

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Multi-Hazard #1	
Proposed Action Title/Description:	
Create and formalize a Lane County Disaster Policy Council to oversee implementation, identify and coordinate funding opportunities, and sustain the Lane County Natural Hazards Mitigation Plan (including the CWPP) and the Emergency Operations Plan, as a single integrated effort.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • CWPP Stakeholder interviews, Firewise Workshop-Identified an opportunity for a central committee to provide leadership by prioritizing and setting guidelines for fuels reduction projects. The support for a CWPP Advisory Committee can be used to infer support for an advisory committee that provides leadership and guidance for all natural hazards affecting Lane County. • Following the events of 9-11, Lane County agencies wanted a group in place to mitigate against all types of hazards. The County-Wide Preparedness Group was formed to satisfy this request. That group can serve as a resource to the Lane County Disaster Policy Council. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Expand current Lane County NHMP steering committee to include a variety of stakeholders, so that input can be provided for all natural hazards and other disasters affecting Lane County. • Convene the Disaster Policy Council and sign a MOU for each calendar year depicting agency commitments and seek ways to reimburse for staff time as an incentive for participation. • Hold quarterly meetings to review the plan and identify highest priority projects most feasible for implementation. • Coordinate timelines to take advantage of funding opportunities available through Resource Advisory Committees that award Title II project funds, and State Homeland Security grants. • The Committee has the ability to add sub-committees as needed. 	
Coordinating Organization:	Lane County Emergency Management, Lane County Land Management
Internal Partners:	External Partners:
Law Enforcement, LCPW, LCPH	The 16 member agencies of the County-Wide Preparedness Group
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
6-7 Months	

Action Item Proposal Form

Proposed Action Item Identification:		
Short Term: Multi-Hazards #2		
Proposed Action Title:		
Create a sub-committee to coordinate and sustain effective countywide public education and outreach activities.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • Stakeholder Phone Interviews, Firewise Workshop - Identified an opportunity to increase education and wildland-urban interface fire awareness of residents of Lane County to increase public involvement in wildfire risk reduction activities. Support for public education of wildland-urban interface fire hazards can be used to infer support for public education and involvement of other hazards addressed by the Lane County NHMP. • 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 sub-committee to conduct public outreach and education would be a way to keep the public informed of, and involved in, the County's actions to mitigate hazards. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Coordinate with the Lane County Fire Prevention Co-op, the coordinating agency for the Lane County CWPP's public education sub-committee. • Encourage the support of rural fire districts for outreach and education activities, as 27% of Lane County CWPP Landowner Survey respondents indicated that they have never received information about protecting their property from wildland fire. This information can be used to infer that landowners have likewise received limited information regarding other natural hazards affecting Lane County. • Create and deliver an annual standardized direct mailing to landowners, as 59% of the Lane County CWPP Landowner Survey respondents identified mail as the method they would most prefer used to disseminate information in the future. Support for mail as a future communication method for information regarding wildland-urban interface fire can be used to infer support for mail as a method to communicate information to the public regarding other natural hazards affecting Lane County. • Coordinate countywide funding opportunities for education and outreach activities. 		
Coordinating Organization:	Lane County Emergency Management	
Internal Partners:		External Partners:
ODF, Public Information Officers		Lane County Fire Prevention Co-Op, USFS, BLM, Keep Oregon Green, Lane County RFD's Eugene/Springfield/Cottage Grove FD's
Timeline:		If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	<i>Depends on future activities</i>
3-6 months		

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Multi-Hazards #3	
Proposed Action Title/Description:	
Develop education programs aimed at mitigating the risk posed by hazards.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average risk to the majority of hazards addressed by the NHMP. Improved outreach to educate Lane County residents on hazard risk mitigation efforts can help reduce the county's overall risk to natural hazards. • To increase natural hazard mitigation and emergency preparedness in Lane County, residents must be aware of the risk and know what they should do before and after the disaster occurs. Outreach and awareness campaigns need to be carefully organized and developed to ensure that residents receive critical information. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for, and vulnerability to, most hazards addressed by the NHMP as being moderate or high. Improved outreach to educate Lane County residents on hazard risk mitigation efforts can help reduce the county's overall risk to natural hazards. • The Disaster Mitigation Act of 2000 requires that communities continue to involve the public beyond the original planning process [201.6(c)(4)(ii)]. Developing public education programs for hazard risk mitigation would be a way to keep the public informed of, and involved in, the County's actions to mitigate hazards. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Utilize agency public information officers to disseminate educational resources. • Collaborate with other agencies to develop targeted outreach program focused on risk reduction for: <ul style="list-style-type: none"> • Citizens • Businesses • Organizations • Develop and disseminate information to populations located in identified at-risk areas. • Integrate natural hazard information into publications/pamphlets distributed in the media about general safety procedures (72 hour kits, emergency evacuation routes, etc.). • Develop announcement protocols for all county sponsored events to address emergency evacuations and preparedness during a situation. • Use sub-committee formed in action item <i>Multi-Hazards #6</i>. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
Law Enforcement, LCPW, LCPH, Public Information Officers	Radio Stations, Television Stations, Newspapers, Fire Service Agencies, Red Cross, Private Businesses (i.e. insurance carriers)
Timeline:	If available, estimated cost:
Short Term (0-2 years)	
Long Term (2-4 or more years)	
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Multi-Hazards #4	
Proposed Action Title/Description:	
Encourage the public to have supplies, emergency kits, and emergency plans in place. Information on developing family emergency plans and kits should be disseminated through several channels - television, radio and mail.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average risk to the majority of hazards addressed by the NHMP. Conducting outreach to educate the public on the importance of having emergency kits, supplies, and plans better prepares citizens for natural hazard events, helping reduce the county's overall risk to natural hazards. • To increase natural hazard mitigation and emergency preparedness in Lane County, residents must be aware of the risk and know what they should do before and after the disaster occurs. Outreach and awareness campaigns need to be carefully organized and developed to ensure that residents receive critical information. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for, and vulnerability to, most hazards addressed by the NHMP as being moderate or high. Conducting outreach to educate the public on the importance of having emergency kits, supplies, and plans better prepares citizens for natural hazard events, helping reduce the county's overall risk to natural hazards. • The Disaster Mitigation Act of 2000 requires that communities continue to involve the public beyond the original planning process [201.6(c)(4)(ii)]. Conducting outreach to educate the public on the importance of emergency kits, supplies, and plans would be a way to keep the public informed of, and involved in, the County's actions to mitigate hazards. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • CWPP Land Owner Survey – Survey respondents had the ability to rank their preferred methods of receiving future communication. 59% of survey respondents indicated that mail was their most preferred method of future communication; 49% preferred newspapers; 42% preferred television; and 42% preferred fact sheets and brochures. The support for these methods of communication to receive information about wildfire can be used to infer support for using these methods to communication information about all natural hazards affecting Lane County. • Use methods supported by the CWPP landowner survey to develop dissemination methods to educate the public on how to create emergency kits and plans: <ul style="list-style-type: none"> • Mailings • Television public service announcements • Newspaper inserts/spots 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
Public Information Officers	Local television stations and newspapers
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Multi-Hazards #5		
Proposed Action Title/Description:		
Provide HAZUS training opportunities for County Staff.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • HAZUS is a GIS mapping tool that can be used to estimate loss for potential natural hazard events. There are three HAZUS models: <ul style="list-style-type: none"> • Hurricane Wind Model • Earthquake Model • Flooding Model • HAZUS can assist communities determine losses, therefore allowing for emergency preparedness, response and recovery planning, and future risk reduction decisions. • If Lane County GIS technicians are trained in HAZUS then they will be able to create maps that will assist decision makers to make informed decisions about natural hazard risk reduction procedures and activities in Lane County. • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Improved estimates of losses from potential flooding events can help the County to better identify ways to reduce its risk to flooding. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates that Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and that the county's vulnerability to a future flood event is moderate. Improved estimates of losses from potential flooding events can help the County to better identify ways to reduce its risk to flooding. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Allow GIS technicians to attend FEMA HAZUS trainings, and ensure that this is a continued effort. HAZUS training is available free to jurisdictions at the Emergency Management Institute. • Have annual HAZUS informational trainings for Lane County Emergency Management, Lane County Land Management Division, and Lane County Public Works GIS personnel. • Investigate data requirements for HAZUS models and locate data sources. • Contact FEMA Region X for possible training opportunities. • Develop a partnership with ORHUG for possible HAZUS collaboration and training. 		
Coordinating Organization:	Lane County Public Works – GIS	
Internal Partners:		External Partners:
LCEM, LCLMD		FEMA, LCOG, ORHUG
Timeline:		If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	Approximately \$2,000 - \$5,000
	Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Multi-Hazards #6	
Proposed Action Title/Description:	
Digitize the existing maps and data concerning hazardous areas within the county.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average risk to the majority of hazards addressed by the NHMP. Improved data for risk assessments can help the County to better identify ways to reduce its risk to natural hazards. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for, and vulnerability to, most hazards addressed by the NHMP as being moderate or high. Improved data for risk assessments can help the County to better identify ways to reduce its risk to natural hazards. • The Disaster Mitigation Act of 2000 recommends that communities identify the types and numbers of buildings, infrastructure, and critical facilities in hazard areas [201.6(c)(2)(i)]. The County currently does not have the appropriate dataset to complete this step of the risk assessment process. Better risk assessments can assist communities better direct limited mitigation dollars. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Create and maintain a single server/location that regional users can access for accurate GIS data. This is especially important for LMD when issuing building permits or analyzing development proposals. • Digitize all maps used to develop the Coastal Resource Management Plan. These maps show areas of geologic instability; active, stable and instable dunes; geologic hazards, and more. • Digitize water quality and quantity maps. These maps show areas where water quality is impaired or quantity is limited. Specific pollutants are identified. • Digitize the wetlands maps. • Use HAZUS to analyze the data after it is digitized. • Incorporate CWPP assessment data. • Take into account the seismic vulnerability inventory from action item <i>Earthquake Hazard #3</i>. 	
Coordinating Organization:	Lane County Land Management Division
Internal Partners:	External Partners:
LCPW-GIS	DOGAMI
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1 Years	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Multi-Hazards #7	
Proposed Action Title/Description:	
Expand existing special needs population data to include detailed inventory of all at-risk communities (elderly, homeless, disabled, etc.) that are w/out access to transportation and communication and determine mechanisms for alert/ warning and evacuation.	
Rationale for Proposed Action Item: <i>(What critical issues will the action address?)</i>	
<ul style="list-style-type: none"> • Creating an inventory of special needs populations that are without access to transportation and communication will assist emergency personnel in responding to such populations in the event of a natural hazard. • 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)]. Creating an inventory of special needs populations will help the county identify the way in which these populations will be impacted in the event of a natural hazard, assisting the identification of the county's overall vulnerability to natural hazards. 	
Ideas for Implementation: (Optional)	
<ul style="list-style-type: none"> • Cross-reference any information obtained for this action item with similar information in Lane County's Emergency Operations Plan (EOP); incorporate any new or more accurate data into the EOP. 	
Coordinating Organization:	Lane County Public Health
Internal Partners:	External Partners:
LCEM	Red Cross
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
6 Months	
Form Submitted by:	

