

CHAPTER 22

STATE MITIGATION STRATEGY

Over the past several years, possible mitigation projects and activities were solicited from state, federal, and local planning participants. Participants are listed in Chapter 2. In addition, projects submitted in county hazard mitigation plans were extracted and summarized in **Table 22.1**.

In 2004 the Multi-Hazard Mitigation Task Force was tasked with reviewing and ranking all proposed mitigation projects. On September 9, 2004, the Wyoming Office of Homeland Security (WOHS) sent the ranked listing of projects to the Multi-Hazard Task Force members for their review and comments. The due date for comments was September 22, 2004. Responses did not indicate a need for changes. The projects were ranked as high, medium, or low based on the following:

- A briefing on the results of the hazard assessment;
- The task force's ranking of hazards subsequent to the briefing;
- A review of a consolidated list of local mitigation projects (**Table 22.1**); and
- The mitigation goal and objectives identified in Chapter 1.

In 2005, the Wyoming Office of Homeland Security reorganized the processes through which decisions were made in regards to plan review, disaster response, and agency-to-agency communication on significant issues. Instead of numerous committees responding to calls for assistance from the Wyoming Office of Homeland Security, one contact list for each state agency, federal agency, public entity, or organization was established. The list is composed of the chain-of-command for each agency or organization, and usually contains the director, deputy director, and key division heads. Those entities are contacted for all key decisions or input needed, including plan review. This ensures the management of each agency or organization is current with planning or response activities of WOHS.

The planning process in Chapter 2 describes the protocols followed for updating this plan in 2007-2008. The Proposed State Hazard Mitigation Projects and Measures in **Table 22.2** were generated by reviewing in detail the mitigation projects and hazards chapters from the 2005 Wyoming Multi-Hazard Mitigation Plan with individual agencies and organizations, and incorporating their updates, changes, and new projects. Each entity providing input to the plan was asked to review the hazards rankings as well as to rank the 2005, 2008 and new 2010 mitigation projects as high, medium, or low. All projects and rankings were then submitted by e-mail to all planning participants for a final review. Few projects were added in the 2010 update. Given the extensive list generated in previous updates, greater attention was given to updating the status of current projects, with the intent of eliminating those projects already completed and making further headway on potential projects already in the proposed project list. It is anticipated the next update will generate significant changes, updates and additions to the project list through meetings conducted over the next three years.

Table 22.2 serves as a guide for policy makers in expediting discussions and committing resources to reducing the effects of natural hazards as funds become available through federal grants, federal disaster assistance, or through legislative appropriations. Federal and state agencies listed under “Responsible Agency for Implementation/Coordination” are not obligated to use existing funds.

Table 22.2 includes a description of how each project links to the overall mitigation objective and strategy, the link to local plans, costs, and benefits. The benefits are in a narrative form as it is impossible to calculate dollar benefits for proposed actions with available data. In addition, a status

column has been added which provides a summary of progress and accomplishments on mitigation projects identified in the 2005 and 2007 plans and also identifies new projects for the 2010 plan update.

Table 22.3 documents the updated hazard rank and project prioritization resulting from a meeting of the Multi-Hazard Mitigation Team in May, 2011. The minutes of the meeting are included as an appendix to the plan.

Table 22.4 shows a summary of mitigation projects completed or underway from 2005-2010. Detail is provided on funding, expenditures, and status.

The cost estimate column in **Table 22.2** also includes projected funding sources. The abbreviations for the funding sources are as follows:

Projected Funding Sources for Proposed Mitigation Projects		
Funding Source Acronym	Agency	State or Federal
DOE	U.S. Department of Energy	Federal
EPA	U.S. Environmental Protection Agency	Federal
FEMA (CAP-SSSE)	FEMA – Community Assistance Program	Federal
FEMA (Dam Safety)	FEMA – National Dam Safety Program	Federal
FEMA (FMA)	FEMA – Flood Mitigation Assistance Program	Federal
FEMA (HMGP)	FEMA – Hazard Mitigation Grant Program	Federal
FEMA (MMMS)	FEMA – Map Mod Management Support	Federal
FEMA (PDM)	FEMA – Pre-Disaster Mitigation Program	Federal
FHA	Federal Highway Administration	Federal
HSGP	Homeland Security Grant Program	Federal
HSGP CCP	Homeland Security Grant Program – Citizen Corp Program (CCP) Grant	Federal
NOAA	National Oceanic Atmospheric Administration	Federal
NWS	National Weather Service	Federal
PSC	Wyoming Public Service Commission	State
USDA	U.S. Department of Agriculture	Federal
USDHS	U.S. Department of Homeland Security	Federal
USFS	U.S. Forest Service	Federal
USFWS	U.S. Fish and Wildlife Service	Federal
USGS	U.S. Geological Survey	Federal
WDEQ	Wyoming Department of Environmental Quality	State
WDFPES	Wyoming Department of Fire Prevention and Electrical Safety	State
WOHS	Wyoming Office of Homeland Security	State
WSFD	Wyoming State Forestry Division	State
WSGS	Wyoming State Geological Survey	State
WWDC	Wyoming Water Development Commission	State
WY A&I	Wyoming Department of Administration and Information	State
WYDOT	Wyoming Department of Transportation	State

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Albany	County wide	Emergency Notification	High #1 Cost Benefit	Replace existing siren system with a more functional system with better coverage. Funding source: HSGP Grant
Albany	County wide	Emergency Notification	Medium #2 Cost Benefit	Install a siren system for Garrett, Wyoming. Funding source: HSGP Grant
Albany	County wide	Emergency Notification	High #3 Cost Benefit	Identify a point of contact for information dissemination during a disaster. Funding source: Emergency Management Budget
Albany	County wide	Emergency Notification	High #4 Cost Benefit	Continue to implement CodeRED into community. Funding source: Emergency Management Budget and City Budget
Albany	County wide	Winter Storms & Blizzards	High #1 Cost Benefit	Identify shelter locations for all types of disasters and educate citizens. Funding source: Emergency Management Budget & Red Cross
Albany	County wide	Winter Storms & Blizzards	Medium #2 Cost Benefit	Prepare backup power for communications systems. Funding source: HSGP Grant
Albany	County wide	Winter Storms & Blizzards	High #3 Cost Benefit	Clearly identify parking areas for semi trucks during times of I-80 closure and also for hazmat trucks. Funding source: City & County budgets
Albany	County wide	Winter Storms & Blizzards	Medium #4 Cost Benefit	Obtain sheltering supplies. Funding source: Emergency Management Budget and HSGP CCP Grant
Albany	County wide	Winter Storms & Blizzards	Low #5 Cost Benefit	Building codes for snow loads. Funding source: County and City Planning Budgets
Albany	County wide	Hazardous Material Incident	High #1 Cost Benefit	Develop a Hazmat Response & Evacuation Plan. Funding source: Emergency Management budget & EMPG Grant
Albany	County wide	Hazardous Material Incident	High #2 Cost Benefit	Warning System. Funding source: HSGP Grant
Albany	County wide	Hazardous Material Incident	High #3 Cost Benefit	City & County involvement with UW labs & other private businesses. Funding Source: Emergency Management Budget, Fire Budget, Police Department Budget, & UW
Albany	County wide	Hazardous Material Incident	Low #4 Cost Benefit	Better education to the public on hazardous materials in the County. Funding source: Emergency Management Budget
Albany	County wide	Wildland Fire	High #1 Cost Benefit	Fire wise programs with public and enforce these restrictions. Funding source: Fire wise education programs
Albany	County wide	Wildland Fire	High #2 Cost Benefit	Continue to work on and update evacuation plans. Funding source: Emergency Management & HSGP grant
Albany	County wide	Wildland Fire	Medium #3 Cost Benefit	Conduct a pine beetle exercise that includes evacuation measures. Funding source: Training & Exercise Funds
Albany	County wide	Wildland Fire	Medium #4 Cost Benefit	Cache of sprinklers for protecting buildings. Funding source: AFG Grant
Albany	County wide	Wildland Fire	Medium #5 Cost Benefit	Type 3 wildland engine with firefighting gel pump and 50 5 gallon buckets of gel. Funding source: SLIB Grant
Albany	County wide	Flooding	Medium #1 Cost Benefit	Complete floodplain study for South Laramie & establish base flood elevations. Funding source: Grant
Albany	County wide	Flooding	Medium #2 Cost Benefit	Implement West & North Laramie drainage studies into plans of action. Funding Source: Grant
Albany	County wide	Flooding	Medium #3 Cost	Create a critical facilities matrix/plan for the county. Funding source: Grant

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
			Benefit	
Albany	County wide	Power & Communications	High #1 Cost Benefit	Develop backup communications system for Laramie & Rock River during power outages. Funding source: HSGP grant & other grants
Albany	County wide	Power & Communications	High #2 Cost Benefit	Work with local phone service providers as appropriate to address communication gaps. Funding Source: Emergency Management Budget
Albany	County wide	Lightning & Wind	High #1 Cost Benefit	Identify & designate shelter sites throughout county. Funding source: Emergency Management & Red Cross budgets
Albany	County wide	Lightning & Wind	Medium #2 Cost Benefit	Work with local paper & radio to add info on lightning. Funding source: Emergency Management Budget
Albany	County wide	Lightning & Wind	Medium #3 Cost Benefit	Work with local utilities on lightning education for kids. Funding Source: Emergency Management Budget
Albany	County wide	Multiple Hazard	High #1 Cost Benefit	Revise/Develop the County/Town EOP. Funding source: Emergency Management and EMPG Grant
Albany	County wide	Multiple Hazard	Low #2 Cost Benefit	Inventory & map siren locations and condition across the county. Funding Source: Emergency Management
Albany	County wide	Multiple Hazard	Medium #3 Cost Benefit	Continue to work with National Weather Service to offer weather spotter training sessions. Funding source: Emergency Management
Albany	County wide	Multiple Hazard	High #4 Cost Benefit	Educate citizens on being prepared for disasters of all types. Funding source: Emergency Management
Albany	County wide	Multiple Hazard	Low #5 Cost Benefit	Studies on current infrastructures in the county. Funding source: Grants
Albany	County wide	Hail	Low #1 Cost Benefit	Start educating the public about reporting hail and how to keep safe. Funding source: Emergency Management
Albany	County wide	Drought	Low #1 Cost Benefit	Create water conservation plans for County. Funding Source: County Planning budget
Albany	County wide	Drought	Low #2 Cost Benefit	Create an agricultural business plan for protecting lands and crops. Funding source: County & Emergency Management
Albany	County wide	Earthquakes	Medium #1 Cost Benefit	Update HAZUS research for County. Funding source: Emergency Management & State
Albany	County wide	Earthquakes	Low #2 Cost Benefit	Public awareness of earthquakes. Funding source: Emergency Management
Albany	County wide	Earthquakes	Low #3 Cost Benefit	Building inspections to check for possible weaknesses & enforce building codes. Funding source: County Planning & Zoning through grants
Albany	County wide	Dam Failure	Low #1 Cost Benefit	Update plan for Rob Roy Dam. Funding Sources: Emergency Management
Albany	County wide	Dam Failure	Medium #2 Cost Benefit	Inspections for private dams. Funding Sources: Grants
Albany	County wide	Landslide	Low #1 Cost Benefit	Install county road protection measures and signage along with public awareness. Funding source: County Planning & Zoning

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Albany	County wide	Landslide	Low #2 Cost Benefit	Enact regulations establishing where homes can be built due to landslide-prone areas. Funding Source: County Planning & Zoning
Albany	County wide	Landslide	Low #3 Cost Benefit	Further analysis of landslide boundaries. Funding Source: Grants
Albany	County wide	Mine Substinance	Low #1 Cost Benefit	Create sight-specific plans for mines of concern in the jurisdiction of Rock River. Funding Source: Grants & City of Rock River
Albany	County wide	Windblown Deposits	Low #1 Cost Benefit	Public awareness of windblown mitigation activities. Funding source: Emergency Management
Albany	County wide	Windblown Deposits	Low #2 Cost Benefit	Restrict building in mined out areas. Funding source: County Planning & Zoning
Albany	County wide	Windblown Deposits	Low #3 Cost Benefit	Stabilize vegetation on identified areas. Funding source: Grants
Albany	County wide	Snow Avalanche	Low #1 Cost Benefit	Public awareness and education. Funding source: Emergency Management
Albany	County wide	Tornado	High #1 Cost Benefit	Work on replacing siren system in county. Funding source: Grants
Albany	County wide	Tornado	Medium #2 Cost Benefit	Ensure evacuation shelters are equipped and safe for tornadoes. Funding source: Emergency Management, Red Cross, and HSGP CCP Grant
Big Horn	County wide	Multiple Hazard	Not Assigned	All hazards and emergency management public awareness campaign utilizing NWS Weather Spotter Programs, PSAs & Wyoming Office of Homeland Security media campaigns. Funding sources: Emergency Management Program Budget & HSGP Citizen Corp Program (CCP) Grant.
Big Horn	County wide	Multiple Hazard	Not Assigned	Improve presence/representation of Emergency Management in decision-making process relative to mitigating hazards and improving public safety. This to be accomplished by encouraging cities, towns and county to create & enforce zoning regulations and building codes in locations where they do not currently exist and by educating those involved of existing and potential hazards. Funding source: County & City Emergency Management budgets, volunteer time, department & agency time.
Big Horn	County wide	Multiple hazard	Not Assigned	Restructure & Expand Community Emergency Response Team (CERT) Program by increasing team membership and improving mission of the team. Funding source: HSGP CCP grant
Big Horn	County wide	Winter Storm	Not Assigned	Improve local GIS Mapping to decrease search response risks and time expended on searches in winter weather. Funding source: 911 funding
Big Horn	County wide	Wildfire & Flooding	High to Medium	Reduce & control dense vegetation, particularly Russian Olive & Tamarisk. Funding sources: BLM, FEMA PDM, BNSF Railroad, Weed & Pest
Big Horn	County wide	Drought & Wildfire	Not Assigned	Improve agricultural irrigation practices by lining or burying water-conveying irrigation canals, increased water conservation and researching and developing water storage capacity. Funding source: Water Management & Conservation Assistance Programs, NRCS including EQIP & AMA

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Big Horn	County wide	Flooding	Not Assigned	Improve infrastructure to lessen impact of flood to include, but not limited to, installing storm drainage systems. Funding source: FEMA PDM grant.
Big Horn	County wide	Multiple Hazard	Not Assigned	Expand emergency notification system by increasing capacity of current Reverse 9-1-1 system. Funding source: HSGP grant & 911 funding
Big Horn	County wide	Winter Storm & Tornado	Not Assigned	Construction of dual purpose structure to be utilized as safe house & equipment storage stations for emergency services/response. Funding source: County budget, HSGP Grant
Campbell	County wide	Fires	Not Assigned	Increased public education and training.
Campbell	County wide	Floods	Not Assigned	Improved flood gauging.
Campbell	County wide	Floods	Not Assigned	Broader participation in the NFIP.
Campbell	County wide	Floods	Not Assigned	Emergency action plan development for the two significant-hazard dams within the county.
Campbell	County wide	Hail	Not Assigned	Increased insurance coverage.
Campbell	County wide	Hail	Not Assigned	Improved detection systems (radar, spotters, etc.).
Campbell	County wide	Multiple Hazards	Not Assigned	Local emergency agencies and the school district are working cooperatively on the development of a crisis response plan which can be used for all-hazards large scale responses with limited response resources.
Campbell	County wide	Multiple Hazards	Not Assigned	Provide public awareness of local hazards.
Campbell	County wide	Multiple Hazards	Not Assigned	Improved building codes and construction techniques.
Campbell	County wide	Multiple Hazards	Not Assigned	Improved hazard mapping of the county.
Campbell	County wide	Severe Weather	High	Install Doppler Radar in Campbell County.
Campbell	County wide	Severe Weather	Medium	Install additional warning sirens.
Campbell	County wide	Severe Weather	Medium	Create a link between dispatch and local media.
Campbell	County wide	Severe Weather	Medium	Develop an approach to warn elderly, special needs individuals and daycare facilities.
Campbell	County wide	Severe Weather	Medium	Investigate new technology that could be used to warn people.
Campbell	County wide	Severe Weather	Medium	Educate people on where to get up-to-the-minute weather information.
Campbell	County wide	Severe Weather	Medium	Use variable message signs to provide weather information.
Campbell	County wide	Multiple Hazards	Medium	Support National Weather Service and Emergency Management weather awareness days.
Campbell	County wide	Multiple Hazards	Medium	Conduct weather education in the schools.
Campbell	County wide	Multiple Hazards	Medium	Develop a traveling display.
Campbell	County wide	Multiple Hazards	Medium	Develop/provide handouts on severe weather.
Campbell	County wide	Multiple Hazards	Medium	Continue newspaper inserts on weather.
Campbell	County wide	Multiple Hazards	Medium	Evaluate the need to prepare materials in other languages.
Campbell	County wide	Multiple Hazards	High	Develop a coordination plan for road, school, airport and other public facilities' closures.
Campbell	County wide	Multiple Hazards	Medium	Use marquees to display weather information.
Campbell	County wide	Multiple Hazards	Medium	Develop one or more trained outreach/response team(s) comprised of local citizens.
Campbell	Wright/Gillette	Winter Storms	High	Identify and prepare shelters in Wright and Gillette for blizzards.

