



Natural Hazards Mitigation Plan

Garfield County, Colorado

Appendix A: Action Item Forms

Proposed Action Item:		Goal Alignment / Hazards Addressed:
Develop maintenance and update processes, in coordination with the other emergency management related plans, and with multi-jurisdictional partners.		Goal 3 / Multi-Hazard
Rationale for Proposed Action Item:		
A comprehensive emergency management program, which includes mitigation as a cornerstone component, is critical to the long-term resilience of Garfield County and its residents. A coordinated update and maintenance process, that considers implications of new data or evolving situations for all of the related emergency management plans (COOP, EOP, etc) reduces staff effort in maintaining all plans and leads to the most effective risk-reduction product possible.		
Ideas for Implementation:		
Establish a Natural Hazards Mitigation Plan Steering Committee to conduct ongoing monitoring and short-term maintenance tasks of the Natural Hazards Mitigation Plan. The mission of the Steering Committee will be to facilitate ongoing implementation, monitoring, and evaluation of countywide mitigation activities.		
Meet in 1 st Quarter 2013, lead by the County Manager to establish County Steering Committee and plan for updating		
Meet in 2 nd Quarter 2013, lead by the County Steering Committee to establish Multi-jurisdictional group and plan for updating		
<ul style="list-style-type: none"> • Identify all organizations within Garfield County that have programs or interests in natural hazards mitigation; • The Steering Committee will develop partnerships between land use planners, geologists, and multi-jurisdictional partners to implement specific mitigation projects; • The Steering committee will work to develop collaborative relationships with businesses, through regular outreach to business groups to target businesses which focus on mitigation, response, and / or recovery related activities 		
Conduct an online survey to inform the annual plan update		
Coordinating Organization:	County Manager	
Internal Partners:		External Partners:
Public Works Director Sheriff Building and Planning Director Emergency Manager Public Health Director		Municipalities Fire Districts
Timeline: (ongoing)		If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	N/A
	Ongoing	
Form Submitted by:		
Action Item Status: New Action (2011)		

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Conduct ongoing public outreach activities during mitigation plan implementation, and in conjunction with the update and maintenance of other emergency management plans.		Goal 1 & 5 / Multi-hazard	
Rationale for Proposed Action Item:			
Ongoing interaction with the citizens of Garfield County can lead to increased awareness about potential hazards and can assist in establishing necessary lines of communication when an emergency occurs.			
Ideas for Implementation:			
The County will use the existing Public Information Officer group that meets once a month to help disseminate information (print, radio, tv) and use web and appropriate social media outlets to reach the public.			
Coordinating Organization:		County Public Information Officer	
Internal Partners:		External Partners:	
County Manager Emergency Manager		Public Information Outlets (radio, newspaper, web, etc) PIO Group	
Timeline: (ongoing)		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	N/A	
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Collaborate with neighboring counties and cities with established GIS services to develop Memoranda of Understanding or Service Agreements for the provision of GIS services in the event of staffing issues.		Goal 3 / Multi-hazard	
Rationale for Proposed Action Item:			
GIS services are critical during recovery, and often during response immediately following an event as well. Garfield County has a well-developed GIS dataset and analytic skills, but has limited staffing. Should a disaster impact the ability of the County to access this data and analysis, response and recovery could be affected.			
Ideas for Implementation:			
Develop and execute a MOU with Pitkin, Eagle, Routt, Mesa, and Rio Blanco Counties and City of Rifle and other Garfield County municipalities. The creation of a template MOU would be useful to all of us in the GIS community who typically do not author documents of this type.			
