Part affect yeacuation There is not correctly an exacution plant to address durin fibure - or chem mass essauation meets. Boules, notification, and avareness are all register. See Multi Hazard: Evacuation See Multi Hazard: E	Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Purpose Purpose <t< th=""><th>Dam Failure</th><th>Dam safety evacuation</th><th>There is not currently an evacuation plan to address dam failure – or other mass evacuation needs. Routes, notification, and awareness are all required.</th><th>See Multi Hazard: Evacuation</th><th>See Multi Hazard: Evacuation</th><th>See Multi Hazard: Evacuation</th><th>See Multi Hazard: Evacuation</th></t<>	Dam Failure	Dam safety evacuation	There is not currently an evacuation plan to address dam failure – or other mass evacuation needs. Routes, notification, and awareness are all required.	See Multi Hazard: Evacuation	See Multi Hazard: Evacuation	See Multi Hazard: Evacuation	See Multi Hazard: Evacuation
Instruction The Army Corps of Engineers has created involution maps based on dam are not in local GIS programs to lacilitate evacuation planning and other emergency planning needs Seek epirmission and involution maps is as a layer within local back permission add inundation maps is as a layer within local are not in local GIS programs to facilitate evacuation planning and other emergency planning needs Staff time By 2016 Dam Seismict (ACTION COMPLETED) The Army Corps of Engineers conducts seisments of dams every 15 evaluation Obtain details of the most recent dam seismic assessments for the results from the most recent assessment of Engineers; tane County Lead: City of Eugene Office of Emergency wanagement. City of Suggene Office of Emergency management. City of Suggene Office of Emergency management. City of Suggene Office of Emergency wanagement. Partner: Army Corps of Engineers; tane County Sheriff's Office. By 2016 Used Transportation (ACTION COMPLETED) Log term surface transportation impairments can cause cascading system earth and bridges and other earth and be bar details of the most recent dam seismic assessment of ransportation methodology, as-built drawings, and physical indepetition of ransportation infrairmeture. While state and feed ral bridges may have had seismic inspections, there is currently no coordinated effort to inspect. Sociol Transportation infrairmeture. While state and feed ral bridges may have had seismic inspections. There is variently developed a prioritized list of bridges to be retrofitted, or replaced. Over the next Syears, a) utilize accepted Oregon Department of ransportation retrofitue of largency classes dim cases in dedatrian present in details of bridges (cross: referenced with critical rand petatrian) for seismic	Dam Failure Dam Failure	Dam safety notification	If electric supply were interrupted (due to an earthquake, for example) there are few methods to communicate with the public if a dam failure were to occur in the Southern Willamette Valley. The method to receive information from the Army Corps of Engineers a dam breach is also susceptible to failure.	Once evacuation routes are established, a) develop and install robust notification system(s); and b) create a community awareness campaign to increase awareness of dam risks among all residents and specifically i) transient student population, and ii) non-English speaking residents.	Lead: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane County; EWEB; Army Corps of Engineers.	Varies widely depending on notification system used	by 2025
Page Dam Seismic ACTION COMPLETED The Army Corps of Engineers conducts seismic assessments of dams every 15 years. Eugene and Springfield Emergency Managers are not familiar with the seismic massessment. Obtain details of the most recent dam seismic assessments for the dams upstream of Eugenc/Springfield. Lead: City of Eugene Office of Emergency Management. Partner: Army Corps of Engineers; Lane County Sheriff's Office. Staff time By 2016 Local Transportation Infrastructure Seismic Valuation [ACTION UNDERWAY] Long term surface transportation impairments can cause cascading system failures and can inhibit evacuation, response, and recovery. A large-scale earthquake has the potential to severely damage local bridges and there transportation infrastructure. While state and federal bridges mush have has seismic inspections, there is currently no coordinated effort to inspect, record, and seismically retrofit local bridges. Additionally, some funding sources may not be available to local jurisdictions unless they have already developed a prioritized list of bridges to be retrofitted, or replaced. Over the retrofitting/replacement. Leads: City of Eugene Office of Emergency Management, City of Springfield bridges (Valuation) prolement and Public Works. Partners: orgon Dept. of Transportation; Private engineering firms S2,000 - \$3000 pr drawings; 30,000 - Eugene'S 54 bridges, 55,000 w/o As-Built drawings, NOT: Price is for assessing more than one bridge, fill with the assessing more than one bridge, with here than one bridge, price will be entrofitted, or replaced. Seismic dister the pre-bridge bridge victure bas assessing more than one bridge, price will be entrofitted or replaced; c) Seek funding to more transportation; private significally low: Suif drawings; Sori- transportation; Private t		Inundation Maps For Planning	The Army Corps of Engineers has created inundation maps based on dam failure scenarios. Those maps are available to local emergency managers but are not in local GIS programs to facilitate evacuation planning and other emergency planning needs	Seek digital versions of inundation maps from Army Corps of Engineers. Seek permission to add inundation maps as a layer within local jurisdiction GIS programs.	Lead: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Army Corps of Engineers; Lane County	Staff time	By 2016
