

5.0 MITIGATION STRATEGY

Hazard mitigation, as defined by the Disaster Mitigation Act of 2000, is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. The development of a mitigation strategy allows the community to create a vision for preventing future disasters, establish a common set of mitigation goals, prioritize actions, and evaluate the success of such actions.

Specific mitigation goals and projects were developed for Lewis and Clark County by the Planning Team and reviewed and enhanced at the public meetings. A matrix developed for project ranking emphasizing cost-benefit and input from local officials was used to determine project prioritization. Project implementation is discussed at the conclusion of this section. **Appendix D** contains supporting documentation for the Mitigation Strategy including: example mitigation projects, and a mitigation action plan with individual project worksheets.

The mitigation strategy in this PDM Plan update has been expanded to include several additional hazards beyond what was developed in the 2005 plan. **Appendix D** presents a table summarizing the status of the 2005 mitigation strategy, identifying new and completed projects, and reconciling projects that were not carried forward to the 2011 strategy.

5.1 HAZARD MITIGATION GOALS

The PDM Plan goals describe the overall direction that Lewis and Clark County can take to work toward mitigating risk from natural and man-made hazards and avoid long-term vulnerabilities to these hazards. Mitigation goals for this plan are listed below. No goal was developed to mitigate the railroad accident hazard at this time.

- Goal 1 – Reduce the Impacts from Wildfire
- Goal 2 - Reduce the Impacts from Earthquakes
- Goal 3 – Reduce the Impacts from Structure Fires
- Goal 4 – Reduce the Impacts from Flooding
- Goal 5 - Reduce the Impacts from Hazardous Material Incidents
- Goal 6 - Reduce the Impacts from Dam Failure
- Goal 7 - Reduce the Impacts from Severe Summer Weather
- Goal 8 - Reduce the Impacts from Severe Winter Weather
- Goal 9 - Reduce the Impacts from All Hazards

5.2 IDENTIFICATION AND ANALYSIS OF MITIGATION OBJECTIVES AND ACTIONS

The Planning Team reviewed a wide range of mitigation projects prior to determining what actions to include in the Lewis and Clark County PDM Plan (**Appendix D**). Particular attention was given to new and

existing buildings and infrastructure, and developing appropriate mitigation strategies for these facilities. Prior to analyzing and prioritizing the mitigation actions, projects were grouped under the following objectives.

- Prevention
- Property Protection
- Public Education and Awareness
- Natural Resource Protection
- Structural Projects
- Emergency Services

Projects included in the 2011 Lewis and Clark County mitigation strategy are presented in **Table 5.4-1**.

The Lewis and Clark County Commissioners hired a consultant to develop a mitigation strategy to address impacts experienced during the June 2011 Presidential flood disaster. **Appendix D** presents these projects, which are hereby incorporated into this PDM Plan.

5.3 PROJECT RANKING AND PRIORITIZATION

Each of the proposed projects has value; however, time and financial constraints do not permit all projects to be implemented immediately. By prioritizing the actions, the most critical, cost effective projects can be achieved in the short term.

A cost-benefit matrix was developed to rank the mitigation projects using the following criteria. Each project was assigned a “high”, “medium”, or “low” rank for *Population Impacted*, *Property Impacted*, *Project Feasibility* and *Cost*, as described below:

- For the *Population Protected* category, a “high” rank represents greater than 50 percent of County residents would be protected by implementation of the mitigation strategy; a “medium” rank represents 20 to 50 percent of County residents would be protected; and, a “low” rank represents less than 20 percent of County residents would be protected.
- For the *Property Protected* category, a “high” represents that greater than \$500,000 worth of property would be protected through implementation of the mitigation strategy; “medium” represents that \$100,000 to \$500,000 worth of property would be protected; and, “low” would be less than \$100,000 would be protected.

- For the *Project Feasibility* category a “high” rank represent that technology is available and implementation is likely; a “medium” rank indicates technology may be available but implementation could be difficult; and, a “low” rank represents that no technology is available or implementation would be unlikely.
- For the *Project Cost* category, a “high” represents that the mitigation project would cost more than \$500,000; a “medium” rank represents the project cost would be between \$100,000 and \$500,000; and, “low” represents the project would cost less than \$100,000.

The overall cost-benefit was then calculated by summing the total score for each project. **Table 5.3-1** presents the cost-benefit scoring matrix. **Table 5.4-1** and the mitigation action plans in **Appendix D** present the scoring of each project.

TABLE 5.3-1 COST-BENEFIT SCORING MATRIX				
	Population Protected	Property Protected	Project Feasibility	Cost
High	3	3	3	1
Medium	2	2	2	2
Low	1	1	1	3

After considering all mitigation projects, the Planning Team prioritized the projects as high, medium, or low based on which projects were most needed to protect life and property. Prioritization of the projects serves as a guide for choosing and funding projects. **Table 5.4-1** and the mitigation action plans in **Appendix D** present the county priority for each project.