Coordinating Organization:		Garfield County GIS	
Internal Partners:		External Partners:	
		GIS staff in other jurisdictions: Carbondale, Glenwood, New Castle, Parachute, and Silt have no GIS staff or capabilities. We have provided emergency GIS services for them in the past without an MOU in place.	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
X			
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens and private property owners, owner's associations, public agencies, businesses, and schools. Coordinate with participating towns, cities, and fire districts on outreach inside of their jurisdictions. Coordinate implementation efforts with the update of recovery and other emergency management plans, as appropriate.		Goal1, 4, 5 / Multi-hazard	
Rationale for Proposed Action Item:			
Much of the damage and many injuries that result from natural hazards occur on private property, and could be avoided via mitigation on those properties. Education and outreach to citizens can lead to improved outcomes in hazards events.			
Ideas for Implementation:			
<p>In general, the County will take the following outreach steps: Make the Garfield County Natural Hazards Mitigation Plan available to the public by publishing the plan electronically on the County websites. Develop Spanish-language education materials. As applicable, use social networking technology such as Facebook and Twitter to provide a forum for discussion of natural hazard risks and risk reduction.</p> <p>To focus outreach on <i>citizens and private property owners</i>, the County can partner with participating jurisdictions to: Conduct workshops for public and private sector organizations to raise awareness of mitigation activities and programs. Partner with Public Health and social service agencies and organizations to conduct outreach to vulnerable populations such as minority groups, immigrant communities, homeless, the young and elderly, individuals dependent on public transit, and low-income families or individuals.</p> <p>To focus outreach on <i>businesses</i>, the County can: Conduct workshops for public and private sector organizations, such as chambers of commerce or other groups, to raise awareness of mitigation activities and programs. Encourage and provide support for the development of business continuity of operations plans.</p> <p>To focus outreach on <i>schools</i>, the County can: Develop a curriculum for school programs and adult education on reducing risk and preventing loss from hazards. Conduct natural hazards awareness programs in schools and community centers.</p>			
Coordinating Organization:		Public Information Officer	
Internal Partners:		External Partners:	
Director of Public Health Director of Human Services Information Technology (website)		Colorado Mountain College Multi-jurisdictional Agencies Public libraries PIO Group	
Timeline: (ongoing)		If available, estimated cost:	
Short Term (0-2 years)	Long Term (2-4 or more years)	N/A	
	ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Collaborate with regional, state, and federal agencies, and private industry to increase the extent of data available for hazard mapping, e.g., floodplain, landslide and debris flow, fire hazard, hazardous or volatile material.		Goals 2, 5 / Multi-hazard	
Rationale for Proposed Action Item:			
<p>The Disaster Mitigation Act of 2000 requires that communities identify their vulnerability to the hazards that affect the community, and how the community will be impacted [201.6(c)(2)(ii)(A)]. More current and accurate data will provide better estimates of vulnerability allow the County to better identify mitigation strategies that can assist the County in reducing its risk to earthquakes.</p> <p>Additionally, during the initial development of the County Risk Assessment, several key pieces of data were missing and were included as estimates only. Specifically, the geologic hazard information for the I-70 corridor was included as an estimate. The national, regional, and local significance of the railroad and highway that run through the canyon makes the I-70 a high priority for LIDAR mapping.</p>			
Ideas for Implementation:			
<ul style="list-style-type: none"> • Coordinate with the CWPP process to ensure that data layers are available in a format that's useful to future County Risk Assessment updates. • Prioritize the I-70 corridor for LIDAR mapping • CWPP will contain the wildfire hazard information and should incorporated 			
Coordinating Organization:		Garfield County GIS	
Internal Partners:		External Partners:	
Emergency Manager		FEMA, Oil and Gas industry, Bureau of Land Management, University of Colorado	
Timeline: (ongoing)		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	A 1-year commitment of \$100/mo for LIDAR (IFSAR) data subscription from Intermap.	
	ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Continue to develop and maintain a GIS inventory of hazard risks and vulnerable assets, to include all critical facilities, large employers, public assembly areas, lifelines, and mitigation successes. Reflect results in a continuously updated on-line Risk Assessment.		Goals 1, 2 , 5 / Multi-hazard	
Rationale for Proposed Action Item:			
<p>Garfield County GIS has already begun the process of creating an on-line risk assessment database http://www.garfield-county.com/geographic-information-systems/explore-live-maps.aspx , but it requires additional refinement and constant update. The benefits of going to an on-line risk assessment are multiple:</p> <ul style="list-style-type: none"> • New data are easily added to the risk assessment, with result immediately available • Information about risk and vulnerability is easily shared with the general public, partners in other jurisdictions, and business leaders • Keeping data up-to-date improves the ease with which all emergency management plans (including this mitigation plan) are updated over time. <p>The data on vulnerable assets that are outlined in this action are particularly important to improve, to better target future action items.</p> <p>All data should be available for public review and input.</p>			
Ideas for Implementation:			
<ul style="list-style-type: none"> • Incorporate vulnerability data into the GIS system instead of just developing one-time or stand alone maps. • Evaluate the vulnerability of emergency transportation routes by comparing current routes with hazard locations. • Digitize and consolidate building plans and maps into one readily accessible database. • Develop a map that visually displays mitigation successes as a method to document actions as they are accomplished and to serve as background information for future mitigation grant proposals. 			
Coordinating Organization:		Garfield County GIS	
Internal Partners:		External Partners:	
County Engineer			
Timeline: (ongoing)		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Evaluate lifeline and evacuation routes to identify any necessary mitigation actions to ensure that they remain viable in any emergency situation requiring evacuation.		Goals 1, 3, 5 / Multihazard	
Rationale for Proposed Action Item:			
The Disaster Mitigation Act of 2000 requires that communities identify their vulnerability to the hazards that affect the community, and how the community will be impacted by the [201.6(c)(2)(ii)(A)]. Evaluating lifeline and evacuation routes will help the county identify how these routes may be impacted by natural hazards, assisting the identification of the county's overall vulnerability to natural hazards.			
Ideas for Implementation:			
Identify evacuation routes and erect necessary signage.. GIS staff has already worked with Emergency Manager to develop primary evacuation routes.			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
GIS Public Works		CDOT	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
X			
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Establish critical infrastructure protection plans.		Goal 2 / Multihazard	
Rationale for Proposed Action Item:			
<p>Protecting and ensuring the continuity of critical infrastructure is essential to security, public health and safety, economic vitality, and normal daily life for residents.</p> <p>The Department of Homeland Security defines Critical Infrastructure as “the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health or safety, or any combination thereof.” Homeland Security Presidential Directive 7 (HSPD-7, 2003) established U.S. policy for enhancing critical infrastructure protection by establishing a framework for the Department's partners to identify, prioritize, and protect the critical infrastructure in their communities from terrorist attacks. The directive identified 17 (and later added an 18th) critical infrastructure sectors and, for each sector, designated a federal Sector-Specific Agency (SSA) to lead protection and resilience-building programs and activities.</p> <p>By cataloguing the infrastructure resources throughout the public and private sectors in the County that align with the 18 federally recognized sectors, Garfield County can better identify strategies and opportunities to protect those infrastructure resources through the development of Critical Infrastructure Protection Plans (CIPP)</p>			
Ideas for Implementation:			
Identify non-County and County run critical facilities in hazard areas and develop public and private partnerships to implement mitigation actions to protect them.			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
Building and Planning GIS		Municipalities Rubicon Team	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	XX		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Emphasize critical public infrastructure and facilities located in special flood hazard areas for mitigation and preparedness measures.		Goals 1 & 2 / Flood Hazard	
Rationale for Proposed Action Item:			
The Risk Assessment modeled the 100-year flood risk and inundation risk in all five areas of the County. Flooding that damages public infrastructure can impair the ability of the County to respond and recover from a flood event. The table below is a summary of the type of assets and infrastructure vulnerable to flood and inundation in Garfield County.			