Local Transportation Long term surface transportation impairments can cause cascading system Over the next 5 years, a) utilize accepted Oregon Department of Ladds: City of Eugene Office of Emergency \$2,000 - \$3000 per With as-built Valuation Failures and can inhibit evacuation, response, and recovery. A large-scale or the next 5 years, a) utilize accepted Oregon Department of Management, City of Springfield bridge with As-Built drawings; \$3,000 - \$2000 per With as-built (ACTION UNDERWAY) seismic inspections, there is currently no coordinated effort to inspect, and seismically retrofit local bridges. Additionally, some funding sources may not be available to local jurisdictions unless they have already developed a prioritized list of bridges to be retrofitted, or replaced. Over the next 5 years, a) utilize accepted Oregon Department of Transportation With as-built bridges with As-Built drawings; \$3,000 - \$2000 per With as-built with as-built respontation imfrastructure. While state and feeral bridges may have had inspections, there is currently no coordinated effort to inspect, and sesting inspections, there is currently no coordinated effort to inspect, developed a prioritized list of bridges to be retrofitted, or replaced. Develop a prioritized list of bridges (cross-referenced with critical travel corridors) to be retrofitting/replacement. Springfield s 14 Price is for assessed in 23 assessed in 23 assessed in 23 assult travele cassinc assessed in 23 assessesin a ass	Dam Failure	Dam Seismic Assessment [ACTION COMPLETED]	The Army Corps of Engineers conducts seismic assessments of dams every 15 years. Eugene and Springfield Emergency Managers are not familiar with the results from the most recent assessment.	Obtain details of the most recent dam seismic assessments for the dams upstream of Eugene/Springfield.	Lead: City of Eugene Office of Emergency Management. Partner: Army Corps of Engineers; Lane County Sheriff's Office.	Staff time	By 2016
	Earthquake	Local Transportation Infrastructure Seismic Evaluation [ACTION UNDERWAY]	Long term surface transportation impairments can cause cascading system failures and can inhibit evacuation, response, and recovery. A large-scale earthquake has the potential to severely damage local bridges and other transportation infrastructure. While state and federal bridges may have had seismic inspections, there is currently no coordinated effort to inspect, record, and seismically retrofit local bridges. Additionally, some funding sources may not be available to local jurisdictions unless they have already developed a prioritized list of bridges to be retrofitted, or replaced.	Over the next 5 years, a) utilize accepted Oregon Department of Transportation methodology, as-built drawings, and physical inspections, to evaluate the Eugene and Springfield bridges (Vehicular and pedestrian) for seismic vulnerability, and record results centrally; b) Develop a prioritized list of bridges (cross-referenced with critical travel corridors) to be retrofitted or replaced; c) Seek funding to implement retrofitting/replacement.	Leads: City of Eugene Office of Emergency Management, City of Springfield Development and Public Works. Partners: Oregon Dept. of Transportation; Private engineering firms	\$2,000 - \$3000 per bridge with As-Built drawings; \$3,000 - \$5,000 w/o As-Built drawings. NOTE: Price is for assessing an individual bridge. If assessing more than one bridge, the per-bridge price will be significantly lower.	With as-built drawings, all of Eugene's 54 bridges, and seven of Springfield's 14 bridges, could be assessed in 2-3 months. Eugene has as-built drawings for about 50% of their bridges. Springfield had seismic evaluations performed on six of

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Earthquake	Seismic Evaluation of Critical Facilities [ACTION UNDERWAY]	Many critical facilities in Eugene/Springfield have not been evaluated for seismic stability. A large-scale earthquake has the potential to severely damage local critical facilities, which can inhibit response and recovery efforts. Some funding sources may not be available to local jurisdictions unless they have already developed a prioritized list of critical facilities/services to be retrofitted, replaced, or relocated.	Over the next 5 years, A) Develop a prioritized list of critical facilities, consistent with the Critical Infrastructure and Key Resources developed by the Federal Emergency Management Agency, such as the Eugene Airport, the Eugene/Springfield Metropolitan Wastewater Commission Water Pollution Control Facility , the underground wastewater and stormwater collection and conveyance systems, and regional 9-1-1 and radio communication systems, to be inspected for seismic vulnerability; B) Develop a prioritization of facilities to be evaluated for seismic stability; C) Seek funding for evaluations; D) Utilizing building and infrastructure construction drawings and individual inspections, evaluate these facilities for seismic vulnerability and record the inspection results centrally; and E) Develop a prioritized list of facilities/services to be retrofitted, relocated, or replaced.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergenecy Management. Partners: 4J, EWEB, MWMC, Private engineering firms.	\$100k - \$500k	Develop the list within 1 year of plan adoption. Begin to conduct seismic evaluations of priority facilities within 5 years.