Action Item Proposal Form

Proposed Action Item Identification:	
Long Term: Multi-Hazards #8	
Proposed Action Title/Description:	
Review and develop recommendations to the Lane County Board of Commissioners for additions to land use regulations such as the creation of new potential hazard overlay zones or environmental constraint overlays (in addition to the existing flood and wildland-urban interface overlays) such as tsunami inundation areas, steep slope, or debris flow prone areas.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self-completed hazard analysis, Lane County rated itself as having an above average risk to the majority of hazards addressed by the NHMP. • Overlay zones are an effective way to assess development in hazard prone areas. They have been used successfully in Lane County to protect people and property from flooding and coastal hazards. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for, and vulnerability to, most hazards addressed by the NHMP as being moderate or high. Improved data for risk assessments can help the County to better identify ways to reduce its risk to natural hazards. • 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 creation of these overlay zones may help identify potential land development changes that will impact both new and existing development. The overlays may also help to refine the County's risk assessment as well. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Review similar ordinances within the Northwest for sample code language. • Use GIS data to establish boundaries of potential hazard overlays. • Draft code amendment to create appropriate overlays zones. • Conduct at least 2 public hearings (1 with planning Commission, 1 with County Commissioners). • Conduct at least 1 public meeting (preferably 6) to obtain comments from public. 	
Coordinating Organization:	Lane County Land Management Division
Internal Partners:	External Partners:
LCPW – GIS	Department of Geology and Mineral Resources
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
	3 Years

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Multi-Hazards #9	
Proposed Action Title/Description:	
Develop a data repository for all existing GIS hazard data, and a GIS clearinghouse for sharing risk assessment GIS data layers and risk models.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self-completed hazard analysis, Lane County rated itself as having an above average risk to the majority of hazards addressed by the NHMP. A data repository and clearinghouse of all existing GIS hazard and risk assessment data would allow the agencies involved in hazard mitigation to more easily access all available hazard data from one location. Easier access to the most current existing data improves the ability of those agencies to work toward mitigating hazards, reducing the county's overall risk to hazards. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for, and vulnerability to, most hazards addressed by the NHMP as being moderate or high. A GIS data repository and clearinghouse would allow agencies responsible for hazard mitigation to access the most current information, improving their ability to mitigate for hazards. This will assist the county in reducing its overall risk to hazards. • The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that are being considered by the community to reduce the effect that natural hazards will have on the community [201.6(c)(3)(ii)]. A GIS data repository and clearinghouse would allow agencies responsible for hazard mitigation to access the most current information, improving their ability to mitigate for hazards. This will assist the county in reducing its overall risk to hazards. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Conduct an inventory of County departments and agencies to determine who has GIS hazard data. • Explore ways to acquire existing GIS data. • Develop method for storing GIS hazard data. • Develop basic meta data regarding ownership of data, data sources, update information, projection and scale. • Place GIS data layers in organized file structure on a regional server accessible to all partner agencies. • Develop methods for Lane County Public Works – GIS to be notified when new GIS hazard data is created, and for Public Works – GIS to be able to acquire the newly developed GIS hazard data to keep repository updated. • Develop methods for informing agencies that would need GIS hazard data that the repository exists. 	
Coordinating Organization:	Lane County Public Works – GIS
Internal Partners:	External Partners:
	EWEB; SUB; Eugene GIS; Springfield GIS; LCOG; ODOT
Timeline:	If available, estimated cost:
Short Term (0-2 years)	
Long Term (2-4 or more years)	
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:		
Long Term: Multi-Hazard #10		
Proposed Action Title/Description:		
Develop inter-ties between drinking water systems to allow for backup water supply if one source of drinking water is significantly affected by a natural hazard event.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • Eugene Water & Electric Board, Springfield Utility Board, and Rainbow Water provide drinking water to over 90% of the population in Lane County including Eugene, Springfield, and surrounding communities. The sources of drinking water include the McKenzie River, Middle Fork Willamette River, and a number of wellfields. Developing inter-ties between these drinking water systems improves the County's ability to continue to provide drinking water (at a reduced rate) if one or more of these sources are significantly impacted during a natural hazard event. Such actions help to mitigate the County's overall risk to the natural hazards addressed by the NHMP. • In a self-completed hazard analysis, Lane County rated itself as having an above average risk to the majority of hazards addressed by the NHMP. There are a number of natural hazards that have the potential to cause disruptions in the County's drinking water systems, including floods, volcanic eruptions, and earthquakes. Developing inter-ties between these drinking water systems improves the County's ability to continue to provide drinking water (at a reduced rate) if one or more of these sources are significantly impacted during a natural hazard event. Such actions help to mitigate the County's overall risk to the natural hazards addressed by the NHMP. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for, and vulnerability to, most hazards addressed by the NHMP as being moderate or high. Developing inter-ties between these drinking water systems improves the County's ability to continue to provide drinking water (at a reduced rate) if one or more of these sources are significantly impacted during a natural hazard event. Such actions help to mitigate the County's overall risk to the natural hazards addressed by the NHMP. 		
Ideas for Implementation: (Optional)		
<ul style="list-style-type: none"> • Identify areas where the water systems come in close proximity to one another and engineer inter-tie system that connects the systems at multiple junctions. A feasibility study has been completed that evaluates a number of different alternatives. • Develop appropriate agreements, such as MOUs, for testing and maintenance of these inter-ties between the various water providers. • Construct and test inter-tie system to maintain system pressure and water quality integrity. • During inter-tie construction, check for seismic vulnerability of the water system. 		
Coordinating Organization:	Eugene Water and Electric Board – Water Division	
Internal Partners:		External Partners:
LCEM, LCPW		SUB, Rainbow Water
Timeline:		If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	\$250,000 - \$1,000,000
	3 Years	
Form Submitted by:	Karl Morgenstern, EWEB	