Area	Flood Risk*	Additional Inundation Risk**	
1	Highway Bridges; Municipal Buildings; Pedestrian Bridge; Railroad Bridge; High, Medium, and Low Traffic Roads	Electric Utility Substation; Federal Building; Fire Station; Library; Museum; Pipelines; Railroad miles; Police Stations; School; Shopping Center; Homes and Businesses	
2	Highway Bridges; Municipal Building; High, Medium, and Low Traffic Roads; Schools	Cemetery; Churches; Communication Facilities; Fire Station; Library; Museum; Nursing Home; Parks; Police Stations; Railroad Miles; Railroad Bridges; Shopping Center; Homes and Businesses	
3	High and Low Traffic Roads	Fire Station; Library; Municipal Building; Museum; Pedestrian Bridge; Police Station; Railroad Miles; Railroad Bridges; School; Shopping Center	
4	Medium Traffic Roads		
5	Highway Bridges; High and Low Traffic Roads		
	<i>*Source: 100-year flood plain data, modeled for Garfield County by FEMA using HAZUS-MH, 9/2010</i>	<i>**Source: Ruedi Dam Inundation Zone, FEMA, 1986</i>	
Ideas for Implementation:			
<ul style="list-style-type: none"> • Use survey, elevation, and use data to Prioritize for mitigation efforts at the County level the buildings / infrastructure evaluated as “High” risk in the Risk Assessment • Use survey, elevation, and use data to identify additional critical facilities at risk from flood events; • Develop strategies to mitigate risk to these facilities, or to utilize alternative facilities should flood events cause damages to the facilities in question. 			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
GIS; Public Works		Municipalities	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
XX			
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Identify floodway obstructions for all parts of Garfield County. Integrate with Pubworks (GIS software) to map obstructions and track progress toward reducing obstructions.		Goals 2 & 5 / Flood	
Rationale for Proposed Action Item:			
This action is a first step towards improved flood capacity and reducing the risk of road washouts and sedimentation damage to habitat and floodway capacity.			
Ideas for Implementation:			
<ul style="list-style-type: none"> • Update map of culverts in the County, as necessary Update map of bridges in the County, as necessary • Prepare an inventory of bridges and culverts that historically create flooding problems and target them for retrofitting 			
Coordinating Organization:		Public Works	
Internal Partners:		External Partners:	
GIS Emergency Manager Public Works		State Department of Emergency Management FEMA	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Long Term		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Ensure continued compliance in the National Flood Insurance Program (NFIP) through enforcement of local floodplain management ordinances.		Goals 2, 3, 5 / Flood	
Rationale for Proposed Action Item:			
<p>The National Flood Insurance Program provides communities federally backed flood insurance to homeowners, renters, business owners, provided that communities develop and enforce adequate floodplain management ordinances. The benefits of adopting NFIP standards for communities are a reduced level of flood damage in the community and stronger buildings that can withstand floods. According to the NFIP, buildings constructed in compliance with NFIP building standards suffer approximately 80 percent less damage annually than those not built in compliance.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that address new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Continued participation in the NFIP will help reduce the level of flood damage to new and existing buildings in communities while providing homeowners, renters and business owners additional flood insurance protection.</p> <p>As of 9/30/11 there are 125 NFIP Policies in force in unincorporated Garfield County with more than 35 million in insurance coverage. There have been four (4) claims with payment in unincorporated Garfield County since 1978.</p>			
Ideas for Implementation:			
<ul style="list-style-type: none"> • Conduct an assessment of the floodplain ordinances to ensure they reflect current flood hazards and situations, and meet NFIP requirements. 			