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County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Campbell	County wide	Multiple Hazards	Medium	Conduct a public information campaign to notify the residents of shelter locations.
Campbell	County wide	Multiple Hazards	Medium	Develop a plan to direct standard motorists to shelters.
Campbell	Wright	Multiple Hazards	High	Pre-wire buildings and obtain backup generators to power Wright clinic, Town Hall, Fire Department and Water Plant.
Campbell	Gillette	Multiple Hazards	High	Pre-wire buildings and obtain backup generators for Gillette Fire Station #1 and nursing home.
Campbell	Wright	Tornadoes	High	Construct tornado shelters in Wright.
Campbell	Gillette	Tornadoes	High	Identify and/or construct tornado shelters in Gillette.
Campbell	County wide	Tornadoes	High	Develop sheltering capability for attendees of events at the Cam-plex and ball fields.
Campbell	County wide	Tornadoes	High	Recommend capability to improve shelter from tornadoes be evaluated by the town, city or county prior to construction of any new public facility in the county.
Campbell	County wide	Tornadoes	High	Facilitate creation of safe rooms in proposed and existing individual homes and public structures across the county.
Campbell	County wide	Human Disease	Medium	Conduct training for first responders.
Campbell	County wide	Human Disease	Medium	Conduct a public information campaign on personal sanitation and how to avoid becoming infected.
Campbell	County wide	Human Disease	Medium	Stockpile educational information in multiple languages, as appropriate, to enable a quick response if a situation develops.
Campbell	County wide	Human Disease	Medium	Have local governmental departments review and update their emergency plans.
Campbell	County wide	Hazardous Materials	High	Conduct a commodity flow-study of hazardous materials in and through the county.
Campbell	County wide	Hazardous Materials	High	Address issues arising from the study.
Campbell	Gillette	Hazardous Materials	Medium	Explore the development or designation of an alternate route for hazardous materials around the city of Gillette.
Campbell	County wide	Hazardous Materials	High	Address traffic flow issues related to arterial corridors.
Campbell	Gillette/Wright	Hazardous Materials	High	Develop evacuation plans for Gillette, Wright and surrounding areas for response to a hazardous materials spill.
Campbell	County wide	Severe Weather	High	Encourage/require skirting and tie-downs for mobile homes to withstand wind events.
Campbell	County wide	Multiple Hazards	Medium	Develop minimum standards for building construction. Use either voluntary or regulatory mechanisms to obtain compliance.
Campbell	County wide	Multiple Hazards	Low	Recommend evaluating soil properties by soil testing prior to new construction so soil issues can be addressed during design and construction, thereby, preventing future property damage.
Campbell	County wide	Hazardous Materials	High	Recommend zoning to separate people from hazardous materials and industrial uses in the town of Wright and Campbell County.
Campbell	County wide	Wildland Fires	High	Develop a plan for siting additional fire stations to serve areas of new residential and commercial growth.
Campbell	County wide	Wildland Fires	Medium	Offer Fire Wise workshops for rural land owners.
Campbell	County wide	Wildland Fires	High	Pursue grants to obtain equipment and training for firefighters.
Campbell	County wide	Floods	Medium	Work with FEMA to update and digitize flood insurance rate maps (FIRM) for the entire county.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Converse	County wide	Drought	Not Assigned	Develop water-rationing measures that will be implemented during a drought situation. Educate residents on the benefits of conserving water at all times, not just during a drought with inclusion of drought-tolerant planting. Develop or increase water storage capabilities for livestock industry. Have agreements in place prior to drought seasons for purchasing water for municipalities when water shortages occur.
Converse	County wide	Floods	Not Assigned	Work with existing floodplain residents to elevate or flood proof their structures, including obtaining funding assistance and technical guidance. Acquire property within the floodplain and transition of those areas into green spaces. Implement reverse 911 system in the county to enhance exiting warning systems.
Converse	County wide	Hazardous Materials	Not Assigned	Public awareness and education on sheltering in place, disaster/emergency supplies and plans, and evacuation. Implement and enforce city ordinances to restrict where trucks hauling HAZMAT cargo may park within city limits. Implement stringent universal storage container testing criteria for transuranic materials that will be carried through Converse County by the Waste Isolation Pilot Plant (WIPP) trains. Train and provide equipment for local emergency responders to enhance their ability to respond to HAZMAT incidents. Organize, train, and equip regional response teams to respond to incidents that exceed the capability and resources of local responders.
Converse	County wide	Wildland Fires	Not Assigned	Expand areas of defensible space program cooperating with the Wyoming State Forestry Division. Educate the public about defensible space and fire resistant landscaping. Implement reverse 911 system. Improve access to rural sources of water for fire trucks. Incorporate communications interoperability for firefighters and other emergency responders.
Converse	County wide	Winter Storms	Not Assigned	Public education for winter storm preparedness and emergency supplies. The Glenrock Senior Center is the designated shelter for that area, however, the center does not have a backup generator for the center - acquisition of a backup generator for the center. Enhance tree-trimming programs near utility lines and other vulnerable areas.
Converse	County wide	Hazardous Materials	High	Implementation and enforcement of City ordinances to restrict where trucks hauling HAZMAT cargo may park within city limits.
Converse	County wide	Hazardous Materials	High	Implementation of stringent universal storage container testing criteria for transuranic materials that will be carried through Converse County by the Waste Isolation Pilot Plan (WIPP) trains.
Converse	County wide	Hazardous Materials	High	Implementation of Reverse 911 system in the county to warn those areas threatened by a HAZMAT incident.
Converse	County wide	Hazardous Materials	Medium	Training and equipment for local emergency responders to enhance their ability to respond to HAZMAT incidents.
Converse	County wide	Hazardous Materials	Medium	Organization, training and equipping of Regional Response Teams to respond to incidents that exceed the capability and resources of local responders.
Converse	County wide	Tornado	Medium	Implementation of reverse 911 system in the county to enhance existing warning systems.
Converse	County wide	Tornado	High	Enforcement of building codes (to include use of hurricane clips)
Converse	County wide	Tornado	Medium	Establish more public emergency shelters.
Converse	County wide	Tornado	High	Severe weather spotter training for the public.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Converse	County wide	Tornado	High	Public education for tornado awareness and what to do in
Converse	County wide	Tornado	High	Establishment and training of Community Emergency Response Teams (CERT) to assist emergency responders in a disaster situation.
Converse	County wide	Flood	Low	Work with existing floodplain residents to elevate or flood proof their structures, including obtaining funding assistance and technical guidance.
Converse	County wide	Flood	High	Acquisition of property within the floodplain and transition of those areas into green spaces.
Converse	County wide	Flood	Medium	Implementation of reverse 911 system in the county to enhance existing warning systems.
Converse	County wide	Wildfire	Medium	Implementation of reverse 911 system in the county as a way to warn residents of threatened areas.
Converse	County wide	Wildfire	High	Improve access to rural water sources for fire trucks. Many stock ponds, windmills, etc. are currently difficult or impossible to access due to steep embankments, etc. Rural water tanks could also be fitted with valves that are compatible to the equipment on the trucks.
Converse	County wide	Wildfire	Low	Incorporation of communications interoperability for firefighters and other emergency responders. Some rural firefighters currently use low-band (UHF) radios while others have high-band (VHF) radios in their trucks. Local law enforcement uses high-band as do the ambulance services. Road and Bridge equipment uses low-band. Some counties are going to 800 megahertz frequencies while others are remaining with current capabilities. The Wyoming Statewide Public Safety Mobile Communications (PSMC) steering committee is currently working to implement interoperability for all those agencies via the use of cooperative infrastructure which will meet all agencies' wireless communication needs now and in the future.
Converse	County wide	Wildfire	N/A	Drill strategically placed deep source water wells around rural parts of the county for fire fighting. It is possible that some old cased-off oil wells could be used for this. The water would not be potable but would be usable for fire fighting. The wells could also be utilized for hauling water to livestock during droughts.
Converse	County wide	Wildfire	High	Develop water rationing measures that will be implemented during a drought situation.
Converse	County wide	Wildfire	High	Develop or increase water storage capabilities for livestock industry.
Converse	County wide	Wildfire	High	Have agreements in place prior to drought seasons for purchasing water for municipalities when water shortages occur.
Converse	County wide	Winter Storm	High	Public education for winter storm preparedness and emergency supplies.
Converse	Glenrock	Winter Storm	High	Acquire a generator for the Glenrock Senior Center.
Converse	County wide	Winter Storm	High	Enhance tree trimming programs near utility lines and other vulnerable areas.
Crook		Drought	High	Develop additional large and small water projects to provide water for municipalities, livestock and wildlife, and irrigation for grasslands and crops.
Crook	County wide	Drought	High	Implement community water-saving program "I choose to turn off the hose".
Crook	County wide	Drought	High	Educational programs understanding health and social issues associated to drought conditions.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Crook	County wide	Drought	High	Implement fire restrictions and bans during drought years.
Crook	County wide	Drought & Wildfire	High	Participation in the National Fire Plan. Participation in Wyoming's Drought Plan.
Crook	County wide	Winter Storms Blizzards	High	Public Service announcements on public communication systems promoting winter preparedness.
Crook	County wide	Winter Storms Blizzards	High	Warning systems and announcements on public communications systems in the event of an impending winter storm.
Crook	County wide	Winter Storms Blizzards	N/A	Adequate communication among personnel who will be handling snow removal and emergency services during a storm.
Crook	County wide	Winter Storms Blizzards	High	Promote public education and preparedness for severe weather.
Crook	County wide	Thunderstorms Tornadoes	Not Assigned	Design and disseminate educational information to property owners to reduce risk from associated hazards, such as, tree failure, structure failure and floods which may impact life, property and utilities.
Crook	County wide	Thunderstorms Tornadoes	Not Assigned	Develop partnerships between utility providers and county and local public works agencies to document known hazard areas.
Crook	County wide	Thunderstorms Tornadoes	High	Promote public education and preparedness for severe weather.
Crook	County wide	Thunderstorms Tornadoes	Not Assigned	Train community weather spotters.
Crook	County wide	Landslides	Not Assigned	Improve knowledge of landslide areas, understand the vulnerability and risk to life and property in hazard prone areas.
Crook	County wide	Landslides	Not Assigned	Encourage construction design applicable to steep slopes to reduce potential adverse impacts from development.
Crook	County wide	Landslides	High	Identify safe evacuation routes in high-risk debris flow and landslide areas.
Crook	County wide	Landslides	High	Limit activities in identified potential and historical landslide areas through regulation and public education.
Crook	County wide	Floods	High	Continued participation in NFIP.
Crook	County wide	Floods		Active participation in Flood Map Modernization Program.
Crook	County wide	Floods	High	Provide hazards information to shelters, emergency facilities in public buildings, campgrounds, and phone books.
Crook	County wide	Floods	Not Assigned	GIS training for local jurisdictions with emphasis on hazards recognition and analysis for application to mitigation planning.
Crook	County wide	Floods	Not Assigned	Investigate opportunities for developing or improving warning systems as a means to reduce loss of life and damage to property.
Crook	County wide	Multiple Hazards	Not Assigned	Purchase NOAA weather radios statewide for placement in homes, government buildings, schools, hotels, etc.
Crook	County wide	Hazardous Materials	Not Assigned	Public Awareness and education.
Crook	County wide	Hazardous Materials	Not Assigned	Maintain and expand training.
Crook	County wide	Hazardous Materials	Not Assigned	Maintaining Sarah Title II report data.
Crook	County wide	Hazardous Materials	Not Assigned	Continue upgrading HAZUS.
Crook	County wide	Hazardous Materials	Not Assigned	Coordinate Hazmat awareness training for school officials, teachers and students.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Crook	County wide	Dam Failures	Low	Purchase of NOAA weather radios statewide.
Crook	County wide	Earthquakes	Low	Continued research and education on earthquake data for Crook County.
Crook	County wide	Power Failures	Not Assigned	Educational awareness to residents about trimming trees.
Crook	County wide	Power Failures	Not Assigned	Decrease the span between poles and add more 'guy wires'.
Crook	County wide	Power Failures	Not Assigned	Purchase back up generators.
Crook	County wide	Power Failures	Not Assigned	Designate public shelters which have alternate power.
Fremont	County wide	Multiple hazards	High	Develop and incorporate into the plan a list of hazard exposure factors for consideration when locating and planning construction of public structures, including critical facilities.
Fremont	County wide	Multiple hazards	Medium	Public education about local hazards, building and fire codes, and earthquake and flood proofing standards.
Fremont	County wide	Drought	High	Upstream storage for shortage of water for irrigation.
Fremont	County wide	Drought	Medium to low	Upstream flow storage on Horse Creek and Wind River.
Fremont	County wide	Drought	Medium to high	Develop water conservation program/education.
Fremont	County wide	Drought	Medium	Develop groundwater supplies.
Fremont	County wide	Earthquakes	Medium	Conduct study and educate Public on phasing in of earthquake provisions of code for county buildings.
Fremont	County wide	Earthquakes	High	Secure items that may cause injuries from above through public education for households and through acquisition and installation of stabilizing braces and window films for schools and critical facilities.
Fremont	County wide	Earthquakes	Medium	Public education on safety measures to take during an earthquake.
Fremont	County wide	Floods	High	Green Way Project in Lander and Popo Agie River flood prevention and stabilization.
Fremont	County wide	Floods	Medium	Dubois stream flow diversion to irrigation ditches.
Fremont	County wide	Floods	High	Continue to encourage participation in NFIP.
Fremont	County wide	Landslides	Medium	Continue monitoring landslides in critical areas.
Fremont	County wide	Landslides	Medium	Stabilize landslides that threaten the population or infrastructure of the county.
Fremont	County wide	Severe Winter Storms	High	Encourage the purchase of Weather Radios for notification of hazardous conditions.
Fremont	County wide	Severe Weather	High	Encourage purchase of 72-Hour Kits and educate public need for kits.
Fremont	County wide	Wildland Fires	High	Educate public on wild land fire/urban interface and encourage reduction of fuels loads.
Fremont	County wide	Wildland Fires	High	Encourage the purchase of Weather Alert Radios for notification of hazardous conditions.
Goshen	County wide	Multiple Hazards	Not Assigned	Install/improve backup power in critical facilities
Goshen	County wide	Multiple Hazards	Not Assigned	Provide additional sheltering facilities
Goshen	County wide	Wildfire/Drought	Not Assigned	Provide water systems to assist with Wildfire and Drought conditions
Goshen	County wide	Multiple Hazards	Not Assigned	Improve Dispatch Communications with updated equipment
Goshen	County wide	Multiple Hazards	Not Assigned	Improve communications

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Goshen	County wide	Multiple Hazards	Not Assigned	Improve public education programs
Goshen	County wide	Multiple Hazards	Not Assigned	Implement employee emergency response training
Goshen	County wide	Floods Dam Failures	Not Assigned	Obtain better information on potential Floods and Dam Failures and instate land use and safety measures to minimize potential resulting damage
Goshen	County wide	Multiple Hazards	Not Assigned	Improve computer mapping capabilities
Goshen	County wide	Multiple Hazards	Not Assigned	Update plans
Johnson	County wide Buffalo Kaycee	Tornadoes Dam Failure Floods	High	Early Warning System
Johnson	County wide Buffalo Kaycee	Multiple Hazards	High	Radio Communication System
Johnson	County wide Buffalo Kaycee	Multiple Hazards	High	Reverse 911/Early Notification System
Johnson	County wide Buffalo Kaycee	Floods Tornadoes Earthquakes	High	Develop a debris management plan
Johnson	Buffalo Kaycee	Tornadoes Winter Storms Earthquakes Fires	Medium	Shelter Facility Identification and Implementation
Johnson	County wide Buffalo Kaycee	Multiple Hazards	High	Establish Emergency Operation Center
Johnson	County wide Buffalo Kaycee	Flood/Flash Flooding Dam Failures Fires Tornadoes	High	Develop Evacuation Plan
Johnson	County wide Buffalo Kaycee	Tornadoes Winter Storms Hail Thunderstorms Lightning Fires Wind Storms	Medium	Improve use of NOAA Weather Radio
Johnson	County wide Buffalo Kaycee	Multiple Hazards	Medium	Develop Response Plan for Special Needs Population
Johnson	Buffalo Kaycee	Tornadoes	Medium	Establish mechanism to participate in new construction projects to create safe rooms
Johnson	Buffalo Kaycee	Hazardous Materials	Medium	Conduct a Commodity Flow Study
Johnson	Buffalo Kaycee	Floods	High	Flood Protection Project
Johnson	County wide Buffalo Kaycee	Landslides Mudslides Expansive Soil	High	Create a soils map for Johnson County
Johnson	County wide	Floods Expansive Soil Landslides Mined-Out Areas Hazardous Materials	High	Adoption of International Building Codes and Zoning