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Earthquake Hazard #1		
Proposed Action Title/Description:		
Educate homeowners about structural and non-structural retrofitting of vulnerable homes and encourage retrofit.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average earthquake risk rating of 175 out of 240. Increasing public outreach to educate residents about retrofitting homes and structures can help mitigate the county's vulnerability to future earthquakes. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future earthquake event is low (that the county would be likely to have a major earthquake event in the next 75-100 years) but that the county's vulnerability to a future earthquake event is high. Increasing public outreach to educate residents about retrofitting homes and structures can help mitigate the county's vulnerability to future earthquakes. • 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 the public helps keep the public informed of what is being done with the plan, how the County is working to mitigate its risk to hazards, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • CWPP Land Owner Survey – Survey respondents had the ability to rank their preferred methods of receiving future communication. 59% of survey respondents indicated that mail was their most preferred method of future communication; 49% preferred newspapers; 42% preferred television; and 42% preferred fact sheets and brochures. The support for these methods of communication to receive information about wildfire can be used to infer support for using these methods to communication information about all natural hazards affecting Lane County. • Use methods supported by the CWPP landowner survey to develop dissemination methods for structural and non-structural earthquake retrofitting to homeowners: <ul style="list-style-type: none"> • Mailings • Television public service announcements • Newspaper inserts/spots • Distribute Institute for Business and Home Safety Homeowner Retrofit Guides 		
Coordinating Organization:	Lane County Emergency Management	
Internal Partners:		External Partners:
LCLMD, LCPW		FEMA, Red Cross, Television Stations, Newspapers
Timeline:		If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	Approximately \$15,000
	Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Earthquake Hazard #2	
Proposed Action Title/Description:	
Develop inventory of public and commercial buildings that may be particularly vulnerable to earthquake damage.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average earthquake risk rating of 175 out of 240. Completing an inventory of public and commercial buildings that are vulnerable to earthquakes helps the county assess its overall vulnerability to earthquakes. A more accurate assessment of its earthquake vulnerability can assist the county in identifying and selecting appropriate methods for earthquake risk mitigation. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future earthquake event is low (that the county would be likely to have a major earthquake event in the next 75-100 years) but that the county's vulnerability to a future earthquake event is high. Completing an inventory of public and commercial buildings that are vulnerable to earthquakes helps the county assess its overall vulnerability to earthquakes. A more accurate assessment of its earthquake vulnerability can assist the county in identifying and selecting appropriate methods for earthquake risk mitigation. • The Disaster Mitigation Act of 2000 requires communities to identify the community's vulnerability to natural hazards, and recommends identifying the types and numbers of buildings and infrastructure that could be affected by hazards [201.6(c)(2)(ii)(A)]. Completing an inventory of public and commercial buildings that are vulnerable to earthquakes helps the county assess its overall vulnerability to earthquakes. A more accurate assessment of its earthquake vulnerability can assist the county in identifying and selecting appropriate methods for earthquake risk mitigation. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Determine if a list of vulnerable public and commercial buildings already exists. • Determine the completeness of the existing list. • Identify public and commercial buildings not listed that need to be assessed for earthquake vulnerability. • Work with building owners/operators to evaluate buildings' vulnerability to earthquakes. • Cross-reference any information obtained for this action item with similar information in Lane County's Emergency Operations Plan (EOP) response plan; incorporate any new or more accurate data into the EOP. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
LCPW, LCLMD	DOGAMI
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1-2 years	

Action Item Proposal Form

Proposed Action Item Identification:		
Short Term: Earthquake Hazard #3		
Proposed Action Title/Description:		
Complete <i>Rapid Visual Assessments</i> to analyze seismic vulnerability of public facilities.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average earthquake risk rating of 175 out of 240. Identifying important public facilities with seismic vulnerabilities can assist the county and local communities in planning for ways to mitigate their risks to earthquakes. • Annex 10, <i>Earthquakes</i>, risk assessment scenarios for earthquakes estimated between \$1.6 and \$1.7 billion in damages to buildings. Improving inventories of critical facilities vulnerable to earthquakes for potential seismic retrofitting can help reduce economic losses. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future earthquake event is low (that the county would be likely to have a major earthquake event in the next 75-100 years) but that the county's vulnerability to a future earthquake event is high. Identifying important public facilities with seismic vulnerabilities can assist the county and local communities in planning for ways to mitigate their risks to earthquakes. • The Disaster Mitigation Act of 2000 requires communities to identify the community's vulnerability to natural hazards, and recommends identifying the types and numbers of buildings and infrastructure that could be affected by hazards [201.6(c)(2)(ii)(A)]. Analyzing the seismic vulnerability of important public facilities can help the county identify its vulnerability to earthquakes. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Create list of important public facilities. • Complete <i>Rapid Visual Assessments</i> to determine vulnerability. • Determine which facilities have had their seismic vulnerability analyzed. For the facilities that have been assessed, find out when assessment was done to determine if a new assessment should be completed to address new seismic standards. • For facilities that have had no seismic vulnerability analysis completed, work with facility operators to perform analysis. • Prioritize facilities based on vulnerability. • Encourage County staff to attend state-sponsored <i>Rapid Visual Assessment</i> trainings. 		
Coordinating Organization:	Lane County Emergency Management	
Internal Partners:	External Partners:	
LC Advisory Committee Members, LCLMD	OEM, DOGAMI, FEMA	
Timeline:	If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	\$50,000
1-2 Years		

Action Item Proposal Form

Proposed Action Item Identification:		
Long Term: Earthquake Hazard #4		
Proposed Action Title/Description:		
Develop and implement projects for highest priority facilities from <i>Earthquake Hazard #3: Complete Rapid Visual Assessments to analyze seismic vulnerability of public facilities.</i>		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average earthquake risk rating of 175 out of 240. Developing and implementing projects to reduce public facilities' seismic vulnerability can reduce the impact earthquakes will have on the facilities. Such actions help to reduce the County's overall risk to potential earthquakes. • Annex 10, <i>Earthquakes</i>, risk assessment scenarios for earthquakes estimated between \$1.6 and \$1.7 billion in damages to buildings. Developing and implementing projects to reduce public facilities' seismic vulnerability can reduce the impact earthquakes will have on the facilities. Such actions help to reduce the County's overall risk to potential earthquakes. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future earthquake event is low (that the county would be likely to have a major earthquake event in the next 75-100 years) but that the county's vulnerability to a future earthquake event is high. Developing and implementing projects to reduce public facilities' seismic vulnerability can reduce the impact earthquakes will have on the facilities. Such actions help to reduce the County's overall risk to potential earthquakes. • The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that are being considered by the community to reduce the effect that natural hazards will have on the community [201.6(c)(3)(ii)]. Developing and implementing projects to reduce public facilities' seismic vulnerability can reduce the impact earthquakes will have on the facilities. Such actions help to reduce the County's overall risk to potential earthquakes. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Using the <i>Rapid Visual Assessments</i> completed for each public facility, identify projects to reduce the seismic vulnerability for the highest prioritized facilities from <i>Earthquake Hazard #3: Complete Rapid Visual Assessments to analyze seismic vulnerability of public facilities.</i> • Identify funding source(s) to complete projects. 		
Coordinating Organization:	Lane County Emergency Management	
Internal Partners:	External Partners:	
LCLMD		
Timeline:	If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	
	2-4 Years	

