

# Appendix A: Action Items



# Marion County NHMP Action Item Matrix

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals							
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration	
Dam Safety #1	Prepare updated high resolution, digitalized maps of dam failure inundation areas for the Silverton, Big Cliff, and Detroit reservoir dams.	GIS, Environmental Services	Public Works, Planning, Emergency Management, Local cities in inundation areas, Army Corps of Engineers	Ongoing	X		X					
Dam Safety #2	Actively encourage the Army Corps of Engineers to complete seismic vulnerability assessments for dams upstream of Salem and to make seismic improvements as necessary.	Emergency Management	Army Corps of Engineers	Ongoing				X				
Drought #1	Connect local farmers and ranchers with organizations such as the local Soil and Water Conservation District, Oregon Department of Agriculture, and the USDA to educate them on water conservation methods they can implement to reduce the impact of droughts.	Environmental Services	Soil and Water Conservation District, OSU Extension, USDA, Oregon Department of Agriculture	Ongoing		X			X			

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals							
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration	
Drought #2	Partner with EarthWISE and local schools to implement water conservation strategies to maximize water use in schools and educate students about water conservation.	Environmental Services	Public Works, Marion County Schools, Oregon Green Schools Program	Ongoing		X				X		
Drought #3	Continue implementing the 'Marion County Water Resource Management Plan' (portion of the Marion County Comprehensive Plan).	Planning Department	Environmental Services, State Water Resources Department, Watershed Councils, Soil and Water Conservation District, and the Irrigation District	Ongoing			X				X	X
Earthquake #1	Develop and publicize structural and nonstructural retrofits activities that county residents can implement to reduce their risk to seismic events.	Emergency Management	Planning, Public Works, Red Cross, FEMA	Ongoing	X	X						
Earthquake #2	Identify county facilities vulnerable to earthquakes and develop appropriate actions to seismically retrofit them.	Marion County Public Works	Building Department, Planning Department, DOGAMI, FEMA	Ongoing			X					

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals						
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration
Earthquake #3	Identify the most seismically vulnerable bridges on county roads, conduct a seismic assessment on them, and take steps to bring those that are out of compliance up to code.	Public Works/Engineering	Planning, Emergency Management, ODOT	LT			X	X			
Earthquake #4	Promote earthquake awareness month activities for schools and large employers (e.g. employers with 250 or more employees).	Emergency Management	Public Works, Safety Committee, Marion County Risk, Red Cross, OEM	ST		X			X		
Flood #1	Develop and implement a formal and regular drainage system maintenance program.	Environmental Services	Operations, USDA, Oregon Department of Agriculture	Ongoing			X			X	
Flood #2	Create partnerships and facilitate riparian habitat restoration projects in flooding or erosion prone areas (e.g. Spongs Landing County Park).	Environmental Services	Marion County Parks Department, Watershed Councils, OSU Extension, Oregon Department of Fish and Wildlife, Oregon Department of Parks and Recreation	Ongoing			X		X	X	

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals						
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration
Flood #3	Develop strategies with property owners to minimize future losses from repetitive flood loss areas.	Planning Department	Emergency Management, Environmental Services, Public Works, FEMA, OEM	Ongoing			X				
Flood #4	Take steps to reduce Marion County's Community Rating System (CRS) rating to reduce flood insurance premiums in the county.	Planning Department	Public Works, Emergency Management, FEMA, OEM	Ongoing	X						
Flood #5	Continue compliance with the National Flood Insurance Program (NFIP) through enforcement of local floodplain ordinances.	Planning Department	Building Inspectors, Road Operation, FEMA, OEM	Ongoing			X			X	
Flood #6	Install gauges in Mill Creek to collect flood data and obtain data from the City of Salem's flood gauges to improve flood warning.	Public Works	Planning, Emergency Management, Oregon Water Resources Department, USGS	Ongoing						X	
Flood #7	Identify bridges in Marion County with flow blockage problems.	Public Works Operations	Planning, Environmental Services, Engineering, Army Corps of Engineers	LT			X	X			

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals						
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration
Flood #8	Identify the location of existing levees in Marion County and implement a maintenance program with their owners and operators to ensure levees remain operable during flood events.	Planning	Environmental Services, GIS, Engineering, Army Corps of Engineers	LT			X	X			
Landslide #1	Increase monitoring and evaluation of steep slopes around Marion County's most heavily traveled roads and continue monitoring of all forested slopes cleared for housing developments.	Public Works/Operations	Planning, Environmental Services, Engineering, ODOT, DLCD	Ongoing			X				
Landslide #2	Repair ongoing slide problems on the Little North Fork River, and Abiqua Creek areas.	Public Works	Engineering, Operations, Planning, Environmental Planning, State and Federal highway administration, private logging companies, (e.g. Elk Horn Development)	LT			X				

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals						
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration
Volcanic Eruption #1	Collaborate with county environmental health for immediate warnings to communities about degraded air quality following volcanic eruptions, particularly in areas with high concentration of vulnerable groups (e.g. retirement facilities and schools).	Emergency Management	Public Health, Environmental Health, Oregon Public Health	Ongoing					X		X
Volcanic Eruption # 2	Collaborate with USGS-CVO and related agencies to develop ash fall models that are specific to Marion County.	Emergency Management	GIS, DOGAMI, USGS, CVO	Ongoing			X		X		X
Wildfire #1	Implement existing action items contained in the 'Action Plan' section of the <i>Marion County Community Wildfire Protection Plan</i> (Pgs. 37-43).	Fire Defense Board	Emergency Management, Fire Marshal, Oregon Department of Forestry	Ongoing				X			

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals							
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration	
Wildfire #2	Collaborate with county environmental health for immediate warnings to communities about degraded air quality following large-scale fire events, particularly in areas with high concentration of vulnerable groups (e.g. retirement facilities and schools).	Environmental Health	Emergency Management, Oregon Public Health, Oregon Department of Forestry	Ongoing	X					X		
Windstorm #1	Initiate a comprehensive program to reduce or eliminate tree hazards to all critical utilities in Marion County. This program includes a prioritization of critical facilities, an assessment of potential tree hazards, and a program to trim, and/or remove tree hazards in designated critical areas.	Public Works – Operations and Environmental Services	Planning, Parks Department, Utility Companies	Ongoing			X				X	
Winter Storm #1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winter storm each year.	Public Works Operations	County Commission, ODOT	Ongoing				X				