Earthquake	Seismic evaluation of Non-Critical facilities (FEMA 154)	Multiple publicly-owned facilities are crucial for maintaining government operations following an earthquake. This effects both continuity of government, continuity of operations planning and response and recovery planning.	A) Develop a seismic rapid visual screening program for public buildings; B)seek funding to support screening program; C) begin implementing screening to inform local mitigation, response, continuity of operations, and recovery, planning efforts.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergenecy Management	unknown	Strive to develop rapid visual screening program by 2020
Earthquake	Non-Structural seismic evaluation (FEMA E74)	All critical and non-critical facilities have non-structural components that may cause damage or injury during a seismic event.	Develop a program to systematically assess and retrofit non-structural components of public facilities. Seek funding for porgram to conduct evaluations and retrofits.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergenecy Management	unknown	Develop program by 2025
Earthquake	Home seismic retrofits	Most of the homes in Eugene/Springfield were built before requirements existed for seismic construction methods. These homes will be ill prepared when a large Cascadia earthquake hits the area. Impacts to household financial stability and the local economy would be severe.	Explore the possibility of developing a home seismic upgrade/retrofit program for Eugene/Springfield. Consider a marketing program, incentives, loans, rebates, or other support options.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergenecy Management. Partner: Lane County	unknown	Consider options by 2020
Flood	Flood Maps [ACTION UNDERWAY]	The Eugene/Springfield metro area flood maps are based on data that is approximately 50 years old. The availability of LIDAR data and other technologies offers superior ability to project and map riverine flooding in the area. FEMA will update maps as resources allow but will prioritize communities that a) indicate an interest in updating local flood maps, and b) provide funding or other resources to support the updating of flood maps.	Actively seek FEMA updates to the Eugene/Springfield floodplain maps	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergenecy Management. Partners: Lane County, FEMA, Lane Council of Governments	unknown	Depends on FEMA timelines

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Flood	Flood control levee certification and maintenance [ACTION ONGOING]	Eugene and Springfield both operate flood control structures. Structures need Army Corps of Engineers Certification and FEMA accredidation to be incroporated into updates of floodplain maps. The regulations surrounding certification and accredidation changed in 2013.	Seek and maintain certification of levees and other flood control structures within Eugene and Springfield	Lead: City of Springfield Development and Public Works	Unknown	unknown
Flood	Flood Insurance Study [ACTION UNDERWAY]	Eugene and Springfield do not have updated digital flood maps for Amazon Creek, Cedar Creek,or the McKenzie River. FEMA is in the process of updating the Flood Insurance Study and developing digital flood maps of these waterways.	Continue to support FEMA in updating the Flood Insurance Study, in selected areas, including Amazon and Cedar Creeks and the McKenzie River. Updated digital maps can provide easy access to flood information in the Eugene/Springfield metropolitan area and support a flood program that reflects the actual flood risk faced by the community.	Leads: City of Eugene Public Works Engineering, City of Springifeld Development and Public Works. Partner: FEMA	Unknown	Ongoing
Flood	Repetitive Loss Records	While there are no repetitive loss properties in Eugene or Springfield, that may not yet be reflected in State and Federal databases.	Ensure the accurate locations of Repetitive Loss Properties have been accurately registered with FEMA.	Lead: City of Springfield Development and Public Works. Partners: Lane County, FEMA	Staff Time	
Flood	Explore Flood Mitigation Actions With Property Owners (upon request) [ACTION ONGOING]	Eugene and Springfield both have neighborhoods that are in the 100-year floodplain. However, not all structures are at risk of flooding because their main finished floor is above the base flood elevation, or other flood mitigation factors have been developed for the structure. Nevertheless, some property owners that are in the floodplain may want to develop mitigation measures to reduce their flood risk. Providing appropriate mitigation options with property owners upon their request will help inform property owners on how to reduce their risk from flooding and inform the cities of Eugene and Springfield on structures that need flood mitigation.	Provide flood risk literature for outreach. Send annual mailer to residents living within the 100 year floodplain describing actions property owners can take to protect themselves from flooding.	Leads: City of Eugene Public Works Engineering, City of Springfield Development and Public Works	Staff time, printing costs	Ongoing
Flood	Maintain Frequent Stormwater Flooding Location Inventory [ACTION ONGOING]	The cities of Eugene and Springfield have each developed an inventory of locations in the Eugene/Springfield Metro Area that are subject to frequent storm water flooding. In order to remain accurate and useful, the inventory should be updated regularly.	Regularly update inventory of locations in the Eugene/Springfield Metro area subject to frequent stormwater (urban, not riverine) flooding	Leads: City of Eugene Public Works, City of Springfield Development and Public Works	Staff time	Ongoing
Flood	Upgrade culverts [ACTION ONGOING]	Repetitive flooding can cause significant damage to roads and storm water infrastructure such as culverts, and can lead to road closures and expensive repairs. In addition, erosion caused by flooding of roads can degrade water quality.	For locations that experience regular flooding and significant damages or road closures, determine and implement mitigation measures such as upsizing culverts or storm water drainage ditches	Leads: City of Eugene Public Works, City of Springfield Development and Public Works	Varies	Varies

