

**GRAYS HARBOR COUNTY
2024 MULTI-JURISDICTION
HAZARD MITIGATION PLAN UPDATE
VOLUME 2: PLANNING PARTNER ANNEX
DOCUMENTS**

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**GRAYS HARBOR COUNTY MULTI-JURISDICTION
2024 HAZARD MITIGATION PLAN UPDATE
VOLUME 2: PLANNING PARTNER ANNEXES**

FINAL

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Grays Harbor County
2024 Multi-Jurisdiction Hazard Mitigation Plan Update
Volume 2—Planning Partner Annexes
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- B. Planning Team Ground Rules
- C. Procedures for Linking to the Hazard Mitigation Plan Update

CHAPTER 1.

PLANNING PARTNER PARTICIPATION

1.1 BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. Such planning efforts require all participating jurisdictions to fully participate in the process and formally adopt the resulting planning document. Chapter 44 of the Code of Federal Regulations (44 CFR) states:

Multi-jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan. (Section 201.6.a(4))

In the preparation of the *Grays Harbor County 2024 Multi-Jurisdiction Hazard Mitigation Plan Update*, a Planning Partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act of 2000 (DMA) for several eligible local governments in Grays Harbor County. The DMA defines a local government as follows:

Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.

There are two types of Planning Partners in this process, with distinct needs and capabilities:

- ✓ Incorporated municipalities (cities and towns)
- ✓ Special purpose districts (e.g., fire, hospital, transit)

For purposes of this update, the County elected to utilize the base plan as its document, with specific county data identified within the various tables within Volume 1.

1.2 THE PLANNING PARTNERSHIP

Initial Solicitation and Letters of Intent

The planning team solicited the participation of the County and recognized special purpose districts at the outset of this project. Initial letters and emails were sent out during the grant application process to identify potential stakeholders for this process, focusing first on existing planning partners to update their respective annex documents. The purpose of the letter was to introduce the planning process to jurisdictions in the County that could have a stake in the outcome of the planning effort, as well as to invite participation in the effort.

The planning process kickoff meeting was held to solicit additional planning partners and inform potential partners of the benefits of participation in this effort, as well as what would be required to meet FEMA's

active level of participation. A second letter defining that process was issued to all planning partners within the existing plan. County-identified eligible local governments within the planning area were invited to attend; a press release announcing the project was published and distributed by the County utilizing its LEPC and EMPC list, which reaches well over 200 individuals from all sectors, including private non-profits, schools, public health agencies, social service agencies, emergency management, public safety, special purpose districts, and municipal government personnel at all levels. Various agency and citizen stakeholders were also invited to this meeting. The goals of the meeting were as follows:

- Provide an overview of the Disaster Mitigation Act.
- Provide an update on the planning grant.
- Outline the Grays Harbor County plan update work plan.
- Describe the benefits of multi-jurisdictional planning.
- Solicit planning partners.
- Confirm the internal Planning Committee.

All interested local governments were provided with a list of planning partner expectations developed by the planning team and were informed of the obligations required for participation. Local governments wishing to join the planning effort were asked to provide the planning team with a “notice of intent to participate” that agreed to the planning partner expectations (see Appendix A) and designated a point of contact for their jurisdiction. In all, formal commitment was received from 20 planning partners, and the Grays Harbor County Planning Partnership was formed.

Maps for each participating city and for port districts are provided in the individual annexes for those jurisdictions. A map at the end of this chapter shows the boundaries of Grays Harbor County fire districts. These maps will be updated periodically as changes to the partnership occur, either through linkage or by a partner dropping out due to a failure to participate.

Planning Partner Expectations

The Planning Team developed the following list of planning partner expectations, which were confirmed by execution of a letter maintained by Grays Harbor County’s Deputy Director of Emergency Management:

- Each partner will provide a “Letter of Intent to Participate.”
- Each partner will support and participate in the development of the update by providing requested information. Support includes this body making decisions regarding plan development and scope on behalf of the partnership.
- Each partner will provide support for the public involvement strategy developed by the Planning Team in the form of mailing lists, possible meeting space, and media outreach such as newsletters, newspapers or direct-mailed brochures.
- Each partner will participate in plan update development activities such as:
 - Planning Team meetings
 - Public meetings or open houses
 - Workshops and planning partner sessions

- Public review and comment periods prior to adoption.

