk assessment that identified and profiled hazards that pose a risk to Mesa County, assessed the County's vulnerability to these hazards, and examined the capabilities in place to mitigate them. The County is vulnerable to several hazards that are identified, profiled, and analyzed in this plan. However, floods, wildfires, and rockfalls-landslides are among the hazards that can have a significant impact on the County and are the hazards that specific mitigation projects have been identified. Based upon the risk assessment, the HMPC identified goals and objectives for reducing risk to hazards. The goals and objectives of this hazard mitigation plan are to:

- (a) Goal 1: Reduce risk to the people, property, and environment of Mesa County from the impacts of natural hazards.
 - (1) Minimize the vulnerability of existing and new development to hazards.
 - (2) Increase education and awareness of hazards and risk reduction measures.
 - (3) Improve comprehensive wildfire planning, funding, and mitigation.
 - (4) Strengthen floodplain management programs.
 - (5) Enhance assessment of multi-hazard risk to critical facilities and infrastructure.

- (b) Goal 2: Minimize economic losses.
- (1) Strengthen disaster resistance and resiliency of businesses and employers.
 - (2) Promote and conduct continuity of operations and continuity of governance planning.
 - (3) Reduce financial exposure of County and municipal governments.
- (c) Goal 3: Implement the mitigation actions identified in this plan.
- (1) Engage collaborative partners, community organizations, businesses, and others.
 - (2) Integrate mitigation activities into existing and new community plans and policies.
 - (3) Monitor, evaluate, and update the mitigation plan.

To meet identified goals and objectives, the plan recommends the mitigation actions summarized in Table 1. The HMPC also developed an implementation plan for each action, which identifies priority level, background information, ideas for implementation, responsible agency, timeline, cost estimate, potential funding sources, and more.

The Hazard Mitigation Plan has been formally adopted by the Mesa County Board of County Commissioners and the governing bodies of each participating jurisdiction and will again be revised within a five-year timeframe.

Table 1: Mitigation Action Matrix

Mitigation Action Matrix				
Jurisdiction	Action	Priority	Goals Addressed	Hazards Addressed
Multi-jurisdictional	Coordinate annual reviews.	High	Goal 3	Multi-Hazard
Multi-jurisdictional	Continue public involvement in mitigation activities.	High	Goal 1	Multi-Hazard
Multi-jurisdictional	Coordinate and complete a continuity of operations/continuity of governance (COOP/COOG) plan.	High	Goal 2	Multi-Hazard
Plateau Valley FPD	Develop a Community Wildfire Protection Plan to address issues in the wildland-urban interface and develop a fuel reduction program. CWPP is designed to assist the public and agencies with structure development and management of natural resources in the wildland-urban interface.	High	Goal 1	Wildfire
Multi-jurisdictional	Identify and prioritize fuel reduction projects around critical facilities and infrastructure in wildfire hazard areas. Community education regarding the risk of wildfires.	High	Goal 1	Wildfire
Multi-jurisdictional	Continue mapping wildfire hazard and vulnerability analysis for wildland-urban interface areas in Mesa County.	High	Goal 1	Wildfire

Table 1: Mitigation Action Matrix (Continued)

Mitigation Action Matrix				
Jurisdiction	Action	Priority	Goals Addressed	Hazards Addressed
Town of Palisade: Fire Department	Create a fire mitigation plan to protect vital raw water supplies and infrastructure. Conduct on the ground mitigation to reduce the potential for wildfire.	High	Goal 1, 2	Wildfire
Multi-jurisdictional	Orchard Mesa Detention and Conveyance Improvements: Project includes two detention basins and 535 feet of improvements to box culvert that will remove 269 structures from 100-year floodplain, including two churches and one elementary school, and decrease emergency response arterial inundation (Hwy. 50).	Medium	Goal 1, 2	Flooding
Mesa County	Adobe Creek: Overbank flooding of properties is common during small events. Project will upgrade 13 structures and 2.5 miles of channel to achieve flow capacity for 10-year event level.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Project will construct a 75.5 acre-foot reservoir above I-70 on Bosley Wash to reduce peak 100-year discharge from 1,727 CFS to 50 CFS, eliminating downstream flooding.	Medium	Goal 1, 2	Flooding
Mesa County	Douglas Wash: The existing drainage way/crossing structures are undersized and cannot convey the 100-year storm event. More than 55 properties are within the flooding area. The recommended solution was to construct detention areas to control the flow within the channel.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Lewis Wash: Existing drainage way and crossing structures are undersized and cannot convey the 100-year storm event. More than 200 properties are within the flooding area. A study was completed and the recommended solution is to construct detention areas to control the flow within the channel.	Medium	Goal 1, 2	Flooding

Table 1: Mitigation Action Matrix (Continued)

Mitigation Action Matrix				
Jurisdiction	Action	Priority	Goals Addressed	Hazards Addressed
City of Grand Junction	Riverside Levee: Flooding occurred in the 1983/84 runoff event in the Colorado River basin. Emergency flood wall was constructed protecting the area north of the river during this flood event. This is not a certified flood levee.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Mitigation project for the upper and lower portions of the Leach Creek drainage. These projects would provide mitigation to flood events for the area of Leach Creek above the confluence with Ranchmen's Ditch.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Identify and map geologic hazard zones and incorporate into master planning.	Medium	Goal 1, 3	Landslide-Rockfall-Mudflow
Multi-jurisdictional	Improve information on website about natural hazard risk and mitigation.	Medium	Goal 1	Multi-Hazard
Multi-jurisdictional	Real time rainfall data is lacking in Mesa County. An automated rainfall ALERT network would allow real time rainfall data access by local officials and National Weather Service forecasters for more timely flash flood warnings.	Medium	Goal 1, 3	Flooding
Multi-jurisdictional	A Basin Master Plan for Big Salt Wash will be completed in May 2010. The plan will identify at risk properties, conveyance and detention mitigation alternatives and costs.	Low	Goal 1	Flooding

Following is a brief project update, from the goals, objectives and projects identified in the approved 2004 plan.

2004 Actions	Status	Reason
<i>Flooding</i>		
Big Pipe project	Completed	
City of Fruita (Washes: brush and debris removal)	Ongoing	
Update Flood Insurance Rate Maps	Completed March 6, 2009	
Public awareness	Ongoing	Each spring we do PSAs.
Incorporate GIS into risk analysis	Completed	
<i>Winter Storm</i>		
Early warning and preparation	Completed Nov. 2008	
Storm Ready participation	Deferred	
Participate in Winter Weather Awareness Week	Completed Nov. 2008	
<i>Drought</i>		
Improve water conservation practices	Completed by 5-2-1 Drainage Authority	
Educate citizens on water conservation	Completed by 5-2-1 Drainage Authority	
Implement DRIP Program	Completed by 5-2-1 Drainage Authority	
<i>Tornadoes</i>		
Early detection and warning systems	Completed (New Reverse 911 system)	
Public awareness and education	Deferred	
<i>Thunderstorms/Severe Weather</i>		
Public awareness about NOAA Weather Radio	Ongoing	
Participate in Severe Weather Awareness Week	Completed	
Promote crop insurance information	Deferred	
<i>Earthquakes</i>		
Increase public awareness about earthquakes	Deferred	
Provide public campaign on how to prepare for and respond to earthquakes	Deferred	
Update GIS maps to show faults in Mesa County	Completed	
Conduct liquefaction study	Deferred	

2004 Actions	Status	Reason
<i>Wildfire</i>		
Continue implementing Firewise Program	Deferred	Not enough resources to complete project.
Fuel reduction projects	Ongoing	NPS worked to reduce fuel on NPS lands.
Education on danger of wildfire	Completed/Ongoing	
Watershed protection	Deferred	Nothing specific was completed.
<i>Public Health</i>		
Public education on West Nile virus	Completed	
Public health surveillance for West Nile	Completed	
Mosquito control measures	Completed Spraying	
<i>Hazardous Materials</i>		
Site inspections and pre-planning with facilities to ID chemicals on site	Completed/Ongoing	
Map high pressure gas lines throughout Mesa County	Completed	
<i>Terrorism</i>		
Public education on terrorism	Completed/Ongoing	
Continued planning with Public Health to identify roles and responsibilities	Ongoing	
Conduct exercises to test plans	Completed	Exercises have been completed through the Northwest All Hazard Emergency Management Region.
<i>Power Loss</i>		
Identify populations at risk	Deferred	
Identify critical facilities that do not have backup power capabilities	Ongoing	Have identified County facilities that do not have backup power.
Identify companies that can provide backup power generation	Ongoing	
<i>Dam Failure</i>		
Identify and map inundation area of Class I and II dams	Ongoing	Have mapped location of all Class I and II dams in the County.
Early notifications to citizens in the inundation areas	Ongoing	Have mapped some areas.

2004 Actions	Status	Reason
<i>Noxious Weeds</i>		
Identify and contain weed infestations	Ongoing	
Develop and implement weed management plan	Ongoing	
Projects were deferred primarily due to a change in the Emergency Management personnel.		

(Res. 05-10, 1-6-10)

42.08.020 Project update.

- (a) Goal 1. Reduce the potential for flooding and remove large commercial areas, including Grand Mesa Center, Valley Plaza Shopping Center, and restaurants along the south side of Mesa Mall, from the 100-year floodplain. This would include construction of detention basins in the upper reaches of the Ranchmen’s Ditch basin and improving conveyance systems through the lower portions of the basin.
- (b) City of Grand Junction, Colorado – Ranchmen’s Ditch Flood Mitigation Project, Also Known as the “Big Pipe” Project.

This project provided a solution to a very complex and vexing flooding problem that affected the greater part of the City of Grand Junction. The solution was nearly 10 years in the making and included the expenditure of over \$16,000,000 to construct a system that ultimately removed nearly 380 land parcels including homes and commercial buildings from the Ranchmen’s Ditch 100-year floodplain by increasing the drainage way conveyance capacity from less than a two-year event to accommodate the expected 100-year flows.

The main feature of this project, as attested by the moniker ascribed by the local newspaper and adopted by the citizens that financed the project, is the “Big Pipe.” The first phase of the project included the installation of over 3,900 LF of triple 78-inch diameter RCP, constructed adjacent to (through the parking lot) the Mesa Mall, the Grand Valley’s most important and active commercial shopping district. Immediately upstream of the mall, over 5,000 feet of parallel 96-inch and 90-inch RCP storm sewers were installed alongside Patterson Road (considered to be the busiest arterial roadway on the western slope of Colorado).

Finally, the upper limits of the Big Pipe included the installation of 78-inch and 60-inch RCP storm sewers parallel to an existing 72-inch RCP system in Patterson Road. Due to the overall size and length of the pipe systems, the conveyance system certainly lives up to its name and now provides an opportunity for future roadway expansion needs. Several other substantial storm water facilities were also designed and constructed to supplement the Big Pipe system. In particular, three regional detention facilities were constructed to provide over 68 acre-feet of detention. The larger of the detention facilities was actually constructed within the boundaries of the Grand Junction Regional Airport, which incorporated specific design elements to reduce the attraction of migratory birds with FAA approval. The ponds also serve to improve water quality by reducing the settleable solids content of the “western wash” in the outflow. The Ranchmen’s Ditch improvements converge with Leach Creek, prior to discharging into the Colorado River.

To address the increased discharges on Leach Creek and overtopping of major transportation corridors, additional improvements were necessary on Lower Leach Creek, including modification to increase the capacity of the existing Colorado Department of Transportation (CDOT) Highway, Interstate 70 (Business) Bridge and constructing a 2,400-foot-long open channel with a 3.8-acre wetlands enhancement. Additional culvert and pipe improvements were installed downstream of Interstate 70 (Business) at the crossing with the Union Pacific Railroad (UPRR), where an additional 84-inch RCP was installed in a single day open-cut operation.

The City of Grand Junction received a Pre-Disaster Mitigation Grant from FEMA in the amount of \$3,000,000 for the project. The project was completed in April 2009.

- (c) Goal 2. Work with Mesa County GIS Department to identify and map critical facilities impacted by flooding events.

Under Homeland Security planning and the Northwest All Hazard Emergency Management (NWAHEM) Region, Mesa County and surrounding jurisdictions have identified a list of critical facilities in our communities. These facilities are considered “critical” for a variety of reasons including:

- (1) Recognized as critical infrastructure in the community.
- (2) Contribute to the community’s public safety system.
- (3) Facility has economic impacts within the community.

After these critical facilities were identified, the Mesa County GIS staff created a mapping layer identifying their locations. Because these facilities were created under Homeland Security directives, this information is sensitive in nature and mapping layers are not included in this plan but are available for review by appropriate personnel.

(Res. 05-10, 1-6-10)

42.08.030 Plan requirements.

44 CFR Requirement Section 201.6(c)(5): The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

The following jurisdictions participated in the development of this plan and have adopted the multi-jurisdictional plan. A sample resolution is provided and all signed copies of resolutions can be found in Appendix A of this plan.

Mesa County	Lower Valley Fire Protection District
City of Grand Junction	Plateau Valley Fire Protection District
Town of Palisade	Grand Junction FD and Grand Junction Rural FPD
City of Fruita	5-2-1 Drainage Authority
Town of Collbran	

RESOLUTION NO. _____

A RESOLUTION ADOPTING THE REVISED MESA COUNTY, COLORADO
MULTI-HAZARD MITIGATION PLAN

WHEREAS, natural hazards in Mesa County have the potential for loss of life and significant property damage,

WHEREAS, the County of Mesa recognizes the importance of reducing or eliminating vulnerability of disasters caused by natural hazards for the overall good and welfare of the community,

WHEREAS, the County of Mesa, Emergency Management Department has revised the comprehensive, multi-jurisdictional, Multi-Hazard Mitigation Plan to identify both natural and manmade disasters and developed strategies to mitigate those hazards,

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires jurisdictions to prepare and adopt a Multi-Hazard Mitigation Plan to be eligible for future pre-disaster and post disaster federal funding for mitigation purposes, and

WHEREAS, the County of Mesa has identified and justified a number of proposed projects and programs needed to mitigate the vulnerabilities of the County to the impacts of future disasters to be included in this revised Multi-Hazard Mitigation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MESA COUNTY, COLORADO:

Section 1: The County of Mesa hereby proposes to accept and approve the revised Mesa County Multi-Hazard Mitigation Plan.

Section 2: The plan participants are requested and instructed to pursue available funding opportunities for implementation of the proposals designated therein, and

Section 3: The plan participants will, upon receipt of such funding or other necessary resources, seek to implement the proposals contained in its section of the mitigation strategy, and

Section 4: The plan participants will continue to participate in the updating and revision of the Mesa County Multi-Hazard Mitigation Plan with a plan review and revision to occur within a five-year cycle, and designated staff will provide annual progress reports on the status of implementation of the plan to the Board of County Commissioners, and

Section 5: The plan participants will further seek to encourage the businesses, community groups, organizations and other stakeholders within the County of Mesa, to also participate in the updating and revision of this plan.

APPROVED on _____.

(Res. 05-10, 1-6-10)

Article II. Introduction and Planning Area Profile

42.08.040 Purpose.

Mesa County and several other participating jurisdictions prepared this revision of the local Multi-Hazard Mitigation Plan to guide hazard mitigation planning to better protect the people and property of the County from effects of hazard events. This plan demonstrates the communities' commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources.

With the completion of this plan revision, Mesa County and participating jurisdictions are eligible for certain federal disaster assistance, specifically, the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program.

(Res. 05-10, 1-6-10)

42.08.050 Background and scope.

Each year in the United States, natural 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 dollars only partially reflect the true cost of disasters, because additional expenses to insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Many natural disasters are predictable, and much of the damage caused by these events can be reduced 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." On average, each dollar spent on mitigation saves society an average of \$4.00 in avoided future losses in addition to saving lives and preventing injuries. (National Institute of Building Science Multi-Hazard Mitigation Council 2005)

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 Mesa County's hazard mitigation planning process and identifies relevant hazards and vulnerabilities and strategies the County and participating jurisdictions will use to decrease vulnerability and increase resiliency and sustainability in Mesa County.

This revised 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 Section 201.6), and finalized on October 31, 2007. 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 Disaster Mitigation Act emphasizes 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).

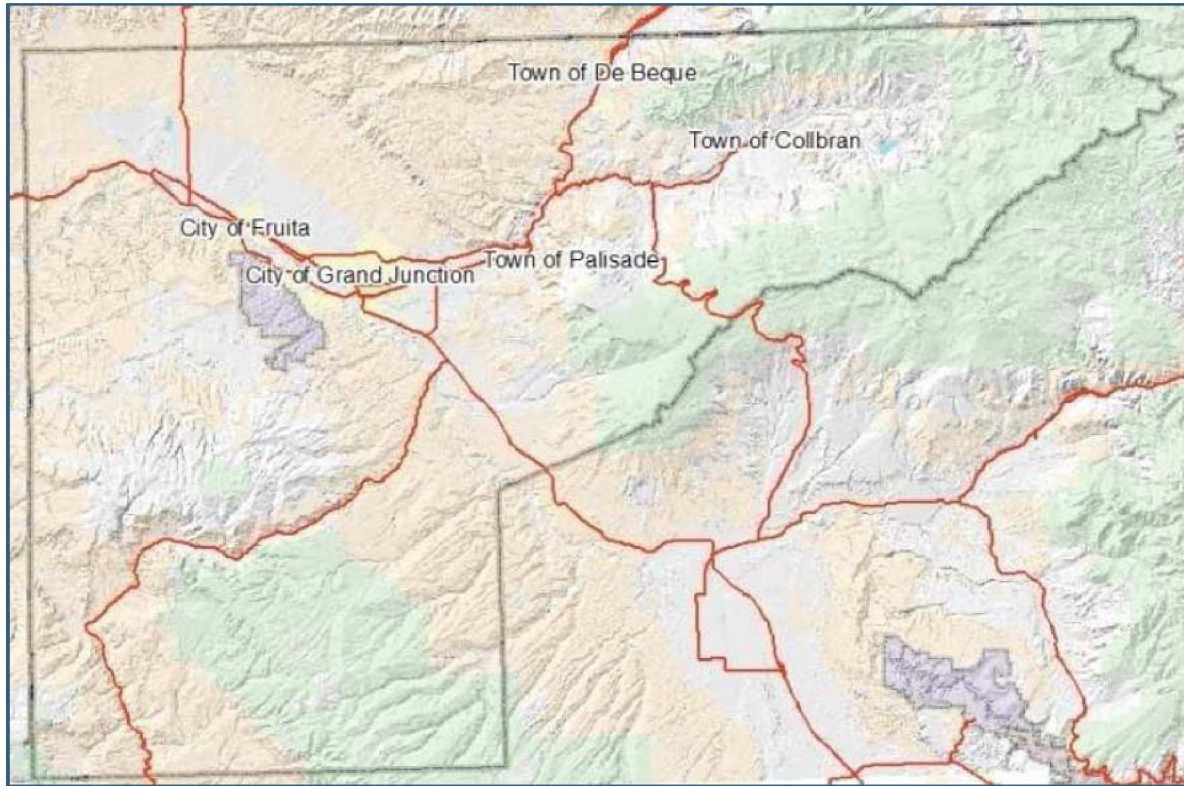
This revised plan addresses natural hazards and one manmade hazard – hazardous materials release. Although FEMA encourages communities to integrate manmade hazards into the mitigation planning process, the scope of this plan focused more on natural hazards. Additional plans have been developed to address other manmade hazards such as chemical, biological, and radiological terrorism through the Northwest All Hazard Emergency Management Region (NWAHEMR) and requires sensitivity towards confidentiality.

(Res. 05-10, 1-6-10)

42.08.060 Planning area profile.

Figure 1 shows a map of the Mesa County planning area, including the various jurisdictions who participated in the revision of this plan.

Figure 1: Hazard Mitigation Planning Area



(Res. 05-10, 1-6-10)

42.08.070 Geography and climate.

Mesa County is located on the western border of Colorado, 250 miles west of Denver. Interstate 70, the State's main east-west transportation corridor, travels directly through Mesa County. One of the 64 counties in Colorado, Mesa County encompasses 3,309 square miles, of which approximately 72 percent is publicly owned and is controlled primarily by the U.S. Forest Service and Bureau of Land Management. The City of Grand Junction is the County seat and is the largest city in Western Colorado. The Grand Junction area serves as the banking center, health care service provider and retail trade center for a large geographical area in western Colorado and eastern Utah.

The landscape of Mesa County has many unique features as it is located in a river valley surrounded by contrasting natural landmarks – such as the Colorado National Monument to the west, the Grand Mesa National Forest to the east, and the Bookcliffs to the north. These natural wonders provide diverse and abundant year-round recreational activities.

The Colorado National Monument is a beautiful geological display of towering red sandstone monoliths set against deep, sheer-walled canyons which are dotted throughout the 20,000 acres of the park. The Grand Mesa National Forest is said to be the largest flat-topped mountain in the world. It has more than 200 lakes and is home to the Powderhorn ski area.

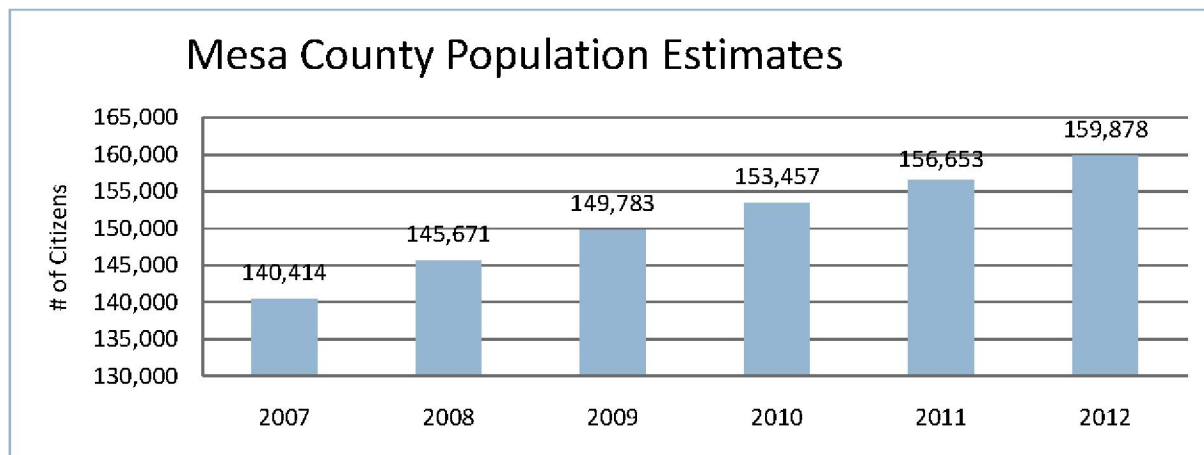
Mesa County's mild climate provides a sharp contrast to the eastern slope of Colorado. Residents enjoy mild winter temperatures with lows averaging only 26 degrees Fahrenheit (minus three degrees Celsius) in January with year-round low humidity. (Mesa County 2008 Budget Book)

(Res. 05-10, 1-6-10)

42.08.080 Population and demographics.

Mesa County estimates its 2008 population to be 144,440 which ranks it as the eleventh largest population of the 64 counties in Colorado. The County estimates include data from the State Demographer's Office and includes more up to date information on components of change – births, deaths, and change in group population. Mesa County also considers school enrollment numbers, new housing permits, household increases, and vacancy rate. Mesa County has used a conservative estimate when projecting future population and estimates the 2011 population to be 156,653, which is a 7.5 percent increase from 2008 as shown in Figure 2. The majority of the County's population is in unincorporated areas and is estimated to be 73,404 based on 2008 data from the Colorado State Demographer's Office; however, the City of Grand Junction's estimated population equals 55,189 as shown in Figure 3.

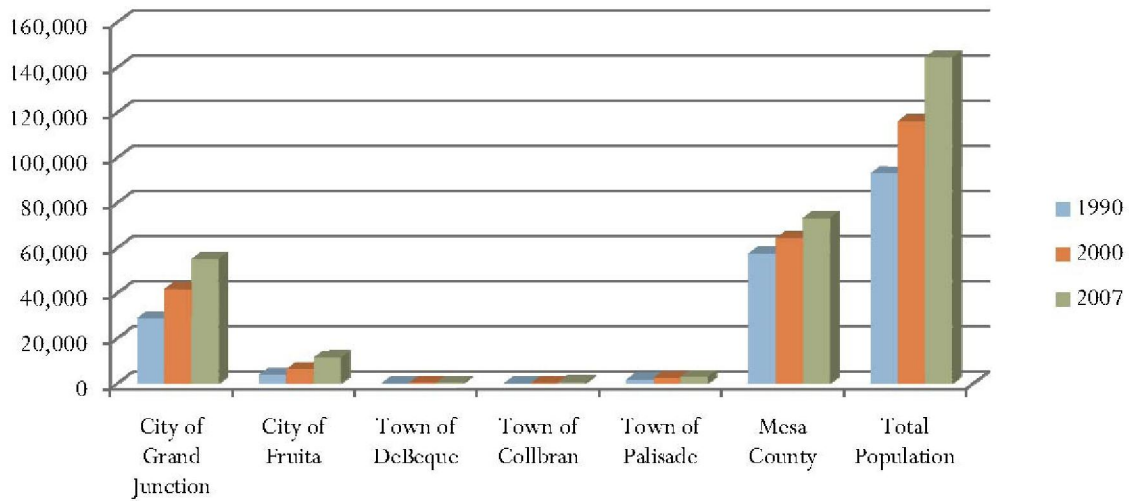
Figure 2: Estimated County Population



(Demographer)

Figure 3: Jurisdiction's Population

<i>Area</i>	<i>1990 Population</i>	<i>2000 Population</i>	<i>2008 Population</i>	<i>% Change</i>
City of Grand Junction	29,034	41,986	55,189	31%
City of Fruita	4,045	6,478	11,535	78%
Town of DeBeque	257	451	524	16%
Town of Collbran	228	388	683	76%
Town of Palisade	1,871	2,579	3,105	20%
Mesa County	57,710	64,373	73,404	14%
Total Population	93,145	116,255	144,440	24%



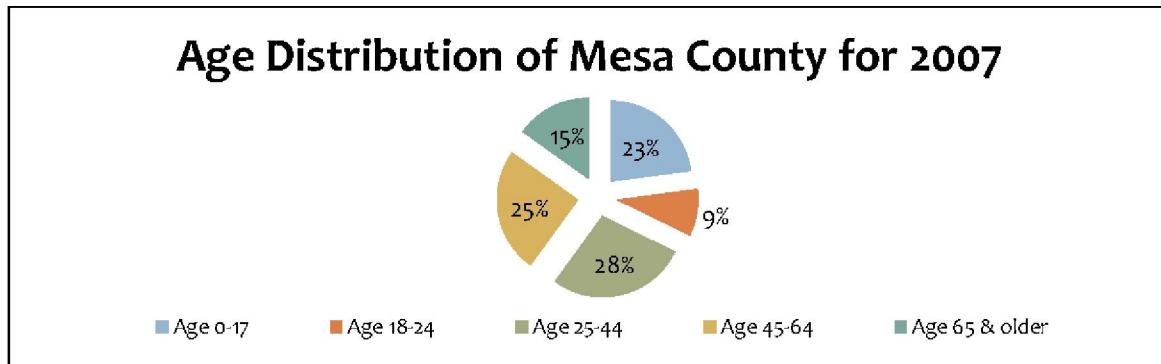
The U.S. Census Bureau demographic and social characteristics for Mesa County are shown in Tables 2 and 3 and Figure 4.

Table 2: Mesa County Demographic and Social Characteristics

Population Estimates by Race and Hispanic Origin in 2007	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
American Ind. or Alaskan Native Alone	1,480	12	1.10%	1.10%
Asian Alone	982	12	0.70%	0.70%
Black Alone	1,254	12	0.90%	0.90%
Native Hawaiian and Other Pac. Isl. Alone	166	10	0.10%	0.10%
White Alone	133,360	11	95.90%	95.90%
Two or More Race Groups	1,840	11	1.30%	1.30%
Hispanic or Latino (can be of any race)				
Non-Hispanic or Latino	122,889	10	88.40%	88.40%
Hispanic or Latino	16,193	11	11.60%	11.60%

(U.S. Census Bureau)

Figure 4: Age Distribution in Mesa County



(U.S. Census Bureau)

Mesa County is served by U.S. Highways 6, 24, and 50; Interstate Highway 70; and several State highways. Most of the communities, including the larger ones, are located along the U.S. and Interstate highway systems. General intra-County access is provided by more than 1,300 miles of County road. The Union Pacific Railroad mainline parallels the U.S. and Interstate highways from east to west through the County, and a branch line parallels U.S. Highway 50 to the south. Limited railroad passenger service by Amtrak is provided, with the bulk of service handling freight. Bus service is available and four major airlines and several commuter-type airlines provide passenger and freight service to Grand Junction.

Table 3: Mesa County Demographics

People and Income Overview (By Place of Residence)	Value	Rank in State	Industry Overview (2007) (By Place of Work)	Value	Rank in State
Population (2007)	139,082	<u>11</u>	Covered Employment	61,540	<u>10</u>
Growth (%) since 1990	49.30%	<u>24</u>	Avg. wage per job	\$36,221	<u>20</u>
Households (2000)	45,823	<u>11</u>	Manufacturing – % all jobs in County	5.40%	<u>16</u>
Labor Force (persons) (2007)	78,896	<u>10</u>	Avg. wage per job	\$38,724	<u>19</u>
Unemployment Rate (2007)	3.2	<u>39</u>	Transportation and Warehousing – % all jobs in County	4.10%	<u>5</u>
Per Capita Personal Income (2006)	\$30,746	<u>27</u>	Avg. wage per job	\$42,556	<u>20</u>
Median Household Income (2007)	\$49,926	<u>27</u>	Health Care, Social Assist. – % all jobs in County	14.00%	<u>3</u>
Poverty Rate (2007)	12	<u>36</u>	Avg. wage per job	\$40,983	<u>12</u>
H.S. Diploma or More – % of Adults 25+ (2000)	85	<u>31</u>	Finance and Insurance – % all jobs in County	3.60%	<u>12</u>
Bachelor's Deg. or More – % of Adults 25+ (2000)	22	<u>30</u>	Avg. wage per job	\$47,118	<u>21</u>

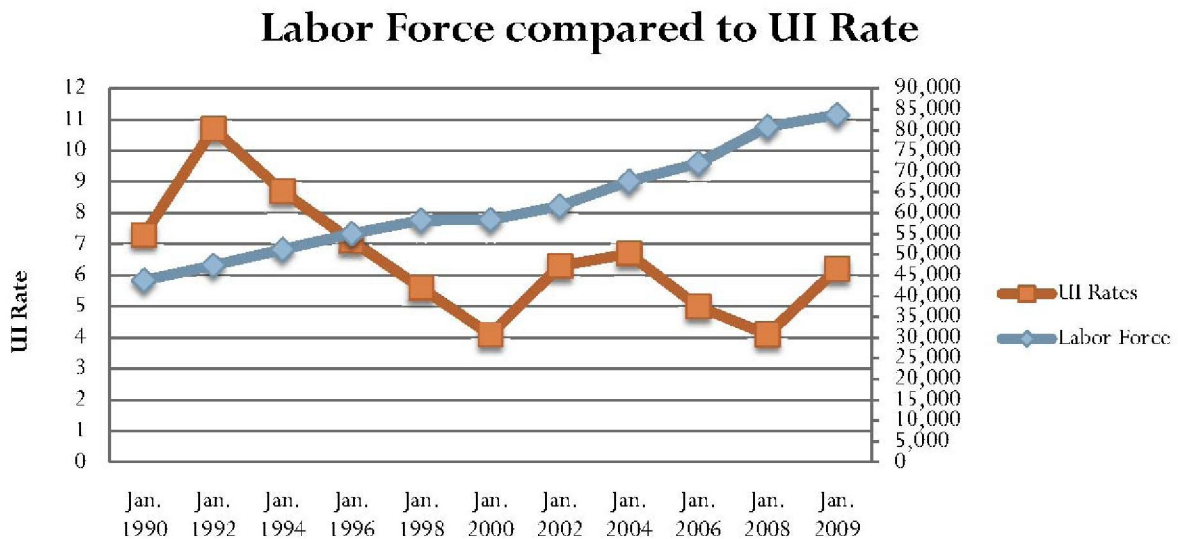
(U.S. Census Bureau)

(Res. 05-10, 1-6-10)

42.08.090 Economy.

Over the past several years, Mesa County had enjoyed an expanding economy. Job growth had increased to all-time highs with renewed mining activity and continued expansion in service producing industries. However, under current economic conditions, the mining industry suffered one of its steepest declines in recent history. The decrease in the energy industry is attributed to a sharp decline in natural gas prices and declining demand as it is tied directly to the national and global economic recession – the worst since the 1929 Great Depression. With the recession, Mesa County projects rising unemployment through at least Q4 2009 (see Figure 5). Mesa County has experienced significantly lower sales tax and use tax receipts, and has experienced lower demand for construction services, declining tourism, recreation activity and revenue.

Figure 5: Mesa County Labor Force and Unemployment



(Tuffin, 2009)

(Res. 05-10, 1-6-10)

Article III. Planning Process

42.08.100 Planning process.

44 CFR Requirement Section 201.6(c)(1): [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

As a requirement under the Disaster Mitigation Act of 2000, local jurisdictions are responsible for revising their Pre-Disaster Mitigation Plans every five years. This plan is a revision to the County’s Pre-Disaster Mitigation Plan that was completed in 2004 and approved in January 2005 under this requirement.

(Res. 05-10, 1-6-10)

42.08.110 Multi-jurisdictional participation.

44 CFR Requirement Section 201.6(a)(3): Multi-jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.

Mesa County invited every incorporated city and special district in the County to participate in the multi-jurisdictional Mesa County Hazard Mitigation Planning process. The Disaster Mitigation Act requires

that each jurisdiction participate in the planning process and officially adopt the multi-jurisdictional hazard mitigation plan. Each jurisdiction that chose to participate in the planning process and development of the plan was required to meet plan participation requirements defined at the beginning of the process, which included the following:

- (a) Designate a representative to serve on the HMPC.
- (b) Participate in HMPC meetings.
- (c) Complete and return worksheets.
- (d) Identify mitigation actions for the plan.
- (e) Review and comment on plan drafts.
- (f) Inform the public, local officials, and other interested parties about the planning process and provide opportunity for them to comment on the plan.
- (g) Formally adopt the Hazard Mitigation Plan.

(Res. 05-10, 1-6-10)

42.08.120 Ten-step planning process.

Mesa County used FEMA's Local Multi-Hazard Mitigation Planning Guidance (2008) and the State and Local Mitigation Planning How-To-Guides (2001), which include Multi-Jurisdictional Mitigation Planning (2006). The process used by Mesa County meets the funding eligibility requirements of the Hazard Mitigation Grant Program, Pre-Disaster Mitigation program, Community Rating System, and Flood Mitigation Assistance program. This plan is structured around a four-phase approach; organize resources, assess risks, develop the mitigation plan, and implement the plan and monitor progress.

(Res. 05-10, 1-6-10)

42.08.130 Phase 1 – Organize resources.

- (a) **Step 1: Organize the Planning Effort.** Mesa County's Hazard Mitigation Planning effort started with a kick-off meeting on August 11, 2009. The Mesa County Emergency Management Department mailed letters to County, municipal, district, State, and federal stakeholder representatives inviting representatives to attend the August 11th meeting and participate in the process. This list is located in Appendix B.

A planning committee was created that includes representatives from each participating jurisdiction, departments of the County, and other local, State, and federal agencies responsible for making decisions in the plan. Representatives at the kick-off meeting agreed to act as the Hazard Mitigation Planning Committee (HMPC).

The following agency representatives participated in the HMPC:

Marty Medina	Colorado Department of Transportation
Dave Wolny	Mesa State College
Vic Sturm	Town of Collbran
Aaron Laing	Colorado State Patrol
Adam Appelhanz	Town of Collbran (Collbran Marshal)
Dave Gitchell	Central Orchard Mesa Fire Protection District
David Smith	City of Grand Junction (Persigo)
Bud Thompson	Mesa County – Engineering
Andi Staley	Mesa County – Engineering/Floodplain Administrator

Chuck Vale	Colorado Division of Emergency Management
Garrett Jackson	Colorado Division of Water Resources
Kelly Rogers	Colorado State Forest Service
Mark Haynes	Colorado Division of Water Resources Dam Safety
Jim Pringle	National Weather Service (Grand Junction Office)
Andy Scott	Town of Palisade (Police Department)
Richard Rupp	Town of Palisade/Palisade Fire Department
Jane Quimby	Federal Bureau of Investigation
Mike Harvey	Plateau Valley Fire Protection District
Eric Mende	5-2-1 Drainage Authority
Bob Russell	City of Grand Junction (Police Department)
Drew Reekie	City of Grand Junction (Fire Department – Hazardous Materials)
Corey Lovern	City of Grand Junction (Fire Department – Hazardous Materials)
Bill Roth	City of Grand Junction (Fire Department)
Ken Watkins	City of Grand Junction (Fire Department)
Richard Proctor	Grand Valley Water Users Association
Barry Oelrich	Bureau of Land Management – Grand Junction Office
Frank Cavaliere	Lower Valley Fire Protection District
Bret Guillory	City of Grand Junction
Frank Hyde	Colorado National Monument
Steve Grant	Grand Junction Rural Fire Protection District
Kent Holsan	Clifton Fire Protection District
Brandi Manuppella	City of Grand Junction (Fire Department)
Mark Angelo	City of Fruita
Jim Fogg	Mesa County (Sheriff's Office)
Andrew Martsolf	Mesa County Emergency Management
Tristan Nelson	Mesa County GIS Department
Kimberly Bullen	Mesa County Emergency Management/Administration

The role of the HMPC was to collect data, make decisions on plan process and content, submit mitigation action implementation worksheets, review plan drafts, and coordinate and assist with community meetings and plan adoptions.

Four meetings were held with the Hazard Mitigation Planning Committee to gather data, develop mitigation actions, and review the draft plan. The agendas, sign-in sheets, and sample worksheets used to collect data are included in Appendix D. In addition, three community meetings were held across the valley to share the information and solicit input to the plan.

Meeting	Topic	Date
Kick-off Meeting	Introduction of planning process and discussion of hazards	August 11, 2009
HMPC #2	Review of risk assessment, identification of goals and objectives	September 3, 2009

Meeting	Topic	Date
HMPC #3	Identification and prioritization of mitigation actions, discussion of process to monitor, evaluate, and update plan	September 17, 2009
HMPC #4	Review of draft plan and priorities	December 9, 2009
Community Input Meeting #1	Discuss the process used, discuss the hazards in the community, seek input on prioritizations	December 10, 2009
Community Input Meeting #2	Discuss the process used, discuss the hazards in the community, seek input on prioritizations	December 11, 2009
Community Input Meeting #3	Discuss the process used, discuss the hazards in the community, seek input on prioritizations	December 14, 2009

During the kick-off meeting, Mesa County Emergency Management staff presented information on the scope and purpose of the plan, participation requirements of HMPC members, and the proposed project work plan and schedule. Also discussed were the hazard identification requirements and data. Table 4 shows the analysis of hazards in Mesa County. This table is based on past events, impacts and future probability for each of the hazards required by FEMA for consideration in a local hazard mitigation plan. Emergency Management staff refined the list of hazards relevant to Mesa County.

Table 4: Hazards in Mesa County

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Total Score	Hazard Level
Avalanche	2	4	6	32	M
Drought	8	4	4	48	M
Earthquake	6	4	4	40	M
Expansive Soils	2	4	2	16	L
Extreme Heat	8	4	2	40	M
Wildfire	6	8	4	80	H
Flood	6	8	4	80	H
Hailstorm	4	4	2	24	L
Land Subsidence	2	4	4	24	L
Landslide/Rockfall	4	8	6	80	H
Lightning	2	8	4	48	M
Tornado	2	4	2	16	L
Windstorm	4	6	4	48	M
Winter Storm	6	6	2	48	M
Dam Failure	4	4	6	40	M
Hazardous Materials	2	8	4	48	M

Geographic Location	
Large: greater than 50%	8
Medium: 25 – 50%	6
Small: 10 – 25%	4
Isolated: less than 10%	2

Magnitude/Severity	
Catastrophic:	8
Critical:	6
Limited:	4
Negligible:	2

Occurrence	
Highly Likely:	8
Likely:	6
Occasional:	4
Unlikely:	2

Formula: Total Score = Occurrences x Impacts

Occurrences x (Geographic Location + Magnitude/Severity)

Hazard Level is based on Total Score.

HMPC representatives were given several worksheets to begin the data collection process. A brief description of each worksheet is provided below and a sample of each worksheet is located in Appendix D. These worksheets were developed by AMEC Earth and Environmental.

Worksheet #1 is the Historical Hazard Event Data Collection Sheet which is used to gather historical events that have occurred in Mesa County.

Worksheet #2 is the Vulnerability worksheet used to determine the vulnerable populations, buildings, critical facilities, and infrastructure for each hazard that affects our jurisdiction. For this specific exercise, Mesa County made the decision to focus on the top three hazards affecting our County, which include wildfires, floods, and rockfalls. This particular information was used to estimate disaster losses which can then be used to gauge potential benefits of mitigation measures.

Worksheet #3 is the Capabilities Matrix which is filled out by each participating jurisdiction identifying various capabilities that exist with each entity.

Worksheet #4, the Mitigation Strategy worksheet, is used to identify possible mitigation actions. Based on the top three hazards that impact Mesa County, the HMPC divided into three groups to develop ideas regarding mitigation actions.

Worksheet #5 is the actual Mitigation Project Description. This worksheet is used to develop mitigation projects identified during the planning process and provide additional details about the project.

(b) Step 2: Public Involvement.

44 CFR Requirement Section 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing

the effects of natural disasters, the planning process shall include: (1) an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.

The HMPC discussed options for involving the public during the development of this plan. It was decided three Open House meetings would be scheduled once the draft plan was written. These meetings were held in Fruita, Colorado; Grand Junction, Colorado; and Palisade, Colorado, and sign-in sheets are located in Appendix H of this plan. The plan was also posted on the County's website at: www.mesacounty.us for review and comment and a press release was sent out to all media outlets in the community. Additional copies of the plan were made available at the following locations from December 1, 2009, to December 15, 2009.

Mesa County Courthouse Reception (544 Rood Ave., Grand Junction, CO)
Mesa County Sheriff's Office (215 Rice Street, Grand Junction, CO)
Mesa County Planning Department (750 Main Street, Grand Junction, CO)

Mesa County Emergency Management presented information on the purpose of the plan and its planning process, the results of the risk assessment, and the mitigation strategy developed by the HMPC. Members of the HMPC then presented the mitigation actions identified for the top three hazards in the community. The mitigation actions were mapped and described on posters around the room. Each attendee was given five sticky dots and asked to vote on their top five mitigation actions by placing their dots next to each one. The input gathered at each of the public meetings was used in the final prioritization of the mitigation actions.

(c) Step 3: Departments and Agencies Coordination.

44 CFR Requirement Section 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and nonprofit interested to be involved in the planning process; (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

There are numerous organizations whose goals and interests align with hazard mitigation in Mesa County. Coordination with these organizations and other community planning efforts is vital to the success of this plan. The Mesa County Office of Emergency Management invited other local, State, and federal departments to participate in this process with several of them serving as representatives on the HMPC. As a component of the coordination with other agencies, the HMPC collected and reviewed existing technical data, reports, and plans. State and federal agency data sources, including the National Weather Service and the Flash Flooding at the Colorado National Monument (1921-2003) Report produced by Professor Gigi Richard of Mesa State were used to collect information.

Mesa County and the participating communities also used a variety of comprehensive planning mechanisms, such as land use and general plans, emergency operations plans, and municipal ordinances and building codes as references. This information was used in the development of the hazard identification, vulnerability assessment, and capability assessment and in the formation of goals, objectives, and mitigation actions.

(Res. 05-10, 1-6-10)

42.08.140 Phase 2 – Assess risk.

- (a) Step 4: Identify the Hazards. During the kick-off meeting, the HMPC discussed past events, impacts, and future probability for each of the hazards required by FEMA for consideration in a local hazard mitigation plan. A profile of each hazard was then developed with the help of County GIS staff in developing GIS layers to display the information. The HMPC discussed the rankings as determined by the scores associated with each of the factors, i.e., occurrences, probability of

future occurrences, magnitude and severity. The committee concurred with the scoring and the ratings of hazards as either high, medium, or low hazards. The committee then determined the areas affected by the top three hazards and GIS mapped out the areas using a subjective boundary.

- (b) **Step 5: Assess the Risks.** After profiling the hazards that could impact Mesa County, the Emergency Management Department staff collected information to describe the likely impacts of future hazard events in the participating jurisdictions. This step involved two parts: a vulnerability assessment and a capability assessment.

The vulnerability assessment involves an inventory of assets at risk to natural hazards and in particular wildfires, flooding, and rockfall/landslides. These assets included total number and value of structures; critical facilities and infrastructure; natural, historic and cultural assets; and economic assets. Mesa County Emergency Management staff completed detailed analysis for each community participating in this revision of the plan. The analysis was used to determine the proportion of value of buildings in the hazard areas that were identified by the HMPC. The County GIS system was used by first selecting parcels from the Assessor's data that have their center within the City or Town limits and then making a sub-selection of parcels that have their center within the defined hazard area. Structure value is based on the actual value of improvements.

A similar process was completed for each jurisdiction to understand the affected population. This analysis used census tract data in the GIS system. Population numbers were increased by 2.2 percent per year to adjust for population growth. (Martsolf, 2009)

The capability assessment consists of identifying the existing mitigation capabilities of participating jurisdictions. This includes government programs, policies, regulations, ordinances, and plans that mitigate or could be used to mitigate risk to disasters. Participating jurisdictions collected information on their regulatory, personnel, fiscal, and technical capabilities as well as ongoing initiatives related to interagency coordination and public outreach. This information is included in Appendix E.

(Res. 05-10, 1-6-10)

42.08.150 Phase 3 – Develop the mitigation plan.

- (a) **Step 6: Set Goals.** The HMPC divided themselves into three groups with each group assigned to develop mitigation goals to one of the three "high" hazards. The groups identified possible locations and possible actions that could be integrated into existing planning.
- (b) **Step 7: Review Possible Activities.** At the third committee meeting, the HMPC identified and prioritized mitigation actions. The HMPC conducted a brainstorming session in which each committee member identified at least one mitigation action to address each of the plan's goals.

As with each priority, there is a responsible agency to ensure the project is completed. The HMPC identified the responsible agency for implementing each action. The responsible agency then completed the Mitigation Project Description Worksheet (worksheet #5). These worksheets allow the HMPC to document background information, ideas for implementation, alternatives, responsible agency, partners, potential funding, cost estimates, benefits, and timeline for each identified action.

- (c) **Step 8: Draft the Plan.** A draft of the revised Mesa County Multi-Hazard Mitigation Plan was developed by Mesa County Department of Emergency Management staff and submitted to the HMPC for internal review. Once the committee's comments were incorporated, a complete draft of the plan was made available online and in hard copy for review and comment by the public and other agencies and interested stakeholders. The review period was from December 1, 2009, to December 15, 2009. Public comments were integrated into a final draft for submittal to the Colorado Division of Emergency Management and FEMA Region VIII.

(Res. 05-10, 1-6-10)

42.08.160 Phase 4 – Implement the plan and monitor progress.

- (a) Step 9: Adopt the Plan. To implement the plan, the governing bodies of each participating jurisdiction adopted the plan with a formal resolution. Scanned copies of resolutions of adoption are included in Appendix A.
- (b) Step 10: Implement, Evaluate, and Revise the Plan. The HMPC developed and agreed upon an overall strategy for plan implementation and for monitoring and maintaining the plan over time. This strategy is further described in the plan implementation section.

(Res. 05-10, 1-6-10)

Article IV. Risk Assessment**42.08.170 Risk assessment.**

Requirement Section 201.6(c)(2): [The plan shall include] a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

Risk to natural hazards is a combination of hazard, vulnerability, and capability. The risk assessment process identifies and profiles relevant hazards and assesses the exposure of lives, property, and infrastructure to these hazards. The goal of the risk assessment is to estimate the potential loss in Mesa County, including loss of life, personal injury, property damage, and economic loss, from a hazard event. The risk assessment process allows communities in Mesa County to better understand their potential risk to natural hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

The risk assessment for Mesa County and its jurisdictions followed the methodology described in the FEMA publication 386-2, *Understanding Your Risks: Identifying Hazards and Estimating Losses (2002)*, which includes a four-step process:

- (a) Identify hazards;
- (b) Profile hazard events;
- (c) Inventory assets;
- (d) Estimate losses.

This article is divided into three parts: hazard identification, hazard profiles, and vulnerability assessments.

(Res. 05-10, 1-6-10)

42.08.180 Hazard identification.

Requirement Section 201.6(c)(2)(i): [The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction.

The Mesa County Hazard Mitigation Planning Committee (HMPC) reviewed data and discussed the impacts of each of the hazards required by FEMA for consideration, which are listed below, to determine the hazards that threaten Mesa County and its jurisdictions:

Avalanche	Expansive Soils	Landslide	Windstorm
Coastal Erosion	Extreme Heat	Severe Winter Storm	
Coastal Storm	Flood	Tornado	
Dam/Levee Failure	Hailstorm	Tsunami	

Drought	Hurricane	Volcano
Earthquake	Land Subsidence	Wildfire

Data on past impacts and future probability of these hazards was collected from the following sources:

State of Colorado Natural Hazard Mitigation Plan (2007)

Mesa County Pre-Disaster Mitigation Plan (2004)

Spatial Hazard Event and Loss Database (SHELDUS), a component of the University of South Carolina Hazards Research Lab

National Oceanic and Atmospheric Administration's (NOAA) National Climatic Data Center

Disaster declaration history from FEMA, the Public Entity Risk Institute, and the U.S. Department of Agriculture (USDA) Farm Service Agency

The HMPC eliminated some hazards from further analysis because they do not occur in Mesa County or their impacts were not considered significant in relation to other hazards. Table 5 lists these hazards and the reasoning for their removal from consideration.

Table 5: Removed Hazards

Hazard	Explanation for Removal from Plan
Coastal Erosion	Mesa County is not near coastal area.
Coastal Storm	Mesa County is not near coastal area.
Hailstorm	Hailstorms occur, but large-sized damaging hail is rare. Past damage has been negligible.
Hurricane	Mesa County is not near coastal area.
Tsunami	Mesa County is not near coastal area.
Volcano	Dotsero, near Glenwood Canyon, is the only volcano of concern in Colorado. It has not erupted in 4,000 years.

The HMPC identified 13 natural hazards that could affect Mesa County and other jurisdictions. These hazards are profiled in further detail throughout this plan. Although not required by the Disaster Mitigation Act of 2000, the HMPC decided to address one manmade hazard – hazardous materials release. The risk from this hazard is related primarily to the transportation of hazardous materials through the County or from a release generated at any one of the number of facilities that produces or stores chemicals on site.

(Res. 05-10, 1-6-10)

42.08.190 Disaster declaration history.

Mesa County has received the following disaster declarations:

Year	Type of Declaration	Hazard
1984	Presidential	Flooding
1995	State	Flooding
2002	Presidential	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Drought

(Res. 05-10, 1-6-10)

42.08.200 Hazard profiles.

Requirement Section 201.6(c)(2)(i): [The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Requirement Section 201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. The description shall include an overall summary of each hazard and its impact on the community.

The hazards identified in this section are profiled individually and a summary of the probability of future occurrence and potential magnitude is provided. Each hazard was also given an overall rating of High – Medium – Low based on the score it received by using the following formula:

$$\text{Total Score} = \text{Occurrences} \times \text{Impacts} \quad (\text{Occurrences} \times [\text{Geographic Location} + \text{Magnitude/Severity}])$$

Detailed profiles for each of the identified hazards include the following information:

- (a) **Hazard Description.** This section consists of a general description of the hazard and the general impacts it may have on a community.
- (b) **Geographic Location.** This section describes the geographic extent or location of the hazard in the planning area and identifies the affected area as isolated, small, medium, or large.
 - (1) Large – Greater than 50 percent of the County affected.
 - (2) Medium – 25 to 50 percent of the County affected.
 - (3) Small – 10 to 25 percent of the County affected.
 - (4) Isolated – Less than 10 percent of the County affected.
- (c) **Occurrence.** This section includes information on historic incidents, including impacts and costs, if known. A historic incident worksheet (worksheet #1) was used to capture the incident information from participating jurisdictions.
- (d) **Future Occurrence.** The frequency of past events is used to gauge the likelihood of future occurrences. Based on historical data, the probability of future occurrence is categorized as follows and given a corresponding score:
 - (1) Highly Likely: (8). Near 100 percent chance of occurrence next year or happens every year.
 - (2) Likely: (6). Ten to 100 percent chance of occurrence in next year or has a recurrence interval of 10 years or less.

- (3) Occasional: (4). One to 20 percent chance of occurrence in the next year or has a recurrence interval of 11 to 100 years.
- (4) Unlikely: (2). Less than one percent chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.

The probability, or chance of occurrence, was calculated where possible based on existing data.

- (e) Magnitude/Severity. This section summarizes the magnitude/severity or extent of hazard event in terms of deaths, injuries, property damage, and interruption of essential facilities and services. Magnitude and severity is classified in the following manner and given a corresponding score:
 - (1) Catastrophic. Multiple deaths; property destroyed and severely damaged; and/or interruption of essential facilities and service for more than 72 hours.
 - (2) Critical. Isolated deaths and/or multiple injuries and illnesses; major or long-term property damage that threatens structural stability; and/or interruption of essential facilities and services for 24 to 72 hours.
 - (3) Limited. Minor injuries and illnesses; minimal property damage that does not threaten structural stability; and/or interruption of essential facilities and services for less than 24 hours.
 - (4) Negligible. No or few injuries or illnesses; minor quality of life loss; little or no property damage; and/or brief interruption of essential facilities or services.

(Res. 05-10, 1-6-10)

42.08.210 Avalanche.

Avalanche hazards occur mostly in mountainous regions of Colorado above 8,000 feet. The vast majority of avalanches occur during and shortly after winter storms. Avalanches occur when loading of new snow increases stress at a rate faster than strength develops, and the slope fails. While most avalanches are caused by the weight of accumulated snow, other triggers can be caused by human activities (e.g., skier, snowshoer, and snowmobiler).

- (a) Geographic Location. The geographic extent of this hazard in Mesa County is isolated – less than 10 percent of the County is affected.

The avalanches in Mesa County have primarily occurred on the Grand Mesa which is primarily federally owned land.