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals							
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration	
Multi-Hazard #1	Develop, publicize and maintain a comprehensive database of all declared and undeclared natural hazard incidents in Marion County.	Emergency Management	IT Department, FEMA, DLCD	Ongoing	X	X						
Multi-Hazard #2	Complete a disaster recovery plan for Marion County.	Emergency Management	Public Works, Health Department, Businesses, NGOs	LT	X		X					
Multi-Hazard #3	Enhance distribution of all hazard information, public emergency preparedness materials, and information on how individuals can mitigate their vulnerability to each hazard.	Emergency Management	Planning, FEMA, OEM, Red Cross	Ongoing	X	X	X					
Multi-Hazard #4	Institute a reverse 911 system in Marion County.	Emergency Management	Board of Commissioners, Sheriff's Office, Local jurisdictions, 911	LT								X
Multi-Hazard #5	Educate cities on process of declaring a disaster	Marion County Emergency Management	Sheriff's Department, FEMA, OEM, Marion County Incorporated cities	Ongoing		X						

Action Item	Proposed Action Title	Coordinating Organization	Partner Organizations	Timeline	Alignment with Plan Goals						
					Public Awareness	Education	Risk Reduction	Funding and Implementation	Partnerships and Coordination	Natural Resource Utilization	Plan Integration
Multi-Hazard #6	Identify and install emergency power backup for all critical county facilities.	Facilities Management	Emergency Management	LT			X		X		X
Multi-Hazard #7	Conduct an assessment of the short and long term needs for sheltering vulnerable populations during prolonged power outages.	Emergency Management	Marion County Public Health, Red Cross, Cities, NGO's, Oregon Public Health	Ongoing					X		X
Multi-Hazard # 8	Complete a risk analysis for the hazards addressed in this plan, when information is available, to estimate potential loss of life and damage to property.	Marion County GIS	Emergency Management, Planning Division, Road Department, DOGAMI, OEM, FEMA	LT			X				

# Dam Safety 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Prepare updated high resolution, digitalized maps of dam failure inundation areas for the Silverton, Big Cliff, and Detroit reservoir dams.		<b>Goals 1: Public Awareness</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness. <b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
Statewide Planning Goal 7, Marion County Emergency Operations Plan, Marion County Comprehensive Plan			
<b>Rationale for Proposed Action Item:</b>			
The Silverton, Big Cliff, and Detroit dams located in Marion County or adjacent to the county all have a high hazard potential according to the Oregon Water Resources Department Dam Inventory. A high hazard potential means that should the dams fail (an event that is highly unlikely), the potential for damage to property and human life downstream are great. Preparing updated high resolution, digitized maps of dam failure inundation areas for each dam can assist the county in avoiding placing critical facilities in inundation areas, and how to inform citizens how to properly evacuate from the area.			
<b>Ideas for Implementation:</b>			
Coordinate with appropriate organizations to evaluate the need for more data;			
Distribute information regarding flooding to the general public efficiently			
Utilize to preplan regarding emergency notification systems (CENS and EAS).			
Receive the latest dam inundation maps from the Army Corps of Engineers.			
<b>Coordinating Organizations:</b>		GIS & Environmental Services	
<b>Internal Partners:</b>		<b>External Partners:</b>	
, Public Works, Planning, Emergency Management		Local cities in inundation areas, Army Corps of Engineers	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

## Dam Safety 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Actively encourage the Army Corps of Engineers to complete seismic vulnerability assessments for dams upstream of Salem and to make seismic improvements as necessary.		<b>Goal 4: Funding and Implementation</b> Identify potential funding sources to implement mitigation projects.	
<b>Alignment with Existing Plans/Policies:</b>			
Detroit Dam Emergency Action Plan			
<b>Rationale for Proposed Action Item:</b>			
Marion County is located in an area that is vulnerable to earthquakes. Several of Marion County's large dams, such as the Silverton, Big Cliff, and Detroit dams were built prior to any understanding of the earthquake hazard in Marion County. While a dam failure due to an earthquake is highly unlikely, actively encouraging the Army Corps of Engineers to complete seismic vulnerability assessments for large dams in Marion County, and to make seismic improvements as necessary, will reduce the likelihood of a dam failure in the county.			
<b>Ideas for Implementation:</b>			
Have an annual meeting with the Army Corps to determine the status of this action item.			
Receive the latest Dam Risk Assessment from the Army Corps of Engineers.			
<b>Coordinating Organizations:</b>	Emergency Management		
<b>Internal Partners:</b>	<b>External Partners:</b>		
	Army Corps of Engineers		
<b>Potential Funding Sources:</b>	<b>Estimated cost:</b>	<b>Timeline:</b>	
		<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing	
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action (2010)		

# Drought 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Connect local farmers and ranchers with organizations such as the local Soil and Water Conservation District, Oregon Department of Agriculture, and the USDA to educate them on water conservation methods they can implement to reduce the impact of droughts.		<b>Goal 2: Education</b> Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life. <b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Comprehensive Plan, Marion County Water Resource Management Plan			
<b>Rationale for Proposed Action Item:</b>			
The Marion County Steering Committee rated the probability of a drought occurring as high and Marion County's vulnerability to drought as high. Connecting local farmers and ranchers with resources from agencies such as the local soil and water conservation districts, the Oregon Department of Agriculture, and the US Department of Agriculture can help farmers and ranchers learn about water conservation and share in the responsibility of implementing drought related mitigation activities. These partnerships can help Marion County establish effective methods of water use curtailment within the industries that typically have high water use.			
<b>Ideas for Implementation:</b>			
Develop a brochure for the public and businesses on how to reduce water use.			
Collaborate with agricultural organizations that represent the farming and ranching community to build on existing outreach methods with the goal of providing water conservation and drought management training to farmers and ranchers.			
Encourage storage facilities where they are needed and where they are feasible to construct. Example locations include placing storage facilities in high drainage basins so that the impact to anadromous fish would be minimal.			
<b>Coordinating Organization:</b>		Environmental Services	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Soil and Water Conservation District, OSU Extension		USDA, Oregon Department of Agriculture	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
Staff Time			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 mitigation plan.		