Attendance will be noted for each activity and used to track and document participation for each planning partner, as well as grant in-kind match purposes. A minimum level of participation was established, as identified in the ground rules attached as Appendix B - Planning Team Ground Rules.

- Each partner will be expected to perform a “consistency review” of all technical studies, plans, and ordinances specific to hazards identified within the planning area to determine the existence of plans, studies or ordinances not consistent with the equivalent documents reviewed in preparation of the County plan. For example: if a planning partner has a floodplain management plan that makes recommendations that are not consistent with any of the County’s basin plans, that plan will need to be reviewed for probable incorporation into the plan for the partner’s area.
- Each partner will be expected to review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction. County or contract resources will provide jurisdiction-specific mapping and technical consultation to aid in this task if unavailable by the local jurisdiction, but the determination of risk and vulnerability will be up to each partner.
- Each partner will be expected to review the mitigation recommendations chosen for the overall county and determine if they will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the overall plan recommendations will need to be identified, prioritized and reviewed to determine their benefits and costs.
- Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- Each partner will be required to sponsor or take part in at least one public meeting to present the draft plan at least two weeks prior to adoption (various ways in which this may be met).
- Each partner will be required to formally adopt the plan.

It should be noted that by adopting this plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume 1. Failure to meet these criteria may result in a partner being dropped from the partnership by the Planning Team, and thus losing eligibility under the scope of this plan.

Linkage Procedures

Eligible local jurisdictions that did not participate in development of this hazard mitigation plan update may comply with DMA requirements by linking to this plan following the procedures outlined in Appendix C.

1.3 ANNEX-PREPARATION PROCESS

Templates

Templates were created to help the Planning Partners prepare their jurisdiction-specific annexes. Since special purpose districts operate differently from incorporated municipalities, separate templates were created for the two types of jurisdictions. The templates were created so that all criteria of 44 CFR Section

201.6 would be met, based on the partners' capabilities and mode of operation. If templates were not completed in advance, each partner was required to participate in a technical assistance workshop during which key elements of the template were completed by a designated point of contact for each partner and a member of the planning team. The templates were set up to lead each partner through a series of steps that would generate the DMA-required elements that are specific for each partner.

Workshop

Workshops were held for Planning Partners to learn about the templates and the overall planning process. In addition to the workshops, one-on-one meetings and/or telephone conferences were also held to provide assistance. Topics addressed included the following:

- DMA
- Grays Harbor County plan background
- The Annex templates and Instructions
- Risk ranking (Calculated Priority Risk Index - CPRI)
- Developing an action plan
- Cost/benefit review.

The sessions provided technical assistance and an overview of the template completion process. Attendance at this workshop was mandatory under the planning partner expectations established by the Planning Team Committee. There was 100-percent attendance of the partnership at these sessions.

In the risk-ranking exercise, each planning partner was asked to rank each risk specifically for its jurisdiction, based on the impact on its population or facilities. Cities were asked to base this ranking on probability of occurrence and the potential impact on people, property and the economy. Special purpose districts were asked to base this ranking on probability of occurrence and the potential impact on their constituency, their vital facilities and the facilities' functionality after an event. The methodology followed that used for the countywide risk ranking presented in Volume 1. A principal objective of this exercise was to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes. Tools utilized during these sessions included the following:

- The risk assessment results developed for this plan, including identification of critical facilities impacted via an excel spreadsheet, and a loss matrix by municipal jurisdiction.
- Hazard maps for all hazards of concern.
- Special district boundary maps that illustrated the sphere of influence for each special purpose district partner.
- Hazard mitigation catalogs.
- Federal funding and technical assistance catalogs.
- Copies of partners' prior annexes, if applicable.
- Calculated Priority Risk Ranking Excel Worksheet and Table.
- Loss Matrices, Critical Facility Exposure and Impact Tables, Comprehensive Data Management System database attribute tables.

Prioritization

44 CFR requires actions identified in the action plan to be prioritized (Section 201.c.3.iii). The planning team developed a methodology for prioritizing the action plans that meets the needs of the partnership and the requirements of 44 CFR. The actions were prioritized according to the following criteria:

- **High Priority**—Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
- **Medium Priority**—Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
- **Low Priority**—Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and timeline for completion is long term (5 to 10 years).

These priority definitions are dynamic and can change from one category to another based on changes to a parameter such as availability of funding. For example, a project might be assigned a medium priority because of the uncertainty of a funding source, but be changed to high once a funding source has been identified. The prioritization schedule for this plan will be reviewed and updated as needed annually through the plan maintenance strategy.