5.4 PROJECT IMPLEMENTATION

The Planning Team reviewed the projects and assigned a corresponding county/city department responsible for its implementation. Cooperating organizations for implementation may also include local, federal or regional agencies that are capable of implementing activities and programs. The Planning Team identified a schedule for implementation and potential funding sources. The schedule for implementation included several categories including: “on-going” for projects that are part of the County’s DES program; “short-term” for projects to be completed within 1-2 years; “mid-term” for projects to be completed within 3-4 years; “long-term” for projects to be completed in 5 or more years; and “Year 1-5” for projects which will span the entire planning period. Implementation details are shown in **Table 5.4-1** and in the mitigation action plans in **Appendix D**. Potential funding sources are discussed in *Section 6.3*. The Lewis and Clark County DES Coordinator will be responsible for mitigation project administration.

TABLE 5.4-1 LEWIS AND CLARK COUNTY MITIGATION STRATEGY						
Goal	Objective	Project	Ranking / Score County Priority	Responsible Agency / Department	Schedule	Potential Funding Source
Goal 1 - Reduce the Impacts from Wildfire	Objective 1.1 - Enhance Opportunities to Protect Property from Wildfire	1.1.1 - Continue grants programs for landowners to create survivable space. Areas of concern include: Douglas Circle Subdivision, Mountain Heritage Estates, Lincoln Area, Wolf Creek, Dearborn Area, Front Range, North Hills, Priest Pass, Colorado Gulch, Birdseye Area, Unionville/South Hills, Marysville, York, and Helena Open Space.	High / 11 points High Priority	Fire Districts, TCFSWG, Landowners	Ongoing	FEMA, DNRC (National Fire Plan Grants), BLM, USFS, RACs
		1.1.2 - Identify and perform on-going fuel reduction along evacuation routes to protect current and future residents	High / 10 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM	Ongoing	FEMA, DNRC, BLM, USFS, RACs
		1.1.3 - Encourage utility companies to perform fuel reduction along utility corridors	High / 12 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM	Ongoing	Utility Companies
		1.1.4 - Encourage development of fuel mitigation projects by other land management and fire protection entities (USFS, BLM, DNRC, Helena Fire Department, Fire Districts and Fire Service Fee Areas)	High / 12 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM, Helena Fire Dept.	Ongoing	County, FEMA, National Fire Plan
		1.1.5 - Support inter-agency collaboration on current and future fuel management projects.	High / 12 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM	Ongoing	TCFSWG
		1.1.6 - Encourage contiguity in fuel management projects so there will be no gaps in treatment.	High / 11 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM	Ongoing	TCFSWG
	Objective 1.2 - Provide Public Education and Awareness on Wildfire	1.2.1 - Continue education programs on wildfire to raise consciousness of current and future landowners	High / 12 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM, DES, Fire Depts., City & Co. CD & Planning	Ongoing	TCFSWG, BLM, USFS, DNRC, City, County
		1.2.2 - Provide education to current and future landowners on fuel mitigation along evacuation routes.	Medium/ 9 points High Priority	Fire Districts, DNRC, TCFSWG, USFS, BLM, DES, Fire Depts., City & Co. CD & Planning City & Co. Public Works	Ongoing	TCFSWG, BLM, USFS, DNRC, City, County
		1.2.3 - Promote evacuation planning for landowners	High / 12 points High Priority	Fire Districts, TCFSWG, DES, Fire Depts., City & County CD & Planning	Ongoing	TCFSWG, BLM, USFS, DNRC, City, County

