

**RESOLUTION NO. 22-01**

**A RESOLUTION OF THE SCAPPOOSE CITY COUNCIL ADOPTING THE UPDATED  
COLUMBIA COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN  
FOR THE CITY OF SCAPPOOSE**

**WHEREAS**, the Federal Emergency Management Agency (FEMA) requires municipalities to adopt Hazard Mitigation Plans in order to be eligible for FEMA funding in the event of future disasters; and

**WHEREAS**, the City of Scappoose, Columbia County, and other county municipalities have since updated the Hazard Mitigation Plan; and

**WHEREAS**, FEMA has approved the final draft of the Columbia County Multi-Jurisdictional Hazard Mitigation Plan; and

**WHEREAS**, the Columbia County Multi-Jurisdictional Hazard Mitigation Plan for the City of Scappoose, and attached hereto as Exhibit A, has been reviewed by residents, business owners, and federal, state, and local agencies and has been revised to reflect their concerns.

**NOW, THEREFORE, THE CITY OF SCAPPOOSE COUNCIL RESOLVES AS FOLLOWS:**

Section 1: The Columbia County Multi-Jurisdictional Hazard Mitigation Plan for the City of Scappoose, and attached hereto as Exhibit A, is hereby adopted as an official plan of the City of Scappoose.

**PASSED AND ADOPTED** by the City Council of Scappoose and signed by me, and the City Recorder in authentication of its passage this 3<sup>rd</sup> day of January, 2022.

**CITY OF SCAPPOOSE, OREGON**

  
\_\_\_\_\_  
Scott Burge, Mayor

Attest:

  
\_\_\_\_\_  
Susan M. Reeves, MMC, City Recorder

City of Scappoose  
Hazard Mitigation Plan  
Annex

2020 Update  
Columbia County  
Multi-Jurisdiction Hazard Mitigation Plan

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**Introduction**

This Annex contains specific City of Scappoose information to support the Columbia County 2020 Multi-Jurisdictional Hazard Mitigation Plan. This section further supports the County’s planning process by summarizing the review and incorporation of existing plans, studies, and reports used to develop this MHMP. This annex is an addition to Columbia County’s Hazard Mitigation Plan and shares attributes of that plan.

**Planning Process and Capability Assessment**

The following section includes a detailed capability assessment that describes the resources available to support this plan. The goal of this assessment is not to identify all capabilities the organization may have, but only those that are currently used or could be used to support mitigation efforts. Capabilities are arranged in tables by type and fall under the explicit authority of the jurisdiction/district.

<b>DMA 2000 Requirements: Planning Process</b>	
<b>Planning Requirements</b>	
§201.6(b)	An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:
§201.6(b)(1)	(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
§201.6(b)(2)	(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
§201.6(b)(3)	(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
§201.6(c)(1)	[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.
§201.6(c)(4)(i)	[The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
§201.6(c)(4)(iii)	[The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.
<b>Planning Elements</b>	
<b>A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? 44 CFR 201.6(c)(1)</b>	

**A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? 44 CFR 201.6(b)(2)**

**A3. Does the Plan document how the public was involved in the planning process during the drafting stage? 44 CFR 201.6(b)(1) and 201.6(c)(1)**

**A4. Does the Plan document the review and incorporation of existing plans, studies, reports, and technical information? 44 CFR 201.6(b)(3)**

**A5. Is there discussion on how the communities will continue public participation in the plan maintenance process? 44 CFR 201.6(c)(4)(iii)**

**A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? 44 CFR 201.6(c)(4)(i)**

### Plan Development Methodology

The updating and authoring of this annex included six phases. These phases do not describe an exactly linear process and many of them were worked upon simultaneously and overlapped others. Each phase produced results that are evident in the final drafts of the Basic Plan and the County, Jurisdictional, and Agency Annexes.

Phase 1 – County Outreach: Under this phase, communication was received by Columbia County Jurisdictions and Districts from the County Emergency Management Department regarding the need for and the scope of the upcoming HMP plan update project. The County update coordinator provided planning information, documentation, an update plan, schedule, and template. Participation in producing this annex was encouraged, and the benefits of Hazard Mitigation Planning were explained.

Phase 2 – Assemble a team: This phase required the jurisdictions and districts to build a planning team, which long with input and direction from the HSEMC and the County Update Coordinator and seeking active involvement from the public would work to produce the required elements of the plan.

Phase 3 - Assess risk: Risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from natural hazards. This process worked in coordination with the HSEMC and the County's broader Hazard profile development, to provide information specific to this annex. During this process, the Update Team worked on the following tasks:

- Identify new hazards and update hazard profiles.
- Determine the impact of hazards on physical, social, and economic assets.
- Estimate the cost of damage or costs that can be avoided through mitigation.

Phase 4 – Determine public involvement and provide opportunities: under this phase, a public involvement strategy was developed that utilized public events outreach events, public questionnaires, media opportunities and public meetings seeking public input. The strategy focused on three primary objectives:

- Assess the public's perception of Natural Hazard risk in the County.
- Assess the public's perception of vulnerability to those risks.
- Identify mitigation strategies that will be supported by the public.

Phase 5 - Identify goals, objectives, and action: Under this phase, the goals and objectives were reviewed and updated, as well as a range of potential mitigation actions for each identified natural hazard identified. A process was created under this phase for prioritizing, implementing, and administering action items based in part on a review of project benefits versus project costs.

Phase 6 - Implement and adopt the plan: Once pre-adoption approval has been granted by the County, the Oregon Office of Emergency Management and FEMA, the final adoption phase begins. In this phase the annex will be presented to our governing body for promulgation and adoption.

### **Plan Integration**

Our jurisdiction will be responsible for ensuring that plan goals and objectives are considered and incorporated into applicable revisions of the adopted comprehensive plan and any new planning projects that we undertake. The plan may be adopted in its entirety, as part of our comprehensive development plan. This would enable the mitigation component of the comprehensive plan to be consistently revisited and reviewed. In addition, the MJHMP should also take into account any changes in the comprehensive plan and incorporate the information accordingly during its next update. This will require consistent communication to the HSEMC. This jurisdiction will seek ways to incorporate mitigation strategies into our comprehensive plans and capital facilities plans, emergency management plans, and budget documents. Lastly this participant will identify other planning documents or mechanisms to incorporate and focus on their hazard mitigation strategies (ex. emergency management plans, master plans).

### **Homeland Security and Emergency Management Commission (HSEMC) and Regional cooperation**

The Homeland Security and Emergency Management Commission (HSEMC) is a body comprised of local Jurisdictions, Districts and Agencies, which have formed a partnership with Columbia County to produce a collaborative, mutually supportive emergency management effort. In the context of Hazard Mitigation planning the HSEMC acts as a permanent, whole community and public meeting space for Mitigation Plan reviews, additions and new ideas and considerations. In addition, the commission works extremely closely with the county Emergency Management Department (the only permanent EM program in the county), to offer and partake in regional planning efforts with agencies, jurisdictions, and other similar commissions in the Greater Metropolitan urban area. Columbia County is identified as one of the five Metros counties for Urban Area Securities Initiative grant applications and is a member of the Regional Disaster Preparedness Organization. Either directly, or through the county EM Department or the

HSEMC, Columbia County jurisdictions and districts have significant opportunity for involvement, and collaboration with a wide array of similar organizations on the topic of Hazard Mitigation.

## Steering Committee Participants

The City of Scappoose is dedicated to mitigating potential natural hazards to its population and infrastructure. To fulfill that goal, a Hazard Mitigation Plan Development Steering Committee was seated; dedicated to identifying hazard threats and developing actions to mitigate damage and life losses from those threats.

Table 1 records the Steering Committee’s participant list.

<b>Name</b>	<b>Agency/Department/Affiliation</b>
Susan Reeves	City Administrator/Recorder - Scappoose
Kelly Niles	Oregon Department of Forestry
Michael Greisen	Scappoose Fire and Rescue
Laurie Oliver	City Planner - Scappoose
Dave Sukau	Public Works Director - Scappoose
Norman Miller	Chief of Police - Scappoose

## Public Participation

As defined by FEMA, Whole Community Planning is; a means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen their assets, capacities, and interests. By doing so, a more effective path to societal security and resilience is built.

Public participation during the drafting of this update was encouraged in several ways. The first is through the HSEMC described earlier. Each Bi-Monthly meeting of the commission is open to the public, and during each meeting, public commentary is encouraged. Appeals to the public to present information, and feedback to the HSEMC for consideration in the Hazard Mitigation Plan was ongoing throughout the two years of the planning process and continues as HSEMC prepares to enter plan maintenance mode after this update cycle.