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Johnson	County wide	Wildland Fire	High	Develop media campaign to educate homeowners on fire safety.
Johnson	County wide	Multiple Hazards	High	Conduct monthly radio programs to inform and educate on identified hazards
Johnson	County wide	Multiple Hazards	Medium	Develop, enhance and implement education programs aimed at mitigating hazards for private property owners and retail/commercial businesses
Johnson	County wide	Multiple Hazards	High	Develop & implement education program aimed at special needs population
Johnson	County wide	Flood & Dam Failure	High	Enhance public awareness and encourage participation in the NFIP
Johnson	County wide	Multiple Hazards	High	Encourage assembly of survival kits for home, business and vehicle
Johnson	County wide	Multiple Hazards	High	Develop and enhance awareness training opportunities for the private and public sectors of communities
Johnson	Buffalo & Kaycee	Tornadoes, Floods & Earthquake	High	Catalog critical facilities structural conditions
Johnson	Buffalo & Kaycee	Tornadoes, Floods & Earthquake	Medium	Develop an inspection process for critical infrastructure
Johnson	Buffalo & Kaycee	Tornadoes, Floods & Earthquake	Medium	Develop a process to begin retrofitting existing infrastructure
Johnson	Buffalo & Kaycee	Tornadoes, Floods & Earthquake	Medium	Create policies and processes to enhance new construction projects with safe rooms
Laramie	County Wide	Multiple Hazards	High	Communications System. Funding source: HSGP Grant
Laramie	County Wide	Flood	Medium	Flood plain management. Funding source: FEMA PDMC or NFIP
Laramie	County Wide & Towns	Multiple Hazards	High	Outdoor warning system. Funding source: Specific purpose tax
Laramie	Town of Pine Bluffs	Multiple Hazards	High	Infrastructure hardening. Funding source: Grants
Laramie	County wide	Multiple Hazards	Medium	Expand GIS capability in Emergency Services. Funding source: HSGP Grant, Local budget, other resources
Laramie	Town of Burns	Multiple Hazards	High	Infrastructure hardening. Funding source: Grants
Laramie	County wide	Multiple Hazards	Low	Continued public education. Funding source: Grants, other resources
Laramie	County wide	Multiple Hazards	Medium	Infrastructure protection. Funding source: FEMA, NRCS, local, other resources
Laramie	County wide & City/Towns	Multiple Hazards	Medium	Adoption of mutual aid agreements. Funding source: Emergency Services
Lincoln	County wide	Earthquake	Medium	Educate public about earthquake risks & how to prepare for an earthquake
Lincoln	County wide	Earthquake	High	Evaluate town, city & county-owned structures used by the public for seismic vulnerability. Prioritize needs and develop a schedule and plan to complete seismic upgrades.
Lincoln	County wide	Earthquake	High	Evaluate critical infrastructure such as sewer and water systems, roads and bridges for vulnerability to seismic events. Prioritize needs and develop a schedule and plan to complete seismic upgrades.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Lincoln	County wide	Earthquake	Medium	Work with WYDPT to accomplish bridge retrofits and upgrades to reduce vulnerability to seismic events.
Lincoln	County wide Cities & Towns	Earthquake	High	Adopt policies that require new town, city and county buildings to meet the seismic design standards in the most recent International Building Code.
Lincoln	County wide	Multiple Hazards	Low	Maintain a list of at-risk individuals and populations in each community and in the county.
Lincoln	County wide	Multiple Hazards	Medium	Complete the transportation plan for local needs.
Lincoln	County wide	Multiple Hazards	Low	Maintain the shelter plan.
Lincoln	County wide	Wildland Fires	High	Identify areas where access is inadequate. Notify residents with inadequate access of their situation and cooperatively seek solutions.
Lincoln	County wide	Wildland Fires	High	Implement recommendations or engineering study for access and water to Star Valley Ranch.
Lincoln	County wide	Wildland Fires	Medium	Prioritize access needs (widening, improvement, etc.) that are the responsibility of the county and work to address them over time.
Lincoln	County wide	Wildland Fires	Medium	When new apparatus is acquired, check weight limits on bridges within the jurisdiction to ensure the apparatus can safely cross.
Lincoln	County wide	Wildland Fires	High	Continue with the Wild land Urban Interface defensible space program in the county.
Lincoln	County wide	Wildland Fires	High	Support hazard fuel reduction projects on all ownerships in the county.
Lincoln	County wide	Wildland Fires	High	Analyze water availability for firefighting across the county. Identify the most advantageous locations for water storage. Pursue funding to construct either above ground water storage facilities in these locations.
Lincoln	County wide	Wildland Fires	Medium	Get mutual aid agreements in place for all local jurisdictions for fire, emergency medical and law enforcement response.
Lincoln	Thayne	Wildland Fires	High	Replace the fire hall.
Lincoln	County wide	Wildland Fires	High	Require all jurisdictions, public and private, to sigh roads to standards provided in the Internal Fire Code.
Lincoln	County wide	Wildland Fires	Medium	Develop evacuation plans for subdivisions/areas at high risk of wildland fire.
Lincoln	County wide	Wildland Fires	High	Purchase a thermal imager for Alpine.
Lincoln	County wide	Wildland Fires	High	Adopt and implement the IFC Parts B, C and D for new development that enhance life safety and survivability as well as suppression effectiveness
Lincoln	County wide	Wildland Fires	High	Enforce regulations (inspect) that require consultation with local Fire Departments for new development.
Lincoln	County wide	Wildland Fires	High	Coordinate implementation of this goal with recently completed Community Wildfire Protection Plan.
Lincoln	County wide	Landslides	Medium	Identify areas at high risk for landslides to developers and the public.
Lincoln	County wide	Floods	High	Identify areas (in addition to those in the floodplains) that are at risk from flash flooding to developers and the public.
Lincoln	County wide	Floods	Medium	Notify land owners of risks so they can mitigate and/or be prepared.
Lincoln	Diamondville	Floods	High	Evaluate and rebuild the Diamondville levee on the Ham's Fork.
Lincoln	Cokeville	Floods	Medium	Evaluate and do maintenance work on Cokeville levee on Smith's Fork.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Lincoln	County wide	Floods Landslides	High	Adopt a requirement that developers must address how surface and spring water will be handled in proposed subdivisions.
Lincoln	County wide	Floods Landslides	High	Ask town, city and county planning boards to consider zoning to prohibit new development in areas at high risk of landslides or flooding.
Lincoln	Smith's Fork Cokeville	Floods	Medium	Remove dead and dying cottonwoods along ditches and the middle channel of Smith's Fork around Cokeville to reduce flooding (and fuel) concerns.
Lincoln	Covey Cook Canals	Floods Landslides	Medium	Evaluate the Covey and Cook Canals above the Flying J to Determine whether any design improvements could be made to prevent flooding by these ditches in the event of an earthquake.
Lincoln	Covey Cook Canals	Floods Landslides	Medium	Seek funds to implement improvements in Covey/Cook Canals.
Lincoln	County wide	Floods	Medium	Maintain good standing with the NFIP.
Lincoln	County wide	Winter Storms	Medium	Educate residents on how to prepare for winter storms through radio and television spots, newspaper inserts and brochures.
Lincoln	County wide	Winter Storms	Medium	Continue to educate people about the hazards associated with supplemental heat sources.
Lincoln	County wide	Winter Storms	Medium	Host sessions for livestock producers around the county on preparing for and surviving winter storms.
Lincoln	County wide	Winter Storms	Medium	Develop evacuation plans for north and south Lincoln County for severe winter storms.
Lincoln	Star Valley Ranchy	Multiple Hazards	High	Replace Star Valley Ranch street signs to facilitate emergency operations.
Lincoln	County wide	Multiple Hazards	High	Continue to exercise existing response plans.
Lincoln	County wide	Multiple Hazards	High	Continue to offer training to keep skill levels high and responders current.
Lincoln	County wide	Multiple Hazards	Medium	Negotiate a MOU with Idaho Falls Team.
Lincoln	County wide	Multiple Hazards	High	Incorporate new technologies as they become available.
Lincoln	County wide	Multiple Hazards	Medium	Work with the National Weather Service to continue to train weather spotters holding at least one training in the county each year, alternating the training between North and South Lincoln County locations.
Lincoln	County wide	Multiple Hazards	Medium	Work with the NWS to offer training for winter weather observation and reporting.
Lincoln	County wide	Human Health	High	Educate citizens on recognizing situation, personal response, infection control and disease prevention.
Lincoln	County wide	Human Health	High	Exercise vaccine and mass prophylaxis plans.
Natrona	City of Casper	Multiple Hazards	Not Assigned	Casper Events Center Hardening Project-ensure uninterrupted electrical power supply to allow center to serve as a shelter, preparedness & emergency response stockpiling & distribution center, inoculation center & business continuity incident command center.
Natrona	City of Casper	Flooding	Not Assigned	Construction of a detention basin at the confluence of the east & west channels of Garden Creek, removing properties from the flood plain.
Natrona	City of Casper	Flooding	Not Assigned	Replace undersized storm sewer along Industrial Avenue between Spruce Street & Elm Street and bring roadway & sidewalks up to current standards to include curb & gutter and crowned paving.
Natrona	City of Casper	Flooding	Not Assigned	Expand flood notification capacity to include citizens located in flood hazard area.
Natrona	Town of Mills	Flooding	Not Assigned	Chamberlain Street bank stabilization to eliminate washout of the street and private property.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Natrona	Town of Mills	Multiple Hazards	Not Assigned	Hardening of the Town of Mills fire department and other town buildings.
Natrona	Town of Mills	Multiple Hazards	Not Assigned	Create a safe room for tornado sheltering and emergency services operation staging area.
Natrona	Town of Evansville	Flooding	Not Assigned	Stabilization of ditch bank & installation of storm sewer pipe along the existing drainage ditch on Oildale Street behind Smith RV.
Natrona	Town of Evansville	Multiple Hazards	Not Assigned	Hardening of the Town of Evansville Police Department to include flood proofing, strengthening the walls, reconfigure the entrance to provide protection from heavy rains and sealing openings that permit water infiltration.
Natrona	Town of Evansville	Multiple Hazards	Not Assigned	Hardening of the Town of Evansville Community Center (currently under construction) to create a safe room for tornado shelters & emergency services operation staging area.
Natrona	County wide	Multiple Hazards	Not Assigned	Reverse 911 System.
Natrona	County wide	Flooding	Not Assigned	Update floodplain mapping, incorporating FEMA's updated floodplain information as it becomes available.
Natrona	County wide	All hazards	Not Assigned	Installation of PageAlert. Make available devices to the public and businesses that will alert them of an impending hazard.
Natrona	County wide	All hazards	Not Assigned	Educate the public through multiple means how to prepare for and survive during any type of hazard.
Natrona	County wide	Wildland fires	Not Assigned	Educate homeowners on how to assess risk and minimize risk to their properties. Construction of fuel breaks, aerial mapping and GPSing of structures in high risk areas has been funded.
Natrona	County wide	Wildland fires	Not Assigned	Develop and complete a wild land fire mitigation plan.
Natrona	Evansville	Storm Water flooding	Not Assigned	Reconstruct storm sewer, curb, gutter and asphalt on major streets.
Natrona	Casper	Storm Water flooding	Not Assigned	Construct a detention storage reservoir south of 24 th street in the Eastdale Creek drainage.
Natrona	Casper Metro	Flood warning system	Not Assigned	Install an early warning system for flood danger.
Niobrara	County wide	Multiple Hazards	High	Provide additional battery packs or generators at all strategic locations to improve communications reliability. Funding Source: Qwest
Niobrara	Lusk & Rural Areas	Multiple Hazards	High	Continue to harden power lines (ongoing since 2003). Funding source: Niobrara Electric
Niobrara	County wide	Multiple Hazards	Medium	Obtain mobile command centers as 2 law enforcement vehicles to better coordinate responses. Funding sources: County budget & HSGP grant
Niobrara	County wide	Flooding	Medium	Make information available on NFIP. Funding source: Budget
Niobrara	County wide	Flooding	High	Invite state floodplain coordinator for service visit to review floodplain codes. Funding Source: Wyoming Office of Homeland Security
Niobrara	County wide	Multiple Hazards	High	Develop capability to warn all residents by phone. Funding sources: County Emergency Management Budget, HSGP Grant
Niobrara	County wide	Multiple Hazards	Medium	Enhance capacity to shelter. Purchase cots. Funding cots: Red Cross, County Emergency Management Budget
Niobrara	County wide	Multiple Hazards	High	Document in writing mutual aid agreements with neighboring jurisdictions to ensure rapid response to disasters and avoid jurisdictional conflict.
Niobrara	County wide	Wildland fires	High	Firefighting training policies and availability. Funding sources: Local fire departments & Wyoming Division of Forestry
Niobrara	County wide	Multiple Hazards	High	Develop standards for personal protective equipment (PPE). Obtain PPE and training on its use. Funding Sources: Local fire departments, Wyoming Division of Forestry
Niobrara	County wide	Multiple Hazards	Medium	Obtain a multi-use command vehicle for effective SAR, fire, and law enforcement response. Funding Sources: County budget & HSGP

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
				Grant
Niobrara	County wide	Multiple Hazards	High	First responders develop disaster plan for their property & families so they are assured their families & property are safe in the event of an emergency.
Niobrara	County wide	Lightening	High	Obtain capacity to monitor lightning.
Niobrara	Manville	Flooding	Medium	Inventory culverts, assess condition and adequacy and replace as needed. Funding sources: Manville budget, FEMA
Niobrara	Lusk	Flooding	High	Request FEMA to create DFIRM map for Lusk. Funding source: County Emergency Management & FEMA
Niobrara	County wide	Flooding	High	Mitigate flood threat to Lance Creek Bridge to prevent the loss of the \$2M bridge. Funding source: County budget, FEMA
Niobrara	Manville	Storms	High	Assess condition and replace power poles in Manville as needed to prevent injury and property damage from storms and maintain power. Funding source: Manville Niobrara Electric
Niobrara	Manville	Wildland Fire	High	Develop plan to minimize potential for wildfire losses. Funding sources: Manville Fire Department
Niobrara	County wide	Multiple Hazards	High	Develop and post materials that explain different siren patterns and tones for emergency events.
Niobrara	Manville	Multiple Hazards	Low	Outfit Manville community building as a shelter. Funding sources: Manville and County Emergency Management budgets
Niobrara	County wide	Multiple Hazards	High	Coordinate sheltering and transportation with Corrections Dept.
Niobrara	County wide	Multiple Hazards	High	Construct wood and living snow fences along roadways to reduce blowing & drifting and reduce vehicle accidents. Funding Source: Wyoming Department of Transportation
Niobrara	County wide	Drought	High	Grasshopper control for retention of livestock forage and drought impact reduction.
Niobrara	County wide	Multiple Hazards	High	Emergency responders and county employees complete basic ICS course and exercise skills learned. Funding source: County Emergency Management & HSGP Grant
Niobrara	County wide	Multiple Hazards	High	Develop Continuity of Operations Plans for county & towns to reduce disruption and costs following an event. Funding Source: FEMA, HSGP Grant, County budget
Niobrara	County wide	Multiple Hazards	High	Host training session in damage assessment. Funding sources: HSGP Grant, FEMA
Niobrara	Lusk	Hazmat	High	Develop a plan to respond to a hazmat spill in Lusk that addresses notification and evacuation of Lusk. Funding sources: Wyoming Dept. of Transportation (WYDOT) & HSGP Grant
Niobrara	County wide	Hazmat	High	Conduct a placard count to determine how many and what types of materials are passing through the county. Funding sources: County Emergency Management & WYDOT
Niobrara	Lusk	Hazmat	Medium	Contact WYDOT about speed control options at critical intersections in Lusk. Funding source: WYDOT
Niobrara	County wide	Hazmat	High	Host annual hazmat awareness level course. Funding source: County Emergency Management & WYDOT
Park	Northwest College	Multiple Hazards	High	Campus Emergency Warning & Notification System
Park	Northwest College	Multiple Hazards	High	Campus Crisis Management Plan
Park	Northwest College	Fire	High	Install sprinklers in multi-student dwellings
Park	Northwest College	Multiple Hazards	High	Construction of road for secondary, emergency egress and dredging of pond for emergency fire-fighting water supply
Park	Northwest College	Multiple Hazards	High	Conduct tabletop exercise to evaluate college & community's response to mass casualty incident
Park	Northwest College	Fire	Medium	Study to evaluate opportunities for wild fire mitigation actions on college main campus
Park	Northwest College	Technology	Medium	Evaluate computer network & other critical technology for vulnerability to loss & take action to mitigate and enhance technological defenses
Park	Northwest College	Fire	Medium	Evaluate campus fire alarm systems