TABLE 5.4-1 LEWIS AND CLARK COUNTY MITIGATION STRATEGY						
Goal	Objective	Project	Ranking / Score County Priority	Responsible Agency / Department	Schedule	Potential Funding Source
Goal 1 - Reduce the Impacts from Wildfire	Objective 1.3 - Implement Actions to Prevent Impacts from the Wildfire Hazard	1.3.1 - Consider strategies for county regulations (subdivision and others) that would require maintenance of fuel reduction projects in the WUI and enforcement.	High / 11 points High Priority	County CD & Planning, Commissioners	Year 1 – 5	County
		1.3.2 - Consider implementing zoning in the county for requiring fuel reduction in the WUI.	High / 11 points High Priority	Co. CD & Planning, Commissioners	Year 1 – 5	County
		1.3.3 - Consider implementing zoning in the county requiring fire-resistant building materials in the WUI.	High / 11 points High Priority	County CD & Planning, Commissioners	Year 1 – 5	County
	Objective 1.4 - Enhance Emergency Services to Mitigate Impacts from Wildfire	1.4.1 - Review implementation process for rural impact fees for fire protection in the WUI.	Medium / 9 points Medium Priority	County CD & Planning, Commissioners	Ongoing	County
Goal 2 - Reduce the Impacts from Earthquakes	Objective 2.1 - Provide Public Education and Awareness on Wildfire Mitigation	2.1.1 - Promote earthquake drills in Lewis & Clark County	Medium / 9 points High Priority	DES, School District, Local/State/Federal Agencies, Private Businesses	Ongoing	FEMA, County
	Objective 2.2 - Implement Structural Projects to Reduce Impact from Earthquakes	2.2.1 - Encourage homeowners to perform structural and non-structural retrofits on their homes.	Medium / 9 points Medium Priority	DES	Year 1 – 5	FEMA, Homeowners
		2.2.2 - Pursue structural and non-structural mitigation projects for schools, public, essential service (target hazard) facilities.	High / 10 points High Priority	DES, School District	Ongoing	FEMA, Schools
	Objective 2.3 - Enhance Opportunities to Protect Property from Earthquakes	2.3.1 - Promote non-structural projects at schools and critical facilities	High / 11 points Medium Priority	DES, Facility Managers	Year 1 – 5	FEMA, County
		2.3.2 - Perform structural analysis for LCC critical facilities and schools, as needed.	High / 10 points Medium Priority	DES, Facility Managers	Year 1 – 5	FEMA, County
	Goal 3 - Reduce the Impacts from Structure Fire	Objective 3.1 - Implement Actions to Prevent Structure Fire	3.1.1 - Explore the possibility of an ordinance requiring residential and commercial automatic fire sprinkler systems to protect current and future development.	High / 11 points Medium Priority	Fire Depts., Fire Districts, County CD & Planning, City Building Dept., Commissioners	Year 1 – 5
Objective 3.2 - Provide Public Education and Awareness on Structure Fire Mitigation		3.2.1 - Promote the need for emergency actions plans for special needs populations.	High / 10 points Medium Priority	DES, Fire Depts., Fire Districts, City-County Health Dept.	Ongoing	County, City of Helena, City of East Helena
		3.2.2 - Promote a public education program on the benefit of smoke detectors and automatic fire sprinkler systems.	High / 12 points High Priority	Fire Depts., Fire Districts, TCFSWG	Ongoing	County, City of Helena, City of East Helena
		3.2.3 - Educate the public about the value of structural fire fighting access on their property.	High / 11 points Medium Priority	Fire Depts., Fire Districts, TCFSWG	Year 1 – 5	County, Cities of Helena & East Helena, TCFSWG

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Goal	Objective	Project	Ranking / Score County Priority	Responsible Agency / Department	Schedule	Potential Funding Source
Goal 3 - Reduce the Impacts from Structure Fire	Objective 3.3 - Enhance Opportunities to Protect Property from Structure Fire	3.3.1 - Explore the possibility of strategically placing water sources to serve current and future residences in addition to individual subdivision wells.	High / 10 points High Priority	Fire Depts., Fire Districts, Co. CD & Planning, County Public Works	Short-range	Landowners
Goal 4 - Reduce the Impacts from Flooding	Objective 4.1 - Implement Actions to Prevent Impacts from Flooding	4.1.1 - Update flood regulations when DFIRMs are adopted to protect future development.	High / 12 points High Priority	Floodplain Administrator	Short-range	County
		4.1.2 - Enforce floodplain ordinances.	High / 12 points High Priority	Floodplain Administrator, Commissioners	Ongoing	County
		4.1.3 - Consider a new zoning ordinance that stipulates new homes built in the 500-year floodplain are not allowed to have basements.	Medium / 9 points Medium Priority	Floodplain Administrator, Commissioners, Co. CD & Planning	Short-range	County
		4.1.4 - Consider acquisition and/or elevation of homes in problem areas in the Helena Valley, relocation of residents, and creation of open space in this area which is repeatedly flooded.	Medium / 7 points High Priority	Floodplain Administrators	Long-range	County
		4.1.5 - Reroute Silver Creek around Sewell Subdivision	Medium / 7 points Low Priority	Floodplain Administrator, DES, County Public Works	Long-range	FEMA, County
		4.1.6 - Implement a policy for residential and non-residential approach permits which includes installation standards and enforcement	High / 12 points High Priority	Commissioners, Co. Public Works, County CD & Planning	Short-range	County
	Objective 4.2 - Provide Public Education and Awareness on Flooding	4.2.1 - Promote participation in the National Flood Insurance Program	High / 10 points High Priority	DES, Floodplain Administrator	Ongoing	County
		4.2.2 - Provide education to the communities on building in the floodplain.	High / 10 points High Priority	DES, Floodplain Administrator	Ongoing	County, City of Helena, City of East Helena
		4.2.3 - Educate county residents on what must be done to manage storm water in the community.	High / 10 points Medium Priority	City & County CD & Planning, City & County Public Works	Ongoing	County, City of Helena, City of East Helena
	Objective 4.3 - Implement Structural Projects to Reduce Impact of Flooding	4.3.1 - Install culverts for Ten Mile Creek south of Mill Rd and Forestvale	High / 10 points Medium Priority	County Public Works	Mid-range	FEMA, County
		4.3.2 - Construct retention pond east of Asarco	Medium / 8 points Low Priority	County Public Works	Long-range	FEMA, County
		4.3.3 - Explore the possibility of constructing a storm water system for the town of Lincoln	High / 10 points Medium-Low Priority	County Public Works	Long-range	County
		4.3.15 - Replace the bridge at McHugh Road with a larger structure	High / 10 points Medium-Low Priority	County Public Works	Long-range	FEMA, County