In addition, the community was encouraged to provide feedback during the drafting office by filling out surveys intended to identify risks and specific hazards of greatest interest. These surveys were made available at every outreach event, public meeting, and preparedness effort in each jurisdiction and district in the county for the last several

years. Upon completion the surveys were gathered, and result incorporated into the planning process of each jurisdiction. Like the opportunity for public testimony the survey program is an ongoing effort intended to maintain a public awareness of Hazard Mitigation with the public.

This Hazard Mitigation Plan was conducted with opportunities for the public to participate to try and meet the goals of whole community planning. Table 2 highlights these efforts.



<b>Table 2. Scappoose Public Involvement Mechanisms</b>	
<b>Date</b>	<b>Description</b>
<b>2014</b>	
7/19/2014	Columbia Emergency Preparedness Association EXPO – Large emergency management event covering all topics (preparedness, fire, law, mitigation, response).
11/11/2014	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
<b>2015</b>	
5/12/2015	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
11/10/2015	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
<b>2016</b>	
4/2/2016	KOHI Radio Preparedness Talk – Radio talk show for Columbia County, topics “specifically included preparing for the next flood event”.
5/10/2016	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
5/24/2016	Neighborhood Association Meeting Talk – Presentation to local HOA.
6/4/2016	Ford Family Foundation Preparedness Fair - County wide event to promote preparedness and mitigation in cooperation with the Ford Family Foundation. All cities participated.
7/23/2016	Columbia Emergency Preparedness Association EXPO – Large emergency management event covering all topics (preparedness, fire, law, mitigation, response).
9/22/2016	Columbia County Soil and Water Conservation District – Event hosted by SWCD on preparedness and flood mitigation efforts.
11/15/2016	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
<b>2017</b>	
2/16/2017	Kiwanis Presentation – Preparedness Presentation on CSZ risk.

Table 2. Scappoose Public Involvement Mechanisms	
Date	Description
5/9/2017	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
11/14/2017	HSEMC– Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted.
11/29/2017	Unprepared showing – St. Helens - presentation of OPB documentary regarding CSZ earthquake and tsunami.
<b>2018</b>	
1/19/2018	Preparedness to Vets Group – Presentation to Veterans regarding personal preparedness and flood mitigation.
5/8/2018	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual NHMP meeting, plan review was conducted and plans for plan update discussed.
10/14/18	South County Chamber - Preparedness Presentation on CSZ risk.
11/13/2018	HSEMC – Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual County-wide Hazard Mitigation meeting. Work Session on Hazard Mitigation Plan update conducted.
11/27/2018	Pints and Preparedness – various topics including Hazard mitigation, and individual preparedness.
<b>2019</b>	
1/22/2019	Pints and Preparedness – various topics including Hazard mitigation, and individual preparedness.
3/26/2019	Drainage Districts Mitigation – Public meetings with presentations regarding mitigation planning.
3/26/2019	Pints and Preparedness – various topics including Hazard mitigation, and individual preparedness.
5/7/2019	HSEMC– Columbia County’s Homeland Security and Emergency Management Commission is recognized by the Board of County Commissioners as the cornerstones of a whole community approach to emergency management planning. All jurisdictions are members of the commission. Semi Annual County-wide Hazard Mitigation meeting. Work Session on Hazard Mitigation Plan update conducted.
4/16/2019	Drainage Districts Mitigation – Public meetings with presentations regarding mitigation planning.
4/23/2019	Pints and Preparedness – various topics including Hazard mitigation, and individual preparedness.

Date	Description
9/7/2019	Preparedness for Scouts – Presentation on preparedness for all hazards.

## Capability Assessment

Table 3, 4, and 5 contain the City of Scappoose resources used to support planning activities, including the reports and studies reviewed as part of the update process.

Regulatory Tool	Name	Effect on Hazard Mitigation
Plans	City of Scappoose Comprehensive Plan, updated 2018	Provides overall guidance for a community's land use, economic development, and resource management.
	Transportation System Plan 2016	Provides overall guidance for the community's transportation system development and resource management. 20 year planning horizon.
	City of Scappoose Water Curtailment Plan	Provides overall guidance to meet minimum supply needs encountered during water shortages.
	Columbia County Comprehensive Emergency Management Plan	Provides overall guidance for a community's disaster emergency management.
	City of Scappoose Emergency Operations Plan	Identifies emergency planning, policies, procedures, and response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies.
	Parks Master Plan 2017	Provides overall guidance for the community's park system, a 20-year planning/growth process.
	Water and Wastewater Master Plans	Provides overall guidance for the community's water and wastewater use and management and future development requirements. 20 year planning horizon.
	Storm water Master Plan	Provides overall guidance for the community's storm water management and future development requirements. 20-year planning horizon.
Programs	National Flood Insurance Program (NFIP)	Makes affordable flood insurance available to homeowners, business owners, and renters in participating communities. In exchange, those communities must adopt and enforce minimum floodplain management regulations to reduce the risk of damage from future floods.
Policies (Municipal Codes)	City Charter	To provide for the government of Scappoose, Columbia County, Oregon; and to repeal all charter provisions of the city enacted prior to the time that this charter takes effect except as hereinafter specifically retained.

**Table 3. City of Scappoose Legal and Regulatory Resources Available for Hazard Mitigation**

Regulatory Tool	Name	Effect on Hazard Mitigation
	Current State Building code	Seismic standards-updates regularly
	City of Scappoose Municipal Code	Provides the principal means for the implementation of the Scappoose Comprehensive Plan. The provisions of this Ordinance shall be deemed the minimum requirements for the preservation of the public safety, health, convenience, comfort, prosperity, and general welfare of the people of Scappoose, Oregon. Contains Floodplain, steep slope, cut and fill regulations. All development regulated by the code.
	2019 City of Scappoose Water Quality Report	An annual report of the outcome of our many water quality tests. This report explains water supply capability.
	Flood Hazard Overlay section of the City of Scappoose Development Code 01/16/18, as amended	Provides the City's Floodplain Management Program

Table 4. City of Scappoose Administrative and Technical Resources for Hazard Mitigation	
Staff/Personnel Resources	Department/Division Position
Planner(s) or engineer(s) with knowledge of land development and land management practices	Planner - Laurie Oliver, CFM Engineer - Chris Negelspach, P.E.
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Public Works Director - Dave Sukau Engineer - Chris Negelspach, P.E. Building Official - Don VanDomelen
Planner(s) or engineer(s) with an understanding of manmade or natural hazards	Planner - Laurie Oliver, CFM Engineer - Chris Negelspach, P.E. Building Official - Don VanDomelen
Floodplain manager(s)	Laurie Oliver and Chris Negelspach
Personnel skilled in GIS and/or HAZUS-MH	Geo-Comm – City’s GIS consultant
Director of Emergency Services	City Administrator (will defer to Columbia County in the event of major disaster)
Finance (grant writers, purchasing)	City Manager – Michael Sykes, Jill Herr - Finance Administrator
Public Information Officers	City Manager

Table 5. City of Scappoose Financial Resources for Hazard Mitigation	
Financial Resources	Effect on Hazard Mitigation
General funds	Yes
Authority to levy taxes for specific purposes	Yes, with voter approval
Incur debt through general obligation bonds	Yes, with voter approval
Incur debt through special tax and revenue bonds	Yes, with voter approval
Incur debt through private activity bonds	No
Hazard Mitigation Grant Program (HMGP)	FEMA funding which is available to local communities after a Presidentially-declared disaster. It can be used to fund both pre- and post-disaster mitigation plans and projects.
Pre-Disaster Mitigation (PDM) grant program	FEMA funding which is available on an annual basis. This grant can only be used to fund pre-disaster mitigation plans and projects only.
Flood Mitigation Assistance (FMA) grant program	FEMA funding which is available on an annual basis. This grant can be used to mitigate repetitively flooded structures and infrastructure to protect repetitive flood structures.
United States Fire Administration (USFA) Grants	The purpose of these grants is to assist state, regional, national or local organizations to address fire prevention and safety. The primary goal is to reach high-risk target groups including children, seniors and firefighters.

**Table 5. City of Scappoose Financial Resources for Hazard Mitigation**

Financial Resources	Effect on Hazard Mitigation
Fire Mitigation Fees	Used to finance future fire protection facilities' construction and other fire capital expenditures to protect new development. The City Council or Fire District may charge fire mitigation fees to ensure new development pays their fair share of constructing these improvements.