## Drought 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Partner with EarthWISE and local schools to implement water conservation strategies to maximize water use in schools and educate students about water conservation.		<p><b>Goal 2: Education</b> Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life.</p> <p><b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Comprehensive Plan, Marion County Water Resource Management Plan			
<b>Rationale for Proposed Action Item:</b>			
The Marion County Steering Committee rated the probability of a drought occurring as high and Marion County's vulnerability to drought as high. Schools consume large amounts of water, and during drought periods, this water use can strain resources. EarthWISE is an active environmental assistance program offered to all businesses in Marion County. This program has an established network of clients and is well respected among the business community. Using EarthWise services for local schools can help to conserve water in Marion County while raising the community's awareness about water conservation strategies.			
<b>Ideas for Implementation:</b>			
Partner with EarthWISE and the Oregon Green Schools Program			
Install low-flow water fixtures in school bathrooms			
Use drip irrigation systems rather than conventional sprinklers on school grounds			
Plant drought resistant "xeriscape" gardens			
Capture rainwater in cisterns and rain barrels for future use on gardens, trees, and other planted areas			
<b>Coordinating Organization:</b>		Environmental Services	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Works, Marion County Schools		Oregon Green Schools Program	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

## Drought 3

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Continue implementing the ‘Marion County Water Resource Management Plan’ (portion of the Marion County Comprehensive Plan).		<b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards. <b>Goal 6: Natural Resource Utilization</b> Use natural resources, watershed planning, and land use planning to reduce long-term costs and maximize effectiveness. <b>Goal 7: Plan Integration</b> Integrate natural hazard mitigation activities, where appropriate, with existing plans and policies.	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Comprehensive Plan, Marion County Water Resource Management Plan			
<b>Rationale for Proposed Action Item:</b>			
Marion County’s Water Resource Management Plan addresses the county’s long-term water supply and water quality concerns. The plan evaluated the groundwater and surface water availability and demand in the Upper Santiam, Lower Santiam, Pudding River, and Willamette River watershed areas. The Plan also includes policies for regulating future water use. Continuing to implement these policies will help to reduce the likelihood of future water shortages in Marion County due to drought.			
<b>Ideas for Implementation:</b>			
Continue to monitor ground and surface water in Marion County watersheds.			
Conduct a regular review of policies found in the Water Resource Management Plan to see if they adequately address the needs in Marion County.			
<b>Coordinating Organization:</b>		Planning Department	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Environmental Services		State Water Resources Department, Watershed Councils, Soil and Water Conservation District, and the Irrigation District.	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

# Earthquake 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Develop and publicize structural and nonstructural retrofits activities that county residents can implement to reduce their risk to seismic events.		<p><b>Goal 1: Public Awareness:</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness.</p> <p><b>Goal 2: Education:</b> Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Regional Debris Management Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Seismic hazards pose a real and serious threat to many communities in Oregon, including Marion County. Buildings and infrastructure (highways, telephone lines, gas, water, etc.) can suffer damage in earthquakes if they have not been built to withstand severe shaking. Damage and loss of life can be very severe if structures are not designed to withstand shaking, are on ground that amplifies shaking, or ground which liquefies due to shaking. Providing Marion County residents with a checklist of structural and nonstructural retrofits that residents can implement will significantly reduce their risk to seismic events.</p> <p>Nonstructural retrofits protect building contents with little cost and effort. Examples of retrofits include:</p> <ul style="list-style-type: none"> <li>• Securing water heaters, large appliances, bookcases, pictures and bulletin boards;</li> <li>• Latching cabinet doors; and</li> <li>• Using safety film on windows.</li> </ul> <p>Structural retrofits include attaching a building to its foundation or constructing seismic bracing to prevent collapse of a building in an earthquake.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that reduce the effects of hazards on a new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Hazard impacts to government agencies, businesses, and residents can be reduced by pursuing structural and non-structural retrofits to existing buildings. Educating Marion County residents about what they can do is the first step towards mitigating the hazard.</p>			
<b>Ideas for Implementation:</b>			
<p>Develop informational brochures about individual mitigation opportunities and post on the city's website, include in the water bill, and make available on the front counters at the police and public works departments. Include recommendations regarding non-structural retrofits in these brochures. Use the following modes of communication or events to educate the public: Quarterly Newsletter, Website, Flyers, National Night Out, Safety Fair</p> <p>Distribute a "Homeowner's Guide to Non-Structural Retrofit" (or something similar) found here: <a href="http://www.seattle.gov/DPD/cms/groups/pan/@pan/@emergprep/documents/web_informational/dpds_005877.pdf">http://www.seattle.gov/DPD/cms/groups/pan/@pan/@emergprep/documents/web_informational/dpds_005877.pdf</a></p>			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning, Public Works,		Red Cross, FEMA	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
County budgeted			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	<b>Deferred from 2006 NHMP.</b>		

## Earthquake 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Identify county facilities vulnerable to earthquakes and develop appropriate actions to seismically retrofit them.		<b>Goal 3: Risk Reduction:</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Comprehensive Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>In the event of an earthquake, Marion County's facilities must be spared from major damage to allow for continuous service to residents and businesses. Identifying those county facilities vulnerable to earthquakes, and developing appropriate mitigation actions to address any issues, will make the county more resilient to earthquake hazards.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community, particularly to buildings and infrastructure [201.6(c)(3)(ii)]. Identifying county facilities that are at risk to earthquakes and developing appropriate mitigation actions to address the seismic risk can increase Marion County's resilience to earthquake hazards.</p>			
<b>Ideas for Implementation:</b>			
<p>Conduct a survey of county facilities using Rapid Visual Survey techniques developed by the Federal Emergency Management Agency to initial identification of vulnerable facilities.</p> <p>For those facilities necessary in a response, conduct further engineering studies to assess seismic risk.</p> <p>Consult DOGAMI's database of facilities vulnerable to seismic hazards and their collapse potential.</p>			
<b>Coordinating Organization:</b>		Marion County Public Works	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Building Department, Planning Department		DOGAMI, FEMA,	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
Oregon Seismic Rehabilitation Grant			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	<b>Deferred from 2006 NHMP</b>		

## Earthquake 3

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Identify the most seismically vulnerable bridges on county roads, conduct a seismic assessment on them, and take steps to bring those that are out of compliance up to code.		<p><b>Goal 3: Risk Reduction:</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p> <p><b>Goal 4: Funding and Implementation:</b> Identify potential funding sources to implement mitigation projects.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Bridges are especially vulnerable parts of the county transportation infrastructure. Identifying seismically vulnerable county bridges, conducting a seismic assessment, and taking steps to bring bridges up to current seismic codes will improve this vulnerable infrastructure from earthquake damage.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community, particularly to buildings and infrastructure [201.6(c)(3)(ii)]. Seismically retrofitting vulnerable bridges can reduce the impact of earthquakes on the county's infrastructure.</p>			
<b>Ideas for Implementation:</b>			
<p>Research of potential funding sources is needed.</p> <p>Coordinate efforts with ODOT's existing seismic assessment schedule and resources.</p>			
<b>Coordinating Organization:</b>		Public Works/Engineering	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning, Emergency Management		ODOT	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

## Earthquake 4

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Promote earthquake awareness month activities for schools and large employers (e.g. employers with 250 or more employees).		<p><b>Goal 2: Education:</b> Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life.</p> <p><b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>The County could increase its resiliency towards earthquake by organizing an effort to educate citizens about mitigation and preparedness activities that businesses and the public can implement to reduce the impact of earthquakes.</p> <p>Large groups of people in enclosed structures can be especially vulnerable to seismic events.</p>			
<b>Ideas for Implementation:</b>			
<p>Awareness tools such as fliers and other forms can be provided.</p> <p>Some monitoring system to track compliance could be implemented.</p> <p>Incentives to conduct these activities could be provided.</p>			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Works, Safety Committee, Marion County Risk		Red Cross, OEN	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input checked="" type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