- (b) Previous Occurrences. According to the National Climatic Data Center Storm Events Database and the CAIC information, Mesa County has had four recorded avalanches from 1959 to 2006.
 - (1) January 30, 1999 – Nine snowmobilers were traversing the north side of the Grand Mesa at the 10,600-foot level. The snowmobiler who was third in line triggered a small hard-slab avalanche which buried him under five feet of snow ending with unsuccessful resuscitation efforts.
 - (2) February 24, 2002 – A snowmobiler triggered a soft-slab avalanche near Flat Top Mountain in extreme northeast Mesa County, about eight miles south southwest of Sunlight Ski Area. This avalanche was about 300 feet across and two feet deep, beginning at an elevation of just below the 10,200-foot level. The avalanche ran approximately 400 vertical feet. The victim was found after having been buried for approximately 30 minutes. Resuscitation efforts were unsuccessful.
 - (3) February 4, 2004 – Avalanche swept across Highway 65 at mile marker 36 on the Grand Mesa. One vehicle was buried and the road was closed in both directions until the next day. No injuries or fatalities reported; however, \$5,000 in property damage was reported.
 - (4) April 1, 2005 – A backcountry skier was killed when he triggered an avalanche at about 10,560 feet above sea level on the Grand Mesa while ascending a slope. The skier was swept

over some rocks and down into some trees. His companion notified 911 dispatch of the incident. CDOT employees and Mesa County Search and Rescue responded and found the victim approximately two hours after he was buried.

- (c) Probability of Future Occurrence. The probability of future occurrence for avalanches in Mesa County is considered occasional or a one to 10 percent chance of happening in the next year.
- (d) Magnitude/Severity. Three out of the four avalanche events recorded resulted in a death, categorizing the magnitude/severity of this hazard as critical.

(Res. 05-10, 1-6-10)

42.08.220 Dam failure.

- (a) Hazard Description. Dams are manmade structures built for a variety of uses, including flood protection, power, agriculture, water supply, and recreation. Dams typically are constructed of earth, rock, concrete, or mine tailings. Two factors that influence the potential severity of a full or partial dam failure are the amount of water impounded and the density, type, and value of development and infrastructure located downstream.

Dam failures can result from any one or a combination of the following causes:

- (1) Prolonged periods of rainfall and flooding, which result in overtopping (overtopping is the primary cause of earthen dam failure);
 - (2) Earthquake;
 - (3) Inadequate spillway capacity resulting in excess overtopping flows;
 - (4) Internal erosion caused by embankment or foundation leakage or piping or rodent activity;
 - (5) Improper design;
 - (6) Improper maintenance;
 - (7) Negligent operation;
 - (8) Failure of upstream dams on the same waterway.
- (b) Geographic Location. The geographic extent of this hazard in Mesa County is small – 10 to 25 percent of the County is affected.

The Colorado Division of Water Resources provided a list of dams in Mesa County as shown in Table 6 and their classification based on the potential hazard to the downstream area resulting from failure of the dam:

- (1) Class I (High Hazard): Failure of dam would likely result in loss of life.
- (2) Class II (Significant Hazard): Failure of dam would not cause loss of life, but would cause extensive and/or severe property damage.

Based on these classifications, there are 23 high hazard dams and 28 significant hazard dams in Mesa County. High and significant hazard dams all have emergency action plans in place.

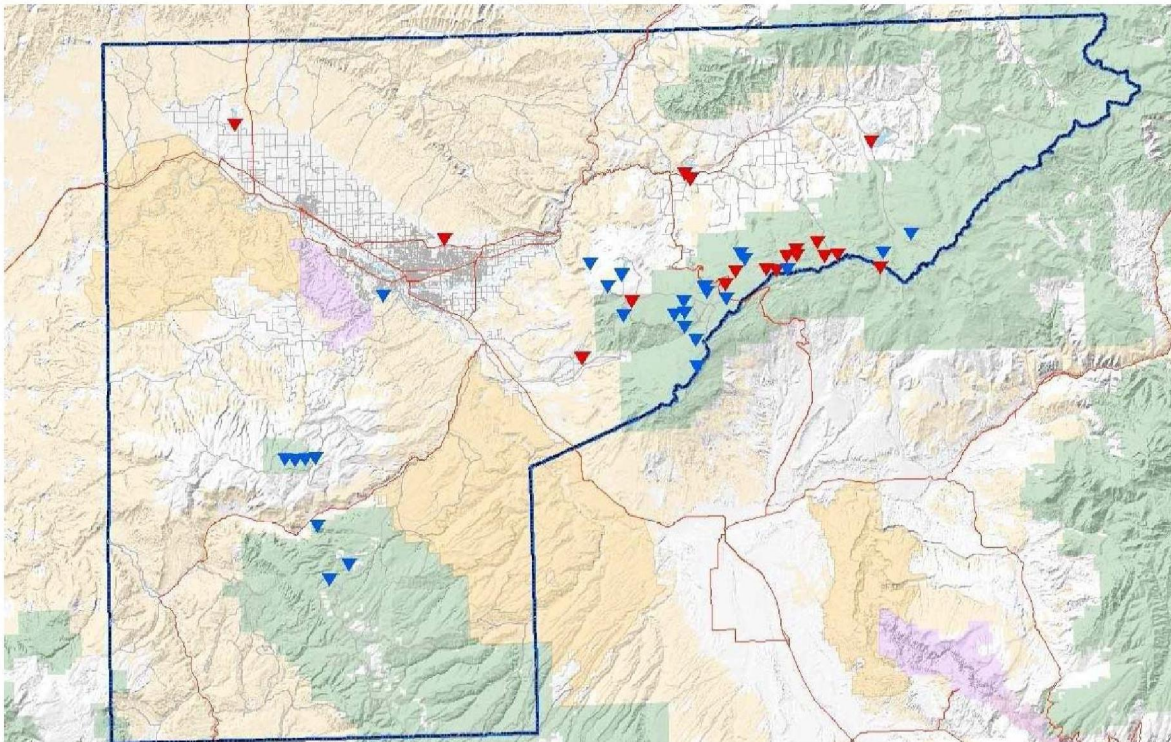
Table 6: Class I – Class II Hazard Dams

Dam Name	HAZCLASS	YRCOMPL	EPP DATE
ALSBURY	1	1996	
BIG CREEK #1	1	1893	17-Nov-05
BIG CREEK #3	1	1893	17-Nov-05
BONHAM-WELLS	1	1900	17-Nov-05
BULL CREEK #4	1	1901	06-Nov-00
COON CREEK #1	1	1900	17-Apr-95
COTTONWOOD #1	1	1894	17-Nov-05
COTTONWOOD #2	1	1895	17-Nov-05
COTTONWOOD #5	1	1909	17-Nov-05
HALLENBECK #1	1	1970	20-Apr-09
INDIAN WASH DET.	1	1965	05-Sep-06
JERRY CREEK #1	1	1964	01-Apr-08
JERRY CREEK #2	1	1978	01-Apr-08
JERRY CREEK DIKE 1	1	1978	01-Apr-08
JUNIATA	1	1979	01-Jan-05
KITSON	1	1911	17-Nov-05
LEON LAKE	1	1898	09-Sep-05
PARKER BASIN #1	1	1899	17-Nov-05
PARKER BASIN #3	1	1899	17-Nov-05
SOMERVILLE-McCULLAH	1	1972	20-Apr-09
UPPER HIGHLINE	1	1967	06-Aug-06
VEGA	1	1959	02-Sep-08
Y T RANCH	1	1911	
ANDERSON #1	2	1963	20-Apr-09
ANDERSON #2	2	1974	20-Apr-09
BIG BEAVER	2	1947	06-Nov-00
BOLEN	2	1973	20-Apr-09
BULL BASIN #2	2	1953	08-Mar-95
BULL CREEK #5	2	1901	06-Nov-00
CASTO	2	1940	01-Jan-08
COLBY HORSE PARK	2	1956	04-Oct-06
COTTONWOOD #4	2	1896	17-Nov-05
CRAIG #1	2	1951	01-Jan-08
CRAIG #2	2	1960	01-Jan-08
DEEP CREEK #2	2	1906	01-Jan-05
FLOWING PARK	2	1973	20-Apr-09
FRUITA #1	2	1949	31-Mar-95
FRUITA #2	2	1959	31-Mar-95

Table 6: Class I – Class II Hazard Dams

Dam Name	HAZCLASS	YRCOMPL	EPP DATE
GARDNER LAKE	2	1980	20-Apr-09
GOBBO #1	2	1973	20-Dec-07
GOBBO #3	2	1973	12-Mar-99
GRAND MESA #1	2	1887	20-Apr-09
GRAND MESA #8	2	1901	20-Apr-09
HALLENBECK #2	2	1943	20-Apr-09
HOGCHUTE	2	1947	01-Jan-05
MESA CREEK #1	2	1893	22-Feb-95
MESA CREEK #3	2	1890	22-Feb-95
MESA CREEK #4	2	1892	22-Feb-95
MONUMENT #1	2	1960	09-Nov-90
PALISADE CABIN	2	1956	05-Dec-08
RAPID CREEK #1	2	1934	28-Nov-95

Figure 6 is a map showing locations of the Class I and II Dams in Mesa County.

Figure 6: Map of Dams in Mesa County

(Mesa County GIS)

(c) Previous Occurrences.

- (1) June 1983 – Grand Mesa Dam No. 8 overtopped and failed during spring runoff due to emergency spillway being blocked by snow and ice. Snowmelt produced high inflow to the reser-

voir which overtopped dam. Minor flooding downstream with damage to Highway 65 and Lands End Road. Significant damage was reported to the dam. Dam was repaired and spillway enlarged.

- (2) Spring 1998 – Fruita No. 1 dam located at the head of North East Creek south of Glade Park failed as a result of failing downstream slope. This slope failed on two separate occasions, reservoir level was restricted until dam was rehabilitated in 2009. Because this failure happened during normal operations, actual flooding was prevented.
 - (3) 1996 – Upper Highline Dam in unincorporated Mesa County (Mack) suffered settling and deformation of the dam. The dam crest settled several feet at the west end and reservoir was drained so dam could be rehabilitated. This intervention prevented failure and flooding. Significant damage reported to State-owned dam.
 - (4) 1983 – Vincient No. 2 dam (above the Town of Palisade) overtopped during spring runoff and failed. When a hazard classification is given to a dam, it is done so based on the consequences of the dam’s failure absent flooding conditions, i.e., on a clear day in summer with the stream at a “normal” level. When Vincient No. 2 failed, the stream below was running bank-full from snowmelt and the resulting failure discharge jumped out of the channel and did more damage downstream than would have normally occurred. It is important to remember that a low hazard dam can still cause a significant amount of damage and possibly result in loss of life, depending on the timing of the failure. (Jackson, 2009)
- (d) Probability of Future Occurrence. The probability of future occurrence is occasional, meaning there is a one to 10 percent chance of occurrence in the next year or has a recurrence interval of 11 to 100 years. Due to the documented cases above, there is a possibility of future dam failures.
- (e) Magnitude/Severity. Depending on the hazard class of the dam, the magnitude/severity of a dam failure is listed as catastrophic. Multiple deaths, destroyed or severely damaged property, and/or interruption of essential facilities and services is possible. As indicated above, Mesa County has several Class 1 (High Hazard) dams which would cause loss of life upon failure of the dam.

(Res. 05-10, 1-6-10)

42.08.230 Drought.

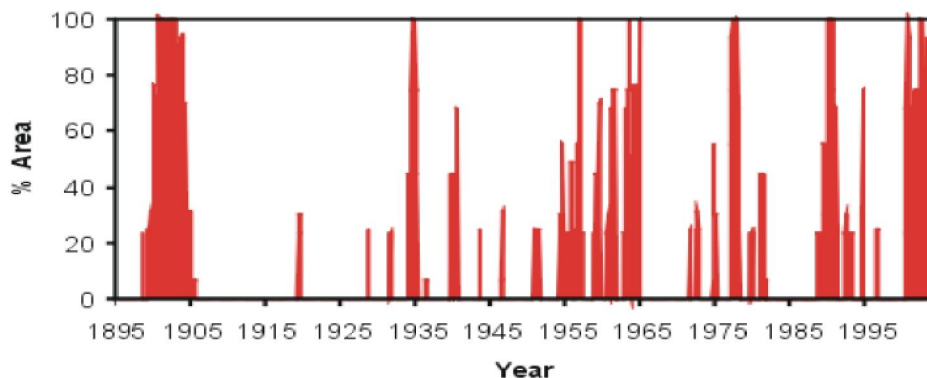
- (a) Hazard Description. Drought is a normal, recurrent feature of climate, although some consider it a rare and random event. It occurs in virtually all climatic zones, but characteristics vary significantly from one region to another. It originates from a deficiency of precipitation over an extended period of time, usually a season or more. (University of Nebraska Lincoln, 2009)

Due to Colorado’s semiarid conditions, drought is a natural but unpredictable occurrence in the State. The onset of drought in western Colorado counties is usually signaled by a lack of significant winter snowfall.

- (b) Geographic Location. The geographic location of this hazard is considered large in Mesa County, with more than 50 percent of the County affected.
- (c) Previous Occurrence. According to the National Climatic Data Center, Mesa County and respective towns and municipalities have experienced several drought periods over time. Since 1999 Mesa County was experiencing multi-year drought conditions and beginning in May of 2002, western Colorado was experiencing its first full month of severe to extreme drought conditions. The most intense drought classification, exceptional drought conditions, had developed. Low elevation snow-pack had already melted throughout the area and many seasonal streams dried up by the end of May. The drought began to have a major impact on agricultural interest and to a lesser degree on the outdoor recreational industry. Perhaps of most importance, the drought created a large potential for major wildfires. Below is a list of drought occurrences as recorded by the National Climatic Data Center.

- (1) May 2002 – May was the first full month of severe to extreme drought conditions in western Colorado. The most intense drought classification, exceptional drought conditions, had developed in the southwest corner of the State by the end of the month. Low elevation snowpack had already melted throughout the area before May, with many seasonal streams dried up by the end of May. In May, the drought began to have a major impact on agricultural interests, and to a lesser degree on the outdoor recreation industry. Perhaps of most importance, the drought created a large potential for major wildfires.
- (2) July 2003 – Severe to extreme drought conditions continued across western Colorado during the month. Although monsoon moisture did bring thunderstorms to the area, significant rainfall amounts were not widespread in coverage. Additionally, record high temperatures occurred through much of the month.
- (3) July 2004 – Surges of subtropical moisture in monsoonal flow resulted in a few bouts of widespread precipitation across western Colorado during the month, with locally heavy rains occurring in some areas. However, this had little impact on the long-term drought situation across the area, and moderate to severe drought continued across most of western Colorado.
- (4) July 2005 – Occasional surges of monsoonal moisture resulted in periods of thunderstorms across western Colorado during the month of July, mainly during the second half of the month. However, typical hot conditions persisted for much of the month and the rainfall that did occur had little impact on the drought conditions across the area. Northwest Colorado remained in moderate to severe drought conditions. Although the remainder of western Colorado was no longer categorized as being in a drought, multiple years of below normal precipitation continued to cause water supply concerns.
- (5) March 2007 – Below normal precipitation through the month caused an increase in the dryness and drought conditions across western Colorado.

Percent Area of the Upper Colorado Basin Experiencing Severe to Extreme Drought January 1895–March 2004



Based on data provided by the National Climatic Data Center, NOAA

Copyright 2004 National Drought Mitigation Center

- (d) Probability of Future Occurrence. The probability of future occurrence is occasional, meaning there is a one to 10 percent chance of occurrence in next year or has a recurrence interval of 11 to 100 years. According to the Colorado Drought Mitigation and Response Plan, Colorado was in a drought for 48 of the past 115 years (1893 – 2007). Therefore a 42 percent chance exists that a drought will happen in Colorado in any given year. (J. Truby, January 2001)

- (e) **Magnitude/Severity.** The magnitude/severity of drought conditions is limited. Drought impacts in Mesa County can be wide reaching: economic, environmental, and societal. The most significant impacts in Mesa County and respective jurisdictions are related to wildfire protection and agriculture. Mesa County economy consists of a number of fruit and vegetable growers who are heavily impacted by drought conditions.

(Res. 05-10, 1-6-10)

42.08.240 Earthquake.

- (a) **Hazard Description.** Earthquakes are defined as the sudden release of energy occurring from the collision or shifting of crustal plates on the earth's surface or from the fracture of stressed rock formations in that crust. The release of energy results in the earth shaking, rocking, rolling, jarring and jolting, having the potential to cause minimal to great damage. Earthquakes are measured by units of magnitude, which is a logarithmic measure of earthquake size. This means that at the same distance from the earthquake, the shaking will be 10 times as large during a magnitude 5 earthquake as it would during a magnitude 4 earthquake. (EHP Web Team, 2009)

Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks, such as water, power, communication and transportation systems. Secondary impacts can include landslides, liquefaction, fires, and dam failure.

- (b) **Geographic Location.** Colorado is comprised of areas with low to moderate potential for damaging earthquakes, based on research by geologists and geophysicists who specialize in seismology. There are about 90 potentially active faults that have been identified in Colorado, with documented movement within the last 1.6 million years. However, there are several thousand other faults that have been mapped in Colorado that have not been sufficiently studied to know whether they are capable of generating earthquakes or not.

It is not possible to accurately estimate the timing or location of future dangerous earthquakes in Colorado. The lack of an adequate network of seismometers in Colorado makes it difficult to detect and locate earthquakes. Moreover, the historical record is quite short (~150 years). Nevertheless, the available seismic hazard information can provide a basis for a reasoned and prudent approach to seismic safety. (Subcommittee, 1999)

Mesa County has a considerable amount of fault lines as shown in Figure 7 that are located within the County but has not recently experienced a significant earthquake event.

- (c) **Previous Occurrences.** Many of Colorado's earthquakes occur in mountainous regions of the State with some having been located in the western valley and plateau region. The Colorado Geological Survey has estimated that the largest earthquake possible on the Western Slope of Colorado is magnitude 6.5. This estimate is based on studies of the fault systems in Western Colorado. The two largest fault systems in Western Colorado area associated with the Uncompahgre Uplift and the White River Uplift.

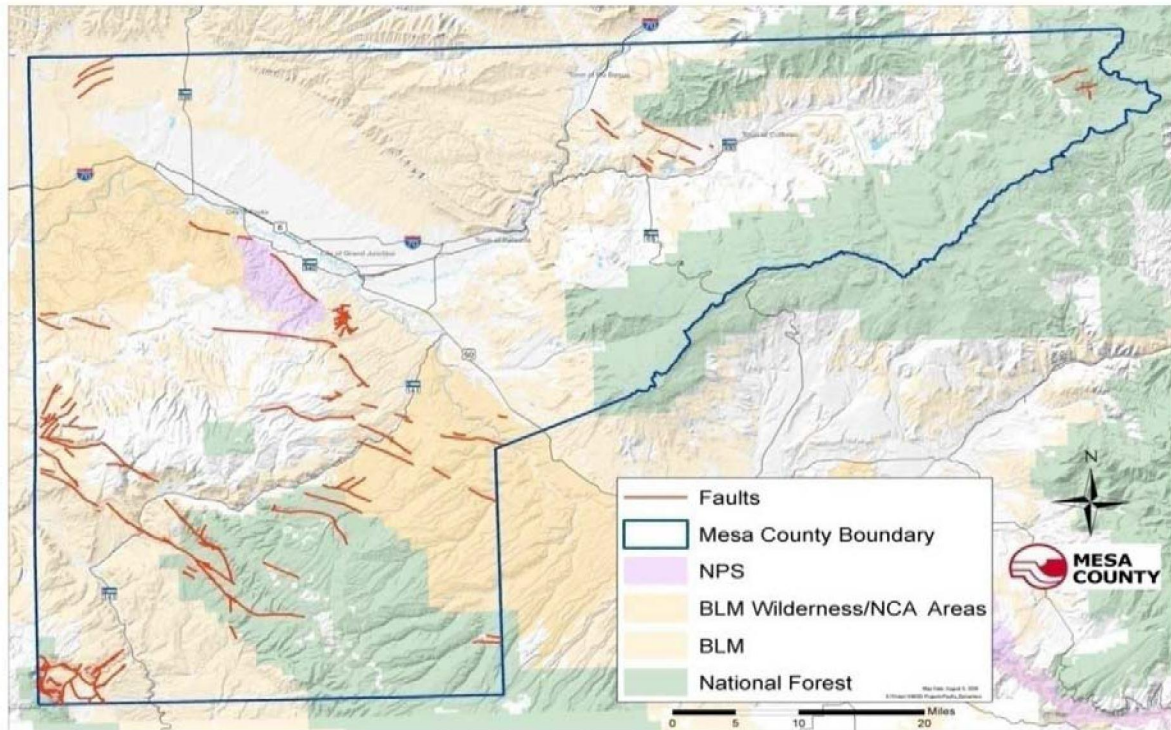
The areas of most concern are the Uncompahgre Plateau and Paradox Valley. The Uncompahgre has the greatest potential for producing a large natural event. The Paradox Valley has the greatest potential for creating a large manmade seismic event. Below are the two significant events that have occurred in Mesa County.

- (1) 1971 – 4.5 magnitude earthquake, Glade Park Fault (unincorporated Mesa County).
- (2) 1975 – 4.4 magnitude earthquake northeast of Fruita, Colorado (Mesa County).

- (d) **Probability of Future Occurrence.** The probability of future occurrence for an earthquake in Mesa County or neighboring jurisdictions is occasional resulting in a one to 10 percent chance of occurrence in the next year or has a recurrence interval of 11 to 100 years.

- (e) **Magnitude/Severity.** The magnitude/severity of an earthquake is limited resulting in minor injuries and illnesses, minimal property damage that does not threaten structural stability and/or interruption of essential facilities and services for less than 24 hours.

Figure 7: Faults in Mesa County



Source: Mesa County GIS

(Res. 05-10, 1-6-10)

42.08.250 Flood.

- (a) **Hazard Description.** Flooding has occurred repeatedly throughout Mesa County and will continue to occur. FEMA defines “flooding” as “a partial or complete inundation of normally dry land areas from (1) the overland flow of a lake, river, stream, ditch, etc.; (2) the unusual and rapid accumulation or runoff of surface waters; and (3) mudflows or the sudden collapse of shoreline land.” (www.training.fema.gov/EMIWeb/IS/IS394A/glossary-0306.doc)

Snowmelt flooding is characterized by moderate peak flows, large volume, and long duration, and is marked by a diurnal fluctuation in flow. Rainfall on melting snow may speed up the melting process and increase flood flow. General rain floods are caused by prolonged heavy rainfall over large areas and are characterized by high peak flows of moderate duration. Cloudburst floods characteristically have high peak flows, high velocities, short durations, and small volumes of runoff. (FEMA, Flood Insurance Study, Mesa County Colorado, 2009)

The area adjacent to a river channel is its floodplain. In its common usage, “floodplain” most often refers to that area that is inundated by the 100-year flood, the flood that has a one percent 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, dam failure floods (see GJMC 42.08.220, Dam failure), and local drainage floods. The 100-year flood is the national standard to which communities regulate their floodplains through the National Flood Insurance Program.

The potential for flooding can change and increase through various land use changes. 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 occur as the result of other events such as wildfires. Wildfires create hydrophobic soils, in which the soils harden preventing rainfall from being absorbed into the ground.

FEMA also defines “flash flooding” as “flood that arises very quickly, occurring suddenly, within a short time (from minutes to less than six hours), and usually is characterized by high flow velocities. Flash floods often result from intense rainfall over a small area, usually in areas of steep terrain.” (www.training.fema.gov/EMIWeb/IS/IS394A/glossary-0306.doc)

Flooding in Mesa County is caused mainly by snowmelt in the larger drainage basins and by cloudbursts over the smaller drainage basins. However, general rainstorms constitute the principal flood hazard on Roan Creek, while general rain on snowpack creates the most hazardous conditions in the basins of Plateau and Buzzard Creek. Major floods on the Colorado and Gunnison Rivers result from rapid melting of the mountain snowpack during May, June, and July and the Dolores River experiences flooding from both snowmelt and general rainstorms.

Mesa County has received a copy of the preliminary, March 6, 2009 Flood Insurance Study that covers the Town of Collbran, Town of DeBeque, City of Fruita, City of Grand Junction, Mesa County unincorporated areas, and Town of Palisade. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates. This information will also be used by Mesa County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound land use and floodplain development.

In unincorporated Mesa County there are 156 properties. According to the 2009 repetitive loss info from FEMA, within the unincorporated portions of the County we have approximately 156 properties with flood insurance policies and have had 16 paid flood claims since 1983 (note, 10 of those were during the 1983 and 1984 major flooding events; the other six are since that time). There is one repetitive loss property (parcel # 2697-273-00-063) with the following claims: claim #1: 6/8/95 in the amount of \$750.00; claim #2: 7/1/99 in the amount of \$2,267; and claim # 3: 7/10/01 in the amount of \$1,973. This property is partially within the FEMA regulatory floodway and partially within the regulatory flood fringe (Staley, 2009).

There are 84 active flood policies in the City of Grand Junction and no repetitive loss properties (Guillory, 2009).

- (b) **Geographic Location.** All streams in Mesa County are either direct or indirect tributaries of the Colorado River, which traverses the north-central and north-western sectors. From the northern County line, the river flows southwesterly for 41 miles to its confluence with the Gunnison River, thence northwesterly 27 miles, and again southwesterly for 15 miles in its remaining course in the County.

In general, the Dolores River, Gunnison River, and West Creek systems drain the western, south-western, and south-central portions of the County. The Plateau Creek system drains the eastern sector, except for the easternmost portion, which is drained by the Divide Creek system, which flows northerly to the Colorado River in Garfield County. A group of minor creeks and washes flowing southerly from the Roan and Bookcliffs regions drain the northwestern portion of the County, and a group of similar stream ways convey drainage to the river from the north-central portion.

Plateau Creek has its headwaters in the Grand Mesa National Forest, approximately 18 miles southeast of the Town of Collbran. The stream flows northwesterly from its origin near Chalk Mountain into Vega Reservoir, approximately 11 miles upstream from Collbran. Plateau Creek then continues westerly from Vega Reservoir through Collbran to its confluence with the Colorado River.

Mesa County is subject to major stream flooding caused by rapid snowmelt, usually associated with rising temperatures and flash flooding caused by rains associated with thunderstorms. Spring runoff

usually reaches its peak in June and recedes to a normal flow by mid-July. Mesa County typically experiences the monsoonal weather patterns in late July and August that create the potential for flash flood events found in the steeper drainage areas of the County. It is these events that have the greatest potential for causing major flooding in Mesa County and typically involve localized flooding and debris-flow issues.

- (c) **Previous Occurrences.** Mesa County has a long history of flooding from summer cloudburst storms and from snowmelt runoff. Seven major flood events have occurred on the Colorado River, four on the Gunnison River, and four on the Dolores River. Floods occurred in 1884, 1917, 1920, 1921, 1935, 1952, 1957, 1983, and 1984 on the Colorado River; in 1884, 1920, 1921, and 1957 on the Gunnison River; and in 1884, 1909, 1911, and 1958 on the Dolores River. Most known floods in Mesa County resulted from snowmelt, sometimes augmented by general rain. The largest snowmelt flood runoff of record on the Colorado River occurred in June 1921. Heavy rain on June 14th and 15th augmented runoff to produce a peak flow of 81,000 cfs near Fruita.

Flooding from general rain occurred on the Dolores River in September 1909 and October 1911. Snowmelt flooding on the Dolores River in April 1958 inundated 1,100 acres in the Gateway area and resulted in damage estimated at \$230,000.

Recorded cloudburst floods occurred on Indian Wash (Grand Junction area) in June 1958 and on West Creek (Gateway area) in July 1940. The West Creek cloudburst covered approximately 25 square miles of the drainage area and produced a peak flow estimated at 11,700 cfs.

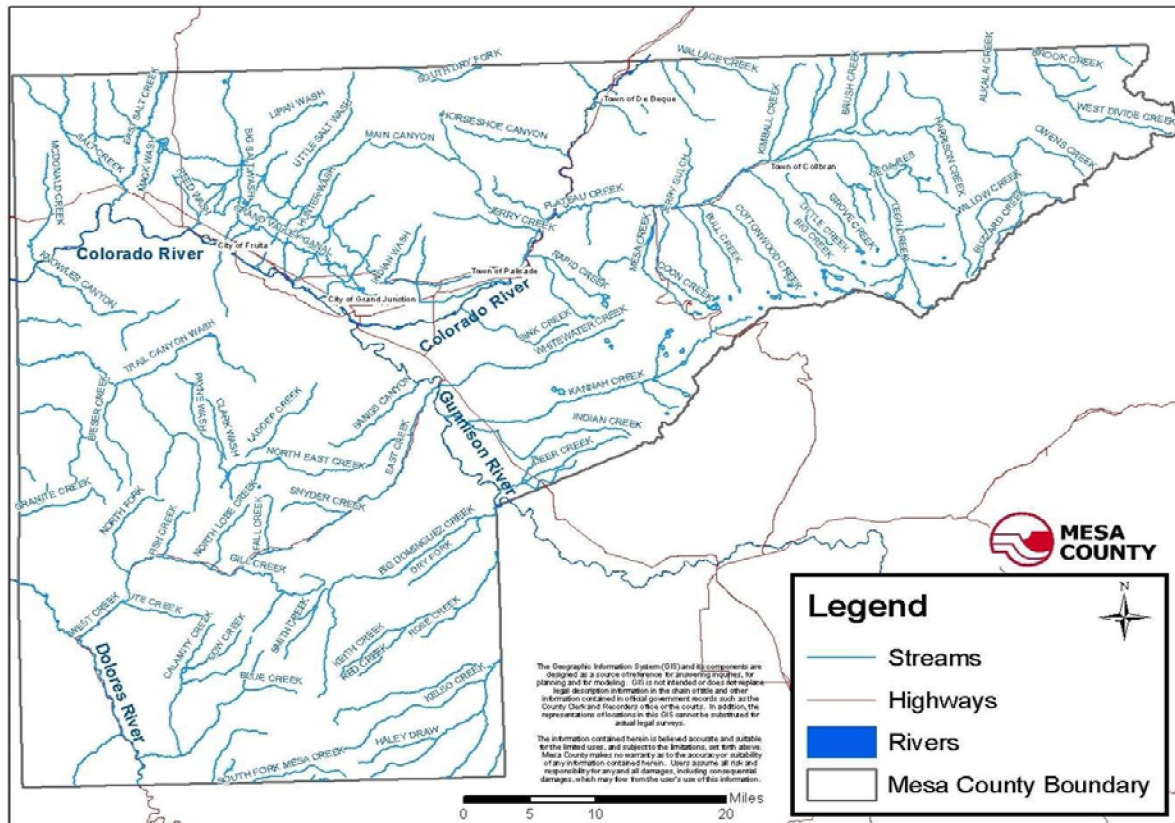
The most recent serious floods on the Colorado River occurred in 1983 and 1984. Peak flows on the Colorado River at the State line were approximately 61,000 and 70,000 cfs in 1983 and 1984 respectively. Colorado River flood flows in the Grand Junction area inundated streets, lawns, and gardens; deposited sand, silt, and debris; and flooded basements and lower floors in residential areas in the Riverside Park, Rosevale and Connected Lakes area southwest of the City in 1983 and 1984 but has not caused significant damage since these events. The flooding events in 1984 resulted in loss of life as did the flooding event that occurred on I-70 when Bosley Wash flooded in 2008 resulting in a drowning.

The Riverside Park area has experienced repeated flood danger as the erosion and undermining of protective levees has necessitated extensive flood fighting and levee repair. These noncertified levee and storm drain system improvements serve to mitigate potential flooding.

The principal cause of flooding on Plateau Creek and Buzzard Creek is a rapidly melting heavy snowpack during May, June, and July. Rainfall on melting snow may hasten the melting process and increase flood flows. A major flood occurred on Plateau Creek in 1922. Based on the record from a stream gage on Plateau Creek located approximately six miles east of Collbran, this flood had an estimated discharge of 3,080 cfs which corresponds to a frequency in excess of 100 years.

- (d) **Probability of Future Occurrence.** The probability of future occurrence is highly likely with a near 100 percent chance of occurrence next year or happens every year. Due to the documented cases above and the information collected on events that were smaller in size, Mesa County and the various towns/municipalities will continue to deal with flood-related activities in the future.
- (e) **Magnitude/Severity.** The magnitude/severity of a flood event is limited resulting in minor injuries and illnesses, minimal property damage that does not threaten structural stability and/or interruption of essential facilities and services for less than 24 hours. Most of the flood events that have occurred in Mesa County over the past 10 years have been limited with respect to injuries and property damage. Figure 8 shows the major rivers and tributaries within Mesa County.

Figure 8: Rivers and Tributaries



(Nelson, 2009)

(Res. 05-10, 1-6-10)

42.08.260 Hazardous materials.

- (a) **Hazard Description.** A hazardous material is any item or agent (biological, chemical, physical, radiological) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. The release of hazardous materials can happen either by accident or as a result of criminal activity and can threaten people and natural resources in the immediate vicinity of the accident, including residences and businesses along transportation routes.
- (b) **Geographic Location.** Mesa County is a center of commerce in western Colorado and hazardous materials are commonly transported through the County by truck and rail. Designated truck routes are State Highways 139, 141, 50 and U.S. Interstate 70. The Union Pacific Railroad operates two rail lines in Mesa County. Their main line is located primarily along the Colorado River through the County. The secondary line (southern leg) branches off the main line near the confluence of the Gunnison and Colorado Rivers and is located along the Gunnison River.

It is observed that the majority of the products transported through Mesa County belong to the hazard classes of 2 (Flammable and Combustible Gases), 3 (Flammable and Combustible Liquids), 8 (Corrosive Materials), and 9 (Miscellaneous Hazardous Materials). There are currently 139 Tier II reporting fixed site facilities in Mesa County. These facilities either produce, store, and/or use hazardous materials and are required by the Environmental Protection Agency to report these quantities under Tier II reporting requirements.

- (c) **Previous Occurrences.** Two significant incidents have occurred in Mesa County as a result of illegal dumping of hazardous material. The first incident involved illegal dumping in the Cactus Park area

of Mesa County of three 150-pound cylinders of liquid chlorine with safety caps removed. This case resulted in a felony conviction of a 30-year-old male who received eight years in the Colorado State Corrections System. This case was the first successful prosecution of the “Clean Air Act” in the State of Colorado. (Reekie, 2009)

The second case occurred in 2001 and was the result of illegal discharging of ethylene glycol into the Colorado River. The facility was discharging through the conveyance of storm water system piping directly into the Colorado River. The illegal discharges resulted in a substantial “fish kill” to native aquatic life. This case resulted in a felony conviction of the corporation and individuals responsible. The environmental remediation was conducted by the Environmental Protection Agency. Remediation costs were approximately \$1,500,000. The business was charged with felony charges resulting in significant fines and imprisonment. This case was the first successful prosecution of the “Clean Water Act” in the State of Colorado. (Reekie, 2009)

The Grand Junction Fire Department that serves as the Designated Emergency Response Authority for the entire planning area identified the following as significant incidents in Mesa County:

- (1) 1990 – Motor Carrier 338 carrying 70,000 pounds of liquid oxygen caused one injury and \$70,000 in damage.
 - (2) 1991 – Motor Carrier 331 carrying propane caused \$100,000 in damage due to remediation of highway shoulder from diesel contamination.
 - (3) 1991 – Illegal dumping of three 150-pound cylinders of liquid chlorine with safety caps removed in Cactus Park area.
 - (4) 1992 – Two tractor trailer 40-foot cargo trailers (MC 331 carrying propane) collide causing two injuries and \$200,000 in damage.
 - (5) 1992 – Motor Carrier 306 with 7,000 gallons of naphtha crashes into rock wall on Highway 141. Highway closed for 36 hours. \$200,000 in damage.
 - (6) 1995 – Hazardous materials release at fixed facility. Nitric acid tank endothermic reaction at fixed facility. Resulted in \$60,000 in damages.
 - (7) 2001 – Illegal discharge of ethylene glycol into the Colorado River.
 - (8) 2002 – Hazardous materials release from Amtrak derailment in Ruby Canyon with 123 passengers on board; \$300,000 in property damage and \$20,000 in environmental remediation.
 - (9) 2008 – Hazardous materials release with two tractor trailers with coal and hydrochloric acid with property damage of \$250,000 and \$80,000 in environmental remediation.
- (d) Probability of Future Occurrence. Highly likely – near 100 percent chance of occurrence next year or happens every year. Hazardous materials related incidents occur in Mesa County every year. Most often these incidents involve the transportation sector and are often fuel spills or cargo that is being transported.
- (e) Magnitude/Severity. The magnitude/severity of a hazardous materials incident in Mesa County has been limited with impacts to the environment, property destroyed or severely damaged, and/or interruption of essential facilities and service for more than 72 hours.

Impacts in the past have been limited, but depending on the type and quantity of material released, an event could have serious consequences to the public. Humans and animals are affected through inhalation, ingestion, or direct contact with the skin. Air releases can prompt large-scale population evacuations and spills into water or onto the ground can adversely affect public water and sewer systems.

(Res. 05-10, 1-6-10)

42.08.270 Landslide, rockfall.

- (a) **Hazard Description.** The Colorado Geological Survey department defines landslides as the downward and outward movement of slopes composed of natural rock, soils, artificial fills, or combination thereof. Landslides move by falling, sliding, and flowing along surfaces marked by difference in soil or rock characteristics. A landslide is the result of a decrease in resisting forces that hold the earth mass in place and/or an increase in the driving forces that facilitate its movement.

Landslides as defined above include two major types: (1) Rotational slides which refer to all landslides having a concave upward, curved failure surface and involving a backward rotation of the original slide mass; and (2) translational slides in which the surface of rupture along which displacement occurs is essentially planar. Either type of landslides can involve various combinations of bedrock, broken bedrock, and unconsolidated superficial material, and the displaced material in either type of slide may be either greatly deformed or nearly intact.

Rate of movement of landslides varies from very slow to very rapid. They may be extremely small in extent or measurable in miles. Volumes of material involved may range from a few cubic feet to millions of cubic yards. Landslides result from some change in the physical condition of an unstable slope area (see section of guidelines on potentially unstable slopes). Such changes may be natural or man-induced.

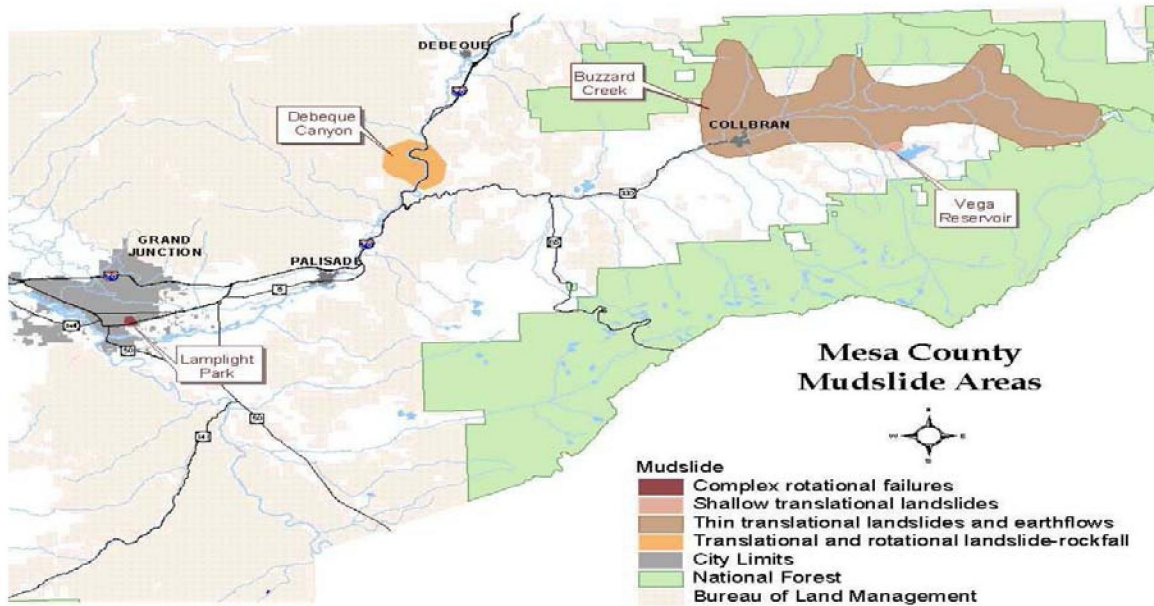
A rockfall is the falling of a detached mass of rock from a cliff or down a steep slope. Weathering and decomposition of geological materials produce conditions favorable to rockfalls. Rockfalls occur most frequently in mountains or other steep areas during the early spring when there is an abundance of moisture and repeated freezing and thawing. (Survey, 2004)

- (b) **Geographic Location.** The geographic location of landslides and rockfalls throughout Mesa County is isolated – which is less than 10 percent of the area.

The landslides and rockfalls that have occurred in Mesa County are most typically associated with canyons. The areas most affected by landslides-rockfalls include: Interstate 70 in DeBeque Canyon and along the Bookcliffs, Highway 65 in Plateau Canyon, Highway 141 in John Brown Canyon near Gateway, Colorado, and the area encompassing the Colorado National Monument.

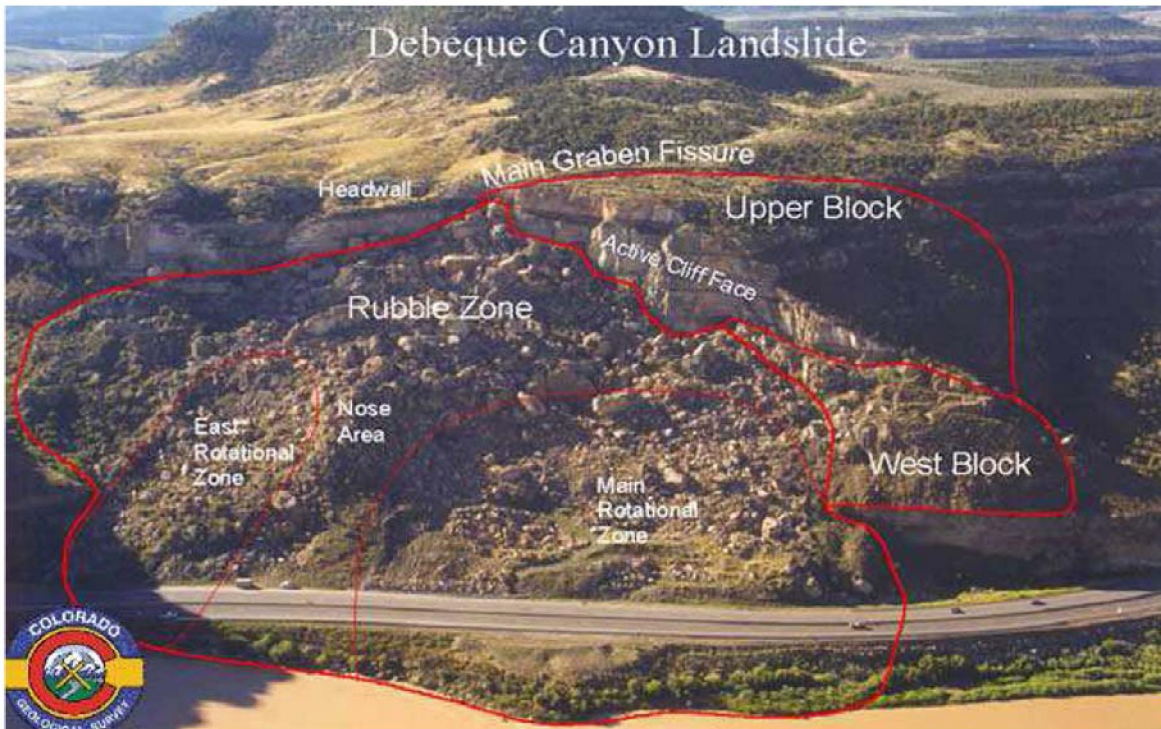
The DeBeque Canyon Landslide is a major landslide complex in western Colorado that has historically impacted the east-west highway and railway corridor on the Colorado River as shown in Figures 9 and 10.

Figure 9: Mesa County Landslide Map



Source: Mesa County GIS

Figure 10: DeBeque Canyon Slide Area



(Survey, 2004)

Figure 11: Photo of DeBeque Canyon Slide Area – Interstate 70



Figure 12: Photo of DeBeque Canyon Slide Area – Interstate 70



(Photos taken by Mesa County Emergency Management – 1998 Slide in DeBeque Canyon)

Figure 13: Rockfall West of Palisade Along Interstate 70



(Photos taken by Mesa County Emergency Management, July 8, 2009)

Figure 14: Rockfall Event in DeBeque Canyon at Beaver Tail Tunnel on Interstate 70



Figure 15: Rockfall Event in DeBeque Canyon at Beaver Tail Tunnel on Interstate 70



(Photos taken by Mesa County Emergency Management 10/26/09)

- (c) **Previous Occurrences.** The DeBeque Canyon Landslide, which is considered a major landslide complex, has had three significant reactivations or ground movements during the past century. The precise date of the first major movement is unknown but occurred in the late 1890s or early 1900s. That slide movement was the largest and reportedly shifted the river channel and damaged railroad facilities on the north bank of the Colorado River.

The second noteworthy movement occurred in February 1958 when the roadway was widened for a modern two-lane highway. The widening resulted in further cutting and destabilizing of the landslide toe, with subsequent movements resulting in the heaving of the roadway 23 vertical feet. In April 1998, the third major movement occurred and caused Interstate 70, constructed in the mid-1980s, to heave 14 vertical feet. This highway also shifted five to six feet laterally towards the river during this event as shown in Figures 11 and 12. (Survey, 2004)

In 2004, rain and snow loosened several rocks resulting in several injuries to motorists travelling on Interstate 70. In 2006 a rockfall along Interstate 70 just outside of the Town of Palisade resulted in a 300-pound boulder hitting several cars travelling on Interstate 70, injuring several motorists who required medical treatment. Additional rockfall activity has occurred in the DeBeque Canyon resulting in isolated deaths and injuries.

In July of 2009 a significant rockfall occurred on the Bookcliffs approximately two miles west of the Town of Palisade; see Figure 13. What was unique about this rockfall was the amount of energy associated with it. This particular event registered a 2.6 on the Richter scale and was first thought to have been an earthquake. After hours of analysis it was determined that the event was actually a rockfall event, possibly triggered due to the moisture in the soil.

Most recently was a rockfall event that occurred in DeBeque Canyon near the Beaver Tail tunnel on Interstate 70. A significant amount of large boulders landed on the interstate closing all lanes of traffic for a period of time as seen in Figures 14 and 15. No injuries were reported.

- (d) **Probability of Future Occurrence.** The probability of future occurrence is considered highly likely based on past events.

- (e) **Magnitude/Severity.** The magnitude/severity of a landslide-rockfall event in Mesa County is critical. Past events have resulted in isolated deaths and/or multiple injuries as well as major or long-term property damage that threatens structural stability; and/or interruption of essential facilities for 24 to 72 hours.

(Res. 05-10, 1-6-10)

42.08.280 Lightning.

- (a) **Hazard Description.** Lightning is defined as “an abrupt, discontinuous natural electric discharge in the atmosphere.” The rising air in a thunderstorm cloud causes various types of frozen precipitation to form within the cloud. Included in these precipitation types are very small ice crystals and much larger pellets of snow and ice. The smaller ice crystals are carried upward toward the top of the clouds by the rising air while the heavier and denser pellets are either suspended by the rising air or start falling toward the ground. Collisions occur between the ice crystals and the pellets, and these collisions serve as the charging mechanism of the thunderstorm. The small ice crystals become positively charged while the pellets become negatively charged. As a result, the top of the cloud becomes positively charged and the middle to lower part of the storm becomes negatively charged. At the same time, the ground underneath the cloud becomes charged oppositely of the charges directly overhead.

When the charge difference between the ground and the cloud becomes too large, a conductive channel of air develops between the cloud and the ground, and a small amount of charge (step leader) starts moving toward the ground. When it nears the ground, an upward leader of opposite charge connects with the step leader. At that instant this connection is made, a powerful discharge occurs between the cloud and the ground. We see this discharge as a bright visible flash of lightning. (NWS, 2008)

Each year in the United States, more than 400 people are struck by lightning. On average, between 55 and 60 people are killed; hundreds of others suffer permanent neurological disabilities.

- (b) **Geographic Location.** The geographic location of this hazard is considered large as it can happen anywhere in the County. However, lightning strikes are isolated in that the area that is affected by a lightning strike is less than 10 percent of the planning area.
- (c) **Previous Occurrences.** Data from the National Lightning Network ranks Colorado second in the number of deaths (28) from 1999-2008 for deaths caused by lightning. While lightning is a regular occurrence in Mesa County, there are few documented cases where lightning has caused structural damage.
 - (1) September 13, 1996 – Lightning hit a tree and then traveled into an adjacent house causing some fire and electrical damage. Estimated damage was reported at \$4,000.
 - (2) September 6, 1997 – Lightning struck a house on the north side of the Grand Mesa destroying some electrical items and blackening a wall on the side of the house.
 - (3) September 13, 1997 – Lightning struck a tree and power pole, setting the tree on fire and destroying a power transformer. Some electrical damage was also incurred at a nearby home.
 - (4) September 21, 1997 – Lightning strike of a two-story house, causing the house to catch on fire.
 - (5) September 9, 1998 – A man was injured when lightning struck a 12-foot-high pole on a trailer next to the man. The lightning also struck the man who was jolted off the trailer, landing 20 feet away. He suffered minor burns.
 - (6) August 20, 2000 – Lightning struck two horses, killing one and paralyzing the other. The two horses were found 50 feet apart from each other.

Many of the lightning strikes that occur in Mesa County are the cause of wildland fires throughout the County and many strikes go unreported.

- (d) **Probability of Future Occurrence.** The probability of lightning strikes in Mesa County is highly likely with a near 100 percent chance of occurrence next year or it happens every year.
- (e) **Magnitude/Severity.** The magnitude/severity of lightning throughout Mesa County is limited with minor injuries and illnesses; minimal property damage that does not threaten structural stability; and/or interruption of essential facilities and services for less than 24 hours.

It is recognized that lightning can cause deaths, injuries, and property damage, including damage to buildings, communications systems, power lines, and electrical systems.

(Res. 05-10, 1-6-10)

42.08.290 Severe winter weather.

- (a) **Hazard Description.** Severe winter weather can include heavy snow, ice, wind chill, blowing snow, freezing rain, sleet, and extremely cold temperatures. Any of these conditions can immobilize our community. These conditions can strand commuters, stop supplies and disrupt power and communication sources. The cost of snow removal, damage repair, and business losses can have a significant impact on the community.

Severe winter storms are usually accompanied by high winds, creating blizzard conditions causing snow to drift, making travel dangerous. Extreme cold temperatures are often associated with winter weather and prolonged exposure can be life-threatening. The months of December, January, and February are the most likely time of the year for severe winter weather.

Grand Junction receives about two feet of snow per year and it generally falls a few inches at a time and then melts off. The ground is usually not covered in snow and there is generally no need to shovel snow constantly. The winter months dip down into the teens and occasionally lower. Most years will see a maximum low temperature for the year of about zero to five degrees Fahrenheit. The average December-January high is 39 with an average low of 16 degrees Fahrenheit. The coldest months on average in Mesa County are January and February and Mesa County's record minimum temperature was recorded as -23 degrees Fahrenheit in 1963. (NWS, 2008)

- (b) **Geographic Location.** The geographic location of severe winter weather in Mesa County is small with approximately 25 to 50 percent of the County affected. Primarily severe winter weather is found in the higher elevations of the County and include: Grand Mesa, Colorado National Monument, and the Uncompahgre areas. The valley area of the County can see severe winter weather in snowfall, icy conditions, cold temperatures and wind.
- (c) **Previous Occurrences.** The National Climatic Data Center Storm Events Database was used to determine the 287 recorded winter weather events that included some portion of Mesa County. These events ranged from heavy snowfall to blowing and drifting snow from significant wind gusts. (Hinson, National Climatic Data Center, 2009)
- (d) **Probability of Future Occurrence.** The probability of future occurrence is likely with a 10 to 100 percent chance of occurrence in next year or has a recurrence interval of 10 years or less. However, it should be noted that Mesa County on average has much milder winter seasons than other parts of the State.
- (e) **Magnitude/Severity.** The magnitude and severity of severe winter weather in Mesa County is limited – resulting in minor injuries and illnesses; minimal property damage that does not threaten structural stability; and/or interruption of essential facilities and services for less than 24 hours.

Severe winter weather in Mesa County can result in property damage, localized power outages and force the closure of streets, highways, schools and businesses. Severe winter weather can escalate, creating life-threatening situations when emergency response is limited due to the conditions or when individuals are caught in the backcountry unprepared. Snow removal costs can also greatly impact local budgets.

(Res. 05-10, 1-6-10)

42.08.300 Wildfire.

- (a) Hazard Description. “Wildfire” is the term applied to any unwanted, unplanned, damaging fire burning in forest, shrub or grass and is one of the most powerful natural forces known to humans. While sometimes caused by lightning, nine out of 10 wildfires are human-caused from smoking, campfires, equipment use, and arson.

On public lands in Mesa County, 84 percent of the wildfires started are from lightning and 26 percent are human-caused. However, many of the more destructive and costly fires have been human-caused. Most of these human-caused fires are started near areas where people congregate. This can include towns, subdivisions, or campgrounds. Undoubtedly, human-caused fires on public lands have the potential to threaten human life as well as property. (Paul, 2009)

Due to fuel accumulation in the form of fallen leaves, branches, and excessive plant overgrowth in forest and wildland areas, increasing hot weather, changing weather patterns, and increased residential development in the wildland-urban interface areas, the potential for wildfires to occur has increased. The potential for major loss of property and structures has also significantly increased with the wildland-urban interface. The risk to firefighters can be high. Similar fuels/fire/terrain was responsible for 17 firefighter deaths in neighboring Garfield County. (Paul, 2009)

Based on information contained in the State of Colorado Natural Hazards Mitigation Plan, a century of aggressive fire suppression combined with cycles of drought and changing land management practices has left many of Colorado’s forests unnaturally dense and ready to burn. Furthermore, the threat of wildfire and potential losses is constantly increasing as human development and population increases and the wildland-urban interface expands.