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Park	Northwest College	Earthquake	Medium	Conduct engineering study of campus buildings for earthquake-related issues
Park	Northwest College	Tornado	Medium	Conduct engineering study of campus facilities for tornado-related vulnerability
Park	Northwest College	Fire	Medium	Evaluate cost/benefit of sprinkler systems installation of non-residence buildings
Park	Northwest College	Multiple Hazards	Medium	Evaluate and upgrade campus electrical infrastructure
Park	Northwest College	Hail	Low	Evaluate severe hail storm mitigation measures
Park	Northwest College	Volcano	Low	Evaluate Volcanic Activity Mitigation Measures
Park	Northwest College	Winter Storm	Low	Evaluate winter storm mitigation measures
Park	Northwest College	Flooding	Low	Evaluate flooding mitigation measures
Park	Northwest College	Drought	Low	Evaluate drought mitigation measures
Park	County wide	Multiple Hazards	Medium	Back-up power supply for shelters & other essential locations. Funding sources: HSGP CCP Grant
Park	County wide	Multiple Hazards	Medium	Public awareness programs including promotion of survival kits, distribution of hazard information through brochures, handouts & news publication
Park	County wide	Multiple Hazards	High	Develop Citizen Corps including CERT teams, medical corps, etc.
Park	County wide	Multiple Hazards	High	Make available and participate in training programs and exercises
Park	County wide	Multiple Hazards	High	Complete Park County Multi-Hazard Mitigation Plan & distribute to involved entities & communities
Park	County wide	Multiple Hazards	High	Review & update Park County Emergency Operations Plan
Park	County wide	Multiple Hazards	Medium	Encourage residents, businesses and schools to purchase NOAA weather radios
Park	County wide	Dam Failure	Low	Establish and Maintain a Dam Safety Program for park County to include: Continued evaluations and inspections of dams Model dams for potential earthquake damage Monitor rains, snow melts, etc. Establish dam safety programs Establish a warning system Train operators / owners Emergency Action Plans Have an evacuation plan Train to be aware of sabotage/ terrorist activity
Park	County wide	Drought	High	Public awareness programs on: Managing natural resources, adopting farming practices less vulnerable to drought, and crop Insurance
Park	County wide	Flooding	Medium	Public awareness programs to include flood insurance and floodplain ordinances.
Park	County wide	Flooding	Medium	Study locations of roads, bridges, buildings, sewage plants, etc. to determine if relocation is needed
Park	County wide	Flooding	Medium	Build levees or dams
Park	County wide	Flooding	Medium	Replant vegetation areas
Park	County wide	Hail	Medium	Public awareness programs to include crop insurance
Park	County wide	Hazmat	High	Public awareness and outreach programs to include information and actions on the following: Using smaller storage containers on commercial sites Enforcing Tier II reporting Keeping Fire Districts updated on facilities' inventories Regularly scheduled LEPC meetings Making certain emergency plans are updated and maintained
Park	Mountainous areas	Landslide	Medium	Public awareness programs
Park	Mountainous Areas Yellowstone Nat'l Park	Landslide	Medium	Study locations of roads, bridges, buildings, sewage plants, etc. & relocate as needed.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Park	County wide	Lightening	Medium	Public awareness programs to include insurance
Park	County wide	Lightening	Medium	Enforce building codes for lightning rods, roof structures, etc.
Park	Mountainous Areas Yellowstone Nat'l Park	Snow Avalanches	Low	Public Awareness programs
Park	Mountainous Areas Yellowstone Nat'l Park	Snow Avalanches	Low	Monitor snowpack and new snowfall with new and proper equipment
Park	County wide	Tornado	High	Public awareness programs to include: Enforcing building codes, Structural reinforcement, Manufactured homes needs Warning systems, and Insurance
Park	Wapiti North Fork	Wildland Fire	High	North Fork Evacuation Plan
Park	County wide Cody	Wildland Fire	High	Public awareness programs Urban Interface Hazard Assessment and Firewise Program Park County Wildland Fire Committee
Park	County wide	Winter Storm	High	Public awareness programs including public service announcements through media (papers & radio) and Building codes that take into account snow load estimates
Park	County wide	Winter Storm	High	Warning systems
Park	County wide	Expansive Soils	Low	Public awareness programs
Park	County wide	Land subsidence	Low	Public awareness programs
Park	County wide	Urban Fire	Low	Public awareness programs
Park	Northeast County	Windblown Deposits	Low	Public awareness programs
Park	County wide	Yellowstone Volcanic Explosion	Low	Public awareness programs
Park	County wide	Multiple Hazard	Low	Evacuation & shelter programs
Park	County Wide	Multiple Hazard	Low	Emergency Operations Plan
Platte	Chugwater	Floods	Medium	Work with FEMA and NFIP to develop new floodplain.
Platte	County wide	Floods	Medium	Join NFIP and determine how to relieve flooding issues in town.
Platte	Wheatland	Hazardous Materials	High	Meet with Wheatland COOP to come up with a safer solution.
Platte	County wide	Hazardous Materials	High	Town ordinances not allowing vehicles transporting hazards to park overnight in city limits.
Platte	County wide	Multiple Hazards	Low	Public education, build awareness by using news, pamphlets, etc.
Platte	County wide	Tornadoes	Medium	Establish shelters for numerous trailers parks throughout the county.
Platte	County wide	Tornadoes	Medium	Establish better warning systems.
Sheridan	County Wide	Multiple Hazards	Medium	Encourage residents, businesses and schools to purchase NOAA weather radios.
Sheridan	County wide	Multiple Hazards	Medium	Public awareness program to include promotion of 72-hr kits and distribution of hazard information to residents and businesses via multiple media sources
Sheridan	County wide	Droughts	High	Public awareness campaign
Sheridan	County wide	Flooding	High	North Main/Higby Road Drainage Project
Sheridan	City of Sheridan	Flooding	Medium	Champion Drive Drainage Project
Sheridan	Sheridan County	Flooding	Medium	Levee & widening channel of Little Goose Creek
Sheridan	Ranchester, Dayton, Sheridan	Flooding	Medium	Tongue River Flood control projects

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
	County			
Sheridan	Story, County	Flooding	Medium	Piney Creek flood control projects
Sheridan	County Wide	Flooding	Medium	Powder River flood control projects
Sheridan	County wide Clearmont	Flooding	Medium	Clear Creek flood control projects
Sheridan	City of Sheridan	Flooding	High	Junior High Hill, LaClede Sanitary Sewer Project
Sheridan	City of Sheridan	Flooding	Medium	Linden Storm Sewer Project – enlarging existing storm sewer
Sheridan	City of Sheridan	Flooding	Medium	Huntington Storm Sewer Project-enlarging storm water ditch
Sheridan	City of Sheridan	Flooding	High	South Downtown Storm Sewer Project-repairing collapsed storm sewer
Sheridan	County	Flooding	High	Dana Avenue Repair Project-bank erosion repair & mitigation
Sheridan	City of Sheridan	Flooding	High	11 th Street Bridge Undermining Project-Repair & mitigate erosion
Sheridan	City of Sheridan	Flooding	Medium	Sumner Street Storm Sewer Project
Sheridan	City of Sheridan	Flooding	Medium	North Gould Storm Sewer Project
Sheridan	City of Sheridan	Flooding	Medium	North Broadway Storm Sewer Project
Sheridan	City of Sheridan	Flooding	High	North Main Street Storm Sewer Project
Sheridan	City of Sheridan	Flooding	Medium	West Downtown Storm Sewer Repair Project
Sheridan	County wide	Flooding	Medium	Floodplain identification and mapping – Digital Flood Insurance Rate Mapping project
Sheridan	County wide	Flooding	High	Enforcement of floodplain management requirements under the National Flood Insurance Program
Sheridan	City of Sheridan	Landslides	Medium	City of Sheridan Cemetery Slide Remediation
Sheridan	County wide & Town of Story	Wildland Fire	High	Hazard awareness for residents of Story
Sheridan	City of Sheridan	HazMat	Medium	Sanitary Sewer Creek Crossings
Sheridan	City of Sheridan	Hazmat	High	Water treatment plant improvements
Sublette	County wide	Multiple Hazards	High	Enhanced reverse 911 system to include phone system phone numbers and the integrate with GIS information
Sublette	County wide	Multiple Hazards	High	Bilingual emergency preparedness information including printed, radio & TV
Sublette	County wide	Multiple Hazards	High	Integration of GIS information with dispatch
Sublette	County wide	Multiple Hazards	Medium	Additional emergency shelter facilities and supplies
Sublette	Pinedale & Marbleton	Multiple Hazards	High	Senior Center evacuation plan
Sublette	County wide	Multiple Hazards	High	Development review
Sublette	County wide	Dam Failure	Low	Establish & maintain a dam safety program to include evaluations , inspections, dam modeling for potential earthquake damage, monitoring of rain & snowmelt, evacuation plans, and awareness of sabotage and terrorist activity
Sublette	County wide	Drought	Medium	Public awareness programs on management of natural resources, adopting farming practices less vulnerable to drought, and crop insurance
Sublette	Northern parts of County	Flooding	Medium	Early warning and monitoring systems for Fremont Lake dam failure
Sublette	Pinedale Marbleton	Flooding	Medium	Expanded participation in Federal FIRM program
Sublette	County wide	Flooding	High	Adopt International Code of Development to prevent construction of

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
				buildings in floodplain
Sublette	County wide	Flooding	Medium	Enforcement of building codes with respect to FIRM maps
Sublette	County wide	Earthquake	High	Adopt building codes for earthquake safe buildings
Sublette	County wide	Earthquake	High	Development of earthquake emergency response plan
Sublette	County wide	Earthquake	Medium	Evaluation of retrofitting of clinics and public facilities
Sublette	County wide	Hazmat	Medium	Acquire 2 hazmat quick attack equipment trailers
Sublette	County wide	Hazmat	Medium	Training and additional personnel
Sublette	County wide	Hazmat	Medium	Enhanced training exercise program
Sublette	County wide	Health	Medium	Epidemic management plan
Sublette	County wide	Health	Low	Enhanced training exercise program
Sublette	County wide	Health	Low	Coordinate disease surveillance and investigation, including infectious diseases and environmental health problems/health hazards in the community
Sublette	County wide	Health	Medium	Provide education related to worker health & safety
Sublette	County wide	Health	Medium	Provide information, education, and outreach to the citizens of Sublette County
Sublette	County wide	Health	Low	Set up & administer mass clinics and/or dispensing of prophylaxis medications, vaccines, etc.
Sublette	Mountainous Areas	Landslide	Medium	Public awareness programs
Sublette	County wide	Lightning	Medium	Public awareness programs
Sublette	Mountainous Areas	Snow Avalanches	Low	Public awareness programs
Sublette	Mountainous Areas	Snow Avalanches	Low	Monitor snowpack
Sublette	County wide	Wildfire	High	Provide public information on wildfire risk mitigation
Sublette	Unincorporated County & Big Piney	Wildfire	High	Develop individual community evacuation plans
Sublette	County wide	Winter Storm	Medium	Increased public awareness through public service announcements and through media. Building codes that account for snow load estimates
Sublette	County wide	Winter Storm	Medium	Additional shelter facilities (in existing buildings) for stranded visitors; back-up supplies for static population
Sweetwater				
Teton	County wide	Multiple Hazards	High	Assess all state highway bridges for structural integrity
Teton	County wide	Multiple Hazards	Medium	Assess secondary road bridges for structural integrity
Teton	County wide	Multiple Hazards	Medium	Assess Town bridges for structural integrity
Teton	County wide	Multiple Hazards	Medium	Inventory & map all private bridges
Teton	County wide	Multiple Hazards	High	Perform structural retrofitting of vulnerable bridges
Teton	County wide	Multiple Hazards	High	Identify nearest resources for installation of temporary bridges
Teton	County wide	Multiple Hazards	High	Assess critical infrastructure (water, sewer, roads, utilities) for structural integrity
Teton	County wide	Multiple Hazards	High	Perform necessary structural and non-structural retrofitting of vulnerable infrastructure
Teton	County wide	Multiple Hazards	High	Assess critical facilities (hospital, shelters, fire stations, police stations, governmental administration buildings) for structural integrity
Teton	County wide	Multiple Hazards	High	Perform necessary structural and non-structural retrofitting of vulnerable facilities
Teton	County wide	Multiple Hazards	High	Identify and pursue fund sources for hazard mitigation projects
Teton	County wide	Earthquake	High	Encourage purchase of earthquake insurance for homes & businesses

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Teton	County wide	Multiple Hazards	High	Assess vulnerability of schools
Teton	County wide	Flood	High	Initiate participation in the Community Rating System
Teton	County wide	Multiple Hazards	High	Assess local regulations to determine their effect on reducing the risks from natural hazards
Teton	County wide	Multiple Hazards	High	Consider natural hazards when creating/updating community development plans
Teton	County wide	Multiple Hazards	High	Complete Fire/EMS Capital Project #21, new fire station at Jackson Hole Golf & Tennis
Teton	County wide	Multiple Hazards	High	Produce a county-wide hazard map
Teton	County Wide	Multiple Hazards	High	Offer two CERT courses per year
Teton	County Wide	Multiple Hazards	High	Offer 2-4 weather spotter courses per year
Teton	County Wide	Multiple Hazards	High	Offer hazard awareness education to the public
Teton	County Wide	Multiple Hazards	Medium	Develop & run avalanche public service announcements
Teton	County Wide	Multiple Hazards	High	Community participation and compliance with the HSEEP
Teton	County Wide	Multiple Hazards	High	Monitor known slide areas
Teton	County Wide	Flooding	High	Complete DFIRM mapping of Teton County
Teton	County Wide	Flooding	Medium	Implement measures to prevent fragile ice build-up
Teton	County Wide	Flooding	Medium	Rehabilitate the Flat Creek drainage
Teton	County Wide	Flooding	High	Complete North Cache storm water upgrade
Teton	County Wide	Flooding	Medium	Extend Taylor #3 levee 600' downstream
Teton	County Wide	Wildland Fire	Medium	Complete the Town of Jackson's hazard tree reduction program
Teton	County Wide	Wildland Fire	Medium	Conduct fire hazard mitigation education
Teton	County Wide	Wildland Fire	High	Fire fuel reduction; removal of high-risk (diseased and infested) trees
Teton	County Wide	Flooding	Medium	Develop a Community Rating Plan
Teton	County Wide	Wildland Fire	Medium	Quantify assets located in high hazard wildlife urban interface
Teton	County Wide	Flooding	High	Taylor Creek Flood Mitigation
Teton	County Wide	Hazmat	Medium	Conduct a commodity flow study to determine the amount and type of hazardous materials moving through the county
Teton	County Wide	Multiple Hazards	Medium	Review and upgrade security access to critical facilities
Teton	County Wide	Multiple Hazards	Medium	Review and upgrade security at critical infrastructure
Teton	County Wide	Technology	High	Provide technological hazard awareness education
Teton	County Wide	Heath	Medium	Identify mental health resources available locally
Uinta	County wide	Multiple Hazards	Low	Reverse 911 system
Uinta	County wide	Multiple Hazards	High	Enhanced 911 system include phone system phone numbers and the integrate with GIS information
Uinta	Evanston	Multiple Hazards	Ongoing	Enhance siren system in Evanston
Uinta	Lyman, Mt. View, Bear River, Ft. Bridger	Multiple Hazards	High	Siren system for other communities and Bridger Valley with associate training & public information
Uinta	County wide	Multiple Hazards	Medium	Improve & increase the number of sheltering & safe haven facilities
Uinta	County wide	Multiple Hazards	High	Dispatch communications improvements – back-up system and integration of GIS information
Uinta	Lyman, Mt. View, Ft. Bridger	Multiple Hazards	High	Radio coverage improvements in the Bridger Valley
Uinta	County wide	Multiple Hazards	High	Bilingual emergency preparedness information including printed, radio and TV
Uinta	County wide	Multiple Hazards	High	Evacuation route development for major public buildings with associated training programs