# Flood 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Develop and implement a formal and regular drainage system maintenance program.		<b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards. <b>Goal 6: Natural Resource Utilization</b> Use natural resources, watershed planning, and land use planning to reduce long-term costs and maximize effectiveness.	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Comprehensive Plan, Regional Debris Management Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Maintaining functional drainage systems is essential in reducing the extent of flooding in the county. Urban flooding and riverine flooding are common issues in Marion County. County personnel must work with the community to maintain the capacity of all drainage systems to function effectively. Developing and implementing a formal and regular drainage system maintenance plan will reduce the impact of future flooding events.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community [201.6(c)(3)(ii)]. Developing a drainage maintenance program will reduce the impact of flooding events.</p>			
<b>Ideas for Implementation:</b>			
<p>Work with county personnel, neighborhood groups, farmers, and rangers to initiate the program.</p> <p>Maintenance should include stormwater, irrigation, and natural drainage systems.</p> <p>Complete an assessment of the main drainage network in the county</p> <p>Identify priority sites that will have the greatest impact on reducing the risk of flood damage.</p>			
<b>Coordinating Organization:</b>		Environmental Services	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Operations		USDA, Oregon Department of Agriculture	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
County Funds			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	<b>Deferred from 2006 NHMP.</b>		

## Flood 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Create partnerships and facilitate riparian habitat restoration projects in flood or erosion-prone areas, especially along the North Santiam River and Willamette River.		<p><b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p> <p><b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p> <p><b>Goal 6: Natural Resource Utilization</b> Use natural resources, watershed planning, and land use planning to reduce long-term costs and maximize effectiveness.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Parks Master Plan, Natural Heritage Parks and Acquisitions Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Riparian habitat restoration projects will protect and maintain ecosystem functions, reduce erosion and sedimentation, and strengthen flood-prone areas. Restoration projects that involve planting trees in riparian areas can both improve the habitat while preventing damage to parkland during flood events.</p> <p>Strengthening partnerships in the county will increase the likelihood that natural hazard mitigation will remain an active element within the community. Partnerships that can facilitate habitat restoration include working with the Oregon Department of Fish and Wildlife, Oregon Parks and Recreation, local watershed councils, and other organizations that can assist in habitat restoration.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community [201.6(c)(3)(ii)]. Restoring riparian habitat will assist in reducing the impact of flooding events.</p>			
<b>Ideas for Implementation:</b>			
Build partnerships with local watershed councils, community groups, and OSU extension's Sustainable Communities program.			
Floodplain assessment and restoration plans and priorities need to be developed on a county-wide-scale.			
Develop showcase projects that will educate the public regarding the benefits of riparian habitat restoration.			
Integrate habitat restoration projects and mitigation projects into the Marion County Parks Master Plan			
<b>Coordinating Organization:</b>		Environmental Services	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Marion County Parks Department		Watershed Councils, OSU Extension, Oregon Department of Fish and Wildlife, Oregon Department of Parks and Recreation	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Flood 3

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Develop strategies with property owners to minimize future losses from repetitive flood loss areas.		<b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Marion County Zoning Ordinances, Marion County Comprehensive Plan			
<b>Rationale for Proposed Action Item:</b>			
Residents in Marion County share a statewide concern about flood issues. According to the National Flood Insurance Program (NFIP), Oregon has 256 flood-prone communities within the 36 counties of the state. Although all of the counties in the state are vulnerable to flooding events, the risk of loss is much more pronounced in some counties than others. Marion County has four repetitive flood loss properties. Working with property owners to develop strategies that minimize flood losses, such as elevating structures or removing structures through buyouts, can increase the community's resilience to flood hazards.			
The Disaster Mitigation Act of 2000 requires that communities identify actions and projects that reduce the impact of a natural hazard on the community, particularly to new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Developing strategies with property owners to minimize future losses on repetitive flood loss properties will protect existing buildings from floods.			
<b>Ideas for Implementation:</b>			
Actively participate with DLCD and FEMA during Community Assistance Visits. The Community Assisted Visit (CAV) is a scheduled visit to a community participating in the NFIP for the purpose of: 1) conducting a comprehensive assessment of the community's floodplain management program; 2) assisting the community and its staff in understanding the NFIP and its requirements; and 3) assisting the community in implementing effective flood loss reduction measures when program deficiencies or violations are discovered.			
Conduct an assessment of Marion County floodplain ordinances to ensure they reflect current flood hazards.			
Identify funding sources, such as the flood mitigation assistance program that funds flood mitigation			
Work with property owners to develop effective flood mitigation strategies.			
<b>Coordinating Organization:</b>		Planning Department	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Emergency Management, Environmental Services, Public Works		FEMA, OEM	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
Hazard Mitigation Grant Program Pre-Disaster Mitigation Program Flood Mitigation Assistance Program			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>		Marion County Steering Committee	
<b>Action Item Status:</b>		<b>Deferred from 2006 NHMP.</b>	

## Flood 4

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Take steps to reduce Marion County's Community Rating System (CRS) rating to reduce flood insurance premiums in the county.		<b>Goal 1: Public Awareness</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness.	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Marion County Zoning Ordinances			
<b>Rationale for Proposed Action Item:</b>			
<p>The Community Rating System (CRS) rewards communities for activities that implement flood mitigation measures above and beyond the minimum standards required for participation in the National Flood Insurance Program. Implementing mitigation activities through the CRS program can diminish the impact of flooding events on all properties insured under the NFIP and reduce total property losses. Marion County currently has a CRS rating of 6. Reducing the rating from a 6 to a 5 can increase the premium discount from 20% to 25% and can provide a significant benefit to the county's 354 policyholders.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that address existing buildings and infrastructure [201.6(c)(3)(ii)]. Taking steps to reduce Marion County's CRS rating will reduce insurance premiums in the county while reducing the community's vulnerability to floods.</p>			
<b>Ideas for Implementation:</b>			
<p>Maintain a detailed and up-to-date inventory of activities that could potentially reduce premiums.</p> <p>Visit CRS website to find out specifics on what Marion County can do to reduce their NFIP premiums. CRS website: <a href="http://training.fema.gov/EMIWeb/CRS/">http://training.fema.gov/EMIWeb/CRS/</a></p> <p>Work with affected property owners to develop strategies that will reduce the county's CRS rating.</p>			
<b>Coordinating Organization:</b>		Planning Department	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Works, Emergency Management		FEMA, OEM	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action (2010)		