**Hazard Identification and Vulnerability Assessment**

<b>DMA 2000 Requirements: Hazard Identification and Risk Assessment</b>	
<b>Planning Requirements</b>	
§201.6(c)(2)(i)	The risk assessment shall include a) description of the type, location and extent of all-natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
§201.6(c)(2)(ii)	The risk assessment shall include a) description of the jurisdiction’s vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods. The plan should describe vulnerability in terms of:
§201.6(c)(2)(ii)(A)	(A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;
§201.6(c)(2)(ii)(B)	(B) An estimate of the potential dollar losses to vulnerable structures identified in ... this section and a description of the methodology used to prepare the estimate.
§201.6(c)(2)(ii)(C)	(C) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
§201.6(c)(2)(iii)	For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction’s risks where they vary from the risks facing the entire planning area.
<b>Planning Elements</b>	
<b>B1. Does the Plan include a description of the type, location, and extent of all-natural hazards that can affect each jurisdiction? 44 CFR 201.6(c)(2)(i) and 44 CFR201.6(c)(2)(iii)</b>	
<b>B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? 44 CFR 201.6(c)(2)(i)</b>	
<b>B3. Is there a description of each identified hazard’s impact on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? 44 CFR 201.6(c)(2)(ii)</b>	
<b>B4. Does the Plan address NFIP insured structures within each jurisdiction that have been repetitively damaged by floods? 44 CFR 201.6(c)(2)(ii)</b>	

**Hazard Identification**

The Steering Committee determined that the following hazards could potentially threaten the community. Table 6 establishes the hazard profile against which this plan is designed.

<b>Table 6. Hazard Profile</b>	
<b>Natural Hazards</b>	
Flood	X
Winter Storm	X
Landslide	X
Fire (Wildland/Urban)	X
Earthquake	X
Volcano	X
Wind	X
Erosion	X
ENSO (El Niño / La Niña)	
Expansive Soils	
Drought	X

**Specific Impacts of Identified Hazards**

The following section provides specific details of the vulnerabilities and impacts from natural hazards for the City of Scappoose in Table 6.

The Basic Plan of this Multi-Jurisdiction Hazard Mitigation Plan contains the full narrative Hazard Profile for the entire county, including full details for this annex. This section is designed to provide additional notes and concerns regarding hazards that can impact this jurisdiction.

**Flood**

FEMA FIRMs were used to outline the 100-year and 500-year floodplains for the City of Scappoose. The 100-year floodplain delineates an area of high risk, while the 500-year floodplain delineates an area of moderate risk.

There are 873 residential structures (worth \$196M), six non-residential structures (value unknown), one emergency response facility (worth \$2.4M), three community facilities (worth \$82.6K), six bridges (worth \$11.1M) and two utilities (worth \$16.1M) within the boundaries of the 100-year floodplain.

There are 1,328 residential structures (worth \$299M), seven non-residential structures (value unknown), one emergency response facility (worth \$2.4M) four community facilities (value unknown), five bridges (worth \$9M) and three utilities (worth \$20.6M) within the 500-year floodplain.

**Winter Storm**

The natural hazards resulting from winter storms, such as ice, cold, wind and floods, are often widespread. A single event is capable of impacting all people, critical facilities and infrastructure



within the City of Scappoose, and therefore the entire population (7,200 people), including 2,512 residential structures (worth \$566.8M), 14 non-residential structures (value unknown), one government facility (worth \$1.2M), one emergency response facility (worth \$2.4M), seven educational facilities (worth \$63.3M), 16 community facilities (value \$2.6M), six bridges (worth \$11.3M), one highway (value unknown), one railroad (value unknown), two transportation facilities (value unknown), and five utilities (worth \$25.6M) are located in the winter storm area.

### Landslide

The potential impacts from landslides can be widespread. Potential debris flows and landslides can impact transportation and rail routes, utility systems, and water and waste treatment infrastructure along with public, private, and business structures located adjacent to steep slopes, along riverine embankments, or within alluvial fans or natural drainages. Response and recovery efforts will likely vary from minor cleanup to more extensive utility system rebuilding. Utility disruptions are usually local and terrain dependent. Damages may require reestablishing electrical, communication, and gas pipeline connections occurring from specific breakage points. Initial debris clearing from emergency routes and high traffic areas may be required. Water and waste water utilities may need treatment to quickly improve water quality by reducing excessive water turbidity and reestablishing waste disposal capability.

USGS elevation datasets were used to determine the landslide hazard areas within the City of Scappoose. Risk was assigned based on slope angle. A slope angle less than 14 degrees was assigned a low risk, a slope angle between 14 and 32 degrees was assigned a medium risk, and a slope angle greater than 32 degrees was assigned a high risk.

There are 705 residential structures (worth \$158.6M), three non-residential structures (value unknown), two educational facilities (worth \$8.6M), three community facilities (worth \$226K), one bridge (worth \$1.5M) and two utilities (worth \$4.9M) in the medium landslide risk area. There are 344 residential structures (worth \$54.9M), three non-residential structures (value unknown), and one community facility (worth \$82K) in the high landslide risk area.

### Wildland Fires

Wildland fire hazard areas were identified using a model incorporating slope, aspect, and fuel load. South-facing, steep, and heavily vegetated areas were assigned the highest fuel values while areas with little slope and natural vegetation were assigned the lowest fuel values. Risk levels of moderate, high, very high, and extreme were assigned to the entire region based on the results of this modeling.

There are 2,209 residential structures (worth \$351.6M), 14 non-residential structures (value unknown), one government facility (worth \$1.2M), one emergency response facility (worth \$2.4M), seven educational facilities (worth \$63.3M), 16 community facilities (value \$2.6M), six

bridges (worth \$6M), one highway (value unknown), one railroad (value unknown), two transportation facilities (value unknown), and five utilities (worth \$25.6M) located in moderate fire risk areas.

There are 882 residential structures (worth \$140.8M), eight non-residential structures (value unknown), four community facilities (value \$288K), one transportation facility (value unknown), two bridges (worth \$2.9M), and three utilities (value \$4.9M) located in the high fire risk areas.

There are 433 residential structures (worth \$69.2M), three non-residential structures (value unknown), one community facility (worth \$82K), and two utilities (worth \$4.9M) located in very high fire risk areas. There were 116 residential structures (worth \$18.5M) and no critical facilities identified in the extreme fire risk area.

### Earthquake

Based on PGA shake maps produced by the USGS, the western portion of Columbia County is likely to experience higher levels of shaking than the eastern portion, as a result of its proximity to the Cascadia Subduction Zone. Ground movement in both areas, however, is likely to cause damage to weak, unreinforced masonry buildings, and to induce small landslides along unstable slopes. As well as landslide, earthquakes can trigger other hazards such as dam failure and disruption of transportation and utility systems.

The eastern portion of Columbia County is likely to experience strong shaking should a subduction zone earthquake occur (9-20 percent of the acceleration of gravity). In contrast, the far western portion of the county is likely to experience very strong shaking (20-25 percent). This rating represents the peak acceleration of the ground caused by the earthquake.

Due to City of Scappoose's proximity to the eastern portion of the county, all people, critical facilities and infrastructure within the City of Scappoose, and therefore the entire population (7,200 people), including 2,512 residential structures (worth \$566.8M), 14 non-residential structures (value unknown), one government facility (worth \$1.2M), one emergency response facility (worth \$2.4M), seven educational facilities (worth \$63.3M), 16 community facilities (value \$2.6M), six bridges (worth \$11.1M), one highway (value unknown), one railroad (value unknown), two transportation facilities (value unknown), and five utilities (worth \$25.6M) are located in the strong shaking (9-20 percent) area.

### Volcano

A volcanic eruption would have a minor impact on The City of Scappoose due to the proximity to volcanoes within the Cascade region. The major resources of concern include air quality and waterway sedimentation. During previous eruptions, ash fall has drifted to the east of the volcanoes. (State Interagency Hazard Mitigation Team 2006)

The City of Scappoose will likely only experience damage from volcanic eruption columns and clouds which contain volcanic gases, minerals, and rock. The columns and clouds form rapidly and extend several miles above an eruption. Solid particles within the clouds present a serious aviation threat, can distribute acid rain (sulfur dioxide gas and water), can create risk of suffocation (carbon dioxide is heavier than air and collects in valleys and depressions threatening human and animals), and pose a toxic threat from fluorine which clings to ash particles potentially poisoning grazing livestock and contaminating domestic water supplies.

Buildings streets and roads throughout the city may require minor cleanup with negligible impacts. Temporary utility interruptions are likely, and minor cleanup may be required for electrical and other utility services. Water treatment facilities may require additional attention to address high turbidity water. River traffic along the Columbia River could be disrupted due to sedimentation from a large eruption from Mt. St. Helens or Hood and dredging to restore channel depths may be necessary. Injuries associated with respiratory problems may result. (Goettel 2005)

Due to the nature of the hazard, it is impossible to predict the location or extent of future events with any probability, although it can be assumed that all critical facilities and infrastructure within the City of Scappoose are at risk including the entire population (7,200 people), including 2,512 residential structures (worth \$566.8M), 14 non-residential structures (value unknown), one government facility (worth \$1.2M), one emergency response facility (worth \$2.4M), seven educational facilities (worth \$63.3M), 16 community facilities (value \$2.6M), six bridges (worth \$11.1M), one highway (value unknown), one railroad (value unknown), and five utilities (worth \$25.6M).