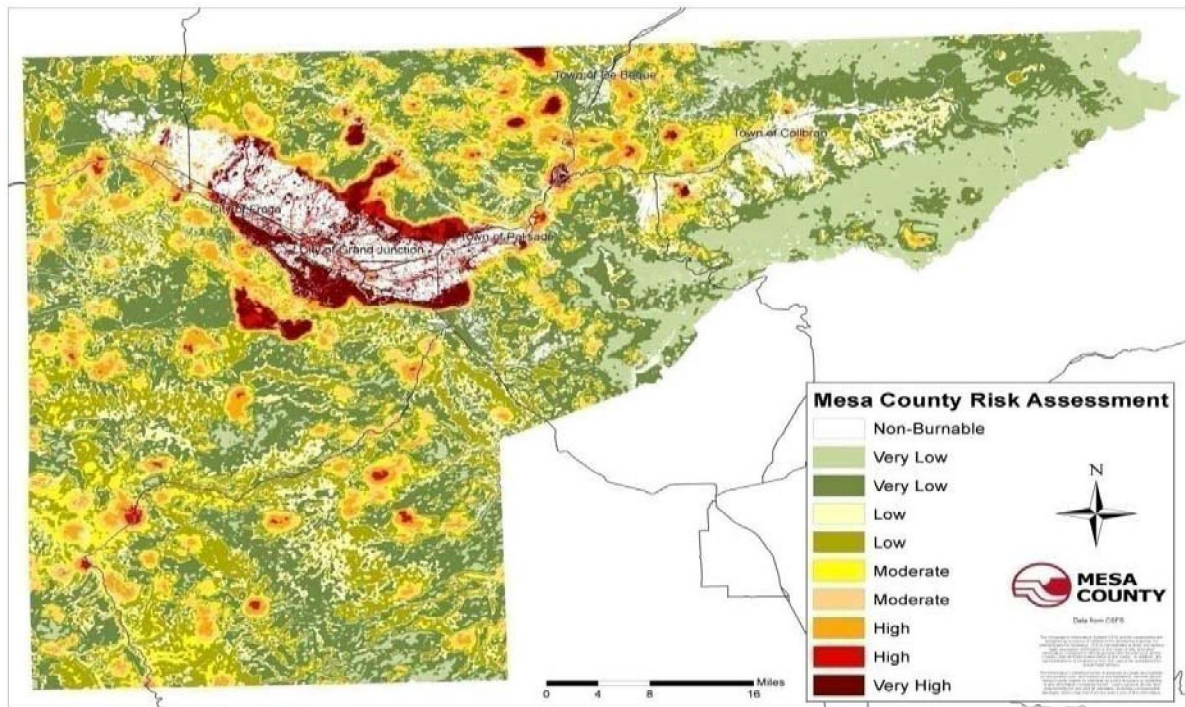
Many other areas of Mesa County now have an increased wildfire threat in areas where fire was not a problem in the past. This is due to a combination of irrigation and the introduction of non-native plants. Non-native tamarisk and Russian olive have invaded drainage areas. Excess, undrained irrigation water has created thick, unbroken stands of vegetation throughout the Grand Valley. The stands of tamarisk and Russian olive burn readily and pose a threat to homes and other structures. The spring 2009 Preserve Fire on the Redlands is a good example of this kind of fire. (Paul, 2009)

- (b) Geographic Location. The geographic extent of this hazard in Mesa County is medium – 25 to 50 percent of the planning area affected.
- (c) Previous Occurrences. According to data collected from the various Fire Protection Districts, the Mesa County Wildland Fire Team, the Bureau of Land Management, and the Colorado State Forest Service, Mesa County has had several significant wildfire events that have either burned a large amount of acres, structures, or involved a multi-agency response. These significant fires include the following:
- (1) June 9, 2002 – Lightning strike resulting in wildfire known as the Miracle Complex Fire that burned 3,951 acres.
 - (2) July 21, 2008 – Lightning-caused fire known as the Housetop Fire burned 143 acres and threatened multiple gas wells in the area.
 - (3) July 29, 2005 – Human-caused fire known as the Turkey Track Fire burned 348 acres, a camp trailer, and the fire protection district’s water tender. This fire also forced the evacuation of approximately 20 people.
 - (4) July 4, 2004 – Human-caused fire known as the 22 1/2 Road Fire burned 110 acres and threatened 20 homes.
 - (5) June 10, 2002 – Human-caused fire known as the Dierich Creek Fire burned 3,951 acres and forced the evacuation of 57 homes.
 - (6) July 4, 2000 – Lightning-caused wildfire known as Cone Mountain Fire burned 4,960 acres. No homes were threatened but forced road closure of John Brown Canyon.

- (7) July 31, 1995 – Lightning-caused wildfire known as Triangle Fire burned 5,343 acres and forced evacuation of 50 people.
 - (8) July 1, 1989 – Lightning-caused wildfire burned 1,233 acres with approximately 100 homes evacuated.
 - (9) April 1978 – Human-caused wildfire known as Mesa Creek Fire (Easter Fire) burned one home with several others damaged.
 - (10) June 21, 2007 – Human-caused wildfire with three homes destroyed.
 - (11) August 2, 2008 – Human-caused wildfire known as the 48 1/4 Road Fire with one injury and one residence partially burned.
 - (12) April 3, 1956 – Human-caused wildfire at the intersection of Mesa Street and U.S. Highway 65 with three structures destroyed.
- (d) Probability of Future Occurrence. Highly likely – Near 100 percent chance of occurrence next year or happens every year.
- (e) Magnitude/Severity. Critical – Isolated deaths and/or multiple injuries and illnesses; major or long-term property damage that threatens structural stability; and/or interruption of essential facilities and services for 24 to 72 hours.

Based on data received from the Bureau of Land Management and Mesa County GIS Department, the following risk assessment has been mapped out for the planning area. Figure 16 illustrates the areas where risk is significant if a wildfire were to occur.

Figure 16: Mesa County Wildfire Risk Assessment



(Source: Bureau of Land Management)

(Res. 05-10, 1-6-10)

42.08.310 Windstorms/tornados.

- (a) **Hazard Description.** High winds occur year round in Mesa County. In the spring and summer, high winds often accompany severe thunderstorms. These winds are typically straight-line winds, which are generally any thunderstorm wind that is not associated with rotation. It is these winds, which can exceed 80 miles per hour (mph), that represent the most common type of severe weather and are responsible for most wind damage related to thunderstorms.
- (b) **Geographic Location.** The geographic extent of this hazard in Mesa County is large – more than 50 percent of the planning area affected.
- (c) **Previous Occurrences.** Historical data from SHELDUS, NCDC Storm Data, and the National Weather Service, Grand Junction Office reported 48 recorded wind events in Mesa County between 1974 and 2008. These wind events also include tornado events that have occurred in Mesa County.
- (d) **Probability of Future Occurrence.** Likely – 10 to 100 percent chance of occurrence in the next year or has a recurrence interval of 10 years or less.

There were 48 recorded wind events in the past 34 years in Mesa County which equals one wind event every 1.4 years on average, or a 71 percent chance of occurrence in any given year.

- (e) **Magnitude/Severity.** Limited – Minor injuries and illnesses; minimal property damage that does not threaten structural stability; interruption of essential facilities and services for less than 24 hours.

Wind storms in Mesa County are rarely life-threatening, but do threaten public safety, disrupt daily activities, cause damage to buildings and structures, increase the potential for other hazards (e.g., wildfire), and have adverse economic impacts from business closures and power loss. Although windstorms are likely to occur in the future, data indicates the past losses have not been significant, and the overall magnitude of this hazard is limited.

(Res. 05-10, 1-6-10)

42.08.320 Hazard profile summary.

This section summarizes the results of the hazard profiles and assigns a level of overall planning significance to each hazard of low, moderate, or high as indicated in Table 7. Significance was determined based on the hazard profile, focusing on key criteria such as geographic location, occurrences, magnitude and severity. This assessment was used by the HMPC to prioritize the hazards that present the greatest risk to the planning area. The hazards that occur infrequently or have little or no impact to the planning area were determined to be of low significance. Those determined to be of high significance were identified as priority hazards that require additional evaluation in the vulnerability assessment.

Table 7: Hazards Profile

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Total Score	Hazard Level
Avalanche	2	4	6	32	M
Drought	8	4	4	48	M
Earthquake	6	4	4	40	M
Expansive Soils	2	4	2	16	L
Extreme Heat	8	4	2	40	M
Wildfire	6	8	4	80	H
Flood	6	8	4	80	H
Hailstorm	4	4	2	24	L
Land Subsidence	2	4	4	24	L
Landslide/Rockfall	4	8	6	80	H
Lightning	2	8	4	48	M
Tornado	2	4	2	16	L
Windstorm	4	6	4	48	M
Winter Storm	6	6	2	48	M
Dam Failure	4	4	6	40	M
Hazardous Materials	2	8	4	48	M

(Res. 05-10, 1-6-10)

42.08.330 Vulnerability assessment.

Requirement Section 201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area.

Requirement Section 201.6(c)(2)(ii)(B): [The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.

Requirement Section 201.6(c)(2)(ii)(C): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

The vulnerability assessment further defines and quantifies populations, buildings, critical facilities and infrastructure, and other community assets at risk to natural hazards. The vulnerability assessment for this plan followed the methodology described in the FEMA publication *Understanding Your Risks – Identifying Hazards and Estimating Losses (2002)*.

The vulnerability assessment is based on the best available data and the overall planning significance of the hazard. Data to support the vulnerability assessment was collected from the same sources identified for the hazard identification and hazard profile sections.

The vulnerability assessment includes three sections:

- (a) Community Asset Inventory. This section is an inventory of assets exposed to hazards in Mesa County, including the total exposure of people and property; critical facilities and infrastructure; natural, cultural, and historic resources; and economic assets.

- (b) **Vulnerability by Hazard.** This section describes the County’s overall vulnerability to each hazard; identifies existing and future structures, critical facilities, and infrastructure in identified hazard areas; and estimates potential losses to vulnerable structures, where data is available. Only hazards of moderate or high significance, or that have identified hazard areas, are addressed in the vulnerability assessment.
- (c) **Development and Land Use Trends.** The final section analyzes trends in population growth, housing demand, and land use pattern.

In addition, a capability assessment was conducted for each jurisdiction as part of the risk assessment process. A capability assessment identifies the existing programs, policies, and plans that mitigate or could be used to mitigate risk to disasters. From a Countywide perspective the following capabilities are identified in Table 8. Jurisdiction specific information regarding capabilities is found in the Jurisdictional Annex of this plan.

Table 8: Capabilities Matrix

Jurisdiction: Mesa County	Y/N/NA Unknown	Comments
Comp Plan/General Plan	No	Mesa County
Special Plans	Yes	Public Improvement District Info.
Subdivision Ordinance	Yes	Floodplain Only
Zoning Ordinance	Yes	Floodplain Only
NFIP/FPM Ordinance	Yes	
Substantial Damage Language	Yes	
Administrator/Certified Floodplain Mgr.	Yes	
# of Flood-Threatened Buildings	Yes	
# of Flood Insurance Policies	Yes	
# of Repetitive Losses	Yes	
Maintain Elevation Certificates	Yes	
CRS Rating, if applicable	Yes	
Storm Water Program	No	5-2-1 Drainage Authority
Erosion or Sediment Controls	No	5-2-1 Drainage Authority
Building Code Version	Yes	Mesa County Building Dept.
Full-Time Building Official	Yes	Mesa County Building Dept.
Conduct “As-Built” Inspections	Yes	Mesa County Building Dept.
BCEGS Rating	Yes	Mesa County Building Dept.
Local Emergency Operations Plan	Yes	Mesa County Emergency Management
Fire Department ISO Rating	No	
Fire Safe Programs	No	
Hazard Mitigation Plans	Yes	Mesa County

Table 8: Capabilities Matrix (Continued)

Jurisdiction: Mesa County	Y/N/NA Unknown	Comments
Warning Systems/Services	Yes	GJRCC
Storm Ready Certified	No	
Weather Radio Reception	Yes	
Outdoor Warning Sirens	No	
Emergency Notification (R-911)	Yes	GJRCC
Other (e.g., cable override)	Yes	GJRCC/NWS-EAS System
GIS System	Yes	Mesa County
Hazard Data	Yes	
Building Footprints	Yes	Mesa County Building Dept./GIS
Links to Assessor Data	Yes	Access Only
Land Use Designations	Yes	Access Only
Structural Protection Projects	No	
Property Protection Projects	No	
Critical Facilities Protected	Yes	
Natural/Cultural Resources Inventory	Yes	
Public Information Program/Outlet	Yes	
Environmental Education Program	No	

(Res. 05-10, 1-6-10)

42.08.340 Community asset inventory.

The following sections assess the population, structures, critical facilities and infrastructure, and other important assets in Mesa County at risk to natural hazards.

(Res. 05-10, 1-6-10)

42.08.350 Critical facilities and infrastructure.

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. Table 9 displays the inventory of critical facilities in Mesa County. The information is based on available data from the Northwest All Hazard Emergency Management Region.

Table 9: Critical Facilities and Infrastructure

Facility Type	Unincorporated Mesa County	Grand Junction	Collbran	Palisade	Fruita	DeBeque
Ambulance	7	7	2	2	3	2
Bridge	104	27	3	–	6	1
Dam	47	1	–	–	–	–
EOC	1 (not 24/7)	–	–	–	–	–
Communication Towers	40	21	1	–	1	–
Fire Station	6	5	2	1	2	1
Govt. Building	–	14	1	1	1	1
Helicopter Staging	–	1	–	–	–	–
911 Communications Center	–	1	–	–	–	–
Medical Facility	–	3	–	–	1	–
Schools						
District 51	15	19	1	2	5	1
Private	3	5				
Water – Wastewater	1	1	1	1	1	1
College – University	–	1	–	–	–	–
Airport	–	1	–	–	–	–

Note: Communication towers include cell towers, radio sites and TV translators. Other facilities in Mesa County, such as locations that hold concerts, sporting events, and other events that attract large numbers of people, may also be at higher risk due to concentrations of people. These events have been identified as part of the Northwest All Hazard Emergency Management regional planning required under Homeland Security.

(Res. 05-10, 1-6-10)

42.08.360 Natural, historic, and cultural assets.

Assessing the vulnerability of Mesa County to disaster also involves inventorying the natural, historic, and cultural assets of the area. This step is important for the following reasons:

- (a) The community may decide that these types of resources warrant a greater degree of protection due to their unique and irreplaceable nature and contribution to the overall economy.

- (b) If these resources are impacted by a disaster, knowing so ahead of time allows for more prudent care in the immediate aftermath, when the potential for additional impacts is higher.
- (c) The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.
- (d) Natural resources can have beneficial functions that reduce the impacts of natural hazards, such as wetlands and riparian habitat, which help absorb and attenuate floodwaters.

(Res. 05-10, 1-6-10)

42.08.370 Natural resources.

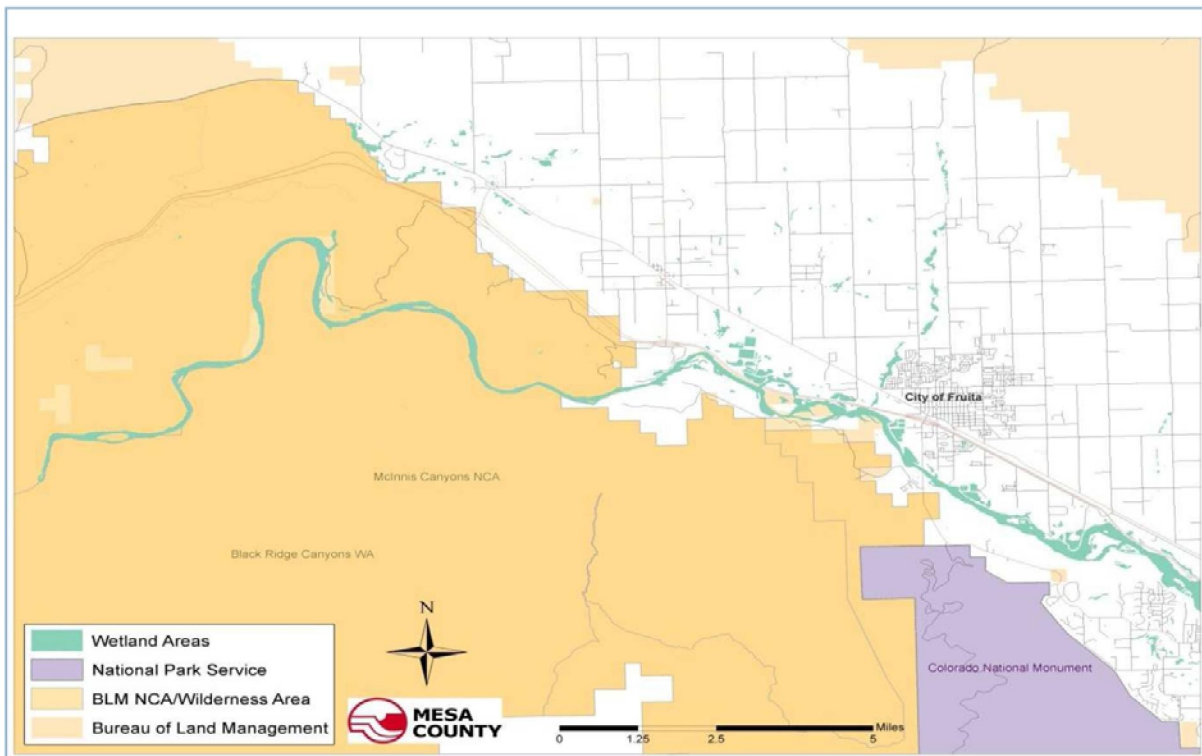
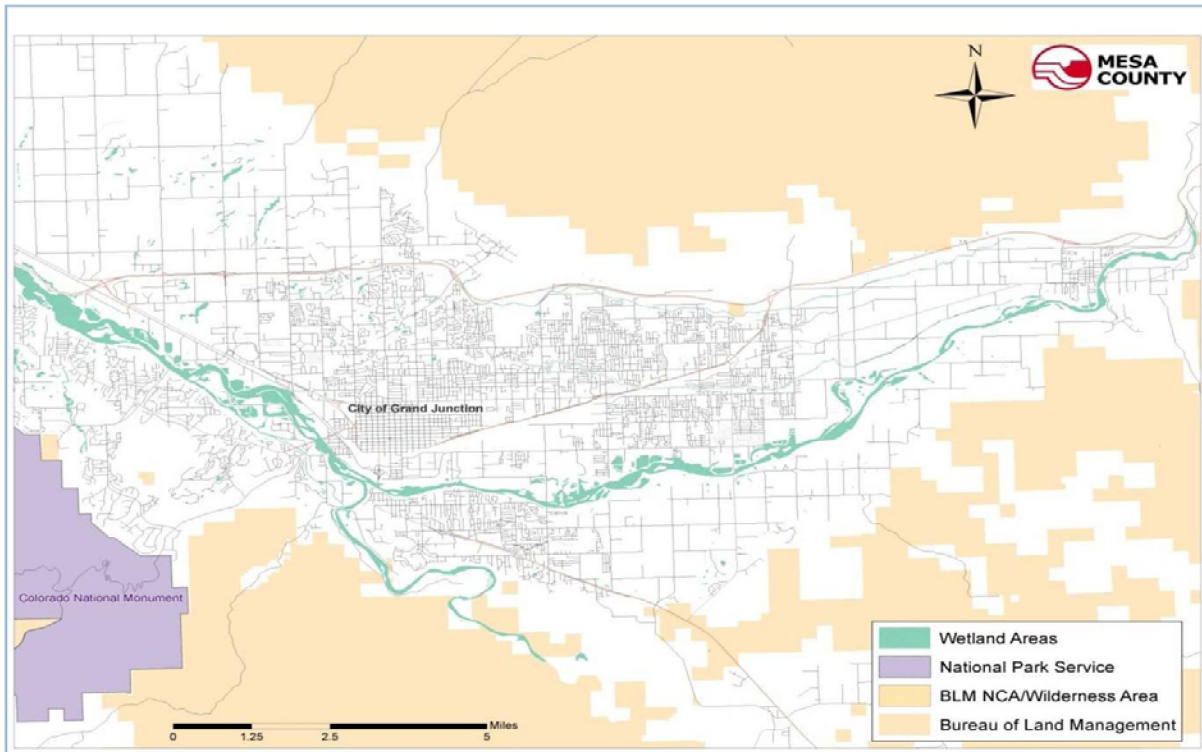
Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters. A number of natural resources exist in Mesa County, including wetlands, endangered species, and imperiled plant communities.

(Res. 05-10, 1-6-10)

42.08.380 Wetlands.

Wetlands are a valuable natural resource for communities, due to their benefits to water quality, wildlife protection, recreation, and education, and play an important role in hazard mitigation. Wetlands reduce flood peaks and slowly release floodwaters to downstream areas. When surface runoff is dampened, the erosive powers of the water are greatly diminished. Furthermore, the reduction in the velocity of inflowing water as it passes through a wetland helps remove sediment being transported by the water. They also provide drought relief in water-scarce areas where the relationship between water storage and stream flow regulation are vital. Figure 17 shows the wetlands that have been identified throughout Mesa County.

Figure 17: Mesa County Wetlands Areas



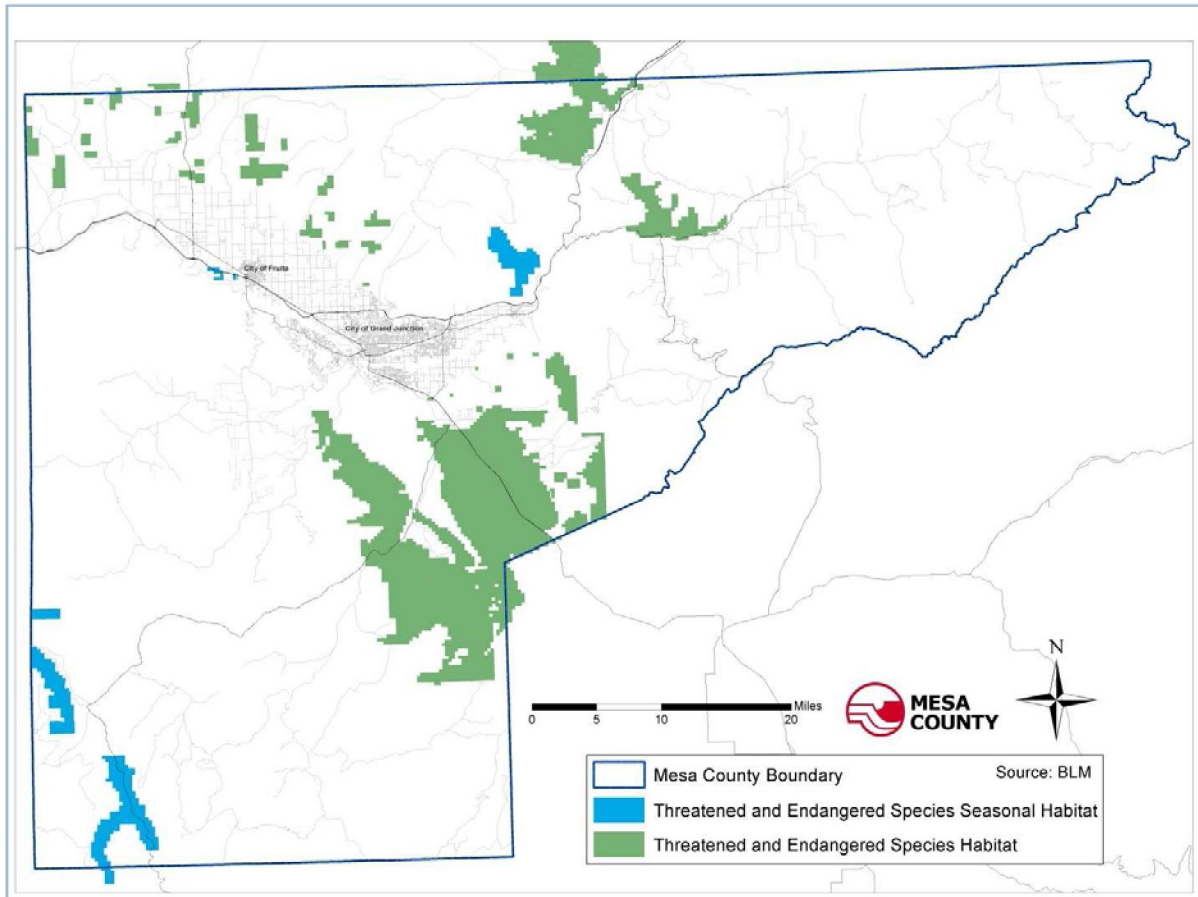
Source: Mesa County GIS

(Res. 05-10, 1-6-10)

42.08.390 Endangered species.

An endangered species is any species of fish, plant life, or wildlife that is in danger of extinction throughout all or most of its range. A threatened species is a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Both endangered and threatened species are protected by law and any future hazard mitigation projects are subject to these laws. Candidate species are plants and animals that have been proposed as endangered or threatened but are not currently listed. Figure 18 is a map showing habitats for threatened and endangered species in Mesa County. (Nelson, 2009)

Figure 18: Mesa County Habitats for Threatened and Endangered Species



The Colorado Division of Wildlife provided the following information of wildlife species found in Mesa County that have been given special designations. See Table 10.

Table 10: Endangered Wildlife

Group	Common Name	Scientific Name	Occurrence	Abundance	Status
Amphibians	Boreal Toad	<i>Bufo boreas</i>	Known to occur	Unknown	State Endangered
Amphibians	Northern Leopard Frog	<i>Rana pipiens</i>	Known to occur	Common	State Species of Concern, Federal Review
Amphibians	Woodhouse's Toad	<i>Bufo woodhousii</i>	Known to occur	Common	State Monitored
Birds	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Known to occur	Rare	State Species of Concern
Birds	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Known to occur	Casual/Accidental	State Threatened
Birds	Ferruginous Hawk	<i>Buteo regalis</i>	Known to occur	Very Rare	State Species of Concern
Birds	Greater Sandhill Crane	<i>Grus canadensis tabida</i>	Known to occur	Very Rare	State Species of Concern
Birds	Gunnison Sage Grouse	<i>Centrocercus minimus</i>	Known to occur	Rare	State Species of Concern, Federal Review
Birds	Least Tern	<i>Sterna antillarum</i>	Known to occur	Unknown	Federal Endangered, State Endangered
Birds	Long-billed Curlew	<i>Numenius americanus</i>	Known to occur	Casual/Accidental	State Species of Concern
Birds	Mountain Plover	<i>Charadrius montanus</i>	Known to occur	Unknown	State Species of Concern
Birds	Plains Sharp-tailed Grouse	<i>Tympanuchus phasianellus jamesii</i>	Known to occur	Unknown	State Endangered
Birds	Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	Known to occur	Rare	Federal Endangered, State Endangered
Birds	Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	Known to occur	Unknown	State Species of Concern
Birds	Whooping Crane	<i>Grus americana</i>	Known to occur	Unknown	Federal Endangered, State Endangered
Fish	Bonytail	<i>Gila elegans</i>	County Fish Data Not Kept by NDIS		Federal Endangered, State Endangered
Fish	Razorback Sucker	<i>Xyrauchen texanus</i>	County Fish Data Not Kept by NDIS		Federal Endangered, State Endangered
Fish	Humpback Chub	<i>Gila cypha</i>	County Fish Data Not Kept by NDIS		Federal Endangered, State Endangered
Fish	Colorado Pikeminnow	<i>Ptychocheilus lucius</i>	County Fish Data Not Kept by NDIS		Federal Endangered, State Endangered
Fish	Speckled Dace	<i>Rhinichthys osculus</i>	County Fish Data Not Kept by NDIS		Rangewide Conservation Strategy

Table 10: Endangered Wildlife

Group	Common Name	Scientific Name	Occurrence	Abundance	Status
Fish	Flannelmouth Sucker	Catostomus latipinnis	County Fish Data Not Kept by NDIS		Rangewide Conservation Strategy
Fish	Bluehead Sucker	Catostomus discabulus	County Fish Data Not Kept by NDIS		Rangewide Conservation Strategy
Fish	Colorado Roundtail Chub	Gila robusta	County Fish Data Not Kept by NDIS		State Species of Concern
Fish	Colorado River Cutthroat Trout	Oncorhynchus clarki pleuriticus	County Fish Data Not Kept by NDIS		State Species of Concern
Mammals	Kit Fox	Vulpes macrotis	Known to occur	Very Rare	State Endangered
Mammals	Lynx	Lynx canadensis	Likely to occur	Extirpated	Federal Endangered, State Endangered
Mammals	Northern Pocket Gopher	Thomomys talpoides	Known to occur	Common	State Species of Concern
Mammals	River Otter	Lontra canadensis	Known to occur	Rare	State Threatened
Mammals	Townsend's Big-eared Bat	Plecotus townsendii	Known to occur	Uncommon	State Species of Concern
Mammals	White-tailed Prairie Dog	Cynomys leucurus	Known to occur	Fairly Common	Federal Petition/Review
Mammals	Wolverine	Gulo gulo	Likely to occur	Extirpated	State Endangered
Reptiles	Longnose Leopard Lizard	Gambelia wislizenii	Known to occur	Uncommon	State Species of Concern
Reptiles	Midget Faded Rattlesnake	Crotalus viridis concolor	Known to occur	Uncommon	State Species of Concern

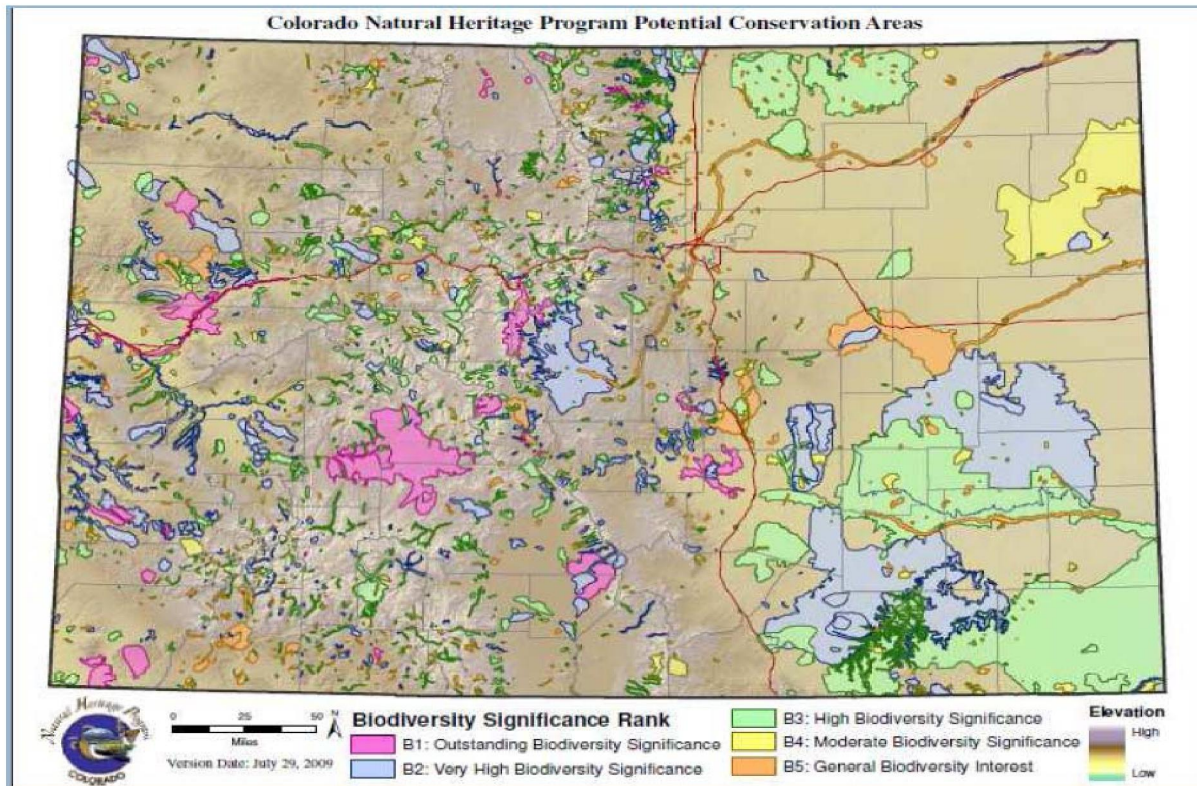
(Hampton, 2009)

(Res. 05-10, 1-6-10)

42.08.400 Imperiled natural plant communities.

The Colorado Natural Heritage Program (CNHP) tracks and ranks Colorado's rare and imperiled species and habitats, and provides information and expertise on these topics to promote the conservation of Colorado's valuable biological resources. The Statewide Potential Conservation Areas (PCA) map in Figure 19 shows CNHP's best estimate of the primary area required to support the long-term survival of targeted species or natural communities. (About Us: Colorado Natural Heritage Program, 2009)

Figure 19: Potential Conservation Areas



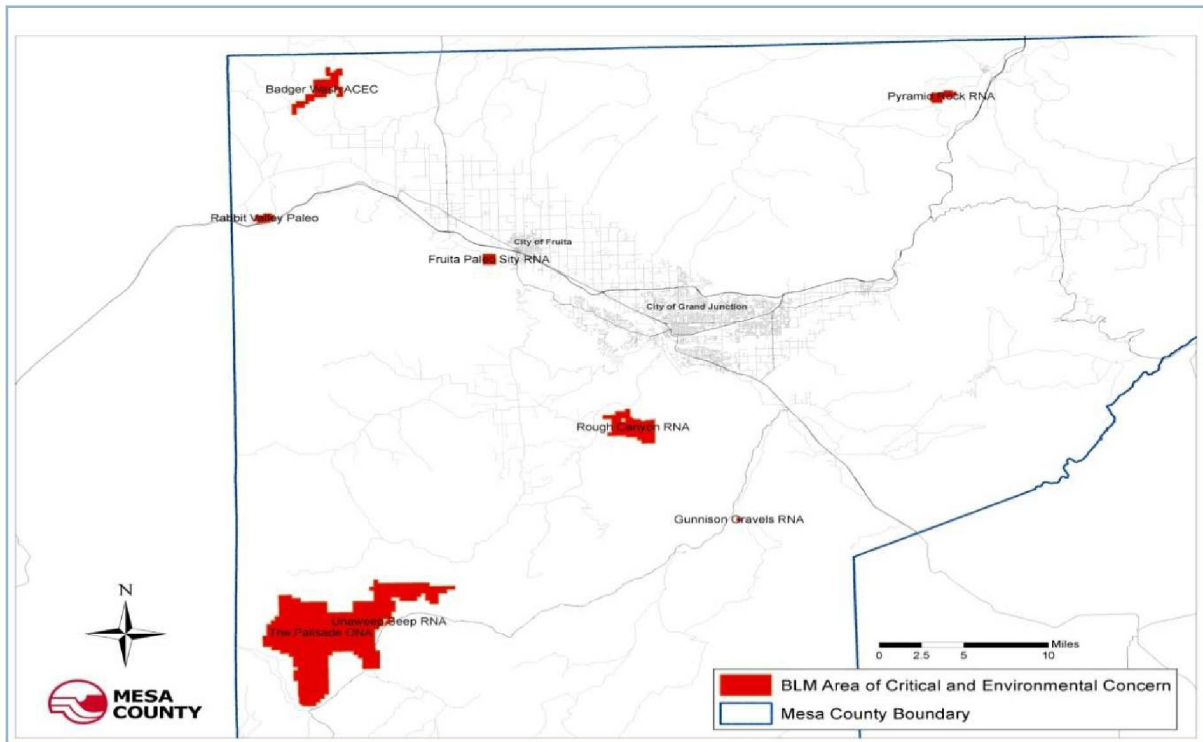
(About Us: Colorado Natural Heritage Program, 2009)

(Res. 05-10, 1-6-10)

42.08.410 Ecologically sensitive areas.

Figure 20 shows the ecologically sensitive areas in Mesa County where threatened and endangered species and imperiled natural plant communities are most likely found.

Figure 20: Mesa County Ecologically Sensitive Areas



Source: Mesa County GIS

(Res. 05-10, 1-6-10)

42.08.420 Historical and cultural resources.

Several national and State historic inventories were reviewed to identify historic and cultural assets in Mesa County:

- (a) The National Register of Historic Places is the nation’s official list of cultural resources. The National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archaeological resources. Properties listed include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.
- (b) The Colorado State Register of Historic Properties is a listing of the State’s significant cultural resources worthy of preservation. Properties listed in the Colorado State Register include individual buildings, structures, objects, districts, and historic and archaeological sites.
- (c) Table 11 lists the properties and districts in Mesa County that are on the National Register of Historic Places.

Table 11: National Register of Historic Places in Mesa County

Property Name	City	Location	Date Listed
Colorado National Monument Visitor Center Complex	Mesa County	Colorado National Monument	07/15/2003
Colorado River Bridge	Mesa County	DeBeque Vicinity	10/15/2002
Clifton Community Center and Church	Mesa County	Clifton	06/30/1982

Table 11: National Register of Historic Places in Mesa County (Continued)

Property Name	City	Location	Date Listed
Coates Creek Schoolhouse	Mesa County	Glade Park	02/03/1993
Convicts' Bread Oven	Mesa County	Molina	12/31/1974
Crissey, Herbert and Edith, House	Palisade	218 W. 1st St.	05/18/2003
Cross Land and Fruit Company Orchards and Ranch	Mesa County	3079 F Road	03/28/1980
DeBeque House	DeBeque	233 Denver Ave.	07/28/1995
Denver and Rio Grande Western Railroad Depot	Grand Junction	119 Pitkin Ave.	09/08/1992
Devils Kitchen Picnic Shelter	Mesa County	Colorado National Monument	04/21/1994
Fruita Bridge	Mesa County	Cty. Rd. 17.50 over Colorado River	02/04/1985
Fruita Museum	Fruita	432 E. Aspen	10/10/1996
Grand Valley Diversion Dam	Mesa County	8 miles NE of Palisade	10/08/1991
Handy Chapel	Grand Junction	202 White Ave.	08/19/1994
Hotel St. Regis	Grand Junction	359 Colorado Ave.	10/22/1992
IIOF Hall	DeBeque	4th St. and Curtis Ave.	03/25/1993
Kettle-Jens House	Mesa County	498 32nd Road	05/06/1983
Land's End Observatory	Mesa County	Land's End Road, 10 miles W of CO 65	02/28/1997
Loma Community Hall	Mesa County	1341 Co. Rd. 13, Loma	11/22/1995
Margery Building	Grand Junction	519-527 Main Street	02/24/1993
North 7th Street Historic Residential District	Grand Junction	7th St. between Hill and White Aves.	01/05/1984
Phillips, Harry and Lilly House	Fruita	798 N. Mesa St.	11/13/1997
Pipe Line School	Mesa County	101 16.5 Rd. Glade Park	04/29/1999
Rim Rock Drive Historic District	Grand Junction	Colorado National Monument	04/21/1994
Saddlehorn Caretaker's House and Garage	Grand Junction	Colorado National Monument	04/21/1994
Saddlehorn Comfort Station	Grand Junction	Colorado National Monument	04/21/1994
Saddlehorn Utility Area Historic District	Grand Junction	Colorado National Monument	04/21/1994
Serpents Trail	Grand Junction	Colorado National Monument	04/21/1994
U.S. Post Office	Grand Junction	400 Rood Ave.	01/31/1980

(National Register of Historic Places, 2009)

- (d) Table 12 identifies the properties and districts in Mesa County that are on the Colorado Office of Archaeology and Historic Preservation site. Those properties listed in Table 11 were also listed on the State list.

Table 12: Mesa County Properties Listed as Archaeology and Historic Preservation Sites

Property Name	City	Location	Date Listed
Stockmens Bank	Collbran	111 Main St.	03/08/1995
Circle Park	Fruita	Fruita Park Sq.	05/14/1997
Fruita Elementary	Fruita	325 E. Aspen St.	03/10/1993
Weckel House	Mesa County	1620 Hwy. 6 and 50	03/13/1996
Driggs Mansion	Mesa County	24505 State Highway 141	09/14/2005
Grand Junction Country Club	Grand Junction	2463 Broadway	09/13/1995
Hurlburt-Knowles House	Mesa County	1151 13 Rd. Loma	08/09/2000
Harlow Gravesite	Mesa County	869 Rapid Creek Rd.	09/13/1995
Bloomfield Site	Mesa County	Whitewater Vicinity	01/20/1983
Coffman House	Mesa County	4000 US Hwy. 50	12/12/2001
Land's End Aboriginal Site	Mesa County	Land's End Road	03/11/1998
Raber Cow Camp	Mesa County	Land's End Road	03/10/1993

(National and State Registers)

(Res. 05-10, 1-6-10)

42.08.430 Economic assets.

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster. After a disaster, economic vitality is the engine that drives recovery. Every community has a specific set of economic drivers, which are important to understand when planning ahead to reduce disaster impacts to the economy. When major employers are unable to return to normal operations, impacts ripple throughout the community. Table 13 lists the major employers in Mesa County based on the number of employees.

Table 13: Major Employers in Mesa County

Ind	Employer	Employees	Phone #	Web Site
G	Mesa County School District #51	3,000	970-254-5100	www.mesa.k12.co.us
S	St. Mary's Hospital and Medical Center	2,191	970-244-2273	www.stmarygj.org
G	City of Grand Junction	700	970-244-1501	www.gjcity.org
G	State of Colorado	1,212	303-866-2431	www.state.co.us
R	Wal-Mart	980	970-241-6061	www.walmart.com
G	Mesa County – All Departments	978	970-244-1800	www.co.mesa.co.us
S	Mesa State College	718	970-248-1020	www.mesastate.edu
S	City Markets, Inc.	677	970-241-0750	www.citymarket.com
S	StarTek USA, Inc.	595	970-263-7676	www.startek.com
S	Community Hospital	588	970-242-0920	www.yourcommunityhospital.org
S	Hilltop Community Resources, Inc.	530	970-242-4400	www.htop.org

Table 13: Major Employers in Mesa County (Continued)

Ind	Employer	Employees	Phone #	Web Site
S	Family Health West	422	970-858-9871	www.familyhealthwest.org
S	Rocky Mountain Health Plans	350	970-244-7800	www.rmhp.org
S	Mesa Developmental Services	293	970-243-3702	www.mesadev.org
S	West Star Aviation	290	970-243-7500	www.weststaraviation.com
S	United Companies	266	970-243-4900	www.united-gj.com
S	Choice Hotels	265	970-245-3355	www.choicehotels.com
S	Daily Sentinel	230	970-242-5050	www.gjsentinel.com
S	Union Pacific Railroad	197	402-544-1188	www.up.com
S	Schlumberger Tech Corp	165	970-683-4000	www.slb.com
R	McDonald's	150	970-245-6420	www.mcdonaldsgrandjunction.com
S	GJ Pipe and Supply	135	970-243-4604	www.gjpipe.com
R	Home Depot	120	970-244-8577	www.homedepot.com
S	Leitner-Poma of America	84	970-241-4442	www.leitner-poma.com
S	BJ Services	77	970-241-0592	www.bjservices.com

(S = Service, R = Retail, G = Government) (Data and Demographics: Grand Junction Economic Partnership, 2009)

(Res. 05-10, 1-6-10)

42.08.440 Vulnerability by hazard.

This section through GJMC 42.08.530 describe overall vulnerability and identify structures and estimates potential losses to buildings, infrastructure, and critical facilities located in identified hazard areas. This assessment was limited to the hazards that were considered moderate or high in planning significance, based on HMPC input and the hazard profiles. Hazards that ranked as "low significance" are not included in the vulnerability assessment. These include the following: expansive soils, hailstorm, land subsidence, and tornado.

Many of the identified hazards, particularly weather related hazards, affect the entire planning area, and specific hazard areas cannot be mapped geographically. For those hazards, which include drought, lightning, and winter weather, the vulnerability is mainly discussed in qualitative terms because data on potential losses to structures is not available.

(Res. 05-10, 1-6-10)

42.08.450 Avalanche.

Mesa County's vulnerability to avalanches is moderate due to the historical events where loss of life has occurred. Thousands of people are exposed to avalanche risk in Mesa County every winter and spring due to the recreational use of backcountry areas. Motorists along highways are also at risk of injury or death if avalanches sweep across roadways.

- (a) Existing Development. Mesa County does not have comprehensive information or mapping of avalanche hazard areas, therefore limiting available data on specific structures at risk or estimate of potential losses to structures.
- (b) Future Development. There are no immediate plans to map avalanches in Mesa County.

(Res. 05-10, 1-6-10)

42.08.460 Dam failure.

Mesa County has a considerable amount of high hazard dams that if a failure of one of these high hazard dams occurred, it would result in loss of life. There is no specific evidence at the time this plan was written to indicate a failure of any dams in Mesa County.

Vulnerability to dam failure is greatest on the Grand Mesa where most of the dams are located and specifically the Town of Collbran which is downstream from many of the dams. A catastrophic dam failure would challenge local response capabilities and require evacuations to save lives. Impacts to life safety will depend on the timely warning of people in the area. Without immediate warning, loss of life could result as well as potentially catastrophic effects to roads, bridges, and homes.

- (a) Existing Development. The Mesa County Department of Emergency Management retains copies of emergency action plans for all Class I and Class II dams in the County. The Mesa County Emergency Management Department has also worked with the Grand Junction Regional Communications Center to identify potential evacuation areas if a dam failure were to occur that is built into the reverse 911 system for notification purposes. Due to ongoing security concerns of the dam operators, Mesa County Emergency Management Department requests that inundation maps not be made part of this public planning process.
- (b) Future Development. Efforts to map out additional evacuation areas that would be inundated in the event of a dam failure will continue with the Grand Junction Regional Communications Center. The County and towns should consider the dam failure hazard when permitting development downstream of the Class I and Class II dams.

(Res. 05-10, 1-6-10)

42.08.470 Drought.

Drought has been a significant issue in Mesa County. It is the one hazard that cannot be controlled yet it has devastating effects that can last for several years. Drought has several impacts to Mesa County including but not limited to: air quality, wildfires, reduction of tourism and recreation activities, and damage to the agriculture industry.

- (a) Existing Development. The impacts from drought are nonstructural and generally affect the economy and environment the most. A drought event normally does not impact structures and can be difficult to identify specific hazard areas. Many of the towns use public education efforts to encourage water conservation during the summer months.
- (b) Future Development. Vulnerability to drought will increase as population growth increases putting more demands on existing water supplies. Future water use planning should consider increase in population as well as potential impacts of climate change.

(Res. 05-10, 1-6-10)

42.08.480 Earthquake.

Past earthquake activity in Mesa County has been minimal and most earthquake activity has low magnitude and severity. Earthquake data in Mesa County is limited but some historical information is available through Mesa State College.

- (a) Existing Development. By using data from the HAZUS-MH software, information on potential economic and social losses due to an earthquake in Mesa County can be determined. This particular information produces “what if” scenarios (e.g., determines what would happen if an earthquake of a certain magnitude occurred on a particular fault). The earthquake magnitudes used for each fault were the “maximum credible earthquake” as determined by the U.S. Geological Survey.

There are 16 Quaternary aged faults identified by the USGS in Mesa County. There are innumerable older faults that have been identified and presumably older faults which remain hidden from view. The Quaternary aged faults are associated with the Uncompahgre Plateau. The Uncompahgre Pla-

teau extends from Grand County, Utah, northwest of Grand Junction to near the Town of Ridgway, Colorado. The Uncompahgre has as much as 640 meters of uplift. The faults associated with the uplift are in two groups, bordering both the southwest flank and northeast flank of the uplift.

The northeast flank of the Uncompahgre Plateau, near Grand Junction, contains the Redlands Fault complex. This fault shows as much as 240 meters of displacement and can be seen most vividly in the Colorado National Monument. The Colorado Geological Survey has estimated that the largest earthquake possible on the Western Slope of Colorado is magnitude 6.5.

- (b) Using the HAZUS-MH program, Emergency Management staff and a Mesa State College faculty member designed and analyzed the following earthquake scenario on the Bridgeport/Cactus Park fault complex in southern Mesa County:
- (1) Type: Deterministic, arbitrary.
 - (2) Attenuation Function: Western U.S. Shallow Crustal Event – Nonextensional.
 - (3) Magnitude: 5.5.
 - (4) Epicenter.
 - (i) Latitude 38.875, Longitude -108.438.
 - (ii) Depth: one kilometer.
 - (iii) Width: six kilometers.
 - (5) Fault Mechanism: Reverse Slip.
 - (6) Rupture.
 - (i) Subsurface Length: 5.88844 kilometers.
 - (ii) Surface Length: 4.02717 kilometers.
 - (iii) Orientation: 120 degrees.
 - (iv) Dip Angle: 75 kilometers.

While this is not the worst-case scenario for an earthquake event in Mesa County, it is believed to be a more plausible scenario (Wolny, Martsolf, 2009). Figure 21 provides an illustration of potential ground acceleration from this scenario.

Figure 21: HAZUS Earthquake Scenario

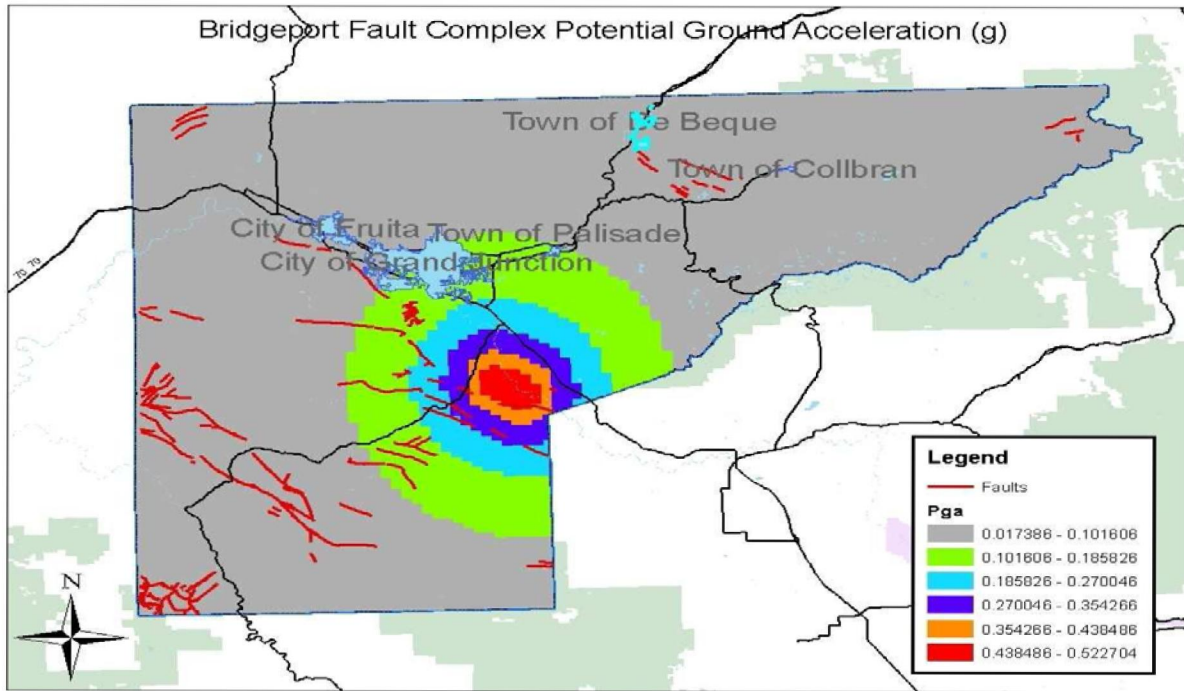


Figure 22 shows how far reaching this type of earthquake would be felt in Mesa County and Figure 23 identifies the area with displaced homes.

Figure 22: Bridgeport Earthquake Ground Motion

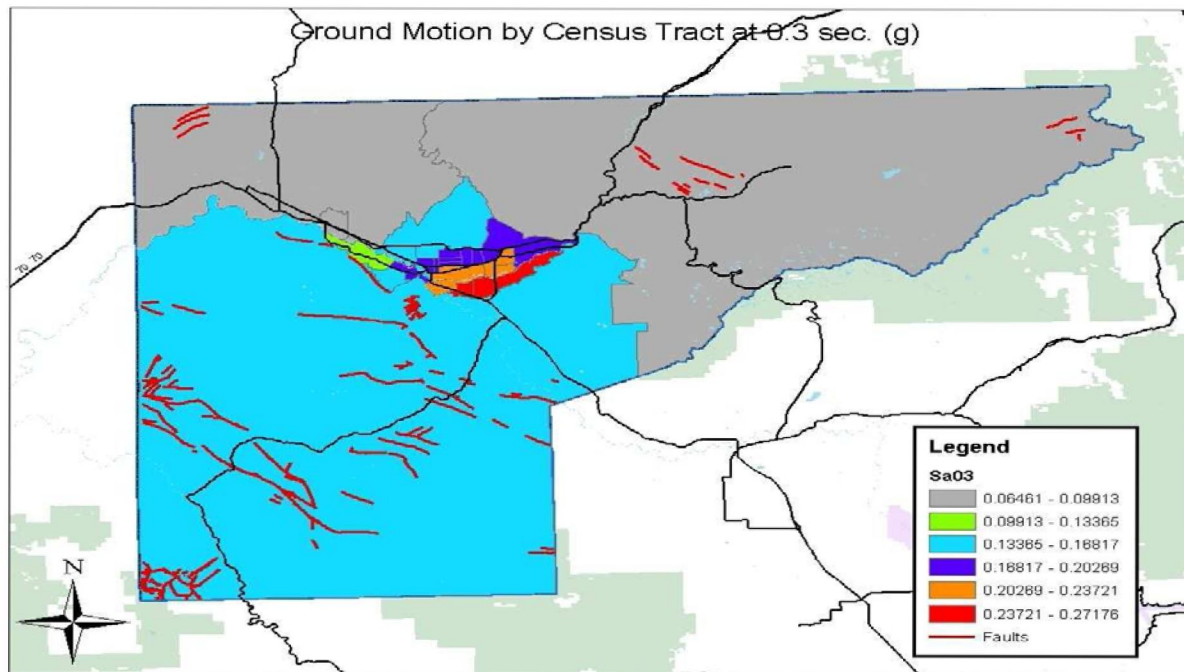
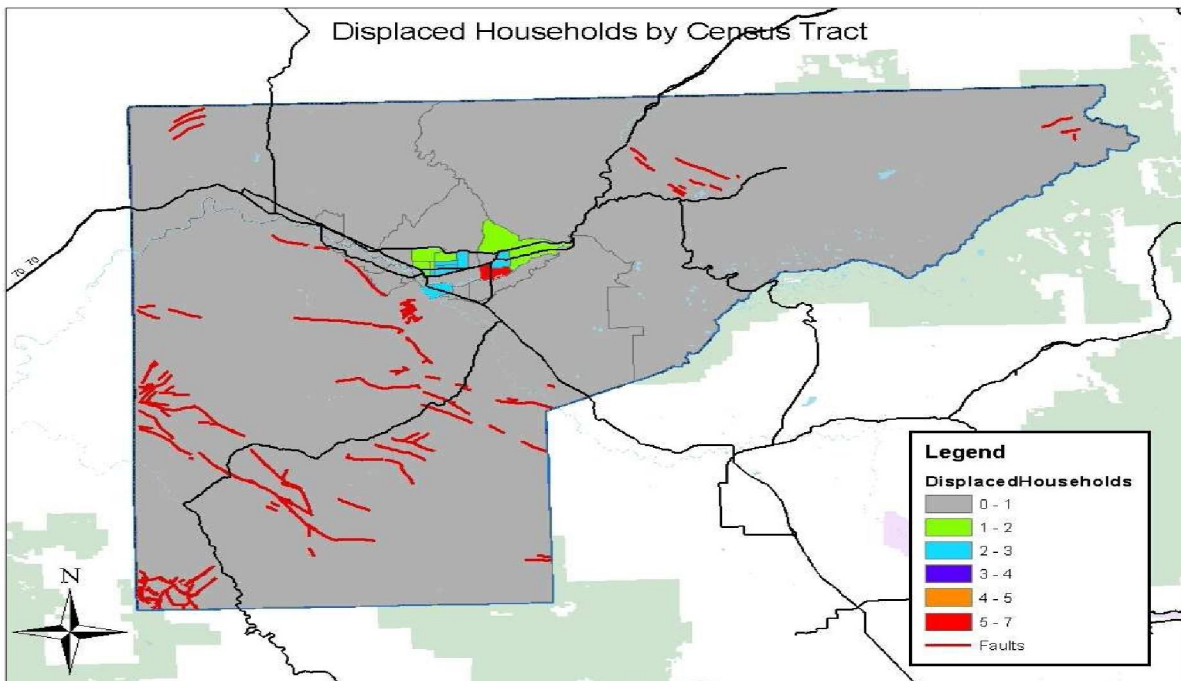


Figure 23: Bridgeport Earthquake Scenario, Displaced Homes



(c) In calculating building damage associated with this type of earthquake, the following HAZUS definitions were used:

- (1) *Slight damage*. Small plaster or gypsum board cracks at corners of doors and window openings and wall-ceiling intersections, small cracks in masonry chimneys and masonry veneer.
- (2) *Moderate damage*. Larger plaster or gypsum board cracks at corners of door and window openings; small diagonal cracks across shear wall panels exhibited by small cracks in stucco and gypsum wall panels; large cracks in brick chimneys; toppling of tall masonry chimneys.
- (3) *Extensive damage*. Large diagonal cracks across shear wall panels or large cracks at plywood joints; permanent lateral movement of floors and roof; toppling of most brick chimneys; cracks in foundations; splitting of wood sill plates and/or slippage of structure over foundations; partial collapse of room-over garage or other soft-story configurations; small foundation cracks.
- (4) *Complete damage*. Structure may have large permanent lateral displacement, may collapse, or be in imminent danger of collapse due to cripple wall failure or the failure of lateral load resisting system; some structures may slip and fall off the foundations; large foundation cracks.