## Flood 5

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Continue compliance with the National Flood Insurance Program (NFIP) through enforcement of local floodplain ordinances.		<p><b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p> <p><b>Goal 6: Natural Resource Utilization</b> Use natural resources, watershed planning, and land use planning to reduce long-term costs and maximize effectiveness.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Marion County Zoning Ordinances, Marion County Comprehensive Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>The National Flood Insurance Program (NFIP) provides communities with federally backed flood insurance, provided that communities develop and enforce adequate floodplain management measures. 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. Marion County's floodplain ordinance and Flood Insurance Rate Maps (FIRM) are current as of 2003. Their continued enforcement will assist in reducing the impact of floods on buildings in the county.</p> <p>The Disaster Mitigation Act of 2000 requires that communities identify actions and projects that reduce the impact of a natural hazard on the community, particularly to new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Continued enforcement of floodplain ordinances will diminish flood damage to new and existing buildings in communities while providing homeowners, renters, and business owners. Continued compliance with the NFIP will allow for flood insurance protection for residents in Marion County.</p>			
<b>Ideas for Implementation:</b>			
<p>Actively participate with DLCD and FEMA during Community Assistance Visits. The Community Assisted Visit (CAV) is a scheduled visit to a community participating in the NFIP for the purpose of:</p> <ol style="list-style-type: none"> <li>1. Conducting a comprehensive assessment of the community's floodplain management program;</li> <li>2. Assisting the community and its staff in understanding the NFIP and its requirements;</li> <li>3. Assisting the community in implementing effective flood loss reduction measures when program deficiencies or violations are discovered.</li> </ol> <p>Periodically review local floodplain ordinances to ensure that they are effective at reducing losses due to flooding.</p>			
<b>Coordinating Organization:</b>		Planning Department	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Building Inspectors, Road Operation		FEMA, OEM	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
Staff Time			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from the 2006 NHMP		

## Flood 6

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Install gauges in Mill Creek to collect flood data and obtain data from the City of Salem's flood gauges to improve flood warning.		<b>Goal 6: Natural Resource Utilization</b> Use natural resources, watershed planning, and land use planning to reduce long-term costs and maximize effectiveness.	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Marion County Zoning Ordinances, Marion County Comprehensive Plan, Marion County Stormwater Management Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Mill Creek is a tributary of the Willamette River whose watershed drains a 110-square-mile area of Marion County. The county recognized a need for an early warning system that could be used to inform citizens when a flooding event was likely to occur. Gauges can be used as flood warning systems and water quality monitoring stations, and installing gauges in Mill Creek, as well as obtaining data from the city of Salem, will provide the county with the resources needed to warn residents about impending floods.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community [201.6(c)(3)(ii)]. Installing a monitoring system in Mill Creek can be used to alert residents of an imminent flood, allowing residents to prepare for a flood event.</p>			
<b>Ideas for Implementation:</b>			
<p>Work with the City of Salem to identify the appropriate gauges for the monitoring system and integrate the new gauges into the existing system.</p> <p>Work with FEMA to secure funding for the implementation of the project.</p>			
<b>Coordinating Organization:</b>		Public Works	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning, Emergency Management		Oregon Water Resources Department, USGS	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Flood 7

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Identify bridges in Marion County with flow blockage problems.		<p><b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p> <p><b>Goal 4: Funding and Implementation</b> Identify potential funding sources to implement mitigation projects.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Storm water Management Plan, Capital Improvement Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Maintaining open bridges is essential during a flooding event if evacuation of residents is necessary. Additionally, continued operation of highways and roads maintains a functioning economy. Flooding around bridges can cause major transportation problems, especially if water overflows the bridge due to debris blockages. Identifying bridges in Marion County with flow blockage problems and remedying those issues can prevent future floods from damaging Marion County's bridges.</p> <p>The Disaster Mitigation Act of 2000 requires that communities identify actions and projects that reduce the impact of natural hazards on the community, particularly to new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Eliminating blockage problems will reduce flooding events on vital infrastructure such as roads and bridges.</p>			
<b>Ideas for Implementation:</b>			
<p>Work with the Army Corps of Engineers and county engineers to conduct an evaluation of bridges in regards to blockage problems.</p> <p>Prioritize bridges, focusing on those with repeat clogging and flooding.</p> <p>Seek federal and state funding</p>			
<b>Coordinating Organizations:</b>		Public Works Operations	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning, Environmental Services, Engineering		Army Corps of Engineers	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Flood 8

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Identify the location of existing levees in Marion County and implement a maintenance program with their owners and operators to ensure levees remain operable during flood events.		<b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards. <b>Goal 4: Funding and Implementation</b> Identify potential funding sources to implement mitigation projects.	
<b>Alignment with Existing Plans/Policies:</b>			
Capital Improvements Plan and Statewide Planning Goal 7.			
<b>Rationale for Proposed Action Item:</b>			
<p>Marion County has several levees that are privately operated. Should any of these levees fail in a flood, they can cause damage to surrounding properties. To avoid flooding issues, levees in the county should be regularly checked to make sure they are structurally sound. A formal maintenance program with those who already own and operate levees is the best way to assure they remain operable during flooding events.</p> <p>The Disaster Mitigation Act of 2000 requires that communities identify actions and projects that reduce the impact of natural hazards on the community, particularly to new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Implementing a maintenance program to strengthen levees will ensure that they remain operable during flood events and continue to protect the property they were designed to protect.</p>			
<b>Ideas for Implementation:</b>			
<p>Contact the owners and operators of levees about best management practices for levee maintenances</p> <p>Coordinate efforts with the Army Corps of Engineers who may operate some levees in the county.</p>			
<b>Coordinating Organizations:</b>		Planning	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Environmental Services, GIS, Engineering		Army Corps of Engineers	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action (2010)		

# Landslide 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Increase monitoring and evaluation of steep slopes around Marion County's most heavily traveled roads and continue monitoring of all forested slopes cleared for housing developments.		<b>Goal 3: Risk Reduction:</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
Geologically Hazardous Areas Overlay Zone			
<b>Rationale for Proposed Action Item:</b>			
<p>Newly de-forested slopes have greater risk of landslides. Depending on the type, location, severity and area affected, severe property damage, injuries and loss of life can be caused by landslide hazards. Landslides can also damage or temporarily disrupt utility services, roads, and other transportation / communication systems, including emergency response, fire, medical, police, etc. Increasing monitoring of steep slopes around heavily traveled roads, as well as monitoring forested slopes cleared for housing developments can reduce the possibility of landslides causing damage to property.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community, particularly to new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Identifying areas vulnerable to landslides can reduce the impacts of landslides on new and existing developments and infrastructure.</p>			
<b>Ideas for Implementation:</b>			
Use GIS maps of steep slope areas and heavily traveled roads to identify locations that should be monitored for landslides.			
Consider developing landslide mitigation actions for areas that experience persistent landslides.			
<b>Coordinating Organization:</b>		Public Works/Operations	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning, Environmental Services, Engineering		ODOT, DLCD	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	<b>Deferred from 2006 NHMP.</b>		