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Goal	Objective	Project	Ranking / Score County Priority	Responsible Agency / Department	Schedule	Potential Funding Source
Goal 4 - Reduce the Impacts from Flooding	Objective 4.3 - Implement Structural Projects to Reduce Impact of Flooding	4.3.5 - Improve Kmart retention ponds	High / 10 points Medium Priority	City of Helena Public Works	Long-range	FEMA, City of Helena
		4.3.6 - Construct detention pond in upper to middle reaches of Last Chance Gulch	Medium / 9 points Medium Priority	City of Helena Public Works	Long-range	FEMA, City of Helena
		4.3.7 - Construct detention pond in upper reaches of Davis Gulch	Medium / 8 points Low Priority	County & City of Helena Public Works	Long-range	FEMA, County
		4.3.8 - Increase carrying capacity of Prickly Pear Creek in East Helena	Medium / 7 points Medium Priority	East Helena Public Works	Mid- to Long-range	FEMA, City of East Helena
		4.3.9 - Install two 48" culverts on Stemple Pass Road in Lincoln to stop water from running over the road.	Medium / 9 points High Priority	County Public Works	Mid-range	FEMA, County
		4.3.10 - Replace four 36" culverts on Dalton Mt. Rd. in Lincoln with two box culverts. Size TBD.	Medium / 9 points High Priority	County Public Works	Mid-range	FEMA, County
		4.3.11 - Replace Elk Creek bridge in 13 miles southwest of Augusta which has been damaged from flood scour.	Medium / 7 points High Priority	County Public Works	Mid-range	FEMA, County
		4.3.12 - Review use of detention ponds to mitigate flooding at problem areas within the county.	High / 12 points High Priority	County Public Works	Ongoing	County
		4.3.13 - Identify and secure use of emergency retention ponds (i.e. Helena Sand & Gravel, Helena Trap Club, etc.)	High / 12 points High Priority	County Public Works	Ongoing	County
		4.3.14 - Identify where culverts are needed (i.e. Alfalfa Road in Helena Valley)	High / 12 points High Priority	City and County Public Works	Ongoing	County, Cities
Goal 5 - Reduce the Impacts from Hazardous Material Incidents	Objective 5.1 - Provide Public Education and Awareness on Hazardous Material Incidents	5.1.1 - Educate residents, teachers and school staff near hazardous material facilities and transportation routes on how to limit exposure to students during a hazardous material incident.	Medium / 9 points Medium Priority	DES, School District, Fire Depts., Fire Districts	Ongoing	County, Schools
	Objective 5.2 - Protect Property for Hazardous Material Incidents	5.2.1 - Revisit idea of an east-west corridor through Helena as a truck by-pass when Custer Interchange is completed.	High / 10 points Medium Priority	City CD & Planning, City of Helena Public Works, Helena Fire Dept., MDT	Year 1 – 5	MDT
Goal 6 - Reduce the Impacts from Dam Failure	Objective 6.1 - Provide Public Education and Awareness on Dam Failure	6.1.1 - Initiate a public awareness campaign aimed at educating people who live in dam inundation areas.	Medium / 8 points Medium Priority	DES	Long-range	County, DNRC
	Objective 6.2 - Prevent Property Damage from Dam Failure	6.2.1 - Consider changes to subdivision review for future development that takes into account change in dam hazard classification.	Medium / 9 points Medium Priority	DES, Commissioners	Year 1 – 5	County, DNRC