Benefit/Cost Review

44 CFR requires the prioritization of the action plan to emphasize a benefit/cost analysis of the proposed actions. Because some actions may not be implemented for up to 10 years, benefit/cost analysis was qualitative and not of the detail required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. A review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to costs and benefits as follows:

- Cost ratings:
 - **High**—Existing funding levels are not adequate to cover the costs of the proposed action; implementation would require an increase in revenue through an alternative source (for example, bonds, grants, and fee increases).
 - **Medium**—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
 - **Low**—The action could be funded under the existing budget. The action is part of or can be part of an existing, ongoing program.
- Benefit ratings:
 - **High**—The action will have an immediate impact on the reduction of risk exposure to life and property.

- **Medium**—The action will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property.
- **Low**—Long-term benefits of the action are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

It should be noted that for many of the strategies identified in this action plan, funding might be sought under FEMA’s HMGP or PDM programs. Both of these programs require detailed benefit/cost analysis as part of the application process. These analyses will be performed on projects at the time of application preparation. The FEMA benefit-cost model will be used to perform this review. For projects not seeking financial assistance from grant programs that require this sort of analysis, the Partners reserve the right to define “benefits” according to parameters that meet their needs and the goals and objectives of this plan.

Analysis of Mitigation Initiatives

Each planning partner reviewed its recommended initiatives to classify each initiative based on the hazard it addresses and the type of mitigation it involves. Mitigation types used for this categorization are as follows:

- **Prevention** - Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. This includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Public Information and Education** - Public information campaigns or activities which inform citizens and elected officials about hazards and ways to mitigate them – a public education or awareness campaign, including efforts such as: real estate disclosure, hazard information centers, and school-age and adult education, all of which bring awareness of the hazards of concern.
- **Structural Projects** —Efforts taken to secure against acts of terrorism, manmade, or natural disasters. Types of projects include levees, reservoirs, channel improvements, or barricades which stop vehicles from approaching structures to protect.
- **Property Protection** – Actions taken that protect the properties. Types of efforts include: structural retrofit, property acquisition, elevation, relocation, insurance, storm shutters, shatter-resistant glass, sediment and erosion control, stream corridor restoration, etc. Protection can be at the individual homeowner level, or a service provided by police, fire, emergency management, or other public safety entities.
- **Emergency Services / Response** —Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities (e.g., sandbagging).
- **Natural Resource Protection** – Wetlands and floodplain protection, natural and beneficial uses of the floodplain, and best management practices. These include actions that preserve or restore the functions of natural systems. Includes sediment and erosion

control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

- **Recovery** —Actions that involve the construction or re-construction of structures in such a way as to reduce the impact of a hazard, or that assist in rebuilding or re-establishing a community after a disaster incident. It also includes advance planning to address recovery efforts which will take place after a disaster. Efforts are focused on re-establishing the planning region in such a way as enhance resiliency and reduce impacts to future incidents. Recovery differs from response, which occurs during, or immediately after an incident. Recovery views long-range, sustainable efforts.

1.4 FINAL COVERAGE UNDER THE PLAN

Of the 19 committed planning partners, 18 fully met the participation requirements specified by the Planning Team, with only Fire District #5 unable to complete their annex template due to staffing issues. The District did attend meetings as schedules allowed and did participate by providing information and critical facility data, but advised the Project Manager for the County that they would not be able to complete their annex for the initial submission. A placeholder has been inserted for the District for inclusion once it has the ability to complete the annex.

Eighteen planning partners attended the workshop or provided materials in advance to ensure annex completion as required, and all 18 subsequently submitted completed templates. All planning partners did a comprehensive review of not only the existing base plan information contained in Volume 1, but also their entire annex document with their internal planning team. As new information was available, their respect templates were updated accordingly. Where no new data existed, the 2018 HMP data remains the most accurate and carried forward.

All partners are to be commended for their efforts in completing the annex documents and participating in this update, as it was no small effort. Many were recovering from disaster incidents, were still impacted by COVID and other medical issues, had lost staffing, went through election turnovers, were in the midst of large mitigation projects, yet all clearly recognized the significance and importance to dedicate to this project. Therefore, 18 jurisdictions and special purpose districts are included in this volume and will seek DMA compliance under this plan.