## Landslide 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Repair ongoing slide problems on the Little North Fork River, and Abiqua Creek areas.		<b>Goal 3: Risk Reduction:</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
Geologically Hazardous Areas Overlay Zone			
<b>Rationale for Proposed Action Item:</b>			
<p>The Marion County Steering Committee identified the Little North Fork River and the Abiqua Creek areas as vulnerable to landslides due to previous landslide occurrences. Previous landslides have closed roads that follow the waterways. Repairing ongoing slide problems in these areas can prevent future landslides from damaging roadways.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify actions and projects that reduce the effects of hazards on the community, particularly to new and existing buildings and infrastructure [201.6(c)(3)(ii)]. Repairing ongoing slide problems on the Little North Fork Santiam River and Abiqua Creek can prevent landslides from damaging existing roadways.</p>			
<b>Ideas for Implementation:</b>			
<p>Identify strategies that will provide lasting mitigation measures to areas at risk to landslides. This may require geological assessments of the areas and potentially require county engineering staff.</p> <p>Coordinate efforts with local residents to identify and repair slide problems.</p>			
<b>Coordinating Organization:</b>		Public Works	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Engineering, Operations, Planning, Environmental Planning		State and Federal highway administration, private logging companies, (e.g. Elk Horn Development)	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
Funding may differ from N. Fork Santiam to Abiqua Creek areas.			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

# Volcanic Eruption 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Collaborate with county environmental health for immediate warnings to communities about degraded air quality following volcanic eruptions, particularly in areas with high concentration of vulnerable groups (e.g. retirement facilities and schools).		<b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities. <b>Goal 7: Plan Integration</b> Integrate natural hazard mitigation activities, where appropriate, with existing plans and policies.	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
Volcanic ash can lead to respiratory problems for vulnerable sectors of Marion County's residents such as the elderly and youth. Increasing awareness through public outreach reduces the impact of a volcano on vulnerable groups residing in Marion County.			
<b>Ideas for Implementation:</b>			
Support Health Department staff in the dissemination of information regarding respiration hazards in the event of a volcanic eruption.			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Health, Environmental Health		Oregon Public Health	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	<b>Deferred from 2006 NHMP.</b>		

## Volcanic Eruption 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Collaborate with USGS-CVO and related agencies to develop ash fall models that are specific to Marion County.		<p><b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p> <p><b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p> <p><b>Goal 7: Plan Integration</b> Integrate natural hazard mitigation activities, where appropriate, with existing plans and policies.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
Volcanic ash can lead to respiratory problems for vulnerable sectors of Marion County's residents such as the elderly and youth. Ash fall models are currently in place for large urban areas such as Portland Oregon, but none specific to Marion County. Collaborating with the United States Geological Survey and Cascades Volcano Observatory to develop ash fall models that are specific to Marion County to assist in planning for future volcanic events.			
<b>Ideas for Implementation:</b>			
Work with state agencies such as DOGAMI who can assist in developing ash fall models for Oregon counties.			
Support Health Department staff in the dissemination of information regarding respiration hazards in the event of a volcanic eruption.			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
GIS		DOGAMI, USGS, CVO	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
Potential State Funding			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

# Wildfire 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Implement existing action items contained in the 'Action Plan' section of the <i>Marion County Community Wildfire Protection Plan</i> (Pgs. 37-43).		<b>Goal 4: Funding and Implementation:</b> Identify potential funding sources to implement mitigation projects	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Community Wildfire Protection Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Marion County completed a Community Wildfire Protection Plan (CWPP) in 2008. The CWPP is meant to serve as the wildfire chapter for the Marion County NHMP. Implementing actions identified in the CWPP can assist in reducing the impact of wildfire on Marion County.</p> <p>Goal 7 of Oregon's Land Use Planning Goals requires that local governments "adopt or amend, as necessary, based on the evaluation of risk, plan policies and implementing measures... [that avoid] development in hazard areas where the risk to people and property cannot be mitigated." Including mitigation measure in subdivision and partition ordinances can reduce the impact of wildfires on new development and help to prevent future wildfire losses.</p>			
<b>Ideas for Implementation:</b>			
<p>Coordinate with responsible agencies listed in the Marion County CWPP to implement action items.</p> <p>Seek funding to help pay for wildfire mitigation projects within the County.</p>			
<b>Coordinating Organization:</b>		Fire Defense Board	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Emergency Management, Fire Marshal		Oregon Dept. of Forestry	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action (2010)		

## Wildfire 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Collaborate with county environmental health for immediate warnings to communities about degraded air quality following large-scale fire events, particularly in areas with high concentration of vulnerable groups (e.g. retirement facilities and schools).		<p><b>Goal 1: Education:</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness.</p> <p><b>Goal 5: Partnerships and Coordination:</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
Ash and smoke from wildfire can lead to respiratory problems for vulnerable sectors of Marion County's residents such as the elderly and youth. Increasing awareness through public outreach reduces the impact that wildfire can have on vulnerable groups residing in Marion County.			
<b>Ideas for Implementation:</b>			
Support Health Department staff in the dissemination of information regarding respiration hazards in the event of a wildfire.			
<b>Coordinating Organization:</b>	Environmental Health		
<b>Internal Partners:</b>		<b>External Partners:</b>	
Emergency Management		Oregon Public Health, Oregon Department of Forestry	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

# Wind Storm 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Initiate a comprehensive program to reduce or eliminate tree hazards to all critical utilities in Marion County. This program includes a prioritization of critical facilities, an assessment of potential tree hazards, and a program to trim, and/or remove tree hazards in designated critical areas.		<p><b>Goal 3: Risk Reduction:</b> Minimize risks to life, property, the environment, and the economy from natural hazards</p> <p><b>Goal 6: Natural Resources Utilization:</b> Use natural resources, watershed planning, and land use planning to reduce long-term costs and maximize effectiveness.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Debris Management Plan, Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>High winds can topple trees and break limbs which in turn can result in power outages and disrupt telephone, computer, and TV and radio service. All overhead electrical lines are subject to high winds and winter storm damage, and the risk is higher on the lines going to a mountaintop or peak. The Marion County risk assessment notes that the probability of a wind storm occurring is high, and the county's vulnerability to wind storms is high as well. Initiating a program that reduces or eliminates tree hazards to all critical utilities in Marion County can prevent future damages to power lines from wind events.</p> <p>During wind storm access to the line by the utility is difficult. This difficulty delays the time for restoration of power to Marion County residents.</p> <p>The Disaster Mitigation Act of 2000 requires communities to develop comprehensive actions to reduce the impacts of natural hazards.[201.6(c)(3)(ii)]. Developing a program that reduces or eliminates tree hazards in Marion County can reduce the impact of wind storms on the county.</p>			
<b>Ideas for Implementation:</b>			
<p>Develop criteria for prioritizing which facilities should be addressed first.</p> <p>Coordinate efforts with the utility company and public works companies to identify who will carry out the task of trimming and/or removing tree hazards in identified critical areas.</p>			
<b>Coordinating Organization:</b>		Public Works – Operations, and Environmental Services	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning, Parks Department		Utility companies	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