Action Item Proposal Form

Proposed Action Item Identification:	
Long Term: Earthquake Hazard #5	
Proposed Action Title/Description:	
Implement recommendations listed in OEM's After Action Report dated August 2005 pertaining to the West Coast Tsunami Warning that was issued on June 14, 2005	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • On June 14, 2005 an Earthquake and Tsunami Warning was issued along the west coast of the United States that served as a real-life test of community readiness for a Tsunami. The After Action Report identifies failures in the overall response system that need to be corrected in order to diminish the impact of a Tsunami. • The After Action Report examines the timelines of the events on June 14, the critical components of emergency operations involved in receiving and issuing tsunami warnings and evacuations, and puts forward ten findings with several recommended actions for local communities to improve or refine existing operations for mitigating future losses during the next Tsunami warning. • Oregon's entire coastline has a delineated tsunami inundation zone according to the 1995 State Senate Bill 379. • The Disaster Mitigation Act of 2000 requires that communities continue to involve the public beyond the original planning process [201.6(c)(4)(ii)]. The recommendations in the report include further educating the public about what to do during a tsunami watch or warning. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop a detailed tsunami mitigation action plan that incorporates all recommendations for local communities in the After Action Report and assign timelines for completion. • Establish an oversight committee for the tsunami mitigation action plan • Conduct a feasibility analysis of the recommended actions and implement those that require the least amount of resources first. Identify costs and seek out funding for action items that require resources that are above and beyond existing program budgets. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
Public Information Officer	Florence City Manager Florence Police Chief Siuslaw Valley Fire & Rescue Chief Port of Siuslaw Local businesses Florence CERT leaders Other coastal towns Coast Guard
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
	2-4 Years

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Flood Hazard #1 (Within FEMA-Mapped Floodplains)		
Proposed Action Title/Description:		
Compile data and prepare GIS maps for structures within the 100-year floodplains. Use the newly available Lane County DFIRMs (Digital Flood Insurance Rate Maps) and the nearly complete & updated parcel base to create an online application for planners, property owners and potential land buyers to quickly and easily understand flood hazards.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Improving residents' awareness of hazard risks can help the County with outreach and education efforts and help reduce the county's overall flood risk. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and the county's vulnerability to a future flood event is moderate. Improving residents' awareness of hazard risks can help the County with outreach and education efforts and help reduce the county's overall flood risk. • The Disaster Mitigation Act of 2000 recommends that communities identify the types and numbers of buildings, infrastructure, and critical facilities in hazard areas [201.6(c)(2)(i)]. The County currently does not have the appropriate dataset to complete this step of the risk assessment process. Better risk assessments can assist communities better direct limited mitigation dollars. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Use air photos and addressing data in conjunction with new DFIRM data to identify structures within the 100- year floodplain. • Load floodplain layer onto ArcIMS or ArcReader applications developed for Public and in-house use. • Enter elevation data for each structure in the floodplain in Lane County into a GIS format; use data to assist with HAZUS analyses: <ul style="list-style-type: none"> • Gather building elevation data, currently housed in TRS property files, and incorporate it into the County's GIS database. • Possible techniques include creating digital elevation polygons and assigning the elevation value to each structure through a process know as point-in-polygon processing. • Modify the county's GIS data base to include an elevation field • Create better digital elevation models (DEM) with aerial photos. • Update elevation data when FEMA conducts its community review every 2 years. 		
Coordinating Organization:	Lane County Public Works – GIS	
Internal Partners:		External Partners:
LCLMD, LCEM		LCOG, photogramatrist, USACE, "Regional GIS Partners": City of Springfield, City of Eugene
Timeline:		If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)	Approximately \$50,000 - \$70,000
	Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Flood Hazard #2 (Within FEMA-Mapped Floodplains)	
Proposed Action Title/Description:	
Consult with property owners and explore mitigation actions for the 20 Lane County properties on FEMA's national repetitive loss list.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • If Lane County becomes a participant in the CRS, it will be required to develop a <i>Flood Mitigation Assistance Program</i>. FEMA requires that communities developing <i>Flood Mitigation Assistance Programs</i> work with homeowner within the community who have had repetitive loss due to flooding. Implementing this action item will assist the County in meeting Federal Requirements for CRS and the <i>Flood Mitigation Assistance Program</i>. • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Improved collaboration with owners of at-risk properties can help the County to better identify ways to reduce its flood risk. • Lane County will receive additional points for the CRS program if the County addresses repetitive flood loss properties through NFIP. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and the county's vulnerability to a future flood event is moderate. Improved collaboration with owners of at-risk properties can help the County to better identify ways to reduce its flood risk. • One of the National Flood Insurance Program's primary objectives is to reduce the number of properties subject to repetitive loss. This can be accomplished by first identifying those properties that have been impacted by more than one flood event and then elevating or relocating the home, or acquiring the home for demolition and returning the vacant land to open space in perpetuity. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop an outreach strategy to gain property owners' input. Examples of possible strategies include a mail survey, phone interviews, or community meeting. • Develop mitigation option materials for repetitive loss property owners – acquisition, elevation, etc. • Evaluate connections to Metro Waterway Plan. 	
Coordinating Organization:	Lane County Land Management Division
Internal Partners:	External Partners:
	FEMA, DLCD, USACE
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1 year	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Flood Hazard #3 (Within FEMA-Mapped Floodplains)	
Proposed Action Title/Description:	
Conduct study to understand relationship between the National Weather Service stream gauge data and on-the ground flood impacts felt by landowners along the forks of the Willamette River.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Providing NWS with information about how flooding affects property owners allows NWS to compare the property impact information with their stream gauge data. Analyzing connections between stream gauge data and property damage can help improve NWS' ability to provide flood watches and warnings. This can allow landowners to better prepare for and respond to potential flood events. • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Analyzing stream gauge data with impacts felt by landowners can help improve flood watches and warnings. This can allow landowners to better prepare and respond to potential flood events. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and the county's vulnerability to a future flood event is moderate. Analyzing stream gauge data with impacts felt by landowners can help improve flood watches and warnings. This allows landowners to better prepare and respond to potential flood events. • 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)]. Gaining information from landowners about the impacts from flooding they experience is a way to involve the public in the mitigation process and involved in the way in which the public can be notified of potential flood events. • The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that are being considered by the community to reduce the effect that natural hazards will have on the community [201.6(c)(3)(ii)]. Studying relationships between NWS' stream gauge data and flood impacts felt by landowners can help improve NWS' ability to provide flood watches and warnings. Such actions can help reduce the County's overall risk to floods. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop an outreach strategy to gain property owners' input on the effects they feel from flooding events. Examples of possible strategies include a mail survey, phone interviews, or community meeting. • Provide NWS with the information obtained from landowners, to allow NWS to analyze the connection between stream gauge data and impacts felt by landowners from flood events. 	
Coordinating Organization:	Lane County Land Management Division
Internal Partners:	External Partners:
	NWS
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
6 Months – 1 Year	

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Flood Hazard #4 (Outside FEMA-Mapped Floodplains)		
Proposed Action Title/Description:		
Complete the inventory of locations in Lane County subject to frequent storm water flooding.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Improved risk assessments can help the County to better identify ways to reduce its flood risk. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and the county's vulnerability to a future flood event is moderate. Improved risk assessments can help the County to better identify ways to reduce its flood risk. • The Disaster Mitigation Act of 2000 recommends that communities identify the types and numbers of buildings, infrastructure, and critical facilities in hazard areas [201.6(c)(2)(i)]. The County currently does not have the appropriate dataset to complete this step of the risk assessment process. Better risk assessments can assist communities better direct limited mitigation dollars. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Amend the floodplain ordinance as requested by FEMA. • Define areas of frequent flooding, compare with past flood occurrences, FEMA flood insurance payouts, County expenditures for flooding repairs, areas of high Citizen complaints during flooding events, etc. • Complete/start to build a database of these locations. • Incorporate this information into the County's GIS database. 		
Coordinating Organization:	Lane County Public Works	
Internal Partners:		External Partners:
Sheriff's Office, LCLMD		ODOT, City of Eugene, City of Springfield, other local cities
Timeline:		If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)	Approximately \$75,000 - \$100,000
	Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:					
Ongoing: Flood Hazard #5 (Outside FEMA-Mapped Floodplains)					
Proposed Action Title/Description:					
For locations with repetitive flooding and significant damages or road closures, determine and implement mitigation measures such as upsizing culverts or storm water drainage ditches					
Rationale for Proposed Action Item:					
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Improved hazard identification and mitigation can help the County to better reduce its flood risk. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and the county's vulnerability to a future flood event is moderate. Improved hazard identification and mitigation can help the County to better reduce its flood risk. 					
Ideas for Implementation:					
<ul style="list-style-type: none"> • Use information gathered from the inventory of frequent flooding and develop a list of areas in need of repair or maintenance. Inventories of culverts, storm water systems, and roads can be used to assist this process. • Prioritize areas of high flood occurrence to secure funding to improve these areas. • Develop protocols to ensure that this list of areas is kept up-to-date when projects are finished. • All information should be incorporated into the County's GIS database. • Identify already scheduled maintenance projects in areas of frequent flooding and incorporate flood mitigation activities. • Implement mitigation measures through Lane County's Capital Improvement Program. 					
Coordinating Organization:	Lane County Public Works				
Internal Partners:	External Partners:				
Sheriff's Office, LCLMD	City of Eugene, City of Springfield, ODOT				
Timeline:	If available, estimated cost:				
<table border="1"> <tr> <td>Short Term (0-2 years)</td> <td>Long Term (2-4 or more years)</td> </tr> <tr> <td></td> <td>Ongoing</td> </tr> </table>	Short Term (0-2 years)	Long Term (2-4 or more years)		Ongoing	Approximately \$5,000 - \$10,000
Short Term (0-2 years)	Long Term (2-4 or more years)				
	Ongoing				