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Uinta	County wide	Multiple Hazards	Ongoing	Community based public education programs on emergency preparedness
Uinta	County wide	Multiple Hazards	Low	Grant program for household emergency preparedness kits
Uinta	County wide	Multiple Hazards	Medium	Adoption of Uniform Building Code by Uinta County
Uinta	County wide	Multiple Hazards	High	Training on existing Mapping/GIS system
Uinta	County wide	Flooding	High	Update flood maps
Uinta	Evanston	Flooding	High	Flood inundation maps for Supur Creek
Uinta	Bear River	Flooding	High	Bridges over dikes, bank stabilization projects including El Caballo area
Uinta	Lyman	Flooding	High	Shelters in Lyman in case of dam break & associated flooding – equipping of existing buildings so they can be used as shelters (including emergency generators)
Uinta	County wide	Flooding	Medium	Early warning/monitoring systems on all dams- inflow and breach
Uinta	Lyman, Mt. View, Ft. Bridger	Flooding	High	Coordinated plan in Bridger Valley on sheltering and evacuation procedures in case of dam break
Uinta	County wide	Earthquake	Ongoing	Retrofit of schools
Uinta	Evanston	Earthquake	Medium	Retrofit of old high school gym, bowling alley at fairgrounds
Uinta	County wide	Earthquake	Low – ongoing	Retrofit of highway bridges & tunnels
Uinta	County wide	Earthquake	Low	Retrofit of railway bridges & facilities
Uinta	Evanston & County wide	Earthquake	Medium – Ongoing	Retrofit of hospitals
Uinta	County wide	Earthquake	Low	Retrofit of fire & police stations
Uinta	Evanston & County wide	Earthquake	Low	Retrofit of airport facilities
Uinta	Evanston	Earthquake	Medium	Retrofit of major buildings (for example: Wells Fargo Bank)
Uinta	County wide	Hazmat	Low – Ongoing	Hazmat equipment for rail spills
Uinta	County wide	Hazmat	Medium	Training & additional personnel
Uinta	County wide	Wildfire	Low – Ongoing	Public information on wildfire risk mitigation
Uinta	Bridger Valley	Wildfire	Low	Installation & maintenance of water storage facilities for wildfire suppression
Uinta	Uinta County Youth Camp	Wildfire	Medium	Increase water storage facility at the Uinta County Youth Camp
Uinta	Lyman, Mt. View, Ft. Bridger	Drought	High	Water delivery improvements for Mountain View, Fort Bridger, & Lyman. Direct line from reservoir to community water systems
Uinta	County wide	Drought	High	Increased storage facilities for potable water
Uinta	County wide	Health	Low	GIS software tracking system
Uinta	County wide	Tornado	Not Assigned	Tornado warning communication system to be tied into existing warning systems
Uinta	County wide	Winter Storm	Medium	Additional shelter facilities (in existing buildings)for stranded visitors; back-up supplies for static population
Uinta	County wide	Winter Storm	Medium	Personal hygiene kits for stranded travelers
Uinta	County wide	Weather	Medium	NPAA weather radios in homes and businesses
Washakie	County wide	Emergency Response	N/A	TAC Response Team.
Washakie	County wide	Floods	N/A	Flood Control - \$500,000 for plan.

Table 22.1—Proposed County Mitigation Projects/Measures

County	Location	Keyword	Mitigation Project Rank (High, Medium, Low)	Description
Washakie	County wide	Hazardous Materials	N/A	HAZMAT truck bypass, railroad HAZMAT.
Washakie	County wide	Transportation	N/A	New bridges, 2005 completion, state and county funds.
Washakie	County wide	Water	N/A	Back-up water line-Worland public works, \$21,000,000 cost, 2005 completion.
Washakie	County wide	Wildland Fires	N/A	Wildland mitigation, new wildland unit, fire command unit.

State Mitigation Goals

The 2011 Wyoming Multi-Hazard Mitigation Plan has ten goals. The first five goals listed below were generated by the Multi-Hazard Task Force for the 2005 Wyoming Multi-Hazard Mitigation Plan. Goals 6 and 7 below were approved as goals in the 2005 plan, but were only represented in Proposed State Mitigation Projects and Measures (Table 22.2). Those goals have been added to the list below. Goal 8 below was added after receiving input from all entities involved in the current planning process, as described in Chapter 2. The goals provide a basis for promoting and supporting mitigation efforts in Wyoming, including the selection, ranking, and funding of mitigation projects. As a Home Rule state, state government’s role is primarily to support local jurisdictions.

The goals were developed after a review of the hazard rankings, proposed mitigation projects identified in local plans, and a discussion of the state hazard assessment and vulnerability analysis portion of this plan as described in Chapter 2. Each of the local mitigation plans reviewed indicates a strong local preference for implementing activities, which are designed to increase local awareness of hazards. Refer to **Table 22.1** for a listing of the projects identified in local plans, and **Table 3.1** for ranking of hazards in local plans. In accordance with the high number of public awareness and education type projects proposed by local jurisdictions, the planning team chose education as the number one state mitigation goal. The team is aware, however, that there are limited federal hazard mitigation grant program funds available for use in public awareness or education activities. A correlation between the goals and the proposed state mitigation projects/measures, and those set forth in local plans, is provided in Chapter 22.

Goals

1. Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area to allow them to make informed decisions as to what level of feasible and realistic disaster resistance they desire for themselves and their communities.
2. Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation activities for inclusion in future revisions of the Wyoming Multi-Hazard Mitigation Plan. Strengthen infrastructure and lifelines, including but not limited to: gas and electrical transmission and distribution lines; communication lines; water distribution systems; and the state highway system as a means of preventing loss of life, reducing damages, and reducing loss of revenue.

3. Strengthen and improve disaster resistance of facilities owned and operated by the State of Wyoming to prevent injury and loss of life and to reduce potential property damage.
4. Encourage all jurisdictions and private partners to utilize geographic information systems (GIS)/digital technology for continued hazard analysis and identification of feasible mitigation measures for inclusion in local and state mitigation plans and related planning documents and programs.
5. Fund research leading to a reduction of hazard impacts.
6. Reduce or eliminate the long term risk to human life and property.
7. Improve capabilities to detect or warn of hazards before damage occurs.
8. Reduce state and local costs related to disaster response and recovery.
9. Minimize economic losses.

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Avalanche	Low	Expanded study to determine extent and dollar impacts of avalanche hazard in Wyoming.	Low	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	U.S. Forest Service (USFS), Wyoming State Forestry Division (WSFD), Wyoming Department of Transportation (WYDOT)	\$35,000 USFS WYDOT	The avalanche hazard in Wyoming will be better defined, assisting in the identification of better mitigation measures. This will potentially save lives and property.	Expanded study still needed. There are ongoing efforts in this area.	N/A
Avalanche	Low	Education	Low	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	U.S. Forest Service (USFS), Wyoming State Forestry Division (WSFD), Wyoming Department of Transportation (WYDOT)	\$35,000 FEMA (PDM) USFS WSFD WYDOT	Education will serve to remind residents of the hazard and how to locate structures or behave in avalanche terrain	News media are notifying the public when avalanche danger is high based on weather and snowpack conditions and warns of safety issues in the back country during times of high avalanche danger. This is an ongoing effort to educate the public. Education is also ongoing by WYDOT utilizing spots on newscasts and other methods.	
Avalanche	Low	Research on avalanche mitigation (wind sails, snow fence, etc)	Medium	Fund research that will lead to the reduction of hazard impacts.	Wyoming Water Resources Data System, USFS	\$750,000 USFS WYDOT	Reducing avalanche occurrence will reduce number of deaths	On-Going/Still Needed	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Dam Failure	Low	Refine computer models to determine potential damage to dams from earthquakes.	Low	Strengthen infrastructure and lifelines.	Wyoming State Engineer's Office (WSEO)	\$200,000 FEMA (Dam Safety)	Modeled dams found to be inadequate can be repaired or modified.	Basic model developed and utilized. Enhancements needed. Ongoing project need..	
Dam Failure	Low	Drill test cores on older hydraulic fill dams in western Wyoming to determine liquefaction or piping potential of the dam.	High	Strengthen infrastructure and lifelines.	Wyoming State Engineer's Office	\$3,000,000 FEMA (PDM, Dam Safety)	Dams that could fail due to liquefaction or piping could be identified and repaired or modified.	Project still needed	
Dam Failure	Low	Identify homes built in inundation areas of dam failures.	Medium	Strengthen infrastructure and lifelines.	Wyoming State Engineers Office	\$42,000 FEMA (NDSP)	Reduce impact of dam failures on Wyoming residents.	Ongoing project	
Dam Failure	Low	Update hazard rating of all dams statewide	High	Strengthen infrastructure and lifelines.	Wyoming State Engineer's Office	\$500,000 FEMA (Dam Safety, PDM)	Updated hazard ratings of dams will lead to improved inspection protocols	Project still needed	
Dam Failure	Low	Increase height of dams to compensate for sediment behind dams	Medium	Strengthen infrastructure and lifelines.	Wyoming Water Development Commission	\$3,000,000 WWDC FEMA (PDM)	Measure will reduce overtopping from reduced capacity	Project still needed	
Dam Failure	Low	Education program on high-hazard dams	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	Wyoming State Engineers Office	\$22,000 FEMA (NDSP)	Improved awareness and response for dam safety	New project	
Drought	Medium-Low	Education	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	Wyoming Department of Agriculture	\$50,000 FEMA (PDM)	Education may reduce demand for water and improve conservation practices	Project still needed	Crook Fremont

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Drought	Medium-Low	Deployment of solar powered well pumps in drought ridden areas.	High	Strengthen infrastructure and lifelines.	Wyoming Department of Agriculture, Wyoming Association of Rural Water Systems	\$1,500,000 DOE	Reduce the impacts of drought on economy	Project still needed	
Drought	Medium-Low	Wind technology study for water pumping and electrical development for water pumps.	High	Strengthen infrastructure and lifelines.	Wyoming Department of Agriculture, Wyoming Association of Rural Water Systems	\$300,000 DOE	Reduce the impacts of drought on Wyoming's economy	Project still needed	
Drought	Medium-Low	Development studies and projects of pipeline water distribution systems and water distribution policies for Wyoming.	High	Strengthen infrastructure and lifelines.	Wyoming Water Development Commission, Wyoming Public Service Commission (PSC)	\$3,000,000 WWDC	Reduce the impacts of drought on Wyoming's economy	Project still needed	Uinta
Drought	Medium-Low	Water conservation projects and studies.	High	Fund research that will lead to the reduction of hazard impacts.	Wyoming Department of Agriculture, Wyoming Water Development Commission (WWDC)	\$100,000 USDA FEMA (PDM)	The impacts of drought may be reduced through expanded water conservation.	Local projects accomplished, overall project continues	Converse Crook Fremont Laramie Lincoln Niobrara Platte Teton Uinta
Drought	Medium-Low	Groundwater development.	Medium	Fund research that will lead to the reduction of hazard impacts.	Wyoming Water Development Commission, Wyoming State Engineer's Office	\$3,000,000 WWDC USGS	Groundwater development may be a long-term solution to serious drought.	Local projects accomplished, overall project continues	Converse Crook Fremont Laramie Lincoln Niobrara Platte Teton Uinta

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Drought And Hazardous Materials	Medium-Low	Study on productive use of produced water related to oil and gas industry.	Low	Fund research that will lead to the reduction of hazard impacts.	Wyoming Department of Environmental Quality, Wyoming Water Development Commission	\$3,000,000 Private Industry	Produced water could be put to new, productive uses, potentially reducing the impact of future droughts.	Limited research accomplished through industry. Project continues.	Converse Laramie Lincoln Niobrara Platte Teton Uinta
Drought	Medium-Low	Enhanced forecasting and data distribution	Medium	Fund research that will lead to the reduction of hazard impacts.	Wyoming Water Development Commission, Water Resources Data System, National Weather Service	\$500,000 WWDC NWS, FEMA (PDM)	More precise forecasting will allow residents to better prepare for effects of drought.	Project still needed	
Drought	Medium-Low	Weather mitigation modification (cloud seeding expanded research)	High	Fund research that will lead to the reduction of hazard impacts	Wyoming Water Development Commission	\$10,000,000 WWDC USDA	Enhanced wintertime precipitation will lead to longer-term runoff in spring and summer months.	Ongoing Project with activities currently funded through WWDC.	
Drought	Medium-Low	Statewide aquifer impact study	Medium	Fund research that will lead to the reduction of hazard impacts	Wyoming Water Development Commission	\$2,000,000 WWDC EPA	Determining impact areas will target areas needing conservation	Project still needed	
Drought	Medium-Low	Build additional dams for water storage	High	To reduce or eliminate the long term risk to human life and property.	Wyoming Water Development Commission	\$30,000,000 WWDC	Increased storage will reduce effects of drought	Project still needed	Uinta
Drought	Medium-Low	Expanded or improved precipitation monitoring (Snowtel, etc.)	Medium	Fund research that will lead to the reduction of hazard impacts.	Wyoming Water Resources Data System	\$500,000 USGS USDA	Better data will allow residents to better prepare for effects of drought.	Project still needed	
Earthquake	Medium	Conduct HAZUS analyses to determine effects building code adoption may have on reducing loss estimates.	Medium	Strengthen infrastructure and lifelines; educate residents, business/industry representatives, and government on hazards and risks.	Wyoming State Geological Survey, WOHS, Wyoming Department of Fire Prevention and Electrical Safety (WDFPES)	\$50,000 FEMA (PDM)	Building code adoption in certain areas of Wyoming could result in reducing loss of life and reduced property damage from earthquakes.	WDFPES routinely enforces International Building and Fire Codes. The IBC includes earthquake restrictions and they are	Albany Bighorn Campbell Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
								enforced in the Teton County area, where earthquake danger is highest and wherever earthquake-prone areas are located throughout the state.	
Earthquake	Medium	Conduct study on Phasing in of earthquake provisions of code for state funded and/or inspected buildings.	High	Strengthen and improve disaster resistance for state owned and operated facilities.	Wyoming Department of Fire Prevention and Electrical Safety	\$25,000 FEMA (PDM)	State buildings would be more earthquake resistant, reducing the loss of life and building damage during an earthquake.	WDFPES has been enforcing and inspecting buildings for years to ensure compliance with IBC earthquake provisions.	Albany Bighorn Campbell Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Earthquake	Medium	Development of enhanced soil layer for use in HAZUS. Currently at 1:500,000 scale, the goal is to obtain 1:100,000 scale.	Medium	To reduce or eliminate the long term risk to human life and property.	Wyoming State Geological Survey	\$700,000 USGS FEMA (PDM)	Better prediction of hazard effects will lead to more directed mitigation	Project has begun utilizing USGS grant funds. 14 maps remain to be completed.	
Earthquake	Medium	Study on retrofit feasibility of government owned buildings, essential facilities, culverts, and bridges.	High	Strengthen and improve disaster resistance for State owned and operated facilities.	Wyoming Department of Administration and Information	\$3,000,000 FEMA (PDM)	Retrofit will strengthen governmental buildings reducing damage / loss of life during an earthquake.	Project still needed	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Earthquake	Medium	Retrofit government owned buildings, essential facilities, culverts, and bridges.	High	Strengthen and improve disaster resistance for State owned and operated facilities.	Wyoming Department of Administration and Information, Local Jurisdictions	\$3,000,000 FEMA (PDM)	Retrofit will make state buildings more earthquake resistant, reducing damage and loss of life during an earthquake.	Project still needed	Albany Bighorn Campbell Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Earthquake	Medium	Analysis of pipeline and other infrastructure including transmission lines, roads, & rail crossings with active faults	Medium	Strengthen infrastructure and lifelines/	Wyoming State Geological Survey, Wyoming Public Service Commission, Bureau of Land Management	\$100,000 FEMA (PDM)	Pipelines and other infrastructure needing to be made seismically resistant will be identified	Project still needed	Teton Uinta
Earthquake	Medium	Statewide education on earthquakes and on seismic provisions of the building code. Also to include preparedness information for responders, and Wyoming residents. Education efforts to include multi-agency meetings, publications and public outreach.	Medium	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation activities for inclusion in future revisions of the Wyoming Multi-Hazard Mitigation Plan	Wyoming State Earthquake Geological Survey, WOHS, Wyoming Department of Fire Prevention and Electrical Safety	\$250,000 FEMA (PDM)	Promote interagency, interoperable, private and public mitigation activities.	Builders in Wyoming are notified by WDFPES of IBC Earthquake-specific code implementation and inspections are conducted to ensure codes are followed. Education is ongoing with new and existing contractors and home builders.	Crook Fremont Uinta
Earthquake	Medium	Seismic workshop for community leaders & planners.	Medium	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation activities for	Wyoming State Geological Survey, WOHS, Wyoming Department of Fire Prevention & Electrical Safety	50,000 FEMA (PDM)	Increased outreach to Wyoming Residents through their own local officials.	Project still needed	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
				inclusion in future revisions of the Wyoming Multi-Hazard Mitigation Plan					
Earthquake	Medium	Retrofit State Capitol and Herschler Building	Medium	Strengthen and improve disaster resistance for state owned and operated facilities.	Wyoming Department of Administration and Information.	\$3,000,000 FEMA (PDM)	Significant damage to key buildings housing state government can be reduced through retrofit.	Project still needed	
Expansive Soils	Low	Conduct mapping studies to determine extent of expansive soils.	Low	Fund research that will lead to the reduction of hazard impacts	WYDOT, Natural Resources Conservation Service	\$500,000 FEMA (PDM)	Damage from expansive soils will be minimized	Historic data compilation is fairly complete with respect to highways and the impact of expansive soils. In other areas of experience, the project is still needed.	N/A
Flood	Medium	Continue to encourage participation in NFIP.	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	WOHS	FEMA (CAP-SSSE)	Flood insurance activities serve to educate the public and reduce flood-related damages and loss of life.	Ongoing Project	All Counties
Flood	Medium	Locate septic systems in flood prone areas, and work with local jurisdictions to remedy potential problems.	Medium	Strengthen infrastructure and lifelines/	Wyoming Association of Municipalities, Wyoming Association of Rural Water Districts	\$1,000,000 FEMA (PDM) WDEQ	Locating and removing or retrofitting septic systems will reduce contamination and improve system functionality.	Project still needed	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Flood	Medium	Study on flood-proofing government buildings and essential/critical facilities in floodplains	Medium	Strengthen and improve disaster resistance for state owned and operated facilities.	WOHS	\$500,000 FEMA (PDM)	Flood-proofing state buildings in the floodplain will provide flood resistance, and will lessen the loss of life or damage.	Project still needed	Albany Bighorn Campbell Converse Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Flood	Medium	Active participation in Risk MAP Program.	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	WOHS	\$70,000 per year FEMA (MMMS)	The Risk MAP Program will enhance the generation of new flood maps for Wyoming.	Participation ongoing	Albany Bighorn Campbell Crook Converse Fremont Hot Springs Johnson Laramie Lincoln Niobrara Platte Teton Uinta
Flood	Medium	Education of floods and on flood insurance	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	WOHS FEMA	\$10,000 per year FEMA (CAP-SSSE)	Education will enhance participation in the program	Public service announcement generated and released in 2007. Project will continue.	All Counties