Eugene/Springfield Natura

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	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
es with federally- ess owners, floodplain the City of Eugene	Continue compliance with the National Flood Insurance Program (NFIP) through enforcement of local floodplain ordinances.	Leads: City of Eugene Public Works Engineering, City of Springfield Development and Public Works	Staff time	ongoing
o identify structure san help minimize	Ensure that first responders continue to have readily available site- specific knowledge of hazardous chemical inventories in the Eugene/Springfield Metro Area through the development of an Extremely Hazardous Substance Plan developed with the Local Emergency Planning Committee.	Lead: Eugene/Springfield Fire/EMS Partner: Oregon State Regional HazMat Response Teams	unknown	ongoing
als incidents and and Springfield raining, and	Enhance emergency planning, emergency response training and equipment to address hazardous materials incidents.	Lead: Eugene/Springfield Fire/EMS. Partners: Oregon State Regional HazMat Response Teams	Varies widely	ongoing
are based on can provide egion.	Update regional landslide risk maps using available lidar data	Lead: City of Eugene Office of Emergency Management, City of Sprinfield Development and Public Works. Partners: Oregon Department of Geology and Mineral Industries, Lane Council of Governments	\$50k	Seek to complete map updates by 2020
l, severe property hazards. In ty services, roads, ng emergency	Use available data to determine areas and buildings at risk to landslides and propose Comprehensive Plan and land use policies accordingly.	Leads: City of Eugene Planning Department, City of Springfield Development and Public Works. Partners: Oregon Department of Geology and Mineral Industries, Lane Council of Governments	Unknown	Ongoing during comprehensive land use updates
ical needs for vehicles, b) fuel ortation systems, ors at critical nd more. Many cess to fuel	Once the Fossil Fuel Sector Assessment is completed, develop a Eugene/Springfield emergency fuel distribution plan that considers 1) the likely local fuel available during specific scenarios (earthquake, winter storm, mass evacuation) 2) the needs for transportation fuels and natural gas (including backup generators) of both public and private (hospital, communications, others) essential systems as well as	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane Transit District, Lane County, PeaceHealth, McKenzie Willamette Hospital, private hazard response and recovery contractors,	\$10k-\$100k depending on scope	Develop plan by 2020

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Flood	NFIP compliance [ACTION ONGOING]	The National Flood Insurance Program provides communities with federally- backed flood insurance to homeowners, renters, and business owners, provided that communities develop and enforce adequate floodplain management ordinances. In order to retain these benefits, the City of Eugene must continue to comply with NFIP requirements.	Continue compliance with the National Flood Insurance Program (NFIP) through enforcement of local floodplain ordinances.	Leads: City of Eugene Public Works Engineering, City of Springfield Development and Public Works	Staff time	ongoing
HazMat	HazMat Locations [ACTION UNDERWAY]	The Disaster Mitigation Act of 2000 requires communities to identify mitigation actions that address existing buildings and infrastructure [201.6(c)(3)(ii)]. Addressing hazardous materials locations can help minimize secondary hazards following a disaster.	Ensure that first responders continue to have readily available site- specific knowledge of hazardous chemical inventories in the Eugene/Springfield Metro Area through the development of an Extremely Hazardous Substance Plan developed with the Local Emergency Planning Committee.	Lead: Eugene/Springfield Fire/EMS Partner: Oregon State Regional HazMat Response Teams	unknown	ongoing
HazMat	HazMat Preparedness [ACTION UNDERWAY]	In order to provide effective response to hazardous materials incidents and maintain the safety of first responders, the cities of Eugene and Springfield need to continue emergency planning activities, response training, and equipment upgrades.	Enhance emergency planning, emergency response training and equipment to address hazardous materials incidents.	Lead: Eugene/Springfield Fire/EMS. Partners: Oregon State Regional HazMat Response Teams	Varies widely	ongoing
Landslide	Landslide Mapping [ACTION UNDERWAY]	Current landslide risk maps for the Eugene/Springfield area are based on dated topographic maps. LIDAR data is now available that can provide substanially better information about landslide risk in the region.	Update regional landslide risk maps using available lidar data	Lead: City of Eugene Office of Emergency Management, City of Sprinfield Development and Public Works. Partners: Oregon Department of Geology and Mineral Industries, Lane Council of Governments	\$50k	Seek to complete map updates by 2020
Landslide	Landslide Planning [ACTION UNDERWAY]	Depending on the type, location, severity and area affected, severe property damage, injuries and loss of life can be caused by landslide hazards. In addition, landslides can damage or temporarily disrupt utility services, roads, and other transportation / communication systems, including emergency response, fire, medical, police, etc.	Use available data to determine areas and buildings at risk to landslides and propose Comprehensive Plan and land use policies accordingly.	Leads: City of Eugene Planning Department, City of Springfield Development and Public Works. Partners: Oregon Department of Geology and Mineral Industries, Lane Council of Governments	Unknown	Ongoing during comprehensive land use updates