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Flood Hazard #6 (Outside FEMA-Mapped Floodplains)	
Proposed Action Title/Description:	
Explore the potential for Lane County to participate in the Community Rating System (CRS) of the National Flood Insurance Program (NFIP)	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • In a self hazard analysis, Lane County rated itself as having an above average flood risk rating of 165 out of 240. Participating in the CRS can help the County to better identify ways to reduce its flood risk and save money by earning reduced insurance premiums. • The <i>State of Oregon's Natural Hazard Mitigation Plan</i> indicates Lane County's probability for a future flood event is high (that the county would be likely to have a major flooding event in the next 10-35 years) and the county's vulnerability to a future flood event is moderate. Participating in the CRS can help the County to better identify ways to reduce its flood risk and save money by earning reduced insurance premiums. • As part of the National Flood Insurance Program (NFIP), CRS recognizes communities' efforts to strengthen floodplain management. CRS rewards those communities that go beyond the minimal requirements of NFIP by reducing flood insurance premiums for a participating community's property owners. The <i>CRS Planning Process</i> is related to FEMA's <i>Flood Mitigation Assistance Program</i> guidelines and NFIP guidelines for flood mitigation planning. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Determine CRS eligibility requirements • Research and document current activities that Lane County is already conducting. • Complete and submit CRS participation application • Update LC 16.244 to reflect requirements of the CRS • Establish outreach projects to provide education flood hazards to Lane County Residents • Implement reasonable higher regulatory standards • Obtain digital floodplain maps. 	
Coordinating Organization:	Lane County Land Management Division
Internal Partners:	External Partners:
	FEMA Region X
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1 Year	

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Landslide Hazard #1	
Proposed Action Title/Description:	
Work with the Forest Service to educate landowners on ideas for mitigating the affects of landslides, including establishing evacuation routes.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 8, <i>Landslides</i>, of Lane County’s risk assessment identified the potential for landslides to cause damage to buildings and infrastructure within Lane County: landslides may cause road closures and interruptions to utility services. The annex also identified previous incidents of landslides that affected Lane County: landslides in 1998 and 2000 in the Deadwood area that caused road closures forced residents to find alternate transportation routes. The road closures from the 2000 landslide took several months to clean up and repair. Working with the Forest Service to educate landowners about mitigating the affects of landslides can assist landowners in preparing for and responding to potential landslide events. This can help mitigate the county’s overall risk to landslides. • 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. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Determine what public outreach and education tools for informing landowners about the affects of landslides already exist. • Work with partner agencies to develop updated or expanded education and outreach information and materials. • CWPP Land Owner Survey – Survey respondents had the ability to rank their preferred methods of receiving future communication. 59% of survey respondents indicated that mail was their most preferred methods of future communication; 49% preferred newspapers; 42% preferred television; and 42% preferred fact sheets and brochures. The support for these methods of communication to receive information about wildfire can be used to infer support for using these methods to communication information about all natural hazards affecting Lane County. • Use methods supported by the CWPP landowner survey to develop dissemination methods for informing landowners of ways to mitigate the affects of landslides: <ul style="list-style-type: none"> • Mailings • Television public service announcements • Newspaper inserts/spots 	
Coordinating Organization:	Lane County Land Management Department
Internal Partners:	External Partners:
LCEM, Public Information Officers	ODF, BLM, Local USFS offices
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Landslide Hazard #2	
Proposed Action Title/Description:	
Expand on DOGAMI provided data to develop inventory of locations where buildings or infrastructure are subject to landslides.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 8, <i>Landslides</i>, of Lane County’s risk assessment identified the potential for landslides to cause damage to buildings and infrastructure within Lane County: landslides may cause road closures and interruptions to utility services. The annex also identified previous incidents of landslides that affected Lane County: landslides in 1998 and 2000 in the Deadwood area that caused road closures forced residents to find alternate transportation routes. The road closures from the 2000 landslide took several months to clean up and repair. Expanding inventories that identify buildings and infrastructure that are at risk to landslides can help the County to better identify and prioritize projects that can assist the County in mitigating its overall risk to landslides. • The Disaster Mitigation Act of 2000 requires communities to identify the community’s vulnerability to natural hazards, and recommends identifying the types and numbers of buildings and infrastructure that could be affected by hazards [201.6(c)(2)(ii)(A)]. Expanding the inventory of buildings that are vulnerable to landslides helps the county assess its overall vulnerability to landslides. A more accurate assessment of its landslide vulnerability can assist the county in identifying and selecting appropriate methods for landslide risk mitigation. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Examine existing DOGAMI provided data. • Identify locations and buildings not included in DOGAMI data that could be subject to landslides. • Site-visit identified locations and buildings to determine real vulnerability landslides. • Include locations and buildings to DOGAMI data that are determined to be vulnerable to landslides. 	
Coordinating Organization:	Lane County Public Works – GIS
Internal Partners:	External Partners:
LCLMD, LCEM	DOGAMI
Timeline:	If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Landslide Hazard #3	
Proposed Action Title/Description:	
Consider adoption of a hillside development ordinance with the intent of monitoring and regulating grading, excavation, development and cut and fill activities on steep or unstable slopes. Ordinances of this kind have been used to promote public safety by controlling land disturbing activities in hazardous areas that may contribute to or be impacted by debris flows.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 8, <i>Landslides</i>, of Lane County's risk assessment identified slopes between 50% and 70% as having moderate risks to shallow rapid landslides, and slopes between 70% and 80% as having high risks to shallow rapid landslides. Limiting the types of development that can occur on such slopes can help mitigate the county's overall risk to landslides. • CWPP Landowner Survey – 83% of survey respondents supported the use of building construction standards for new developments in high hazard areas to reduce the community's risk to wildland fire. The support for building construction standards to mitigate wildfire risk can be used to infer support for building construction standards to mitigate risk for all natural hazards affecting Lane County. • 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)]. Adopting development ordinances that would regulate grading, excavation, development, and cut and fill activities could help limit development that would increase a slope's vulnerability to landslides, or limit development that could increase the potential for loss of life or property due to landslides. Such actions would help the county mitigate its risk to landslides. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • 	
Coordinating Organization:	Lane County Land Management Department
Internal Partners:	External Partners:
LCPW, LCEM	Lane County Board of Commissioners
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
2 Years	

Action Item Proposal Form

Proposed Action Item Identification:		
Short-Term: Landslide Hazard #4		
Proposed Action Title/Description:		
Develop a GIS data layer that identifies areas that have become more vulnerable to landslides as a result of a wildfire event.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • Based on over 20 years of post fire assessment studies, the USFS has identified various criteria that can be used to predict whether an area would be highly susceptible to landslides following a wildfire event (i.e., based on soil characteristics, geology, slope, climate, geomorphology). Use of this information would allow the County to map potential landslide areas in relation to critical infrastructure and develop preplanning to prevent wildfire in these areas using various mitigation measures. Such actions can assist the County in mitigating its overall risk to landslides. • The Disaster Mitigation Act of 2000 requires communities to identify the community's vulnerability to natural hazards, and recommends identifying the types and numbers of buildings and infrastructure that could be affected by hazards [201.6(c)(2)(ii)(A)]. Identifying areas that may be more vulnerable to landslides after a wildfire event can assist the County in better identifying its vulnerability to landslides. A better identification of its landslide vulnerability can assist the County in better identifying and prioritizing projects that can assist the County in mitigating its overall risk to landslides. 		
Ideas for Implementation: (Optional)		
<ul style="list-style-type: none"> • Develop GIS data layers necessary for wildfire landslide assessment (many of the data layers already exist but may need some cleanup or enhancement). • Work with USFS to assign basic weightings to layers based on specific attributes. • Create GIS overlay to produce landslide hazard index in post wildfire conditions. 		
Coordinating Organization:	Eugene Water and Electric Board	
Internal Partners:	External Partners:	
	USFS LCOG LCPW – GIS BLM ODF	
Timeline:	If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	\$15,000 - \$30,000
2 years		
Form Submitted by:	Karl Morgenstern, EWEB	