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Flood	Medium	Generate and publish summary of Wyoming DOT hydrologic and flood potential assessments.	Low	To reduce or eliminate the long term risk to human life and property.	WYDOT	\$50,000 FEMA (CAP-SSSE)	The assembly of and publishing of DOT studies will benefit all future flood studies in covered areas.	Project still needed	Albany Big Horn Campbell Converse Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Flood	Medium	Statewide analysis of areas needing detention ponds, with needs prioritized	Medium	To reduce or eliminate the long term risk to human life and property.	WOHS, Wyoming State Engineer's Office	\$1,000,000 FEMA (PDM, FMA)	Pre-defining and prioritizing needs will ensure projects needing funding first are identified. This will lead to loss of life and property.	Project still needed	
Flood	Medium	Precisely locate structures in existing floodplain, and generate cost estimates for raising or removing structures.	Medium	To reduce or eliminate the long term risk to human life and property.	WOHS	\$100,000 FEMA (PDM, FMA, CAP-SSSE)	Property and lives will be saved by raising or removing structures in the floodplain.	Project still needed	
Flood	Medium	Early warning stream stage continuous recorders with warning function established throughout state	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	Wyoming Water Resources Data System, U.S. Geological Survey, National Weather Service	\$10,000,000 USGS	Continuous data will allow for advance warning of residents downstream, allowing for sandbagging, etc.	Project still needed	Campbell Converse Crook Natrona Uinta
Flood	Medium	Storm drain inspection and cleaning program	High	To reduce or eliminate the long term risk to human life and property.	Local Jurisdictions	\$3,000,000 FEMA (PDM, FMA)	Storm drain inspection and cleaning will reduce flood impacts	Project still needed	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Hail	Medium	Education	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks	Wyoming Water Resources Data System, National Weather Service	\$25,000 FEMA (PDM)	Education will serve to inform public on methods to reduce impacts of hail damage	Project still needed	Albany Bighorn Campbell Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Hazardous Materials	Medium-Low	State or regional-sponsored hazardous material collection days, with improved education on disposal of household items.	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	Wyoming Department of Environmental Quality, Local Jurisdictions, State Emergency Response Commission (SERC)	\$500,000 FHA EPA SERC	Hazardous material collection days reduce the chance of incidents. The activities also increase knowledge of the hazards.	Project implemented, and is continuing.	All Counties
Hazardous Materials	Medium-Low	Increased education and public outreach regarding the risks associated with hazardous materials and appropriate disposal methodology.	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area	Wyoming Department of Environmental Quality, Wyoming Department of Agriculture, State Emergency Response Commission (SERC)	\$200,000 FHA EPA SERC	Provides the tools necessary for businesses, private residents, and government officials to mitigate hazardous materials risks.	Project still needed	Campbell Converse Crook
Hazardous Materials	Medium-Low	Commodity Flow Study	High	To reduce or eliminate the long term risk to human life and property.	State Emergency Response Commission (SERC)	\$250,000 FHA EPA SERC	Determine travel routes, number, and types of hazmat transport vehicles in community so alternate routes can be established.	Ongoing project	Campbell Johnson Washakie
Hazardous Materials	Medium-Low	Chemical Safety Audits of fixed facilities	High	To reduce or eliminate the long term risk to human life and property.	EPA / Local Emergency Planning Committees, State Emergency Response Commission (SERC)	\$200,000 FHA EPA SERC	Safety audits will ensure safe handling of materials	Ongoing project	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Hazardous materials	Medium-Low	Safe Haven Study to establish buffer zones around towns	Medium	To reduce or eliminate the long term risk to human life and property.	State Emergency Response Commission (SERC)	\$500,000 FHA EPA SERC	Keeping hazmat transport vehicles out of towns will reduce hazards to residents.	Ongoing project	Campbell Converse Platte
Hazardous Materials	Medium-Low	Increase capability for waste management regulatory inspectors , and civil servants regularly, or with a high potential of exposure to hazmat.	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area	State Emergency Response Commission, Wyoming Department of Environmental Quality	\$1,000,000 FHA EPA SERC	Provides the tools necessary for government employees to mitigate hazardous materials risks.	Project still needed	Converse Crook Uinta
Hazardous Materials	Medium-Low	Identify areas most susceptible to release of toxic gas (H2S, CO2) and review mitigation plans in place.	High	To reduce or eliminate the long term risk to human life and property.	Wyoming Department of Environmental Quality, Bureau of Land Management, WOHS, State Emergency Response Commission (SERC)	\$250,000 WDEQ EPA SERC	Problem areas identified and adequacy of plans determined	Ongoing project	
Hazardous Materials	Medium-Low	Education on Shelter-In-Place	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area	State Emergency Response Commission	\$25,000 EPA FEMA (PDM) SERC	Residents will reduce exposure to hazardous materials if evacuation is not possible	New Project, but some education at local level in place.	
Landslides	Low	Detailed study of critical and essential facilities and state buildings with exposure to landslides.	Medium	Strengthen and improve disaster resistance for State owned and operated facilities.	Wyoming State Geological Survey, WOHS	\$250,000 FEMA (PDM)	State buildings that are on or near landslides could be damaged or destroyed if the landslide activates. The study will prioritize the need for retrofit or relocation.	Basic study completed, but detailed study still needed.	Big Horn Campbell Fremont Hot Springs Johnson Laramie Platte Teton Uinta

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Landslides	Low	Roadway (including Highway and Interstate) realignment studies, and improved monitoring equipment.	Medium	Strengthen infrastructure and lifelines; and the state highway system as a means of preventing loss of life, reducing damages, and reducing loss of revenue.	WYDOT	\$3,000,000 FHA WYDOT	Harden transportation infrastructure against landslide dangers.	Extensive information obtained. Expansive (& expensive) mitigation is ongoing in areas of known slides. Research projects have been ongoing for some time.	
Landslides	Low	Monitor select landslides to detect movement	Medium	Strengthen and improve disaster resistance for state owned and operated facilities	WYDOT, Wyoming State Geological Survey	\$500,000 USGS WYDOT FHA	Identification of landslides initiating movement to allow for mitigation activities before damage occurs.	Project is ongoing in operations.	Fremont
Landslides	Low	Study on effect of wildland fire and post-fire precipitation on slope stability	Medium	Fund research that will lead to the reduction of hazard impacts.	Wyoming State Geological Survey, Natural Resources Conservation Service, WYDOT	\$500,000 USGS FEMA (PDM)	Research may identify slope stability problem areas in advance	Project still needed.	
Landslides	Low	Education	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area	Wyoming State Geological Survey	\$50,000 FEMA (PDM)	Education will lead to better placement of facilities and infrastructure, thus reducing future damage.	Ongoing Project	Crook
Lightning	Medium	Subscribe to lightning monitoring system such as Vaisala	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area	Wyoming State Forestry Division	\$1,380 per year DOI	Real-time lightning monitoring will enable state to more quickly respond to wildfires.	Ongoing project	
Liquefaction	Low	Study to determine liquefaction potential of transportation infrastructure	Low	Fund research that will lead to the reduction of hazard impacts	WYDOT	\$500,000 WYDOT USGS	Determining potential will lead to specific mitigation projects on liquefaction	No project being conducted at this time, but seismic	N/A

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
								concerns have been addressed in the past. Project still needed.	
Tornado	Low	Education	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area	WOHS, National Weather Service	\$10,000 FEMA (PDM)	Education will lead to better responses by the public.	Periodic information in press concerning tornadoes.	All Counties
Tornado	Low	Establish tornado shelters	Medium	Strengthen and improve disaster resistance of facilities	WOHS, Local Jurisdictions	\$150,000 per facility FEMA (PDM)	Shelter can save lives	Project still needed	
Tornado	Low	Study of governmental buildings to determine which qualify as potential shelters	High	Strengthen and improve disaster resistance of facilities	WOHS, A&I Facilities Management	\$2,000,000 FEMA (PDM)	Tornado shelters can be identified in governmental buildings	Project still needed	
Tornado	Low	Enhanced radar coverage in northeast Wyoming	High	Improve capabilities to detect or warn of hazards before damage occurs	Wyoming Water Resources Data System, National Weather Service, WOHS	\$3,000,000 NWS	Advanced warning of tornado	Project still needed	Converse
Tornado	Low	Warning systems	Medium	Improve capabilities to detect or warn of hazards before damage occurs	National Weather Service, Local jurisdictions	\$100,000 per site Local Jurisdiction	Warning residents will lead them to seek shelter in suitable tornado shelters	Local jurisdictions are adding and/or improving community warning systems utilizing homeland security grant funds	Campbell Converse Crook Platte

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Wildland Fire	High	Increase number of firewise communities in state.	High	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation.	Wyoming State Forestry Division	\$50,000 USDA NFP Mitigation Community Assistance Fund	The fire hazard will be reduced.	A full-time person has been hired and is continuing to implement the firewise program in Wyoming.	Albany Bighorn Campbell Carbon Converse Crook Fremont Hot Springs Johnson Laramie Lincoln Niobrara Platte Teton Uinta Washakie Weston
Wildland Fire	High	Air quality impact studies on Wyoming livestock.	Medium	Strengthen infrastructure and lifelines.	Wyoming Livestock Board, Wyoming Department of Environmental Quality	\$300,000 USDA	Reduce the impacts of wildland fires on Wyoming's economy.	Project still needed	
Wildland Fire	High	Develop plans for livestock evacuation and food supplies in the event of wildland fires.	Medium	Strengthen infrastructure and lifelines	Wyoming Livestock Board	\$1,000,000 USDHS USDA	Reduce the impacts of wildland fires on Wyoming's economy	Project Completed	Converse
Wildland Fire	High	Planning study determining the location and extent of electrical arching related to overhead power and communication lines.	Low	Strengthen infrastructure and lifelines	Wyoming Public Service Commission	\$50,000 PSC DOE	Reduction of fire hazards, statewide.	Project still needed	
Wildland Fire	High	Generate information on adopting guidelines and ordinances related to wildland fire.	Medium	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation.	Wyoming State Forestry Division	\$25,000 WSFD USDA SFA VFA	The adoption of ordinances or guidelines concerning wildland fire will potentially save lives and property.	Ongoing project	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Wildland Fire	High	Education, to include construction material alternatives	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks.	Wyoming State Forestry	\$100,000 FEMA USFA DOI Ready Reserve (RR) DOI Rural Fire Assistance (RFA)	Fire resistant construction and construction materials will reduce effects of fire.	Ongoing project thru Wyoming Statewide Assessment of Forest Resources	Fremont Natrona Teton Uinta
Wildland Fire	High	Fuel Load Reduction	High	To reduce or eliminate the long term risk to human life and property.	Wyoming State Forestry Division	\$3,000,000+ FEMA (PDM, HMGP) USFS	Fuel load reduction will reduce the severity and occurrence of wildland fires.	Project still needed	Converse Lincoln Washakie
Wildland Fire	High	Work with CoCoRAHS weather spotters to report wildland fires	Medium	To reduce or eliminate the long term risk to human life and property.	Wyoming Water Resources Data System, National Weather Service	\$5,000 NOAA	Advanced reporting of wildland fires and effective fire suppression	Project still needed	
Wildland Fire	High	Re-vegetate burned areas to minimize soil erosion or landslide formation	Medium	To reduce or eliminate the long term risk to human life and property.	Wyoming Department of Environmental Quality, Natural Resources Conservation Service, Wyoming State Geological Survey	\$300,000 USDA FEMA (PDM)	Re-vegetation will reduce landslides/debris flows and severe soil erosion.	Ongoing project	
Winter Storms	High	Encourage purchase or assembly of 3-day survival Kits for home and vehicle.	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	WOHS, American Red Cross, National Weather Service	\$50,000 WOHS USDHS	Survival kits are known to save lives.	Brochures distributed to all households in Wyoming. Project continues. 2010 Survey of Wyoming households indicates that 52% have 3-day emergency kits & another 33% plan to prepare one.	Albany Big Horn Campbell Converse Fremont Goshen Hot Springs Johnson Laramie Niobrara Platte Teton Uinta

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Winter Storms	High	Develop plans for livestock evacuation and food supplies in the event of winter storm.	High	Strengthen infrastructure and lifelines	Wyoming Livestock Board	\$1,000,000 USDA USDHS WY Dept of Ag	Reduce the impacts of winter Storms on Wyoming's economy	Project Completed	
Winter Storms	High	MRE Distribution	High	To reduce or eliminate the risk to human life.	WOHS	\$50,000 USDHS	Ensure travelers or residents in shelters have food supply	Ongoing Project, MRE distributed to Counties anticipating road closures with stranded motorists for use in their shelter locations prior to winter storms arrival.	
Winter Storms	High	Strengthen overhead power lines.	High	Strengthen infrastructure and lifelines.	Wyoming Public Service Commission, Wyoming Rural Electric Association (WREA)	\$1,000,000 +/- FEMA (PDM, HMGP)	The reduction of power outages can help to save lives during severe winter storms.	This is an appropriate role for private industry, although the state can offer support.	Albany Big Horn Campbell Converse Fremont Goshen Hot Springs Johnson Laramie Niobrara Platte Teton Uinta

