



Staff Report

For City Council Meeting - 3/3/2021

Subject - Ordinances/Resolutions - Resolution 955: Multi-Jurisdictional Natural Hazard Mitigation Plan (MJNHMP) Gearhart 2021

Synopsis: Across 2015-2017, the City of Gearhart developed its Natural Hazard Mitigation Plan (NHMP). Thanks to a FEMA grant Clatsop County received through the Department of Land Conservation and Development (DLCD), a Multi-Jurisdictional Natural Hazard Mitigation Plan (MJNHMP) was completed in 2018. That plan is having an update! Both the Planning Commission and City Council were involved with Gearhart's Risk Assessment portion of the plan throughout 2019. The public feedback portion was conducted through area surveys multiple times throughout 2020.

The Council reviewed the final draft of the plan's portion most relevant to Gearhart at the February 2021 meeting; final pages are attached. We believe the Gearhart portions of the plan are now ready for adoption via Resolution 955, also attached.

Council Options:

- 1) Resolve to sign the attached Resolution #955;
- 2) Make changes and motion to sign as amended;
- 3) Do nothing.

Recommendation: Staff recommends the Council sign Resolution #955 to accept the 2021 MJNHMP final update.

Legal Analysis: Not determined to be necessary

Financial Analysis: Not determined to be necessary

Respectfully Submitted,

Carole Connell
City Planner

RESOLUTION NO. 955

A RESOLUTION ADOPTING THE 2021 CLATSOP COUNTY MULTI-JURISDICTIONAL NATURAL HAZARDS MITIGATION PLAN

WHEREAS, natural hazards threaten life, businesses, property, and environmental systems in the City of Gearhart, and throughout Clatsop County.

WHEREAS, an understanding of the nature, extent, and potential impacts of natural hazards is the foundation for developing strategies to reduce or eliminate those impacts.

WHEREAS, natural hazards mitigation planning is the process through which such understanding and strategies are developed and a process for implementation is established in the City of Gearhart and throughout Clatsop County.

WHEREAS, it is in the interest of Clatsop County and the cities and special districts located therein to undertake natural hazards mitigation planning and implementation together as coordinated planning strengthens communities and better serves all.

WHEREAS, Clatsop County and the Cities of Astoria, Cannon Beach, Gearhart, Seaside and Warrenton previously prepared, implemented, and updated multi-jurisdictional natural hazards mitigation plans in accordance with the Disaster Mitigation Act of 2000. These plans were each approved by the Federal Emergency Management Agency (FEMA) for a period of five years.

WHEREAS, the Port of Astoria, Clatsop Community College, Seaside School District, Sunset Empire Transportation District, Cannon Beach Rural Fire Protection District, Lewis and Clark Rural Fire Protection District, Knappa-Svensen-Burnside Rural Fire Protection District, Arch Cape Domestic Water Supply District, Arch Cape Sanitary District, and Falcon Cove Beach Domestic Water Supply District, each participated updating the 2021 Clatsop County Multi-Jurisdictional Natural Hazards Mitigation Plan in accordance with the Disaster Mitigation Act of 2000, thereby developing their first natural hazards mitigation plans.

WHEREAS, the 2015 Clatsop County Multi-Jurisdictional Natural Hazards Mitigation Plan is the most recent and expired on July 23, 2020.

WHEREAS, having a natural hazards mitigation plan developed in accordance with the Disaster Mitigation Act of 2000 and approved by FEMA is a prerequisite for local government eligibility for certain federal pre- and post-disaster mitigation funds.

WHEREAS, adoption of the updated 2021 Clatsop County Multi-Jurisdictional Natural Hazards Mitigation Plan is required for FEMA approval of the 2021 Clatsop County Multi-Jurisdictional Natural Hazards Mitigation Plan and restored eligibility for certain federal pre- and post-disaster mitigation funds.

WHEREAS, adoption of the updated 2021 Clatsop County Multi-Jurisdictional Natural Hazards Mitigation Plan demonstrates the City of Gearhart's commitment to reducing or eliminating the potential impacts of natural hazards and to achieving the Plan's goals.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF GEARHART:

Section 1. The City of Gearhart City Council hereby adopts the recitals above in support of this resolution.