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Winter Storm Hazard #1	
Proposed Action Title/Description:	
Work with utilities to establish agreed upon standards for all utilities operating in Lane County regarding tree pruning around transmission lines and trunk distribution lines.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls during winter storm events as a risk to the county. During a winter storm, tree falls have the potential to damage buildings and infrastructure, block roadways, and down overhead power lines, causing electric power failures. Tree pruning helps reduce the vulnerability of trees to winter storms, mitigating the potential damage they could cause to buildings and infrastructure during a winter storm. Standards for completing tree pruning jobs helps to maximize time, money, and other resources. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and the county’s vulnerability to a future winter storm event is high. Tree pruning helps reduce the vulnerability of trees to winter storms, mitigating the potential damage they could cause to buildings and infrastructure during a winter storm. Standards for completing tree pruning jobs helps to maximize time, money, and other resources. • 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)]. Developing public/private partnerships to educate the public can help pool resources for mitigation. Tree pruning will help reduce the trees’ vulnerability to winter storms. Reducing tree vulnerability reduces the risk that trees will be downed in a winter storm, damaging buildings and infrastructure. Having pruning standards before tree pruning begins assists work crews responsible for pruning: standards allow work crews to know they are sufficiently completing pruning jobs the first time out, maximizing time, money, and other resources. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Determine if any standards already exist. • Hold meetings with utilities to determine and identify standards that can be agreed upon by all. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
	All utilities
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Winter Storms Hazard #2	
Proposed Action Title/Description:	
Provide information brochures to property owners to encourage tree pruning near service drops	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls as a risk to the county during winter storm events. During a winter storm, tree falls have the potential to damage buildings and infrastructure, block roadways, and down overhead power lines, causing electric power failures. Providing information brochures helps educate people on the hazards that unpruned trees can cause during a winter storm, and the importance of tree pruning near service drops. This can help mitigate the county’s overall risk to winter storms. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and the county’s vulnerability to a future winter storm event is high. Providing information brochures helps educate people on the hazards that unpruned trees can cause during a winter storm, and the importance of tree pruning near service drops. This can help mitigate the county’s overall risk to winter storms. • 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)]. Providing information brochures helps educate people on the hazards that unpruned trees can cause during a winter storm, and the importance of tree pruning near service drops. Conducting public outreach also keeps the public informed of what is being done with the plan, and allows for public feedback and input into the plan and it’s implemented actions. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Community Wildfire Protection Plan Land Owner Survey – Survey respondents indicated their top preferences for receiving information in the future. 59% of survey respondents indicated that their most preferred method of future communication was through the mail and 42% preferred fact sheets and brochures. The support for these methods of communication to receive information about wildfire can be used to infer support for using these methods to communication information about all natural hazards affecting Lane County. • Acquire existing brochures, or develop brochures or mailers, with information for homeowners about tree pruning. 	
Coordinating Organization:	Lane Electric Cooperative
Internal Partners:	External Partners:
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Winter Storm Hazards #3		
Proposed Action Title/Description:		
Determine undergrounding requirements for utility extension; assess and evaluate for any needed improvements in the requirements.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls during winter storm events as a risk to overhead power lines. During a winter storm, tree falls have the potential to down overhead power lines, causing electric power failures. Undergrounding utility extensions to reduce the effect of ice loading and tree falls can help mitigate the county’s risk to winter storms, and limit disruptions in service in the event of a winter storm. • 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)]. Assessing and evaluating needed improvements for undergrounding utility extensions, can assist the County in determining what further actions are needed to help mitigate Lane County’s risk to winter storms. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • 		
Coordinating Organization:	Lane County Land Management Division	
Internal Partners:		External Partners:
Timeline:		If available, estimated cost:
Short Term (0-2 years)	Long Term(2-4 or more years)	
	Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Winter Storm Hazard #4	
Proposed Action Title/Description:	
Conduct outreach campaign to remind government, private sector and non-government agencies to keep sidewalks and roads free of ice during severe winter storms.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified ice as a risk to the county during winter storm events. During a winter storm, ice has the potential to cause injury to people (due to slipping and/or falling) and limit access and egress to/from roads and areas. Educating businesses and agencies on the importance of clearing ice from sidewalks and roads can helping mitigate the county’s risk to winter storms. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and the county’s vulnerability to a future winter storm event is high. Collaborating with and involving the public in mitigation efforts can help the County to better reduce its winter storm risk. • 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)]. Conducting public outreach helps educate people on the risks posed by icy sidewalks and roads, and suggest ways they can mitigate the risk. Conducting public outreach also keeps the public informed of what is being done with the plan, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Determine most appropriate and effective methods and messages for reaching targeted audiences. • Provide tips for how to clear sidewalks. • Determine funding source(s) for conducting outreach methods. • Get sidewalk information from City of Eugene and City of Springfield, and use information to target commercial addresses within range of sidewalks. • Incorporate action item into Lane County’s Emergency Response Plan. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
Public Information Officers	City of Eugene, City of Springfield, Radio Stations, Television Stations, Newspapers
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	Approximately \$2,000 - \$5,000
<u>Long Term</u> (2-4 or more years)	
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Winter Storm Hazard #5		
Proposed Action Title/Description:		
Conduct public outreach campaigns in early fall each year to remind people how to get around under adverse weather conditions (i.e., driving on icy roads, etc.).		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls, ice, and snow as risks to the county during winter storm events. During a winter storm, tree falls, ice, and snow have the potential to block and/or limit access and egress to/from roads and areas. Educating people about ways to get around more safely during adverse weather conditions can help mitigate the amount of injuries that could result from unsafe travel. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and the county’s vulnerability to a future winter storm event is high. Collaborating with and involving the public in mitigation efforts can help the County to better reduce its winter storm risk. • 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)]. Conducting public outreach helps educate people on the risks posed by adverse weather conditions, and suggest ways they can mitigate the risk. Conducting public outreach also keeps the public informed of what is being done with the plan, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Determine most appropriate and effective methods and messages for reaching targeted audiences. • Determine funding source(s) for conducting decided upon outreach methods. • Identify and acquire any existing information on public outreach to educate the public on adverse weather conditions. • Develop outreach materials that provide the public with tips on what to carry with them and in their cars during adverse weather, how to make emergency kits, etc. • Incorporate action item into Lane County’s Emergency Operations Plan. 		
Coordinating Organization:	Lane County Public Works	
Internal Partners:	External Partners:	
Sheriff’s Office	Radio Stations Television Stations <i>Newspapers</i>	
Timeline:	If available, estimated cost:	
Short Term (0-2 years)	Long Term (2-4 or more years)	\$2,000 - \$5,000
	Ongoing	