Table 14 provides an estimated number of buildings damaged and the extent of damage to the various types of structures using this scenario.

Table 14: Estimated Building Damage from Earthquake

	Number of Buildings					Total
	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage	
Wood	28,677	2,296	384	25	0	31,382
Steel	177	10	5	1	0	193
Concrete	367	27	10	1	0	405
Precast	192	16	13	3	0	224
Reinforced Masonry	3,234	202	133	20	0	3,589
Manufactured Home	2,086	295	156	16	0	2,553
Total	34,733	2,846	701	66	0	38,346

Table 15 identifies the possible economic loss due to the number of damaged or destroyed buildings as a result of this type of earthquake.

Table 15: Direct Economic Loss

Capital Stock Losses			
Structural Damage Loss	Nonstructural Damage Cost	Contents Damage Cost	Inventory Loss
\$11,819,000.00	\$37,667,000.00	\$15,472,000.00	\$539,000.00

Income Losses			
Relocation Loss	Capital Related Loss	Wage Losses	Rental Income Loss
\$315,000.00	\$2,977,000.00	\$3,944,000.00	\$4,520,000.00

Total Loss
\$65,497,000.00

- (d) Much of the County's recent development has building codes in place which reduce the risk of structural damage. However, historical buildings constructed of unreinforced masonry are most vulnerable to seismic ground shaking. Downtown Grand Junction is one of the areas most vulnerable to a seismic event due to older construction.

Similar to calculating damage to buildings, the analysis also allows us to estimate possible injuries sustained during a 5.5 magnitude earthquake in this area as shown in Table 16. HAZUS injury definitions are defined as the following:

- (1) *Severity 1.* Injuries requiring basic medical aid without requiring hospitalization.
- (2) *Severity 2.* Injuries requiring a greater degree of medical care and hospitalization, but not expected to progress to a life-threatening status.
- (3) *Severity 3.* Injuries that pose an immediate life-threatening condition if not treated adequately and expeditiously. The majority of these injuries are the result of structural collapse and subsequent collapse or impairment of the occupants.

- (4) *Severity 4*. Instantaneously killed or mortally injured.

Table 16: Possible Injuries Sustained in Earthquake

Casualties at 2:00 a.m. event	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other – Residential	7	1	0	0	8
Single-Family	14	2	0	0	16
Total Casualties – 2:00 a.m.	21	3	0	0	24

Casualties at 2:00 p.m. event	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
Commuting	0	0	0	0	0
Commercial	13	2	0	0	15
Educational	3	0	0	0	3
Hotels	0	0	0	0	0
Industrial	2	0	0	0	2
Other – Residential	1	0	0	0	1
Single-Family	3	0	0	0	3
Total Casualties – 2:00 p.m.	22	2	0	0	24

Casualties at 5:00 p.m. event	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
Commuting	0	0	0	0	0
Commercial	10	1	0	0	11
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	1	0	0	0	1
Other – Residential	3	1	0	0	4
Single-Family	5	1	0	0	6
Total Casualties – 5:00 p.m.	19	3	0	0	22

- (e) Future Development. All jurisdictions within Mesa County have adopted building codes. Building codes substantially reduce the costs of damage to future structures from earthquakes. It is highly recommended that a specific study be done on the liquefaction hazards found within the Grand Valley. This is the single most important unknown in assessing the vulnerability of earthquakes in Mesa County.

(Res. 05-10, 1-6-10)

42.08.490 Floods.

Floods affect most of the communities in Mesa County and will continue to occur in the future. Floods can be critical in their magnitude and may cause deaths and damage to property and infrastructure.

- (a) **Existing Development.** In 2005, Mesa County entered FEMA's map modernization program to develop digital flood insurance rate maps (DFIRMs) in partnership with State and federal agencies. Mesa County has received a copy of the preliminary copies of the Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report. The preliminary report is in a Countywide format, which means that flood hazard information for all jurisdictions within Mesa County have been included on one DFIRM and one FIS report.

Analysis was done for each community in Mesa County to determine the proportion of value of buildings in the hazard areas that were identified by the HMPC. The GIS system was used by selecting parcels that have their center within the City or Town limits, then by making a sub-selection of parcels that have their center within the areas subject to flooding. Structure value is based on the actual value of improvements. Specific information regarding flood losses is identified in the jurisdiction's annex.

- (b) **Floodplain Management.** The purpose of the Mesa County floodplain management program is to assist property owners with any improvements in the floodplain. The County's goal is to help minimize property damage to residents of Mesa County during flood events. Mesa County wants to ensure that life, property including natural resource values, and/or new improvements are safe during flood events and that any structures or improvements in the floodplain will not cause additional drainage problems.

Regulations are in place to ensure that proposed improvements will not cause flooding problems upstream and/or downstream. Every manmade structure or improvement constructed within the floodplain area requires a floodplain development permit prior to beginning construction. A floodplain development permit authorizes a specific activity within the regulatory floodplain while minimizing the likelihood of property damage to buildings or improvements in the event of a flood. (County, 2009)

The National Flood Insurance Program (NFIP) is a federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses. A jurisdiction's eligibility to participate is premised on their adoption and enforcement of State and community floodplain management regulations intended to prevent unsafe development in the floodplain, thereby reducing future flood damages. Thus, participation in the NFIP is based on an agreement between communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the federal government will make flood insurance available within the community as a financial protection against flood losses. Currently all of the communities in and including Mesa County participate in the National Flood Insurance Program.

- (c) **Future Development.** Management of storm water is important to the communities in Mesa County. As mandated under the Clean Water Act, the U.S. Environmental Protection Agency has developed a National Pollutant Discharge Elimination System storm water permitting program. Phase II of this program addresses smaller urbanized areas, such as the Grand Valley. Currently the jurisdictions in Mesa County have identified areas where Phase II regulations are to be implemented, requiring storm water construction permits. (County, 2009)

(Res. 05-10, 1-6-10)

42.08.500 Landslide, mudflow/debris fall, rockfall.

In Mesa County, vulnerability to landslides primarily occurs along roadways, where the hazard could cause deaths or injuries. Road closures due to landslide events also affect the County economically.

(a) Existing Development. Under the Mesa County Land Development Code, Chapter 7, any proposed land use or development must identify hazard areas, i.e., floodplains, drainage areas, steep slope areas, geological fault areas, and other areas hazardous to life or property. Such proposals will require an evaluation to determine the degree to which the proposed activity will:

- (1) Expose any person, including occupants or users of the proposed use or development, to any undue natural hazard.
- (2) Create or increase the effects of natural hazard areas or other improvements, activities or lands.
- (3) Impact the natural environment and be unduly destructive to the natural resources of an area.

Regulations also require proposed land uses to address soil, erosion, and surface geologic characteristics of the development site through proper design, engineering and construction. (County, Mesa County Planning and Economic Development, 2009)

Potential losses for the landslide areas in Mesa County were estimated using Mesa County GIS and assessor's data and were examined in terms of values and critical facilities at risk. Detailed information pertaining to specific jurisdictions is found in that jurisdiction's annex.

(b) Future Development. The severity of landslide problems is directly related to the extent of human activity in hazard areas. Adverse effects can be mitigated by early recognition and avoiding incompatible land uses in these areas or by corrective engineering. The mountainous topography of the County presents considerable constraints to development, most commonly in the form of steep sloped areas. These areas are vulnerable to disturbance and can become unstable. Most of these areas are adjacent to roadway systems that are heavily used. Continued adherence to the Land Development Code is necessary.

(Res. 05-10, 1-6-10)

42.08.510 Lightning.

Lightning events are likely to occur throughout Mesa County and can result in deaths and destruction of property. Consequences of lightning may have destructive effects on power and information systems. Failure of these systems would have cascading effects throughout the County and could possibly disrupt other critical infrastructure such as water treatment facilities. Because lightning can occur anywhere in the County, data was not available to identify specific structures at risk or estimate potential losses.

(Res. 05-10, 1-6-10)

42.08.520 Severe winter weather.

(a) Existing Development. Winter storms can create significant public safety concerns and cause significant impacts to the local economy due to a disruption in the transportation of goods. On occasion, winter storms can overwhelm snow removal efforts, transportation, livestock management and business and commercial activities.

From previous events, Mesa County Emergency Management staff has identified the County's elderly population as a significantly vulnerable population during winter storms especially when utility outages are associated with winter storms.

(b) Future Development. Population growth in the County will increase potential problems with traffic and snow removal, thereby putting pressure on local governments and emergency services. The Grand Valley does not typically experience significant winter storms; however, it has experienced utility outages associated with severe weather. Future efforts should be made to identify populations at risk and determine special needs.

(Res. 05-10, 1-6-10)

42.08.530 Wildfire.

- (a) **Existing Development.** Past mitigation projects include a detailed, on the ground, wildfire hazard risk assessment for approximately 450 structures including private residences and outbuildings within the jurisdictions of Lower Valley Fire Protection District, Grand Junction Rural Fire Protection District and unincorporated Mesa County. Each structure was evaluated based on potential fuels, slope, aspect, fire disturbance regimes, access/egress, water supply, and structure ignitability. This data was compiled and incorporated into the County's GIS system.

The GIS data shows structures that have been rated as to overall risk of wildfire, as well as those areas deemed most appropriate for wildland fire hazard mitigation efforts on both federal and non-federal lands within this area. This information is used to aid local fire departments and federal agencies in preparing fuels mitigation projects and preplanning fire prevention and protection strategies. This assessment also serves as the basis for public information and education efforts directed primarily by the Colorado State Forest Service and participating jurisdictions to encourage private property owners to participate in Firewise and other mitigation efforts to protect their property.

Mesa County Land Development Code specifically addresses development standards in hazard areas. All new development located on lands rated as medium or higher wildfire hazard shall be developed using defensible spacing standards. (County, Mesa County Planning and Economic Development, 2009)

- (b) **Future Development.** Many areas in Mesa County now have an increased wildfire threat in areas where fire was not a problem in the past. This is due to a combination of irrigation and the introduction of non-native plants. Non-native tamarisk and Russian olive have invaded drainage areas. Excess undrained irrigation water has created thick unbroken stands of vegetation throughout the Grand Valley. These stands of tamarisk and Russian olive burn readily and pose a threat to homes and other structures. (Paul, 2009)

Additional wildfire assessments need to be conducted across Mesa County. Several areas are at significant risk to wildland fire and more education of property owners on how to create a defensible space around their homes and other structures is needed. Once the assessments have been completed, on the ground efforts to create defensible spacing or thinning of areas with substantial overgrowth need to be completed.

(Res. 05-10, 1-6-10)

Article V. Mitigation Strategy

42.08.540 Mitigation strategy.

44 CFR Requirement Section 201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

This article presents the mitigation strategy developed by the Mesa County Hazard Mitigation Planning Committee (HMPC) based on the County's risk assessment. The mitigation strategy was developed through a collaborative group process and consists of goals, objectives, and mitigation actions. The following definitions are based upon those found in FEMA publication 386-3, *Developing a Mitigation Plan (2002)*:

- (a) **Goals.** General guidelines that explain what you want to achieve. Goals are defined before considering how to accomplish them so that they are not dependent on the means of achievement: They are usually long-term, broad, policy-type statements.
- (b) **Objectives.** Define strategies or implementation steps to attain the identified goals and are specific and measurable.

(c) *Mitigation actions*. Specific actions that help achieve goals and objectives.

(Res. 05-10, 1-6-10)

42.08.550 Goals and objectives.

The HMPC developed goals and objectives to provide direction for reducing hazard-related losses in Mesa County that were based on the results of the risk assessment. Through discussions at the second planning meeting, the HMPC identified a variety of possible goals.

(a) Goal 1. Reduce risk to the people, property, and environment of Mesa County from the impacts of natural hazards.

- (1) Minimize the vulnerability of existing and new development to hazards.
- (2) Increase education and awareness of hazards and risk reduction measures.
- (3) Improve comprehensive wildfire planning, funding, and mitigation.
- (4) Strengthen floodplain management programs.
- (5) Enhance assessment of multi-hazard risk to critical facilities and infrastructure.

(b) Goal 2. Minimize economic losses.

- (1) Strengthen disaster resistance and resiliency of businesses and employers.
- (2) Promote and conduct continuity of operations and continuity of governance planning.
- (3) Reduce financial exposure of County and municipal governments.

(c) Goal 3. Implement the mitigation actions identified in this plan.

- (1) Engage collaborative partners, including community organizations, businesses, and others.
- (2) Integrate mitigation activities into existing and new community plans and policies.
- (3) Monitor, evaluate, and update the mitigation plan.

(Res. 05-10, 1-6-10)

42.08.560 Identification and analysis of mitigation actions.

44 CFR Requirement Section 201.6(c)(3)(ii): The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

The HMPC representatives present at the third meeting identified, discussed, and prioritized potential mitigation actions. Representatives chose to focus on the top three hazards with an overall ranking of “High” to develop hazard specific mitigation actions. The three high hazards are: flooding, wildfire, and landslides-rockfalls. At the time the mitigation actions are complete, additional mitigation goals and actions will be developed for the remaining hazards. The additional hazards include: avalanche, dam failure, drought, hazardous materials, lightning, and severe winter weather. It is important to note that many of the final mitigation actions are multi-hazard actions designed to reduce potential losses from all types of hazard events.

The HMPC discussed the key issues for each priority hazard and discussed potential mitigation alternatives. The mitigation strategy worksheet (worksheet #4) was used to identify all possible mitigation actions for each of the three high hazards. Possible actions were discussed and eventually prioritized for the appropriate jurisdictions.

(Res. 05-10, 1-6-10)

42.08.570 Implementation of mitigation actions.

44 CFR Requirement Section 201.6(c)(3)(ii): The mitigation strategy shall include an action strategy describing how the actions identified in paragraph (c)(2)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefits review of the proposed projects and their associated costs.

Representatives prioritized the various mitigation actions based on the hazard that would be mitigated, cost estimate, and benefits to completing the mitigation actions preventing further loss, and possible funding opportunities for the actions. The process of identification and analysis of mitigation alternatives allowed the HMPC to come to consensus and to prioritize the recommended actions.

The Disaster Mitigation Act regulations state that cost-benefit review is the primary method for mitigation projects to be prioritized. Recognizing the federal regulatory requirement to prioritize by cost-benefit, and the need for any publicly funded project to be cost-effective, the HMPC decided to pursue implementation according to when and where damage occurs, available funding, political will, and jurisdictional priority.

The mitigation actions developed by the HMPC are listed in Table 17. The HMPC came to consensus on which departments and representatives are responsible for completing an implementation worksheet for each identified mitigation action. The worksheets document background information, cost estimates, benefits, and timeline for each action.

Table 17: Mitigation Action Matrix

Mitigation Action Matrix				
Jurisdiction	Action	Priority	Goals Addressed	Hazards Addressed
Multi-jurisdictional	Coordinate annual reviews.	High	Goal 3	Multi-Hazard
Multi-jurisdictional	Continue public involvement in mitigation activities.	High	Goal 1	Multi-Hazard
Multi-jurisdictional	Coordinate and complete a continuity of operations/continuity of governance (COOP/COOG) plan.	High	Goal 2	Multi-Hazard
Plateau Valley FPD	Development of a Community Wildfire Protection Plan to address issues in the wildland-urban interface and develop a fuel reduction program. CWPP is designed to assist the public and agencies having jurisdiction a guideline for the mitigation, structure development and management of natural resources in the wildland-urban interface.	High	Goal 1	Wildfire
Multi-jurisdictional	Identify and prioritize fuel reduction projects around critical facilities and infrastructure in wildfire hazard areas. Community education regarding the risk of wildfires.	High	Goal 1	Wildfire
Multi-jurisdictional	Continue to map wildfire hazard and vulnerability analysis for wildland-urban interface areas in Mesa County.	High	Goal 1	Wildfire

Table 17: Mitigation Action Matrix (Continued)

Mitigation Action Matrix				
Jurisdiction	Action	Priority	Goals Addressed	Hazards Addressed
Town of Palisade: Fire Department	Create a fire mitigation plan to protect vital raw water supplies and infrastructure. Conduct on the ground mitigation to reduce the potential for wildfire.	High	Goal 1, 2	Wildfire
Multi-jurisdictional	Project includes two detention basins and 535 feet of box culvert improvements that will remove 269 structures from 100-year floodplain, including two churches and one elementary school, and decrease emergency response arterial inundation (Hwy. 50) by 0.43 feet (Orchard Mesa Detention and Conveyance Improvements).	Medium	Goal 1, 2	Flooding
Mesa County	Adobe Creek: Overbank flooding of properties is common during small events. Project will upgrade 13 structures and 2.5 miles of channel to achieve flow capacity for 10-year event level.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Project will construct a 75.5 acre-foot reservoir above I-70 on Bosley Wash to reduce peak 100-year discharge from 1,727 CFS to 50 CFS, thereby eliminating downstream flooding.	Medium	Goal 1, 2	Flooding
Mesa County	Douglas Wash: The existing drainage way and crossing structures are undersized and cannot convey the 100-year storm event. More than 55 properties are within the flooding area as a result. A study was completed and the recommended solution was to construct detention areas to control the flow within the channel.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Lewis Wash: Existing drainage way and crossing structures are undersized and cannot convey the 100-year storm event. More than 200 properties are within the flooding area as a result. A study was completed and the recommended solution was to construct detention areas to control the flow within the channel.	Medium	Goal 1, 2	Flooding
City of Grand Junction	Riverside Levee: Flooding occurred in the 1983/84 runoff event in the Colorado River basin. Emergency flood wall was constructed protecting the area north of the river during this flood event. This is not a certified flood levee.	Medium	Goal 1, 2	Flooding

Table 17: Mitigation Action Matrix (Continued)

Mitigation Action Matrix				
Jurisdiction	Action	Priority	Goals Addressed	Hazards Addressed
Multi-jurisdictional	Mitigation project for the upper and lower portions of the Leach Creek drainage. These projects would provide mitigation to flood events for the area of Leach Creek above the confluence with Ranchmen's Ditch.	Medium	Goal 1, 2	Flooding
Multi-jurisdictional	Identify and map geologic hazard zones and incorporate into master planning.	Medium	Goal 1, 3	Landslide-Rockfall-Mudflow-Debris flow
Multi-jurisdictional	Improve information on website about natural hazard risk and mitigation.	Medium	Goal 1	Multi-Hazard
Multi-jurisdictional	Real time rainfall data is lacking in Mesa County. An automated rainfall ALERT network would allow real time rainfall data access by local officials and National Weather Service forecasters for more timely flash flood warnings.	Medium	Goal 1, 3	Flooding
Multi-jurisdictional	A Basin Master Plan for Big Salt Wash will be completed in May 2010. The plan will identify at risk properties, conveyance and detention mitigation alternatives and costs.	Low	Goal 1	Flooding

(a) Mitigation Action: Multi-Jurisdictional – 1: Plan Maintenance and Implementation.

- (1) Jurisdiction: Multi-jurisdictional.
- (2) Action item: Coordinate biannual reviews of the Mesa County Multi-Hazard Mitigation Plan to monitor, evaluate, and update the plan.
- (3) Priority: High.
- (4) Issue/background: The Hazard Mitigation Planning Committee formed to develop the Mesa County Multi-Hazard Mitigation Plan needs to continue to exist and be comprised of a broad base of stakeholders. Holding biannual meetings will help keep the plan action-oriented and will assist in a more effective five-year update process. This action will also implement the process for monitoring, evaluating, and updating the plan.
- (5) Implementation: The Mesa County Emergency Manager will schedule and facilitate these meetings. The committee will need to establish a meeting schedule and framework for continuity. These concepts will be presented to the group by email with a meeting date planned for the future. The first meeting will occur in January 2011.
- (6) Responsible agency: Mesa County Emergency Management Department.
- (7) Partners: All agencies and jurisdictions identified as the Hazard Mitigation Planning Committee.
- (8) Potential funding: Mesa County Emergency Management.
- (9) Cost estimate: Staff time.

- (10) Benefits.
 - (i) Continue to build relationships and understanding of the important issues involved in mitigation planning.
 - (ii) Improve communication and coordination between the County and participating jurisdictions/agencies.
 - (iii) Keep plan current and accurate.
- (11) Timeline: First meeting scheduled for January 2011 and every six months after.
- (b) Mitigation Action: Multi-Jurisdictional – 2: Public Involvement in Mitigation Activities.
 - (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Continue public involvement process in mitigation activities.
 - (3) Priority: High.
 - (4) Implementation: The Mesa County Emergency Management Department will prepare and conduct a series of presentations focused upon coordination and improvements of mitigation activities.

Through Mesa County's Public Relations Director, local media will be used to announce progress on the mitigation plan and future mitigation activities. Additional educational information materials will be used and will include: fact sheets, public service announcements, and presentations to specific groups. Flooding, landslides/rockfall, and wildfires are priority hazards for such information.
 - (5) Responsible agency: Mesa County Emergency Management Department.
 - (6) Partners: All participating local governments, special districts, authorities and local media sources.
 - (7) Potential funding: Mesa County and participating jurisdictions/agencies.
 - (8) Cost estimate: Staff time and media costs.
 - (9) Benefits:
 - (i) Increase public education and awareness.
 - (ii) Improve communication and coordination.
 - (iii) Build relationships and encourage a better understanding of the important issues involved in mitigation planning.
 - (10) Timeline: Within first six months after the adoption of the plan. Ongoing.
- (c) Mitigation Action: Multi-Jurisdictional – 3: Coordination of a Continuity of Operations/Continuity of Governance Plan.
 - (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Complete a comprehensive inventory and vulnerability analysis of critical infrastructure and coordinate multi-jurisdictional continuity of operations/continuity of governance (COOP/COOG) planning.
 - (3) Priority: High.
 - (4) Issue/background: The Mesa County Emergency Management Department and City of Grand Junction staff has been engaged in a COOP/COG planning process, which should be completed for the County government by December 2009.

- (5) Implementation: The County will work with local governments and special districts to encourage their investment and implementation of similar work for their organizations and critical infrastructure. The Mesa County and City of Grand Junction are invested in this planning.
 - (6) Responsible agency: Mesa County Emergency Management Department/City of Grand Junction.
 - (7) Partners: All local governments and special districts.
 - (8) Potential funding: Mesa County and participating jurisdictions.
 - (9) Cost estimate: Staff time.
 - (10) Benefits.
 - (i) Identify critical functions/services provided by local government/special districts.
 - (ii) Prevent loss of service.
 - (iii) Protect human health and safety.
 - (11) Timeline: Draft plans are currently being written at both the County and City of Grand Junction level. Plans should be completed by December 2009.

Mesa County Department of Emergency Management will begin working with other jurisdictions beginning June 2010.
- (d) Mitigation Action: Plateau Valley Fire Protection District – 1: Community Wildfire Protection Plan (CWPP).
- (1) Jurisdiction: Plateau Valley Fire Protection District.
 - (2) Action title: Development of a Community Wildfire Protection Plan to address issues in the wildland-urban interface area.
 - (3) Priority: High.
 - (4) Issue/background: Increasing rural development increases the wildland-urban interface problem. The Community Wildfire Protection Plan is designed to assist the public and agencies having jurisdiction address mitigation, structure development and management of natural resources.
 - (5) Implementation: Organize a core team of agency representatives from the Plateau Valley Fire Protection District, Mesa County Emergency Management Department, Colorado State Forest Service, Bureau of Land Management, and the Mesa County Sheriff's Office Wildland Team to begin identifying components of plan and determine planning schedule.
 - (6) Responsible agency: Plateau Valley Fire Protection District.
 - (7) Partners: Bureau of Land Management, Colorado State Forest Service, Mesa County Sheriff's Office, Mesa County Emergency Management Department.
 - (8) Potential Funding: Bureau of Land Management Grant, Plateau Valley FPD.
 - (9) Cost estimate: \$20,000.
 - (10) Benefits.
 - (i) Develop mitigation actions to reduce the potential for a wildland fire.
 - (ii) Improve communication and coordination.
 - (iii) Reduce future losses due to wildfire.
 - (iv) Protect public health and safety.
 - (v) Provide education to the community regarding the wildfire hazard.

- (11) Timeline: 2010-2011.
- (e) Mitigation Action: Multi-Jurisdictional – 4: Community Education Regarding the Risk of Wildfires.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Identification of fuel reduction projects around critical facilities and infrastructure in wildland-urban interface areas.
 - (3) Priority: High.
 - (4) Issue/background: At present times, wildfires are caused mainly by humans and lightning. Each year significant issues arise for Fire Protection Districts/Agencies regarding agriculture burning without proper permits.
 - (5) Implementation: Fire Protection Districts/Agencies will pull together information discussing the process for obtaining an agriculture burn permit and discuss the advantages to ensuring property owners use defensible spacing around structures on their property.
 - (6) Responsible agency: All Fire Districts/Departments.
 - (7) Partners: All Fire Districts, Colorado State Forest Service, Bureau of Land Management, and Mesa County Sheriff's Department.
 - (8) Potential funding: Fire Districts/Departments, grants.
 - (9) Cost estimate: \$4,400 for ad campaigns and permits.
 - (10) Benefits.
 - (i) Improve communication and coordination.
 - (ii) Protect public health and safety.
 - (iii) Reduce future losses.
 - (iv) Prevent duplication of efforts.
 - (11) Timeline: Ongoing.
- (f) Mitigation Action: Multi-Jurisdictional – 5: Wildfire Hazard and Vulnerability Analysis.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Conduct additional wildfire hazard and vulnerability analysis in wildfire prone areas of Mesa County.
 - (3) Priority: Medium.
 - (4) Issue/background: Approximately two years ago, a wildfire assessment and mapping project was done in conjunction with the Colorado National Monument, Mesa County Sheriff's Office Wildfire Team, Lower Valley Fire Protection District and the Colorado State Forest Service. This assessment was done using the "Red Zone" software that gives a property a rating based on the risk and vulnerability to wildfire.
 - (5) Implementation: Identify areas within Mesa County that are prone to wildfire activity and complete assessment.
 - (6) Responsible agency: Area Fire Districts/Departments.
 - (7) Partners: Bureau of Land Management, Colorado State Forest Service, and Mesa County Sheriff's Office Wildland Team.
 - (8) Potential funding: Grant funding.
 - (9) Cost estimate: Staff time.

- (10) Benefits.
 - (i) Improve communication and coordination.
 - (ii) Educate property owners regarding the risk of wildfire.
 - (iii) Protect public health, safety, and property.
- (11) Timeline: Completed by fall months 2013.
- (g) Mitigation Action: Town of Palisade-Fire Department – 1: Fire Mitigation Plan for Town’s Watershed.
 - (1) Jurisdiction: Town of Palisade.
 - (2) Action title: Implementation of a fire mitigation plan to reduce fuels and protect vital raw water supplies and infrastructure.
 - (3) Priority: High.
 - (4) Issue/background: The Town of Palisade’s watershed has been threatened by wildfire in recent years. The Town of Palisade has developed a plan to reduce fuel sources that threaten the watershed if a wildfire were to start in the area.
 - (5) Implementation: Mechanical thinning and pruning will be used where practical with hand work applied to areas of steep terrain or poor vehicle access. Prescribed burning will be applied as appropriate and existing roads and pipeline routes will provide for fuel breaks. All slash will be removed, burned or mulched.
 - (6) Responsible agency: Town of Palisade-Fire Department.
 - (7) Partners: Town of Palisade Road and Bridge Department, Colorado State Forest Service, Bureau of Land Management, private land owners.
 - (8) Potential funding: Colorado State Forest Service Grant, Town of Palisade.
 - (9) Cost estimate: \$150,000.
 - (10) Benefits.
 - (i) Protect the Town of Palisade’s watershed.
 - (ii) Prevent future losses to the Town of Palisade.
 - (iii) Protect public health and safety.
 - (iv) Create habitat and an improved environment.
 - (11) Timeline: Spring, 2010.
- (h) Mitigation Action: Multi-Jurisdictional – 6: Orchard Mesa Detention and Conveyance Improvements.
 - (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Build two detention basins and make improvements to culvert.
 - (3) Priority: Medium.
 - (4) Issue/background: With the construction of two detention basins and 535 feet of box culvert improvements, 269 structures including two churches and one elementary school will be removed from the 100-year floodplain. This will also decrease emergency response arterial inundation (Highway 50) by 0.43 feet.
 - (5) Implementation: The 5-2-1 Drainage Authority will make application to the Pre-Disaster Mitigation Grant funds and begin design phases.

- (6) Responsible agency: 5-2-1 Drainage Authority.
 - (7) Partners: City of Grand Junction and Mesa County governments.
 - (8) Potential funding: Request \$3,000,000 from PDM Grant, \$1,150,000 from City of Grand Junction/Mesa County.
 - (9) Cost estimate: \$4,150,000.
 - (10) Benefits.
 - (i) Remove a significant amount of structures out of the 100-year floodplain.
 - (ii) Decrease emergency response arterial inundation.
- (i) Mitigation Action: Multi-Jurisdictional – 7: Increase Flow Capacity on Adobe Creek with Conveyance Improvements.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Increase Adobe Creek flow capacity.
 - (3) Priority: Medium.
 - (4) Issue/background: Overbank flooding of properties is common during small events. This project will upgrade 13 structures and 2.5 miles of channel to achieve flow capacity for 10-year event level.
 - (5) Implementation: 5-2-1 Drainage Authority will identify the 13 structures that will be updated in this project and begin developing design standards to increase flow capacity.
 - (6) Responsible agency: 5-2-1 Drainage Authority.
 - (7) Partners: City of Fruita and Mesa County.
 - (8) Potential funding: City of Fruita, Mesa County CIP, grants.
 - (9) Cost estimate: \$7,873,000.
 - (10) Benefits.
 - (i) Increase flow capacity along Adobe Creek and reduce overbank flooding.
 - (ii) Thirteen structures will be upgraded.
 - (11) Timeline: Not yet determined.
- (j) Mitigation Action: Multi-Jurisdictional – 8: Construction of Reservoir on Bosley Wash.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Construct reservoir to reduce peak discharge to eliminate downstream flooding.
 - (3) Priority: Medium.
 - (4) Issue/background: Project will consist of constructing a 75.5 acre-foot reservoir above Interstate Highway 70 on Bosley Wash to reduce peak 100-year discharge from 1,727 CFS to 50 CFS, ultimately eliminating downstream flooding.
 - (5) Implementation: 5-2-1 Drainage Authority will pursue funding to begin the design phase in 2010, with construction beginning in 2010-2011.
 - (6) Responsible Agency: 5-2-1 Drainage Authority.
 - (7) Partners: Mesa County.
 - (8) Potential funding: County Capital Improvement Plan, grants.
 - (9) Cost estimate: \$2,157,000.

- (10) Benefits: Elimination of downstream flooding.
 - (11) Timeline: 2010-2011.
- (k) Mitigation Action: Multi-Jurisdictional – 1: Douglas Wash Improvements.
- (1) Jurisdiction: Mesa County.
 - (2) Action title: Construction of detention area to control the flow within the channel.
 - (3) Priority: Medium.
 - (4) Issue/background: The existing drainage way and crossing structure are undersized and cannot convey the 100-year storm event. More than 55 properties are within the flooding area as a result. A study was completed and the recommended solution was to construct detention areas to control the flow within the channel.
 - (5) Implementation: Unknown at this time.
 - (6) Responsible agency: 5-2-1 Drainage Authority.
 - (7) Partners: Mesa County, Grand Junction Drainage District.
 - (8) Potential funding: None identified at this time.
 - (9) Cost estimate: \$8,286,000.
 - (10) Benefits.
 - (i) Reduce future losses.
 - (ii) Protect public health and environment.
 - (11) Timeline: Not identified at this time.
- (l) Mitigation Action: Multi-Jurisdictional – 2: Lewis Wash Improvements.
- (1) Jurisdiction: Mesa County.
 - (2) Action title: Construction of detention areas along Lewis Wash to control the flow within the channel.
 - (3) Priority: Medium.
 - (4) Issue/background: Existing drainage way and crossing structures are undersized and cannot convey the 100-year storm event. More than 200 properties are within the flooding areas as a result. A study was completed and the recommended solution is to construct detention areas to control the flow within the channel.
 - (5) Implementation: Unknown at this time.
 - (6) Responsible agency: Mesa County.
 - (7) Partners: 5-2-1 Drainage Authority, City of Grand Junction, Grand Junction Drainage District.
 - (8) Potential funding: Mesa County Capital Improvement Project, City of Grand Junction, Grand Junction Drainage District, grants.
 - (9) Cost estimate: \$5,690,000.
 - (10) Benefits.
 - (i) Protect public health and safety.
 - (ii) Reduce property damage.
 - (iii) Improve communication and coordination.
 - (11) Timeline: Not identified at this time.

- (m) Mitigation Action: City of Grand Junction – 1: Riverside Levee.
- (1) Jurisdiction: City of Grand Junction.
 - (2) Action title: Redesign and construct a certified flood levee in the Riverside area.
 - (3) Priority: Medium.
 - (4) Issue/background: Flooding occurred in 1983-1984 runoff event in the Colorado River Basin. Emergency flood wall was constructed protecting the area north of the river during this flood event. This emergency flood wall is not a certified levee.
 - (5) Implementation: Unknown at this time.
 - (6) Responsible agency: City of Grand Junction.
 - (7) Partners: None listed at this time.
 - (8) Potential funding: City of Grand Junction currently has this project tentatively budgeted for 2011, U.S. Army Corps of Engineers.
 - (9) Cost estimate: \$1,650,000.
 - (10) Benefits: Benefits are identified in the Section 205 Report (1991) U.S. Army Corps of Engineers.
 - (11) Timeline: Begin design phase in 2015 with the construction phase beginning in 2016 or later.
- (n) Mitigation Action: Multi-Jurisdictional – 9: Leach Creek Drainage Detention Ponds.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Construction of regional detention ponds for Leach Creek Drainage.
 - (3) Priority: Medium.
 - (4) Issue/background: These projects would provide mitigation to flood events for the area of Leach Creek above the confluence with Ranchmen's Ditch. Other alternatives would be to purchase all properties with structures impacted by flood.
 - (5) Implementation: Unknown at this time.
 - (6) Responsible party: 5-2-1 Drainage Authority.
 - (7) Partners: City of Grand Junction.
 - (8) Potential funding: 5-2-1 Drainage Authority, City of Grand Junction.
 - (9) Cost estimate: \$3,500,000.
 - (10) Benefits.
 - (i) Remove approximately 500 acres of commercial and residential zone properties from floodplain.
 - (ii) Protect public health and safety.
 - (iii) Reduce future losses.
 - (11) Timeline: Not in the capital improvement budget for the next 10 years. Unknown at this time when project might be completed.
- (o) Mitigation Action: Mesa County – 10 Landslide-Rockfall-Mudflow-Debris Flow Mapping.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Identify and map landslide-rockfall-mudflow-debris flow areas in Mesa County and identify possible mitigation actions.

- (3) Priority: Medium.
 - (4) Issue/background: Additional identification and mapping of landslide-rockfall-mudflow debris flow is needed throughout Mesa County and as important is the need for possible mitigation efforts.
 - (5) Responsible agency: Mesa County Emergency Management Department.
 - (6) Partners: Mesa County Public Works Department, Colorado Department of Transportation.
 - (7) Potential funding: Nothing identified at this time.
 - (8) Cost estimate: Staff time.
 - (9) Benefits.
 - (i) Reduce geologic hazard risk.
 - (ii) Increase public awareness of hazard.
 - (iii) Protect public health and safety.
 - (10) Timeline: 2012.
- (p) Mitigation Action: Mesa County – 3: Natural Hazard Education.
- (1) Jurisdiction: Mesa County.
 - (2) Action title: Improve education and information on the natural hazards in Mesa County.
 - (3) Priority: Medium.
 - (4) Issue/background: The Mesa County website currently does not provide a significant amount of information on the natural hazards in Mesa County and what citizens can do to protect themselves and their property.
 - (5) Implementation: Based on the information gathered in this Mitigation Plan, information about the natural hazards in Mesa County and preventative information will be provided on the County website.
 - (6) Responsible party: Mesa County Emergency Management Department.
 - (7) Partners: Mesa County Information Technology and GIS Department.
 - (8) Potential funding: Mesa County.
 - (9) Cost estimate: Staff time.
 - (10) Benefits.
 - (i) Increase public awareness of natural hazards in community.
 - (ii) Protect public health and safety.
 - (11) Timeline: Project completed by July 2010.
- (q) Mitigation Action: Multi-Jurisdictional – 11: Automated Rainfall Alert Network.
- (1) Jurisdiction: Mesa County.
 - (2) Action title: Automated Rainfall Alert Network.
 - (3) Priority: Medium.
 - (4) Issue/background: Real time rainfall data is lacking in Mesa County, with only one exception being the Grand Junction Regional Airport. An automated rainfall alert network would allow real time rainfall data access by local officials and National Weather Service forecasters for more timely flash flood warnings.

- (5) Implementation: Identification of system components and vendors.
 - (6) Responsible agency: Mesa County Emergency Management Department.
 - (7) Partners: National Weather Service.
 - (8) Potential funding: Grants.
 - (9) Cost estimate: \$625,000 for installation and \$150,000 annual maintenance.
 - (10) Benefits.
 - (i) Enhanced monitoring of flood potential.
 - (ii) Increase lead time of flash flood warnings for the general public.
 - (iii) Protect public health and safety.
 - (11) Timeline: Unknown at this time.
- (r) Mitigation Action: Multi-Jurisdictional – 12: Big Salt Wash Detention and Conveyance.
- (1) Jurisdiction: Multi-jurisdictional.
 - (2) Action title: Create a Basin Master Plan to identify properties at risk and develop mitigation alternatives.
 - (3) Priority: Low.
 - (4) Issue/background: Some flooding has occurred along Big Salt Wash. A better understanding of what properties are at risk and identification of mitigation actions/alternatives is required.
 - (5) Implementation: A Basin Master Plan is needed to identify at risk properties and determine what conveyance and detention mitigation actions will prevent future flooding.
 - (6) Responsible agency: 5-2-1 Drainage Authority.
 - (7) Partners: City of Fruita, Mesa County.
 - (8) Potential funding: City of Fruita, Mesa County Capital Improvement Plan.
 - (9) Cost estimate: Unknown at this time.
 - (10) Benefits.
 - (i) Improve communication and coordination.
 - (ii) Protect infrastructure and other properties.
 - (iii) Protect public health and safety.
 - (11) Timeline: Not identified at this time.

(Res. 05-10, 1-6-10)

Article VI. Plan Implementation and Maintenance

42.08.580 Plan implementation and maintenance.

This article provides an overview of the overall strategy for plan implementation and maintenance and outlines the method and schedule for monitoring, updating, and evaluating the plan.

(Res. 05-10, 1-6-10)

42.08.590 Implementation.

Implementation and maintenance are critical to the success of the mitigation plan. While this plan makes many important recommendations, the jurisdictions will need to decide which action(s) to take first. Two

factors will help with making that decision; the priority assigned to the recommendations and funding availability. Low or no-cost actions most easily demonstrate progress toward successful implementation of the plan.

An important implementation mechanism that is highly effective and low-cost is incorporation of the hazard mitigation plan recommendations and their underlying principles into other plans such as comprehensive planning, capital improvement budgeting, and regional plans. Mitigation is most successful when it is incorporated in the day-to-day functions and priorities of government and in land use and development planning.

It is important to maintain a constant monitoring of funding opportunities that can be leveraged to implement some of the more costly recommended actions. Specific funding opportunities that should be monitored include: special pre-and post-disaster funds, State and federal earmarked funds, and other grant programs.

(Res. 05-10, 1-6-10)

42.08.600 Monitoring, evaluating, and updating the plan.

44 CFR Requirement Section 201.6(c)(4): The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five year cycle.

(Res. 05-10, 1-6-10)

42.08.610 Hazard Mitigation Planning Committee.

With formal adoption of this plan, the HMPC will be tasked with plan monitoring, evaluation, and maintenance. The participating jurisdictions and agencies, led by the Mesa County Emergency Management Department, agree to the following:

- (a) Meet biannually and after a significant event to monitor and evaluate the implementation of the plan.
- (b) Act as a forum for hazard mitigation issues.
- (c) Disseminate hazard mitigation ideas and activities to all participants.
- (d) Pursue the implementation of high priority, low- or no-cost recommended actions.
- (e) Maintain active monitoring of multi-objective, cost-share, and other funding opportunities to help the community implement the plan's recommended actions for which no current funding exists.
- (f) Monitor and assist in implementation and update of this plan.
- (g) Keep the concept of mitigation in the forefront of the community decision makers by identifying plan recommendations when other community goals, plans, and activities overlap or influence community vulnerability to hazards.
- (h) Report on plan progress and recommended changes to the Mesa County Board of County Commissioners, City Councils, and other governing bodies of participating jurisdictions.
- (i) Inform and solicit input from the public.

The HMPC's primary duty is to see the plan successfully implemented and to report to the community governing boards and the public on the status of plan implementation and mitigation opportunities.

(Res. 05-10, 1-6-10)

42.08.620 Plan maintenance schedule.

The Mesa County Emergency Manager is responsible for initiating plan reviews and scheduling biannually meetings or after a significant event has occurred to monitor progress and update the strategies. This

plan will undergo a five-year written update that will be submitted to the Colorado Division of Emergency Management and FEMA Region VIII, unless disaster or other circumstances, i.e., changing regulations, require a change to this schedule.

(Res. 05-10, 1-6-10)

42.08.630 Plan maintenance process.

- (a) Evaluation of progress can be achieved by monitoring changes in vulnerabilities identified in the plan. Changes in vulnerability can be identified by:
 - (1) Decreased vulnerability as a result of implementing recommended actions;
 - (2) Increased vulnerability as a result of failed or ineffective mitigation actions; and/or
 - (3) Increased vulnerability as a result of new development (and/or annexation).
- (b) Updates to this plan will:
 - (1) Consider changes in vulnerability due to action implementation.
 - (2) Document successful mitigation efforts that have been proven effective.
 - (3) Document areas where mitigation actions were not effective.
 - (4) Identify new hazards that may arise or may have been previously overlooked.
 - (5) Identify new data or studies on hazards and risks.
 - (6) Incorporate new capabilities or changes in capabilities.
 - (7) Incorporate growth and development-related changes to inventories.
- (c) Updating of the plan will be by written changes and submissions from the Mesa County Emergency Management Department and as approved by the Mesa County Board of County Commissioners, City Councils, and other governing boards of the other participating jurisdictions.

(Res. 05-10, 1-6-10)

42.08.640 Incorporation into existing planning mechanisms.

44 CFR Requirement Section 201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

When possible, plan participants will use existing plans and/or programs to implement hazard mitigation actions. Based on the capability assessments of the participating jurisdictions, communities in Mesa County continue to plan and implement programs to reduce losses to life and property from hazards. This plan builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing actions, where possible, through the following plans:

- (a) Mesa County Emergency Operations Plan.
- (b) Mesa County Community Wildfire Protection Plan.
- (c) General or master plans of participating jurisdictions.
- (d) Ordinances of participating jurisdictions.
- (e) Capital improvement plans and budgets.
- (f) Other community plans within Mesa County, such as water conservation plans and storm water management plans.

(Res. 05-10, 1-6-10)

42.08.650 Continued public involvement.

44 CFR Requirement Section 201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

The update process provides an opportunity to document success in mitigating hazards and seek additional public comment. Information will be posted in the local newspapers and on the County website following the annual review of the plan. Community meetings will be scheduled to seek public comment on the plan update. Public notice will be posted and public participation will be invited through available website postings and press releases to the local media outlets.

(Res. 05-10, 1-6-10)

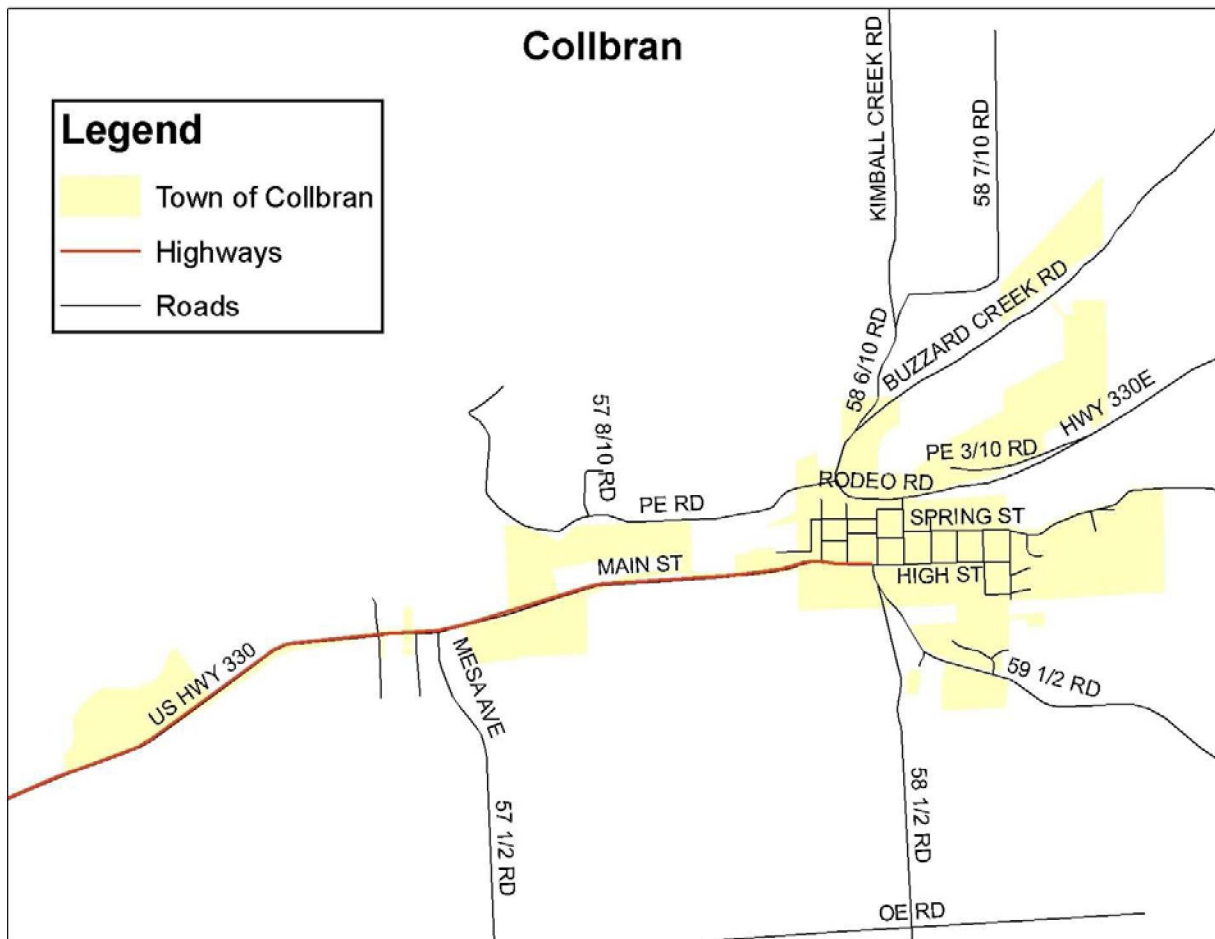
Article VII. Community Profiles**42.08.660 Community profiles.**

Community profiles provide specific information unique to each participating jurisdiction in the hazard mitigation plan. For unincorporated Mesa County, Countywide information is addressed previously in the main plan.

(Res. 05-10, 1-6-10)

42.08.670 Town of Collbran.

Figure 24: Town of Collbran



- (a) Community Profile. The Town of Collbran is located in eastern Mesa County; see Figure 24. Collbran is in the Plateau Valley on the western slope of the Rocky Mountains between the 9,000-foot Battlement Mesa to the north and east and the 11,000-foot Grand Mesa to the south and west. The Town is approximately 35 miles northeast of the City of Grand Junction and is completely bordered by unincorporated Mesa County land.

Cattle ranchers settled in the area which is now Collbran and the Town itself was incorporated in 1908. The population of the Town of Collbran is 683 in 2008 based on State Demographer's information. (Demographer) The climate of Collbran is semiarid. The mesa areas surrounding Collbran are subject to moderately heavy precipitation. Elevation greatly influences the amount of precipitation. The annual precipitation at Collbran averages approximately 13 inches, and the higher elevations of the mesas receive from 20 to 40 inches. Occurrence of precipitation is fairly uniform in the Collbran area, and slightly less than one-half falls as snow from December to April. Most winter precipitation occurs in the higher elevations as snow, and a deep snowpack ordinarily begins in late October and snowmelt in late April. Snowmelt continues through early July. The mean annual temperature at Collbran is 46.4 degrees Fahrenheit. Cooler temperatures prevail in the higher elevations. (FEMA, Flood Insurance Study, Mesa County Colorado, 2009)

- (b) Hazard Identification and Profiles. The HMPC identified the hazards that affect the community and summarized their geographic location, probability of future occurrence, potential magnitude or severity, and planning significance specific to the Town in Table 18.

Table 18: Collbran Hazards Profiles

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Hazard Level
Avalanche	Isolated	Occasional	Critical	M
Drought	Large	Occasional	Limited	M
Earthquake	Medium	Occasional	Limited	M
Expansive Soils	Isolated	Occasional	Negligible	L
Extreme Heat	Large	Occasional	Negligible	M
Wildfire	Medium	Highly Likely	Limited	H
Flood	Large	Likely	Limited	H
Hailstorm	Small	Occasional	Negligible	L
Land Subsidence	Isolated	Occasional	Limited	L
Landslide/Rockfall	Small	Likely	Limited	M
Lightning	Medium	Highly Likely	Limited	M
Tornado	Isolated	Unlikely	Negligible	L
Windstorm	Small	Likely	Limited	M
Winter Storm	Large	Likely	Critical	H
Dam Failure	Large	Occasional	Critical	H
Hazardous Materials	Isolated	Occasional	Limited	L

- (c) Vulnerability Assessment. The intent of this section is to assess the Town of Collbran's vulnerability separate from that of the planning area as a whole. The vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of moderate or high significance that may vary from other parts of the planning area.
- (d) Community Asset Inventory. Table 19 shows the total population, number of structures, and assessed value of improvements to parcels in the Town of Collbran. Land values have been purposely excluded because land remains following disasters, and subsequent market devaluations are frequently short-term and difficult to quantify. Additionally, State and federal disaster assistance programs generally do not address loss of land or its associated value.

Table 19: Town of Collbran's Asset Inventory

Jurisdiction:	Town of Collbran								
Hazard:	Wildfire								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	143	143	100%	\$18,625,780.00	\$18,625,780.00	100%	468	468	100%
Commercial	18	18	100%	\$3,059,140.00	\$3,059,140.00	100%			
Agricultural	7	7	100%	\$1,706,920.00	\$1,706,920.00	100%			
Industrial	1	1	100%	\$43,170.00	\$43,170.00	100%			

Jurisdiction:	Town of Collbran								
Hazard:	Flooding								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	143	17	11.89%	\$18,625,780.00	\$2,071,730.00	11.12%	468	67	14.32%
Commercial	18	1	5.56%	\$3,059,140.00	\$353,660.00	11.56%			
Agricultural	7	0	0.00%	\$1,706,920.00	\$ -	0.00%			
Industrial	1	0	0.00%	\$43,170.00	\$ -	0.00%			

Jurisdiction:	Town of Collbran								
Hazard:	Rockfalls and Slides								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	143	0	0.00%	\$18,625,780.00	\$ -	0.00%	468	0	0.00%
Commercial	18	0	0.00%	\$3,059,140.00	\$ -	0.00%			
Agricultural	7	0	0.00%	\$1,706,920.00	\$ -	0.00%			
Industrial	1	0	0.00%	\$43,170.00	\$ -	0.00%			

(e) Capabilities Assessment.