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Winter Storms	High	Develop a power line inspection and assessment program.	High	Strengthen infrastructure and lifelines.	Wyoming Public Service Commission (PSC), Wyoming Rural Electric Association	\$100,000 PSC DOE	Weak or damaged power lines can be evaluated and replaced as necessary.	Project still needed.	Albany Big Horn Campbell Converse Fremont Goshen Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Winter Storms	High	Increase use of existing pole testing and replacement programs.	High	Strengthen infrastructure and lifelines.	Wyoming Public Service Commission (PSC), Wyoming Rural Electric Association	\$100,000 PSC DOE	Pole testing can result in the replacement of weak or damaged poles.	Project still needed.	Albany Big Horn Campbell Converse Fremont Goshen Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
Winter Storms	High	Design and locate new snow fence	High	Strengthen infrastructure and lifelines.	WYDOT	\$3,000,000 WYDOT FHWA	Reduces drifting of snow on highways, leading to safer driving conditions	Ongoing project. New snow fences have been installed in multiple locations over the past several years. Staff in place to accomplish this.	Niobrara

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
Winter Storms	High	Additional webcams on state highways to allow drivers to better monitor highway conditions	Medium	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	WYDOT	\$1,000,000 WYDOT FHWA HMGP PDMC	Direct drivers to other routes in order to prevent accidents	Ongoing project. Several web cams were added to the highway monitoring system each year over the past 3 years. More are expected to be installed and the project is ongoing.	
All Hazards	High	Provide all-hazards weather radios to all residences in Wyoming	High	Improve capabilities to detect or warn of hazards before damage occurs	WOHS	\$3,000,000+ USDHS	Residents can be warned of impending or existing disaster before damage or loss of life occurs	Attempt to find funds not yet successful. Project continues.	Crook Fremont Johnson
All Hazards	Medium	Identify and inspect shelters in hazard prone areas	High	To reduce or eliminate the long term risk to human life and property.	Local Jurisdictions, American Red Cross	\$750,000 USDHS FEMA (PDM)	Shelter inspection will lead to selection of safe shelters	Project still needed	
All Hazards	Medium	Research feasibility and costs of adding new frontage roads /detour routes to I-80, I-90, and I-25 to prevent significant delay in traffic flow and resultant economic loss and possible loss of life.	Medium	Strengthen infrastructure and lifelines.	WYDOT, Federal Highway Administration (FHA)	\$150,000 WYDOT FHA	Alternate routes and detours can ensure that traffic flow is not seriously disrupted, preventing economic loss and possibly the loss of life.	Research has been done regarding viability of frontage roads & detour routes. Not considered a viable project because of the cost involved.	N/A
All Hazards	Medium	Provide hazards info to shelters, emergency facilities in public buildings, campgrounds, and phone books.	High	Educate, on an on-going basis, residents, business/industry representatives, and government officials on the hazards and risks in their area.	WOHS	\$25,000 FEMA (PDM)	The distribution and availability of hazards information can save lives for those that do not know how to react or evacuate.	Project still needed	N/A

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
All Hazards	Medium	Develop reseeding plans for losses due to all hazard events.	High	Strengthen infrastructure and lifelines	Wyoming Department of Environmental Quality, Natural Resources Conservation Service, Wyoming Department of Agriculture	\$500,000 FEMA (PDM, HMGP) USDA	Mitigates impacts of hazards on the Wyoming agricultural industry.	Project still needed	
All Hazards	Medium	Investigate opportunities for developing or improving warning systems as a means to reduce loss of life, damage to property, and economic losses.	Medium	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation.	National Weather Service, U.S. Geological Survey, U.S. Bureau of Reclamation, WOHS	\$150,000 USDHS	New or advanced warning systems can result quicker reaction to hazards, leading to the saving of lives.	Local jurisdictions are adding and/or improving community warning systems utilizing homeland security grant funds	Albany Big Horn Campbell Goshen Johnson Uinta
All Hazards	Medium	Education programs encompassing multi-hazard insurance for business, resident and government application.	High	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation activities for inclusion in future revisions of the Wyoming Multi-Hazard Mitigation Plan.	WOHS	\$50,000 FEMA (PDM, CAP-SSSE)	Promote multi-hazard insurance.	Project still needed	Uinta
All Hazards	Medium	Education programs encompassing multi-hazard mitigation for business, resident and government application.	High	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation activities.	WOHS FEMA	\$20,000 FEMA (PDM)	Promote interagency, interoperable, private and public mitigation activities.	Ongoing project	Albany Big Horn Fremont Goshen Platte Teton Uinta

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
All Hazards	Medium	Planning studies regarding transportation of essential and/or key personnel during all hazard events	High	Strengthen infrastructure and lifelines	WOHS, WYDOT, Wyoming Military Department	\$100,000 USDHS	Harden infrastructure and economy against all hazard events.	Project still needed.	
All Hazards	Medium	Continue outreach to counties on identifying cost effective and feasible mitigation projects.	High	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation.	WOHS	\$25,000 FEMA (PDM)	All possible mitigation activities and projects have probably not been identified.	Ongoing project.	Will benefit all counties
All Hazards	Medium	Promote Continuity of Operations and Continuity of Government, statewide.	High	Strengthen infrastructure and lifelines.	WOHS	\$100,000 USDHS	Harden statewide infrastructure against all hazards.	Ongoing project	
All Hazards	Medium	Maintain and continue to expand hazards databases that were generated for the State Hazard Mitigation Plan. Seek new sources of information.	Medium	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation.	WOHS	\$30,000 per year FEMA (PDM)	Databases on hazards serve to inform the public as to the potential severity of natural hazards. Such knowledge will encourage the development of better mitigation plans.	Ongoing activity	Will benefit all counties and State
All Hazards	Medium	Identify, document, and advertise all volunteer agency's locations and contact information.	Medium	Enhance cooperation between government authorities at all levels and private partners to articulate accurate and specific needs for mitigation	WOHS	\$100,000 USDHS	Serves to mitigate the severity of natural hazards. Such knowledge will aid the development of better mitigation plans	Wyoming VOAD re-energized in the past 3 years. Contact lists created, meetings occurring, leadership in place.	

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Mitigation Project Rank (High Medium Low)	State Mitigation Goal Link	Responsible Agency For Implementation/ Coordination	Estimated Cost and Projected Funding Source	Benefit	Status	Link to Local Plan
All Hazards	Medium	Identify and repair vulnerable communications infrastructure prior to a disaster.	High	Strengthen infrastructure and lifelines.	Wyoming Public Service Commission	\$3,000,000 FEMA (PDM)	Vulnerable communications lines, towers, and other equipment can be identified and repaired prior to a flood, tornado, earthquake, etc.	Updating and improvement of communications infrastructure is constant and on-going.	Will benefit all counties and State.
State Facilities	Low	Study on retrofit feasibility of state buildings, essential facilities, and bridges.	High	Strengthen and improve disaster resistance for state owned and operated facilities.	WYDOT, Wyoming Department of Administration and Information	\$3,000,000 FEMA (PDM)	Retrofit will make state buildings more earthquake resistant, reducing damage and loss of life during an earthquake.	Continuing Project. Bridges have been retrofitted. WYDOT and other state buildings are analyzed for retrofit based on risk.	Albany Bighorn Campbell Fremont Hot Springs Johnson Laramie Niobrara Platte Teton Uinta
State Facilities	Low	Establish a non-structural retrofit program for high-risk State buildings.	High	Strengthen and improve disaster resistance for state owned and operated facilities.	Wyoming A&I Construction Management	\$50,000 FEMA (PDM)	Non-structural retrofit of State buildings will result in reduced damages and injuries.	Project still needed.	Will benefit the State

Table 22.3- 2011 Updated Hazard Rank and Project Prioritization

Cost Ranking Formula	Population Benefitting Formula
Very High => \$3 m (2 points)	Very High = 100% State Residents Benefit (5 points)
High = \$1 m - \$2.99m (4 points)	High = 60% - 80% Benefit (4 points)
Medium = \$500,000 - \$1 m (6 points)	Medium = 40% - 60% Benefit (3 points)
Low = \$100,000 - \$500,000 (8 points)	Low = 20% - 40% Benefit (2 points)
Very Low < \$100,000 (10 points)	Very Low = < 20% Benefit (1 point)

Hazard Frequency Formula
High = Mitigates common hazard/occurs more than once a year (3 points)
Medium = Mitigates a frequest hazard / occurs less than once a year but more than once per decade (2 points)
Low = Mitigates an infrequent hazard / occurs less than once per decade (1 point)

Table 22.2—Proposed State Mitigation Projects and Measures

Hazard	Hazard Rank (High Medium Low)	Proposed Mitigation Project	Estimated Cost and Projected Funding Source	Hazard Rank Committee Assigned (By Points) 1-16	Estimated Project Cost Rank (By Points) (Weighted) 1-10	Population Benefiting from Project Rank (By Points) 1-5	Project Feasibility Rank (By Points) 1-3	Hazard Frequency Rank (By Points) 1-3	Total Points	Rank based on Total Points (Low, Med, High)	37 Max 12 low 13-24 med 25-37 high
Avalanche	Low	Expanded study to determine extent and dollar impacts of avalanche hazard in Wyoming.	\$35,000 USFS WYDOT	6	10	3	1	3	23	medium	
Avalanche	Low	Education	\$35,000 FEMA (PDM) USFS WSFD WYDOT	6	10	5	3	3	27	high	
Avalanche	Low	Research on avalanche mitigation (wind sails, snow fence, etc)	\$750,000 USFS WYDOT	6	6	3	2	3	20	medium	
Dam Failure	Low	Refine computer models to determine potential damage to dams from earthquakes.	\$200,000 FEMA (Dam Safety)	1	4	3	2	1	11	low	
Dam Failure	Low	Drill test cores on older hydraulic fill dams in western Wyoming to determine liquefaction or piping potential of the dam.	\$3,000,000 FEMA (PDM, Dam Safety)	1	2	3	2	1	9	low	
Dam Failure	Low	Identify homes built in inundation areas of dam failures.	\$42,000 FEMA (NDSP)	1	10	1	2	1	15	medium	
Dam Failure	Low	Update hazard rating of all dams statewide	\$500,000 FEMA (Dam Safety, PDM)	1	8	1	2	1	13	medium	
Dam Failure	Low	Increase height of dams to compensate for sediment behind dams	\$3,000,000 WWDC FEMA (PDM)	1	2	1	1	1	6	low	
Dam Failure	Low	Education program on high-hazard dams	\$22,000 FEMA (NDSP)	1	10	5	3	1	20	medium	
Drought	Medium-Low	Education	\$50,000 FEMA (PDM)	8	10	5	3	2	28	high	
Drought	Medium-Low	Deployment of solar powered well pumps in drought ridden areas.	\$1,500,000 DOE	8	4	3	1	2	18	medium	
Drought	Medium-Low	Wind technology study for water pumping and electrical development for water pumps.	\$300,000 DOE	8	8	3	1	2	22	medium	
Drought	Medium-Low	Development studies and projects of pipeline water distribution systems and water distribution policies for Wyoming.	\$3,000,000 WWDC	8	2	4	2	2	18	medium	
Drought	Medium-Low	Water conservation projects and studies.	\$100,000 USDA FEMA (PDM)	8	8	5	3	2	26	high	
Drought	Medium-Low	Groundwater development.	\$3,000,000 WWDC USGS	8	2	5	3	2	20	medium	

Drought And Hazardous Materials	Medium-Low	Study on productive use of produced water related to oil and gas industry.	\$3,000,000 Private Industry
Drought	Medium-Low	Enhanced forecasting and data distribution	\$500,000 WWDC NWS, FEMA (PDM)
Drought	Medium-Low	Weather mitigation modification (cloud seeding expanded research)	\$10,000,000 WWDC USDA
Drought	Medium-Low	Statewide aquifer impact study	\$2,000,000 WWDC EPA
Drought	Medium-Low	Build additional dams for water storage	\$30,000,000 WWDC
Drought	Medium-Low	Expanded or improved precipitation monitoring (Snowtel, etc.)	\$500,000 USGS USDA
Earthquake	Medium	Conduct HAZUS analyses to determine effects building code adoption may have on reducing loss estimates.	\$50,000 FEMA (PDM)
Earthquake	Medium	Conduct study on Phasing in of earthquake provisions of code for state funded and/or inspected buildings.	\$25,000 FEMA (PDM)
Earthquake	Medium	Development of enhanced soil layer for use in HAZUS. Currently at 1:500,000 scale, the goal is to obtain 1:100,000 scale.	\$700,000 USGS FEMA (PDM)
Earthquake	Medium	Study on retrofit feasibility of government owned buildings, essential facilities, culverts, and bridges.	\$3,000,000 FEMA (PDM)
Earthquake	Medium	Retrofit government owned buildings, essential facilities, culverts, and bridges.	\$3,000,000 FEMA (PDM)
Earthquake	Medium	Analysis of pipeline and other infrastructure including transmission lines, roads, & rail crossings with active faults	\$100,000 FEMA (PDM)

8	2	3	1	2	16 medium
8	6	5	2	2	23 medium
8	2	3	1	2	16 medium
8	4	5	2	2	21 medium
8	2	3	1	2	16 medium
8	6	4	3	2	23 medium
10	10	3	3	3	29 high
10	10	3	2	3	28 high
10	6	3	2	3	24 medium
10	2	3	2	3	20 medium
10	2	5	2	3	22 medium
10	8	4	2	3	27 high

Earthquake	Medium	Statewide education on earthquakes and on seismic provisions of the building code. Also to include preparedness information for responders, and Wyoming residents. Education efforts to include multi-agency meetings, publications and public outreach.	\$250,000 FEMA (PDM)
Earthquake	Medium	Seismic workshop for community leaders & planners.	50000 FEMA (PDM)
Earthquake	Medium	Retrofit State Capitol and Herschler Building	\$3,000,000 FEMA (PDM)
Expansive Soils	Low	Conduct mapping studies to determine extent of expansive soils.	\$500,000 FEMA (PDM)
Flood	Medium	Continue to encourage participation in NFIP.	FEMA (CAP-SSSE)
Flood	Medium	Locate septic systems in flood prone areas, and work with local jurisdictions to remedy potential problems.	\$1,000,000 FEMA (PDM) WDEQ
Flood	Medium	Study on flood-proofing government buildings and essential/critical facilities in floodplains	\$500,000 FEMA (PDM)
Flood	Medium	Active participation in Risk MAP Program.	\$70,000 per year FEMA (MMMS)
Flood	Medium	Education of floods and on flood insurance	\$10,000 per year FEMA (CAP-SSSE)
Flood	Medium	Generate and publish summary of Wyoming DOT hydrologic and flood potential assessments.	\$50,000 FEMA (CAP-SSSE)
Flood	Medium	Statewide analysis of areas needing detention ponds, with needs prioritized	\$1,000,000 FEMA (PDM, FMA)
Flood	Medium	Precisely locate structures in existing floodplain, and generate cost estimates for raising or removing structures.	\$100,000 FEMA (PDM, FMA, CAP-SSSE)

10	8	4	2	3	27 high
10	10	4	3	3	30 high
10	2	3	1	3	19 medium
2	6	2	2	2	14 medium
11	10	5	3	3	32 high
11	6	4	2	3	26 high
11	8	4	2	3	28 high
11	10	4	3	3	31 high
11	10	5	3	3	32 high
11	10	4	2	3	30 high
11	4	4	2	3	24 medium
11	8	2	2	3	26 high

Flood	Medium	Early warning stream stage continuous recorders with warning function established throughout state	\$10,000,000 USGS
Flood	Medium	Storm drain inspection and cleaning program	\$3,000,000 FEMA (PDM, FMA)
Hail	Medium	Education	\$25,000 FEMA (PDM)
Hazardous Materials	Medium-Low	State or regional-sponsored hazardous material collection days, with improved education on disposal of household items.	\$500,000 FHA EPA SERC
Hazardous Materials	Medium-Low	Increased education and public outreach regarding the risks associated with hazardous materials and appropriate disposal methodology.	\$200,000 FHA EPA SERC
Hazardous Materials	Medium-Low	Commodity Flow Study	\$250,000 FHA EPA SERC
Hazardous Materials	Medium-Low	Chemical Safety Audits of fixed facilities	\$200,000 FHA EPA SERC
Hazardous materials	Medium-Low	Safe Haven Study to establish buffer zones around towns	\$500,000 FHA EPA SERC
Hazardous Materials	Medium-Low	Increase capability for waste management regulatory inspectors, and civil servants regularly, or with a high potential of exposure to hazmat.	\$1,000,000 FHA EPA SERC
Hazardous Materials	Medium-Low	Identify areas most susceptible to release of toxic gas (H2S, CO2) and review mitigation plans in place.	\$250,000 WDEQ EPA SERC
Hazardous Materials	Medium-Low	Education on Shelter-in-Place	\$25,000 EPA FEMA (PDM) SERC
Landslides	Low	Detailed study of critical and essential facilities and state buildings with exposure to landslides.	\$250,000 FEMA (PDM)
Landslides	Low	Roadway (including Highway and Interstate) realignment studies, and improved monitoring equipment.	\$3,000,000 FHA WYDOT