Action Item Proposal Form

Proposed Action Item Identification:	
Long Term: Winter Storm Hazard #6	
Proposed Action Title/Description:	
Identify which critical facilities in Lane County need backup power and emergency operations plans to deal with power outages.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls during winter storm events as a risk to the county. During a winter storm, tree falls have the potential to damage buildings and infrastructure, and down overhead power lines, causing electric power failures. Providing backup power to critical facilities in the event of a winter storm can help decrease disruptions in services, mitigating the county’s risk to winter storms. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and that the county’s vulnerability to a future winter storm event is high. Providing backup power to critical facilities in the event of a winter storm can help decrease disruptions in services, mitigating the county’s risk to winter storms. • 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)]. Providing backup power to critical facilities in the event of a winter storm can help decrease disruptions in services, mitigating the county’s risk to winter storm events. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Survey operations managers of critical facilities to develop gap analysis. • Encourage facility operators to develop plans for establishing back up power. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
All Lane County departments and agencies	
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1-2 years	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Winter Storm Hazard #7	
Proposed Action Title/Description:	
Develop public/private partnership (i.e., public works and arborist society) to educate property owners how to evaluate the health of trees on their property.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls during winter storm events as a risk to the county. During a winter storm, tree falls have the potential to damage buildings and infrastructure, block roadways, and down overhead power lines, causing electric power failures. Evaluating tree health to reduce trees’ vulnerability to winter storms can help mitigate the county’s risk to winter storms. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and the county’s vulnerability to a future winter storm event is high. Collaborative partnerships and public education can help the County to better reduce its winter storm risk. • 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)]. Developing public/private partnerships to educate the public can help pool resources for mitigation. Outreach provided by such a group could educate property owners, assisting them to reduce the vulnerability of trees on their property to winter storms, helping reduce the county’s overall risk to winter storms. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop a list of agencies, organizations, etc., who would be able to provide assistance in educating property owners about the health of the trees on their property. • Contact those agencies, organizations, etc., to see if they would be interested and willing to contribute to a partnership to help educate property owners about the health of the trees on their property. • Form partnerships with interested parties, and develop methods for outreach to educate property owners about evaluating the health of the trees on their property. • Develop incentives for property owners to participate in monitoring and maintaining the health of the trees on their property, such as free arborist visits and assessments of trees. • Partner with local utilities to provide informational inserts in monthly utility bills. 	
Coordinating Organization:	Lane County Public Works
Internal Partners:	External Partners:
LCLMD	Arborists Society, EWEB, other utilities
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1 Year	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Winter Storm Hazard #8	
Proposed Action Title/Description:	
Develop a hazardous tree inventory for all County properties.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls during winter storm events as a risk to the county. During a winter storm, tree falls have the potential to damage buildings and infrastructure, block roadways, and down overhead power lines, causing electric power failures. Developing an inventory of trees that may be more vulnerable to damage from winter storms can help the County in better identifying and prioritizing projects that can assist the County in mitigating its overall risk to winter storms. • The <i>State of Oregon’s Natural Hazard Mitigation Plan</i> indicates Lane County’s probability for a future winter storm event is high (that the county would be likely to have a major winter storm event in the next 10-35 years) and the county’s vulnerability to a future winter storm event is high. Developing an inventory of hazardous trees can help the County identify which trees might be more vulnerable to damage caused by winter storms. Such information can help the County in better identifying and prioritizing projects that can assist the County in mitigating its overall risk to winter storms. • 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 an inventory of hazardous trees can help the County identify which trees might be more vulnerable to damage caused by winter storms. Such information can help the County in better identifying and prioritizing projects that can assist the County in mitigating its overall risk to winter storms. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop a list of agencies, organizations, etc., who may have information about hazardous trees that may be at increased risk to damage caused by winter storms. • Contact those agencies, organizations, etc., to see if they could provide information to help develop the hazardous tree inventory. • Use GIS to create an inventory of identified hazardous trees. • Develop methods for maintaining and updating the inventory. • Develop methods for informing agencies, which may need such information, that the inventory exists and ways that they can obtain a copy of the inventory. 	
Coordinating Organization:	Lane County Public Works – Parks
Internal Partners:	External Partners:
LCLMD	Arborists Society, EWEB, other utilities
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1 Year	

Action Item Proposal Form

Proposed Action Item Identification:	
Long Term: Winter Storms Hazard #9	
Proposed Action Title/Description:	
Consider upgrading lines and poles to improve wind/ice loading, undergrounding critical lines, and adding interconnect switches to allow alternative feed paths and disconnect switches to minimize outage areas	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 7, <i>Winter Storms</i>, of Lane County’s risk assessment identified tree falls during winter storm events as a risk to overhead power lines. During a winter storm, tree falls have the potential to down overhead power lines, causing electric power failures. Adding upgrades to utility lines, poles, and extensions to reduce the effect of ice loading and tree falls can help mitigate the county’s risk to winter storms, and limit disruptions in service in the event of a winter storm. • 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)]. Assessing and evaluating needed improvements for utility extensions, lines, and poles can assist the County in determining what further actions are needed to help mitigate Lane County’s risk to winter storms. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Determine existing conditions of lines and poles. Involve stakeholders to identify if and where upgrades are feasible. • Identify requirements for undergrounding critical lines. Involve stakeholders to identify if and how undergrounding lines could be possible and feasible. • Identify requirements for adding interconnect switches. Involve stakeholders to identify if and how adding interconnect switches is possible and feasible. 	
Coordinating Organization:	Lane Electric Cooperative
Internal Partners:	External Partners:
Timeline:	If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)
	5 Years

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Volcanic Hazards #1	
Proposed Action Title/Description:	
Update public emergency notification procedures for ash fall events	
Rationale for Proposed Action Item: (What critical issues will the action address?)	
<ul style="list-style-type: none"> • Annex 11, <i>Volcanic Hazards</i>, of Lane County’s risk assessment identified ash falls as the volcanic hazard that Lane County would most likely experience. Updating public emergency notification procedures for ash fall events would improve the public and emergency personnel’s abilities to respond to an ash fall event, helping mitigate the county’s risk to ash falls. • Pre-planning for event can help minimize the effort and cost needed to respond to an event. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Include Central Cascades Volcanic Plan as an addendum • Add ash fall events to communication centers notification protocols. • Develop instructions for distribution of alert to the public regarding what to do in an ash fall event. • Incorporate action item into Lane County’s Emergency Operations Plan. 	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
Public Information Officers	Other communication centers, Media outlets, Central Cascades Volcano Committee
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1-2 years	

Action Item Proposal Form

Proposed Action Item Identification:		
Short Term: Volcanic Hazard #2		
Proposed Action Title/Description:		
Update emergency response planning for ash fall events.		
Rationale for Proposed Action Item: (What critical issues will the action address?)		
<ul style="list-style-type: none"> • Annex 11, <i>Volcanic Hazards</i>, of Lane County's risk assessment identified ash falls as the volcanic hazard that Lane County would most likely experience. Updating the county's emergency response to an ash fall event will assist emergency personnel in responding to and assisting the public during an ash fall, mitigating the county's risk to ash fall events. • Pre-planning for event can help minimize the effort and cost needed to respond to an event. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Continue Lane County's participation in the Central Cascades Volcanic Planning effort. • Pre-identify incident command posts for coordinating a regional response. • Incorporate action item into Lane County's Emergency Operations Plan. 		
Coordinating Organization:	Lane County Emergency Management	
Internal Partners:		External Partners:
		City of Eugene, other affected counties, Central Cascades Volcano Committee
Timeline:		If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	\$1,500 yearly
1-2 years		