Multi-Hazard	Emergency Fuel Distribution Plan	Following a significant natural hazard, there are several critical needs for available fossil fuel supplies to a) fuel emergency response vehicles, b) fuel service vehicles to repair communications systems, transportation systems, utilities, and other critical services, and c) operate generators at critical facilities including hospitals, fire stations, police facilities, and more. Many service providers indicate they expect to receive priority access to fuel following an emergency, however it is unclear how limited fuel supplies would be distributed in the wake of a significant disturbance to supplies, such as an earthquake.	Once the Fossil Fuel Sector Assessment is completed, develop a Eugene/Springfield emergency fuel distribution plan that considers 1) the likely local fuel available during specific scenarios (earthquake, winter storm, mass evacuation) 2) the needs for transportation fuels and natural gas (including backup generators) of both public and private (hospital, communications, others) essential systems as well as those of neighboring communities supplied by the Eugene Kinder Morgan / Williams Pipeline fuel terminal, and 3) the existing on-site fuel storage and operation capacity of those critical services.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane Transit District, Lane County, PeaceHealth, McKenzie Willamette Hospital, private hazard response and recovery contractors, EWEB, SUB, and others.	\$10k-\$100k depending on scope	Develop plan by 2020

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Multi-Hazard	Community Recovery Planning	Eugene and Springfield currently do not maintain recovery plans to inform the recovery from any natural hazards.	List and prioritize the hazards likely to warrant recovery plans. Develop appropriate and necessary community recovery plans starting with the highest priority hazards.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partner: Lane County.	Depends on scope, number of hazards addressed, and number of partners involved	List and prioritze hazards for recovery planning by 2016. Begin working on at least one recovery plan by 2017
Multi-Hazard	Local Electricity Generation [ACTION UNDERWAY]	Relatively little of the electricity used in the Eugene/Springfield area is generated locally, resulting in a) dependency on extensive transmission lines, b) little local influence on maintenance and reliability of electric generation infrastructure, c) little influence on prioritization of service restoration following a major hazard event or regional outage.	 Develop a plan to increase local control of EWEB electric generation in the event of a regional outage (for example: given a regional outage, develop ability to direct locally generated power to critical facilities such as water treatment plants and hospitals). Encourage small scale local electricity generation that can be operated independently of the regional and/or local grid in the event of a local or regional power outage (for example: install local renewable electricity generation in support of critical facilities so they can operate during an outage). 	Leads: Eugene Water and Electric Board; Springfield Utility Board. Partners: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Bonneville Power Administration, Bonneville Environmental Foundation	Varies widely depending on scale.	Develop plan (part 1) by 2020. Begin implementation of part 2 by 2020
Multi-Hazard	Downed Power Lines	Downed power lines result in power failures and block critical transportation routes. The loss of electric power for a long period of time (more than 72 hours) can lead to failures of multiple critical systems including health care, water filtration, wastewater treatment, communications, transportation, and others. Impassable roadways from downed lines also inhibit emergency response and restoration of critical services, such as drinking water and health care, and is particularly problematic if fuel for backup generators cannot be delivered. The hazards most likely to impair surface transportation and disrupt electric service are severe winter storm (snow, ice, downed trees, utility pole, and wire failures) and earthquake, (downed trees, utility pole and wire failures).	Over the next five years, a) identify critical transportation corridors (including primary emergency, evacuation, and access routes) and electric distribution routes b) develop a list of key backbone transmission and distribution routes that serve critical customers and enable efficient restoration to the broader distribution system c) develop a long-term plan to underground, relocate, or "harden" key electric distribution lines along critical corridors (including feasibility assessment and prioritization) d) seek funds and opportunities to relocate power poles and power lines, or harden existing facilities, where feasible and appropriate, to reduce interruption to the transportation system and to reduce risk of outages from severe winter storms or earthquakes.	Leads: City of Eugene Public Works, City of Springfield Development and Public Works. Eugene Water and Electric Board, Springfield Utility Board, City of Eugene Public Works, Springfield Public Works, Lane Transit District.	Plan development: \$10-\$60k plus staff time. The cost of implementation will be estimated within the plan.	Develop plan by 2020
Multi-Hazard	Credentials	Some critical private-party service providers may not be allowed into emergency areas following a hazard event. Several private entities such as cellular phone service providers, cable service providers and others, may need access to emergency personnel or restricted locations in order to restore service and support emergency operations in the wake of a hazard event.	Explore a strategy to facilitate credentialling of non-traditional partners during an emergency hazard event	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partner: Lane County Sheriff's Office	Staff time	Lower priority. Implement by 2025.