TABLE 5.4-1 LEWIS AND CLARK COUNTY MITIGATION STRATEGY						
Goal	Objective	Project	Ranking / Score County Priority	Responsible Agency / Department	Schedule	Potential Funding Source
Goal 6 - Reduce the Impacts from Dam Failure	Objective 6.3 - Enhance Emergency Services to Mitigate Impacts from Dam Failure	6.3.1 - Promote installation of early warning systems on high hazard dams to interface with dispatch.	Medium / 9 points Medium Priority	DES, Dam Owners	Long-range	Dam Owners
Goal 7 - Reduce the Impacts from Severe Summer Weather	Objective 7.1 - Enhance Opportunities to Protect Property from Severe Summer Weather	7.1.1 - Install shatter-proof film on windows of critical facilities and schools.	High / 10 points Low Priority	DES, School District	Long-range	FEMA, County, Schools
		7.1.2 - Promote the use of hurricane clips for buildings vulnerable to high winds (Augusta area).	Medium / 9 points Low Priority	DES	Long-range	FEMA, County
	Objective 7.2 - Provide Public Education and Awareness on Severe Summer Weather	7.2.1 - Participate in National Weather Service Severe Weather Week.	High / 10 points High Priority	DES, NWS	Short-range	County, NWS
Goal 8 - Reduce the Impacts from Severe Winter Weather	Objective 8.1 - Provide Public Education and Awareness on Severe Winter Weather	8.1.1 - Prepare a guidebook for special needs populations on winter weather survival.	Medium / 8 points Low Priority	DES	Long-range	County
		8.1.2 - Require installation of address plaques at proper height for rescue purposes.	Medium / 7 points High Priority	DES, Fire Districts, County CD & Planning	Ongoing	County
	Objective 8.2 - Enhance Emergency Services to Mitigate Impacts from Severe Winter Storms	8.2.1 - Obtain generators for critical infrastructure	Medium / 7 points High Priority	DES	Year 1 – 5	County, GSA
	Objective 8.3 - Enhance Opportunities to Protect Property from Severe Winter Weather	8.3.1 - Work with power companies to identify powerlines which should be buried to mitigate interruption of service.	Medium / 8 points Medium Priority	DES, Utility Companies	Long-range	FEMA, Utility Companies
		8.3.2 - Install air flow spoilers on powerlines in areas vulnerable to heavy snow loads.	High / 10 points Medium Priority	DES, Utility Companies	Long-range	FEMA, Utility Companies
Goal 9 - Reduce the Impacts from All Hazards	Objective 9.1 - Enhance Emergency Services to Mitigate Impacts from All Hazards	9.1.1 - Obtain NOAA radios for critical infrastructure	Medium / 8 points Medium Priority	DES	Long-range	County, NWS
		9.1.2 - Enhance GIS data to better to assist with mitigation.	High / 10 points Medium Priority	DES, County GIS	Mid-range	FEMA, County
		9.1.3 - Negotiate with NOAA to get an antenna for residents of Augusta to receive weather radio broadcasts.	Medium / 9 points Medium Priority	DES	Long-range	FEMA, County, NOAA

Notes: DES = Lewis & Clark County Disaster and Emergency Services; USFS = U.S. Forest Service; BLM = Bureau of Land Management; NWS = National Weather Service; DNRC = Montana Department of Natural Resources and Conservation; FEMA = Federal Emergency Management Agency; TCFSWG = Tri-County FireSafe Working Group; Co. CD & Planning = County Community Development and Planning Department; City CD & Planning = City of Helena Community Development and Planning Department; NOAA = National Oceanic and Atmospheric Administration; GIS = Geographic Information Systems.

6.0 CAPABILITY ASSESSMENT

Lewis and Clark County's capabilities to implement mitigation projects include community planners, engineers, floodplain managers, GIS personnel, emergency managers, and financial, legal and regulatory requirements (zoning, building codes, subdivision regulations, and floodplain management ordinances). These resources have the responsibility to provide overview of past, current, and ongoing pre- and post-disaster mitigation planning projects including capital improvement programs, wildfire mitigation programs, stormwater management programs, and NFIP compliance projects. The goals and objectives used to mitigate natural and technological hazards builds on the community's existing capabilities.

6.1 DISASTER AND EMERGENCY SERVICES

Lewis and Clark County DES: 1) plans, organizes and manages the county emergency preparedness program; 2) evaluates, improves and promotes comprehensive disaster planning efforts; 3) organizes and facilitates effective operation of multi-jurisdiction, multi-discipline work groups and task forces; 4) promotes interagency coordination; and 5) develops and reviews policies, contracts and interagency agreements. These efforts are designed to enhance the capacity of the local government to plan for, respond to, and mitigate the consequences of threats and disasters using an all-hazard framework.

The Lewis and Clark County DES office has a staff of two including a full-time DES Coordinator and a full-time Wildfire Mitigation Project Manager, whose salaries are both federally-funded. The county also has a full-time grants coordinator who is available to secure funding for mitigation projects.

6.2 LOCAL EMERGENCY PLANNING COMMITTEE

The mission of the Lewis and Clark County Local Emergency Planning Committee is to provide resources and guidance to the community through education, coordination and assistance in hazmat planning; and to assure public health and safety. They do not function in actual emergency situations, but attempt to identify and catalogue potential hazards, identify available resources, and mitigate hazards when feasible. The LEPC consists of representatives from businesses, local government, emergency responders and citizen groups located in Lewis and Clark County. Monthly meetings are held on the 3rd Thursday of every other month at the DES office in Helena.