11	2	3	2	3	21 medium
11	2	4	3	3	23 medium
13	10	5	3	3	34 high
9	8	5	2	3	27 high
9	8	5	3	3	28 high
9	8	3	3	3	26 high
9	8	3	3	3	26 high
9	8	4	2	3	26 high
9	4	5	3	3	24 medium
9	8	3	3	3	26 high
9	10	5	3	3	30 high
5	8	2	1	3	19 medium
5	2	3	2	3	15 medium

Landslides	Low	Monitor select landslides to detect movement	\$500,000 USGS WYDOT FHA
Landslides	Low	Study on effect of wildland fire and post-fire precipitation on slope stability	\$500,000 USGS FEMA (PDM)
Landslides	Low	Education	\$50,000 FEMA (PDM)
Lightning	Medium	Subscribe to lightning monitoring system such as Vaisala	\$1,380 per year DOI State of Wyo Local Jurisdictions
Liquefaction	Low	Study to determine liquefaction potential of transportation infrastructure	\$500,000 WYDOT USGS
Tornado	Low	Education	\$10,000 FEMA (PDM)
Tornado	Low	Establish tornado shelters	\$150,000 per facility FEMA (PDM)
Tornado	Low	Study of governmental buildings to determine which qualify as potential shelters	\$2,000,000 FEMA (PDM)
Tornado	Low	Enhanced radar coverage in northeast Wyoming	\$3,000,000 NWS
Tornado	Low	Warning systems	\$100,000 per site Local Jurisdiction
Wildland Fire	High	Increase number of firewise communities in state.	\$50,000 USDA NFP Mitigation Community Assistance Fund
Wildland Fire	High	Air quality impact studies on Wyoming livestock.	\$300,000 USDA
Wildland Fire	High	Develop plans for livestock evacuation and food supplies in the event of wildland fires.	\$1,000,000 USDHS USDA
Wildland Fire	High	Planning study determining the location and extent of electrical arching related to overhead power and communication lines.	\$50,000 PSC DOE
Wildland Fire	High	Generate information on adopting guidelines and ordinances related to wildland fire.	\$25,000 WSFD USDA SFA VFA
Wildland Fire	High	Education, to include construction material alternatives	\$100,000 FEMA USFA DOI Ready Reserve (RR)

5	8	2	1	3	19 medium
5	8	3	2	3	21 medium
5	10	5	3	3	26 high
12	10	3	2	3	30 high
4	8	1	2	1	16 medium
7	10	5	3	2	27 high
7	8	3	2	2	22 medium
7	4	3	2	2	18 medium
7	2	2	3	2	16 medium
7	8	3	3	2	23 medium
16	10	2	3	3	34 high
16	8	2	1	3	30 high
16	6	2	2	3	29 high
16	10	3	2	3	34 high
16	10	3	3	3	35 high

			DOI Rural Fire Assistance (RFA)
Wildland Fire	High	Fuel Load Reduction	\$3,000,000+ FEMA (PDM, HMGP) USFS
Wildland Fire	High	Work with CoCoRAHS weather spotters to report wildland fires	\$5,000 NOAA
Wildland Fire	High	Revegetate burned areas to minimize soil erosion or landslide formation	\$300,000 USDA FEMA (PDM)
Winter Storms	High	Encourage purchase or assembly of 3-day survival Kits for home and vehicle.	\$50,000 WOHS USDHS
Winter Storms	High	Develop plans for livestock evacuation and food supplies in the event of winter storm.	\$1,000,000 USDA USDHS WY Dept of Ag
Winter Storms	High	MRE Distribution	\$50,000 USDHS
Winter Storms	High	Strengthen overhead power lines.	\$1,000,000 +/- FEMA (PDM, HMGP)
Winter Storms	High	Develop a power line inspection and assessment program.	\$100,000 PSC DOE
Winter Storms	High	Increase use of existing pole testing and replacement programs.	\$100,000 PSC DOE
Winter Storms	High	Design and locate new snow fence	\$3,000,000 WYDOT FHWA
Winter Storms	High	Additional webcams on state highways to allow drivers to better monitor highway conditions	\$1,000,000 WYDOT FHWA HMGP PDMC
All Hazards	High	Provide all-hazards weather radios to all residences in Wyoming	\$3,000,000+ USDHS
All Hazards	Medium	Identify and inspect shelters in hazard prone areas	\$750,000 USDHS FEMA (PDM)
All Hazards	Medium	Research feasibility and costs of adding new frontage roads /detour routes to I-80, I-90, and I-25 to prevent significant delay in traffic flow and resultant economic loss and possible loss of life.	\$150,000 WYDOT FHA
All Hazards	Medium	Provide hazards info to shelters, emergency facilities in public buildings, campgrounds, and phone books.	\$25,000 FEMA (PDM)
All Hazards	Medium	Develop reseeding plans for losses due to all hazard events.	\$500,000 FEMA (PDM, HMGP) USDA

16	8	3	3	3	33 high
16	2	3	3	3	27 high
16	10	2	3	3	34 high
16	8	2	2	3	31 high
15	10	5	3	3	36 high
15	4	2	2	3	26 high
15	10	3	3	3	34 high
15	4	5	3	3	30 high
15	8	5	3	3	34 high
15	8	5	3	3	34 high
15	2	5	3	3	28 high
15	4	5	3	3	30 high
14	2	5	2	3	26 high
14	6	4	2	3	29 high
14	8	3	1	3	29 high
14	10	5	3	3	35 high
14	6	3	2	3	28 high

All Hazards	Medium	Investigate opportunities for developing or improving warning systems as a means to reduce loss of life, damage to property, and economic losses.	\$150,000 USDHS
All Hazards	Medium	Education programs encompassing multi-hazard insurance for business, resident and government application.	\$50,000 FEMA (PDM, CAP-SSSE)
All Hazards	Medium	Education programs encompassing multi-hazard mitigation for business, resident and government application.	\$20,000 FEMA (PDM)
All Hazards	Medium	Planning studies regarding transportation of essential and/or key personnel during all hazard events	\$100,000 USDHS
All Hazards	Medium	Continue outreach to counties on identifying cost effective and feasible mitigation projects.	\$25,000 FEMA (PDM)
All Hazards	Medium	Promote Continuity of Operations and Continuity of Government, statewide.	\$100,000 USDHS
All Hazards	Medium	Maintain and continue to expand hazards databases that were generated for the State Hazard Mitigation Plan. Seek new sources of information.	\$30,000 per year FEMA (PDM)
All Hazards	Medium	Identify, document, and advertise all volunteer agency's locations and contact information.	\$100,000 USDHS
All Hazards	Medium	Identify and repair vulnerable communications infrastructure prior to a disaster.	\$3,000,000 FEMA (PDM)
State Facilities	Low	Study on retrofit feasibility of state buildings, essential facilities, and bridges.	\$3,000,000 FEMA (PDM)
State Facilities	Low	Establish a non-structural retrofit program for high-risk State buildings.	\$50,000 FEMA (PDM)

14	8	5	3	3	33 high
14	10	5	3	3	35 high
14	10	5	3	3	35 high
14	8	3	2	3	30 high
14	10	5	3	3	35 high
14	10	5	3	3	35 high
14	10	5	2	3	34 high
14	8	5	3	3	33 high
14	2	5	3	3	22 medium
3	2	3	2	3	13 medium
3	10	2	3	3	21 medium

Table 22.4 – Summary of Mitigation Projects Completed or Underway From 2005-2010

Hazard	Proposed Mitigation Project	Responsible Agency for Implementation/ Coordination	Funding and Status
Avalanche	Education	Wyoming Department of Transportation (WYDOT) Wyoming State Forestry Division (WSFD)	News media weather personalities are notifying the public when avalanche danger is high based on weather and snowpack conditions and warns of safety issues in the back country during times of high avalanche danger. This is an ongoing effort to educate the public.
Dam Failure	Refine computer models to determine potential damage to dams from earthquakes.	Wyoming State Engineer's Office (WSEO)	Cost of basic model to determine potential damage to dams and to identify dams needing on-site inspection was approximately \$10,000. The funds were derived from FEMA through the Dam Safety Program. Model is being considered for enhancement related to earthquakes and heavy precipitation events. Estimated cost of refinement is approximately \$11,000. Current model is used after earthquake events in or near Wyoming.
Drought	Water conservation projects and studies.	Wyoming Department of Agriculture Wyoming Water Development Commission (WWDC)	Numerous studies conducted or projects underway through private, local, and state level. Wyoming Water Development Commission has expended \$9,905,480 on water conservation projects over the last three years, but no comprehensive data available on private and local expenditures.
Drought	Groundwater development.	Wyoming Water Development Commission Wyoming State Engineer's Office	Wyoming Water Development Commission has expended \$21,231,657 on groundwater development projects over the last three years. If state funds become unavailable, \$3,000,000 per year in federal funds could be utilized on groundwater development projects to mitigate the effects of drought.
Drought	Study on productive use of produced water related to oil and gas industry.	WDEQ WWDC Private Industry	Private industry is currently undertaking studies on productive uses of produced water. No data available on industry expenditures. Project will continue and may eventually be funded with state/FEMA dollars. \$3,000,000 is projected funding need.
Flood	Continue to encourage participation in NFIP.	WOHS	FEMA (CAP-SSSE) Ongoing Project from FEMA to WOHS. Total project funding (state and federal) is approximately \$100,000 per year. Current participants include 81 towns, cities and counties throughout the state. During the past three years WOHS has worked to include Star Valley Ranch and Crook and Sweetwater Counties in the NFIP.
Flood	Education of floods and on flood insurance.	WOHS FEMA	WOHS utilized FEMA CAP-SSSE funding to generate and serve public service announcements on floods and flood insurance in Wyoming. Announcement generated in 2006 at cost of \$7,000. Public service announcements were served in late 2006 and early 2007 at cost of \$17,548. PSAs were aired statewide on television and radio for 2 months each year in the summer of 2009 and the summer of 2010 at a cost of approximately \$16,000 per year. Public service announcements will be aired again as funding becomes available.
Hazardous Materials	State or regional-sponsored hazardous material collection days, with improved education on disposal of household items.	WDEQ Local Jurisdictions	Approximate costs of \$300,000 per year. Approximately 20 events per year with a cost of approximately \$30,000 per event. Funded by local jurisdictions and EPA. Hazardous material collection days are conducted yearly around the state.
Hazardous Materials	Education on Shelter-In-Place.	State Emergency Response Commission	No cost estimates available as education on shelter-in-place is combined with other educational topics at workshops and briefings. All counties and cities are encouraged by WOHS to develop shelter-in-place plans.

Table 22.4 – Summary of Mitigation Projects Completed or Underway From 2005-2010

Hazard	Proposed Mitigation Project	Responsible Agency for Implementation/ Coordination	Funding and Status
Landslides	Detailed study of critical and essential facilities and state buildings with exposure to landslides.	WSGS WOHS University of Wyoming (UW)/WYDOT	Basic study completed as part of generation of 2005 and 2008 Wyoming Multi-Hazard Mitigation Plans. Approximate cost for 2005 plan is \$75,000 utilizing PDM funds. Approximate cost for 2008 plan is \$7,000 utilizing EMPG funds. Detailed study still needed at an approximate cost of \$250,000. WSGS, WOHS, University of Wyoming, and the Wyoming Department of Transportation required to generate PDMC grant application.
Windblown Deposits	Education.	NRCS	Windblown deposits were mapped by the Wyoming State Geological Survey. The hazard is addressed in EA and EIS generation and review. \$10,000 needed for informational brochure.
Winter Storms	Encourage purchase or assembly of 3-day survival Kits for home and vehicle.	WOHS American Red Cross National Weather Service	WOHS distributed brochures to all households in Wyoming in late 2005 called "Understanding and Preparing". The brochures addressed 3-day survival kits in detail. Cost for generation and distribution of brochure was approximately \$130,000. Funds were from US Department of Homeland Security. Brochures are still distributed as requested. \$50,000 will be needed for generation of additional brochures.
Winter Storms	MRE Distribution.	WOHS	MRE's distributed to all counties in Wyoming. Two hundred MRE's were distributed to all counties serviced by interstate highways. One hundred MRS's were distributed to all counties without interstate highways. MRE's to used to feed citizens in shelters if other food supplies not available. Pilot project completed in late 2007 at a cost of \$20,228.00 utilizing Citizen Corps funding. MREs have been replenished annually between 2007 and 2010 upon request from Wyoming counties.
All Hazards	GIS training for local jurisdictions with emphasis on hazards recognition and analysis for application to mitigation planning.	Wyoming Geographic Information Science Center ESRI	Most local jurisdictions have hired GIS trained personnel, negating the need for specific GIS training. Training still needed on HAZUS and hazards-specific analysis. FEMA has offered training to WOHS and WSGS personnel on HAZUS.
All Hazards	Education programs encompassing multi-hazard mitigation for business, resident and government application.	WOHS FEMA	Periodic workshops for counties have been offered with FEMA assistance. Multi-Hazard Mitigation Plan distributed to all counties. Planning process review and plan editing at Wyoming Homeland Security Meetings in 2005, 2006, and 2007. BCA training was offered and attended in a joint session with Colorado September 2009. G318 was held in Wyoming January 2010. BCA training was offered in Wyoming August 2010. Flood Mitigation workshops were offered November 2008 and August 2010.
All Hazards	Continue outreach to counties on identifying cost effective and feasible mitigation projects.	WOHS	Periodic workshops on HMGP, PDM, and HMGP have been offered for counties and local jurisdictions. Planning process review and plan editing at Wyoming Homeland Security Meetings in 2005, 2006, and 2007. WOHS contract with AMEC, Inc. for the generation of hazards and vulnerability chapters for eighteen counties. Chapters provided to counties. In September, 2005, a specific workshop for all counties on PDM and HMGP was hosted by FEMA and WOHS in Casper. The workshop included a day-long discussion on the generation of Multi-Hazard Mitigation Plans and personal assistance to all participating counties on the incorporation of the provided hazards chapters. \$25,000 FEMA (PDM) projected for future workshops. . FEMA has offered to hold annual training in Wyoming if we desire and at our request.
All Hazards	Promote Continuity of Operations and Continuity of Government, statewide.	WOHS	COOP and COG have been underway with State of Wyoming for over five years, with agency updates conducted one-on-one for three years. No specific expenses tracked for COOP/COG. Counties are developing plans, but additional training needed. \$100,000 +/- could be used from USDHS funds for COOP/COG personnel.

Table 22.4 – Summary of Mitigation Projects Completed or Underway From 2005-2010

Hazard	Proposed Mitigation Project	Responsible Agency for Implementation/ Coordination	Funding and Status
All Hazards	Maintain and continue to expand hazards databases that were generated for the State Hazard Mitigation Plan. Seek new sources of information.	WOHS	2008 Multi-Hazard Mitigation Plan updated for schools and state buildings at cost of approximately \$20,000. \$30,000 per year needed for continual updates.
State Facilities	Propose that Wyoming's Department of A&I Procurement Division requires contracts for design/construction of all new state-owned or state-funded buildings include that facilities be built to the currently adopted building code, including the seismic provisions.	WDFPES	This project is completed and underway. State has adopted International Building Code, and State Fire Marshall indicates code is being followed. No significant expenses associated with adoption.
State Facilities	Inform State agencies that their state owned or leased buildings have been identified as being in a flood zone, on or near a landslide. Require that agencies with the highest risk exposure conduct an internal risk assessment.	WOHS	All state agencies informed in 2005 if their buildings are in floodplain. No significant expenditures needed for notification. Detailed internal risk assessments still needed at projected cost of \$100,000 +.
State Facilities	Inform state agencies of wildland fire potential and of their state owned or leased buildings at risk, and request that the agencies work to ensure that their property is wildland fire resistant.	WOFPES WOHS	State agencies notified in 2005, and asked to ensure facilities are wildland fire resistant. No significant costs associated with notification.
State Facilities	Inform state agencies that their buildings have been identified as being on or near a liquefaction-prone area, and request that agencies conduct a liquefaction potential analysis for buildings at highest risk.	WSGS	State agencies notified in 2005. No detailed liquefaction analyses completed. No significant costs associated with notification. \$50,000+ still needed for analyses.