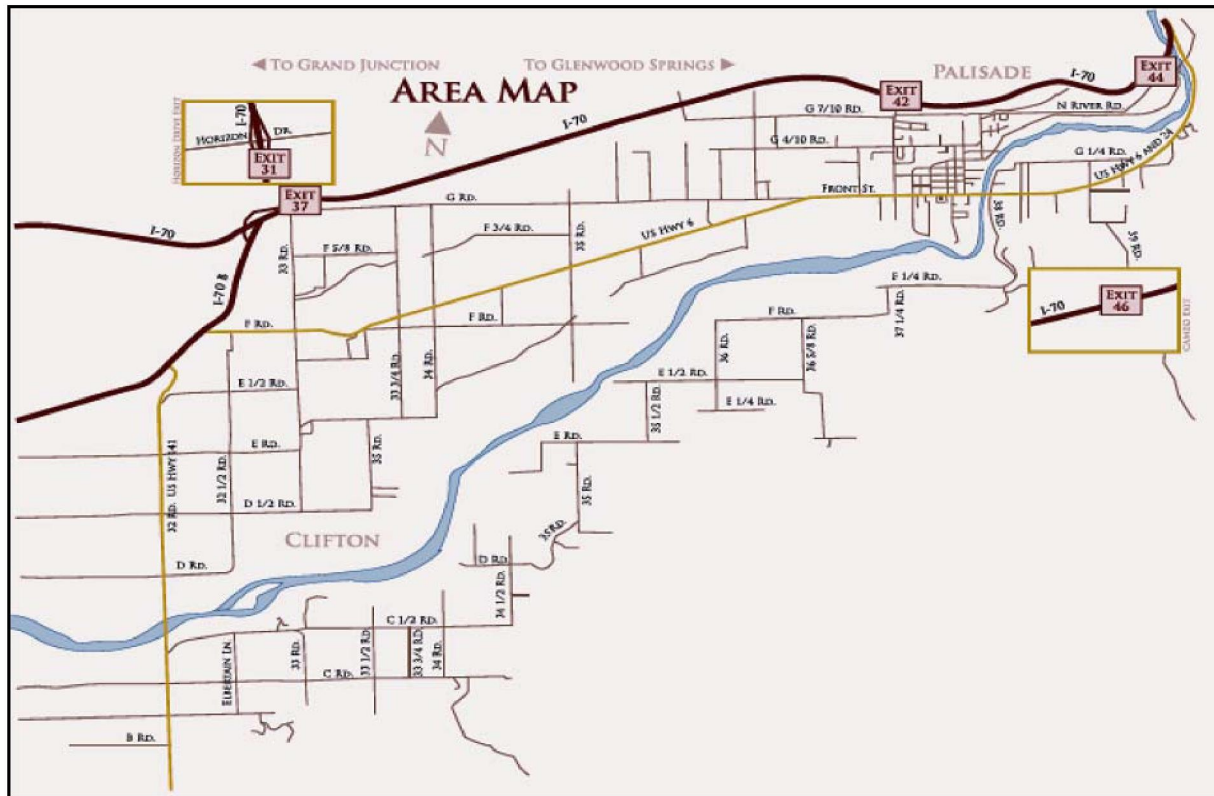
Jurisdiction: Town of Collbran	Y/N/NA/Unknown	Comments
Comp Plan/General Plan	Yes	
Special Plans	No	
Subdivision Ordinance	Yes	
Zoning Ordinance	Yes	
NFIP/FPM Ordinance	Yes	
Substantial Damage Language	No	
Administrator/Certified Floodplain Mgr.	No	
# of Flood-Threatened Buildings	Unknown	
# of Flood Insurance Policies	Unknown	
# of Repetitive Losses	Unknown	
Maintain Elevation Certificates	No	
CRS Rating, if applicable	Unknown	
Storm Water Program	Unknown	
Erosion or Sediment Controls	Yes	
Building Code Version	Yes	
Full-Time Building Official	No	
Conduct "As-Built" Inspections	No	
BCEGS Rating	Unknown	
Local Emergency Operations Plan	No	Is covered under Mesa County's Plan
Fire Department ISO Rating	Unknown	
Fire Safe Programs	No	
Hazard Mitigation Plans	No	
Warning Systems/Services	No	
Storm Ready Certified	No	
Weather Radio Reception	Yes	
Outdoor Warning Sirens	No	
Emergency Notification (R-911)	Unknown	
Other (e.g., cable override)	Yes	Through GJRCC-EAS System
GIS System	No	
Hazard Data	Unknown	
Building Footprints	No	
Links to Assessor Data	Unknown	
Land Use Designations	Yes	
Structural Protection Projects	No	
Property Protection Projects	No	
Critical Facilities Protected	No	
Natural/Cultural Resources Inventory	No	
Public Information Program/Outlet	No	
Environmental Education Program	No	

(Res. 05-10, 1-6-10)

42.08.680 Town of Palisade.

(a) Community Profile.

Figure 25: Town of Palisade



(Town of Palisade)

The Town of Palisade is located in north-central Mesa County and has a population of 3,105. (Demographer) Palisade is approximately 10 miles east of Grand Junction, and at the eastern end of a portion of Mesa County known as the Grand Valley; see Figure 25. Palisade lies at an elevation of approximately 4,700 feet near the base of the eastern toe of the Bookcliffs. East Orchard Mesa borders Grand Valley on the south in the study area, which is largely devoted to agricultural interests. Some of the first orchards in the valley were planted in the Palisade area because of easily accessible water, rich soil, and suitable climate.

Around 1884, some of the earlier inhabitants of the region constructed the Price Ditch, which has aided in perpetuating interest in and growth of the Town and adjacent agricultural areas. Palisade has gained prominence for its excellent fruit products and has continued to present as a major fruit growing center. Completion of the Highline Canal irrigation facility in 1915 assured an adequate water supply to the area and furthered economic stimulation in the region.

The climate of Palisade is arid and yearly precipitation averages approximately nine inches. Temperatures are often in the 90 degrees Fahrenheit range in the summer and below freezing in the winter. Occasionally, summertime temperatures may exceed 100 degrees Fahrenheit and winter temperatures may drop as low as -20 degrees Fahrenheit. Natural vegetation in valley areas consists of cottonwood and willow, desert shrub, and an understory of hardy grasses. Mesas and lower mountain slopes between 5,000 and 8,000 feet support oak, big sagebrush, Douglas fir, pinon pine, and juniper. (FEMA, Flood Insurance Study, Mesa County Colorado, 2009)

- (b) Hazard Identification and Profiles. The HMPC identified the hazards that affect the community and summarized their geographic location, probability of future occurrence, potential magnitude or severity, and planning significance specific to the Town in Table 20.

Table 20: Town of Palisade's Hazards Profiles

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Hazard Level
Avalanche	Isolated	Unlikely	Negligible	L
Drought	Large	Occasional	Limited	M
Earthquake	Medium	Occasional	Limited	M
Expansive Soils	Isolated	Occasional	Negligible	L
Extreme Heat	Large	Occasional	Negligible	M
Wildfire	Medium	Highly Likely	Limited	H
Flood	Large	Likely	Limited	H
Hail Storm	Small	Occasional	Negligible	L
Land Subsidence	Isolated	Occasional	Limited	L
Landslide/Rockfall	Isolated	Highly Likely	Critical	H
Lightning	Medium	Highly Likely	Limited	M
Tornado	Isolated	Unlikely	Negligible	L
Wind Storm	Small	Likely	Limited	M
Winter Storm	Small	Likely	Limited	L
Dam Failure	Isolated	Occasional	Limited	L
Hazardous Materials	Isolated	Likely	Negligible	L

- (c) Vulnerability Assessment. The intent of this section is to assess the Town of Palisade's vulnerability separate from that of the planning area as a whole. The vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of moderate or high significance that may vary from other parts of the planning area.

This section analyzes existing structures and other assets at risk to hazards ranked of high significance that vary from the risks facing the entire planning area and estimates potential losses. These hazards include: wildfire, floods, and rockfall.

- (d) Community Asset Inventory. Table 21 shows the total population, number of structures, and assessed value of improvements to parcels in the Town of Palisade. Land values have been purposely excluded because land remains following disasters, and subsequent market devaluations are frequently short-term and difficult to quantify. Additionally, State and federal disaster assistance programs generally do not address loss of land or its associated value.

Table 19: Town of Palisade's Asset Inventory

Jurisdiction:	Town of Palisade								
Hazard:	Wildfire								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	797	99	12.42%	\$132,984,480.00	\$16,175,230.00	12.16%	3,111	479	15.40%
Commercial	63	13	20.63%	\$19,117,930.00	\$1,794,910.00	9.39%			
Agricultural	12	0	0.00%	\$4,292,240.00	\$ -	0.00%			
Industrial	4	3	75.00%	\$689,090.00	\$488,290.00	70.86%			

Jurisdiction:	Town of Palisade								
Hazard:	Flooding								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	797	5	0.63%	\$132,984,480.00	\$757,310.00	5.07%	3,111	0	0.00%
Commercial	63	6	9.52%	\$19,117,930.00	\$348,350.00	27.09%			
Agricultural	12	0	0.00%	\$4,292,240.00	\$ -	0.00%			
Industrial	4	0	0.00%	\$689,090.00	\$ -	0.00%			

Jurisdiction:	Town of Palisade								
Hazard:	Rockfalls and Slides								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	797	48	6.02%	\$132,984,480.00	\$6,740,140.00	5.07%	3,111	0	0.00%
Commercial	63	3	4.76%	\$19,117,930.00	\$5,178,400.00	27.09%			
Agricultural	12	3	25.00%	\$4,292,240.00	\$1,613,020.00	37.58%			
Industrial	4	0	0.00%	\$689,090.00	\$ -	0.00%			

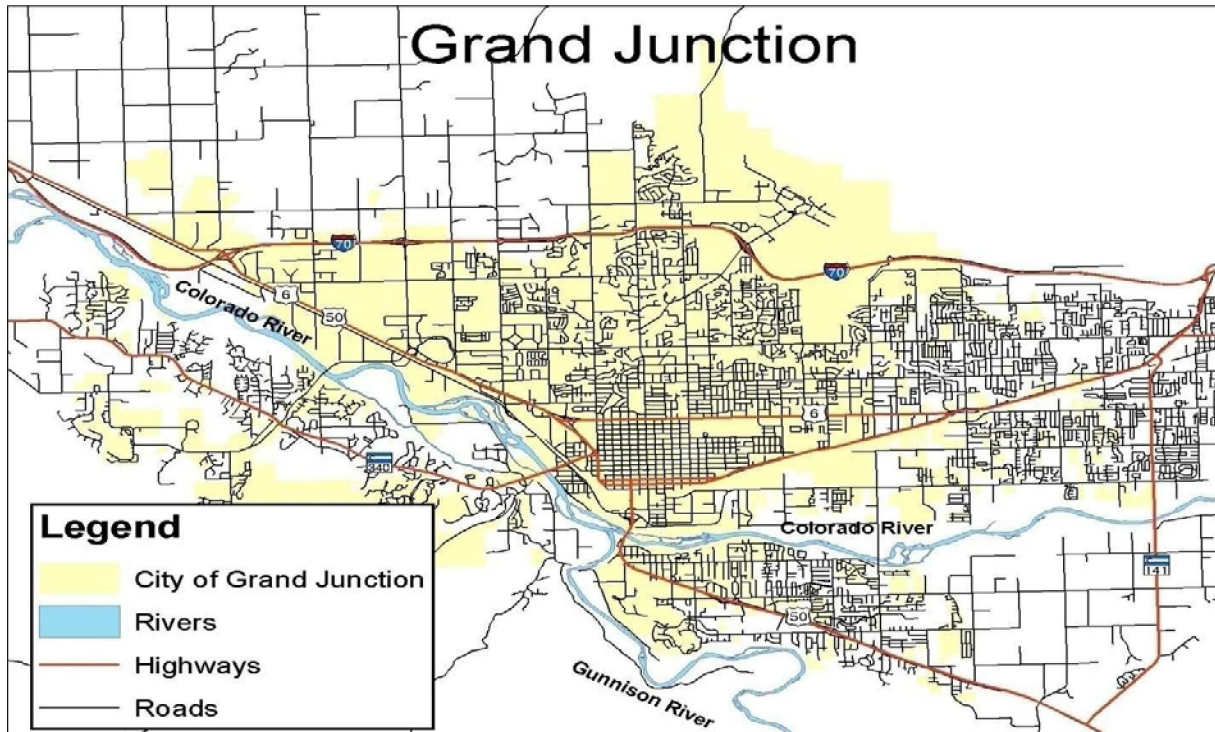
(e) Capabilities Assessment.

Jurisdiction: Town of Palisade	Y/N/NA/Unknown	Comments
Comp Plan/General Plan	Yes	
Special Plans	Yes	
Subdivision Ordinance	Yes	
Zoning Ordinance	Yes	
NFIP/FPM Ordinance	Yes	
Substantial Damage Language	No	
Administrator/Certified Floodplain Mgr.	No	
# of Flood-Threatened Buildings	Unknown	
# of Flood Insurance Policies	Unknown	
# of Repetitive Losses	Unknown	
Maintain Elevation Certificates	No	
CRS Rating, if applicable	Unknown	
Storm Water Program	Yes	
Erosion or Sediment Controls	Yes	
Building Code Version	Yes	
Full-Time Building Official	Yes	
Conduct "As-Built" Inspections	Yes	
BCEGS Rating	Unknown	
Local Emergency Operations Plan	Yes	
Fire Department ISO Rating	Yes (5)	
Fire Safe Programs	Yes	
Hazard Mitigation Plans	Yes	
Warning Systems/Services	Yes	
Storm Ready Certified	No	
Weather Radio Reception	Yes	
Outdoor Warning Sirens	No	
Emergency Notification (R-911)	Yes	GJRCC
Other (e.g., cable override)	Yes	GJRCC-EAS System
GIS System	Yes	
Hazard Data	No	
Building Footprints	No	
Links to Assessor Data	No	
Land Use Designations	No	
Structural Protection Projects	No	
Property Protection Projects	No	
Critical Facilities Protected	No	
Natural/Cultural Resources Inventory	No	
Public Information Program/Outlet	No	
Environmental Education Program	No	

(Res. 05-10, 1-6-10)

42.08.690 City of Grand Junction.

(a) Community Profile.

Figure 26: City of Grand Junction

Grand Junction is located on the western slope of the Rocky Mountains in central Mesa County in western Colorado. It is surrounded by the unincorporated areas of Mesa County as seen in Figure 26. It is situated approximately halfway between Salt Lake City, Utah, and Denver, Colorado, and is a regional center for transportation and trade for an area of over 60,000 square miles.

Grand Junction became the center of an extensive mining industry. It continues to be a transportation center for the farming, orchard growing, and livestock industries in the area, as well as a base for various industrial, commercial, and tourism activities. The current population is estimated to be 55,189. (Demographer) The Colorado River originates high in the Rocky Mountains, on the western slope of the Continental Divide. The headwaters, located in Rocky Mountain National Park, are at approximately 12,000 feet. The river flows southwesterly from its headwaters, approximately 200 miles upstream of Grand Junction. At Grand Junction, the river turns to the northwest and continues in that direction through Colorado. The drainage area at Grand Junction is approximately 17,100 square miles.

Grand Junction lies at an elevation of approximately 4,600 feet in the southern part of the Grand Valley, a wide gently sloping valley defined by high, rock cliffs. To the north, the valley gradually slopes upward for several miles to the base of the Bookcliffs, which rise abruptly to more than 8,000 feet. To the south, Grand Junction is flanked by the Uncompahgre Plateau.

Indian Wash originates at the foot of the Bookcliffs at an elevation of approximately 5,800 feet and flows approximately 5.5 miles southwesterly to an area just northeast of Grand Junction Regional Airport, where the U.S. Soil Conservation Service IW-1 flood detention structure is located. From there it flows generally southerly through the City of Grand Junction to its confluence with the Colorado River.

The climate of Grand Junction is classified as arid to semiarid. The mountainous regions around Grand Junction are subject to moderately heavy precipitation. Elevation greatly influences precipitation amounts. The annual precipitation of Grand Junction averages approximately 8.4 inches; the higher mesas receive from 10 to 20 inches. Occurrence of precipitation is extremely variable with a large part of the total concentrated in several months. Late summer convection type cloudburst storms of small aerial extent and early fall general rain over large areas normally cause August, September, and October to be the wettest months of the year. Most winter precipitation occurs as snow and, in the higher elevations, a deep snowpack generally accumulates. Average snowfall ranges from approximately 19 inches at Grand Junction to approximately 300 inches in the higher mountainous regions. Snowfall is generally dominated by a few large storms. Snowpack ordinarily begins in late October and snowmelt in late April; snowmelt continues through early July.

The temperature extremes at Grand Junction are shown by mean maximums ranging from approximately 38 degrees Fahrenheit in January to approximately 94 degrees Fahrenheit in July, and by mean minimums ranging from approximately 15 degrees Fahrenheit in January to 62 degrees Fahrenheit in July. Record low and high temperatures are -34 degrees Fahrenheit and 64 degrees Fahrenheit for January and 38 degrees Fahrenheit and 111 degrees Fahrenheit for July, respectively.

The Colorado River, Indian Wash, and Horizon Drive Channel floodplains are moderately developed with commercial and residential structures. (FEMA, Flood Insurance Study, Mesa County Colorado, 2009)

- (b) Hazard Identification and Profiles. The HMPC identified the hazards that affect the community and summarized their geographic location, probability of future occurrence, potential magnitude or severity, and planning significance specific to the City as shown in Table 22.

Table 22: City of Grand Junction's Hazards Profiles

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Hazard Level
Avalanche	Isolated	Unlikely	Negligible	L
Drought	Large	Occasional	Limited	M
Earthquake	Medium	Occasional	Limited	M
Expansive Soils	Isolated	Occasional	Negligible	L
Extreme Heat	Large	Occasional	Negligible	M
Wildfire	Medium	Highly Likely	Limited	H
Flood	Large	Likely	Limited	H
Hail Storm	Small	Occasional	Negligible	L
Land Subsidence	Isolated	Occasional	Limited	L
Landslide/Rockfall	Isolated	Unlikely	Limited	L
Lightning	Medium	Highly Likely	Limited	M
Tornado	Isolated	Unlikely	Negligible	L
Wind Storm	Medium	Likely	Limited	M
Winter Storm	Large	Occasional	Limited	M
Dam Failure	Medium	Occasional	Critical	M
Hazardous Materials	Isolated	Occasional	Limited	L

- (c) Vulnerability Assessment. The intent of this section is to assess the City of Grand Junction's vulnerability separate from that of the planning area as a whole. The vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked as high significance that may

vary from other parts of the planning area and estimates potential losses. These hazards include: wildfire, floods, and rockslides.

- (d) **Community Asset Inventory.** Table 23 shows the total population, number of structures, and assessed value of improvements to parcels in the City of Grand Junction. Land values have been purposely excluded because land remains following disasters, and subsequent market devaluations are frequently short-term and difficult to quantify. Additionally, State and federal disaster assistance programs generally do not address loss of land or its associated value.

Table 23: City of Grand Junction's Asset Inventory

Jurisdiction:	City of Grand Junction								
Hazard:	Wildfire								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	19,911	3,349	16.82%	\$3,721,808,840.00	\$765,930,110.00	20.58%	56,977	8,866	15.5%
Commercial	1,926	301	15.63%	\$1,041,798,810.00	\$121,427,630.00	11.66%			
Agricultural	86	14	16.28%	\$20,693,890.00	\$3,150,000.00	15.22%			
Industrial	313	67	21.41%	\$183,537,290.00	\$58,877,120.00	32.08%			

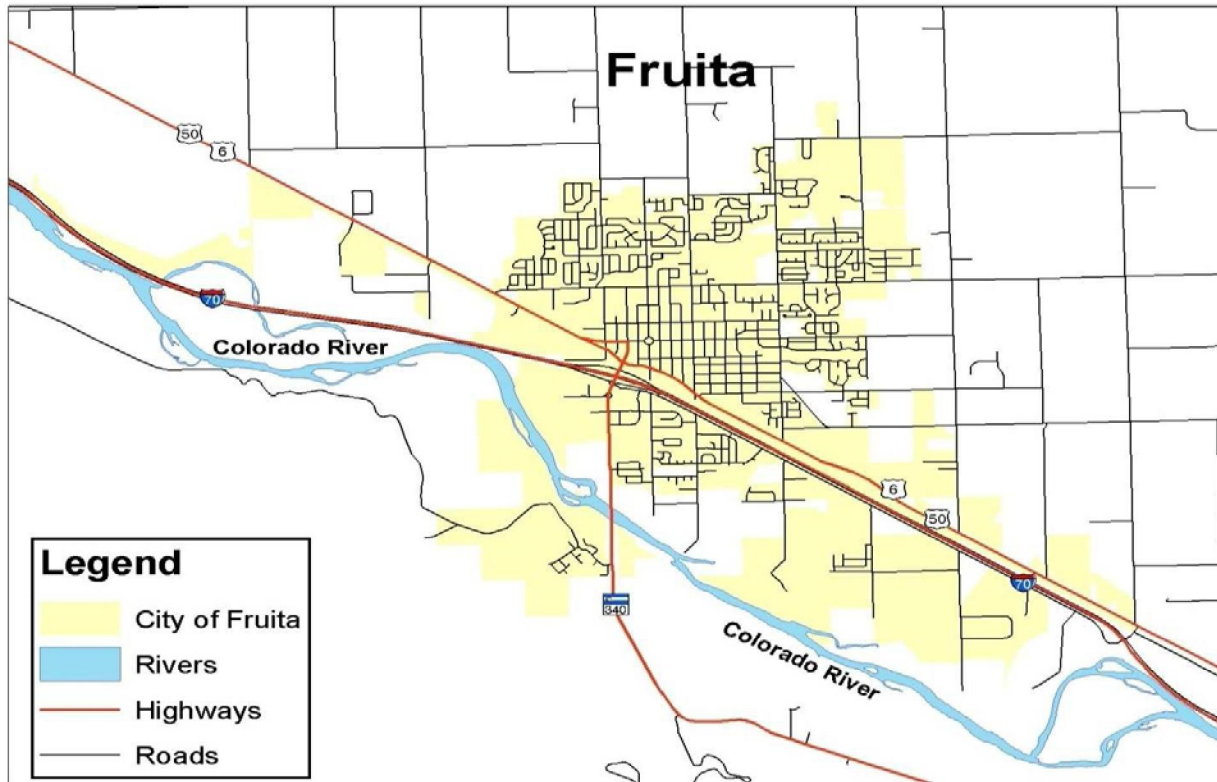
Jurisdiction:	City of Grand Junction								
Hazard:	Flooding								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	19,911	195	0.80%	\$3,721,808,840.00	\$29,669,810.00	0.80%	56,977	491	0.86%
Commercial	1,926	52	2.53%	\$1,041,798,810.00	\$26,336,470.00	2.53%			
Agricultural	86	0	0.00%	\$20,693,890.00	\$ –	0.00%			
Industrial	313	5	1.62%	\$183,537,290.00	\$2,967,660.00	1.62%			

Jurisdiction:	City of Grand Junction								
Hazard:	Rockfalls and Slides								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	19,911	2,453	12.32%	\$3,721,808,840.00	\$671,122,270.00	18.03%	56,977	5,134	9.01%
Commercial	1,926	48	2.49%	\$1,041,798,810.00	\$24,539,800.00	2.36%			
Agricultural	86	5	5.81%	\$20,693,890.00	\$1,769,650.00	8.55%			
Industrial	313	0	0.00%	\$183,537,290.00	\$ –	0.00%			

(e) Capabilities Assessment.

Jurisdiction: City of Grand Junction	Y/N/NA/Unknown	Comments
Comp Plan/General Plan	Yes	Update of Comp Plan underway
Special Plans	Yes	Area plans, transportation plans
Subdivision Ordinance	Yes	
Zoning Ordinance	Yes	
NFIP/FPM Ordinance	Yes	
Substantial Damage Language	Yes	
Administrator/Certified Floodplain Mgr.	Yes	
# of Flood-Threatened Buildings	Unknown	
# of Flood Insurance Policies	Yes	84 active policies
# of Repetitive Losses	No	
Maintain Elevation Certificates	Yes	
CRS Rating, if applicable	NA	
Storm Water Program	Yes	
Erosion or Sediment Controls	Yes	
Building Code Version	2006 IBC	
Full-Time Building Official	Yes	
Conduct "As-Built" Inspections	Yes	
BCEGS Rating	Unknown	
Local Emergency Operations Plan	No	Covered under Mesa County plan
Fire Department ISO Rating	Yes	
Fire Safe Programs	Yes	
Hazard Mitigation Plans	Yes	Included in the Mesa County plan
Warning Systems/Services		
Storm Ready Certified	No	
Weather Radio Reception	Yes	
Outdoor Warning Sirens	No	
Emergency Notification (R-911)	Yes	Dam Failure City of GJ Structures
Other (e.g., cable override)	Yes	
GIS System	Yes	Floodplain info. on zoning map
Hazard Data	Yes	
Building Footprints	Yes	Aerial photos
Links to Assessor Data	Yes	
Land Use Designations	Yes	
Structural Protection Projects	NA	
Property Protection Projects	Unknown	
Critical Facilities Protected	Yes	
Natural/Cultural Resources Inventory	No	
Public Information Program/Outlet	Yes	
Environmental Education Program	Unknown	

(Res. 05-10, 1-6-10)

42.08.700 City of Fruita.**(a) Community Profile.****Figure 27: City of Fruita**

(Source: Mesa County GIS)

The City of Fruita is in northwestern Mesa County. Fruita lies approximately 20 miles east of the Colorado-Utah State boundary and approximately 11 miles west of Grand Junction; see Figure 27. Fruita is surrounded by unincorporated areas of Mesa County. The total land area contained within Fruita is approximately 2.25 square miles. The population of Fruita is estimated to be 11,535. (Demographer)

Fruita has been agriculturally oriented and farming has since become more diversified, with such crops as grains for livestock feed and various fruits and vegetables. Cattle and sheep ranching began as large-scale operations and continue as part of the economic base of the community. There are extensive irrigation facilities in the area to support these activities. Both the Little Salt Wash and the Colorado River floodplains are developed in Fruita.

Little Salt Wash originates in the Bookcliffs approximately 11 miles north of town, where its headwaters are at approximately 5,100 feet. It flows through the northern corporate limits of Fruita, then forms the western corporate limits of the City as it flows southwesterly to its confluence with the Colorado River. Little Salt Wash flows into the Colorado River approximately 0.5 miles downstream of Fruita. The drainage area at Fruita is approximately 33 square miles.

Fruita lies at an elevation of approximately 4,500 feet in the southern part of the Grand Valley. To the north, the valley gradually ascends for several miles to the base of the Bookcliffs. Approximately two miles south of town, the steep sandstone and shale formations of the Colorado National Monument (or the Uncompahgre Uplift) begin. Fruita is part of the Canyon lands, a subdivision of a larger physiographic region known as the Colorado Plateaus.

The climate of Fruita is classified as arid to semiarid. The mountainous regions around Fruita are subject to moderately heavy precipitation. Elevation greatly influences the precipitation amounts. Annual precipitation at Fruita averages approximately nine inches. The higher mesas (headwaters and primary drainage areas of Little Salt Wash) receive from 10 to 20 inches. Convection-type cloudburst storms of small aerial extent and general rainfall over large areas normally make August, September, and October the wettest months of the year. Most wintertime precipitation occurs as snow, and a deep snowpack normally accumulates at the higher elevations. Average snowfall is approximately 19 inches at Fruita.

The temperature extremes at Fruita are evidenced by mean maximums ranging from approximately 38 degrees Fahrenheit in January to approximately 94 degrees Fahrenheit in July, and by mean minimums ranging from approximately 15 degrees Fahrenheit in January to 62 degrees Fahrenheit in July. Record low and high temperatures are 34 degrees Fahrenheit and 64 degrees Fahrenheit for January and 38 degrees Fahrenheit and 111 degrees Fahrenheit for July respectively. (FEMA, Flood Insurance Study, Mesa County Colorado, 2009)

- (b) Hazard Identification and Profiles. The HMPC identified the hazards that affect the community and summarized their geographic location, probability of future occurrence, potential magnitude or severity, and planning significance specific to the Town as shown in Table 24.

Table 24: City of Fruita's Hazards Profiles

Hazard Type	Geographic Location	Occurrences	Magnitude/Severity	Hazard Level
Avalanche	Isolated	Unlikely	Negligible	L
Drought	Large	Occasional	Limited	M
Earthquake	Medium	Occasional	Limited	M
Expansive Soils	Isolated	Occasional	Negligible	L
Extreme Heat	Large	Occasional	Negligible	M
Wildfire	Medium	Highly Likely	Limited	H
Flood	Large	Likely	Limited	H
Hail Storm	Small	Occasional	Negligible	L
Land Subsidence	Isolated	Occasional	Limited	L
Landslide/Rockfall	Isolated	Unlikely	Negligible	L
Lightning	Medium	Highly Likely	Limited	M
Tornado	Isolated	Unlikely	Negligible	L
Wind Storm	Medium	Likely	Limited	M
Winter Storm	Large	Occasional	Limited	M
Dam Failure	Medium	Occasional	Critical	M
Hazardous Materials	Isolated	Occasional	Limited	L

- (c) Vulnerability Assessment. The intent of this section is to assess the City of Fruita's vulnerability separate from that of the planning area as a whole. The vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of moderate or high significance that may vary from other parts of the planning area.

This section analyzes existing structures and other assets at risk to hazards ranked of high significance that vary from the risks facing the entire planning area and estimates potential losses. These hazards include: wildfire, floods, and rockfalls.

- (d) Community Asset Inventory. Table 25 shows the total population, number of structures, and assessed value of improvements to parcels in the City of Fruita. Land values have been purposely excluded because land remains following disasters, and subsequent market devaluations are frequently short-term and difficult to quantify. Additionally, State and federal disaster assistance programs generally do not address loss of land or its associated value.

Table 25: City of Fruita's Asset Inventory

Jurisdiction:	City of Fruita								
Hazard:	Wildfire								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	4,237	1,056	24.92%	\$760,571,300.00	\$201,674,330.00	26.52%	7,924	922	11.64%
Commercial	164	3	1.83%	\$65,842,970.00	\$1,262,220.00	1.92%			
Agricultural	40	21	52.50%	\$10,129,910.00	\$5,414,880.00	53.45%			
Industrial	12	5	41.67%	\$8,526,210.00	\$6,951,700.00	81.53%			

Jurisdiction:	City of Fruita								
Hazard:	Flooding								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	4,237	24	0.57%	\$760,571,300.00	\$6,859,980.00	0.90%	7,924	535	6.75%
Commercial	164	1	0.61%	\$65,842,970.00	\$246,180.00	0.37%			
Agricultural	40	0	0.00%	\$10,129,910.00	\$ –	0.00%			
Industrial	12	0	0.00%	\$8,526,210.00	\$ –	0.00%			

Jurisdiction:	City of Fruita								
Hazard:	Rockfalls and Slides								
Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in Comm.	# in Hazard Area	% in Hazard Area	\$ in Comm.	\$ in Hazard Area	% in Hazard Area	# in Comm.	# in Hazard Area	% in Hazard Area
Residential	4,237	0	0.00%	\$760,571,300.00	\$ –	0.00%	7,924	0	0.00%
Commercial	164	0	0.00%	\$65,842,970.00	\$ –	0.00%			
Agricultural	40	0	0.00%	\$10,129,910.00	\$ –	0.00%			
Industrial	12	0	0.00%	\$8,526,210.00	\$ –	0.00%			

(e) Capabilities Assessment.

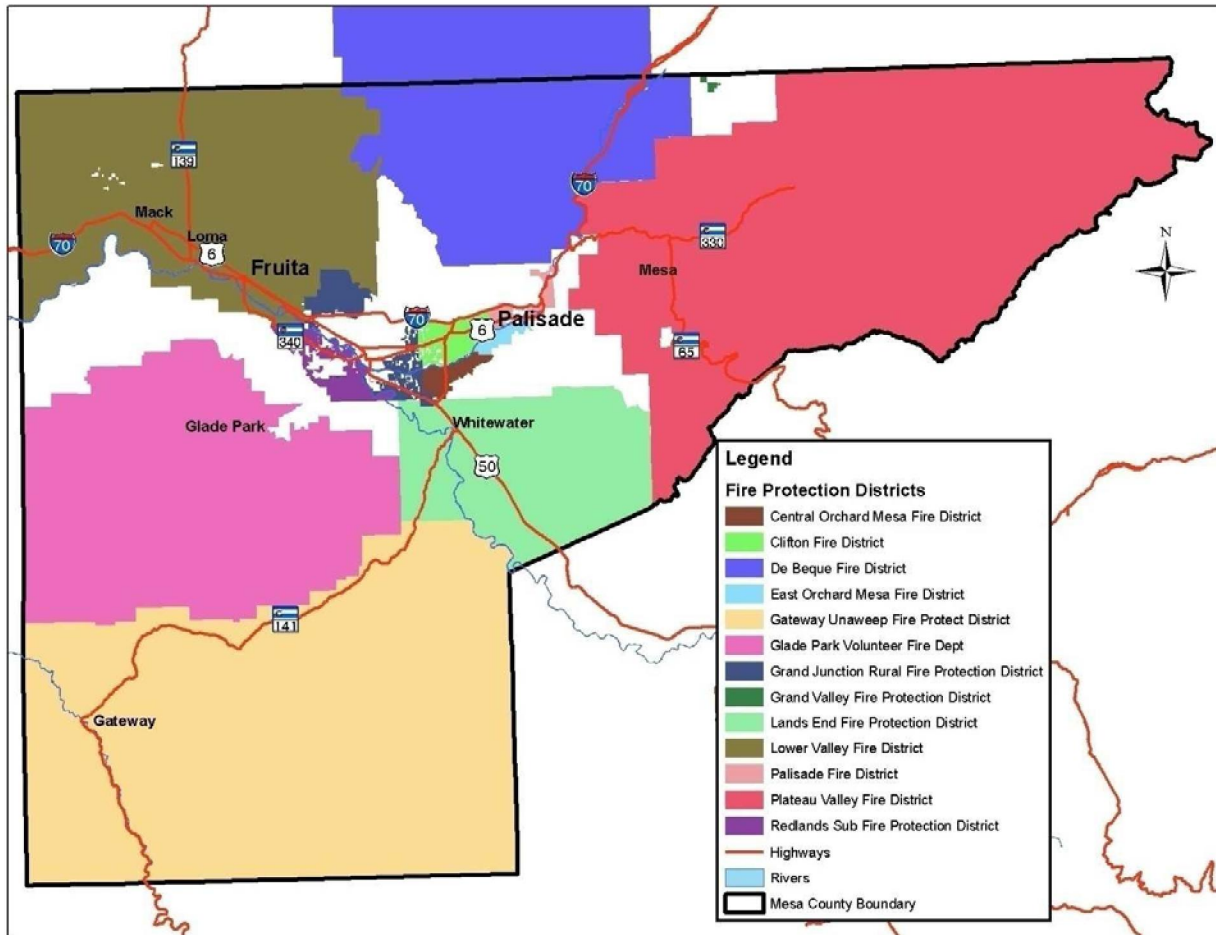
Jurisdiction: City of Fruita	Y/N/NA/Unknown	Comments
Comp Plan/General Plan	Yes	
Special Plans	Yes	
Subdivision Ordinance	Yes	
Zoning Ordinance	Yes	
NFIP/FPM Ordinance	No	
Substantial Damage Language	Unknown	
Administrator/Certified Floodplain Mgr.	Yes	
# of Flood-Threatened Buildings	Unknown	
# of Flood Insurance Policies	Unknown	
# of Repetitive Losses	Unknown	
Maintain Elevation Certificates	Unknown	
CRS Rating, if applicable	Unknown	
Storm Water Program	Sort of	
Erosion or Sediment Controls	Pro	
Building Code Version	Most current with Mesa County	
Full-Time Building Official	Mesa County	
Conduct "As-Built" Inspections	Yes	
BCEGS Rating	Unknown	
Local Emergency Operations Plan	Yes	
Fire Department ISO Rating	Yes	
Fire Safe Programs	Yes	
Hazard Mitigation Plans	Yes	
Warning Systems/Services	Reverse 911	
Storm Ready Certified	Unknown	
Weather Radio Reception	Unknown	
Outdoor Warning Sirens	No	
Emergency Notification (R-911)	Yes	
Other (e.g., cable override)	No	
GIS System	Yes	
Hazard Data	Yes	
Building Footprints	Yes	
Links to Assessor Data	Yes	
Land Use Designations	Yes	
Structural Protection Projects	Unknown	
Property Protection Projects	Unknown	
Critical Facilities Protected	Some	
Natural/Cultural Resources Inventory	Unknown	
Public Information	Nothing Formal	
Environmental Education Program	No	

(Res. 05-10, 1-6-10)

42.08.710 Fire protection districts.

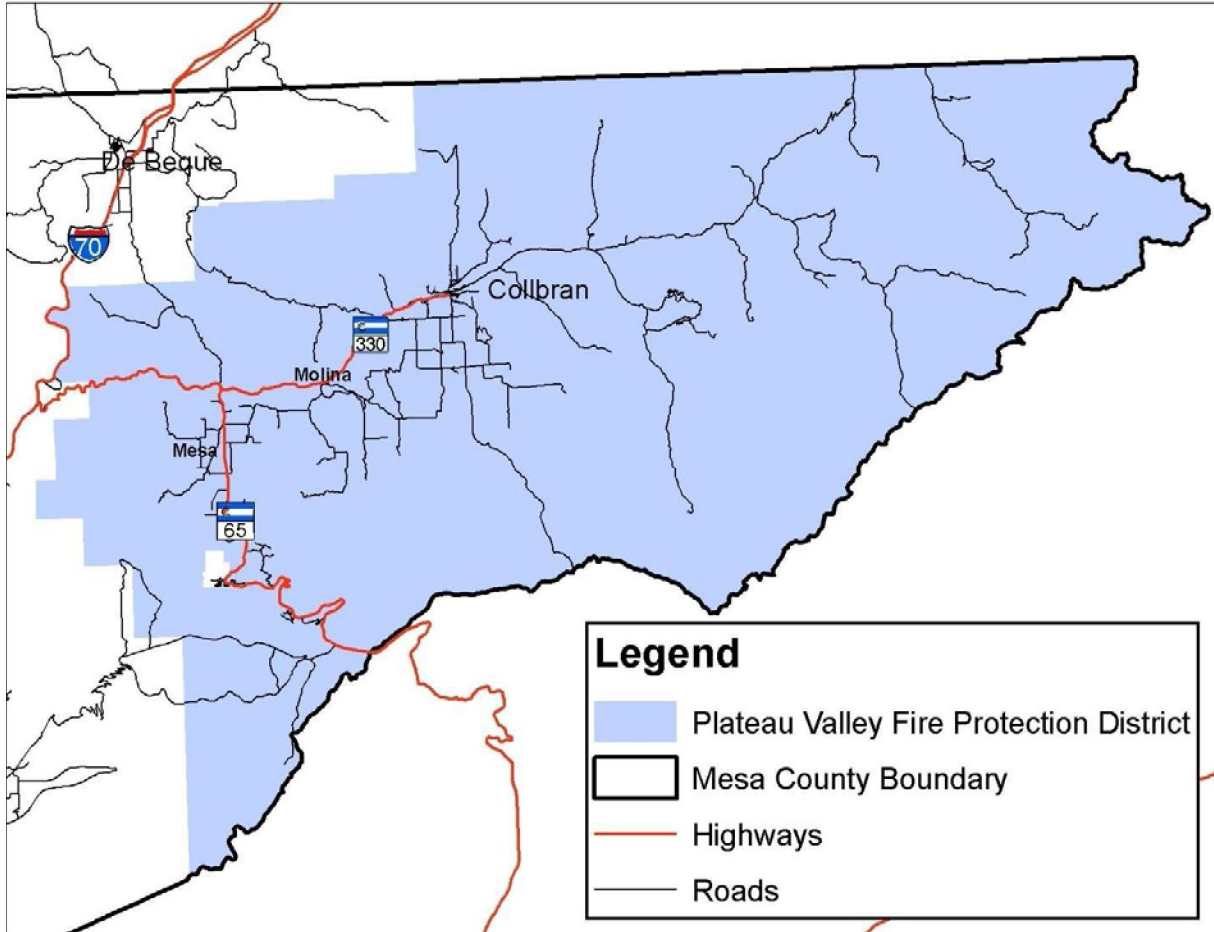
- (a) District Profile. The material presented in this section applies to two fire protection districts in Mesa County, which are described below. Each of the districts participated individually in this planning process. Figure 28 shows all fire districts in Mesa County.

Figure 28: Fire Protection Districts in Mesa County



- (b) Plateau Valley Fire Protection District. The Plateau Valley Fire Protection District (PVFPD) covers an area of 803 square miles as shown in Figure 29, with a residential population of approximately 4,000 people. The district operates out of three fire stations with approximately 30 volunteers.

Figure 29: Plateau Valley FPD Boundary

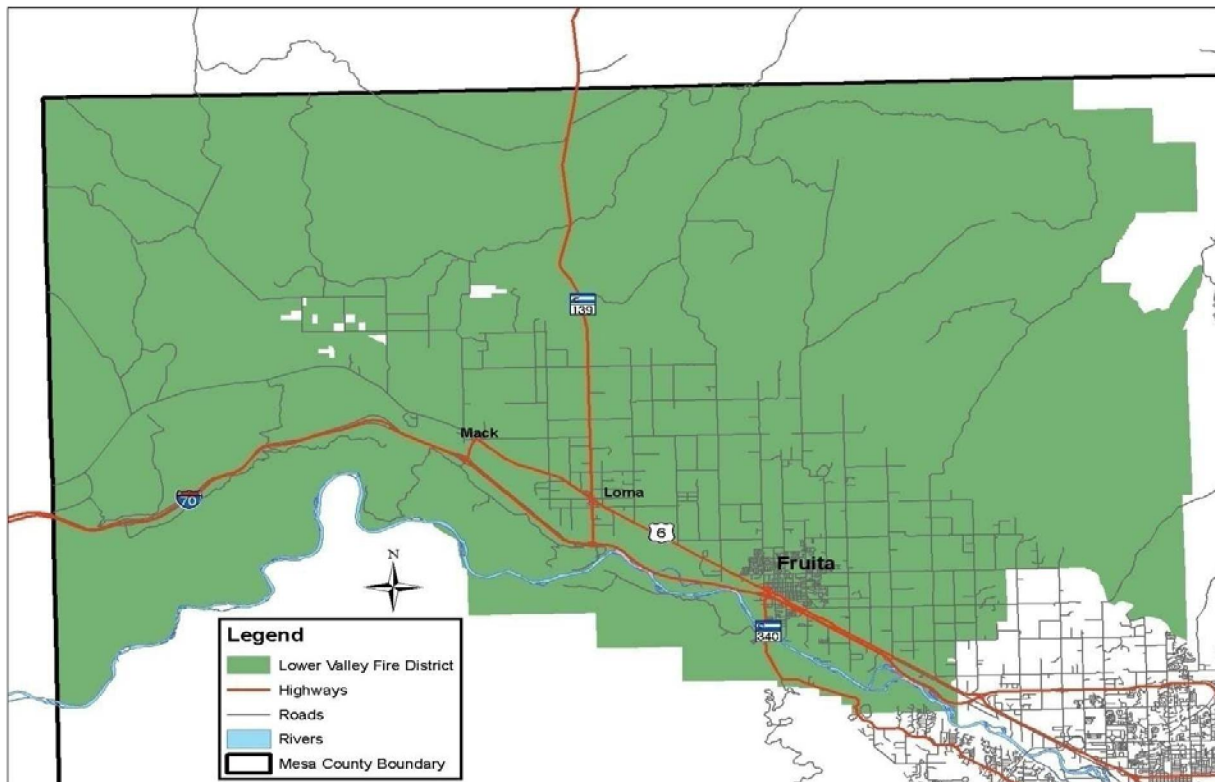


- (c) Lower Valley Fire Protection District. The Lower Valley Fire Protection District (LVFPD) and the City of Fruita organized a fire district in 1973. The district split from the City and in 1980 became its own separate district. Both volunteer and paid positions make up the district and provide fire protection as well as emergency medical services.

Population of the district ranges between 8,500 and 12,000 people. LVFPD operates out of two fire stations: Station 31 is located in Fruita and houses three ambulances, two engines, two brush trucks, one water tender, one river boat and two ATVs. Station 32 is five miles to the west in Loma and houses one water tender, one ladder, one rescue and the antique fire truck.

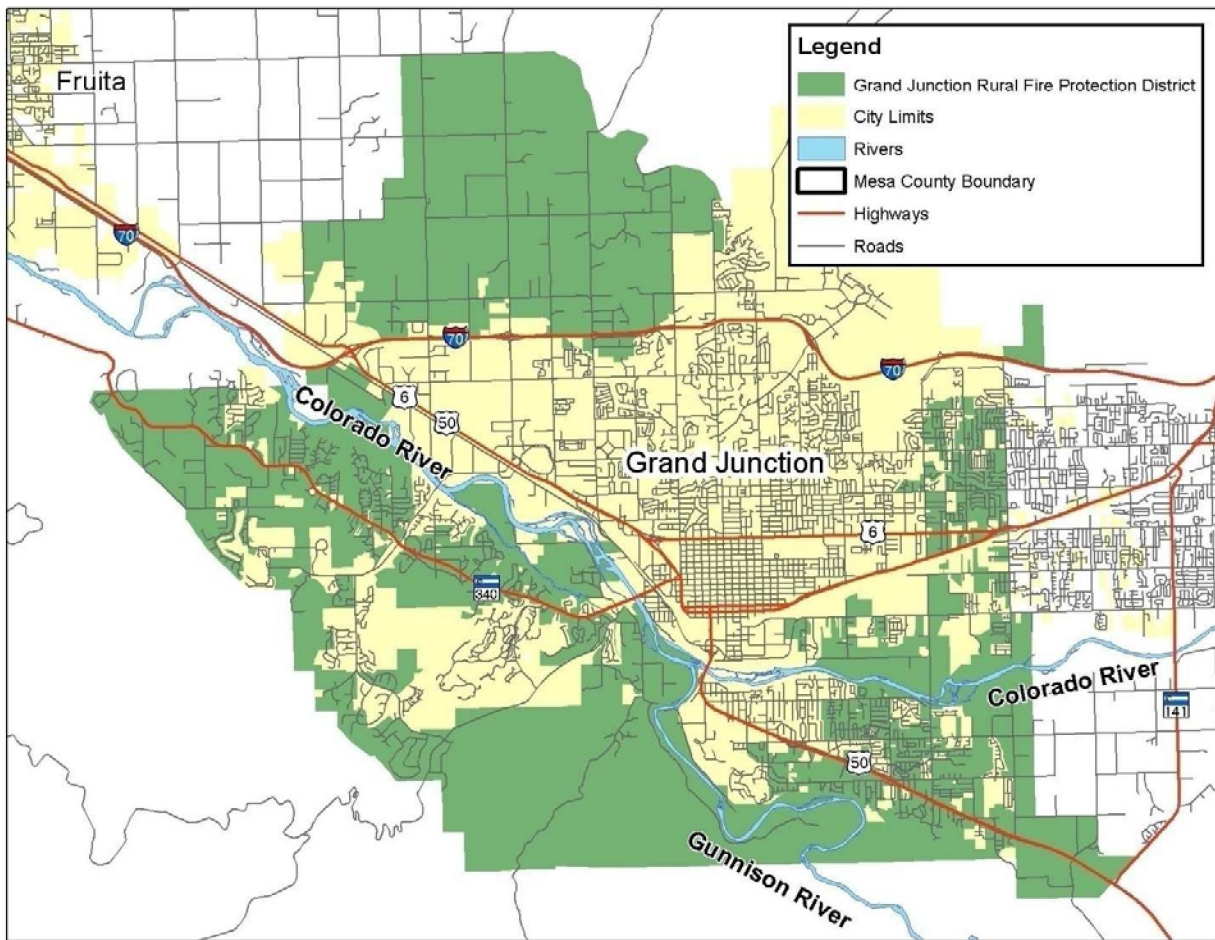
Coverage of the district amounts to approximately 225 square miles ranging from the City limits of Grand Junction on the east side and the Utah State border on the west side as shown in Figure 30. This area covers the Colorado National Monument to the south and continuing north to Douglas Pass in Garfield County. The District has a variety of terrain ranging from desert to heavy timber and rural residential to a small downtown commercial district. (Home: Lower Valley Fire Protection District, 2009)

Figure 30: Lower Valley Fire Protection District



- (d) Grand Junction Fire Department and Grand Junction Rural Fire Protection District. The Grand Junction Fire Department is an emergency organization that provides education, enforcement and emergency services to over 84,000 residents living within the City of Grand Junction and the Grand Junction Rural Fire Protection District. The Grand Junction Rural Fire Protection District is a taxing district surrounding the City limits which contracts with the City of Grand Junction to provide these services. Grand Junction Fire Department serves a total of 77 square miles with five stations and 120 full-time personnel as shown in Figure 31.

Figure 31: Grand Junction Fire Department and Grand Junction Rural Fire Protection District



- (e) Hazard Identification and Profiles. As population continues to grow in Mesa County, development continues in the wildland-urban interface areas, increasing the risk to wildfires. Continued assessments and mitigation efforts are needed throughout the County to reduce the risk and impacts to communities. More detailed analysis has been done for the specific communities and can be found in those sections.

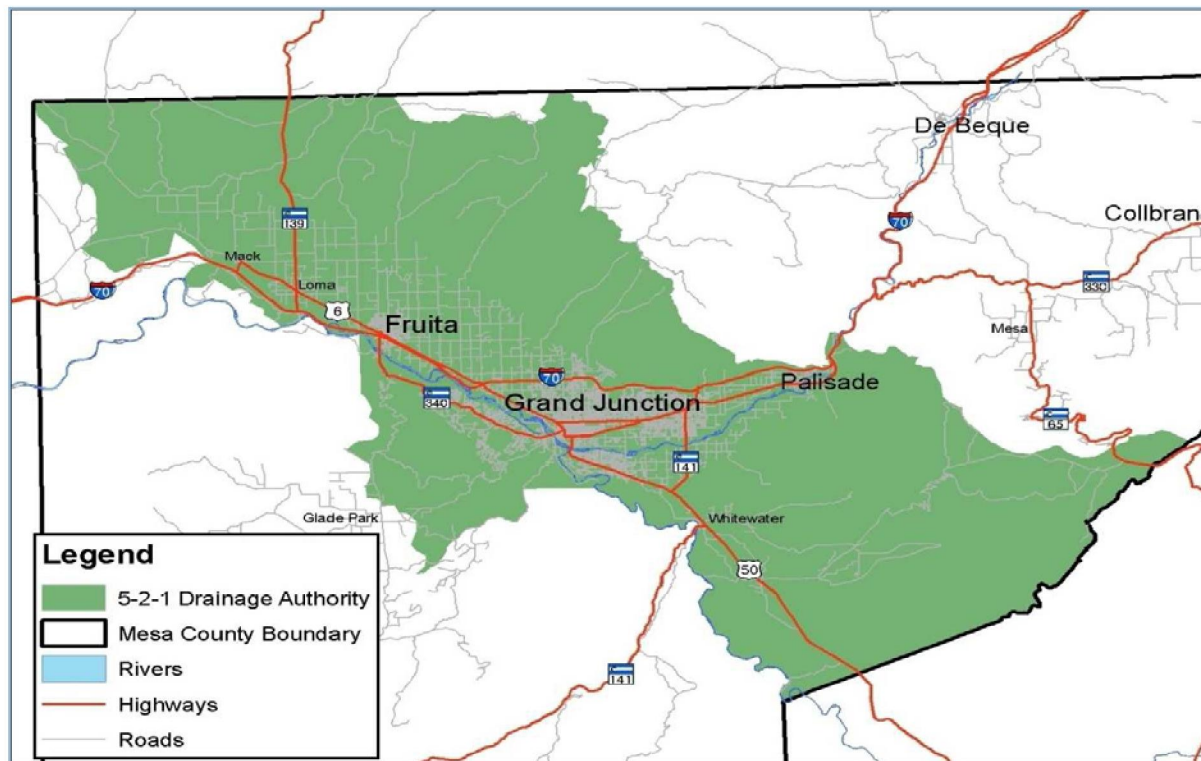
(Res. 05-10, 1-6-10)

42.08.720 5-2-1 Drainage Authority.

- (a) Authority Profile. The 5-2-1 Drainage Authority was formed in June of 2004 through an Intergovernmental Agreement (IGA) between the City of Grand Junction, the City of Fruita, the Town of Palisade, Mesa County, and the Grand Valley Drainage District (formally the Grand Junction Drainage District). The Authority was formed in order to protect people and property from flooding, to comply with federal environmental regulations regarding water quality, and to provide a funding mechanism so that storm water services can be performed.

Figure 32 illustrates the service area that includes all of the City of Grand Junction, the City of Fruita, the Town of Palisade, the Grand Valley Drainage District, and that part of Mesa County south of the rim of the Bookcliffs to the northerly line of Mesa County. The boundary line then follows the westerly boundary of West Salt Creek to the Colorado River where it crosses the river and hugs the southerly bank of the river to a point where 16 Road would intersect and goes south to follow the drainage basin boundaries that encompasses lands all the way to No Thoroughfare Canyon where the boundary follows the channel to the A Road line, thence easterly to the Gunnison River. The line follows the point where it intersects the northerly boundary of Rapid Creek. All of Rapid Creek to the Colorado River is in the service area. (Home: 5-2-1 Drainage Authority)

Figure 32: 5-2-1 Drainage Authority Boundary



(Source: Mesa County GIS)

- (b) Hazard Identification and Profiles. The 5-2-1 Drainage Authority is primarily responsible for storm water management. As precipitation falls, some is absorbed into the ground, and some makes its way into streams and rivers, and eventually oceans. In a natural environment, storm water will soak into soils and soft surfaces and some water will run into area streams. Due to the environment of the Grand Valley, the clay soils do not absorb moisture very well, causing storm water to flow into storm drains, creeks and rivers. Storm water does not go into a treatment plant so any pollutants like

oil, grease, pesticides, fertilizers, detergents, lawn clippings, etc., are carried into the storm water and discharged into waterways and back into the environment.

- (c) **Vulnerability Assessment.** Storm water management is the process of public education coupled with understanding, analyzing, planning for, and controlling storm water. Storm water management plays a critical role in controlling flooding, enhancing safety, protecting the environment, and meeting requirements of federal environmental regulations. Many existing facilities are aging, rusting or in need of repair and maintenance. The 5-2-1 Drainage Authority also needs to construct new facilities to adequately address storm water management in not only developing areas, but in all areas of the valley, including agricultural. Work on storm water facilities is needed in all areas of the Grand Valley to varying degrees. Some facilities have reached their service life, and a maintenance effort is not enough; replacement is necessary. Other facilities have become overgrown or eroded to a point where maintenance is needed. Lastly, facilities are not adequate or even in existence and in some cases major capital construction is needed to correct deficiencies. (Home: 5-2-1 Drainage Authority)
- (d) **Community Asset Inventory.** The intent of this section is to assess the 5-2-1 Drainage Authority vulnerability separate from that of the planning area as a whole. One area prone to flooding in the Grand Valley is Bosley Wash between the unincorporated Clifton area and the Town of Palisade. Floodwaters have made Highway 6 between Clifton and Palisade impassable in the recent past and have flooded homes and farmlands. Studies have been performed on this area for the purpose of alleviating these problems.
- (e) **Vulnerability by Hazard.** The 5-2-1 Drainage Authority is currently studying other washes in the Grand Valley to determine what measures need to be taken to mitigate flooding of homes and farmlands. There are proposals to build detention facilities and to correct other structures, such as bridges and culverts. There are 28 major washes in the Grand Valley to be studied with corrective action to be taken. (Home: 5-2-1 Drainage Authority)

(Res. 05-10, 1-6-10)

42.08.730 Works cited.

About Us: Colorado Natural Heritage Program. (2009). Retrieved October 21, 2009, from Colorado Natural Heritage Program: <http://www.cnhp.colostate.edu>

County, M. (2009, July 28). *Mesa County Planning and Economic Development.* Retrieved November 12, 2009, from Mesa County: <http://www.mesacounty.us>

County, M. (2009, March 24). *Mesa County Public Works, Stormwater Management.* Retrieved November 12, 2009, from Mesa County: <http://www.mesacounty.us>

Data and Demographics: Grand Junction Economic Partnership. (2009). Retrieved October 26, 2009, from Grand Junction Economic Partnership: <http://www.gjep.org/>

Demographer, S. (n.d.). *State Demography Office.* Retrieved November 2, 2009, from Colorado Division of Local Government: <http://dola.colorado.gov>

Department of Geography, U. o. (2009, August 26). *Hazards and Vulnerability Research Institute.* Retrieved September 14, 2009, from SHELDUS: <http://webra.cas.sc.edu>

EHP Web Team. (2009, September 14). *Welcome to the U.S. Geological Survey Earthquake Hazards Program.* Retrieved September 14, 2009, from USGS: <http://earthquake.usgs.gov/>

FEMA. (2009). *Flood Insurance Study, Mesa County Colorado.* FEMA.