6.3 TRI-COUNTY FIRESAFE WORKING GROUP

Lewis and Clark County participates in the Tri-County FireSafe Working Group. Membership includes individual citizens, local government, state and federal agencies, interested contractors, and fire suppression departments from the counties. The group has had the primary mission of fire prevention education and helping homeowners survive a wildland residential interface fire. Much of the group's efforts are directed toward educating homeowners about reducing and managing fuel buildup, building

and maintaining adequate road systems, providing adequate water supplies, and the use of fire-resistant materials and designs for homes and outbuildings. The group meets on a monthly basis.

6.4 FUNDING OPPORTUNITIES

Although a number of the mitigation projects listed in **Table 5.2-1** may not be eligible for FEMA funding, Lewis and Clark County may secure alternate funding sources to implement these projects in the future including federal and state grant programs, and funds made available through the County. Alternate funding sources may include the following:

U.S. Department of Housing and Urban Development, Community Development Block Grants (CDBG).

The CDBG program is a flexible program that provides communities with resources to address a wide range of unique community development needs. CDBG money can be used to match FEMA grant money. More Information:

<http://www.hud.gov/offices/cpd/communitydevelopment/programs/>

U.S. Bureau of Land Management, Rural Fire Assistance Program. BLM provides funds to rural fire department for wildfire fighting; also provides wildland fire equipment, training and/or prevention materials. More Information:

http://199.134.225.50/nwcc/t2_wa4/pdf/RuralAssistance.pdf

U.S. Department of Homeland Security. Enhances the ability of states, and local jurisdictions, and other regional authorities in the preparation, prevention, and response to terrorist attacks and other disasters, by distributing grant funds. Localities can use grants for planning, equipment, training and exercise needs. These grants include, but are not limited to areas of Critical Infrastructure Protection Equipment and Training for First Responders, and Homeland Security Grants. More information:

<http://www.dhs.gov/dhspublic/>

FEMA, Hazard Mitigation Grant Program (HMGP). The HMGP provides grants to States, Indian Tribes, local governments, and private non-profit organizations to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

More information: <http://www.fema.gov/government/grant/hmgrp/>

FEMA, Pre-Disaster Mitigation Competitive (PDMC) Grant Program. The PDM program provides funds to states, territories, and local governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on

funding from actual disaster declarations. PDMC grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds.

More information: <http://www.fema.gov/government/grant/pdm/index.shtm>

National Fire Plan, State Fire Assistance Hazard Mitigation Program. These special state Fire Assistance funds are targeted at hazardous fuel treatments in the wildland-urban interface. Recipients include state forestry organization, local fire services, county emergency planning committees and private landowners. More information:

http://www.fs.fed.us/r1-r4/spf/coopfire_assistance.html

Fire Management Assistance Program is authorized under Section 420 of the Stafford Act. It allows for the mitigation, management, and control of fires burning on publicly or privately owned forest or grasslands that threaten destruction that would constitute a major disaster.

More information: <http://www.fema.gov/government/grant/fmagp/index.shtm>

U.S. Department of Agriculture, Community Facilities Loans and Grants. Provides grants (and loans) to cities, counties, states and other public entities to improve community facilities for essential services to rural residents. Projects can include fire and rescue services; funds have been provided to purchase fire-fighting equipment for rural areas. No match is required.

More information: http://www.rurdev.usda.gov/HCF_CF.html; or local Rural Development office.

General Services Administration, Sale of Federal Surplus Personal Property. This program sells property no longer needed by the federal government. The program provides individuals, businesses and organizations the opportunity to enter competitive bids for purchase of a wide variety of personal property and equipment. Normally, there are no restrictions on the property purchased. More information: <http://www.govsales.gov/html/index.htm>

FEMA, Readiness, Response and Recovery Directorate, Fire Management Assistance Grant Program. Program provides grants to states and local governments and local governments for the mitigation, management and control of any fire burning on publicly (non-federal) or privately owned forest or grassland that threatens such destruction as would constitute a major disaster. The grants are made in the form of cost sharing with the federal share being 75 percent of total eligible costs. Grant approvals are made within 1 to 72 hours from time of request.

More information: <http://www.fema.gov/government/grant/fmagp/index.shtm>

Hazardous Materials Emergency Preparedness Grants. Grant funds will be passed through to local emergency management offices and HazMat teams having functional and active LEPC groups. More information: <http://www.phmsa.dot.gov/hazmat/grants>

7.0 PLAN MAINTENANCE PROCEDURES

The plan maintenance section of this document details the formal process that will ensure that the Lewis and Clark County PDM Plan remains an active and relevant document. The maintenance process includes a schedule for monitoring and evaluating the plan and producing a plan revision every five years. The plan can be revised more frequently than five years if the conditions under which it was developed change significantly (e.g. a major disaster occurs and projects are accomplished and/or new projects need to be identified, or funding availability changes). This section also describes how the County will monitor the progress of mitigation activities and be incorporated into existing planning mechanisms. The final section describes how the County will integrate public participation throughout the plan maintenance process.