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Multi-Hazard	Broadcast Radio communications	Broadcast radio is one of the least expensive and most resilient forms of mass communication available in our area. Significant federal investments have been made to harden local radio infrastructure. During an emergency, Broadcast Radio announcers rely on phone and internet to get reliable, timely information. If internet access and phone are not available, broadcast radio may continue to function but will not be able to access the important information in order to share it.	Review existing communication tools between Emergency Managers and radio stations. Develop a low-tech, direct communication line (such as HAM radio) between staff at Bicoastal Media (1120 KPNW, the radio station that has been heavily hardened with FEMA dollars) and Eugene/Springfield and Lane County Emergency Managers.	City of Eugene Office of Emergency Management. Partners: City of Springfield, 1120 KPNW, Lane County Sheriff's Office	\$5,000 - \$10,000 plus staff time	Implement by 2020.
Multi-Hazard	Continuity of operations plans [ACTION UNDERWAY]	Continuity of operations plans (COOP) and procedures are necessary to assue that essential public services are provided during disasters and to provide for continuity of government. Few City work groups or facilities have COOP plans in place.	A) Identify priority work groups and facilities in need of Continuity of Operations Plans. B) Develop Continuity of Operations Plans for the top priority work groups or facilities.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partner: Lane Preparedness Coaltion	Varies widely depending on scope	Begin developing COOP plans by 2015
Multi-Hazard	Staffing for critical systems	In the aftermath of a large earthquake or other large-scale hazard event, critical staff are likely to prioritize the health and wellbeing of their families and may leave work or not report to work. Response and recovery operations for crucial services like electric, water, sanitation, transportation, and others, will be severely hampered without adequate, appropriately trained staff available.	Review policies, procedures and plans from other public agencies with high seismic vulnerability. Research their strategies to ensure staff availability following a significant hazard event. Assess options to apply these strategies in Eugene/Springfield to ensure the availability of critical staff following a significant hazard event.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Community Organizations Active in Disasters (COAD) partners	Policy review: \$10,000	Policy Review by 2020
Multi-Hazard	Local food availability	Some 90% of food consumed locally is produced outside of the area. The vast majority of food consumed in Eugene/Springfield is brought in by truck and trailer on I-5 from distribution centers in San Francisco and Portland. Local grocery stores have a three-day supply of food at any one time. Severe flooding, severe winter storm or severe earthquake event can cause disruption to the resupply of local grocery stores.	Work with coalition of food suppliers to consider options to address these food supply concerns. Consider developing common messaging and marketing strategies to increase awareness of the need for individuals to store adequate emergency food and water supplies. There is some large-scale food storage in the area in the form of food storage businesses and food processors. If organized in advance, these stored food supplies could be distributed to residents in the aftermath of an emergency event. This could be developed into an "Emergency Food Distribution" plan.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Food storage businesses, food processors, Food For Lane County	Unknown	Investigate options by 2020

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Multi-Hazard	Water Source [ACTION UNDERWAY]	Homes and businesses in Eugene are served primarily by one publicly owned utility, EWEB. EWEB draws water from one single source on the McKenzie River and transports the water to Eugene through two large, co-located transmission pipelines. If a) the river water became contaminated or otherwise unusable, b) the filtration facility at Hayden Bridge were disrupted for any reason, or c) the transmission lines bringing water to Eugene were disrupted, water supply to Eugene residents and businesses (including water for fire suppression) could be compromised. Currently, on summer days EWEB has only enough emergency water storage to provide one or two days of water if something happens to the McKenzie River water source, EWEB's water treatment plant or transmission lines. Emergency interties with nearby utilities cannot provide enough water to meet Eugene's minimum water needs.	EWEB is actively seeking to develop alternate sources of drinking water EWEB's Strategic Plan and Water Capital Improvement Plan call for alternate sources to be developed over the next ten years. EWEB has been issued a conditional permit on the Willamette River and has obtained a groundwater use permit. EWEB is assessing interest of potential partners, and will develop at least one additional water supply by 2022. The Cities of Eugene and Springfield support EWEB's purchase of property, construction of infrastructure, and financing of this project.	. Lead: Eugene Water and Electric Board Water Operations	See EWEB for cost estimates	Develop at least one additional water supply by 2022