### Wind

Many buildings, utilities and transportation systems in open areas, natural grasslands, or agricultural lands are especially vulnerable to wind damage. Impacts associated with wind can include damage to power lines, trees, and structures, and can also cause temporary disruptions of power. Additionally, high winds can cause significant damage to forestlands.

All areas within the City of Scappoose are equally at risk of a windstorm event including all people, critical facilities and infrastructure, and therefore the entire population (7,200 people), including 2,512 residential structures (worth \$566.8M), 14 non-residential structures (value unknown), one government facility (worth \$1.2M), one emergency response facility (worth \$2.4M), seven educational facilities (worth \$63.3M), 16 community facilities (value \$2.6M), six bridges (worth \$11.1M), one highway (value unknown), one railroad (value unknown), two transportation facilities (value unknown), and five utilities (worth \$25.6M).

## Erosion

Riverine and stream erosion rarely causes death or injury. However, erosion causes significant destruction of property, development, and infrastructure. Erosion hazard data is not readily available; however, descriptions of several localized areas were identified during the development of this document and are identified only by location on a map referencing the river or stream reach described. Critical facilities that may be at risk of erosion were identified using a 300 foot-buffer in the areas identified as having historic erosion impacts to conservatively account for building footprints.

The City of Scappoose has 49 residential structures (worth \$7.8M), one educational facility (worth \$3.8M), and six bridges (worth \$11.1M) within potential erosion hazard areas. There is also one pump station (worth \$1.3M) and sewer and water lines (values unknown) in close proximity (within 30 feet) of Scappoose Creek which possess an erosion threat to the infrastructure.

## Drought

State-wide droughts have historically occurred in Oregon, and as it is a region-wide phenomenon, all residents are equally at risk. Structural damage from drought is not expected; rather the risks are present to humans and resources. Agriculture, fishing, and timber have historically been impacted, as well as local and regional economies.

## Dam Failure

US Army Corps of Engineers inundation data for the Columbia River and the PacifiCorp inundation data for the Lewis River in the State of Washington were used to determine the impacts from dam failure upriver from the City of Scappoose. There are 1,094 residential structures (worth \$246.8M), six non-residential structures (value unknown), one government facility (value \$1.2M), one emergency response facility (value \$2.4M), seven educational facilities (worth \$63.3M), seven community facilities (value \$1.8M), two bridges (worth \$3.8M), two transportation facilities (value unknown), and four utilities (value \$20.8M) located in the inundation area.

## Values at Risk

### Population Analysis

Population data listed in Table 7 were obtained from the 2010 U.S. Census and Portland State University. It comprises census block level data and estimates from university conducted community research.

Table 7. Population			
2000 Census	2010 Census	% Change	2018 Estimate
4,976	6,592	33%	7,200

## Asset Inventory

The Asset Inventory describes the physical values; the residential building stock, public facilities, and infrastructure within each community that may be affected by hazard events and includes population, residential and nonresidential buildings, critical facilities, and infrastructure. These values are described in Tables 8 and 9 and portray the City’s critical infrastructure numbers and values, and their potential vulnerability by hazard type.

**City of Scappoose** seeks to protect its population by supporting Columbia County and Oregon State initiatives, ordinances, building codes, and development regulations. One of the most important initiatives is to prohibit or not allow future development of buildings, infrastructure and critical facilities in identified high hazard areas. Any essential infrastructure component will undergo stringent review to ensure potential hazard risk will be mitigated.

Table 8. Residential Buildings	
Total Building Count	Total Value of Buildings (\$)
2,512	\$566,850,384

Table 9. Critical Facilities and Infrastructure			
Facility Type	Name/ Number	Address	Value <sup>1</sup>
Government	Scappoose City Hall (includes Police Department and Municipal Court)	33568 E Columbia Ave	\$1,571,038
	Public Works Shop	34485 E Columbia Ave	\$450,000
Emergency Response	City of Scappoose Police Department	See City Hall	See City Hall
	Scappoose Fire Station - Scappoose	52751 Columbia River Hwy	\$2,660,600
Educational	Peterson Elementary	52050 SE 3 <sup>rd</sup> Street	\$16,109,880
	Grant Watts Elementary	52000 SE 3rd Place	\$5,833,229
	Scappoose Middle School	52265 Columbia River Hwy	\$8,518,634
	Scappoose High School	33700 SE High School Way	\$28,083,935

Table 9. Critical Facilities and Infrastructure			
Facility Type	Name / Number	Address	Value <sup>1</sup>
Community	OHSU Family Medicine Clinic	51377 SW Old Portland Road	Unknown
	Scappoose Public Library	52469 SE 2nd St	\$1,635,580
	Watts House Museum	52432 SE 1st St	Unknown
	Heritage Park	SE 2 <sup>nd</sup> Street	\$1,200,000
	Veterans Park	52590 Captain Roger Kucera Way	\$1,700,000
	Miller Park	52451 Miller Road	\$700,000
	Creek View Park	51925 SW Creek View Place	\$350,000
	Chief Comcomly Park	Seely Lane	\$1,300,000
	Scappoose Four Square Church	33404 SW JP West Rd	Unknown
	Church of Jesus Christ	53987 Columbia River Highway	Unknown
	Grace Lutheran Church	51737 South Columbia River Hwy	Unknown
	St Wenceslause Catholic Church	51555 Old Portland Rd	Unknown
	Scappoose Senior Center	33342 SW Meadow Dr	Unknown
	Creekside Baptist Church	51681 SW Old Portland Rd	Unknown
	State and Federal Highways	US 30	1.5 miles
Railroads	Portland Western (short line with switching facility and staging line)	1.5 miles	Unknown
Transportation Facilities	Scappoose Airport (non-towered) with Heliport	Airport Road	Unknown
Bridges	Bridge #1	Hwy 30	\$2,756,000
	Bridge #2 (County #7)	EJ Smith Rd	\$1,484,000
	Bridge #3 (County #1)	EM Watts Street	\$1,696,000
	Bridge #4 (County #6)	JP West Road	\$1,696,000
	Bridge #5 (County #10)	Scappoose Vernonia Hwy	\$2,014,000
	Bridge #6 (County #121)	Dutch Canyon Road	\$1,484,000
Utilities	Wireless company/tower at high school	High School Way	Unknown
	Qwest Telephone		Unknown
	Pump House		\$93,730
	Keys Road Water Treatment Plant		\$6,360,000

Facility Type	Name / Number	Address	Value <sup>1</sup>
	Miller Road Water Treatment Plant		\$4,770,000
	Wastewater Treatment Plant		\$16,000,000
	Dutch Canyon Well		\$300,000
	Miller Road Well		\$300,000
	Reservoirs (3-storage tanks; 2M, 1M and 350K gallons)		\$4,770,000
	Reservoirs (2 storage tanks; 350K and 300K gallon capacity)		\$1,600,000
	EJ Smith Waste lift station		\$1,272,000
	Hwy 30, Keys Landing, Seven Oaks and Spring Lake Lift Stations		\$1,700,000
	Columbia River PUD Power Plant/Sub Stations		Unknown
	Dams	Gourley Creek Dam	
South Fork Dam			\$1,596,000
Lacey Creek Dam			\$850,000

<sup>1</sup> Estimated and/or insured structural value for critical facilities and estimated values for critical infrastructure.

National Flood Insurance Policy

National Flood Insurance Program data were obtained from the State Department of Land Conservation and Development. This data is significant for the vulnerability assessment as it identifies the impact of flooding, one of the most often repeated natural hazards for the county. This data is displayed in Table 10 and 10a.

Jurisdiction	Effective FIRM and FIS	Initial FIRM	Total Policies	Pre FIRM Policies	Policies by Building Type				Minus Rated A Zone	Minus Rated V Zone
					Single Family	2 to 4 Family	Other Residential	Non-Residential		
Scappoose	10/1/18	8/16/88	117	46	110	2	5	0	1	0

Source: FEMA Community Information System 02/21/2019

Jurisdiction	Insurance in Force	Total Paid Claims	Pre-Firm Claims Paid	Substantial Damage Claims	Total Paid Amount	Repetitive Loss Structures	Severe Repetitive Loss Structures	CRS Class Rating	Last Community Assistance Visit
Scappoose	\$29,773,400	17	16	0	\$113,635	1	0	8	2/19/2015

Source: FEMA Community Information System 02/21/2019

### Vulnerability Analysis

A vulnerability analysis predicts the extent of exposure, and the impacts that may result from a hazard event of a given intensity in each area. The analysis provides quantitative data that may be used to identify and prioritize potential mitigation measures by allowing communities to focus attention on areas with the greatest risk of damage. A vulnerability analysis is divided into five steps including asset inventory, methodology, data limitations, exposure analysis for current assets, and areas of future development.