FEMA. (2009, July 9). *Getting Started: Building Support for Mitigation Planning FEMA 386-1.* Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov>

FEMA. (2007, October 31). *Hazard Mitigation Planning and Hazard Mitigation Grant Program. Final Rule.* Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov>

- FEMA. (2009, November 13). HAZUS-MH.
- FEMA. (2006). *Introduction to Hazard Mitigation. FEMA IS-393*. Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov>
- FEMA. (2009). *Multi-Hazard Identification and Risk Assessment*. Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov/library/viewRecord.do>
- FEMA. (2009, July 9). *Multi-Hazard Mitigation Planning. FEMA 386-8*. Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov>
- FEMA. (2001, September). *Understanding Your Risks: Identify Hazards and Estimating Losses. FEMA 386-2*. Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov>
- FEMA. (2001). *Understanding Your Risks: Identifying Hazards and Estimating Losses. FEMA 386-2*. Retrieved October 28, 2009, from Federal Emergency Management Agency: <http://www.fema.gov>
- Hampton, R. (2009, October 28). Division of Wildlife, Public Information Officer, Northwest Region. Grand Junction, CO, USA.
- Hinson, S. (2009, September 25). *National Climatic Data Center*. Retrieved September 25, 2009, from Storm Events: <http://www.ncdc.noaa.gov>
- Hinson, S. (2009, September 14). *NCDC Storm Events*. Retrieved September 14, 2009, from National Climatic Data Center: <http://www4.ncdc.noaa.gov>
- Home: *5-2-1 Drainage Authority*. (n.d.). Retrieved November 5, 2009, from 5-2-1 Drainage Authority: <http://www.521drainageauthority.org/index.html>
- Home: *Lower Valley Fire Protection District*. (2009). Retrieved October 28, 2009, from Lower Valley Fire Protection District: <http://lowervalleyfire.com>
- J. Truby, L. B. (January 2001). *The Colorado Drought Mitigation and Response Plan*.
- Jackson, G. (2009). Colorado Division of Water Resources Dam Safety Branch. Grand Junction, CO, USA.
- Martsof, A. (2009, October 27). Vulnerability Assessment. Grand Junction, CO.
- National and State Registers*. (n.d.). Retrieved October 21, 2009, from Colorado Historical Society Office of Archeology and Historic Preservation: <http://www.coloradohistory.org>
- National Register of Historic Places*. (2009, October 21). Retrieved October 21, 2009, from National Park Service: <http://nrhp.focus.nps.gov>
- Nelson, T. (2009, October 29). Mesa County Endangered Species Habitat Map. Grand Junction, CO, USA.
- NWS. (2008, October 16). *National Weather Service, Lightning Safety*. Retrieved September 25, 2009, from National Weather Service: <http://www.lightningsafety.noaa.gov>
- Paul, D. (2009, November 4). Fire Mitigation Specialist, Bureau of Land Management. Grand Junction, CO, USA.
- Reekie, D. (2009, September 15). Grand Junction Fire Department. Grand Junction, CO, USA.
- Subcommittee, E. (1999, November 15). *Colorado Earthquake Information*. Retrieved September 14, 2009, from Colorado Geological Survey: <http://geosurvey.state.co.us>
- Summit County, A. (2008). *Summit County Multi-Hazard Mitigation Plan*. Summit County.
- Survey, C. G. (2004, November 24). *DeBeque Canyon Landslide*. Retrieved September 14, 2009, from Colorado Geological Survey: <http://geosurvey.state.co.us>

Sylves, R. T. (2008, March 31). *Public Entity Risk Institute Presidential Disaster Declaration*. Retrieved September 14, 2009, from PERI Presidential Disaster Declaration Site: <http://www.peripresdecusa.org/mainframe.htm>

Tuffin, S. (2009). Mesa County Workforce Director. Grand Junction, CO, USA.

U.S. Census Bureau. (n.d.). Retrieved October 9, 2009, from U.S. Census Bureau: <http://www.census.gov>

University of Nebraska Lincoln. (2009). *About National Drought Mitigation Center*. Retrieved September 14, 2009, from National Drought Mitigation Center: <http://drought.unl.edu/index.htm>

Welcome, Town of Palisade. (n.d.). Retrieved October 29, 2009, from Town of Palisade: <http://www.townofpalisade.org>

(Res. 05-10, 1-6-10)

Appendix A Plan Adoption Resolutions

RESOLUTION NO. MCM 2009-225

A RESOLUTION ADOPTING THE REVISED MESA COUNTY, COLORADO

MULTI-JURISDICTION HAZARD MITIGATION PLAN

WHEREAS, natural hazards in Mesa County have the potential for loss of life and significant property damage; and

WHEREAS, the County of Mesa recognizes the importance of reducing or eliminating vulnerability of disasters by natural hazards for the overall good and welfare of the community; and

WHEREAS, the County of Mesa, Emergency Management Department has revised the comprehensive, multi-jurisdictional, Hazard Mitigation Plan to identify both natural and manmade hazards and developed strategies to mitigate these hazards; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires jurisdictions to prepare and adopt a Hazard Mitigation Plan to be eligible for future pre-disaster and post disaster federal funding for mitigation purposes; and

WHEREAS, the County of Mesa has identified and justified a number of proposed projects and programs needed to mitigate the vulnerabilities of the County to the impacts of future disasters to be included in this revised Hazard Mitigation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MESA COUNTY, COLORADO:

Section 1. The County of Mesa hereby proposes to accept and approve the revised Mesa County Multi-Jurisdiction Hazard Mitigation Plan.

Section 2. The plan participants are requested and instructed to pursue available funding opportunities for implementation of the proposals designated therein, and

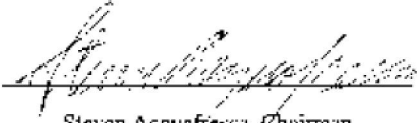
Section 3. The plan participants will, upon receipt of such funding or other necessary resources, seek to implement the proposals contained in its section of the mitigation strategy, and

Section 4. The plan participants will continue to participate in the updating and revision of the Mesa County Multi-Jurisdiction Hazard Mitigation Plan with a plan review and revision to occur within a five-year cycle, and designated staff will provide annual progress reports on the status of implementation of the plan to the Board of County Commissioners, and

Section 5. The plan participants will further seek to encourage the businesses, community groups, organizations and other stakeholders within the County of Mesa, to also participate in the updating and revision of this plan.

DULY MOVED, SECONDED AND PASSED THIS 21st day of December, 2009.

MESA COUNTY BOARD OF
COUNTY COMMISSIONERS

By: 
Steven Acquafresca, Chairman

ATTEST:





Mesa County Clerk & Recorder

(Res. 05-10, 1-6-10)

Appendix B Kick-off Meeting Invitation List

Towns/Cities

Town of Collbran
1010 High
Collbran, CO 81624

Town of DeBeque
381 Minter
DeBeque, CO 81630

City of Fruita
325 E. Aspen Ave.
Fruita, CO 81521

Town of Palisade
175 E. 3rd Street
Palisade, CO 81526

City of Grand Junction
250 North 5th Street
Grand Junction, CO 81501

Fire Protection Districts/Departments

Central Orchard Mesa Fire Protection District
3253 B 1/2 Road
Grand Junction, CO 81503

Clifton Fire Protection District
3254 1/2 F Rd.
Clifton, CO 81520

DeBeque Fire Protection District
380 Curtis Avenue
DeBeque, CO 81630

East Orchard Mesa Fire Protection District
455 35 Road
Palisade, CO 81526

Glade Park Volunteer Fire Department
16400 DS Road
Glade Park, CO 81523

Grand Junction Fire Department
330 S. 6th Street
Grand Junction, CO 81501

Grand Junction Rural Fire Protection District
P.O. Box 4450
Grand Junction, CO 81502

Lands End Fire Protection District
34980 Pronghorn Drive
Whitewater, CO 81527

Lower Valley Fire Protection District
168 N. Mesa
Fruita, CO 81521

Palisade Fire Department
175 E. 3rd Street
Palisade, CO 81526

Palisade Rural Fire Protection District
3836 G. Road
Palisade, CO 81526

Plateau Valley Fire Protection District
49084 KE-1/2 Rd.
Mesa, CO 81643

Gateway-UnawEEP Fire Protection District
P.O. Box 126
Gateway, CO 81522

Grand Junction Fire Department
222 South 6th Street
Grand Junction, CO 81501

Other Districts

Grand Mesa Metropolitan District #2	Grand Valley Drainage District
Powderhorn Metropolitan District No. 1	Redlands Mesa Metropolitan District
Ridges Metropolitan District #1	Upper Grand Valley Pest Control District

Southwest Mesa County Rural Services Public Improvement District
544 Rood Ave.
Grand Junction, CO 81501

Whitewater Public Improvement District
544 Rood Ave.
Grand Junction, CO 81501

Mesa County Lower Valley Public Improvement District
544 Rood Ave.
Grand Junction, CO 81501

Mesa County Whitewater Urban Services Public Improvement District
544 Rood Ave.
Grand Junction, CO 81501

Sanitation Districts

Mesa Water and Sanitation District

Central Grand Valley Sanitation District
541 Hoover Dr.
Grand Junction, CO 81504

Clifton Sanitation District
3217 D. Road
Clifton, CO 81520

Persigo Wastewater Treatment Plant/Service Area
2145 River Road
Grand Junction, CO 81505

Water Districts

Clifton Water District
510 34 Road
Clifton, CO 81520

Colorado River District
P.O. Box 1120
Glenwood Springs, CO 81602

Ute Water Conservancy District
560 25 Road
Grand Junction, CO 81506

Colorado Division of Water Resources
Attn: Garrett Jackson
2754 Compass Drive, #175
Grand Junction, CO 81506

West Divide Water Conservancy District
P.O. Box 1478
Rifle, CO 81650

Law Enforcement Agencies

Colorado State Patrol
554 Jurassic Ct.
Fruita, CO 81521

Grand Junction Police Department
625 Ute Ave.
Grand Junction, CO 81501

Collbran Town Marshal
1010 High St.
Collbran, CO 81624

DeBeque Town Marshal
381 Minter Ave.
DeBeque, CO 81630

Fruita Police Department
101 W. McCune Ave.
Fruita, CO 81521

Palisade Police Department
175 E. 3rd Street
Palisade, CO 81526

Mesa County Sheriff's Office
215 Rice St.
Grand Junction, CO 81501

Federal Bureau of Investigation
402 Rood Ave., Suite 225/P.O. Box 1905
Grand Junction, CO 81502

Other Agencies

NOAA National Weather Service
792 Eagle Dr.
Grand Junction, CO 81506

Xcel Energy
Grand Junction, CO 81501

Grand Valley Power
2727 Grand Ave.
Grand Junction, CO

Redlands Water and Power Co.
2216 S. Broadway
Grand Junction, CO 81503

Bureau of Land Management
2815 H. Road
Grand Junction, CO 81506

Bureau of Land Management
Attn: Mr. Doug Paul
2815 H. Road
Grand Junction, CO 81506

Bureau of Reclamation
2764 Compass Drive, Suite 106
Grand Junction, CO 81506

Mesa County Floodplain Manager
750 Main Street
Grand Junction, CO 81501

Colorado State Forest Service
Attn: Mr. Kelly Rogers
222 South 6th Street, Room 416
Grand Junction, CO 81501

Colorado State Forest Service
Attn: Tim Foley
222 South 6th Street, Room 416
Grand Junction, CO 81501

State of Colorado, Division of Emergency Management
Attn: Mr. Steve Denney
222 South 6th Street, Room 409
Grand Junction, CO 81501

State of Colorado – Department of Agriculture
700 Kipling Street, Suite 4000
Lakewood, CO 80215-8000

State of Colorado
Department of Transportation
222 South 6th Street
Grand Junction, CO 81501

Grand Junction Regional Communications Center
Attn: Mrs. Paula Creasy
625 Ute Ave.
Grand Junction, CO 81501

Grand Junction Public Works
Attn: Mr. Tim Moore
2553 River Road
Grand Junction, CO 81505

Mesa County LEPC
P.O. Box 2242
Grand Junction, CO 81502-2242

Mesa County Information Technology Department
Attn: Rick Corsi
544 Rood Ave.
Grand Junction, CO 81501

Mesa County Engineering Department
750 Main Street
Grand Junction, CO 81501

Mesa County Public Works Department
750 Main Street
Grand Junction, CO 81501

Mesa County Planning Department
750 Main Street
Grand Junction, CO 81501

Mesa County Health Department
Community Services Building
510 – 29 1/2 Road
Grand Junction, CO 81504

Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203

Colorado Geological Survey
1313 Sherman Street, Room 721
Denver, CO 80203

Colorado National Monument
Fruita, CO 81521-0001

FEMA Region VIII – Mitigation Office
Building 170, Denver Federal Center
P.O. Box 25267
Denver, CO 80225-0267

U.S. Forest Service
2250 Highway 50
Delta, CO 81416

Mesa County Fleet Services
Mr. Dave Wolney
1000 South 9th Street
Grand Junction, CO 81501

5-2-1 Drainage Authority
Attn: Eric Mende
P.O. Box 3389
Grand Junction, CO 81502

City of Grand Junction Water Department
Attn: Rick Brinkman
333 West Ave., Bldg. A
Grand Junction, CO 81501

(Res. 05-10, 1-6-10)

Appendix C Invitation Letter to Kick-off Meeting

Kimberly Bullen
544 Rood Avenue
Grand Junction, Co. 81501
Kimberly.bullen@mesacounty.us

July 23, 2009

RE: Mesa County Multi-Hazard Mitigation Plan

To Whom It May Concern:

As you may be aware, the Disaster Mitigation Act of 2000 requires all local governments to assess their risks to natural hazards and identify actions that can be taken in advance to reduce future losses. The law requires all local governments and districts to have an approved local hazard mitigation plan after November 1, 2004, to be eligible for certain federal disaster assistance and mitigation funding programs.

Mesa County completed the original plan in October, 2004 and is required by the State of Colorado, Division of Emergency Management (CDEM) and the Federal Emergency Management Agency (FEMA), to submit an updated Pre-Disaster Mitigation Plan every five years. The purpose of this plan is to reduce or eliminate long-term risk to the people and property of Mesa County from the effects of natural hazard events.

Mesa County Emergency Management has taken the lead in developing this plan which was adopted in 2004 by all municipal/Town governments and Mesa County. During the revision process we hope to expand this plan to also include special districts. Mesa County Emergency Management will facilitate the planning process, collect the necessary data, and perform other technical services, including preparing the risk assessment and plan document. However, we need your help to successfully complete this project.

The Pre-Disaster Mitigation planning process is heavily dependent on the participation of representatives from local government agencies and departments, the public, and other stakeholder groups. A Hazard Mitigation Planning Committee will be formed to support this project and will include representatives from the County, Cities/Towns, special districts, and other local, state, and federal agencies in or that serve Mesa County.

Your organization's participation on the committee is requested due to the information, technical knowledge, or other valuable experience you have about your community or agency. Please designate a representative to serve on the committee and attend the kickoff meeting. If you have more than one department or individuals that you would like to attend this meeting, please feel free to invite them.

**Mesa County Multi-Hazard Mitigation Plan Kick-off Meeting
August 11, 2009 (10:00 a.m.-12:00 p.m.)
Mesa County Courthouse-Multi-Purpose Room
544 Rood Ave., Grand Junction, Co. 81501**

Please respond to Kimberly Bullen at (970)244-1649 or kimberly.bullen@mesacounty.us as to whether or not you or your representative will be able to attend. Thank you for your attention to this important project.

Sincerely,

Kimberly K. Bullen
Sr. Management Analyst/
Interim Emergency Manager

(Res. 05-10, 1-6-10)

Appendix D HMPC Meeting Agendas, Sign-In Sheets, and Sample Worksheets**AGENDA**

Mesa County Multi-Hazard Mitigation Plan Kick-off Meeting

August 11, 2009

10:00 a.m. – 12:00 p.m.

Mesa County Courthouse: Multi-Purpose Room

10:00 a.m. – 10:15 a.m.	Opening Remarks
	Introductions
10:15 a.m. – 10:30 a.m.	Local Hazard Mitigation Plan Purpose and Requirements
10:30 a.m. – 10:45 a.m.	Identification of Multi-Jurisdictional Participation and Hazard Mitigation Planning Committee
	Planning for Public Involvement
10:45 a.m. – 12:00 p.m.	Hazard Identification and Data Collection Needs
	Worksheets 1 – 3
	Next Steps



Sign-In Sheet
 Mesa County Multi-Hazard Mitigation Plan
 Kick-off Meeting
 August 11, 2009

Name	Jurisdiction/Department	Address	Phone	E-Mail
MARTY MEDINA	CDOT	222 S. 6th Plm 317 GRAND JUNCTION 81501	970-683-4211	marty.medina@dot.state.co.us
Dave Wolyn	Mesa State College	1100 North Ave Grand Jct 81501	970-245-7141	dvolyn@mesastate.edu
VIC STURM	Town of Colbran	1010 High St. Colbran 81624	970-487-3120	Publicworks@TOWNOF COLBRAN.CO.US
AARON LANG	COLO STATE PATROL	554 JURASSIC COURT FRUITA CO 81501	970-858-2850	
Aslan Applebaum	Cellular Analysts Inc	1010 HIGH ST P.O. Box 382 81624	970-487-8085	cellularanalysts@comcast.net
DAVE GITCHELL	CENTRAL OREGON MESA FPD	3253 Bldg. G, J 81503	970-640-0434	FINMEDIVER@54@HARRIS .COM
DAVID SMITH	CITY OF GRAND JCT. (PERIOD)	2145 RIVER ROAD	970-256-4163	dauid@glcity.org
Bud Thompson	MCDOT	1000 So. 9th St	970-216-1323	Bud.Thompson@mtcsc and: STALEY COUNTY MESA COUNTY, US
Andi Staley	Mesa Cnty - Engineering	750 main	970-244-1686	
check vnte	CDEM		970-246-3912	check.vnt@state.co.us
Garrett Jackson	CO SUR	2151 COMPANION #175 GRAND JCT. 81501	970/245-8355	
Kelly Rogers	CSFS	222 S. 6th St GT CO 81501	970 249 7725	Kelly.Rogers@colstate -edu
Mark Haynes	Co DWR DAM SAFETY	1313 SHERMAN ST Rt 818 DENVER CO 80603	303/822-3581	mark.haynes@state.co.us
Jim Pringle	NATL WX SVC.	792 ENGINE DR GRAND Junction CO 81501	970-243-7007	james.pringle@noaa.gov



Sign-In Sheet
 Mesa County Multi-Hazard Mitigation Plan
 Kick-off Meeting
 August 11, 2009

Name	Jurisdiction/Department	Address	Phone	E-Mail
Alex Scahill	Polisade P.D.	Box 125 Polisade	970-5601	AScahill@TownofPolisade
Richard Rupp	Polisade Fire	P.O. Box 128 Polisade	970-4753	rrupp@TownofPolisade
JANE QUIMBY	FBI	400 East Ave 65	242 8360	Jane.Quimby@ic.fbi.gov
Mike Harney	Platteau Valley Fire	Box 456, Collinsburg, CO	287-5283	mharney155@avc.la
Eric Mende	5-2-1 Drainage Auth	573 W. Crete Cr. GJT.	263-7401	eric.mende@mesacounty
Tom Messall	Grand Jct P.D.	625 W 2nd Ave	244-3727	TomM@GJCity.org
DREW REEKSE	GJFD	330 S. 6th	244-1600	DREWRE@GJCity.org
Corey Loveen	" "	" "	" "	COREY@GJCity.org
Bill Roth	GJFD	330 S 6th	244-1476	billr@GJCity.org
Richard Proctor	Grand Valley Water Users Assoc.	1147 24th Rd	242-5065	GURHAM@GVAOLGA
Barry Delrich	BLM GJ	2815 H Road	970-589-9658	Barry.Delrich@blm.gov
FRANK CAVALIERE	LOWER VALLEY FD	168 N. MESA ST	888-3133	fcavaliere@fruita.org
BRET GUNAWAY	CITY OF GJ.	250 N 5th St.	244-1590	BG@GJCity.org
Frank Hayde	Colorado Nat'l Monument	Fruita, CO	958-3617	frank_hayde@
Ken Watkins	GJ Fire	330 S. 6th St GJ	244-1415	nps.gov KenW@GJCity.org

42-129

AGENDA

Mesa County Multi-Hazard Mitigation Plan – 2nd Meeting

September 3, 2009

10:00 a.m. – 12:00 p.m.

Mesa County Courthouse: Multi-Purpose Room

10:00 a.m. – 10:15 a.m.	Opening Remarks
	Introductions
10:15 a.m. – 10:45 a.m.	Review Historical Hazard Data, Vulnerability Assessment and Capabilities Matrix
10:45 a.m. – 11:30 a.m.	Discuss Mitigation Actions (Worksheet #4)
11:30 a.m. – 12:00 p.m.	Discuss Mitigation Project Descriptions (Worksheet #5)
	Next Steps



Sign-In Sheet
Mesa County Multi-Hazard Mitigation Plan
Mitigation Strategy Meeting
 September 3, 2009

Name	Jurisdiction/Department	Address	Phone	E-Mail
Chuck Votc	CDEM			chuck.votc@state.co.us
Bill Roth	G.J.F.D.			billr@gjcity.org
DREW REEKIE	GJFD			Drewr@gjcity.org
Jen Folt	MCSO			Jim.Folt@mesacounty.us
JIM PRINGLE	NWS			james.pringle@noaa.gov
Richard Rupp	Polisade Fire			rrupp@townofpolisade.org
Eric Mende	S-21 Drainage Authority			eric.mende@mesacounty.us
MIKE HARVEY	Plateau Valley Fire			mharvey155@pvl.com
Wade Hofzinger	FEMA Region III	Denver		wade.hofzinger@dhs.gov
Grant Jackson	City of G.J.			grant.jackson@state.co.us
Bob Conroy	City of G.J.			Bob Conroy @GJ
Andi Staley	Mesa County Public Works			andi.staley@mesacounty.us
Bud Thompson	MO DOT			bud.thompson@mesacounty.us
FRANK CAVALIERE	LVFD			fcavaliere@fruita.org



Sign-In Sheet
Mesa County Multi-Hazard Mitigation Plan
Mitigation Strategy Meeting
 September 3, 2009

Name	Jurisdiction/Department	Address	Phone	E-Mail
Mark Angelo	FPD	101 W. McClure Ave. Fruita, CO	888-358	MARK.Angelo@MESA.CO.US
Marilyn Gally	CDEM	15220 S. Golden Rd, Golden	303-273 1712	marilyn.gally@state.co.us
Brandi Plouffe	GJFD	330 S 6th St 81507	970-250-9166	brandim@gjcity.org

AGENDA

Mesa County Multi-Hazard Mitigation Plan – 3rd Meeting

September 17, 2009

10:00 a.m. – 12:00 p.m.

Mesa County Courthouse: Multi-Purpose Room

10:00 a.m. – 10:15 a.m.	Opening Remarks
	Introductions
10:15 a.m. – 10:45 a.m.	Review Vulnerability Assessment, Capabilities Matrix
10:45 a.m. – 11:15 a.m.	Review Hazard Maps (Floods, wildfires, rockfalls, Tier II facilities, dams, earthquakes, critical facilities, historical events)
11:15 a.m. – 12:00 p.m.	Refine Strategies and Projects
	Schedule one additional HMPC meeting to review and finalize plan
	Schedule Community Meetings

Sign-In Sheet
Mesa County Multi-Hazard Mitigation Plan
Kick-off Meeting
 September 17, 2009



Name	Jurisdiction/Department	Address	Phone	E-Mail
MARY MEDINA	CRIT	222 S. 6th Ln.	603-6041	mary.medina@dot.state.co.us
Richard Rupp	Palisade Fire	175 E 2nd P.O. Box 128	270-9753	rrupp@townofpalisade.org
Doug Kent	LCR Fire	2815 HBA CT	299-3106	dougkent@palisade.org
Brenda Mangarella	GJFD	330 S 6th - GJ	244-1400	
Mike Harsanyi	Platteau Valley	Bx 456, Collbran	268-5283	m.harsanyi@plv.com
Jim Pringle	NWS			james.pringle@noaa.gov

AGENDA

Mesa County Multi-Hazard Mitigation Meeting – Final Planning Meeting

December 9, 2009

9:00 a.m. – 10:30 a.m.

Mesa County Courthouse: Multi-Purpose Room

9:00 a.m. – 9:30 a.m.	Planning Committee Agreement on Project Priorities
9:30 a.m. – 10:00 a.m.	Final Changes to Plan
10:00 a.m. – 10:30 a.m.	Review Community Open House Schedule and Formal Adoption Process



Sign-in Sheet
Mesa County Multi-Hazard Mitigation Plan
Final Planning Meeting
December 9, 2009

Name	Jurisdiction/Department	Address	Phone	E-Mail
Andrew Markolf	Mesa County / O&E	514 Ross Ave Grand Jct.	970-241-063	amarkolf@mesacounty.us
Kimberly Bullen	Mesa County / O&E Admin.	544 Ross Ave. Grand Jct.	(970) 244-1649	Kimberly.bullen@mesacounty.us
BRECKENRIDGE FRANK CHVALIENE	City of GJ	260 N 5th St	970-244-1590	BRACKENRIDGE@CITY.GJ.CO
Monica Mulhain	Lower Valley FD	168 N Mesa St	858-3133	fravalier@frontier.com
Dave Wolong	Comm Center	625 W. Ave 605	244-3463	monica@digitally.org
Richard Rupp	Mesa State College	12th & North Ave	255-7128	dwohly@mesastatedu
Greg Atkinson	Palisade Fire	195 E 2nd St	220-4253	mrupp@ci.palisade.ny.us
	MCHD	510 201st Rd	771-5343	Greg.Hartman@mesacounty.us

(Res. 05-10, 1-6-10)

Appendix E Data Collection Worksheets

**Historic Hazard Event Data Collection Sheet
Worksheet #1**

Instructions: Please fill out one sheet for each event with as much detail as possible. Attach supporting documentation, photocopies of newspaper articles or other original sources.

Type of natural hazard event:	
Date of event:	
Description of the nature and magnitude of the event:	
Location (community or description with map):	
Injuries:	
Deaths:	
Property damage:	
Infrastructure damage:	
Business/Economic impact:	
Road/School/Other closures:	
Other damage:	
Total damages:	
Insured losses:	
Fed/State Disaster relief funding (\$):	
Opinion on likelihood of occurring again:	
Source of information:	
Comments:	

Contact Information	
Name of Jurisdiction:	
Submitted By:	
Address:	
Phone:	

Vulnerability Assessment Worksheet #2

Instructions: Please complete to the extent possible the vulnerable buildings, populations, critical facilities and infrastructure for each hazard that affects your jurisdiction. This information will be used to estimate disaster losses, which can then be used to gauge potential benefits of mitigation measures. Attach supporting documentation, photocopies of engineering reports or other sources.

Hazard:

Location and Description of Potential Impact:

Building Inventory:

Residential	Count	Estimated Value
Comments		
Commercial	Count	Estimated Value
Comments		
Industrial	Count	Estimated Value
Comments		
Agricultural	Count	Estimated Value
Comments		
Other (Define, e.g., gov.)	Count	Estimated Value
Comments		

**Capabilities Matrix
Capabilities Worksheet #3**

Jurisdiction:	Y/N/NA/Unknown	Comments
Comp Plan/General Plan		
Special Plans		
Subdivision Ordinance		
Zoning Ordinance		
NFIP/FPM Ordinance		
Substantial Damage Language		
Admin./Certified Floodplain Manager		
# of Flood-Threatened Buildings		
# of Flood Insurance Policies		
# of Repetitive Losses		
Maintain Elevation Certificates		
CRS Rating, if applicable		
Storm Water Program		
Erosion or Sediment Controls		
Building Code Version		
Full-Time Building Official		
Conduct "As-Built" Inspections		
BCEGS Rating		
Local Emergency Operations Plan		
Fire Department ISO Rating		
Fire Safe Programs		
Hazard Mitigation Plans		
Warning Systems/Services		
Storm Ready Certified		
Weather Radio Reception		
Outdoor Warning Sirens		
Emergency Notification (R-911)		
GIS System		
Hazard Data		
Building Footprints		
Links to Assessor Data		
Land Use Designations		
Structural Protection Projects		
Property Protection Projects		
Critical Facilities Protected		
Natural/Cultural Resources Inventory		
Public Information Program/Outlet		
Environmental Education Program		

**Mitigation Strategy – Identify Mitigation Actions
Worksheet #4**

Instructions: For each type of loss identified on previous worksheets, determine possible actions. Record information below.

Hazard:

Priority	Possible Actions (Include Location)	Sources of Information (include sources you reference and documentation)	Comments (Note any initial issues you may want to discuss or research further)	Planning Reference (Determine into which pre-existing planning suggested projects can be integrated)

Contact Information:

Name of Jurisdiction:

Submitted By:

Address:

Phone:

**Mitigation Project Description Worksheet
Worksheet #5**

Instructions: Use this guide to record potential mitigation projects (one or more pages per project) identified during the planning process. Provide as much detail as possible and use additional pages as necessary. These will be collected following HMPC meetings on mitigation goals and measures and included in the plan.

Jurisdiction:

Mitigation Project:

Issue/Background:

Other alternatives:

Responsible Agency:

Priority (High-Medium-Low):

Cost Estimate:

Benefits (Avoided Losses):

Potential Funding:

Schedule:

Worksheet Submitted By:

Name and Title:

Phone:

Address:

(Res. 05-10, 1-6-10)

Appendix F Mesa County Hazard Mitigation Planning Committee Members

Name	Agency
Marty Medina	Colorado Department of Transportation
Dave Wolny	Mesa State College
Vic Sturm	Town of Collbran
Aaron Laing	Colorado State Patrol
Adam Appelhanz	Town of Collbran (Marshal's Office)
Dave Gitchell	Central Orchard Mesa FPD
David Smith	City of Grand Junction (Persigo)
Bud Thompson	Mesa County Public Works
Andi Staley	Mesa County Engineering
Chuck Vale	Colorado Division of Emergency Management
Garrett Jackson	Colorado Division of Water Resources
Kelly Rogers	Colorado State Forest Service
Jim Pringle	National Weather Service (Grand Junction Office)
Andy Scott	Town of Palisade (Police Department)
Richard Rupp	Town of Palisade (Fire Department)
Jane Quimby	Federal Bureau of Investigations
Mike Harvey	Plateau Valley FPD
Eric Mende	5-2-1 Drainage Authority
Bob Russell	City of Grand Junction (Police Department)
Drew Reekie	City of Grand Junction (Fire Department – D.E.R.A.)
Corey Lovern	City of Grand Junction (Fire Department – D.E.R.A.)
Bill Roth	City of Grand Junction (Fire Department)
Richard Proctor	Grand Valley Water Users Association
Barry Oelrich	Bureau of Land Management
Doug Paul	Bureau of Land Management
Frank Cavaliere	Lower Valley Fire Protection District
Bret Guillory	City of Grand Junction
Ken Watkins	City of Grand Junction (Fire Department)
Frank Hayde	Colorado National Monument
Jim Fogg	Mesa County Sheriff's Office
Brandi Manuppela	City of Grand Junction (Fire Department – D.E.R.A.)
Kent Holsan	Clifton Fire Protection District
Steve Grant	Grand Junction Rural Fire Protection District
Mark Angelo	City of Fruita (Police Department)
Tristan Nelson	Mesa County GIS
Andrew Martsolf	Mesa County Emergency Management
Kimberly Bullen	Mesa County Administration

(Res. 05-10, 1-6-10)

Appendix G Community Open House Press Release



Date: December 3, 2009

Contact: Andy Martsof
Emergency Manager
(970) 244-1763
andrew.martsof@mesacounty.us

Keeping You Safe From Natural Disasters

Plan recommends actions to reduce risks to our communities from flooding, wildfires, rockfalls and landslides.

What steps should Mesa County and its communities take to protect people and property from natural hazards? A new draft plan analyses local threats and proposes ways to minimize risks.

The draft [Mesa County Hazard Mitigation Plan](#) assesses the risk of several different types of natural hazards within Mesa County and its communities. The goals of the plan are to:

- Reduce or eliminate the risk to people, property and the environment.
- Minimize potential economic losses.
- Move forward with action steps that will mitigate damage by working with local partners.

The public is invited to find out more about what hazards we face in Mesa County, and what's being planned to reduce our risks. Please come review the draft plan at one of our open houses:

DROP IN ANYTIME!

Thursday, December 10 th <ul style="list-style-type: none">• 6:00 to 8:00 p.m.	Fruita—Lower Valley Fire Station (168 N. Mesa Avenue)
Friday, December 11 th <ul style="list-style-type: none">• 3:00 to 5:00 p.m.	Grand Junction—Old County Courthouse (544 Rood Avenue, first floor multipurpose room)
Monday, December 14 th <ul style="list-style-type: none">• 6:00 to 8:00 p.m.	Palisade—Veterans' Memorial Community Center (121 W. 8 th Street)

People who can't attend one of the open houses can review the draft plan online at:
www.mesacounty.us/emergencymanagement
(Just click on "[Draft Hazard Mitigation Plan](#)")

The draft plan is also available for review at the following locations during regular business hours:

- Old County Courthouse (544 Rood Avenue)—reception area inside revolving doors on 6th Street.
- Mesa County Sheriff's Office (215 Rice Street)
- Mesa County Department of Planning and Economic Development (750 Main Street)

"Mesa County—Creating a community of opportunities for all residents with a focus on the future."

IN BRIEF SENTINEL STAFF

Holiday party will be Thursday for children of foster care

MOMS Club of Grand Junction East will have a holiday party for all children from Ariel Foster Care from 5:30 p.m. to 8:30 p.m. Thursday at Canyon View Vineyard Church. Food, games and a visit from Santa Claus are on the party agenda.

Anyone wishing to help purchase presents for the children can drop off or mail donations to Ariel Foster Care, 2938 North Ave., Suite G.

County will present draft plan for managing natural hazards

Open houses have been scheduled for the draft Mesa County Hazard Mitigation Plan, which proposes ways to minimize risks from flooding, wildfires, rockfalls and landslides and other threats.

The schedule is:

- Thursday, 6-8 p.m., Lower Valley Fire Station, 168 N. Mesa Ave., in Fruita
- Friday, 3-5 p.m., Mesa County Courthouse, 544 Rood Ave., first floor multipurpose room
- Dec. 14, 6-8 p.m., Veteran's Memorial Community Center, 121 W. Eighth St. in Palisade

The draft plan can also be viewed online at www.mesacounty.us/emergencymanagement by clicking on Draft Hazard Mitigation Plan; in the

Mesa County Courthouse reception area, which is inside revolving doors on Sixth Street; at the Mesa County Sheriff's Department, 215 Rice St.; and at Mesa County Department of Planning and Economic Development, 750 Main St.

Letter carriers need bowlers for fundraising event Dec. 13

The National Association of Letter Carriers, Local Branch 913 is seeking bowlers to participate in the 2009 Bowl-A-Thon from 9 a.m. to noon Dec. 13 at Orchard Mesa Lanes.

The event will include a pizza lunch and will help raise awareness and money for the Muscular Dystrophy Association. Each player needs to donate or raise \$60 to join a team of five players. Call 241-2181 for information.

Partners offers gift wrapping at mall through Dec. 24

Through Dec. 24, shoppers at Mesa Mall can have gifts wrapped by Partners at cafe Court. Donations will be used for Partners' programs, which provide enrichment activities and provide a safe environment for at-risk youth in the programs.

Call Mary D'Amico at 245-5555, extension 12, for information.

(Res. 05-10, 1-6-10)

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(Res. 05-10, 1-6-10)

Title 43
(Reserved)

Title 44

PLANNING AGREEMENTS

Chapters:

**44.04 Cooperative Planning Agreement – Grand Junction, Fruita,
Palisade and Mesa County**

Chapter 44.04**COOPERATIVE PLANNING AGREEMENT – GRAND JUNCTION, FRUITA,
PALISADE AND MESA COUNTY**

Sections:

44.04.010 Authority.

Article I. Town of Palisade, Mesa County and City of Grand Junction

44.04.020 Findings.

44.04.030 Agreement.

44.04.040 Implementation.

44.04.050 Enforcement – Disputes.

44.04.060 Amendment.

Article II. City of Fruita, Mesa County and City of Grand Junction

44.04.110 Findings.

44.04.120 Agreement.

44.04.130 Implementation.

44.04.140 Enforcement – Disputes.

44.04.150 Amendments.

44.04.010 Authority.

Be it resolved by the City Council of the City of Grand Junction, Colorado, that the Mayor be authorized to sign the cooperative planning agreements between Grand Junction, Fruita and Mesa County and Grand Junction, Palisade and Mesa County.

(Res. 21-98, 2-18-98)

Article I. Town of Palisade, Mesa County and City of Grand Junction**44.04.020 Findings.**

- (a) This agreement is entered into this ninth of February, 1998, by and between Mesa County, Colorado, a body politic organized under and existing by virtue of the laws of the State of Colorado and the Town of Palisade, Colorado, and the City of Grand Junction, Colorado; and
- (b) This agreement is entered under the authority authorized by C.R.S. Title 29, Article 20, as amended; and
- (c) The Board of County Commissioners, the Palisade Town Council and the Grand Junction City Council find it is for the mutual benefit of all parties and in the interest of the public and affected land owners to cooperatively plan the future land use of an area between Palisade and Clifton; and
- (d) The Board of County Commissioners, the Palisade Town Trustees and the Grand Junction City Council entered an Interim Cooperative Planning Agreement (MCA 96-70) on November 18, 1996, which provided for the creation of this agreement to supersede the 1996 agreement; and
- (e) The Mesa Countywide Land Use Plan expresses Countywide goals, policies, and actions to provide guidance in land use decision-making; and
- (f) Mesa County has initiated the process of revising the Mesa County Land Development Code to be consistent with and implement the Countywide Land Use Plan; and

- (g) The Growth Plan for the City of Grand Junction and the Mesa Countywide Land Use Plan both have the following as a goal statement:

To ensure orderly transitions or buffers in areas of joint concern between different communities (i.e., Grand Junction, Fruita, Palisade) that help define distinct communities within Mesa County.

and

- (h) The above plans both have the following as a policy statement:

Grand Junction and Mesa County will coordinate with the Town of Palisade to establish and maintain a transition area between Grand Junction and Palisade that includes the proposed area of joint concern....

and

- (i) There is an area between Clifton and Palisade in which there are no sewer lines, limited domestic water lines, a general lack of urban services, and lengthy response times for emergency services; and
- (j) There is considerable pressure for development in the area between Clifton and Palisade; and
- (k) Without an agreement between Mesa County and the municipalities the area between Palisade and Clifton could develop in a manner making one community indistinguishable from the other, adding to existing traffic problems, and requiring additional urban services at taxpayer expense.

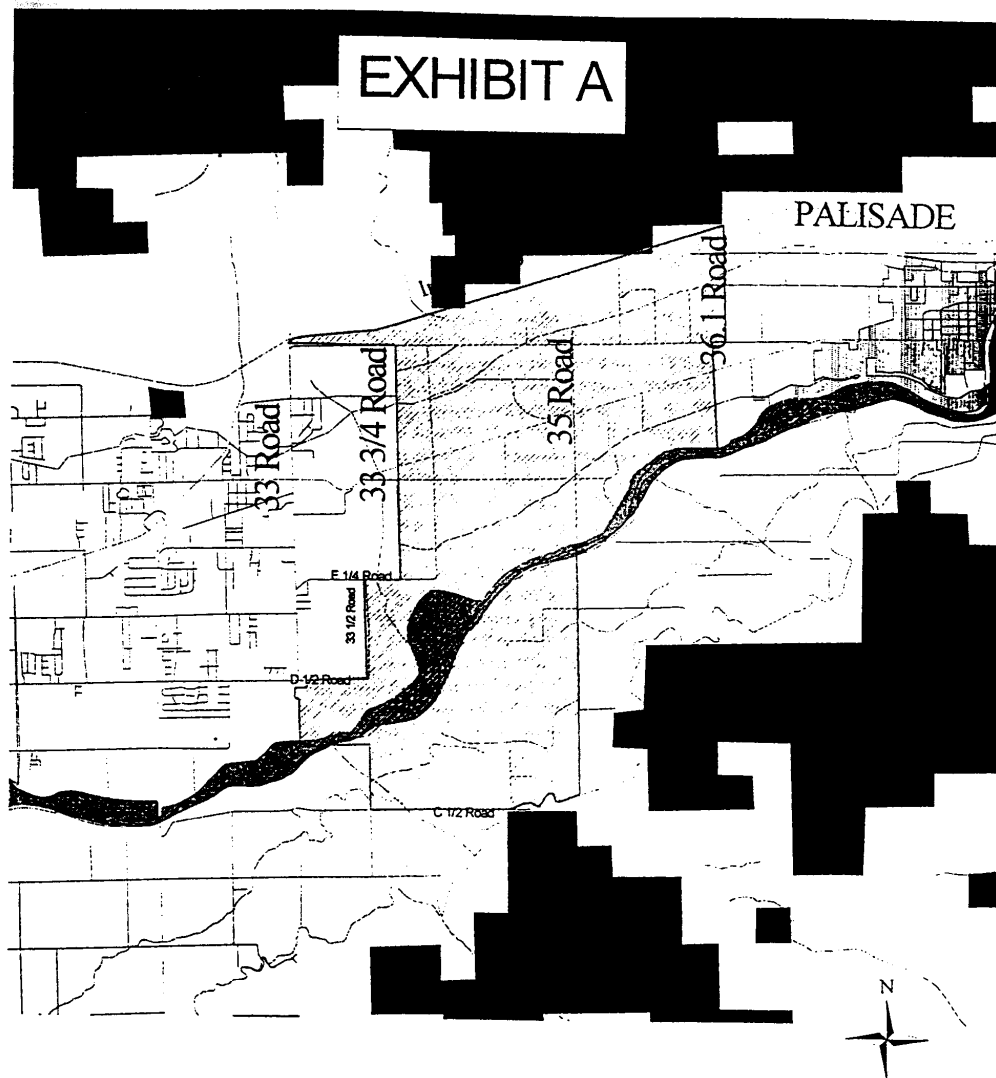
(Res. 21-98, 2-18-98)

44.04.030 Agreement.

Now, therefore, in consideration of the covenants and obligations herein expressed, it is agreed by and between the parties as follows:

- (a) This intergovernmental agreement shall pertain to the geographic area labeled as “cooperative planning area” on Exhibit A at the end of this section.
- (b) This intergovernmental agreement supersedes the interim agreement between the parties dated November 18, 1996 (MCA 96-70).
- (c) Within the “cooperative planning area,” neither the City of Grand Junction nor the Town of Palisade will:
- (1) Annex any territory;
 - (2) Extend any municipal utility services that are not already present; without the mutual consent of all parties.
- (d) Within the “cooperative planning area,” all parties will not:
- (1) Extend any sanitary sewer line;
 - (2) Recommend amendment to any 201 sewer service area boundary; without the mutual consent of all parties.
- (e) It is the goal of all parties that future land use decisions within the “cooperative planning area” will enhance the rural character of the area.
- (f) All parties will respect the adopted master plans for each jurisdiction pertaining to the “cooperative planning area.”

-
- (g) Within the “cooperative planning area” changes in the zoning of a property (rezone) will be consistent with the recommendations of the Mesa Countywide Land Use Plan, where applicable, unless the change is formally approved by the governing bodies of all parties to this agreement.
 - (h) Mesa County will revise the Mesa County Land Development Code appropriately to implement the this agreement.
 - (i) Mesa County will provide the other two parties, with adequate notice, the opportunity to review and comment upon the following types of development activity and related matters in the cooperative planning area:
 - (1) Site plans;
 - (2) Subdivision plats or replats;
 - (3) Planned developments;
 - (4) Special use permits;
 - (5) Conditional use permits;
 - (6) Zoning or development code text amendments that may affect the “cooperative planning area”;
 - (7) Rezone applications; and
 - (8) Policy and plan amendments that may affect the “cooperative planning area.”
 - (j) All parties will share planning meeting and hearing agendas with the other parties in a timely manner.



**PALISADE/GRAND JUNCTION/MESA COUNTY
COOPERATIVE PLANNING AREA**

Plot date
12/2/97

(Res. 21-98, 2-18-98)

44.04.040 Implementation.

- (a) All parties will work cooperatively to:
 - (1) Establish and adopt rural land use design standards for the cooperative planning area including, but not limited to: landscaping, signage, entryways, parking, and outdoor storage requirements; and adopt traffic access and engineering standards in conjunction with the Colorado Department of Transportation.
 - (2) Assist property owners in voluntary rezoning and/or replatting their properties in a manner consistent with the Mesa Countywide Land Use Plan, and the Palisade Strategic Development

Plan to further the purposes of this agreement. Assistance may be provided in the form of fee waivers, and/or expedited review.

- (3) Explore, develop, and support options and seek funding mechanisms available for preserving open lands and enhancing the rural character of the cooperative planning area.
 - (4) Establish a joint open space fund for acquisition of important land, development rights, and open space and conservation easements.
- (b) All parties will meet every five years or as needed, to review the status of the above provisions. Each party will rotate hosting these annual meetings.

(Res. 21-98, 2-18-98)

44.04.050 Enforcement – Disputes.

It is the intent of all parties that this agreement be binding upon all parties, and that each party shall be permitted to specifically enforce any provision of this agreement. Venue for any dispute hereunder shall be in the District Court of Mesa County, Colorado.

(Res. 21-98, 2-18-98)

44.04.060 Amendment.

This agreement may be amended in writing no earlier than the year 2002, subject to the approval of all parties.

(Res. 21-98, 2-18-98)

Article II. City of Fruita, Mesa County and City of Grand Junction

44.04.110 Findings.

- (a) This agreement is entered this ninth of February, 1998, by and between Mesa County, Colorado, a body politic organized under and existing by virtue of the laws of the State of Colorado, and the City of Fruita, Colorado, and the City of Grand Junction, Colorado; and
- (b) This agreement is entered under the authority authorized in C.R.S. Title 29, Article 20, as amended; and
- (c) The Board of County Commissioners, the Fruita City Council and the Grand Junction City Council find it is for the mutual benefit of all parties and in the interest of the public and affected land owners to cooperatively plan the future land use of an area between Fruita and Grand Junction; and
- (d) The Board of County Commissioners, the Fruita City Council and the Grand Junction City Council entered an Interim Cooperative Planning Agreement (MCA 96-71) on November 18, 1996, which provided for the creation of this agreement to supersede the 1996 agreement; and
- (e) The Mesa Countywide Land Use Plan expresses Countywide goals, policies, and actions to provide guidance in land use decision-making; and
- (f) Mesa County has initiated the process of revising the Mesa County Land Development Code to be consistent with and implement the Countywide Land Use Plan; and
- (g) The Growth Plan for the City of Grand Junction and the Mesa Countywide Land Use Plan both have the following as a goal statement:

To ensure orderly transitions or buffers in areas of joint concern between different communities (i.e., Grand Junction, Fruita, Palisade) that help define distinct communities within Mesa County.

and

- (h) The above plans both have the following as a policy statement:

Grand Junction and Mesa County will coordinate with the City of Fruita to establish and maintain a transition area between Grand Junction and Fruita that includes the proposed area of joint concern....

and

- (i) The adopted Fruita Community Plan (May 23, 1994) includes a goal to “establish positive regional relations,” that is consistent with the concept of establishing a cooperative planning area between Grand Junction and Fruita; and
- (j) The “Future Land Use” map and annexation policies in the adopted Fruita Community Plan support a rural cooperative planning area between Grand Junction and Fruita; and
- (k) The adopted Mesa County Land Use and Development Policies discourage development of a commercial strip between Grand Junction and Fruita as follows:

Increased commercial, industrial and medium to high density residential zoning will be discouraged outside of the Fruita 201 area....Future commercial, business, tourist, medium-high density residential and industrial rezones will be limited to the Fruita and Grand Junction 201 sewer service areas... All other areas will be left in the existing zone (AFT). (Policy# 27 Lower Valley Policies – 3/21/85)

Consistent with the Lower Valley Policies commercial, industrial, and high density residential development is discouraged along the Highway 6 and 50/River Road corridor outside the Fruita and Persigo 201 sewer service areas. (Policy #33 – Mid-Valley Appleton Plan - 6/28/90)

and

- (l) There is an area between Grand Junction and Fruita in which there are no sewer lines, limited domestic water lines, a general lack of urban services, and lengthy response times for emergency services; and
- (m) The above area between the two municipalities has four distinct geographic and land use characteristics:
- (1) The U.S. 6 and 50 Highway and Interstate 70 corridor;
 - (2) The Colorado River and its floodplain;
 - (3) The farmland north of Highway 6 and 50; and
 - (4) The Redlands or south side of the Colorado River to the boundaries of the Colorado National Monument; and
- (n) Without an agreement between Mesa County and the municipalities the area between Fruita and Grand Junction could become a continuous strip of commercial land uses, making one community indistinguishable from the other, adding to existing traffic problems, and requiring additional urban services at taxpayer expense.

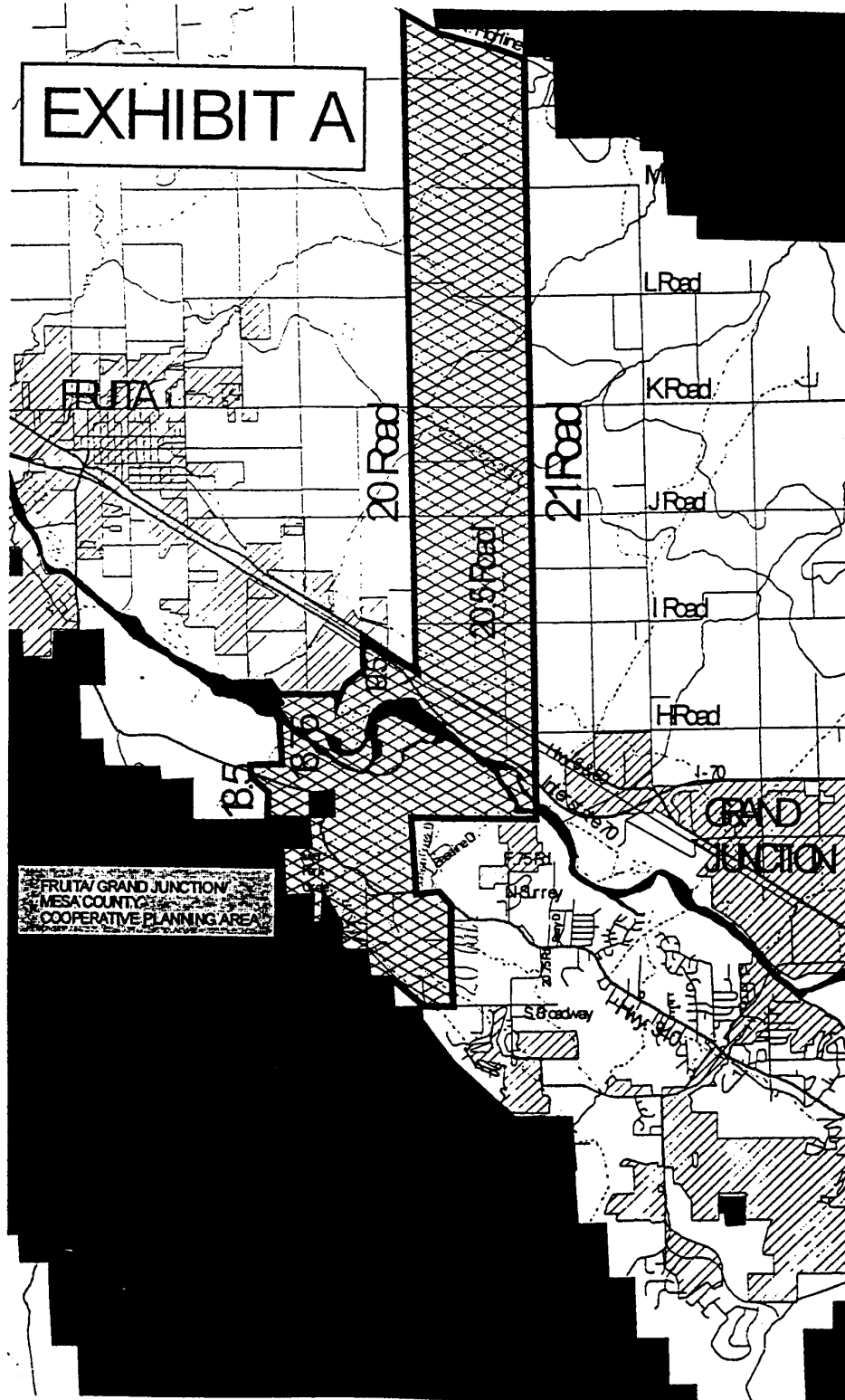
(Res. 21-98, 2-18-98)

44.04.120 Agreement.

Now, therefore, in consideration of the covenants and obligations herein expressed, it is agreed by and between the parties as follows:

- (a) This intergovernmental agreement shall pertain to the geographic area labeled as “cooperative planning area” on Exhibit A at the end of this section.

- (b) This intergovernmental agreement supersedes the interim agreement between the parties dated November 18, 1996 (MCA 96-71).
- (c) Within the “cooperative planning area,” neither the City of Grand Junction nor the City of Fruita will:
 - (1) Annex any territory;
 - (2) Extend any municipal utility services that are not already present; without the mutual consent of all parties.
- (d) Within the “cooperative planning area,” all parties will not:
 - (1) Extend any sanitary sewer line;
 - (2) Recommend amendment to any 201 sewer service area boundary; without the mutual consent of all parties.
- (e) It is the goal of all parties that future land use decisions within the “cooperative planning area” will enhance the rural character of the area.
- (f) All parties will respect the adopted master plans for each jurisdiction pertaining to the “cooperative planning area.”
- (g) Within the “cooperative planning area” changes in the zoning of a property (rezone) will be consistent with the recommendations of the Mesa Countywide Land Use Plan, where applicable, unless the change is formally approved by the governing bodies of all parties to this agreement.
- (h) Mesa County will revise the Mesa County Land Development Code appropriately to implement the this agreement.
- (i) Mesa County will provide the other two parties, with adequate notice, the opportunity to review and comment upon the following types of development activity and related matters in the cooperative planning area:
 - (1) Site plans;
 - (2) Subdivision plats or replats;
 - (3) Planned developments;
 - (4) Special use permits;
 - (5) Conditional use permits;
 - (6) Zoning or development code text amendments that may effect the “cooperative planning area”;
 - (7) Rezone applications; and
 - (8) Policy and plan amendments that may affect the “cooperative planning area.”
- (j) All parties will share planning meeting and hearing agendas with the other parties in a timely manner.