Coordinating Organization:		Building and Planning	
Internal Partners:		External Partners:	
County Manager		State Department of Emergency Management, National Flood Insurance Program, Federal Emergency Management Agency	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Continue to incorporate hazard mapping information into development review process to avoid or reduce risk of development in flood hazard areas.		Goals 2, 3, 4, 5 / Flood	
Rationale for Proposed Action Item:			
New State requirements (September 2010) include key revisions: 1 – new structures and substantial changes must be one-foot above base flood elevation or non-residential buildings flood-proofed to that same level. 2 – New floodways, when mapped, will use a ½ foot rise criteria versus a one-foot rise. 3 – Critical facilities need to be protected to two-foot above base flood elevation; a higher standard than typical structures. 4 – The 500-year floodplain standards is now a suggestion and not a requirement 5 – Development is not prohibited in the regulatory floodplain 6 – The variance procedure is applicable to all of the floodplain rules and handled at the local level 7 – The rules are not retroactively applied to existing structures, unless they are substantial changes or new additions			
Ideas for Implementation:			
<ul style="list-style-type: none"> Evaluate elevation requirements for new residential and non-residential structures in the floodplain area Review and evaluate the County's development code for consistency with new State requirements for floodplain management 			
Coordinating Organization:		Building and Planning	
Internal Partners:		External Partners:	
GIS Emergency Manager Building and Planning		State Department of Emergency Management FEMA	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Review and evaluate development codes to incorporate soil type in addition to slope as a criterion for further environmental studies before permitting.		Goal 5 / Geologic	
Rationale for Proposed Action Item:			
The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings [201.6(c)(3)(ii)]. The evaluation of development codes to include soil type will help to identify when a new development might incur increased risk due to soil and geologic hazards.			
Ideas for Implementation:			
<ul style="list-style-type: none"> • Map county landslide and debris flow areas • Identify the location and extent of hazard areas and establish a factual base to support implementation of future measures • Adopt landslide ordinances and design standards that require additional site review and/or geotech reports in at risk areas identified on landslide maps 			
Coordinating Organization:		Building and Planning	
Internal Partners:		External Partners:	
Chief Building Official		State Geologists	
Timeline:		If available, estimated cost:	
Short Term (0-2 years)	Long Term (2-4 or more years)		
	XX		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Partner with Colorado Geological Survey to enhance mapping of Garfield County landslide, debris flow and soil instability risk areas, especially in areas of more recent residential development (Roaring Fork and Colorado River Valleys; Areas 1 - 3).		Goals 2 & 5 / Geologic	
Rationale for Proposed Action Item:			
<p>The Disaster Mitigation Act of 2000 requires that communities identify their vulnerability to the hazards that affect the community, and how the community will be impacted [201.6(c)(2)(ii)(A)]. More current and accurate data will provide better estimates of vulnerability allow the County to better identify mitigation strategies that can assist the County in reducing its risk to geologic hazards.</p> <p>Additionally, during the initial development of the County Risk Assessment, several key pieces of data were missing or not available and were included as estimates only.</p>			
Ideas for Implementation:			
If and when updated or more complete LIDAR data of landslide, debris flow, and soil instability across the County is made available, develop maps that over lay oil and gas industry assets with this hazard risk.			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
GIS Oil and Gas Liaison		State Geologists	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	X		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Reduce impacts of landslides on existing developments by developing a tool kit for homeowners regarding resources that are available for risk reduction.		Goals 1, 2, 5 / Geologic	
Rationale for Proposed Action Item:			
<p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings [201.6(c)(3)(ii)]. Providing information to homeowners will encourage them to mitigate their structures and property against landslides thereby reducing risk to life and property.</p> <p>Additionally, the Disaster Mitigation Act of 2000 requires communities to identify how the community will continue to involve the public in the plan maintenance process [201.6(c)(4)(iii)]. Educating landowners on how to mitigate the affects of landslides helps keep the public informed of what is being done with the plan, how the County is working to mitigate its risk to landslides, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan.</p>			
Ideas for Implementation:			
<ul style="list-style-type: none"> • Use and publicize the National Weather Service’s debris flow warning system; and • Provide information to residents on landslide prevention. Publications such as FEMA’s Homeowner’s Landslide Guide for Hillside Flooding, Debris Flows, Erosion, and Landslide Control and Hillside Drainage Flyer have some ideas about reducing landslide susceptibility. In some cases residents could consider: <ul style="list-style-type: none"> - Where appropriate, reducing the number of building sites and corresponding disruption of the natural contour and vegetation; - Reducing driveway cuts into the hillside; - Adjusting the building setback from property lines to minimize building site cuts and fills; - Maintaining the amount of vegetation on hillside lots; and - Reducing water input into slopes from building roof drains, storm drains, and surface runoff. 			