# Winter Storm 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winter storm each year.		<b>Goal 4: Funding and Implementation:</b> Identify potential funding sources to implement mitigation projects.	
<b>Alignment with Existing Plans/Policies:</b>			
This action item aligns with the Marion County Emergency Operation Plan, and the Marion County Rural Transportation Systems Plan.			
<b>Rationale for Proposed Action Item:</b>			
Destructive winter storms that produce heavy snow, ice, rain and freezing rain, and high winds have a long history in Oregon. Severe storms affecting Oregon with snow and ice typically originate in the Gulf of Alaska or in the central Pacific Ocean. These storms are most common from October through March and have closed down transportation routes in the area. Assuring a sufficient supply of sand and de-icing agent will maintain safe transportation corridors and ensure the delivery of services to county residents.			
<b>Ideas for Implementation:</b>			
Maintain current levels of sand and de-icing agents			
Continuing the practice of including sand and de-icing agent in county budget.			
<b>Coordinating Organization:</b>		Public Works Operations	
<b>Internal Partners:</b>		<b>External Partners:</b>	
County Board of Commissioners		ODOT,	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action (2010)		

# Multi-Hazard 1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Develop, publicize and maintain a comprehensive database of all declared and undeclared natural hazard incidents in Marion County.		<b>Goals 1: Public Awareness:</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness. <b>Goal 2: Education:</b> Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life.	
<b>Alignment with Existing Plans/Policies:</b>			
Statewide Planning Goal 7, Marion County Zoning ordinance, Comprehensive Land Use Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Having a publically-available hazards database has two benefits: (1) it allows the current and future residents to easily see the location and extent of past hazardous events in the County so they can take individual action to mitigate future impacts; and (2) it also allows future steering committees to easily update the hazard profiles and risk assessments of future NHMP updates.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify previous occurrences of natural hazard events [201.6(c)(2)(i)]. Developing, publicizing, and maintaining a comprehensive database of all declared and undeclared natural hazard incidents in Marion County can improve the understanding of the location and extent of natural hazards in the county and increase awareness among the public the hazards that the county is vulnerable to.</p>			
<b>Ideas for Implementation:</b>			
<p>Emergency management will coordinate with the IT Department to turn the existing, internal hazards history database into a publicly available and accessible location and format. The database will be updated over time as new hazards occur.</p> <p>Consider mapping the locations of natural hazards in the county using GIS and making the maps available to the public.</p>			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
IT Department		FEMA, DLCD	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Multi-Hazard 2

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Complete a disaster recovery plan for Marion County.		<b>Goal 1: Public Awareness:</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness. <b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Comprehensive Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Decisions made immediately following a disaster often miss significant opportunities to rebuild a safer community for the future. The pressure exerted by residents and property owners to have their disaster-stricken community rebuilt to its pre-disaster form and condition as quickly as possible remains a powerful factor in local, state, and federal emergency management to this day. There are ways to acknowledge such pressures and maintain mitigation and other post-disaster goals as high priorities during the process of long-term reconstruction even as the water is receding or the ashes and rubble are being cleared away. The secret lies in identifying in advance those decisions that will need to be made after a disaster that are most likely to have long-term repercussions for hazard mitigation.</p> <p>Pre-disaster and post-disaster mitigation should be two parts of a seamless whole in a sound plan for post-disaster recovery and reconstruction. The only difference is one of scale: accelerating the pace with which existing mitigation plans are implemented as a result of the influx of outside assistance. What is important about planning for post-disaster hazard mitigation is that the additional resources that facilitate hazard mitigation in the aftermath of a disaster do not materialize by accident. Local governments manage to secure such resources in large part because they have planned to do so. (Source: FEMA, "Policies for Guiding Planning for Post-Disaster Recovery and Reconstruction")</p>			
<b>Ideas for Implementation:</b>			
Designate a recovery management team that is empowered to monitor the process and implement the community's post-disaster recovery policies. This team should also serve as the post-disaster recovery planning team, and can/should include persons involved in pre-disaster mitigation planning efforts. Involve a wide range of stakeholders and community leaders/volunteers. Discuss post-disaster recovery planning at future mitigation plan meetings.			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Works, Health Dept.		Businesses, NGOs	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Multi-Hazard 3

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Enhance distribution of all hazard information, public emergency preparedness materials, and information on how individuals can mitigate their vulnerability to each hazard.		<p><b>Goals 1: Public Awareness:</b> Increase awareness of natural hazard risks, emergency notification methods, and resources for citizen preparedness.</p> <p><b>Goal 2: Education:</b> Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life.</p> <p><b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Statewide Planning Goal 7, Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>This action gets to the heart of the idea that mitigation is a shared responsibility between the government and individuals. By reaching more people with hazards information, more individuals will be able to mitigate the vulnerability of their own properties to natural hazards.</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)]. By distributing hazard information, public emergency preparedness materials, and information on how individuals can mitigate their vulnerability to hazards, the county is empowering the public on how to make intelligent choices about their own homes, businesses and behaviors.</p>			
<b>Ideas for Implementation:</b>			
Use preparedness and hazard mitigation resources from FEMA, OEM, and the Red Cross.			
Consider social networking websites as a medium to distribute information.			
Use neighborhood groups to disseminate information to residents and specific neighborhoods.			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Planning		FEMA, OEM, Red Cross	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Multi-Hazard 4

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Institute a reverse 911 system in Marion County.		<b>Goal 7: Plan Integration</b> Integrate natural hazard mitigation activities, where appropriate, with existing plans and policies.	
<b>Alignment with Existing Plans/Policies:</b>			
Statewide Planning Goal 7, Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
Reverse 911 is an effective way to disperse emergency information quickly to a large number of residents. While it is largely a response tool, reverse 911 systems can serve as a warning of an impending natural hazard, prompting citizens to take measures that can save lives and reduce damage to property.			
<b>Ideas for Implementation:</b>			
To make this more of a mitigation rather than response tool, this could possibly be used to warn homeowners at risk of landslides when soils are over saturated, when weather forecasts call for flooding, or when extreme cold events pose a risk to agricultural livestock and plants (potentially useful for farmers to take action to protect crops).			
Develop a cost-benefit analysis of developing a reverse 911 system for the county.			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Board of Commissioners, Sheriff's Office		Local jurisdictions, 911	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action Item (2010)		