Section 2. The City of Gearhart City Council hereby adopts the Clatsop County Multi-Jurisdictional Natural Hazards Mitigation Plan.

DATED this 3rd day of March 2021.

Paulina Cockrum, Mayor of Gearhart City Council

ATTEST:

APPROVED AS TO FORM:

Chad Sweet, City Administrator

[print Name, Title]

For City Council review on February 3, 2021

Revised Gearhart portions of the draft Clatsop County Natural Hazard Mitigation Plan pursuant to City Council review on 12/29/20 and Planning Commission review on 1/14/21. The plan is in the County's public comment period. City Council's next decision is to review and officially accept the plan.

DRAFT Clatsop County Natural Hazard Mitigation Plan

City of Gearhart

Hazard Vulnerability Analysis

Table _____ City of Gearhart Hazard Vulnerability Analysis

Jurisdiction	Coastal Erosion	Drought	Earthquake	Flood	Landslide	Tsunami	Volcanic Ashfall	Wildfire	Wind/Winter Storm
Gearhart	L	L	H	L	L	H	L	L	H

Source: City of Gearhart Risk Assessment, May 2019. *Pam – we think we might be a Medium for Landslides on this table. CC changed wildfire to L on 2-3-21*

Introduction

The City has included data from the DOGAMI Open-File Report 0-20-16 Table A-13 and A-14 City of Gearhart Hazard Profile. This is a risk assessment utilizing quantitative building and population data for the City of Gearhart provided by the Clatsop County Tax Assessor and the 2010 U.S. Census. For these purposes, the report is based on a population of 1,462 and a building inventory of 1,607 structures.

Coastal Erosion

Coastal erosion occurs through a complex interaction of geologic, atmospheric and oceanic factors, including sea level rise. Beaches and dunes are highly susceptible to erosion during large storms coupled with high ocean water levels near the beach or coastal bluffs. The DOGAMI report indicates Gearhart has a low risk of coastal erosion wherein 81 buildings are exposed affecting a potential displacement of 7 residents.

Drought

Historically, Clatsop County has very few drought years. However, when drought conditions prevail, area creeks and fish can suffer. In addition, the surrounding forest lands are more susceptible to disease and the Clatsop plains and forests are susceptible to wild land forest fires during drought. Gearhart has low exposure to drought.

Earthquake

The DOGAMI Risk Report for Clatsop County conducted in 2020 built upon previous studies by the department and identified locations within the study area that are comparatively more vulnerable or at a greater risk to a CSZ M9.0 earthquake hazard (a frequency of every 425 – 525 years). Very-high liquefaction soils are found throughout most of the populated coastal portions of Clatsop County, which include the communities of Astoria, Cannon Beach, Gearhart, Seaside, and within the low-lying areas around the City of Warrenton. In the event of a CSZ M9.0 earthquake scenario, Gearhart has the potential of 278 damaged buildings including 3 critical facilities, and 160 potentially displaced residents.

Flood

Flooding generally occurs quickly due to heavy concentrated rainfall. Tidal changes in conjunction with high winds and/or snow accumulation at higher elevations have influence on the severity as well. Flood season is in effect from November 1 through March 31. Principal riverine flood sources in Gearhart are the Neacoxie Creek and the Necanicum River Estuary. The above referenced DOGAMI report indicates a potential for 34 damaged buildings and 50 displaced residents in the event of a 100 - year flood.

Landslide

This hazard is the downslope movement of rock, soil, or other debris or the opening of sinkholes. These hazards are often associated with other incidents such as heavy rainfall, snow melt run-off, floods or earthquakes. County history has been that we have frequent landslides during the rainy months on our mountain roads, highways, and city streets. The landslide hazard within Gearhart is documented in the foothills on the east side of the city (DOGAMI Hazards Study 2020). Erosion can also occur on the banks of the Neacoxie Creek, and the Necanicum estuary. The DOGAMI report indicates Gearhart has 55 exposed buildings and 75 displaced residents in the event of a landslide.