The following is derived from the best available data for facility locations and values. In many cases, values were unavailable, and therefore the totals listed below should be considered incomplete and likely less than the actual costs associated with the respective hazards.

The vulnerability analysis development process is thoroughly discussed in the Columbia County Basic Plan, Section 6, which generated the following Hazard Exposure Analysis Overviews in Tables 11, 12, and 13.



**Table 11. City of Scappoose Potential Hazard Exposure Analysis Overview**  
*Population and Buildings*

			Population	Buildings			
				Residential		Non-Residential	
Hazard Type	Hazard Area	Methodology	Number	Number	Value (\$) <sup>i</sup>	Number	Value (\$)
Flood	Moderate	500-year floodplain	--	1,328	299,000,000	7	unknown
	High	100-year floodplain	--	873	196,000,000	6	unknown
Winter Storm		descriptive	7,200	2,512	566,800,000	14	unknown
Landslide	Moderate	>14-32 degrees	--	705	158,600,000	3	unknown
	High	>32-56 degrees	--	344	54,900,000	3	unknown
Wildland Fire	Moderate	Moderate fuel rank	--	2,209	351,600,000	14	unknown
	High	High fuel rank	--	882	140,800,000	8	unknown
	Very High	Very high fuel rank	--	433	69,200,000	3	unknown
	Extreme	Extreme fuel rank	--	116	18,500,000	0	unknown
Earthquake	Strong	9-20% (g)	--	2,512	566,800,000	14	unknown
	Very strong	20-40% (g)	--	0	--	0	unknown
	Severe	>40-60% (g)	--	0	--	0	unknown
Volcano		descriptive	7,200	2,512	566,800,000	14	unknown
Wind		descriptive	7,200	2,512	566,800,000	14	unknown
Erosion		within 300' of potential areas of erosion	--	49	7,800,000	unknown	unknown
Drought		Descriptive	--	--	--	--	unknown

**Table 12. Scappoose Potential Hazard Exposure Analysis Overview**  
*Critical Facilities*

			Government		Emergency Response		Educational		Care		Community	
Hazard Type	Hazard Area	Methodology	No.	\$	No.	\$	No.	\$	No.	\$	No.	\$
Flood	Moderate	500-year floodplain	--	--	1	2.4M	2	13.3M	--	--	4	N/A
	High	100-year floodplain	--	--	1	2.4M	1	3.6M			3	82K
Winter Storm		Descriptive	1	1.2M	1	2.4M	7	63.3M			16	2.6M
Landslide	Moderate	>14-32 degrees	--	--	--	--	2	8.6M			3	226K
	High	>32-56 degrees	--	--	--	--					1	82K
Wildland Fire	Moderate	Moderate fuel rank	1	1.2M	1	2.4M	7	63.3M	--	--	16	2.6M
	High	High fuel rank	--	--	--	--	--	--	--	--	4	288K
	Very High	Very high fuel rank	--	--	--	--	--	--	--	--	1	82K
	Extreme	Extreme fuel rank	--	--	--	--	--	--	--	--	--	--
Earthquake	Strong	9-20% (g)	1	1.2M	1	2.4M	7	63.3M	--	--	16	2.6M
	Very strong	20-40% (g)	--	--	--	--	--	--	--	--	--	--
	Severe	>40-60% (g)	--	--	--	--	--	--	--	--	--	--
Volcano		Descriptive	1	1.2M	1	2.4M	7	63.3M	--	--	16	2.6M
Wind		Descriptive	1	1.2M	3	2.4M	7	63.3M	--	--	16	2.6M
Erosion		within 300' of potential areas of erosion	1	1.3M	--	--	1	3.8M	--	--	--	--

**Table 13. Scappoose Potential Hazard Exposure Analysis Overview**  
*Critical Infrastructure*

Hazard Type	Hazard Area	Methodology	Highways		Railroads		Bridges		Transportation Facilities		Utilities		Dams	
			Miles	Value (\$)	Miles	Value (\$)	No.	Value (\$)	No.	Value (\$)	No.	Value (\$)	No.	Value (\$)
Flood	Moderate	500-year floodplain	--	--	--	--	5	9M	--	--	3	20.6M	--	--
	High	100-year floodplain	--	--	--	--	6	11.1M	--	--	2	16.1M	--	--
Winter Storm	Moderate		1.5	unknown	1.5	unknown	6	11.1M	2	unknown	5	25.6M	--	--
Landslide	Moderate	>14-32 degrees	1.5	unknown	1.5	unknown	1	1.5M	--	--	2	4.9M	--	--
	High	>32-56 degrees	--	--	--	--	--	--	--	--	--	--	--	--
Wildland Fire	Moderate	Moderate fuel rank	1	unknown	1	Unknown	6	11.1M	2	unknown	5	25.6M	--	--
	High	High fuel rank	--	--	--	--	--	--	--	--	3	4.9M	--	--
	Very High	Very high fuel rank	--	--	--	--	--	--	--	--	--	--	--	--
	Extreme	Extreme fuel rank	--	--	--	--	--	--	--	--	--	--	--	--
Earthquake	Strong	9-20% (g)	1	unknown	1	Unknown	6	11.1M	2	unknown	5	25.6M	--	--
	Very strong	20-40% (g)	--	--	--	--	--	--	--	--	--	--	--	--
	Severe	>40-60% (g)	--	--	--	--	--	--	--	--	--	--	--	--
Volcano		Descriptive	1	unknown	1	unknown	6	11.1M	2	unknown	5	25.6M	--	--
Wind		Descriptive	1	unknown	1	unknown	6	11.1M	2	unknown	5	25.6M	--	--
Erosion		within 300' of potential areas of erosion	--	--	--	--	6	10.7M	--	--	--	--	--	--

**Mitigation Strategy**

The following section defines mitigation action identification and analysis as stipulated in DMA 2000 and its implementing regulations.

<b>DMA 2000 Requirements: Mitigation Strategy</b>	
<b>Planning Requirements</b>	
§201.6(c)(3)	The plan shall include the following:] A mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing tools.
§201.6(c)(3)(i)	The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
§201.6(c)(3)(ii)	The hazard mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction’s participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.
§201.6(c)(3)(iii)	The hazard mitigation strategy shall include an] action plan, describing how the action identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
§201.6(c)(3)(iv)	For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.
§201.6(c)(4)(ii)	The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvements, when appropriate.
<b>Planning Elements</b>	
<b>C1. Does the plan document each jurisdiction’s existing authorities, policies, programs and resources, and its ability to expand on and improve these existing policies and programs? 44 CFR 201.6(c)(3)</b>	
<b>C2. Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? 44 CFR 201.6(c)(3)(ii)</b>	
<b>C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? 44 CFR 201.6(c)(3)(i)</b>	
<b>C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? 44 CFR 201.6(c)(3)(ii) and 44 CFR 201.6(c)(3)(iv)</b>	

**C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? 44 CFR 201.6(c)(3)(iii) and 44 CFR (c)(3)(iv)**

**C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? 44 CFR 201.6(c)(4)(ii)**

### Identify Mitigation Goals

Scappoose reviewed the Columbia County goals and determined they meet the City’s needs and subsequently adopted the Goals in Table 14 for the current planning period.