Coordinating Organization:		Building and Planning	
Internal Partners:		External Partners:	
Public Works Chief Building Official GIS		Division of Housing Colorado Geological Survey	
Timeline:		If available, estimated cost:	
Short Term (0-2 years)	Long Term (2-4 or more years)		
	XX		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Conduct engineering studies to identify feasible mitigation actions for high activity landslide or debris flow areas.		Goals 1, 2, 5 / Geologic	
Rationale for Proposed Action Item:			
<p>The Disaster Mitigation Act of 2000 requires that communities identify their vulnerability to the hazards that affect the community, and how the community will be impacted [201.6(c)(2)(ii)(A)]. More current and accurate data will provide better estimates of vulnerability allow the County to better identify mitigation strategies that can assist the County in reducing its risk to landslides and debris flows.</p> <p>Additionally, the Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on both new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Identifying mitigation actions for high activity landslide and debris flow areas will reduce the occurrence and severity of these hazards thereby protecting existing buildings and infrastructure.</p> <p>The State has designated Tier 1 areas in Garfield County as Douglass Pass-Baxter Region, and Highway 215.</p>			
<ul style="list-style-type: none"> • Prioritize mitigation actions for high activity landslide or debris flow areas. 			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
Engineering GIS		Colorado Division of Emergency Management	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	X		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Support existing cross training efforts that coordinate industry and fire district response to fires affecting the oil and gas fields.		Goal 3 / Wildfire	
Rationale for Proposed Action Item:			
<p>The Oil and Gas industry is the backbone of the Garfield County economy. It provides jobs for County residents and tax revenue that supports County services. Oil and Gas extraction and processing can be volatile and fires are not uncommon at the well sites. These fires have several characteristics that make appropriate response technically challenging including their remote location and industrial implications.</p> <p>Through many years of working relationships, the Oil and Gas industry and the local fire districts have established response protocols to ensure the safety of first responders, industry equipment, and the County overall. Formalizing and standardizing response protocol and training will ensure the continuation of this critical partnership between industry, the County and first responders.</p>			
Ideas for Implementation:			
<p>Develop ways to expand cross training and communication across oil and gas companies and fire protection districts.</p> <p>Participate in the annual exercise program to test the interoperability of County and oil and gas industry fire response.</p>			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
Oil and Gas Liaison Building and Planning Public Works		Fire Districts State Department of Emergency Preparedness Colorado Oil and Gas Conservation Commission	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Continue to update the database of the location of industry assets for use by fire responders (industry or fire protection district personnel) in real time. Transfer data for use in Emergency Responders vehicles.		Goal 3 / Wildfire	
Rationale for Proposed Action Item:			
<p>The Oil and gas industry is the backbone of the Garfield County economy. It provides jobs for County residents and tax revenue that supports County services. Oil and Gas extraction and processing can be volatile and fires are not uncommon at the well sites. These fires have several characteristics that make appropriate response technically challenging including their remote location and industrial implications. The location of pipelines and wells often change but that information may not be received by the first responders regularly.</p> <p>Additionally, the Disaster Mitigation Act of 2000 requires that communities identify their vulnerability to the hazards that affect the community, and how the community will be impacted [201.6(c)(2)(ii)(A)]. More current and accurate data will provide better tracking of actual risk incurred and lead to better preparedness for and mitigation of fire risk.</p>			
Ideas for Implementation:			
<p>Continue to receive Tier II reporting (hazmat) be industry.</p> <p>Ensure that the County maintains accurate and up to date information about the location, type and size of industry assets such as pipelines, compressors, well heads and drill rigs.</p> <p>COGCC keeps GIS data for wells current. Building & Planning needs to provide GIS staff with data required to map incoming pipeline/compressor station as they are approved, as there is no other source for this information.</p>			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