Tsunami

This is a series of traveling ocean waves of extremely long length and period, generated by disturbances associated with earthquakes. As it enters the shoaling water of coastlines in its path, the velocity of its waves diminishes and wave height increases. In shallow waters they can crest to heights of more than 100 feet and become a threat to life and property. The Gearhart coastline is particularly vulnerable with many residents in need of early warning. The DOGAMI report indicates a CSZ-Medium tsunami will expose 808 buildings and 775 residents. There is a potential of 1,275 exposed buildings and 1,103 displaced residents in the event of the SB 379 Regulatory line (XXL) tsunami event.

Volcanic Event

There is little risk of significant impact to the City.

Wildfire

Generally, Gearhart is at low risk from a wildfire event due to high coastal humidity. However, in the intermittent dry periods with east winds from summer to late fall wildfire risk can elevate quickly. The 2020 DOGAMI Report indicates there are 2 exposed buildings and 1 potentially displaced resident in the event of a wildfire.

Windstorm and Winter Storm

Windstorms hazards are common in Gearhart and usually results in localized power outages or large-scale power outages, which can affect all of Clatsop County. Windstorms can reach hurricane strength in the exposed areas and damage to homes and property is not unusual during the winter months. Structures that are the most vulnerable to high winds include insufficiently anchored manufactured homes and older buildings in need of roof repair. It is essential that manufactured home tie-down standards be enforced. Fallen trees can be a hazard. They can block roads, trails, and affect emergency operations. They can down power and utility lines. Strategic pruning working with utility companies and establishing a tree removal and maintenance program is prudent.

Mitigation Actions

Table ____ City of Gearhart Mitigation Actions

Hazard	City of Gearhart 2020-2025 Mitigation Actions	Priority	Timeline	Status & Explanation	Partners/ Funding Sources
Multi-Hazard, Earthquake, Tsunami	Develop and implement a community disaster education and preparedness program.	H	On-going	Cache containers available funded by SHSP program thru OEM. Short Term Rental financial incentive provides evacuation go-packs. Periodic City Blog & Website disaster preparedness announcements. Medical supplies are strategically located through the City. Tsunami hazard building permit disclaimer signature required at issuance of building permits. Need to assess social vulnerability thru CERT Map your Neighborhood program.	City of Gearhart, CERT, Great Oregon Shakeout training
Multi-Hazard	Rebuild City Hall to withstand earthquakes and aid in recovery	M	5 years	Priority is to build Fire Station, not City Hall.	City of Gearhart
Multi-Hazard, Earthquake, Tsunami	Evaluate the construction of critical facilities, structures & public utilities; retrofit, relocate or bury to withstand disaster.	H	2-5 years	Relocate the Gearhart Fire Station to a site outside of the large tsunami zone. Reconstruct /harden Neacoxie Creek crossings at G Street, Pacific Way, Gearhart Lane and Highland Road per TSP. New critical facilities and high-density dwellings are restricted in CSZ-Medium event by Tsunamis Hazard Overlay (THO) Zone	City of Gearhart
Multi-Hazard	Evaluate City ordinances and capital improvement plans regularly. Require new development and provide incentives for existing development to reduce the potential for natural hazards.	M	2-5 years	New critical facility structures are restricted by the City THO Zone. Need to develop a City CIP to include hazard mitigation projects.	City of Gearhart
Multi-Hazard	Train Certified Emergency Response Teams (CERT) for each neighborhood. Develop an emergency shelter and operations center.	H	On-going	CERT training is complete and on-going. Emergency training and operations facility to be included in a new city fire station.	City of Gearhart, CERT