Multi-Hazard	Evacuation Plans	There is not currently a designated and widely known evacuation plan for mass evacuation needs, including dam safety. Designated routes, a notification system, and community awareness are all required.	Develop a community evacuation plan to address multiple hazards. Develop routes, notification system, and community awareness plan. Work with Lane County to coordinate routes and evacuation plans.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane County Sheriff's Office, ODOT, LTD, School Districts, auto fleet owners.	varies depending on scope	Develop community evacuation plan by 2020
Multi-Hazard	Fossil Fuel Sector Assessment	During the process of conducting a community-wide hazards and climate vulnerability assessment, there emerged a gap in information regarding private fossil fuel distributors. The community as a whole, and emergency response functions depend heavily on fossil fuels to function. In order to better plan for and reduce the risk of disruptions, Eugene and Springfield need to aquire better information about the supply of fossil fuels in the area.	Develop a list of critical information needs pertaining to the regional fuel transmission and distribution system. Develop a plan to acquire the necessary information to a) better understand the factors that could disrupt the regional fossil fuel supply and b) ensure essential emergency functions can be sustained.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane County, DOGAMI, and private fossil fuel providers including Williams Pipeline.	Unknown	Complete assessment by the end of 2017.
Multi-Hazard	Water Storage	The supply of drinking water could be interrupted by an earthquake, water supply contamination, long-term power outage, or other natural hazards. Most locations that could serve as sheltering facilities do not currently store potable water on site, creating a need for fresh water when these sites are employed as shelters.	Explore options to increase drinking water storage in public buildings including a) essential facilities and b) potential public sheltering facilities.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Eugene Water and Electric Board, Springfield Utitlity Board, Rainbow Water District.	Varies widely depending on scale.	2020

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Multi-Hazard	Vulnerable Populations [ACTION ONGOING]	Within section 3, Maps, The Eugene/Springfield NHMP contains valuable information regarding vulnerable populations. This information has not been directly compared with each hazard or mitigation action. Mitigation actions will be more effective and will enhance community social equity when mitigation actions are analyzed throught the lens of vulnerable populations.	Compare relevant NHMP hazard risk maps with the relevant vulnerable population maps developed for the Lane Livability Consortium. Prioritize map combinations to provide results most informative to the mitigation actions within the NHMP.	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane Council of Governments, Lane County	Staff time and cost varies widely depending on scope	Complete by end of 2015
Multi-Hazard	Lane Preparedness Coalition [ACTION ONGOING]	Emergency Management and hazard mitigation is less effective if done without effective collaboration and coordination.	Continue working with the Lane Preparedness Coalition to support public and private sector partnerships that result in successful hazard mitigation activities.	Lane Preparedness Coalition Members	Staff time	ongoing
Multi-Hazard	Community Education and Outreach [ACTION ONGOING]	Not all community members are prepared for hazard events	Continue to deliver existing education programs aimed at increasing awareness and mitigating the risk posed by hazards. At least twice each year a) provide information about the NHMP, b) describe progress toward implementation, and c) collect feedback on the NHMP from audiences. Accomplish these tasks through the Eugene Springfield CERT program training events, and the Lane Preparedness Coalition Full Coalition Meetings (that include general public).	Leads: City of Eugene Office of Emergency Management, City of Springfield Office of Emergency Management. Partners: Lane Council of Governments, Eugene Water and Electric Board, Springfield Utility Board, COAD members, and others.	Staff time	ongoing
Multi-Hazard	72 Hour Kits [ACTION ONGOING]	Eugene and Springfield are vulnerable to a number of natural hazards that could disrupt services such as utilities, transportation networks, and businesses. In some cases it may take days until vital services are restored. Preparing a 72 hour kit can help community members survive on their own without relying too heavily on emergency services.	Encourage community members and city employees to prepare and maintain 72 hour kits.	Leads: City of Eugene Office of Emergency Management, City of Eugene Public Works, City of Springfield Office of Emergency Management. Partners: Lane County, Lane Council of Governments, Eugene Water and Electric Board, Springfield Utility Board, and others.	Staff time	ongoing