(Res. 21-98, 2-18-98)

44.04.130 Implementation.

- (a) All parties will work cooperatively to:
- (1) Establish and adopt rural land use design standards for the cooperative planning area including, but not limited to: landscaping, signage, entryways, parking, and outdoor storage requirements; and adopt traffic access and engineering standards in conjunction with the Colorado Department of Transportation;
 - (2) Assist property owners in voluntarily rezoning and/or replatting their properties in a manner consistent with the Mesa Countywide Land Use Plan, and the Fruita Community Plan, to further the purposes of this agreement. Assistance may be provided in the form of fee waivers and/or expedited review;
 - (3) Explore, develop, and support options and seek funding mechanisms available for preserving open lands and enhancing the rural character of the cooperative planning area; and
 - (4) Establish a joint open space fund for acquisition of important land, development rights, and open space and conservation easements.
- (b) All parties will meet jointly every five years or as needed, to review the status of the above provisions. Each party will rotate hosting these meetings.

(Res. 21-98, 2-18-98)

44.04.140 Enforcement – Disputes.

It is the intent of all parties that this agreement be binding upon all parties, and that each party shall be permitted to specifically enforce any provision of this agreement. Venue for any dispute hereunder shall be in the District Court of Mesa County, Colorado.

(Res. 21-98, 2-18-98)

44.04.150 Amendments.

This agreement may be amended in writing no earlier than the year 2002, subject to the approval of all parties.

(Res. 21-98, 2-18-98)

Title 45

WATERS, SEWERS AND SANITATION DISTRICTS

Chapters:

- 45.04 Drought Response Plan**
- 45.08 Persigo Sewer System Intergovernmental Agreement**
- 45.12 Central Grand Valley Sanitation District, Orchard Mesa Sanitation District, Mesa County Intergovernmental Agreement**
- 45.16 Central Grand Valley Sanitation District Total Service Agreement**
- 45.20 Orchard Mesa Sanitation District Total Service Agreement**

Chapter 45.04**DROUGHT RESPONSE PLAN**

Sections:

- 45.04.010 Purpose.
- 45.04.020 Introduction.
- 45.04.030 Drought Response Plan – Stages of drought.
- 45.04.040 Response to drought.
- 45.04.050 Stage I drought.
- 45.04.060 Stage II drought.
- 45.04.070 Public outreach.
- 45.04.080 Summary.

45.04.010 Purpose.

The parties to this memorandum of understanding, the City of Grand Junction, Colorado (City), the Clifton Water District (Clifton), the Town of Palisade (Palisade) and the Ute Water Conservancy District (Ute) hereby agree to the following:

- (a) The purpose of this memorandum of understanding is to formalize an understanding of mutual cooperation between the parties associated with the implementation of a drought response plan.
- (b) It is paramount to respond to drought conditions by decreasing water use and increasing water supply, thereby preserving water for the current and future demands of the Grand Valley.
- (c) The parties have cooperatively developed a drought response plan that incorporates a two-stage drought response and implementation of restrictions to reduce water consumption which is codified in this chapter.
- (d) Implementation of the drought response plan is a unified effort. Measures to reduce water use, including mandatory restrictions and a drought rate will be uniformly enacted by all parties.
- (e) Develop a public information program to educate the public concerning the drought response plan, the importance of water conservation and how to reduce water use.
- (f) Meet regularly to assess drought conditions and to evaluate the results of the drought response plan.
- (g) This memorandum of agreement may be amended by written agreement between the parties.
- (h) This memorandum of agreement may be terminated by mutual written agreement of the parties or by any party upon 30 days' notice to the other parties.
- (i) The authority to enter into this memorandum of understanding is granted for:
 - (1) The City of Grand Junction by Article XX of the Constitution of the State of Colorado, the City's Charter and State statutes.
 - (2) The Clifton Water District by C.R.S. § 29-1-203.
 - (3) The Town of Palisade by C.R.S. § 31-15-101.
 - (4) The Ute Water Conservancy District by C.R.S. § 29-1-203.

(Memorandum of Understanding, April, 2003)

45.04.020 Introduction.

Drought can be defined as an extended period of below-average precipitation and/or stream flow that stresses a water supply. Drought is a natural, ongoing situation in Colorado – a phenomenon that has recurred regularly throughout Colorado's history.

For planning purposes, the City of Grand Junction, Ute Water Conservation District, Clifton Water District and the Town of Palisade water supply strategy is to have enough water to meet unrestricted customer usage during a period similar to the 1977 or 2002 droughts.

No one can predict how long a drought will last or if it will be worse than those used in our calculations. Therefore, even though Grand Valley domestic water supply currently exceeds its use, the providers must be prepared to recognize drought conditions early and respond appropriately. The Drought Response Plan (DRP) codified in this chapter is designed to provide governing boards and city councils with a set of options to consider in dealing with a prolonged drought.

Each domestic water provider has developed a water conservation plan. Implementation of this plan will be accomplished through an ongoing annual effort, budgeted and paid from the four domestic water providers. These plans include, but are not limited to, the following items:

- (a) Initiate drought response information project to provide public education through all sources of media on why and how to reduce per capita consumption;
- (b) Encourage all customer classes to evaluate, redesign and reconstruct existing landscapes and outdoor water uses to reduce overall consumption;
- (c) All public institutions to take the lead in evaluating indoor and outdoor water use practices. Parks, open spaces, medians, golf courses, fountains, etc. to be audited for current consumption and redesigned or re-operated to reduce consumption;
- (d) Examine all municipal and County code provisions that affect water usage, such as landscape standards, storm water best management practices, and building codes provisions and amend, if appropriate, these code provisions to meet not only the objectives of the code as originally intended but also to reduce water consumption;
- (e) Campaign proclamation to alert public to the need to conserve water;
- (f) Acquaint customers with measures they can expect if Stage I or Stage II drought occurs;
- (g) Monitor potential drought response effectiveness; recommend adjustments as needed to the city councils and governing boards and report to the public regularly;
- (h) Highlight unusually high use on customers' bills. Contact these customers and special interest groups with heavy water use to get their ideas and suggestions for obtaining long-term reductions (golf courses, parks, hospitals, schools, government);
- (i) Suggest water use surveys (comprehensive water use analyses) for high volume water users in all customer classes, advise them on ways to reduce water use and, where appropriate, suggest retrofit devices;
- (j) Coordinate with Mesa County; invite to meetings;
- (k) Meet with citizens groups and convey messages of basic water conservation and Stage I and Stage II drought conditions;
- (l) Publish "water waste reduction" suggestions for households and aggressively promote it by including it with water bills, putting it on web sites, and using other effective distribution methods, including billboards and public service announcements;
- (m) Train customer service employees to respond to conservation-related questions and give information;
- (n) Communicate with the irrigation districts and companies to cooperatively work with them to ensure that adequate irrigation water will be available throughout irrigation season;
- (o) Develop some demonstration Xeriscape™ areas for customers to identify with;
- (p) Encourage xeriscaping and low-water consumption practices;

- (q) Quarterly meetings of domestic water providers to review water supply projections, current reservoir capacity and ongoing conservation efforts;
- (r) Consider incentives by the domestic water providers to customers to replace outdated, water-consuming indoor plumbing fixtures, faucets and shower heads;
- (s) Each provider consider adjusting increasing block rate (separation of residential from commercial/industrial rates); and
- (t) Train and assign field and customer service personnel to:
 - (1) Monitor outdoor use;
 - (2) Offer suggestions to customers on water wise use; and
 - (3) Identify and work with high water users.

Denver Water holds the trademark for the term Xeriscape. The word Xeriscape was created in 1981 for landscape water conservation education programs. The name is a combination of “landscape” and the Greek word “xeros,” which means “dry.”

(Memorandum of Understanding, April, 2003)

45.04.030 Drought Response Plan – Stages of drought.

The Drought Response Plan is based on two stages of drought, each of which is triggered by either a combination of the historic user pool projections, water provider storage, or stream flow projections.

- (a) **Stage I Drought – Ongoing Intensive Water Conservation.** Conditions are similar to 2002 drought, but no real impacts to area domestic water providers; statewide drought conditions may or may not exist that affect area irrigators. Some voluntary water use reductions anticipated. Actions undertaken involve predominantly sharing water supply.

The 2002 drought had a statewide drought declaration; Ute Water Conservancy Districts primary water source and the Lower Molina power plant was out of water by mid July; Vega reservoir did not fill. The Town of Palisade’s cabin reservoir had only 75 percent of normal but springs remained steady. The City of Grand Junction’s Purdy Mesa and Juniata Reservoirs started out about 75 percent full with about 1,100 acre feet of municipal water available on top of Grand Mesa. The Historic User Pool (HUP) received approximately 75 to 80 percent of full allocation but had water for full irrigation season.

- (b) **Stage II Drought.** At least one of the four water providers’ supply is at or near minimum target levels (to be determined) for either storage or stream flows requiring drastic water conservation measures to ensure water needs for the most essential uses for all Valley water customers. Mandatory water use reductions and a drought rate imposed.
- (c) Moving from a Stage I drought to a Stage II drought will be dependent on several factors. During a Stage I drought all water providers will have gone from meeting on a quarterly basis to be meeting on a monthly basis and all water supplies, either storage or stream flows, will be monitored very closely. If it is anticipated that the Historic User Pool (HUP) is expected to only receive 75 percent of entitlement and irrigation districts are anticipating they will not be able to stretch available water supplies throughout entire irrigation season we will need to take stronger action to ensure our domestic supplies are not over burdened. Domestic water suppliers usually have enough water resources to supply their current water demands, if outside irrigation demand that has normally been supplied by one of the irrigation canals is suddenly added to the domestic demand it will cause both treatment and capacity delivery problems. Individual triggers for each domestic water provider have been discussed and will be modified as weather and demand dictate. Currently the Ute Water District trigger for moving to Stage II will be when they will be at 75 percent of storage capacity in Jerry Creek reservoirs by midsummer. The Town of Palisade’s Cabin Reservoir is below 75 percent capacity right after spring runoff and Ute Water may not have capacity to keep them whole. Clifton

Water District will use the 75 percent of Historic User Pool storage available as their trigger as they do not anticipate any numeric triggers; the only hardship may be getting water to treatment facility from the river. The City of Grand Junction is anticipating a trigger of 50 percent of storage for Juniata and Purdy Mesa Reservoirs by end of irrigation season.

(Memorandum of Understanding, April, 2003)

45.04.040 Response to drought.

This plan identifies two ways to respond to a drought: increase water supply and decrease water use.

- (a) Increase Water Supply. The four area water providers can possibly augment their water supply from other sources. There are several options for doing this, each presenting its own set of intergovernmental and technical considerations. Among the possibilities:
 - (1) Call back water rights others are allowed to use (ranch lessees);
 - (2) Augment raw water sources through river pump stations if river water is in priority;
 - (3) Pay an upstream water user to allow diversion of more water;
 - (4) Seek waivers from State agencies to allow diversion and use of irrigation water decrees if available; and
 - (5) Purchase municipal water contracts from federal projects if available (possibly must do in advance).
- (b) Decrease Water Use. The prime drought response is to budget water use for the most essential uses for the drought's duration. There are a wide variety of options that could be used to decrease water use. In general, we expect that reductions would be voluntary as outlined above in the introduction. Voluntary measures would continue with a Stage I drought. Mandatory measures would be implemented during a Stage II drought. It is believed it is important to ensure that any discomfort, difficulty or potential loss is shared as equitably as possible across all customer classes.

(Memorandum of Understanding, April, 2003)

45.04.050 Stage I drought.

Based on past experience of other domestic water providers, it is expected that between zero percent and 10 percent reduction in water consumption will be achieved with the following measures:

- (a) Monthly meetings of domestic water providers to review water supply projections, current reservoir capacity and ongoing conservation efforts;
- (b) Continue all measures outlined in the ongoing water conservation plan implementation as outlined above;
- (c) Initiate campaign to alert public of Stage I drought conditions;
- (d) Monitor drought response effectiveness; recommend adjustments as needed to the city councils and governing boards, and report to the public regularly;
- (e) Request all government entities to reduce their own short term domestic water use by 30 percent of last five-year average to demonstrate leadership in dealing with the crisis, and then publicize the results;
- (f) Publicize creative water saving efforts of individuals and business customers as examples of leadership;
- (g) Assist City and County Health Departments in distributing guidelines for using gray water where legal and appropriate;
- (h) Suggest the following ideas to reduce indoor water use:

- (1) Serve water in restaurants only upon request;
 - (2) Encourage all hotels, motels, inns and bed and breakfast establishments to have only shower heads meeting maximum flow rates of 2.5 gallons per minute and faucet aerators meeting maximum flow rates of 2.2 gallons per minute; and
 - (3) Promote the reduction of water-cooled air conditioning.
- (i) Suggest the following ideas to reduce outdoor water use:
 - (1) Cut back on street cleaning, sidewalk and driveway washing, except where spills of toxic or hazardous substances or where public health and safety issues can only be resolved by washing the impermeable surface;
 - (2) Suggest to customers other ways to clean sidewalks or driveways and any other hard surfaces without the use of hoses;
 - (3) Suggest to customers other ways to wash vehicles to minimize water waste;
 - (4) Suggest home owners not to fill private swimming pools; and
 - (5) Require that ornamental fountains in buildings and parks be turned off.
 - (j) Provide information and assistance to customers planning for post-drought landscape revival or replacement.

(Memorandum of Understanding, April, 2003)

45.04.060 Stage II drought.

Based on past experience of other domestic water providers, it is expected that between 10 percent and 20 percent reduction in water consumption will be achieved with the following measures:

- (a) Continue all measures initiated in Stage I droughts;
- (b) Increase meeting frequency from monthly to weekly;
- (c) Adjust drought water rates to increase financial incentives for using less water;
- (d) Intensify public information to reinforce the need for extreme measures (generate awareness of drought status, response, policy recommendations, requirements and penalties);
- (e) Provide information and assistance to customers planning for post-drought landscape revival or replacement;
- (f) Eliminate all fire hydrant uses except those required for public health and safety;
- (g) Reduce indoor water use:
 - (1) Eliminate serving water in restaurants except upon request;
 - (2) Require all hotels, motels, inns and bed and breakfast establishments to have only shower heads meeting maximum flow rates of 2.5 gallons per minute and faucet aerators meeting maximum flow rates of 2.2 gallons per minute; and
 - (3) Assist County Health Department in distributing guidelines prohibiting use of gray water.
- (h) Intensify reductions of outdoor water use:
 - (1) Increase penalties for wasting water, violating any permits or ignoring restrictions;
 - (2) Prohibit street, sidewalk and driveway washing by flushing methods, except where spills of toxic or hazardous substances or where public health and safety issues can only be resolved by washing the impermeable surface;
 - (3) Prohibit curbside car/truck washing by all customers;

- (4) Prohibit car/truck washing on dealers' lots;
- (5) Prohibit filling private swimming pools;
- (6) Require that ornamental fountains in buildings and parks be turned off;
- (7) Impose restrictions in landscape water use in proportion to the severity of the drought;
- (8) Prohibit all new landscaping including planting of trees and shrubs; and
- (9) Train and assign field and customer service personnel to:
 - (i) Police outdoor water use;
 - (ii) Issue warnings; and
 - (iii) Impose penalties for water waste, violations of any permits and noncompliance with restrictions.
- (j) Prohibit outdoor water use (as a last resort in an extremely severe drought) except for subsistence irrigation of trees and shrubs.

(Memorandum of Understanding, April, 2003)

45.04.070 Public outreach.

During a drought, it is essential that the four area water providers communicate effectively not only with their customers, but also with other area water suppliers, local governments, and other groups who may be affected by this drought response. An intense water conservation effort is being implemented during 2003. This effort once initiated is planned to be ongoing with continued support from Ute Water Conservancy District, Town of Palisade, Clifton Water District and the City of Grand Junction.

(Memorandum of Understanding, April, 2003)

45.04.080 Summary.

While the options listed in the Drought Response Plan are based on lessons learned here and from other water utilities during past droughts, it is important to understand that every drought is different and that the governing boards and City Council will adjust and refine measures based on actual drought conditions. This plan is intended to help staff, customers, stakeholders and the boards and Council be better prepared when a drought occurs.

(Memorandum of Understanding, April, 2003)

Chapter 45.08**PERSIGO SEWER SYSTEM INTERGOVERNMENTAL AGREEMENT**

Sections:

- 45.08.010 Goals.
- 45.08.020 Definitions.
- 45.08.030 Policy.
- 45.08.040 Implementation – Zoning – Master Plan.
- 45.08.050 City growth – Powers of attorney – Annexation.
- 45.08.060 Enclaves.
- 45.08.070 Remedies.
- 45.08.080 Other provisions.
- 45.08.090 Rules of construction.
- 45.08.100 Service area boundaries.

Cross-reference – Chapter 13.16 GJMC.

45.08.010 Goals.

The overriding goal of the County is to make available connection to the system to all properties within the 201 service area and to participate jointly with the City to provide policy direction for operation and maintenance of the system.

The overriding goal of the City is that all new development shall occur within, and be annexed to, the City, and under the City's land use jurisdiction.

The parties agree that these two goals can be accomplished together.

The Master Plan is the community's best effort to identify those areas of the Central Grand Valley that should be urbanized, and those that should not.

- (a) In addition, the parties have expressed their willingness and resolve to guarantee, for themselves and for the Boards and Councils that will follow, that:
 - (1) The City may continue to grow, in accordance with its Charter and applicable State law;
 - (2) Within the 201, all annexable development, as herein defined, must only occur within the City and under the City's jurisdiction;
 - (3) The County shall continue to participate jointly with the City to provide policy direction for operation and maintenance of the system;
 - (4) So that the integrity of the City and County planning efforts is not threatened in the joint planning areas (herein defined), the parties will not allow growth inconsistent with the Master Plan adopted by each entity or by the Planning Commissions of each; or existing zoning; and
 - (5) The City will continue to manage, operate and maintain the system as it has done, subject to policy guidance by the Board of County Commissioners and City Council, acting jointly, as provided herein.
- (b) This agreement between the City and the County addresses the following goals and community values:
 - (1) The system was constructed and will be operated for the benefit of the current and future users in the 201;
 - (2) The agreement should resolve all issues that were in dispute in the lawsuit;
 - (3) The pursuit of health and water quality on behalf of all citizens is of the utmost importance;

- (4) Continue quality management, operation, and maintenance of the system;
- (5) Encourage connection of all properties within the 201 to the system in the short term, rather than waiting for septic systems to fail; and
- (6) Agree on, and adopt, the boundaries of the 201.

(1998 Intergovernmental Agreement § A)

45.08.020 Definitions.

For this agreement, the parties agree to the following definitions and meanings.

- (a) *Annexable development*: includes nonresidential development, as defined herein, and residential development, as defined herein.
- (b) *City Council, City or Council*: the City Council of the City of Grand Junction, the City Manager of the City of Grand Junction, or the City of Grand Junction as an entity, as the context may require.
- (c) *Commercial or nonresidential development*: all development which is described in GJMC 45.08.050(d).
- (d) *County, Commissioners, Board or BoCC*: Mesa County, a political subdivision of the State of Colorado, acting through its Board of Commissioners.
- (e) *Development*: construction, improvement, or placement of a use on a parcel or lot or other property. For this agreement, changes in intensity of use, reconstruction of a building after demolition, rezonings and the other activities or thresholds as defined in the body of this agreement, are included within the definition of “development.” It is intended that in cases which are not clear, an activity or property be included within the term “development,” rather than excluded.

Below is a list of those activities, approvals and review processes which will subject the applicant to being annexed by the City prior to any land use review by the County.

The following are examples of annexable development, as defined in this agreement. This list is intended to be illustrative only and not an all-inclusive list of development types that would trigger land use review and approval or annexation by the City.

- (1) Residential Annexable Development. In general, residential annexable development includes any proposed development that would require a public hearing under the Mesa County Land Development Code as it was on April 1, 1998. Such development includes, but is not limited to, any residential development that:
 - (i) Is generally defined as single-family dwellings (detached and attached), duplexes, triplexes, quadplexes, townhomes, multifamily buildings, apartments, condominiums, rooming houses, boarding houses, group homes, nursing homes, retirement homes, adult congregate living facilities, hospices, or similar residential development. The term does not include commercial facilities such as hotels, motels, hospitals, penal/correctional facilities, or similar commercial or institutional facilities;
 - (ii) Requires a change to the Future Land Use Map of the Master Plan, or a change to the text, exhibits, goals or policies of the Master Plan, if requested by or on behalf of a property owner/developer;
 - (iii) Requires a change in zoning applicable to a property or a change in the text of the Mesa County Land Development Code as it existed as of April 1, 1998;
 - (iv) Requires a rezoning to planned development or planned unit development (PUD);
 - (v) Requires official development plan (ODP) approval for a planned development or PUD;
 - (vi) Requires preliminary plan approval for a planned development or PUD, regardless of any previous approval of an ODP;

- (vii) Requires approval of a major amendment to an approved planned development or PUD. A major amendment includes:
 - (A) A change in density, number of lots or number of dwelling units;
 - (B) A change in a permitted use(s); or
 - (C) A change in dwelling unit type (e.g., detached, attached, townhome, zero lot line, etc.);
 - (viii) Requires approval of conditional use (except a home occupation);
 - (ix) Requires approval of a special use (except a home occupation);
 - (x) Results in the subdivision of land (including judicial and partition action, but not foreclosure) whereby more than one additional lot or parcel is created; or
 - (xi) Requires approval of a subdivision plat or replat resulting in the creation of more than one additional lot or parcel.
- (2) Nonresidential Annexable Development. In general, nonresidential annexable development includes any proposed development that would require a public hearing under the Mesa County Land Development Code in effect on April 1, 1998, and any new or significantly non-residential principal structure(s). Such development includes, but is not limited to, any non-residential development that:
- (i) Is generally defined as commercial, industrial, institutional, public (other than some property owned by Mesa County; see *infra*) or any combination thereof, or any one of the foregoing in combination with a residential use;
 - (ii) Requires a change on the Future Land Use Map adopted as part of the Master Plan, or a change to the text, exhibits, goals or policies of said plan, as may be requested by or on behalf of a private property owner;
 - (iii) Requires a change in zoning or a change in the text of the Mesa County Land Development Code;
 - (iv) Requires a rezoning to planned development or planned unit development (PUD);
 - (v) Requires official development plan (ODP) approval for a planned development or PUD;
 - (vi) Requires preliminary plan approval for a planned development or PUD, regardless of any previous approval of an ODP;
 - (vii) Requires approval of a major amendment to an approved planned development or PUD, such as:
 - (A) A change in intensity, lot coverage or floor area ratio;
 - (B) A change in a permitted use; or
 - (C) A change in the location of a principal structure;
 - (viii) Requires approval of conditional use (except a home occupation);
 - (ix) Requires approval of a special use (except a home occupation);
 - (x) Results in the subdivision of land (including judicial and partition actions) whereby one or more additional lots or parcels are created;
 - (xi) Requires approval of a subdivision plat or replat resulting in the creation of one or more additional lot(s) or parcel(s);
 - (xii) Results in the construction of any new principal structure;

- (xiii) Results in any existing principal structure of less than 10,000 square feet of gross floor area being enlarged to 10,000 square feet or greater of gross floor area; and
 - (xiv) Results in an addition of 10,000 square feet or larger of gross floor area to any existing principal structure of 10,000 square feet or greater of gross floor area.
- (f) *Existing arrangement*: that state of affairs and status, with all attendant powers, defenses, liabilities and duties, which existed the instant before the lawsuit was dismissed.
 - (g) *Gross floor area*: the sum of the areas, expressed in square feet, at each floor level of a structure including cellars, basements, mezzanines, penthouses, corridors, lobbies, stores, offices, etc., and included within the principal outside faces of exterior walls. Also included are all stories or areas that have floor surfaces with clear standing headroom (six feet, six inches minimum) regardless of their uses. The gross area of any parking garage within a building shall not be included within the gross floor area.
 - (h) *Jointly agreed upon infrastructure standards*: those standards to be agreed upon by the City and County within one year of the signing hereof which include all necessary technical construction specifications of roads, drainage, water, sewer and other public or private utilities necessary to serve a nonresidential or residential development.
 - (i) *Jointly*: a joint decision of the City and County. While the City and the County may be required to act separately, according to applicable law, no such action shall be effective until both bodies have adopted identical actions, terms and provisions.
 - (j) *Joint Urban Area Plan ("JUP")*: means that portion of the Mesa County Countywide Land Use Plan as shown in color on the City's Future Land Use Map (adopted October 2, 1996), along with the corresponding text, goals and policies. Note that the colored portion is larger than the urban growth boundary.
 - (k) *Lawsuit*: Mesa County v. City of Grand Junction, 94 CV 233, Mesa County District Court.
 - (l) *Lot*: a parcel of land as measured and established by a plat recorded with the Mesa County Clerk and Recorder.
 - (m) *Master Plan*: also known as Comprehensive Plan, Growth Plan; for the purposes of this agreement, it is Chapter 5 of the Mesa Countywide Land Use Plan (October, 1996), also known as the Joint Urban Area Plan.
 - (n) *Nonresidential development or commercial*: all development which is described in GJMC 45.08.050(d).
 - (o) *Official development plan*: as defined by Mesa County Land Development Code, in effect as of April 1, 1998.
 - (p) *Parcel*: an area of land defined by a legal description and recorded with the County Clerk and Recorder.
 - (q) *Persigo wastewater treatment system*: See *Sewer*.
 - (r) *Policy*: see GJMC 45.08.030(c).
 - (s) *Principal structure or use*: the main or primary purpose for a structure or use on a property; included are accessory structures which are attached to and architecturally integrated with the principal structure.
 - (t) *Property*: includes the terms "lot" and "parcel," as defined herein. Adjacent or contiguous tax parcels, according to the Mesa County Assessor, which are in identical ownership, shall be treated as one property, parcel or lot, for the purposes of this agreement. The term is intended to be inclusive and to refer to all lands, grounds, and areas.

- (u) *Public approval*: for any proposed use, development or change to either, an approval which requires or involves a public hearing process, based on the provisions of the County's code and the administrative practices in effect in Mesa County on April 1, 1998 (unless consented to in writing by the City if the provisions or practices change). Thus, if a subdivision of property requires a public hearing of some sort, the subdivision cannot occur without "public approval." If construction can occur without a public hearing or public notice of a meeting (for example, only staff review of a set of plans must occur before the activity is authorized) no public approval is required for the development. It includes, according to the County's adopted code as of April 1, 1998, any development, subdivision, platting, planned or planned unit development (including all phases, steps, and filings), conditional or other use permit, land use review, change of use, change of intensity of use or other permitting process, permit or approval applicable to land or structure thereon which requires a public hearing.
- (v) *Residential development*: includes single-family dwellings, multifamily homes, apartments, townhomes and condominiums, and other dwelling places, along with appurtenant structures, such as a club house which serves only the residents of a particular subdivision, and which requires a public approval.
- (w) *Septic system*: all forms of State of Colorado and Mesa County Health Department approved individual sewage disposal systems, as defined in State law and State implementing regulations.
- (x) *Septic system failure*: as defined by County Health Department or, in lieu of any definition by the County Health Department, by the State of Colorado's statutes or implementing regulations.
- (y) *Structure*: has the same meaning as is provided for in the most current version of the Uniform Building Code, as published by the ICBO, or a successor entity or uniform code, as adopted from time to time by the City.
- (z) *System*: the plant, and all lines, interceptors, and pipes, valves, pumps and other facilities and appurtenant devices, including the real property rights, necessary or used for the collection and transportation of sewage and waste liquids to, and the operation and maintenance of, the Persigo Wastewater Treatment Plant. "System" includes all pipes and devices however large or small, including what has been termed "backbone," collection, trunks, et cetera, and all necessary personal property needed to operate the system. See sewer regulations as adopted by the City.
- (aa) *201 service area or 201 or Persigo 201*: as shown on the map GJMC 45.08.100, "Persigo Exhibit A," within which area it is intended that all properties shall be connected to, and served by the system, to the exclusion of septic or other individual sewage disposal systems.
- (bb) *Urban or urbanizing*: Within the JUP, any development or use other than residential single-family dwelling(s) on lots, parcels or tracts which are smaller than two acres in size, net.
- (cc) *Urban growth boundary or area*: as shown in GJMC 45.08.100, "Persigo Exhibit A" ("UGA").
- (dd) *Use*: the purpose for which land or a building is designed, arranged, or intended, or for which is or may be occupied or maintained; also includes any activity, occupation, business or operation which is carried on or in a structure or on a tract or parcel of land.

(1998 Intergovernmental Agreement Exh. 1)

45.08.030 Policy.

- (a) The City Council and the Board of County Commissioners shall jointly establish and provide policy direction relating to the system.
- (b) No policy shall be effective until formally adopted by both the City Council and the Board of County Commissioners.
- (c) *Policy* means:
 - (1) Setting goals and objectives;

- (2) Reviewing and adopting capital improvement plans and annual operating budgets;
 - (3) Reviewing and setting system rates and fees;
 - (4) Entering into bond issues and other financing arrangements, adopting or amending sewer rules and regulations;
 - (5) Adopting policies and philosophies which govern rate and capital reviews and studies;
 - (6) Acting jointly regarding any changes to the 201. The parties recognize that their joint decision and recommendation regarding the 201 boundary may be subject to the approval of others pursuant to the Federal Clean Water Act and implementing regulations; and
 - (7) Approving and entering into new sewer service contracts or amending existing sewer service contracts with special districts, municipalities, or other sewer service providers.
- (d) In the event the parties fail to jointly adopt an annual operating budget, the previously approved operating budget shall be the operating budget.
- (e) The parties agree that, unless required by a debt instrument or similar obligation, the following shall apply to the system:
- (1) Operating and maintenance reserves required by any debt instrument will not be used for trunk line extension or plant expansion;
 - (2) Jointly adopted differential fees and charges may be used to encourage infill;
 - (3) Plant investment fees and monthly charges may be established to meet anticipated future capital needs and inflation indexing; and
 - (4) The plant investment fee will be put into an expansion fund until plant usage reaches 90 percent of capacity, at which point construction is expected to expand the plant capacity. After such construction, expansion fund moneys may be accumulated for future uses or may be used to plan and construct new or replacement facilities.
- (f) Arbitration. Subject to the overriding provisions of GJMC 45.08.070, Remedies, in the event of a dispute of any matter determined by either body to be necessary to effectuate this agreement or to establish any policy, the parties shall first mediate the dispute. If mediation does not resolve the dispute, the parties shall each state its position in writing and deliver the same to the other party. If, within 10 days of the delivery of such writings to each party, the parties have not resolved the dispute, the parties shall proceed to binding arbitration. Each party shall designate an arbitrator of its choice and the two designees shall designate a third. Arbitration shall be subject to the rules of the American Arbitration Association. Expenses of mediation and arbitration shall be shared jointly by the parties.
- (g) The 1998-1999 existing system capital improvement plan, and existing operating budgets, and the sewer rules and regulations (to the extent not inconsistent with this agreement) and the boundary of the 201 as indicated on "Persigo Exhibit A," GJMC 45.08.100, are hereby continued and ratified until jointly modified.

(1998 Intergovernmental Agreement § B)

45.08.040 Implementation – Zoning – Master Plan.

- (a) The parties agree to provide for, encourage, and assist growth of the City through annexation by the City of all annexable development within the boundaries of the 201. In the event of a question, the parties agree that annexation is to occur, unless prohibited by applicable law or this agreement.
- (b) The parties shall jointly develop appropriate incentives to encourage annexation to the City. If a neighborhood or other area petitions or elects to be annexed to the City, the County and the City may jointly fund incentives. As allowed by available money, the incentives may include, but are not limited to, parks, roads, fire stations or road improvements.

- (c) The parties agree to implement this agreement, in letter and in spirit, through the various tools, plans and powers of each party, including but not limited to the adopted codes of each, the policies and procedures of each, and the agents and employees of each. Throughout the term of this agreement, the parties agree to continue to amend and adopt such provisions as are authorized and necessary to implement all provisions and goals of this agreement.
- (d)
 - (1) The parties acknowledge the importance of adoption of, or implementation of, and compliance with, the Master Plan. The parties shall implement the Master Plan through their resolutions, ordinances or other actions or shall comply with the zoning existing as of the date of this agreement. The parties may jointly allow for exceptions, in writing.
 - (2) When one party approves an amendment or other change to the Master Plan for property within such party's jurisdiction, if the other party does not consider and decide whether to amend within 30 calendar days of the first party's approval, the amendment shall be deemed approved.
- (e) To maintain the integrity of the Master Plan, and the implementation of it, and for other reasons, the parties agree that any property within the 201 should eventually develop at an urban level of density. For this agreement, residential lot sizes of two acres gross or larger are deemed to not be "urban" while smaller parcel or lot sizes are deemed to be "urban." The parties agree to amend the 201 to implement this principle.

(1998 Intergovernmental Agreement § C)

45.08.050 City growth – Powers of attorney – Annexation.

- (a) Neither contemporaneous annexation to the City, nor a power of attorney to annex later, shall be required as a condition of service by or connection with the system, subject to, and in accordance with, the several provisions hereof. However, annexation is required pursuant to this agreement in order to implement the goals and objectives of this agreement.
- (b)
 - (1) Over time all properties within either the UGA or the 201, as those boundaries are adjusted and amended pursuant to this agreement, will be annexed by the City. The parties agree that the UGA and the 201 should be the same, although amendments are required to accomplish this consistency, except that Clifton Sanitation District I and II will be excluded from the 201. All land use review of whatever form of any annexable development within the 201 boundary, beginning with the very first contact with the planning offices or departments of the parties (such as a pre-application conference or the acceptance of any application or permit request), shall exclusively occur in, and be exclusively subject to the land use jurisdiction of, the City through the development review or other review process.
 - (2) Until the tenth anniversary of the signing of this agreement, the City shall not annex outside of the 201 or the UGA unless the Board of County Commissioners consents.
- (c) All decisions relating to infrastructure standards, location and similar technical matters for annexable development shall be performed by the City pursuant to City standards and requirements, even if an earlier phase or portion of an annexable development had occurred without City review or process or standards. Within the 201, the parties shall jointly agree upon the infrastructure standards which shall be followed throughout the 201. The parties shall agree on such standards within one year of execution of this agreement. Thus, the general principle to accomplish the goals of this agreement, and to replace the existing arrangement is that no annexable development in the 201 shall, after the effective date of this agreement, occur except through the City's land use process and after annexation to the City is completed. The City Council may allow the land use review process of annexable development to proceed along with the annexation, as required by the City.
- (d) Except as provided in subsections (i) through (k) of this section, any proposed nonresidential (including but not limited to commercial, industrial, institutional or public, e.g., schools, churches) use or development which fits at least partially any one or more of the following criteria shall first

annex to the City prior to, or concurrent with, review and approval of the development proposal. Even if the developer or applicant would experience a delay, the City shall require that annexation shall occur forthwith so that the City has complete land use authority over the proposed development from its initial planning and review stages. Those criteria are as follows:

- (1) Any development requiring a change of the text of, or to any map which is a part of, the adopted Joint Urban Area Plan;
 - (2) Any property, or portion thereof, the owner of which has requested or applied for a rezoning or any change to a planned zone or any amendment to any planned zone;
 - (3) Any subdivision of property that results in the creation of one or more additional lot(s), parcel(s) or tax parcel(s). Judicial and partition actions are included within the definition of "subdivision." Notice of any such judicial or partition action shall be given to the City;
 - (4) Any use or development requiring a conditional use permit, except a home occupation located in a residence;
 - (5) Any new principal structure;
 - (6) Any addition to an existing principal structure which contains less than 10,000 square feet of gross floor area if, following the addition, the gross floor area of the structure is equal to or greater than 10,000 square feet; or
 - (7) Any addition of 10,000 square feet of gross floor area or larger to an existing principal structure of 10,000 square feet or more of gross floor area.
- (e) The County hereby agrees to sign such documents as are reasonably necessary to complete every annexation initiated or completed by the City within the 201 which reasonably complies with the Annexation Act and the provisions of this agreement.
- (1) Specifically, the parties agree that the County may intervene, sue or otherwise take action against or contrary to any City effort to annex any property within the 201 only if:
 - (i) The City is not complying or reasonably attempting to comply with the Annexation Act and this agreement; or
 - (ii) The property involved is County park, recreational property or other property such as courthouses, jails, maintenance yards, Intermountain Veterans Memorial Park, and the offices or buildings of the County Clerk and other County officials.
 - (2) The County specifically consents to the annexation of all or a portion of any road, street, highway, easement, right-of-way, open space or other County-owned property, unless excluded in subsection (e)(1)(ii) of this section, at any time for any purpose consistent with the terms of this agreement.
 - (3) For or on behalf of any third party, the County shall not intervene, sue or otherwise take action against or contrary to any City effort to annex pursuant to the Annexation Act and this agreement. Even though the County is granted standing by the Annexation Act or otherwise, the County agrees not to exercise such right, to require an election for, or contest any annexation in the 201, unless inconsistent with the Annexation Act.
- (f) (1) Annexation techniques such as the use of "flagpole(s)," including the annexation of all or any portion of any right-of-way, street, easement or road, may be used by the City to accomplish annexations and the objectives of this agreement. The City agrees to minimize the use of "flagpoles," other than the use of linear strips (normally portions of a right-of-way or other roadway), when establishing contiguity and compliance with the Annexation Act.
- (2) The City may require that annexation be completed prior to issuance of any final development approval and the City may complete annexation prior to initiating any development review.

- The City may choose to allow a land use application or proposed use to proceed contemporaneously with the annexation process.
- (3) Other parcels shall not be involuntarily included in an annexation petition prepared or controlled by the City pursuant to subsection (f)(2) of this section. However, if a majority of property owners file a petition to annex, the minority may be annexed involuntarily without violating this agreement.
 - (4) The parties agree that a “pole” of a “flagpole” annexation does not create an enclave. The City agrees that it will not attempt to use any “pole” to create or “close” an enclave.
 - (5) All phases, filings, or portions of any property subject to a public approval such as planned developments, official development plans (“ODPS”), and any other process or step whereby a portion of one or more tax or other parcels are reviewed or evaluated (even though such parcels, lots or properties are not expected to be finally approved, subdivided or zoned at the same time) are to be treated as one property, and therefore all such phases, filings or portions shall be annexed to the City when the first such phase, filing or portion of property is reviewed and/or annexed.
- (g) Powers of attorney for annexation (“POAs”) or other instruments which provide for the exchange of sewer for an agreement to annex (only such documents shall be called POAs for purposes of this agreement) which were entered into or recorded as of the dismissal of the lawsuit will not be used by the City to effect annexation during the time this agreement is in effect.
- (h) Any POA which has not been exercised or released as of December 31, 2005, will be canceled on or before that date by formal action by the City Council. Such notice of cancellation, which shall be recorded, shall provide that the cancellation is subject to the several terms of this agreement.
- (i) Redlands. Within that portion of the 201 which is west/south of the Colorado River and west of the Gunnison River, (termed the “Redlands” in this agreement), and which is shown more particularly in GJMC 45.08.100, “Persigo Exhibit A”:
- (1) For any residential development, no permit or approval shall be given for such development if any portion of the property is within one-quarter mile (1,320 feet) of any portion of the City limits, as those limits change from time to time, except through the City’s land use process and until the property is annexed to the City. The County shall refuse to review or approve any such development proposal; and shall refer the applicant to the City which shall process and decide if the permit, application or proposed development shall be approved. The City may require that annexation be completed prior to initiation of any land use review process by the County, or the City may choose to allow a land use application or proposed use to proceed contemporaneously with the annexation process.
 - (2) Regardless of proximity to the limits of the City, all nonresidential annexable development on the Redlands shall be exclusively processed and evaluated by, and possibly approved only after it is annexed to, the City. The City may elect to begin the land use review process prior to completion of the annexation process if the City has land use jurisdiction as determined by the City.
- (j) Eastern Area.
- (1) Any proposed annexable development of any property within the 201 and which is partially or wholly WEST of the line shown in GJMC 45.08.100, “Persigo Exhibit A,” and which will be referred to as “The Line,” shall be exclusively processed and reviewed by, and annexed to, the City.
 - (2) Until December 31, 2005, all nonresidential annexable development and any residential development which requires a rezoning to higher density, which is east of “The Line” will be exclusively processed by, and annexed to, the City.

- (3) On or after January 1, 2006, "The Line" shall no longer have any force or effect: any annexable development any portion of which lies within the 201 shall be processed and reviewed exclusively by and annexed to the City, except for property on the Redlands which shall continue to be treated in accordance with subsection (i) of this section.
 - (4) To the extent that property, upon annexation to the City, is excluded from the Clifton Fire Protection District ("Clifton Fire"), the City promises to pay to Clifton Fire that amount of money which would have been received by Clifton Fire by virtue of its current mill levy as applied throughout Clifton Fire which would have applied absent exclusion, subject to the ongoing requirement that Clifton Fire shall continue to provide its full services to the excluded property.
- (k) Orchard Mesa.
- (1) For properties south of the Colorado River and east of the Gunnison within the 201 ("Orchard Mesa"), there shall be no development nor uses approved in the area east of 30 Road, west of Highway 141 (32 Road) which are connected to the system except the already fully developed subdivision "Valle Vista." Structures lawfully existing as of the date hereof which are within 400 feet of the existing sewer service line which connects to Valle Vista may be connected to that Valle Vista sewer line.
 - (2) Development of any property any portion of which is west of 30 Road, on Orchard Mesa, which meets the criteria of annexable development shall only occur within the City and contemporaneous with annexation and City review and approval.
 - (3) The parties shall commit to a successful resolution with Orchard Mesa Sanitation District (OMSD) of resolving the OMSD debt related to construction of the Valle Vista sewer service line described above.
- (l) Appleton Service Area. The Appleton service area is defined by Exhibit A of the Resolution known as MCM-98-51 (County) also known as Resolution 22-98 (City). Annexation of existing residential development is not required in order to obtain sewer service; however, annexable development within the Appleton service area shall be annexed similar to other annexable development as provided herein.
- (m) Clifton. Property which is east of "The Line", south of I-70B and which is within the Clifton Sanitation Districts I or II is not annexable development under this agreement and may develop without annexation to the City.

(1998 Intergovernmental Agreement § D)

45.08.060 Enclaves.

- (a) The parties agree that all property within an enclave shall be unilaterally, in accordance with the procedures provided for in the Annexation Act, annexed by the City on or before the fifth anniversary of the creation of the enclave.
- (b) In an effort to eliminate duplication of services provided to the enclaves, the parties may contract with each other concerning urban services to be provided to enclaves and "flagpoles."
- (c) The City and County will work toward amicable annexation of enclaves to the fullest extent possible.
- (d) Until annexation of an enclave is final (i.e., all appeal periods have expired for any protest or appeal and all litigation contesting any such enclave in whole or in part is finally adjudicated following the completion of all appellate proceedings), the County shall continue to provide its ordinary services (unless otherwise agreed in writing with the City) throughout such enclave.
- (e) The County agrees to complete the capital planning, expenditures and construction of improvements which are identified in the County's adopted two-year budget and in the County's adopted

two-year capital plan with respect to a portion or all of any enclave area, notwithstanding that the area, or a portion of the area, has been annexed.

(1998 Intergovernmental Agreement § E)

45.08.070 Remedies.

- (a) This agreement can be amended or terminated only with the concurrence of both parties as expressed in a joint resolution passed by a majority vote of the City Council and the Board of County Commissioners respectively, except as otherwise provided herein.
- (b) Each party shall have the right to enforce each and every provision hereof, using the right of specific performance or otherwise. The court shall award the prevailing party its reasonable attorney's fees and costs.
- (c) If either party breaches or otherwise fails to comply with the terms and goals of this agreement, the parties agree that, upon declaration of a court of competent jurisdiction, to the fullest extent allowed by law, all of the breaching party's right, title, and interest to the system shall immediately and irrevocably vest in the nonbreaching party. The parties term this remedy "Here are the Keys."
- (d) If a court of competent jurisdiction determines that the "Here are the Keys" remedy is not enforceable for whatever reason, or if, due to the actions or inactions of a third party or intervening force, either party is not able to obtain the benefit of its bargain or is not able to accomplish the goals of that party, the court shall enforce as many provisions and terms hereof as are consistent with such goals and benefits. In addition, if the City's goals and benefits are not able to be met, the City may require that no development of any kind within the 201 shall occur except upon annexation to the City.
- (e) The parties desire that the agreement shall be perpetual, so long as the terms and goals of this agreement are being accomplished, and the benefits are being realized. If there comes a time that the "scope" of this agreement needs to be expanded in order to continue the City's role as the urban services provider, and other method or methods of accomplishing land use review and control by the City in urbanizing areas are necessary, or to continue the County's role as a co-manager of the system and as a policy decider of the system, the parties agree to negotiate reasonably. In the event they cannot agree, either or both may request that the court fashion such a modification of the terms hereof, based on then existing law and circumstances, as will satisfy the goals and intents of the parties and allow each to obtain the benefit of this agreement.

(1998 Intergovernmental Agreement § F)

45.08.080 Other provisions.

- (a) Within one year of the effective date hereof, the parties agree to, in good faith, amend the urban growth boundary, or the 201, or both, so that such boundaries and areas are identical.
- (b) The provisions of this agreement are not assignable without the specific consent of the parties, which consent may [not]* be unreasonably withheld.
- (c) This document is intended to be an intergovernmental agreement (IGA), pursuant to the several powers of the parties, including but not limited to C.R.S. § 29-1-201, et seq., C.R.S. § 29-20-101, et seq., C.R.S. Title 30, especially Articles 11, 15, 20 and 28 thereof, and the statutory and home rule powers of the City. It is intended that this agreement replace the existing arrangement.
- (d) The three existing contracts, between the City and Orchard Mesa Sanitation District, Central Grand Valley Sanitation District and Fruitvale Sanitation District, respectively, which districts are served by the system, shall remain unchanged by this agreement.
- (e) This agreement shall not grant any status or right for person or any third party, specifically any owner of any property, to make any claim as a third party beneficiary, or for deprivation of any

right, violation of any vesting of rights, inverse or other condemnation, or other theories. The parties intend this agreement to be for their benefit only, to resolve issues between these two governments.

- (f) Generally Accepted Accounting Principles (“GAAP”), as published by the Government Accounting Standards Board (“GASB”), which are standards applicable to local governments, will continue to apply to the system.
- (g)
 - (1) The parties also agree that the failure of either to implement each and every term of this agreement shall constitute a breach.
 - (2) Because of the severity of a declaration of a breach, a party desiring to declare a breach shall first, in writing, inform the other party of the basis for the breach, including as much detail and specificity as is possible. The other party shall have 120 calendar days to either cure the breach or to inform the other party what steps are being taken, in a reasonable time and with reasonable efforts, to cure the breach. If the one hundred twentieth day falls on a holiday or weekend, the party shall have until the following day which is not a holiday or a weekend to cure or inform. No breach shall occur without a court of competent jurisdiction having declared so.
 - (3) Either party may ask for direction from the court, in the form of a declaratory judgment, in anticipation of a breach argument being made by the other party.
- (h) The City as operator and manager will acquire and own any and all new and/or additional real and/or personal property or property interest only under the name and style of “the City of Grand Junction, Colorado, for the benefit of the Persigo 201 sewer system.”
- (i) The City shall manage, operate, and maintain the system for the benefit of the current and future users of sewer service in the Persigo 201, according to sound utility practices and principles and, except as otherwise provided herein, without regard to whether or not current and future users of sewer service in the Persigo 201 are located within or without the boundaries of the City.
- (j) Other matters, decisions and issues which have been decided by the City, acting as manager, shall continue to be decided by the City, unless included in the definition of policy provided in this agreement. For example: the City may, as the manager, accept a bid which is within budget, without obtaining any further approval from the Council or the Board of County Commissioners; the City, acting as the manager, has complete authority, subject to policy direction as provided for herein; all system employees who operate and manage the system will continue under the City’s personnel, pay and benefit system; matters of insurance, employee discipline, benefits, and similar questions, shall continue to be determined by the City.
- (k) Policy decisions and guidance shall be provided at joint meetings which shall occur at least annually. At least one of these meetings shall occur before July of each year so that any policy decisions (including changes to the boundaries of the 201) may be implemented by the City in the proposed budget for the joint system for the subsequent year. The City shall inform each special district of proposed rates for the subsequent year by September 1st of each year so that each district has reasonable advance information upon which to base its own budget projections.
- (l) Rate studies shall be made by outside consultants at least every five years, or more often at the joint request of the City and County.
- (m) Since attorneys for both parties may, from time to time, give legal advice to either or both parties regarding policy directives, management, operation, and/or maintenance of the system, neither party shall assert against the other any attorney-client privilege with regard to any communication involving either party and either party’s attorney, which communication occurred prior to the giving and receiving of written notice of a disagreement pursuant to this agreement.
- (n) Except as provided in GJMC 45.08.050(b), with regard to property outside of the 201 or the UGA, this agreement shall in no way limit or expand the existing powers of the City.
- (o) In any zoning or other land use decision undertaken by the City, those persons who own property which is within the area of the City’s standard notification and which is not within the City’s limits

shall be entitled to the same rights of appeal and participation in the land use review process as City residents.

(p) The parties agree to the definitions as shown in GJMC 45.08.020.

(1998 Intergovernmental Agreement § G)

*Code reviser's note: The bracketed "not" has been added for clarification and is not part of the original inter-governmental agreement document.

45.08.090 Rules of construction.

(a) If a term or the application of this agreement is ambiguous or cannot otherwise be determined, these rules, in the order presented, shall guide resolution of the question:

- (1) Annexation of the property to the City should be accomplished;
- (2) Sewer service to all properties within the 201 shall be provided;
- (3) The other terms and provisions hereof shall be implemented.

(b) The goals and community values as referred to herein are properly used to construe this agreement.

(c) In the event there exists a conflict between the body of this agreement and any exhibit to this agreement, the body of this agreement shall prevail.

(d) If a conflict exists between this agreement and any other document executed or adopted by either party and necessary to and associated with operation of the system, this agreement shall prevail, except as otherwise provided for herein.

(e) This agreement is not intended to be and shall not be interpreted to be in derogation of any rights of the trustee or the bondholders pursuant to Mesa County Resolution No. MCM 92-160 (Series 1992).

(f) In the event this agreement is deemed to be ambiguous or vague, the parties agree that the rule that 'ambiguities shall be construed against the drafter,' or similar rules of construction, shall not apply because this agreement is a result of mutual negotiation and drafting.

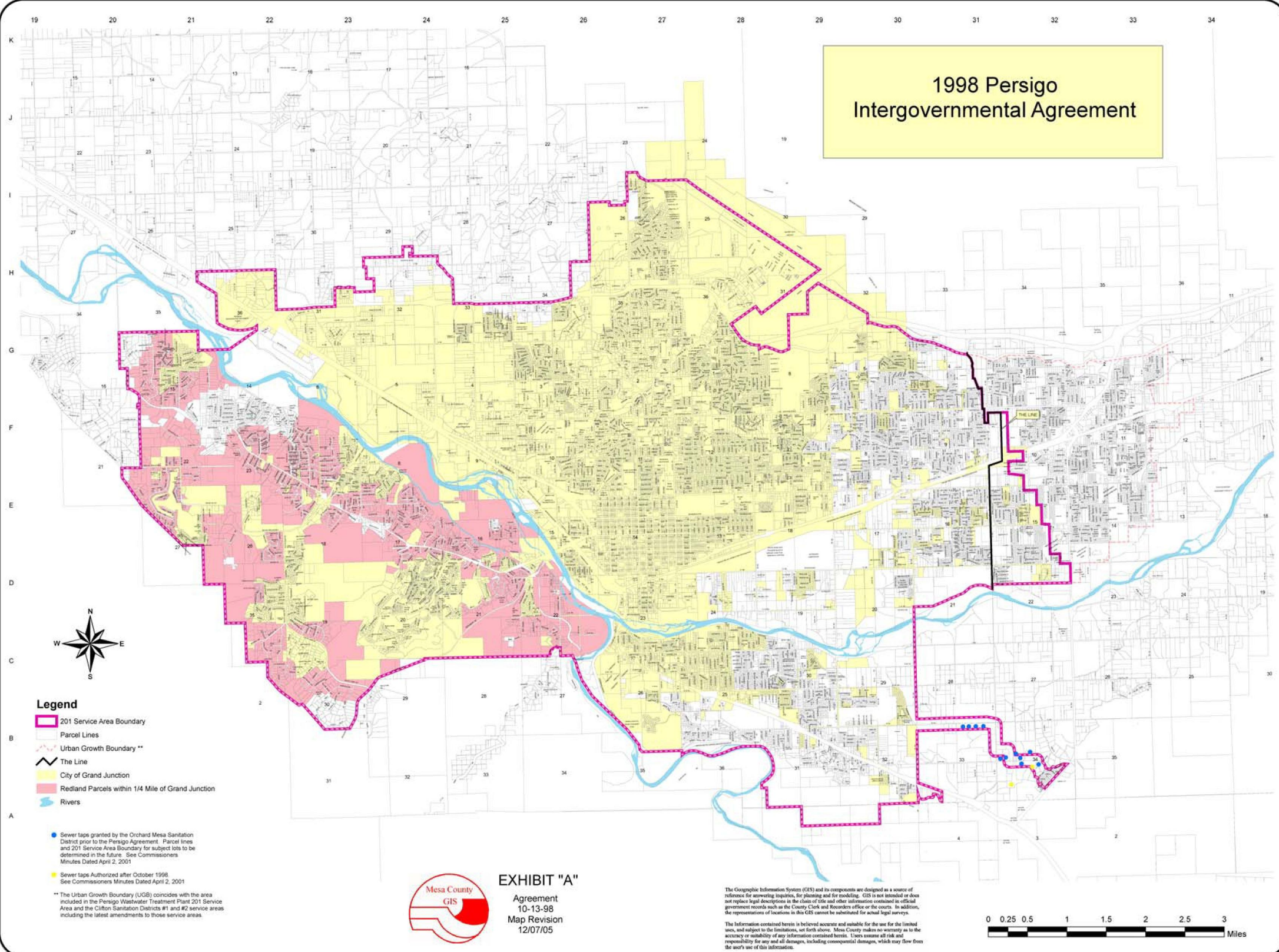
(1998 Intergovernmental Agreement § H)

45.08.100 Service area boundaries.

See map on following page.

(1998 Intergovernmental Agreement Exh. A)

1998 Persigo Intergovernmental Agreement



- Legend**
- 201 Service Area Boundary
 - Parcel Lines
 - Urban Growth Boundary **
 - The Line
 - City of Grand Junction
 - Redland Parcels within 1/4 Mile of Grand Junction
 - ~ Rivers

● Sewer taps granted by the Orchard Mesa Sanitation District prior to the Persigo Agreement. Parcel lines and 201 Service Area Boundary for subject lots to be determined in the future. See Commissioners Minutes Dated April 2, 2001

● Sewer taps Authorized after October 1998. See Commissioners Minutes Dated April 2, 2001

** The Urban Growth Boundary (UGB) coincides with the area included in the Persigo Wastewater Treatment Plant 201 Service Area and the Clifton Sanitation Districts #1 and #2 service areas including the latest amendments to those service areas.