Hazard	City of Gearhart 2020-2025 Mitigation Actions	Priority	Timeline	Status & Explanation	Partners/ Funding Sources
Coastal Erosion	Conduct a periodic survey of vegetation on the dune and exposed sand areas. Require the maintenance of vegetation on exposed sand dune areas to increase resilience.	L	5+ years	Dune vegetation removal controlled by zone code. Invasive vegetation removal permitted. Vegetation maintenance is managed on city park land and by property owner permit.	City of Gearhart
Drought	Implement a water conservation plan to ensure adequate water supply.	L	5 years	City Water Master Plan identifies need. Water service fee structure encourages water conservation. Need to enhance conservation measures.	City of Gearhart
Flood	Comply with FEMA Floodplain recommendations for development within a floodplain.	L	Complete	City updated Floodplain Overlay Zone per FEMA standards in 2018. City provides periodic FIRM insurance rate announcements.	City of Gearhart
Flood	Ensure that runoff does not pollute ground water supplies.	L	None	City does not have a formal storm water collection system. Building setbacks from Neacoxie Creek are enforced.	City of Gearhart, Clatsop Co. Health/DEQ
Winter Storms	Implement winter storm preparation for high winds	L	On-going	Remove trees near power lines. Assure tie-downs for manufactured homes. Fire Dept. provides tree removal. assistance.	Property owners, Building Code, Pacific Power, City of Gearhart
Landslide	Install drainage systems where necessary to prevent soil erosion.	L	On-going 2 years	Building Permit compliance required. Strengthen Land Division requirements for geotechnical analysis.	Building Code, City of Gearhart
Landslide	Require maintenance of vegetation on bare soils and site investigation/engineering in areas of slope hazard.	L	5+ years	Adopt 2020 DOGAMI landslide protections for new development	City of Gearhart
Wildfire	Ensure adequate space between structures to reduce vulnerability	L	5 years	Development permit review requires setback compliance. Identify needed urban/wildland interface setbacks.	Planning, Building code regulations
Wildfire	Construct fire access roadways and turnarounds within vulnerable neighborhoods, purchase land where right-of-way is not available.	L	2-5 years	Identify vulnerable areas and additional measures.	Building code, Fire Dept.

Hazard	City of Gearhart 2020-2025 Mitigation Actions	Priority	Timeline	Status & Explanation	Partners/ Funding Sources
Wildfire	Conduct periodic fire inspections for vegetative fuels reduction and maintenance program to provide fire buffer to structures.	H	On-going	Per Fire Chief recommendations	City Fire, Planning
Wildfire	Initiate and maintain a routine fire inspection and prevention within the neighborhoods.	M	On-going	Per Fire Chief recommendations	Fire, City, Planning

Completed/Ongoing Mitigation Actions

Tsunami

Tsunami Wayfinding Signage

In 2013, the City worked with regional partners to develop new tsunami maps for the area, and a few tsunami evacuation signs were installed at that time. In 2014-15, Gearhart enhanced the wayfinding system by installing “You Are Here” signs in four key locations to specifically direct evacuees to high ground following an earthquake/tsunami. In 2018-19, the City participated with other jurisdictions in the countywide Wayfinding Assessment project, which served to identify gaps in the wayfinding system and creating a record of existing sign location to provide an easier way to maintain the system over time. Finally, in conjunction with the 2019-20 tsunami overlay project, the city was able to secure grant funding to purchase/install an estimated 60 signs to complete the sign system for tsunami evacuation. Future steps include maintaining and exploring ongoing opportunities for improvement as well as conducting evacuation exercises.

Emergency Cache Container Program

The City launched the cache container program in spring 2019. The COVID pandemic delayed the project initially, but first access drop-off date occurred in August 2020 and the second in October 2020. The program currently maintains 7 registered drums, and 9 residents are on the waiting list for the 2021 spring event.

Pre-Disaster Mitigation Reserve Fund

The city budget holds a Hazard Mitigation Fund where the fiscal year begins with \$15,000 in reserves available for planning and projects that seek to protect life and property from future natural disasters. Its existence has funded projects such as the Conex bins for the soon-to-start Emergency Cache program, emergency supplies including medications and first aid, a HAM radio hut for emergency communications, and a starter supply of shelf-stable MRE's (Meals Ready to Eat).