## Multi-Hazard 5

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Educate cities on process of declaring a disaster.		Goal 2: Education Educate the public on how to successfully mitigate and prepare for a natural disaster in order to minimize property damage and loss of life.	
<b>Alignment with Existing Plans/Policies:</b>			
Statewide Planning Goal 7, Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
The Marion County Steering Committee indicated a need for its cities to be educated about the process for declaring a disaster and how to obtain public assistance in the event of a disaster declaration. Disaster declarations are important because they can be used to mobilize a response and recovery effort, inform the community about the impacts of a disaster on their community, and potentially open up state and federal resources for response and recovery.			
<b>Ideas for Implementation:</b>			
Encourage cities to develop emergency operations plans with criteria for declaring a local disaster to provide a clear definition for disaster declaration.			
Conduct trainings with city officials on how to respond to hazard events and when to declare a disaster.			
<b>Coordinating Organizations:</b>		Marion County Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Sheriff's Department		FEMA, OEM, Marion County Incorporated cities	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New Action (2010)		

## Multi-Hazard 6

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Identify and install emergency power backup for all critical county facilities.		<p><b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.</p> <p><b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p> <p><b>Goal 7: Plan Integration</b> Integrate natural hazard mitigation activities, where appropriate, with existing plans and policies.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Emergency Operations Plan, Statewide Planning Goal 7			
<b>Rationale for Proposed Action Item:</b>			
<p>After Hurricane Katrina, Harrison County Mississippi noted "It is important that critical facilities function during and after disasters. Local units of government want to insure continuous service by strengthening essential facilities such as fire stations, city halls, shelters, and police stations. In addition, emergency backup generators should be provided to each critical facility." (Harrison County Community Recovery Plan. August 2006. FEMA ESF-14 in support of the state of Mississippi. p. 61)</p> <p>Ensuring that all critical facilities have backup power and emergency operations plans to deal with power outages will assist residents in recovering from a natural disaster as well as make the process easier.</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)]. Ensuring that all critical facilities have backup power and emergency operations plans to deal with power outages will help protect existing buildings and infrastructure and allow for continuous service.</p>			
<b>Ideas for Implementation:</b>			
<p>Conduct an assessment of critical facilities to determine their priority in an emergency and whether they should have backup generators and emergency operations plans.</p> <p>Seek funding from Federal and state resources to obtain generators and to develop emergency operations plans</p>			
<b>Coordinating Organizations:</b>		Facilities Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Emergency Management			
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Multi-Hazard 7

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Conduct an assessment of the short and long term needs for sheltering vulnerable populations during prolonged power outages.		<p><b>Goal 5: Partnerships and Coordination</b> Create, maintain and enhance partnerships with stakeholders, adjacent jurisdictions, and public and private agencies' risk management activities.</p> <p><b>Goal 7: Plan Integration</b> Integrate natural hazard mitigation activities, where appropriate, with existing plans and policies.</p>	
<b>Alignment with Existing Plans/Policies:</b>			
Marion County Emergency Operations Plan			
<b>Rationale for Proposed Action Item:</b>			
<p>Marion County has a number of populations that could be vulnerable in the event of a power outage. These include those that are ill in hospitals, the elderly, and very young children. Conducting an assessment of the short and long term needs of these populations can help to reduce injuries in the event of a prolonged power outage.</p> <p>The Red Cross maintains a list of shelters in each community to ensure that populations are properly taken care of during a natural disaster. Conducting an assessment of these shelters to determine whether they contain the right supplies to take care of vulnerable populations can prevent future injuries from occurring.</p>			
<b>Ideas for Implementation:</b>			
<p>Obtain emergency shelter construction guidelines; determine the best community building to 'designate' as a shelter, and work toward building a new shelter, if needed. Evaluate building's design, and determine whether it's safe for probable hazards.</p> <p>Determine the 'type' of shelter most needed within the community. Utilize FEMA's publicized resources to do so.</p> <p>Coordinate efforts with the American Red Cross who maintains a list of local shelters.</p>			
<b>Coordinating Organization:</b>		Emergency Management	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Marion County Public Health		Red Cross, Cities, NGO's, Oregon Public Health	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input type="checkbox"/> Long Term (2-4+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Public Works		
<b>Action Item Status:</b>	Deferred from 2006 NHMP.		

## Multi-Hazard 8

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Complete a risk analysis for the hazards addressed in this plan, when information is available, to estimate potential loss of life and damage to property.		<b>Goal 3: Risk Reduction</b> Minimize risks to life, property, the environment, and the economy from natural hazards.	
<b>Alignment with Existing Plans/Policies:</b>			
<b>Rationale for Proposed Action Item:</b>			
<p>A risk analysis involves estimating the damage, injuries, and costs likely to be incurred in a geographic area over a period of time. Risk has two measurable components: (1) the magnitude of the harm that may result, defined through the vulnerability assessment, and (2) the likelihood or probability of the harm occurring. Hazards US (HAZUS) is a risk assessment software program for analyzing potential losses from floods, hurricane winds and earthquakes and can assist communities in completing the risk analysis phase. In HAZUS-MH current scientific and engineering knowledge is coupled with the latest geographic information systems (GIS) technology to produce estimates of hazard-related damage before, or after a disaster occurs. Completing a risk analysis with available data for the hazards listed in this plan can help Marion County in prioritizing areas for natural hazards mitigation.</p> <p>The Disaster Mitigation Act of 2000 recommends that communities estimate the potential dollar losses to vulnerable structures. [201.6(c)(2)(ii)(B)]. Completing a risk analysis for hazards addressed in this plan will provide Marion County with an estimate of the potential effects impacts of a hazard event.</p>			
<b>Ideas for Implementation:</b>			
<p>Order the HAZUS-MH software free of charge from the FEMA Publication Warehouse. Information can be found at <a href="http://www.fema.gov/plan/prevent/hazus/index.shtm">http://www.fema.gov/plan/prevent/hazus/index.shtm</a>. Federal, State, and local government agencies and the private sector can order this information.</p> <p>Coordinate efforts to complete a risk analysis with the Department of Geology and Mineral Industries (DOGAMI) who has used HAZUS-MH software for several counties and cities across Oregon.</p> <p>Use the results from the HAZUS software to update Marion County's vulnerability assessment and develop appropriate mitigation actions as needed.</p>			
<b>Coordinating Organization:</b>		Marion County GIS	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Emergency Management, Planning Division, Road Department		DOGAMI, OEM, FEMA	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
			<input type="checkbox"/> Short Term (0-2 years) <input checked="" type="checkbox"/> Long Term (2-4+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	Marion County Steering Committee		
<b>Action Item Status:</b>	New action (2010)		