Oil and Gas Liaison Building and Planning GIS		COGCC Fire Departments	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Increase coordination among mitigation planning efforts and actions with the soon-to-be-developed County-wide Community Wildfire Protection Plan (CWPP). Coordinate future updates of the mitigation plan with the CWPP updates.		Goal 2, 4, 5 / Wildfire	
Rationale for Proposed Action Item:			
<p>The Healthy Forests Restoration Act of 2003 requires at-risk WUI communities to develop CWPPs in order to be eligible to receive certain federal funds for mitigation projects. Being eligible for federal funds can assist the county in funding WUI fire mitigation projects, assisting the county in reducing its overall WUI fire risk.</p> <p>The CWPP is a targeted planning effort that mitigates against wildfire risk by identifying actions that fire districts can take, in collaboration with the County and its jurisdictions, to reduce the risk to life and property from wildland fires. It will evaluate in detail issues such as access road codes, rural water supplies, and expected development patterns in the wildland urban interface and identify specific actions that will reduce opportunities for ignition and property damage. These actions should be incorporated into the mitigation plan when they are developed, to address wildfire risk.</p>			
Ideas for Implementation:			
Adopt the completed CWPP and update annually.			
Adopt all wild-fire risk reduction activities identified in the CWPP in to the Natural Hazard Mitigation Plan via reference in the CWPP adoption resolution.			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
GIS		Fire Protection Districts State Forest Service	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Ensure that all areas of Garfield County are served by a fire protection district.		Goal 1, 3 / Wildfire	
Rationale for Proposed Action Item:			
Some areas of unincorporated Garfield County are not included in a fire protection district.			
Ideas for Implementation:			
Execute an Annual Operation Plan and Mutual Agreements Modify fire protection district boundaries to include all areas of the county Expanding FPD boundaries also implies expanding tax district boundaries, creating new tax districts, and imposing new taxes on residents in those areas.			
Coordinating Organization:		Sheriff	
Internal Partners:		External Partners:	
GIS Emergency Manager Assessor		Fire Districts	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	X		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Continue to implement the Infectious Disease Action Plan.		Goal 1, 3 / Response	
Rationale for Proposed Action Item:			
<p>Colorado State law establishes a statutory requirement for disclosure by providers and coroners, of reportable communicable disease cases, as well as unusual deaths, to local and state public health officials (Statutory Citation: C.R.S. 25-1.5-102(1)(a)(II) and 25-1-122). A list of reportable conditions requiring Public Health notification from physicians and labs is available upon request. http://www.cdphe.state.co.us/dc/reportable.html.</p> <p>The control of infectious diseases depend on a healthy environment-clean water, adequate sanitation, vector control, shelter, population immunization and health care workers trained in early diagnosis and treatment. Disasters compromise the infrastructures that support healthy environments.</p>			
Ideas for Implementation:			
<p>Public Health Plans are in place for infectious disease surveillance and investigation, mass immunization, environmental surety, quarantine and isolation and mass fatality.</p> <p>Continue to exercise and modify plans as necessary.</p> <p>Continue partnerships through ESF8 planning group</p> <p>Continue partnerships through Public Safety Council</p>			
Coordinating Organization:		Garfield County Public Health Department	
Internal Partners:		External Partners:	
Emergency Manager		Hospital Districts EMS	
Timeline: Ongoing		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	Ongoing		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Create in-house training for Department Heads and Steering Committee members.		Goal 2, 3 / Response	
Rationale for Proposed Action Item:			
<p>The mitigation and recovery process are broad efforts that need multi-disciplinary participation and on-going training across all departments.</p> <p>More informed staff can incorporate natural hazard mitigation into their daily work activities, make better decisions regarding natural hazard planning, and can assist the Steering Committee in implementing the Plan's identified action items. This can help the county reduce its overall risk to the natural hazards addressed by the NHMP.</p> <p>Additionally, having County staff members who understand the principles of mitigation will create the understanding needed to better incorporate mitigation into existing programs, which is a key requirement of the Disaster Mitigation Act of 2000.</p>			