7.1 MONITORING, EVALUATING AND UPDATING THE PLAN

7.1.1 2005 PDM Plan

The 2005 PDM Plan was neither monitored nor evaluated since it was developed and adopted. Mitigation projects were completed during this period (as discussed in Section 7.2.1, below); however, the plan was not discussed for relevance since its inception. Lewis and Clark County submitted a planning grant to FEMA in 2008 to update both their PDM Plan and CWPP; however, the grant was not approved because the CWPP component was not eligible. Lewis and Clark County re-applied for the planning grant in 2009 requesting funding for just the PDM Plan update and this funding was approved.

7.1.2 2011 PDM Plan

The PDM Plan should be reviewed annually at meetings of the LEPC and Tri-County FireSafe Working Group. These reviews may be more or less frequent, as deemed necessary by the DES Coordinator, but there will be a minimum of one review per year. The review should determine whether a plan update is needed prior to the required five-year update. The plan review should consider any new hazards and vulnerabilities as well as document completed mitigation projects, identify new mitigation projects and evaluate mitigation priorities.

The DES Coordinator and/or Deputy will be responsible for ensuring the PDM Plan review is on the agendas at the LEPC and Tri-County FireSafe Working Group meetings so that applicability of the plan can be evaluated. The DES Coordinator/Deputy should prepare a status report summarizing the outcome of the plan review and the minutes should be made available to interested stakeholders and kept in a permanent file designated for the next (2016) PDM Plan update.

Three years after adoption of the plan, the DES Coordinator may apply for a planning grant through FEMA to start the updating of the PDM Plan. Upon receipt of funding, the county may solicit bids in accordance with applicable contracting procedures and hire a contractor to assist with the project. The

proposed schedule for completion of the plan update is one year from award of a contract, to coincide with the five-year adoption date of the original PDM Plan.

The DES Coordinator will be responsible for the plan update. Before the end of the five-year period, the updated plan will be submitted to FEMA for approval. When concurrence is received that the updated plan complies with FEMA requirements, it will be submitted to the Board of County Commissioners and Mayors/City Commissions for adoption. The DES Coordinator will send an e-mail to individuals and organizations on the stakeholder list to inform them that the updated plan is available on the county website.

7.2 MONITORING PROGRESS OF MITIGATION ACTIVITIES

7.2.1 2005 PDM Plan

Since development of the 2005 PDM Plan, a number of mitigation activities were completed in Lewis and Clark County. The projects focused on three hazards: earthquake, wildfire, and flooding. Completed earthquake projects include installing 3-mil shatterproof film on windows in the schools, and an education program in the schools and communities on earthquake safety. Completed wildfire projects include numerous fuel reduction projects to protect infrastructure and create survivable space, and a public education program on wildfire mitigation. Flood projects completed since 2005 include: a new bridge in East Helena (Wylie Drive) and installation of larger culverts at several locations; revision to the 1985 floodplains in the Helena Valley; status as a NWS Storm Ready Community; and, enrollment in the NFIP Community Rating System. In 2010, the Lewis and Clark County Emergency Operations Plan was updated and hazard-specific annexes were reviewed and revised. The DES Coordinator and Deputy have monitored completion of these activities; however, the 2005 PDM Plan did not outline a specific process to track the initiation, status, and completion of mitigation activities.

7.2.2 2011 PDM Plan

The process for monitoring and evaluating mitigation projects will be the responsibility of the LEPC and Tri-County FireSafe Working Group. These groups are comprised of dedicated individuals from county and city departments, emergency response entities, local businesses, and non-profit organizations to engage in all aspects of emergency management. These groups have accepted the responsibility for implementing mitigation projects on behalf of their jurisdiction and annual meetings will provide a venue for reporting and accountability. Minutes should be prepared from these meetings and should be distributed to interested stakeholders as well as kept in a permanent file for the next PDM Plan update (2016). Agencies and organizations “assigned” responsibility for various aspects of the mitigation strategy will have the opportunity to coordinate with other team members on challenges, success and opportunities at these meetings.

Individual projects will be monitored by the department implementing the project or the grant. Generally, HMGP and PDMC projects will be monitored by the DES Coordinator and any National Fire Plan projects or Community Assessment Agreements will be monitored by the Tri-County FireSafe Working Group. Each organization will track projects through a central database and issue quarterly reports to federal agencies.

7.3 IMPLEMENTATION THROUGH EXISTING PROGRAMS

Lewis and Clark County will have the opportunity to implement hazard mitigation projects through existing programs and procedures through plan revisions or amendments. The PDM Plan will be incorporated into the plans, regulations and ordinances as they are updated in the future or when new plans are developed. **Table 7.3-1** presents a summary of existing plans and ordinances and how integration of mitigation projects will occur.