EXHIBIT "A"
 Agreement
 10-13-98
 Map Revision
 12/07/05

The Geographic Information System (GIS) and its components are designed as a source of reference for planning purposes, for planning and for modeling. GIS is not intended or does not replace legal descriptions in the chain of title and other information contained in official government records such as the County Clerk and Recorder office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.

The information contained herein is believed accurate and suitable for the use for the limited uses, and subject to the limitations, set forth above. Mesa County makes no warranty as to the accuracy or reliability of any information contained herein. Users assume all risk and responsibility for any and all damages, including consequential damages, which may flow from the user's use of this information.



Chapter 45.12**CENTRAL GRAND VALLEY SANITATION DISTRICT, ORCHARD MESA SANITATION DISTRICT, MESA COUNTY INTERGOVERNMENTAL AGREEMENT**

Sections:

- 45.12.010 Agreement date.
- 45.12.020 Recitals.
- 45.12.030 Joint Persigo sewer system agreement.
- 45.12.040 CGVSD lines and fixtures.
- 45.12.050 OMSD lines and fixtures.
- 45.12.060 Construction standards.
- 45.12.070 City lines and fixtures.
- 45.12.080 Acceptance of effluent for treatment.
- 45.12.090 Rates for treatment.
- 45.12.100 Additional District charges.
- 45.12.110 Plant investment fee.
- 45.12.120 Operation of District lines.
- 45.12.130 Pretreatment.
- 45.12.140 Participation in joint funds.
- 45.12.150 Provisions relating specifically to CGVSD.
- 45.12.160 Provisions relating specifically to OMSD.
- 45.12.170 Dissolution of Orchard Mesa/TSA.
- 45.12.180 Dissolution of Central Grand Valley Sanitation District.
- 45.12.190 Limitation of liability.
- 45.12.200 Term of agreement.
- 45.12.210 Termination/enforcement/remedies.
- 45.12.220 Sewer regulations incorporated by reference.
- 45.12.230 Effective date.

Cross-reference – Chapter 45.08 GJMC.

45.12.010 Agreement date.

This agreement is entered into effective the eighth day of March, 2004, by and among the Central Grand Valley Sanitation District (“CGVSD”), the Orchard Mesa Sanitation District (“OMSD”), Mesa County (“County”) and the City of Grand Junction (“City”). The two districts may be referred to jointly in this agreement as the “Districts.”

(2004 Intergovernmental Agreement (MCA 2004-028))

45.12.020 Recitals.

- (a) On November 4, 1970, CGVSD entered into an agreement (“CGVSD agreement”) for the construction of sanitary sewer lines within the boundaries of that District and for the treatment of such effluent by the City of Grand Junction. The CGVSD agreement has been modified on several occasions.
- (b) On November 19, 1975, OMSD entered into an agreement (“OMSD agreement”) for the construction of sanitary sewer lines within the boundaries of that District and for the treatment of such effluent by the City of Grand Junction. The OMSD agreement has been modified on several occasions.
- (c) The parties now desire to enter into this new intergovernmental agreement which will (except as otherwise specifically provided herein) supersede the CGVSD agreement, as modified, and the OMSD agreement, as modified. This intergovernmental agreement will govern the relationship of the parties from and after the effective date of this agreement.

Now, therefore, in consideration of the recitals above and the covenants below, the parties agree as follows in this chapter.

(2004 Intergovernmental Agreement (MCA 2004-028))

45.12.030 Joint Persigo sewer system agreement.

The City and Mesa County have entered into a joint policy making agreement for the Persigo sewer system signed October 13, 1998 (“Persigo agreement”). The parties acknowledge that the Persigo agreement controls the relationship between the City and the County regarding the operation, management and control of the Persigo sewer system as that system is defined in the Persigo agreement. Nothing in this intergovernmental agreement is intended to modify or supersede the Persigo agreement and if a conflict exists, then the provisions of the Persigo agreement will prevail.

(2004 Intergovernmental Agreement (MCA 2004-028) § 1)

45.12.040 CGVSD lines and fixtures.

CGVSD has constructed and currently owns, operates and maintains approximately 95 miles of lines, most of which are located within its boundaries. In addition to all lines within its boundaries, CGVSD owns discharge lines that carry effluent from the District to City lines. Those discharge lines are commonly referred to as the 29 Road and the 29 3/8 Road lines. CGVSD currently serves several out-of-District customers through a verbal understanding with Fruitvale Sanitation District. In addition, certain properties in WestPark Subdivision and Eastbury Subdivision are within the CGVSD boundaries but are serviced by Fruitvale Sanitation District. All properties within the District boundaries are also within the Persigo system 201 service area (“201 service area”). Except as otherwise provided herein and by the terms of the total service agreement (“TSA”), Chapter 45.16 GJMC, which is incorporated herein by this reference, CGVSD will continue to own, operate and maintain all of its current lines and will own any lines that are constructed in the future by the District, whether located within or outside of the District boundaries. All such lines and any facilities attached to or used in connection with such lines (including lift stations) are referred to in this agreement as the “CGVSD lines.”

(2004 Intergovernmental Agreement (MCA 2004-028) § 2)

45.12.050 OMSD lines and fixtures.

OMSD has constructed and currently owns, operates and maintains approximately 46 miles of lines, most of which are located within its boundaries. In addition to all lines within its boundaries, OMSD owns the B Road Line which services the Valle Vista subdivision and certain other properties between that subdivision and the District boundaries. The District also owns certain major lateral lines that carry effluent from the District and discharge the effluent to City lines. All properties serviced by OMSD are also within the 201 service area. Except as otherwise provided for herein or by the terms of the TSA, OMSD will continue to own, operate and maintain all of its current lines and will own any lines which are constructed in the future by the District and which connect to OMSD lines or which are located within the OMSD boundaries. All such lines and any facilities attached to or used in connection with such lines (including lift stations) are referred to in this agreement as the “OMSD lines.”

(2004 Intergovernmental Agreement (MCA 2004-028) § 3)

45.12.060 Construction standards.

OMSD is responsible for the proper construction and maintenance of all of the OMSD lines and CGVSD is responsible for the proper construction and maintenance of all of the CGVSD lines. All such construction shall comply with all rules and regulations of each respective District and with all local, County and State laws and regulations. In addition, such construction shall at a minimum meet the standard construc-

tion specifications as adopted from time to time by the City. The Districts' standards may exceed those of the City.

(2004 Intergovernmental Agreement (MCA 2004-028) § 4)

45.12.070 City lines and fixtures.

All sanitary sewer lines, and any facilities attached to or used in connection with such lines (including lift stations) which are not CGVSD lines or OMSD lines (and excluding any lines which belong to the Fruitvale Sanitation District) will be referred to in this agreement as the "City lines." The Districts acknowledge that they do not have any ownership interest in such City lines and the City lines are under the control of the City, either by virtue of actual ownership or by virtue of agreements with other parties. The City is responsible for the maintenance of the City lines.

(2004 Intergovernmental Agreement (MCA 2004-028) § 5)

45.12.080 Acceptance of effluent for treatment.

The Districts will continue to discharge their effluent into the City lines at the currently existing locations. If additional discharge points are required in the future, then the City will negotiate with the respective District regarding the terms and locations of such additional discharge points. In addition, the City will continue to treat all District effluent at the Persigo plant.

(2004 Intergovernmental Agreement (MCA 2004-028) § 6)

45.12.090 Rates for treatment.

All rates for treatment and for maintenance and operation of all parts of the Persigo system, except for the OMSD lines and the CGVSD lines, shall be established pursuant to the Persigo agreement and shall be assessed uniformly to all users of the Persigo system, including District users ("Persigo rate"). Effective as of January 1, 2004, and as of the date of the signing of this agreement, the Persigo rate is \$13.23 each month for one EQU. For purposes of determining the charges to be paid by the Districts' customers, the Persigo rate shall be reduced by 27.2 percent for all District customers; this number will be referred to as the "District rate." The District rate as of the date of the signing of this agreement is \$9.63 for one EQU. "EQU" is defined by the City's code. When the City changes the Persigo rate from time to time, the District rate shall be adjusted to continue to be equal to 72.8 percent of the Persigo rate.

(2004 Intergovernmental Agreement (MCA 2004-028) § 7)

45.12.100 Additional District charges.

In addition to the District rate, each District may assess or charge such additional amounts to its customers as may be determined from time to time by the Board of each District; provided, however, from and after the date of this agreement each District shall assess or charge monthly service fees to its customers (including the District rate) which equals or exceeds the Persigo rate. Each District may establish its own procedures for setting rates, fees, tolls and charges to be assessed against its customers for services. In addition, each District may incur such debt, enter into such contracts and establish such ad valorem taxes as each Board may determine is needed or proper for the administration of its services.

(2004 Intergovernmental Agreement (MCA 2004-028) § 8)

45.12.110 Plant investment fee.

- (a) In addition to the Persigo rate, the City, pursuant to the Persigo agreement, shall continue to assess to and require the payment of a plant investment fee ("PIF") to each new tap into the Persigo system. This PIF shall be charged by each District for new taps into the District system. Such PIF shall be uniform throughout the Persigo system and shall be paid at the time of physical connection to either the Districts' systems or the Persigo system ("tap"). In addition to the City PIF, each District may establish its own tap fee or system development charge in such amounts and payable under such

terms as determined by each District's respective Board. All such fees or system development charges assessed by the Districts shall be retained by the respective District and shall be used in accordance with the rules and regulations of such District.

- (b) Each District shall require that each new customer of such District, and with respect to each new tap into the District's or the Persigo system, shall pay to and be assessed by the City the then current PIF, in addition to any other lawful charges assessed or charged by the City as manager of the Persigo system.

(2004 Intergovernmental Agreement (MCA 2004-028) § 9)

45.12.120 Operation of District lines.

- (a) Except as provided in the TSA, each District shall be responsible for the operation, maintenance and control of its respective lines. Each District shall monitor its lines to locate areas of inflow and/or infiltration ("I & I") into the respective District lines and shall take such steps and make such capital expenditures as are reasonably required to reduce such I & I. All costs for the operation, maintenance and capital expenditures of the District lines will be paid by the respective District, except as provided in the TSA.
- (b) In addition, each District shall police its own lines to minimize the discharge of substances which may be detrimental to the treatment process employed at the Persigo plant, including oils, acids or other such materials. Each District shall continue to enforce and abide by the City's and U.S. E.P.A.'s pretreatment rules and regulations. The City may perform such inspections of the District lines as it deems appropriate to fulfill its duties and responsibilities, including identification and location of any source of any illegal or other discharges into the Persigo system that could cause an "upset" or which violates any permit or other City requirement.

(2004 Intergovernmental Agreement (MCA 2004-028) § 10)

45.12.130 Pretreatment.

- (a) The Districts shall continue to delegate to the City, and the City hereby accepts such continued delegation, the administrative, managerial and enforcement authority concerning pretreatment programs as applied to industrial and other users of the Persigo system. The City shall continue to act as the agent for each District in pretreatment matters to the extent necessary to allow regulatory and health-related control by the City over industrial and nonresidential users within each respective District. It is the intent of the parties that the City shall continue to exercise such pretreatment authority throughout the Persigo sewer system as may be reasonably required to comply with all federal and State grant and discharge permit requirements applicable to the Persigo sewer system.
- (b) As the manager of the Persigo system, the City agrees to hold the Districts harmless from any and all liability whatsoever which may result either directly or indirectly from the City's acts or omissions arising from or related to the administrative, managerial or enforcement authority concerning pretreatment programs.
- (c) The City may pay any costs, expenses, penalties or fines, whether administrative or otherwise, from the revenues and assets of the Persigo system without having to adjust for revenues or assets derived directly or indirectly from the Districts.

(2004 Intergovernmental Agreement (MCA 2004-028) § 11)

45.12.140 Participation in joint funds.

The City shall continue to collect the District rate from the District customers. The parties have determined that a portion of the District rate that is collected by the City should be returned to each respective District under the following provisions:

- (a) **Unrestricted Capital Funds.** In each fiscal year for the City, beginning in 2004, the City shall propose a budget item to the City Council and Board of County Commissioners (acting jointly as “co-owners”) in the amount of \$154,070 which shall be referred to as the “unrestricted capital funds.”
- (1) Of said \$154,070, on or before March 1st of each calendar year, beginning with the 2004 calendar year, and through the 2012 calendar year, the City will pay to CGVSD the sum of \$110,670.
 - (2) Similarly, on or before March 1st of each calendar year, beginning with the 2004 calendar year, and finishing on or before March 1, 2015, the City will pay to OMSD the sum of \$43,400.
 - (3) The Districts will be entitled to rely on the amount of such distributions in the preparation of their annual budgets, subject only to the final appropriations decision of the co-owners of the Persigo system.
 - (4) Unrestricted capital funds shall only be used for repairs to existing capital systems or for capital improvements of the respective District lines. Permissible capital improvements shall not include the construction of new line extensions that shall continue to be solely funded by developers under each District’s rules and regulations that exist as of the date of this agreement.
 - (5) If unrestricted capital funds are not spent within the two calendar years following the year of distribution, the City may withhold the future distribution of unrestricted capital funds until such time as the City is assured that previously distributed unrestricted capital funds have been used only in accordance with this section and as otherwise provided in this agreement.
- (b) **Restricted Capital Funds.** In addition to the unrestricted capital funds, in each City fiscal year beginning in 2004, the City shall propose a budget item to the co-owners in the amount of \$200,930 (referred to as the “restricted capital funds”), which, if approved, shall be distributed to the Districts as described in this subsection (b).
- (1) CGVSD shall receive an amount not to exceed \$144,330 annually to be paid on or before March 1st beginning on or before March 1, 2004, and continuing through March 1, 2012.
 - (2) Similarly, OMSD shall be entitled to receive an amount not to exceed \$56,600 annually to be paid on or before March 1st beginning on or before March 1, 2004, and continuing through March 1, 2012.
 - (3) In order to receive such annual restricted capital funds, each District hereby warrants and promises to expend the funds only on capital improvements to the existing District lines or in the construction of new or replacement collector lines that are not funded by developers under the line extension policy of each District as such policies exist as of the date of this agreement.
 - (4) In addition, each District shall match District funds dollar-for-dollar with the restricted capital funds. The matching District funds shall not include amounts received through the unrestricted capital fund distributions.
 - (5) Each District shall submit to the City by August 1st of each year (beginning in 2004) its plans for capital improvements to be funded with the restricted capital funds. Such plans may be for any number of future years. If the District plan includes capital improvements as described in this agreement to increase capacity, replace aging lines, construct new or replacement collector lines that are not funded by developers, maintain or repair existing lines or to reduce or cure inflow and infiltration, then the City shall disburse to such District its share of the restricted capital funds up to the allocated amount.
 - (6) The District is not required to spend all of the restricted capital funds in the year received; restricted capital funds may be accrued for up to three years following the year of distribution for the funding of capital projects.

- (7) Such funds shall be accounted for separately in the District's accounting and records. The District will maintain and submit such records as the City may reasonably require to reflect the proper use or aggregation of such funds. If upon the eventual dissolution of each District (as described below) any funds remain in the restricted capital fund account, then any plan of dissolution shall show a return to the City of such unused funds unless the City otherwise consents in writing to the funds being used for capital improvements.

(2004 Intergovernmental Agreement (MCA 2004-028) § 12)

45.12.150 Provisions relating specifically to CGVSD.

The provisions of this section shall apply only to CGVSD.

- (a) **Customer Billing.** The City shall continue to bill all District customers on a monthly basis. Included in the billing is the monthly District rate and the additional District charges. The District shall continue to be responsible for the collection of all delinquent accounts. The City shall continue to provide to the District on a monthly basis information on delinquent accounts.
- (b) **Emergency Call Outs.** The District and the City currently have a separate agreement for emergency call out services. The terms of that separate agreement shall remain in effect and may be modified from time to time as provided in that agreement.
- (c) **Line Cleaning.** The District is responsible for cleaning and televising its own lines and for paying the costs thereof.

(2004 Intergovernmental Agreement (MCA 2004-028) § 13)

45.12.160 Provisions relating specifically to OMSD.

The provisions of this section shall apply only to OMSD.

- (a) **Customer Billing.** The District shall continue to be responsible for billing its customers for all monthly sewer charges, including District rate charges and City rate charges.
 - (1) The City shall continue to send to the District a single bill for all sewer charges payable to the City for customers serviced by the District based on the City's standard EQU calculation. The bill is to be received by the District by the fifteenth of each month and the District shall pay the bill to the City by the last business day of each month. If not paid by the last business day of the month, the bill shall be delinquent and shall accrue interest at the rate of nine percent per annum until paid. It will be the sole responsibility of the District to bill its customers.
 - (2) The City shall not send bills to any of the individual customers of the District, except for industrial and similar nonresidential pretreatment charges. If there are any customers within the District that require pretreatment, all pretreatment charges shall be billed separately by the City.
 - (3) The amount to be billed and collected by OMSD for its single-family customers shall be the District rate less eight percent, which represents the savings to the City in customer billing costs. OMSD customers other than single-family residents shall continue to be charged at the District rate for such customers less the per customer reduction for the billing charge at the rate calculated for single-family residents. The reduction effective January 1, 2004, is \$0.77.
- (b) **Customer List.** At least once each calendar year, the District shall provide to the City, at no cost to the City, the District's current customer and address list.
- (c) **New Connects and Disconnects.** Each month the District will provide to the City a list of new connects and disconnects.
- (d) **Emergency Call Outs.** The District and the City currently have a separate agreement for emergency call out services. The terms of that separate agreement shall remain in effect and may be modified from time to time as provided in that agreement.

- (e) Line Cleaning. The District is responsible for cleaning and televising its own lines and for paying the costs thereof.
- (f) District System Expansion.
 - (1) All of the area serviced by OMSD is within the 201 service area. No future amendment of the 201 boundary on Orchard Mesa between 30 Road and 32 Road shall be permitted without the express approval of the City, the County and OMSD.
 - (2) The District shall not allow the connection to any District line or any City line with regard to any property on Orchard Mesa east of 30 Road except those properties the owner of which holds a paper tap issued by the District in exchange for granting easements for the construction of the Valle Vista line extension; each of such properties is listed by parcel number on Exhibit "B" at the end of this section.
 - (3) Prior to construction, the District shall submit to the City all plans for extensions or enlargements of any District line for engineering review and to determine if the terms of this agreement, and the Persigo agreement, are being complied with. If the design meets City engineering standards and applicable regulations and agreements, the City shall approve the submittal within 10 City working days; if the City issues its approval, no further concurrence from the City shall be required. If the City does not respond to a submittal within said 10 working days, concurrence shall be presumed.

Exhibit B

List of Properties Pursuant to GJMC 45.12.160(f)(2)

Paper taps have been issued to the following properties. These taps stay with the property. For parcel #2943-331-00-087, if this property is divided into different parcels, then taps for up to four parcels may be issued.

# of Taps	Address	Parcel Number	Current Owner
4	155 31 Road	2943-331-00-087	Rooks
1	3124 A1/2 Rd.	2943-342-00-076	Peale
1	3130 A1/2 Rd	2943-342-00-104	Traudt
1	3094 C. Rd	2943-214-00-065	A & G Partnership LLP

(2004 Intergovernmental Agreement (MCA 2004-028) § 14)

45.12.170 Dissolution of Orchard Mesa/TSA.

On or before the general election to be held in November of 2015, the Board of Directors of OMSD shall take such steps as are required by statute to take to the voters of the District a plan and proposal to dissolve the District.

- (a) In preparation for such vote, the OMSD Board shall pass a resolution endorsing such dissolution and shall recommend to its qualified electors that the plan be adopted and that the electors vote in favor of the dissolution.
- (b) The District's plan of dissolution shall call for the transfer of all District lines and sewer related assets (including sewer lines, lift stations, taps, fittings, records, video tapes, easements and rights-of-way) to the City of Grand Junction, Colorado, for the benefit of the Persigo 201 sewer system, free and clear of any liens or encumbrances, and without cost or expense to the City.

- (c) The plan shall call for the final dissolution of the District and the transfer of all District lines and the District's sewer related assets to the City within one year of the date of the election.
- (d) If the election is unsuccessful, the TSA, Chapter 45.20 GJMC, shall become effective as of the following June 1st. In addition, the Board shall forthwith after the November 2015 election ratify and approve the TSA, without changes.
- (e) The conduct of the affairs of the District from and after the failure of the election shall be consistent with the intent of the parties to transfer effective control to the City, as provided in the TSA.
- (f) In any plan of dissolution to be voted upon by the qualified electors of the District, the plan shall provide for the distribution of cash reserves under the following guidelines: the Board may elect to waive all or part of the monthly sewer service charges to its customers for a period of up to six months, and to use the cash reserves to pay for all costs of the operation of the district (including payments of the Persigo rate to the City). After completion of the dissolution, any remaining cash reserves shall be accounted for separately by the City and spent exclusively on capital improvements to the district system.

(2004 Intergovernmental Agreement (MCA 2004-028) § 15)

45.12.180 Dissolution of Central Grand Valley Sanitation District.

On or before the general election to be held in November of 2012, the Board of Directors of CGVSD shall take such steps as are required by statute to take to the voters of the District the Board's plan and proposal to dissolve the District.

- (a) In preparation for such vote, the CGVSD Board shall pass a resolution endorsing such dissolution and shall recommend to its qualified electors that the plan be adopted and that the electors vote in favor of the dissolution.
- (b) The District's plan of dissolution shall call for the transfer of all District lines and sewer related assets (including sewer lines, lift stations, taps, fittings, records, video tapes, easements and rights-of-way) to the City of Grand Junction, Colorado, for the benefit of the Persigo 201 sewer system, free and clear of any liens or encumbrances, and without cost or expense to the City.
- (c) The plan shall call for the final dissolution of the District and the transfer of all District lines and the District's sewer related assets to the City within six months of the date of the election or when the TSA is effective, whichever is sooner.
- (d) If the election is unsuccessful, the Directors shall again endorse and refer the question of dissolution to its voters within 25 months of the date of the first such vote. If the second election is also unsuccessful, the TSA, Chapter 45.16 GJMC shall become effective as of the next June 1st. In addition, the Board shall forthwith ratify and approve the TSA.
- (e) The conduct of the affairs of the District from and after the failure of the second election shall be consistent with the intent of the parties to transfer effective control to the City, as provided in the TSA.
- (f) In any plan of dissolution to be voted upon by the qualified electors of the District, the plan shall provide for the distribution of cash reserves under the following guidelines: the Board may elect to waive all or part of the monthly sewer service charges to its customers for a period of up to six months, and to use the cash reserves to pay for all costs of the operation of the district (including payments of the Persigo rate to the City). After completion of the dissolution, any remaining cash reserves shall be accounted for separately by the City and spent exclusively on capital improvements to the district system.

(2004 Intergovernmental Agreement (MCA 2004-028) § 16)

45.12.190 Limitation of liability.

No party shall be liable to any other party for any damages for failure to deliver or receive sanitary sewer discharges if such failure is due to war or civil strife, broken lines, accidents, fires, strikes, lockouts or other such occurrences beyond the reasonable control of such entity. Nothing in this agreement is intended to waive any of the rights and privileges of the Colorado Governmental Immunity Act.

(2004 Intergovernmental Agreement (MCA 2004-028) § 17)

45.12.200 Term of agreement.

This agreement shall continue with respect to each District until the respective District is dissolved.

(2004 Intergovernmental Agreement (MCA 2004-028) § 18)

45.12.210 Termination/enforcement/remedies.

- (a) This agreement may be enforced by either party through a suit for specific performance or for damages or for both. The prevailing party in any such proceeding may be awarded attorney fees and costs at the discretion of the Court.
- (b) Upon the giving of 30 days' written notice and the failure of the receiving party to comply with each and every term hereof, or with other applicable laws or regulations, the party giving the notice may terminate this agreement with a subsequent writing given within 60 days of the initial notice. The remedy of termination is cumulative to other remedies of the parties, including the remedies described above.
- (c) The failure of the City/County Joint Persigo Board to make the payments to each District as required herein shall be deemed a default and upon proper notice and right to cure as provided in subsection (b) of this section, each District may elect to terminate this agreement.

(2004 Intergovernmental Agreement (MCA 2004-028) § 19)

45.12.220 Sewer regulations incorporated by reference.

The terms and provisions of the City's code, the sewer regulations, as both are amended from time to time, are incorporated herein by this reference as though fully set forth herein.

(2004 Intergovernmental Agreement (MCA 2004-028) § 20)

45.12.230 Effective date.

This agreement shall become effective upon approval of the City Council, the County Commissioners and the Boards of Directors of each District.

(2004 Intergovernmental Agreement (MCA 2004-028) § 21)

Chapter 45.16**CENTRAL GRAND VALLEY SANITATION DISTRICT TOTAL SERVICE AGREEMENT**

Sections:

- 45.16.010 Generally.
- 45.16.020 Definitions.
- 45.16.030 Complete wastewater service.
- 45.16.040 Maintenance.
- 45.16.050 Authority.
- 45.16.060 Sewer taps.
- 45.16.070 Enforcement – Service disconnection.
- 45.16.080 Rules and regulations.
- 45.16.090 Public rights-of-way – Easement acquisition.
- 45.16.100 Expansion of contract service area.
- 45.16.110 Refusal to accept wastewater flows.
- 45.16.120 Clean Water Act compliance.
- 45.16.130 Disconnection from joint system.
- 45.16.140 Rates and charges – Collection.
- 45.16.150 Rates and charges – Established.
- 45.16.160 Joint system fees and charges.
- 45.16.170 Plant investment fees.
- 45.16.180 Conveyance of pump stations and pipelines.
- 45.16.190 Improvements.
- 45.16.200 District findings.
- 45.16.210 Binding assignment of rights.
- 45.16.220 Waiving of rights.
- 45.16.230 Remedies.
- 45.16.240 Obligations unaffected by amendment to State laws.
- 45.16.250 City exercise of rights.
- 45.16.260 Material breach of agreement.
- 45.16.270 Actions to dissolve District.
- 45.16.280 Term.
- 45.16.290 Interpretation.
- 45.16.300 Express or implied covenants.
- 45.16.310 Representations inducing entering into agreement.
- 45.16.320 Superseding of prior agreements.

Cross-reference – Chapter 45.08 GJMC.

45.16.010 Generally.

This agreement is made and entered into as of the eighth day of March, 2004, by and among the City of Grand Junction, State of Colorado (the “City”), as manager and operator of the wastewater collection, transmission and treatment system more fully described below (the “joint system”), the County of Mesa (the “County”) as a participant in the joint system with the City, and the Central Grand Valley Sanitation District, Mesa County, Colorado, a quasi-municipal corporation and political subdivision of the State of Colorado (“District”).

- (a) Whereas, each party is authorized by law to furnish sanitary sewer services and has the means to perform the same; and
- (b) Whereas, each party is authorized by the provisions of Article XIV, Section 18, Colorado Constitution, and C.R.S. § 29-1-201, et seq., to enter into contracts with other local governments for the performance of functions which it is authorized by law to perform on its own; and

- (c) Whereas, the City and the County, have, pursuant to that agreement dated October 13, 1998 (the “system agreement”), established the joint system in order to provide for the collection, transmission and treatment of wastewater from and within an extensive area described in the system agreement as the “Persigo area”; and
- (d) Whereas, the District is located within the Persigo area and has utilized the joint system to transmit wastewater flows from its system to the joint system treatment works for treatment but has prior to the date of this agreement owned, operated and maintained the collection and transmission system within its legal boundaries; and
- (e) Whereas, the District now desires to contract with the City as the manager and operator of the joint system for complete wastewater services as set forth in this agreement;

Now, therefore, in consideration of the premises and the covenants and agreements hereinafter set forth, it is agreed by and among the parties as follows in this chapter.

(2004 Intergovernmental Agreement (MCA 2004-029))

45.16.020 Definitions.

For the purposes of this agreement, the following terms shall have the following meanings:

City shall mean the City of Grand Junction, in its capacity as manager and operator of the joint system, and any authorized person or entity acting on its behalf in such capacity. Pursuant to the system agreement, when reference is made to the City as owner of, or owning, pipes and related facilities that are components of the joint system, the parties acknowledge that the City accepts and holds title to pipes and related facilities of the joint system in the name and style of “the City of Grand Junction, Colorado, for the benefit of the Persigo 201 sewer system.”

Collection system shall refer to the pipes and related appurtenances for the collection and transmission of wastewater within the District’s contract service area. In general, the collection system will be owned by the City for the benefit of the Persigo 201 sewer system, but certain facilities in place prior to the City’s provision of wastewater service pursuant to this agreement shall be owned by the District under the terms of this agreement.

Contract service area shall mean the presently existing legal boundaries of the District together with any amendments to those boundaries within the Persigo area accomplished in accordance with the terms and provisions of this agreement.

District shall refer to the Central Grand Valley Sanitation District and any authorized representative thereof.

Joint system shall have the same definition as contained in the Persigo contract.

Persigo area shall mean the outer geographical boundaries of the 201 service area as contemplated and defined in the system agreements, which the joint system serves.

Rules and regulations shall mean the operating rules and design standards promulgated by the City to govern the design, construction, operation, maintenance and use of the joint system, including the rates, fees, tolls and charges imposed from time to time, including future modifications thereto.

Sewer tap shall mean a physical connection to the collection system which effects wastewater service to the connected premises.

(2004 Intergovernmental Agreement (MCA 2004-029) § 1)

45.16.030 Complete wastewater service.

The City shall furnish all service necessary to effect full and complete sanitary sewer service to all lands within the District's contract service area, including the full development and any redevelopment of any and all such lands in accordance with applicable law.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.1)

45.16.040 Maintenance.

Wastewater service furnished by the City under this agreement shall be provided in a manner uniform and consistent with that provided to customers throughout the Persigo area. To the extent the City determines that maintenance of the collection system is necessary to the furnishing of wastewater service under this agreement, the City agrees to maintain or replace all portions of the collection system it owns or which come under its dominion. The City agrees to construct, maintain, replace and keep inventory of such additional physical facilities as the City deems necessary.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.2)

45.16.050 Authority.

The District represents that it has authority to use, connect, disconnect, modify, renew, extend, enlarge, replace, convey, abandon or otherwise dispose of the pipes and other facilities, including pump stations, for providing wastewater service to users within its contract service area, and grants to the City all such authority deemed necessary by the City to perform its obligations under this agreement. The District hereby delegates to the City, and the City hereby accepts administrative, managerial and enforcement authority concerning the District pretreatment program as applied to industrial users of the joint system. The City will act as the District's agent in pretreatment matters to the extent necessary to allow direct regulatory and health-related control by the City over industrial users within the District. All additions to the collection system installed or replaced by the City within the District's contract service area shall be owned by the City. The District shall not exercise any dominion over any of its wastewater facilities that is in any way inconsistent with the exercise or performance by the City of its rights and obligations.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.3)

45.16.060 Sewer taps.

The City shall not make any sewer tap within the contract service area or issue any approval or license for attachment to the collection system within the contract service area except upon written authorization of the District. Upon receipt of written authorization by the District, the City shall make the necessary taps in the regular course of its business. The District shall be fully liable to the City for unreported connections, including payment of all charges thereon. No new sewer taps may be made to the collection system which would impair the capacity of the joint system to furnish wastewater service in accordance with the rules and regulations.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.4)

45.16.070 Enforcement – Service disconnection.

Each of the parties to this agreement recognizes in the other the right to enforce its rules and the terms of this agreement by interrupting or disconnecting wastewater flows from the premises of those who violate the rules of either party or this agreement. Neither party shall interfere with the other in the enforcement of its rules or this agreement. Neither party shall restore any service connection after the same has been interrupted or disconnected by the other in the course of enforcing its rules or the terms of this agreement, except upon written authority of the party causing the interruption or disconnection of service. Each party agrees to provide oral or written notice to the other prior to interrupting or disconnecting any service con-

nection, except when disconnection is made by either solely for reason of delinquency in payment for charges or to prevent an immediate threat to public health or safety.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.5)

45.16.080 Rules and regulations.

Wastewater service furnished under this agreement shall be governed by the rules and regulations and the system agreements. Future amendments or modifications to the rules and regulations shall be binding on the District unless the District objects thereto in writing within 30 days after the adoption of such amendment or modification and the Board of County Commissioners and the City Council, acting jointly pursuant to the system agreements, determine to repeal or reject the proposed amendment(s) and/or modification(s). The rules and regulations shall be applied uniformly and equitably throughout the Persigo area. The City may require the installation of additional wastewater service facilities at the expense of the customer requiring service in accordance with the rules and regulations. The District retains the full right to make and enforce rules, not inconsistent with the rules and regulations, to govern use of the collection system use within its contract service area. The District agrees to exercise its rule-making, fee-setting and other powers to assist the City in enforcing the rules and regulations.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.6)

45.16.090 Public rights-of-way – Easement acquisition.

The District warrants that all portions of the collection system it owns or controls are in public rights-of-way or easements it now owns, that its rights-of-way and easements are free and clear of all liens and encumbrances, and that title to all such rights-of-way and easements is adequately granted or dedicated to or vested in District in documents recorded in the real property records of the Mesa County Clerk and Recorder. Where a portion of the collection system owned or controlled by the District is located on private property, or the District's easement is insufficient in size, the District agrees to acquire at its expense such easements as may be reasonably required by the City.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.7)

45.16.100 Expansion of contract service area.

The District may not expand its contract service area without the express written approval of the City, in its unfettered discretion.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.8)

45.16.110 Refusal to accept wastewater flows.

The City reserves the right to refuse to accept wastewater flows from any premises when the same would impose unreasonable risk of a health hazard or other harm to the joint system.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.9)

45.16.120 Clean Water Act compliance.

The wastewater service to be furnished by the City shall comply with the federal Clean Water Act and any and all other applicable regulations.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.10)

45.16.130 Disconnection from joint system.

The damage to the joint system if the District disconnects from the joint system shall be not less than the reproduction cost of any of the joint system's facilities which are rendered useless by such disconnection and which must be replaced in order to serve customers outside the contract service area. The District

agrees to pay the damages described in this section immediately upon the occurrence of such disconnection.

(2004 Intergovernmental Agreement (MCA 2004-029) § 2.11)

45.16.140 Rates and charges – Collection.

For the wastewater services provided by the joint system, the City shall be paid by the users within the District's contract service area the rates, fees, tolls and charges calculated in accordance with the system agreements, which shall be the same as all such rates and charges imposed and collected generally throughout the Persigo area. Methods of collection and schedules of charges shall be applied uniformly among similar users throughout the Persigo area. In addition to any other rate or charge herein provided, the District shall pay or cause to be paid all applicable plant investment fees, and such other rates, tolls, charges or combinations thereof as the City may, from time to time, in the exercise of its lawful authority and pursuant to the system agreements impose.

(2004 Intergovernmental Agreement (MCA 2004-029) § 3.1)

45.16.150 Rates and charges – Established.

Rates for wastewater service shall be established by the joint action of the City Council and the Board of County Commissioners, pursuant to the system agreements.

(2004 Intergovernmental Agreement (MCA 2004-029) § 3.2)

45.16.160 Joint system fees and charges.

The District grants and delegates to the City all of the District's power and authority deemed necessary by the City to impose and collect the joint system's fees and charges, including charges for sewer taps and other purposes within the contract service area. This section shall not be construed to limit in any manner the District's powers to impose and collect its own fees and charges.

(2004 Intergovernmental Agreement (MCA 2004-029) § 3.3)

45.16.170 Plant investment fees.

The District shall require the users within its contract service area to pay the City's plant investment fees and other charges and wastewater service rates. The District grants and delegates to the City all of the District's power and authority for the City to enforce collection of such rates and charges in the same manner as it employs generally throughout the Persigo area.

(2004 Intergovernmental Agreement (MCA 2004-029) § 3.4)

45.16.180 Conveyance of pump stations and pipelines.

By special warranty deed and bill of sale of even date herewith, the District transfers and conveys to the City for the benefit of the Persigo 201 sewer system, for the purposes of this agreement, all of its wastewater pump stations, and all underground pipelines having a diameter of 10 inches or larger, together with (a) all manholes and other surface and subsurface appurtenances thereto, (b) all easements and rights-of-way covering or accommodating the same, and (c) fee title held by the District in all parcels of real property upon which any such facilities are located.

(2004 Intergovernmental Agreement (MCA 2004-029) § 4.1)

45.16.190 Improvements.

In consideration of payments made to the City by the District customers under prior agreements and the provisions of this agreement, the receipt and sufficiency whereof is acknowledged, the City shall pay for

and shall make all improvements necessary to bring the collection system up to the standards applicable generally within the Persigo area.

(2004 Intergovernmental Agreement (MCA 2004-029) § 4.2)

45.16.200 District findings.

Based upon the City's representations that it is able and willing to supply the District with all of the wastewater service for the full development of the District's contract service area, the District finds that the making of this agreement will provide for satisfactory, uniform and dependable service available for current and future use within its contract service area, and is in the best interests of the users within its contract service area.

(2004 Intergovernmental Agreement (MCA 2004-029) § 4.3)

45.16.210 Binding assignment of rights.

No assignment by either party of its rights under this agreement shall be binding on the other unless the other party shall have assented to such assignment with the same formality as employed in the execution of this agreement.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.1)

45.16.220 Waiving of rights.

No party shall waive its rights hereunder by failing to exercise its rights; any such failure shall not affect the right of such party to exercise at some future time the rights not previously exercised.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.2)

45.16.230 Remedies.

None of the remedies provided for under this agreement need to be exhausted or exercised as a prerequisite to either party's pursuit of further relief to which it may be entitled.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.3)

45.16.240 Obligations unaffected by amendment to State laws.

The benefits and obligations created by this agreement shall not be modified by amendment to the Constitution or the laws of the State of Colorado; provided, however, that in the event that the General Assembly or an amendment to the Colorado Constitution lawfully places the joint system under the jurisdiction of the Public Utilities Commission, the City's obligations hereunder shall cease. Nothing in this section, however, shall be construed as a waiver by the District of any rights it may have to continued wastewater service arising outside of this agreement.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.4)

45.16.250 City exercise of rights.

The City shall have the authority to exercise all rights with respect to the collection system in order to use the collection system to serve or contribute to the service of any lands within the Persigo area, consistent with the rules and regulations.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.5)

45.16.260 Material breach of agreement.

If the District commits a material breach of this agreement and the City gives the District written notice specifying the particular material breach, the District shall have such time as provided in the notice, which time shall be reasonably sufficient to permit the District to cure the noticed material breach but in

no event no less than 90 days. In the event that the District fails to correct such breach within the time provided in the notice, or if more than the time provided in the notice is reasonably required to cure such matter complained of, if the District shall fail to commence to correct the same within said period or shall thereafter fail to prosecute the same to completion with reasonable diligence, the City, without obligation to the District or any person claiming by, through or under the District, may take such steps as it may deem necessary to cure or remedy the breach. The District agrees to reimburse the City for all fees and expenses incurred by the City in correcting the default or defaults. The 90-day notice provision of this section shall not apply if the City determines that the breach will probably result in an immediate health hazard or harm to persons or property, in which case the City may unilaterally implement such cure or remedy upon hand delivery of written notice of the breach and description of the harm that is probable to result. The term “material breach” shall include, but not be limited to, failure by the District to continue to exist as a Title 32 quasi-municipal corporate entity, an unauthorized extension of wastewater service, and other actions or inactions which could cause a health hazard or harm to persons or property.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.6)

45.16.270 Actions to dissolve District.

The District shall not assert this agreement as a defense to any action seeking to dissolve the District pursuant to C.R.S. § 32-1-701 et seq., as amended.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.7)

45.16.280 Term.

This agreement shall remain in force until terminated by mutual written agreement or pursuant to the provisions hereof.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.8)

45.16.290 Interpretation.

This agreement shall be construed and enforced as the fully integrated expression of the parties’ agreement with respect to the matters addressed.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.9)

45.16.300 Express or implied covenants.

No express or implied covenant not specifically set forth shall be a part of this agreement.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.10)

45.16.310 Representations inducing entering into agreement.

The parties expressly aver that no representations other than those specifically set forth in this agreement have been relied upon by either party to induce it to enter into this agreement.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.11)

45.16.320 Superseding of prior agreements.

This agreement supersedes and replaces in their entirety all prior agreements between the City and the District for sanitary sewer service.

(2004 Intergovernmental Agreement (MCA 2004-029) § 5.12)

Chapter 45.20**ORCHARD MESA SANITATION DISTRICT TOTAL SERVICE AGREEMENT**

Sections:

- 45.20.010 Generally.
- 45.20.020 Definitions.
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- 45.20.300 Express or implied covenants.
- 45.20.310 Representations inducing entering into agreement.
- 45.20.320 Superseding of prior agreements.

Cross-reference – Chapter 45.08 GJMC.

45.20.010 Generally.

This agreement is made and entered into as of the eighth day of March, 2004, by and among the City of Grand Junction, State of Colorado (the “City”), as manager and operator of the wastewater collection, transmission and treatment system more fully described below (the “joint system”), the County of Mesa (the “County”) as a participant in the joint system with the City, and the Orchard Mesa Sanitation District, Mesa County, Colorado, a quasi-municipal corporation and political subdivision of the State of Colorado (“District”).

- (a) Whereas, each party is authorized by law to furnish sanitary sewer services and has the means to perform the same; and
- (b) Whereas, each party is authorized by the provisions of Article XIV, Section 18, Colorado Constitution, and C.R.S. § 29-1-201, et seq., to enter into contracts with other local governments for the performance of functions which it is authorized by law to perform on its own; and

- (c) Whereas, the City and the County, have, pursuant to that agreement dated October 13, 1998 (the “system agreement”), established the joint system in order to provide for the collection, transmission and treatment of wastewater from and within an extensive area described in the system agreement as the “Persigo area”; and
- (d) Whereas, the District is located within the Persigo area and has utilized the joint system to transmit wastewater flows from its system to the joint system treatment works for treatment but has prior to the date of this agreement owned, operated and maintained the collection and transmission system within its legal boundaries; and
- (e) Whereas, the District now desires to contract with the City as the manager and operator of the joint system for complete wastewater services as set forth in this agreement;

Now, therefore, in consideration of the premises and the covenants and agreements hereinafter set forth, it is agreed by and among the parties as follows in this chapter.

(2004 Intergovernmental Agreement (MCA 2004-030))

45.20.020 Definitions.

For the purposes of this agreement, the following terms shall have the following meanings:

City shall mean the City of Grand Junction, in its capacity as manager and operator of the joint system, and any authorized person or entity acting on its behalf in such capacity. Pursuant to the system agreement, when reference is made to the City as owner of, or owning, pipes and related facilities that are components of the joint system, the parties acknowledge that the City accepts and holds title to pipes and related facilities of the joint system in the name and style of “the City of Grand Junction, Colorado, for the benefit of the Persigo 201 sewer system.”

Collection system shall refer to the pipes and related appurtenances for the collection and transmission of wastewater within the District’s contract service area. In general, the collection system will be owned by the City for the benefit of the Persigo 201 sewer system, but certain facilities in place prior to the City’s provision of wastewater service pursuant to this agreement shall be owned by the District under the terms of this agreement.

Contract service area shall mean the presently existing legal boundaries of the District together with any amendments to those boundaries within the Persigo area accomplished in accordance with the terms and provisions of this agreement.

District shall refer to the Orchard Mesa Sanitation District and any authorized representative thereof.

Joint system shall have the same definition as contained in the Persigo contract.

Persigo area shall mean the outer geographical boundaries of the 201 service area as contemplated and defined in the system agreements, which the joint system serves.

Rules and regulations shall mean the operating rules and design standards promulgated by the City to govern the design, construction, operation, maintenance and use of the joint system, including the rates, fees, tolls and charges imposed from time to time, including future modifications thereto.

Sewer tap shall mean a physical connection to the collection system which effects wastewater service to the connected premises.

(2004 Intergovernmental Agreement (MCA 2004-030) § 1)

45.20.030 Complete wastewater service.

The City shall furnish all service necessary to effect full and complete sanitary sewer service to all lands within the District's contract service area, including the full development and any redevelopment of any and all such lands in accordance with applicable law.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.1)

45.20.040 Maintenance.

Wastewater service furnished by the City under this agreement shall be provided in a manner uniform and consistent with that provided to customers throughout the Persigo area. To the extent the City determines that maintenance of the collection system is necessary to the furnishing of wastewater service under this agreement, the City agrees to maintain or replace all portions of the collection system it owns or which come under its dominion. The City agrees to construct, maintain, replace and keep inventory of such additional physical facilities as the City deems necessary.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.2)

45.20.050 Authority.

The District represents that it has authority to use, connect, disconnect, modify, renew, extend, enlarge, replace, convey, abandon or otherwise dispose of the pipes and other facilities, including pump stations, for providing wastewater service to users within its contract service area, and grants to the City all such authority deemed necessary by the City to perform its obligations under this agreement. The District hereby delegates to the City, and the City hereby accepts administrative, managerial and enforcement authority concerning the District pretreatment program as applied to industrial users of the joint system. The City will act as the District's agent in pretreatment matters to the extent necessary to allow direct regulatory and health-related control by the City over industrial users within the District. All additions to the collection system installed or replaced by the City within the District's contract service area shall be owned by the City. The District shall not exercise any dominion over any of its wastewater facilities that is in any way inconsistent with the exercise or performance by the City of its rights and obligations.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.3)

45.20.060 Sewer taps.

The City shall not make any sewer tap within the contract service area or issue any approval or license for attachment to the collection system within the contract service area except upon written authorization of the District. Upon receipt of written authorization by the District, the City shall make the necessary taps in the regular course of its business. The District shall be fully liable to the City for unreported connections, including payment of all charges thereon. No new sewer taps may be made to the collection system which would impair the capacity of the joint system to furnish wastewater service in accordance with the rules and regulations.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.4)

45.20.070 Enforcement – Service disconnection.

Each of the parties to this agreement recognizes in the other the right to enforce its rules and the terms of this agreement by interrupting or disconnecting wastewater flows from the premises of those who violate the rules of either party or this agreement. Neither party shall interfere with the other in the enforcement of its rules or this agreement. Neither party shall restore any service connection after the same has been interrupted or disconnected by the other in the course of enforcing its rules or the terms of this agreement, except upon written authority of the party causing the interruption or disconnection of service. Each party agrees to provide oral or written notice to the other prior to interrupting or disconnecting any service con-

nection, except when disconnection is made by either solely for reason of delinquency in payment for charges or to prevent an immediate threat to public health or safety.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.5)

45.20.080 Rules and regulations.

Wastewater service furnished under this agreement shall be governed by the rules and regulations and the system agreements. Future amendments or modifications to the rules and regulations shall be binding on the District unless the District objects thereto in writing within 30 days after the adoption of such amendment or modification and the Board of County Commissioners and the City Council, acting jointly pursuant to the system agreements, determine to repeal or reject the proposed amendment(s) and/or modification(s). The rules and regulations shall be applied uniformly and equitably throughout the Persigo area. The City may require the installation of additional wastewater service facilities at the expense of the customer requiring service in accordance with the rules and regulations. The District retains the full right to make and enforce rules, not inconsistent with the rules and regulations, to govern use of the collection system use within its contract service area. The District agrees to exercise its rule-making, fee-setting and other powers to assist the City in enforcing the rules and regulations.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.6)

45.20.090 Public rights-of-way – Easement acquisition.

The District warrants that all portions of the collection system it owns or controls are in public rights-of-way or easements it now owns, that its rights-of-way and easements are free and clear of all liens and encumbrances, and that title to all such rights-of-way and easements is adequately granted or dedicated to or vested in the District in documents recorded in the real property records of the Mesa County Clerk and Recorder. Where a portion of the collection system owned or controlled by the District is located on private property, or the District's easement is insufficient in size, the District agrees to acquire at its expense such easements as may be reasonably required by the City.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.7)

45.20.100 Expansion of contract service area.

The District may not expand its contract service area without the express written approval of the City, in its unfettered discretion.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.8)

45.20.110 Refusal to accept wastewater flows.

The City reserves the right to refuse to accept wastewater flows from any premises when the same would impose unreasonable risk of a health hazard or other harm to the joint system.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.9)

45.20.120 Clean Water Act compliance.

The wastewater service to be furnished by the City shall comply with the federal Clean Water Act and any and all other applicable regulations.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.10)

45.20.130 Disconnection from joint system.

The damage to the joint system if the District disconnects from the joint system shall be not less than the reproduction cost of any of the joint system's facilities which are rendered useless by such disconnection and which must be replaced in order to serve customers outside the contract service area. The District

agrees to pay the damages described in this section immediately upon the occurrence of such disconnection.

(2004 Intergovernmental Agreement (MCA 2004-030) § 2.11)

45.20.140 Rates and charges – Collection.

For the wastewater services provided by the joint system, the City shall be paid by the users within the District's contract service area the rates, fees, tolls and charges calculated in accordance with the system agreements, which shall be the same as all such rates and charges imposed and collected generally throughout the Persigo area. Methods of collection and schedules of charges shall be applied uniformly among similar users throughout the Persigo area. In addition to any other rate or charge herein provided, the District shall pay or cause to be paid all applicable plant investment fees, and such other rates, tolls, charges or combinations thereof as the City may, from time to time, in the exercise of its lawful authority and pursuant to the system agreements impose.

(2004 Intergovernmental Agreement (MCA 2004-030) § 3.1)

45.20.150 Rates and charges – Established.

Rates for wastewater service shall be established by the joint action of the City Council and the Board of County Commissioners, pursuant to the system agreements.

(2004 Intergovernmental Agreement (MCA 2004-030) § 3.2)

45.20.160 Joint system fees and charges.

The District grants and delegates to the City all of the District's power and authority deemed necessary by the City to impose and collect the joint system's fees and charges, including charges for sewer taps and other purposes within the contract service area. This section shall not be construed to limit in any manner the District's powers to impose and collect its own fees and charges.

(2004 Intergovernmental Agreement (MCA 2004-030) § 3.3)

45.20.170 Plant investment fees.

The District shall require the users within its contract service area to pay the City's plant investment fees and other charges and wastewater service rates. The District grants and delegates to the City all of the District's power and authority for the City to enforce collection of such rates and charges in the same manner as it employs generally throughout the Persigo area.

(2004 Intergovernmental Agreement (MCA 2004-030) § 3.4)

45.20.180 Conveyance of pump stations and pipelines.

By special warranty deed and bill of sale of even date herewith, the District transfers and conveys to the City for the benefit of the Persigo 201 sewer system, for the purposes of this agreement, all of its wastewater pump stations, and all underground pipelines having a diameter of 10 inches or larger, together with (a) all manholes and other surface and subsurface appurtenances thereto, (b) all easements and rights-of-way covering or accommodating the same, and (c) fee title held by the District in all parcels of real property upon which any such facilities are located.

(2004 Intergovernmental Agreement (MCA 2004-030) § 4.1)

45.20.190 Improvements.

In consideration of payments made to the City by the District customers under prior agreements and the provisions of this agreement, the receipt and sufficiency whereof is acknowledged, the City shall pay for

and shall make all improvements necessary to bring the collection system up to the standards applicable generally within the Persigo area.

(2004 Intergovernmental Agreement (MCA 2004-030) § 4.2)

45.20.200 District findings.

Based upon the City's representations that it is able and willing to supply the District with all of the wastewater service for the full development of the District's contract service area, the District finds that the making of this agreement will provide for satisfactory, uniform and dependable service available for current and future use within its contract service area, and is in the best interests of the users within its contract service area.

(2004 Intergovernmental Agreement (MCA 2004-030) § 4.3)

45.20.210 Binding assignment of rights.

No assignment by either party of its rights under this agreement shall be binding on the other unless the other party shall have assented to such assignment with the same formality as employed in the execution of this agreement.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.1)

45.20.220 Waiving of rights.

No party shall waive its rights hereunder by failing to exercise its rights; any such failure shall not affect the right of such party to exercise at some future time the rights not previously exercised.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.2)

45.20.230 Remedies.

None of the remedies provided for under this agreement need to be exhausted or exercised as a prerequisite to either party's pursuit of further relief to which it may be entitled.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.3)

45.20.240 Obligations unaffected by amendment to State laws.

The benefits and obligations created by this agreement shall not be modified by amendment to the Constitution or the laws of the State of Colorado; provided, however, that in the event that the General Assembly or an amendment to the Colorado Constitution lawfully places the joint system under the jurisdiction of the Public Utilities Commission, the City's obligations hereunder shall cease. Nothing in this section, however, shall be construed as a waiver by the District of any rights it may have to continued wastewater service arising outside of this agreement.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.4)

45.20.250 City exercise of rights.

The City shall have the authority to exercise all rights with respect to the collection system in order to use the collection system to serve or contribute to the service of any lands within the Persigo area, consistent with the rules and regulations.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.5)

45.20.260 Material breach of agreement.

If the District commits a material breach of this agreement and the City gives the District written notice specifying the particular material breach, the District shall have such time as provided in the notice, which time shall be reasonably sufficient to permit the District to cure the noticed material breach but in

no event no less than 90 days. In the event that the District fails to correct such breach within the time provided in the notice, or if more than the time provided in the notice is reasonably required to cure such matter complained of, if the District shall fail to commence to correct the same within said period or shall thereafter fail to prosecute the same to completion with reasonable diligence, the City, without obligation to the District or any person claiming by, through or under the District, may take such steps as it may deem necessary to cure or remedy the breach. The District agrees to reimburse the City for all fees and expenses incurred by the City in correcting the default or defaults. The 90-day notice provision of this section shall not apply if the City determines that the breach will probably result in an immediate health hazard or harm to persons or property, in which case the City may unilaterally implement such cure or remedy upon hand delivery of written notice of the breach and description of the harm that is probable to result. The term "material breach" shall include, but not be limited to, failure by the District to continue to exist as a Title 32 quasi-municipal corporate entity, an unauthorized extension of wastewater service, and other actions or inactions which could cause a health hazard or harm to persons or property.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.6)

45.20.270 Actions to dissolve District.

The District shall not assert this agreement as a defense to any action seeking to dissolve the District pursuant to C.R.S. § 32-1-701 et seq., as amended.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.7)

45.20.280 Term.

This agreement shall remain in force until terminated by mutual written agreement or pursuant to the provisions hereof.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.8)

45.20.290 Interpretation.

This agreement shall be construed and enforced as the fully integrated expression of the parties' agreement with respect to the matters addressed.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.9)

45.20.300 Express or implied covenants.

No express or implied covenant not specifically set forth shall be a part of this agreement.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.10)

45.20.310 Representations inducing entering into agreement.

The parties expressly aver that no representations other than those specifically set forth in this agreement have been relied upon by either party to induce it to enter into this agreement.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.11)

45.20.320 Superseding of prior agreements.

This agreement supersedes and replaces in their entirety all prior agreements between the City and the District for sanitary sewer service.

(2004 Intergovernmental Agreement (MCA 2004-030) § 5.12)