Ideas for Implementation:			
<p>Use Trackstar software as a tool for continuity and training</p> <p>Conducting an annual exercise and use after action report to evaluate any necessary plan updates</p>			
Coordinating Organization:		County Manager	
Internal Partners:		External Partners:	
Emergency Manager Human Resources		CMC, FEMA Colorado Division of Emergency Management	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
X			
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Develop an ESF-14 Communication Plan		Goal 2, 3 / Response	
Rationale for Proposed Action Item:			
<p>The county needs to develop policy team guidelines for communication and decision-making and for the transitions between emergency response and recovery.</p> <p>The Disaster Mitigation Act of 2000 requires that communities continue to involve the public beyond the original planning process [201.6(c)(4)(ii)]. Creating a communications plan will guide public outreach and education to keep the public informed of, and involved in, the County's actions to prepare, mitigate, and respond to hazards.</p>			
Ideas for Implementation:			
Use the existing PIO group to assist in the dissemination of information.			
Coordinating Organization:		Public Information Officer	
Internal Partners:		External Partners:	
County Manager Emergency Management Team		Public information outlets PIO Group	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
X			
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Develop a debris management plan with a defined transition team		Goal 3 / Response	
Rationale for Proposed Action Item:			
Debris removing and cleaning is necessary beyond the initial emergency response period. Heavy equipment and labor should be coordinated for transition into a recovery period. Receiving sites for debris need to be coordinated and scheduled, as appropriate.			
Ideas for Implementation:			
Develop a list of qualified contractors Develop a general scope of services Establish feasible alternative locations			
Coordinating Organization:		Public Works	
Internal Partners:		External Partners:	
Emergency Manager Procurement Landfill		Private Contractors CDOT Landowner(s)	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
X			
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Develop a response and recovery plan specifically for hazardous material spills		Goal 1, 3 / Response	
Rationale for Proposed Action Item:			
The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that address existing buildings and infrastructure [201.6(c)(3)(ii)]. Addressing hazardous materials locations can help minimize secondary hazards following a disaster.			
Ideas for Implementation:			
Execute multi-agency and jurisdictional mutual aid plans and agreements Create a Water supply (temporary) plan Environmental Surety Plan is in place			
Coordinating Organization:		Emergency Manager	
Internal Partners:		External Partners:	
Public Health Public Information Officer Sheriff (DERA)		CDPHE Fire Departments Colorado State Patrol (Hazmat Unit)	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)		
	X		
Form Submitted by:			
Action Item Status: New Action (2011)			

Proposed Action Item:		Goal Alignment / Hazards Addressed:	
Update the Airport Emergency Procedures Manual and create 72 hour Emergency Operations List		Goal 2, 3 / Response	
Rationale for Proposed Action Item:			
<p>The Garfield County Regional Airport is a County-owned public-use airport and is essential for the transportation and economic sectors of Garfield County. In January 2011, a 47-million renovation project was completed that enhanced the runway, capacity, security, utilities, and technical instruments of the facility. To insure the uninterrupted operation of the airfield in an emergency the airport developed the 72 hour emergency operations list. This list identifies essential operating needs of the airport and staff. This list along with the emergency operations manual will assist in keeping the airport operational in the event of an emergency.</p>			
Ideas for Implementation:			
<p>Annually review the emergency operations manual Complete purchase of essential items on 72hr list by June 30, 2012</p>			
Coordinating Organization:		Airport Director	
Internal Partners:		External Partners:	
County Manager		FAA FBO	
Timeline:		If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	\$1,200	
X			
Form Submitted by:		Brian Condie / Airport Director	
Action Item Status: New Action (2011)			