TABLE 7.3-1 IMPLEMENTATION OF MITIGATION INTO EXISTING PLANS AND CODES		
Type	Name	Integration Technique
Plans		
Emergency Operations	Lewis and Clark County Emergency Operations Plan, 2010	Integrated by reference in PDM Plan.
	Emergency Action Plan, Hauser Dam, 2010	Dam failure mitigation projects should be Integrated in EAPs when these documents are revised.
	Emergency Action Plan, Holter Dam, 2010	
	Emergency Action Plan, Canyon Ferry Dam and Reservoir, March 2007	
	Emergency Action Plan, Three Mile Dam	
	Emergency Action Plan, Nilan North and East Dam	
	Emergency Action Plan, Willow Creek Dam	
	Emergency Action Plan, Helena Valley Reservoir	
	Emergency Action Plan, Chessman Main and Saddle Dam	
	Emergency Action Plan, Gibson Dam	
Emergency Action Plan, Pishkun Dikes		
Growth Policies	Lewis and Clark County Growth Policy	Integration of mitigation strategies will occur when growth policies are revised.
	City of Helena Growth Policy (draft)	
	City of East Helena Growth Policy	
	Lincoln Planning Area Growth Policy	
Land Use	Helena Open Lands Management Plan	Wildfire mitigation projects will be incorporated when plan is revised.
	City of Helena Stormwater Drainage Master Plan	Flood mitigation projects will be incorporated when plan is revised.
Wildfire Mitigation	Tri-County Fire Working Group, Regional Community Wildfire Protection Plan, 2005	Wildfire mitigation projects will be incorporated when plans are revised.
	Lincoln Rural Fire District, Fire Risk Management Strategy Community Protection Plan, 2005	

TABLE 7.3-1 IMPLEMENTATION OF MITIGATION INTO EXISTING PLANS AND CODES		
Type	Name	Integration Technique
Codes, Regulations & Ordinances		
Zoning	Lewis and Clark County Zoning Ordinance	Mitigation projects will be incorporated into revisions of zoning ordinances.
	City of East Helena Zoning Ordinance	
	City of Helena Zoning Ordinance	
Building Codes	City of Helena, Building Codes for Seismic, Wind, Snow Load	Mitigation projects will be incorporated into building code revisions.
Subdivisions	Lewis and Clark County Subdivision Regulations	Mitigation projects will be incorporated into revisions of subdivision regulations.
	City of Helena Subdivision Regulations	
	City of East Helena Subdivision Regulations	
Floodplain	Lewis and Clark County Floodplain Regulations	Flood mitigation projects will be incorporated into revisions of floodplain regulations.

Lewis and Clark County and the cities of Helena and East Helena use a Growth Policy to guide and control development. Typically, a Growth Policy will address hazards; specifically, that life and property be protected from natural disasters and man-caused hazards. Mitigation goals in the PDM Plan will be recommended for incorporation into future revisions of these growth policies to ensure that high-hazard areas are being considered for low risk uses.

To ensure that the requirements of the PDM Plan are incorporated into other planning mechanisms and remain an on-going concern in Lewis and Clark County, job descriptions of various staff will be enhanced to include a mitigation component. The job descriptions of County and City Planners will be augmented to include involvement in the LEPC and/or Tri-County FireSafe Working Group. Participation in these groups will provide an awareness of new and on-going mitigation initiatives for the purpose that they be integrated into plans, codes and regulations during revision. The job description of the City-County GIS Coordinator will include responsibilities for management and update of the spatial data compiled for the hazard analysis including coordinates of critical facilities and digital floodplain, inundation, and wildfire layers so this data can be integrated into other planning efforts. The job description of the DES Coordinator will include responsibilities for implementing outreach activities for risk reduction in the county, coordinating with the Board of County Commissioners to secure funding for mitigation projects, ensure mitigation projects are implemented, and updating the PDM Plan. The DES Coordinator will also be responsible for maintaining a permanent master file for the PDM planning process, which will include damage figures from hazard events, records of mitigation projects, and notes/minutes from relevant meetings.

Meetings of the Board of County Commissioners will provide an opportunity for the DES Coordinator to report back on the progress made on the integration of mitigation planning elements into county planning documents and procedures.

7.4 CONTINUED PUBLIC INVOLVEMENT

Lewis and Clark County is dedicated to involving the public directly in review and updates of the PDM Plan. The public will have many opportunities to provide feedback about the plan. Hard copies of the plan will be kept at appropriate county offices as well as at the Lewis and Clark County Library. An electronic copy of the plan will be available on the county website. The existence and location of plan hard copies will be publicized on the County website. *Section 2.0* includes the address and the phone number of the DES Coordinator who will be responsible for keeping track of public comments on the plan.

The public will be invited to meetings of the LEPC and Tri-County Fire-Safe Working Group when the PDM Plan is discussed. The meetings will provide the public a forum for which they can express concerns, opinions, or ideas about the plan. The DES Coordinator will be responsible for using county resources to publicize the public meetings and maintain public involvement through the newspapers, radio and Internet.

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