Table 14. Scappoose Mitigation Goals	
Goal Number	Goal Description
1	<b>Reduce the Threat to Life Safety</b> Enhance life safety by minimizing the potential for deaths and injuries in future disaster events.
2	<b>Protect Critical Facilities and Enhance Emergency and Essential Services</b> <ul style="list-style-type: none"> <li>• Implement activities or projects to protect critical facilities and infrastructure.</li> <li>• Seek opportunities to enhance, protect, and integrate emergency and essential services.</li> <li>• Strengthen emergency operations plans and procedures by increasing collaboration and coordination among public agencies, non-profit organizations, businesses, and industry.</li> </ul>
3	<b>Reduce the Threat to Property</b> <ul style="list-style-type: none"> <li>• Seek opportunities to protect, enhance and integrate emergency and essential services.</li> <li>• Strengthen emergency operations plans and procedures by increasing collaboration and coordination among public agencies, non-profit organizations, businesses, industries and the citizens of Columbia City.</li> </ul>
4	<b>Create a Disaster Resistant and Disaster-Resilient Economy</b> <ul style="list-style-type: none"> <li>• Develop and implement activities to protect economic well-being and vitality while reducing economic hardship in post disaster situations.</li> <li>• Reduce insurance losses and repetitive claims for chronic hazard events.</li> <li>• Work with State and Federal Partners to reduce short-term and long-term recovery and reconstruction costs.</li> <li>• Work with local and County organizations, such as Columbia Emergency Planning Association (CEPA).</li> <li>• Expedite pre-disaster and post-disaster grants and program funding.</li> </ul>
5	<b>Increase Public Awareness, Education, Outreach, and Partnerships</b> <ul style="list-style-type: none"> <li>• Coordinate and collaborate, where possible, risk reduction outreach efforts with the Oregon Partners for Disaster Resistance &amp; Resilience and other public and private organizations.</li> <li>• Develop and implement risk reduction education programs to increase awareness among citizens, local, county, and regional agencies, non-profit organizations, businesses, and industry.</li> <li>• Promote insurance coverage for catastrophic hazards</li> <li>• Strengthen communication and coordinate participation in and between public agencies, citizens, nonprofit organizations, businesses, and industry.</li> </ul>

### Evaluate and Prioritize Mitigation Actions

Mitigation actions are activities, measures, or projects that help achieve the goals of a mitigation plan. Table 15 lists the mitigation actions developed during this mitigation planning process or offered during whole community planning activities. It is not intended that this plan will attempt

to act on all of these action items, but the list will be maintained in order to provide documentation for future planning efforts.

Mitigation strategies were evaluated using FEMA's recommended STAPLEE process. This process addresses all major factors when weighing the costs and benefits of implementing one action over another. Important factors to be considered when ranking the strategies include the prohibitive costs, the community's resource capabilities, the community's desires and concerns, and the overall feasibility of the action. STAPLEE criteria were used to evaluate the potential benefits of each participant's listing of mitigation alternatives or actions. The STAPLEE evaluation includes consideration of the social, technical, administrative, political, legal, economic, and environmental benefits of the mitigation actions, which are summarized below.

- S – Social: Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the communities social and cultural values.
- T – Technical: Mitigation actions are technically most effective if they provide long-term reduction of losses and have minimal secondary adverse impacts.
- A – Administrative: Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
- P – Political: Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support of the action.
- L – Legal: It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
- E – Economical: Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
- E – Environmental: Sustainable mitigation actions that do not have an adverse effect on the environment, comply with Federal, State, and local environmental regulations, and are consistent with the community's environmental goals provide mitigation benefits while being environmentally sound.

STAPLEE criteria were reviewed and applied to proposed mitigation actions in order to provide a prioritized list in each jurisdiction. HSEMC and other key personnel and members attending the public meetings were asked to take into account all of the STAPLEE criteria and to come up with a cumulative priority ranking that maximizes the benefits of each alternative. The projects with the greatest benefits and lowest relative costs as determined by the STAPLEE criteria were assigned a higher priority, while alternatives with lower benefits and relatively higher costs were assigned a lower priority.

In the future, a more detailed and formal formulation of the costs and benefits of each mitigation strategy could be established to better prioritize the participant action items. A final list of strategies, or actions, was established including information on the associated hazard mitigated and a description of the action, responsible party, cost estimate, potential funding sources and timeline.

Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
<b>Natural Hazards</b>			
<i>Multi-Hazard (MH)</i>			
MH	Consider		Develop, implement, and maintain jurisdictional debris management plans.
MH	<i>Ongoing</i>		Develop and incorporate ordinances commensurate with development and building codes to reflect survivability from wind, seismic, fire, and other hazards to ensure occupant safety.
MH	<i>Ongoing</i>		Review ordinances and develop outreach programs to assure manufactured homes and buildings are protected from severe wind and flood hazards. (Anchoring, elevation, and other methods as applicable)
MH	<i>Ongoing</i>		Cross reference and incorporate mitigation planning provisions into all community planning processes such as comprehensive, capital improvement, land use, transportation plans, etc to demonstrate multi-benefit considerations and facilitate using multiple funding source consideration.
MH	<i>Ongoing</i>		Purchase and install generators with main power distribution disconnect switches for identified and prioritized critical facilities susceptible to short term power disruption. (i.e. first responder and schools, and water and sewage pump stations, etc.)
MH	<i>Ongoing</i>		Electronic surge protection devices on critical electronic components such as warning systems, communications equipment, and computers for critical facilities.
MH	<i>Ongoing</i>		Distribute information materials concerning mitigation, preparedness, and safety procedures for all natural hazards.

Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
MH	<i>Ongoing</i>		Explore the need for, develop, and implement hazard zoning ordinances for high-risk hazard area land-use.
MH	Consider		Retrofit structures to protect them from seismic, floods, high winds, earthquakes, or other natural hazards.
MH	Consider		Acquire, demolish, or relocate structures from hazard prone area. Property deeds shall be restricted for open space uses in perpetuity to keep people from rebuilding in hazard areas.
MH	Consider		Harden utility headers located along river embankments to mitigate potential flood, debris, and erosion damages.
MH	<i>Ongoing</i>		Establish a formal role for the jurisdictional Hazard Mitigation Planning Committees to develop a sustainable process to implement, monitor, and evaluate citywide mitigation actions.
MH	<i>Ongoing</i>		Identify and pursue funding opportunities to implement mitigation actions.
MH	<i>Ongoing</i>		Develop public and private sector partnerships to foster hazard mitigation activities.
MH	<i>Ongoing</i>		Integrate the Mitigation Plan findings into planning and regulatory documents and programs and into enhanced emergency planning.
<b>Flood</b>			
Flood	Consider		Develop and maintain GIS mapped critical facility inventory for all structures located within 100-year and 500-year floodplains.
Flood	Consider		Develop and maintain GIS mapped inventory, and develop prioritized list of residential and commercial buildings within 100-year and 500-year floodplains.
Flood	Consider		Develop and maintain GIS mapped inventory of repetitive loss properties to include the types and numbers of properties.
Flood	<i>Ongoing</i>		Develop and implement mitigation actions for repetitive loss properties.
Flood	<i>Ongoing</i>		Establish flood mitigation priorities for critical facilities and residential and commercial



Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
			buildings located within the 100- year floodplain using survey elevation data.
Flood	<i>Ongoing</i>		Implement mitigation measures identified by critical facilities' owners, and other facility owners, to protect facilities located within the 100-year floodplain.
Flood	<i>Ongoing</i>		Develop an outreach program to educate public concerning NFIP participation benefits, floodplain development, land use regulation, and NFIP flood insurance availability to facilitate continued compliance with the NFIP.
Flood	<i>Ongoing</i>		Develop, implement, and enforce floodplain management ordinances.
Flood	Consider		Acquire, relocate, elevate, or otherwise flood-proof critical facilities.
Flood	<i>Ongoing</i>		Develop, or revise, adopt, and enforce storm water ordinances and regulations to manage run-off from new development, including buffers and retention basins.
Flood	<i>Ongoing</i>		Create detention storage basins, ponds, reservoirs etc. to allow water to temporarily accumulate. Water ultimately returning to its watercourse at a reduced flow rate.
Flood	<i>Ongoing</i>		Provide flood protection to mitigate damage and contamination of wastewater systems.
Flood	<i>Ongoing</i>		Develop and incorporate mitigation provisions and recommendations into zoning ordinances and community development processes to maintain the floodway and protect critical infrastructure and private residences from other hazard areas.
Flood	<i>Ongoing</i>		Identify and list repetitively flooded structures and infrastructures, analyze the threat to these facilities, and prioritize mitigation actions to acquire, relocate, elevate, and/or flood proof to protect the threatened population.
Flood	<i>Ongoing</i>		Perform hydrologic and hydraulic engineering, and drainage studies and analyses. Use information obtained for feasibility determination and project design. This information should be a key component, directly related to a proposed project.
<b>Winter Storm</b>			

Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
Winter Storms	Ongoing		Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe winter storms.
Winter Storms	Ongoing		Develop critical facility list needing emergency back-up power systems, prioritize, seek funding and implement mitigation actions.
Winter Storms	Ongoing		Develop and maintain severe winter storm public outreach program defining mitigation activity benefits through educational outreach aimed at households and businesses while targeting of special needs populations.
Winter Storms	Ongoing		Develop and implement tree clearing mitigation programs to keep trees from threatening lives, property, and public infrastructure from severe weather events.
Winter Storms	Ongoing		Develop, implement, and maintain partnership program with electrical utilities to use underground utility placement methods where possible to reduce or eliminate power outages from severe winter storms. Consider developing incentive programs.
Winter Storms	Ongoing		Develop early warning test program partnering with NOAA, City Police, Fire Departments, and Volunteer Fire Department to coordinate tests.
Winter Storms	Ongoing		Review critical facilities and government building energy efficiency, winter readiness, and electrical protection capability. Identify, prioritize, and implement infrastructure upgrade or rehabilitation project prioritization and development.
<b>Landslide</b>			
Landslide	Ongoing		Complete a landslide location inventory, identify threatened critical facilities and other buildings and infrastructure.
Landslide	Consider		Develop prioritized list of mitigation actions for threatened critical facilities and other buildings or infrastructure.
Landslide	Ongoing		Develop process to limit future development in steep slope areas (permitting, geotechnical review, soil stabilization techniques, etc).
Landslide	Ongoing		Update the storm water management plan to include regulations to control runoff, both for

Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
			flood reduction and to minimize saturated soils on steep slopes that can cause landslides.
Landslide	<i>Ongoing</i>		Develop comprehensive geological landslide and rockslide prone area maps.
Landslide	<i>Ongoing</i>		Identify and seasonally restrict construction activities in steep slope areas.
<b>Wildland Fire</b>			
Wildland Fire	<i>Ongoing</i>		Identify critical facilities and vulnerable populations based on mapped high hazard areas.
Wildland Fire	Consider		Identify evacuation routes away from high hazard areas and develop outreach program to educate the public concerning warnings and evacuation procedures.
Wildland Fire	<i>Ongoing</i>		Develop Community Wildland Fire Protection Plans for all at-risk communities.
Wildland Fire	<i>Ongoing</i>		Hold FireWise workshop to educate residents and contractors concerning fire resistant landscaping.
Wildland Fire	Consider		Promote FireWise building siting, design, and construction materials.
Wildland Fire	Consider		Develop FireWise Public Service Announcements (PSA).
Wildland Fire	<i>Ongoing</i>		Provide wildland fire information in an easily distributed format for all residents.
Wildland Fire	Consider		Schedule and perform government facility "fire drills" at least twice per year.
Wildland Fire	<i>Ongoing</i>		Develop, adopt, and enforce burn ordinances that require burn permits, restricts campfires, and controls outdoor burning.
Wildland Fire	Consider		Develop outreach program to educate and encourage fire-safe construction practices for existing and new construction in high risk areas.
Wildland Fire	<i>Ongoing</i>		Identify, develop, and implement, and enforce mitigation actions such as fuel breaks and reduction zones for potential wildland fire hazard areas.
<b>Earthquake</b>			
Earthquake	Consider		Supplement State Seismic Needs Analysis data (schools, fire, law enforcement). Complete inventory of public and commercial buildings that may be particularly vulnerable to earthquake damage.

Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
Earthquake	Consider		Identify high seismic hazard areas; develop a wood-frame residential building inventory and an outreach program to educate population concerning facilities particularly vulnerable to earthquake damage, such as pre-1940s homes and homes with cripple wall foundations.
Earthquake	Consider		Disseminate FEMA pamphlets to educate and encourage homeowners concerning seismic structural and non-structural retrofit benefits.
Earthquake	Ongoing		Retrofit important public facilities with significant seismic vulnerabilities, such as unreinforced masonry construction.
Earthquake	Completed		Retrofit bridges that are not seismically adequate for lifeline transportation routes.
Earthquake	Ongoing		Update existing (or adopt the most current) Uniform Building Code
Earthquake	Ongoing		Implement and enforce the Uniform, International, and State Building Codes.
Earthquake	Ongoing		Inspect and/or certify all new construction.
Earthquake	Ongoing		Develop outreach program to educate residents concerning benefits of increased seismic resistance and modern building code compliance during rehabilitation or major repairs for residences or businesses.
Earthquake	Ongoing		Inspect, prioritize, and retrofit any critical facility or public infrastructure that does not meet current Building Codes.
Earthquake	Ongoing		Evaluate critical public facility seismic performance for fire stations, public works buildings, potable water systems, wastewater systems, electric power systems, and bridges within the jurisdiction.
Earthquake	Consider		Develop outreach program for educating private facility owners/operators concerning alternative or emergency power source acquisition to enable them to deliver food, fuel, and medical services during disaster emergency response and recovery efforts.
Earthquake	Ongoing		Encourage utility companies to evaluate and harden vulnerable infrastructure elements for sustainability.

Table 15. Scappoose Mitigation Actions Considered			
Hazard	Status	Comment	Description
Earthquake	<i>Ongoing</i>		Develop partnerships to mitigate hazards that result in jurisdictional facility lifeline or emergency transportation route closures.
<b>Volcano</b>			
Volcano	Consider		Update public emergency notification procedures and develop an outreach program for ash fall events.
Volcano	Consider		Update emergency response planning and develop client focused outreach program for ash fall events affecting river, air, and highway transportation, and industrial facilities and operations.
Volcano	Consider		Evaluate ash impact on storm water drainage system and develop mitigation actions.
<b>Wind</b>			
Wind	<i>Ongoing</i>		Review ordinances and develop outreach programs to assure manufactured buildings are protected from severe wind and flood hazards. (Anchoring, elevation, siting, and other methods as applicable)
Wind	Consider		Identify and prioritize critical facilities' overhead utilities that could be placed underground to reduce power disruption from wind storm / tree blow down damage.
Wind	<i>Ongoing</i>		Revise requirements to place utilities underground to reduce power disruption from wind storm / tree blow down damage when upgrading or during new development.
Wind	<i>Ongoing</i>		Increase power line wire size and incorporate quick disconnects (break away devices) to reduce ice load power line failure during severe wind or winter ice storm events.
<b>Erosion</b>			
Erosion	Consider		Maintain and update erosion hazard locations, identify critical facilities potentially impacted and develop and implement mitigation initiatives such as bank stabilization or facility relocation to prevent or reduce the threat.
Erosion	<i>Ongoing</i>		Harden culvert entrance with asphalt, concrete, rock, to reduce erosion or scour.

Hazard	Status	Comment	Description
Erosion	Ongoing		Construct a structure to dissipate energy or reduce flow velocity to prevent erosion of the streambed and banks.

### Mitigation Action Plan

The Steering Committee has evaluated and prioritized each of the considered mitigation actions to determine which would be included in the Mitigation Action Plan. The Committee then determined the responsible agency and potential funding sources. The Mitigation Action Plan represents mitigation projects and programs to be implemented through the cooperation of multiple entities.

Upon review, the Steering Committee assigned a high priority ranking to actions that best fulfill the goals of the HMP and are appropriate and feasible for the City and responsible entities to implement during the 5-year lifespan of this version of the HMP. As such, the Steering Committee determined that only the mitigation actions that received a high priority ranking would be included in the City’s Mitigation Action Plan. Table 16 depicts the City’s mitigation actions grouped by hazard and in descending priority order within each hazard.

Hazard	Description	Managing Department / Agency	Timeframe	Potential Funding Source(s)	Benefit-Costs / Technical Feasibility
<b>Natural Hazards</b>					
<b>Multi-Hazard (MH)</b>					
MH	Purchase and install generators with main power distribution disconnect switches for identified and prioritized critical facilities susceptible to short term power disruption. (i.e. first responder and schools, and water and sewage pump stations, etc.)	Public Works	Completed	General Fund, HMGP	BC: TBD TF: Yes
MH	Electronic surge protection devices on critical electronic components such as warning systems, communications	Public Works	1 yr	General Fund	BC: TBD TF: Yes

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	equipment, and computers for critical facilities.				
MH	Update or develop, implement, and maintain jurisdictional debris management plans.	City Admin/ Public Works	1-3 yrs	General Fund	BC: TBD TF: Yes
MH	Develop and implement strategies and educational outreach programs for debris management.	City Admin/ Public Works	1-3 yrs (Plan) 3-5 (outreach)	General Fund	BC: TBD TF: Yes
MH	Cross reference and incorporate mitigation planning provisions into all community planning processes such as comprehensive, capital improvement, land use, transportation plans, etc. to demonstrate multi-benefit considerations and facilitate using multiple funding source consideration.	City Admin/ Planning	1-5 yrs	General Fund	BC: TBD TF: Yes
MH	Develop outreach program for educating private facility owners/operators concerning alternative or emergency power source acquisition to enable them to deliver services during disaster emergency response and recovery efforts.	City Admin Public Works	2-5 yrs	General Fund	BC: TBD TF: Yes
MH	Develop critical facility list needing emergency back-up power systems, prioritize, seek funding and implement mitigation actions.	Public Works	1-2 yrs	General Fund	BC: TBD TF: Yes
MH	Update public emergency notification procedures and develop an outreach program for all emergencies	City Admin	3-5 years	General Fund, HMPG	BC:TBD TF: Yes
<b>Flood</b>					
Flood	Develop, implement, and enforce floodplain management ordinances.	Planning Dept.	Ongoing	General Fund	BC: TBD TF: Yes
Flood	Develop, or revise, adopt, and enforce storm water ordinances and regulations to manage run-off from new development, including buffers and retention basins.	Planning/ Public Works	Ongoing	General Fund	BC: TBD TF: Yes
Flood	Create detention storage basins, ponds, reservoirs etc. to allow water to temporarily accumulate. Water	Public Works/ Engineers	0-5 yrs	Street Fund, FMA,	BC: TBD TF: Yes