Tsunami Hazard Overlay Zone Adoption

In August 2019, the City of Gearhart adopted Ordinance No. 924 amending the Gearhart Comprehensive Plan and Zoning Ordinance to update tsunami hazard background, policies, and development standards. These components were established via Section 3.14 of the Gearhart Zoning Code—the Tsunami Hazard Overlay Zone (THOZ). The purpose of the Tsunami Hazard Overlay Zone is to increase the resilience of the community to a local source (Cascadia Subduction Zone) tsunami by establishing standards, requirements, incentives, and other measures to be applied in the review and authorization of land use and development activities in areas subject to tsunami hazards. Significant public and private investments have been made in development in areas which are now known to be subject to tsunami hazards. These standards are not intended to require the relocation of or otherwise regulate existing development within the Tsunami Hazard Overlay Zone. These standards are intended to limit, direct and encourage the development of land uses within areas subject to tsunami hazards in a manner that will reduce loss of life,

reduce damage to private and public property, reduce social, emotional, and economic disruptions; and increase the ability of the community to respond and recover.

Tsunami Studies and Information

The City of Gearhart was a key participant and driver for technical analyses and policy development completed by the State of Oregon with federal funding. Specifically, Oregon Coastal Management Program applied for and was successful in securing two grants from the National Oceanic and Atmospheric Administration (NOAA) to address identified gaps in local land use planning for tsunami hazards, both a Project of Special Merit (which concluded in September 2019) and a Coastal Resilience Grant (to conclude in June 2021). The Oregon Department of Geology and Mineral Industries (DOGAMI) was a lead partner in these efforts to complete innovative analyses, including time/distance evacuation modeling, called “Beat the Wave,” and casualty and building damage estimates for a local tsunami. These analyses covered many coastal jurisdictions, including the cities of Gearhart and Port Orford, all of Tillamook and Lincoln Counties, and the Coos Bay Estuary.

Leading up to the release of these publications were many in-person meetings, workshops, and open houses where the information was shared and revised (based on feedback) with elected officials, practitioners, emergency preparedness groups, and the public. This information has and will continue to help inform specific evacuation and mitigation improvement projects that will have the most impact in terms of lives saved. For example, many communities have utilized the Beat the Wave maps to inform where they place evacuation route signs to ensure the most efficient routes to safety are signed appropriately.

Plans and Policies

Table Error! No text of specified style in document.-1. City of Gearhart Plans and Policies

Plan/ Policy Name	Date	Owner/Author	Description	Relation to Natural Hazard Mitigation
City of Gearhart Comprehensive Plan		City of Gearhart	The purpose of the City's Comprehensive Plan is to control and promote development which is most desirable to the majority of the residents and property owners of the City. The Plan establishes a set of policies and guidelines within this context.	The Comp Plan outlines how the City addresses the statewide land use planning Goal 7, areas subject to natural hazards. Identifies how the City manages development in geologic, flood, dune, and other hazard areas.
City of Gearhart Zoning Ordinance	Jan. 2020	City of Gearhart	Outlines zones for use within the City and the uses within them.	Contains two hazard-specific zones: flood and tsunami overlay zones.
Transportation System Plan Volumes I & II	2017	City of Gearhart, ODOT/ DKS Associates	The TSP outlines the transportation system, needs and necessary improvements.	An updated TSP allows for effective tsunami evacuation planning to be situated upon current data and existing conditions for pedestrian networks and other infrastructure.
Hazard Acknowledgement Disclosure Statement (tsunami)	2019	City of Gearhart	Discloses the tsunami risk to developers in a formal disclosure.	Ensures new development includes an understanding of tsunami risk.
City of Gearhart Water Master Plan		City of Gearhart	Describes the City's water system and guides its operation.	Managing water supply is key to anticipating and preventing the impacts of drought.
City of Warrenton Water Master Plan		City of Warrenton	Describes the City's water system and guides its operation. City of Gearhart infrastructure is addressed in the Warrenton Plan.	Managing water supply is key to anticipating and preventing the impacts of drought.