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Volcanic Hazard #3	
Proposed Action Title/Description:	
Evaluate capability of water treatment plants to deal with high turbidity from ash falls and upgrade treatment facilities and emergency response plans to deal with ash falls.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Annex 11, <i>Volcanic Hazards</i>, of Lane County’s risk assessment indicates the potential for ash fall events to impact the water systems within Lane County. Ash fall events have the potential to cause high water turbidity and operational problems at water treatment facilities. Upgrading water treatment facilities’ ability to respond to ash fall events can help reduce the disruption to services that an ash fall event may cause. • 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)]. Upgrading treatment facilities to deal with the high turbidity of the water caused by ash fall events will help the county mitigate its risk to ash falls, and reduce the disruption in services that an ash fall event may cause. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Form a team or task force of Lane County Advisory Committee members to: <ul style="list-style-type: none"> • Examine the current capabilities of water treatment plants to deal with high turbidity from ash fall events. • Identify ways to upgrade the capabilities of the water treatment plants to respond to ash fall events. • Determine feasibility and costs associated with implementing identified improvements and upgrades. • Incorporate action item into Lane County’s Emergency Operations Plan. 	
Coordinating Organization:	Eugene Water and Electric Board
Internal Partners:	External Partners:
	USACE, Central Cascades Volcano Committee
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1-2 years	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: Volcanic Hazards #4	
Proposed Action Title/Description:	
Use the high resolution maps developed by U.S. Geological Survey (that model the scenarios of likely mud flow, avalanche debris and lahar paths in the event of an eruption from the South Sister) to assist in updating the emergency response plan, including public notification and evacuation routes.	
Rationale for Proposed Action Item: (What critical issues will the action address?)	
<ul style="list-style-type: none"> • Following the events of 2005's Hurricane Katrina, Lane County recognized a need and an opportunity to assess the worst probably case scenario for a volcanic eruption event in Lane County. Preparing maps of mud flow, avalanche debris, and lahar paths from the South Sister bulge can provide the County with information about what to expect from a major volcanic eruption: would major rivers be temporarily dammed and would subsequent failure cause a wave of water and flooding; what areas, infrastructure, populations, etc., would be affected and to what extent. A better understanding of the County's vulnerability to a volcanic eruption from South Sister can assist the County in better identifying methods for mitigating the risk from this hazard. • Lane County currently does not have information regarding the worst probable case scenario for a volcanic eruption event. The US Geological Survey has completed a simulation study of a major eruption from the South Sister bulge area and mapped using GIS mud flow, avalanche debris and lahar paths. Gathering this information for the South Sister in Lane County would assist the County in knowing the worst probable case scenario and in identifying methods for preparing for and responding to the scenario. • The Central Cascades Facilitating Committee completed a draft <i>Central Cascades Coordination Plan: Coordinating Efforts Among Governmental Agencies in the Event of Volcanic Unrest in the Central Cascades, Oregon (April 2005)</i>. It may be beneficial to evaluate this plan for inclusion in Lane County's mitigation and/or response planning efforts 	
Ideas for Implementation: (Optional)	
<ul style="list-style-type: none"> • Obtain the USGS volcanic eruption data for South Sister and include the regional GIS data repository. • Evaluate mud flow, avalanche debris and lahar paths to determine evacuation routes and impacts to critical infrastructure in the area. Special attention should be paid for areas that major earth flows cross rivers or large tributaries. This event may cause temporary damming followed by failure and flooding. Additional modeling as a dam failure scenario may provide better information regarding additional inundation areas. • Volcanic eruptions usually involve seismic activities, so there should be a link to the earthquake portion of the Lane County Natural Hazards Mitigation Plan. • Develop GIS-based evacuation plans and identify shelters with caches of supplies for population potentially effected. 	
Coordinating Organization:	Eugene Water and Electric Board – Source Protection Program
Internal Partners:	External Partners:
EWEB – Engineering Lane Co Emergency Management	Red Cross, USGS, USACE, NWS, USFS
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	\$25,000 to \$35,000
<u>Long Term</u> (2-4 or more years)	
2 years	

Action Item Proposal Form

Proposed Action Item Identification:		
Ongoing: Dam Safety Hazard #1		
Proposed Action Title/Description:		
Train first responders on alert/warning systems, emergency plan and evacuation routes		
Rationale for Proposed Action Item:		
Ideas for Implementation:		
Coordinating Organization:	Eugene Water and Electric Board	
Internal Partners:		External Partners:
LCEM		
Timeline:		If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)	

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Dam Safety Hazard #2	
Proposed Action Title/Description:	
Encourage the Corps of Engineers to complete seismic vulnerability assessments for dams upstream of heavily populated areas in Lane County and to make seismic improvements as necessary.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Following the events of 2005's Hurricane Katrina, Lane County recognized a need and an opportunity to evaluate the seismic vulnerability of its dams. Encouraging the Army Corps of Engineers, the entity that controls the dams, to complete seismic vulnerability assessments for the dams upstream of heavily populated areas can assist the County in better understanding the vulnerability of its dams. Information about seismic vulnerability of Eugene Water & Electric Board dams in the McKenzie should also be incorporated into this effort. A better understanding of dam seismic vulnerability can assist the County in better identifying methods for mitigating the risk of dam vulnerability. • Lane County currently does not have information regarding the worst probable case scenario for a dam failure event. The National Weather Service and EWEB have run dam break inundation studies. Gathering such information for the dams in Lane County would assist the County in knowing the worst probable case scenario and in identifying methods for preparing for and responding to the scenario. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Convene a meeting of technical experts to address potential risk associated with seismic vulnerability of Lane County's dams. Possible agencies to invite include: DOGAMI, USGS, USACE, EWEB, and NWS. • Incorporate data into the local GIS system. 	
Coordinating Organization:	Eugene Water and Electric Board – Water/Electric Engineering
Internal Partners:	External Partners:
LCEM EWEB Environmental Dept.	DOGAMI, USACE, NWS, USGS
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
	5 Years

Action Item Proposal Form

Proposed Action Item Identification:		
Short Term: Dam Safety Hazard #3		
Proposed Action Title/Description:		
Prepare high resolution maps of dam failure inundation areas and update emergency response plan, including public notification and evacuation routes.		
Rationale for Proposed Action Item:		
<ul style="list-style-type: none"> • Following the events of 2005's Hurricane Katrina, Lane County recognized a need and an opportunity to assess the worst probably case scenario for a dam failure event in Lane County. Preparing maps of dam failure inundation areas can provide the County with information about what to expect from a dam failure event: what areas, infrastructure, populations, etc., would be affected and to what extent. A better understanding of the County's vulnerability to a dam failure event can assist the County in better identifying methods for mitigating the risk of dam vulnerability to hazards. • Lane County currently does not have information regarding the worst probable case scenario for a dam failure event. The National Weather Service has run dam break inundation studies. Eugene Water & Electric has evaluated its dams on the McKenzie River for worst case inundation scenarios. Gathering such information for the dams in Lane County would assist the County in knowing the worst probable case scenario and in identifying methods for preparing for and responding to the scenario. 		
Ideas for Implementation:		
<ul style="list-style-type: none"> • Incorporate action item into Lane County's Emergency Operations Plan. • Obtain EWEB's dam break inundation GIS data that shows wave height, timing of wave, and inundation area as the flood moves down the watershed (using Smith and Trail Bridge dam failures). This data is available as a CADD data layer (which can be converted to GIS). • Obtain NWS dam failure inundation study results for Lane County Dams and work with the Army COE to evaluate validity of these results for Army COE dams. Obtain data as a GIS data layer or digitize information into a GIS format for use with other data layers. • Develop GIS-based evacuation plans and identify shelters with caches of supplies for population potentially effected. 		
Coordinating Organization:	Eugene Water and Electric Board – Water/Electric Engineering	
Internal Partners:	External Partners:	
LCEM, LCPW – GIS EWEB-Environmental Dept	USACE, NWS, USGS	
Timeline:	If available, estimated cost:	
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)	\$20,000 - \$40,000
1-2 years		

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: HazMat Safety Hazard #1	
Proposed Action Title/Description:	
Enhance emergency planning, emergency response training and equipment to address hazardous materials incidents.	
Rationale for Proposed Action Item:	
Ideas for Implementation:	
Coordinating Organization:	Regional HazMat Team
Internal Partners:	External Partners:
	FEMA Region X
Timeline:	If available, estimated cost:
Short Term (0-2 years)	
Long Term (2-4 or more years)	
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: HazMat Safety Hazard #2	
Proposed Action Title/Description:	
Ensure that first responders have readily available site-specific knowledge of hazardous chemical inventories in Lane County	
Rationale for Proposed Action Item:	
Ideas for Implementation:	
Coordinating Organization:	Oregon State Fire Marshal
Internal Partners:	External Partners:
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
1 years	

Action Item Proposal Form

Proposed Action Item Identification:	
Short Term: HazMat Safety Hazard #3	
Proposed Action Title/Description:	
Plot HazMat locations in GIS for first responders.	
Rationale for Proposed Action Item:	
Ideas for Implementation:	
Coordinating Organization:	Lane County Public Works – GIS
Internal Partners:	External Partners:
Timeline:	If available, estimated cost:
<u>Short Term</u> (0-2 years)	<u>Long Term</u> (2-4 or more years)
6 Months	

Action Item Proposal Form

Proposed Action Item Identification:	
Ongoing: Terrorism Hazard #1	
Proposed Action Title/Description:	
Enhance emergency planning, emergency response training and equipment to address potential terrorism incidents.	
Rationale for Proposed Action Item:	
Ideas for Implementation:	
Coordinating Organization:	Lane County Emergency Management
Internal Partners:	External Partners:
Timeline:	If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)
	Ongoing

Action Item Proposal Form

Proposed Action Item Identification:	
Long Term: Terrorism Hazard #2	
Proposed Action Title/Description:	
Upgrade physical security detection and response capability for critical facilities, including water systems	
Rationale for Proposed Action Item:	
Ideas for Implementation:	
Coordinating Organization:	Eugene Water and Electric Board
Internal Partners:	External Partners:
Timeline:	If available, estimated cost:
Short Term (0-2 years)	Long Term (2-4 or more years)
	5 Years