## City of Scappoose Annex

	ultimately returning to its watercourse at a reduced flow rate.			HMGP, PDM	
Flood	Implement flood protection to mitigate damage and contamination of wastewater systems.	Public Works	5-10 yrs	Sewer Fund, FMA, HMGP, PDM	BC: TBD TF: Yes
<b>Winter Storm</b>					
Winter Storm	Develop and implement programs to coordinate maintenance and mitigation activities to reduce public infrastructure from severe winter storms.	Public Works	Ongoing	General Fund	BC: TBD TF: Yes
Winter Storm	Review critical facilities and government building energy efficiency, winter readiness, and electrical protection capability. Identify, prioritize, and implement infrastructure upgrade or rehabilitation project prioritization and development.	Public Works	Ongoing	General Fund, HMGP	BC: TBD TF: Yes
<b>Landslide</b>					
Landslide	Develop process to limit future development in steep slope areas (permitting, geotechnical review, soil stabilization techniques, etc).	Planning/ Engineering	Completed	General Fund	BC: TBD TF: Yes
<b>Wildland Fire</b>					
	Develop Community Wildland Fire Protection Plan	Fire District	Ongoing	General Fund, FMAP	BC: TBD TF: Yes
Wildland Fire	Provide wildland fire information in an easily distributed format for all residents.	City Admin Fire District	Ongoing	General Fund, FMAP	BC: TBD TF: Yes
Wildland Fire	Develop, adopt, and enforce burn ordinances that require burn permits, restricts campfires, and controls outdoor burning.	City Admin/ Fire District	Ongoing	General Fund	BC: TBD TF: Yes
<b>Earthquake</b>					
EQ	Identify, evaluate, and prioritize critical public facilities' seismic performance.	City Admin/ Public Works/ Engineering	3-5 yrs	General Fund	BC: TBD TF: Yes
<b>Volcano</b>					



Volcano	Evaluate ash impact on storm water drainage system and develop mitigation actions.	Public Works/ Engineering	3-5 yrs	General Fund	BC: TBD TF: Yes
<i>Wind</i>					
Wind	Identify and prioritize critical facilities' overhead utilities that could be placed underground to reduce power disruption from wind storm / tree blow down damage.	Public Works	1-5 yrs	General Fund, Utility Co., HMGP, PDM	BC: TBD TF: Yes
<i>Erosion</i>					
Erosion	Maintain and update erosion hazard locations, identify critical facilities potentially impacted and develop and implement mitigation initiatives	Public Works	3-5 yrs	General Fund, HMGP, PDM	BC: TBD TF: Yes

**Plan Adoption and Maintenance**

The following section provides documentation of the formal adoption of this annex by the governing board of the district or the city council/county commission of the jurisdiction. It also identifies the standing committee that will be responsible for future reviews between update periods.

<b>DMA 2000 Requirements: Plan Review, Evaluation, Implementation, and Adoption</b>	
<b>Planning Requirements</b>	
§201.6(d)(3)	A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit if for approval within 5 years in order to continue to be eligible for mitigation project grant funding.
§201.6(c)(5)	The plan shall include...] Documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County commissioner, Tribal Council). For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.
<b>Planning Elements</b>	

- D1. Was the plan revised to reflect changes in development? 44 CFR 201.6(d)(3)**
- D2. Was the plan revised to reflect progress in local mitigation efforts? 44 CFR 201.6(d)(3)**
- D3. Was the plan revised to reflect changes in priorities? 44 CFR 201.6(d)(3)**
- E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? 44 CFR 201.6(c)(5)**
- E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? 44 CFR 201.6(c)(5)**

**Resolution of Adoption**

RESOLUTION NO. 14-15

**A RESOLUTION OF THE SCAPPOOSE CITY COUNCIL ADOPTING THE UPDATED COLUMBIA COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN FOR THE CITY OF SCAPPOOSE**

**WHEREAS**, the Federal Emergency Management Agency (FEMA) requires municipalities to adopt Hazard Mitigation Plans in order to be eligible for FEMA funding in the event of future disasters; and

**WHEREAS**, the City of Scappoose adopted a Hazard Mitigation Plan through Resolution No. 09-13; and

**WHEREAS**, the City of Scappoose, Columbia County, and other county municipalities have since updated the Hazard Mitigation Plan; and

**WHEREAS**, the Columbia County Multi-Jurisdictional Hazard Mitigation Plan for the City of Scappoose, attached hereto as Exhibit A, has been reviewed by residents, business owners, and federal, state, and local agencies and has been revised to reflect their concerns.

**NOW, THEREFORE, THE CITY OF SCAPPOOSE COUNCIL RESOLVES AS FOLLOWS:**

Section 1: The Columbia County Multi-Jurisdictional Hazard Mitigation Plan for the City of Scappoose, attached hereto as Exhibit A, is hereby adopted as an official plan of the City of Scappoose.

Section 2: Resolution No. 09-13 is hereby rescinded and replaced.

**PASSED AND ADOPTED** by the City Council of Scappoose and signed by me, and the City Recorder in authentication of its passage this 7<sup>th</sup> day of July 2014.

CITY OF SCAPPOOSE, OREGON

Attest:

\_\_\_\_\_  
Scott Burge, Mayor

\_\_\_\_\_  
Susan M. Reeves, MMC, City Recorder

## Standing Review Committee

The following table identifies the members of the Standing committee that will meet quarterly to review the HMP annex and provide a running update.

Table 17. (Name of Jurisdiction/District here) Standing Hazard Mitigation Committee	
Name	Agency/Department/Affiliation
Susan Reeves	City Administrator/Recorder - Scappoose
Kelly Niles	Oregon Department of Forestry
Michael Greisen	Scappoose Fire and Rescue
Laurie Oliver	City Planner - Scappoose
Dave Sukau	Public Works Director - Scappoose
Norman Miller	Chief of Police - Scappoose



# Columbia County

## Multi Jurisdiction Hazard Mitigation Plan 2021 Update Plan

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For the last nine years Columbia County has maintained a Multi Jurisdiction Hazard Mitigation Plan, which combines the planning efforts of the County and all seven of the incorporated Cities. The Disaster Mitigation Act of 2000 (Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for State, Local and Indian Tribal governments. Among these requirements is the obligation to update Hazard Mitigation Plans every five years. In 2014 Columbia County produced its last full update of the County's Multi-jurisdiction Hazard Mitigation Plan; therefore, it was required that the next State and FEMA approved update be started by October 6, 2019. Work on the update has now been completed and has received both State and Federal approval. The draft Hazard Mitigation Plan s now ready for local and county promulgation.

The MJ-HMP is a required element for participation in three major federal grant programs:

- **Hazard Mitigation Grant Program:** assists in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration. HMGP funding is generally 15% of the total amount of Federal assistance provided to a State, Territory, or federally-recognized tribe following a major disaster declaration. This grant program was critical to the mitigation projects in Vernonia after the 2007 flooding incident.
- **Pre Disaster Mitigation:** provides funds for hazard mitigation planning and projects on an annual basis. PDM funding depends on the amount congress appropriates each year for this program. This includes the Building Resilient Infrastructures and Communities (BRIC) grant.
- **Flood Mitigation Assistance:** provides funds for planning and projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP) on an annual basis. FMA funding depends on the amount congress appropriates each year for this program.

A recent FEMA interpretation of Oregon Revised Statutes has concluded that all Oregon Districts are considered local government and are therefore required to maintain a Hazard Mitigation Plan to retain eligibility with these grant programs. It is important to note that the lack of an HMP does not disqualify districts from post-disaster public assistance funding (section 406 programs), which provides 75% of costs for rebuilding projects. However, funding for mitigation specific efforts

(section 404 described above) now require participation by *any* jurisdictions deemed to have a government function, has taxing authority, or maintains an elected board.

In practical terms this means that in the aftermath of a presidentially declared disaster, money will be available for immediate repairs to public infrastructure in your district or jurisdiction. However, without an approved mitigation plan grant, dollars will not be available to rebuild infrastructure with designs intended to reduce future impacts, or to move infrastructure away from impact areas. In the end the best way to ensure access to federal funding for *all* recovery projects is to participate in this planning effort. It is highly recommended that Cities, and districts consider doing so.

The last step in completing the MJ-HMP is the local jurisdictions promulgation. When this is completed and with the county's promulgation the plan being approved will be good for 5 additional years.