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Wildfire	Springfield Wildfire Plan	The City of Springfield does not have a specific plan completed that addresses wildfire in the urban interface zones of Springfield.	Eugene/Springfield Fire/EMS continue development of a Springfield- specific wildfire hazard plan that is consistent with mutual and automatic response agreements for the region. This plan will include a) threshold events that require evacuation notification; b) fire management plans that include all county wide fire resources until they are exhausted; and c) a requirement for escalation to State conflagration response. The plan will include coordination with aerial suppression resources and hourly costs for suppression aircraft during initial stages of an incident.	Lead: Eugene/Springfield Fire/EMS. Partners: City of Springfield; Lane County Fire Defense Board	This project will utilize light duty fire crews that have a working knowledge of local Wild land Urban Interface (WUI) response including the deployment of resources throughout Lane County	2017
Wildfire	Wildfire risk and building codes	The south hills of Eugene and Springfield both contain heavy forest cover that results in a high fire risk, particularly at the end of a long, hot summer. Red flag warnings have occurred recently indicating high fire weather risk. Changes in climate patterns are projected to increase the risk of wildfire over time. Oregon State Building Code contains a provision for increased requirements for building construction materials and methods in areas of high fire risk. In order to be implemented locally, the area of high fire risk must be mapped and a regulatory map formally adopted by the local municipality. Currently, neither Eugene nor Springfield have created a formal map of high fire risk for the purpose of implementing this component of the Oregon Building Code.	 A) Over the next 5 years, utilize the Oregon Department of Forestry's Criteria (OAR Chapter 629, Division 44) to develop a "Fire hazard zone" map of the areas of high fire danger in the Eugene/Springfield area. B) Cities of Eugene and Springfield adopt the "fire hazard zoning" map; C) Implement increased building code requirements for construction/repair in the identified high fire risk areas. 	Leads: City of Eugene Office of Emergency Management and Building and Permit Services. Partners: City of Springfield Development and Public Works; Eugene/Springfield Fire/EMS; Oregon Department of Forestry; Lane Council of Governments; City of Eugene; City of Springfield.	unknown	2020
Winter Storm	Downed Power Lines	See Multi-Hazard Action: Downed Power Lines	See Multi-Hazard Action: Downed Power Lines	See Multi-Hazard Action: Downed Power Lines	See Multi-Hazard Action: Downed Power Lines	See Multi-Hazard Action: Downed Power Lines
Winter Storm	Tree Trimming [ACTION ONGOING]	High winds and ice during winter storms can topple trees and break limbs which in turn can result in power outages and disrupt telephone, computer, and TV and radio service.	Continue tree trimming efforts especially for transmission lines and trunk distribution lines.Both the Eugene Water and Electric Board (EWEB) and the Springfield Utility Board (SUB) trim trees on public property, as well as private property when necessary, to reduce the likelihood that tree limbs will cause future power outages. Continuing proper tree trimming for transmission lines and trunk distribution lines will help prevent power outages and damage to property from winter storms.	Leads: EWEB, SUB, BlachlyLane, EPUD, BPA	Varies	Ongoing

Downed Power	See Multi-Hazard	See Multi-Hazard	
	Action: Downed	Action: Downed	
	Power Lines	Power Lines	
vlane EPUD BPA	Varies	Ongoing	

Hazard	Action Name	Problem Statement	Mitigation Action	Implementation Leads and Partners	Estimated Cost	Timeline
Winter Storm	Property Owner Education [ACTION ONGOING]	High winds and ice during winter storms can topple trees and break limbs which in turn can result in power outages and disrupted telephone, internet, and cable service. While the Eugene Water and Electric Board (EWEB) and the Springfield Utility Board (SUB) manage vegetation near power lines in public areas, private property owners are responsible for informing the utility companies about vegetation on their property that must be removed.	Continue to educate private property owners about dangers of vegetation near distribution lines and service drops.	Leads: EWEB, SUB, EPUD, BPA, BlachlyLane	Low	Ongoing
Winter Storm	Backup Power	High winds and ice during winter storms can topple trees and break limbs which in turn can result in power outages, disrupting telephone, computer, and TV and radio service. Encouraging critical facilities to have backup power and/or emergency operations plans to deal with power outages will allow for continuous service.	Encourage critical facilities in the Eugene/Springfield Metro Area to have backup power and emergency operations plans to deal with power outages.	Leads: City of Eugene Office of Emergency Management, City of Springfield Development and Public Works. Partners: EWEB, SUB	Varies	Ongoing
Winter Storm	Undergrounding Utilities In New Developments [ACTION ONGOING]	High winds and ice during winter storms can topple trees and break limbs which in turn can result in power outages and disrupt telephone, computer, and TV and radio service.	Continue policy requiring new developments to locate power lines underground.	Leads: City of Eugene Publice Works, City of Springifeld Development and Public Works. Partners: EWEB, SUB	Varies	Ongoing
Volcano	Ash Fall	Ash fall is considered a low probability event that occurs with plenty of warning in the Cascades. Actions have been taken to develop public emergency notification procedures. Water treatment capacity is deemed adequate to deal with ashfall events. Therefore, the cities of Eugene/Springfield do not have any priority actions in this category.	None at this time	n/a	n/a	n/a