Table 1-1 Planning Partner Status				
Jurisdiction	Letter of Intent Submitted	Attended Workshop?	Completed Template?	Will Be Covered by This Plan?
Grays Harbor County	Yes	Yes	Yes	Yes
City of Aberdeen	Yes	Yes	Yes	Yes
City of Cosmopolis	Yes	Yes	Yes	Yes
City of Elma	Yes	Yes	Yes	Yes
City of Hoquiam (including HHD)	Yes	Yes	Yes	Yes
City of McCleary	Yes	Yes	Yes	Pending
City of Montesano	Yes	Yes	Yes	Yes
City of Ocean Shores	Yes	Yes	Yes	Yes
City of Oakville	Yes	Yes	Yes	Pending
City of Westport	Yes	Yes	Yes	Yes
Grays Harbor Fire District No. 2	Yes	Yes	Yes	Yes
<i>Grays Harbor Fire District No. 5 (Placeholder – pending completion)</i>	Yes	Yes	No	No
Grays Harbor Fire District No. 7	Yes	Yes	Yes	Yes
Grays Harbor Fire District No. 8	Yes	Yes	Yes	Pending
South Beach Regional Fire Authority	Yes	Yes	Yes	Yes
Harbor Regional Health (formerly Grays Harbor County Hospital District #2)	Yes	Yes	Yes	Yes
Grays Harbor Transportation Authority	Yes	Yes	Yes	Yes
Grays Harbor College	Yes	Yes	Yes	Yes
Port of Grays Harbor	Yes	Yes	Yes	Yes

CHAPTER 2.

CITY OF ABERDEEN ANNEX UPDATE 2024

2.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Aberdeen, a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Aberdeen. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

2.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City of Aberdeen followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Aberdeen also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Rick Sangder 200 E. Market St Aberdeen, WA 98520 Telephone: 360-537-3228 rsangder@aberdeenwa.gov	Public Works - Director Primary Point of Contact	Revision of existing City of Aberdeen HMP including risk assessment, hazard analysis, and mitigation strategy. Attend planning team meetings; conduct review of hazard profiles; base plan and jurisdictional annex documents. Present plan to Council for review and adoption.
Brett Bradley, 1201 W. Heron Street Aberdeen, WA 98520 Telephone: 360-537-3218 bbradley@aberdeenwa.gov	Public Works - O&M Manager Alternate Point of Contact	Attended HMP meetings, serving as alternate POC; reviewed and revised existing City of Aberdeen HMP including risk assessment, hazard analysis, and mitigation strategy Conducted review of

Local Planning Team Members		
Name	Position/Title	Planning Tasks
		risk assessment, hazard profiles, and draft plans.
Dave Golding 700 W. Market St Aberdeen, WA 98520 Telephone: 360-537-3262 dgolding@aberndeenwa.gov	Public Safety - Fire Chief Alternate Point of Contact	Attended planning team meetings; assisted with revision of existing City of Aberdeen HMP including risk assessment, hazard analysis, and mitigation strategy. Provided input on plan concerning public safety viewpoint; conducted draft reviews.
Andy Snodgrass 200 E. Market St Aberdeen, WA 98520 Telephone: 360-537-3238 asnodgrass@aberndeenwa.gov	Public Safety – Deputy Police Chief	Attended meetings; assisted with revision of existing City of Aberdeen HMP including risk assessment, hazard analysis, and mitigation strategy. Reviewed draft plan, hazard profiles, and risk ranking documentation.
Trace Christensen 200 E. Market St. Aberdeen, WA 98520 tchristensen@aberndeenwa.gov	GIS Analyst	Provided assistance with identifying areas of risk during risk assessment portion of the plan, and completing City's maps for inclusion in the 2024 update.

2.3 COMMUNITY PROFILE

Date of Incorporation: Aberdeen was incorporated as a third-class city on May 12, 1890, became a second-class city in 1906 and a first-class city in 1929.

Current Population: The population, as recorded by the 2020 census was 17,013.

Population Growth: Aberdeen population growth, low and high projections:

<u>2023</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
17,487	17,788	18,563	19,209	20,050

Location and Description: Aberdeen is Grays Harbor County's largest city. The city was founded at the confluence of the Wishkah and Chehalis Rivers in Grays Harbor. Grays Harbor is on the Pacific coast of the

State of Washington, 45 miles north of the mouth of the Columbia River, 50 miles west of Olympia, 100 miles southwest of Seattle and 140 miles northwest of Portland.

Brief History: The region's rich fisheries and abundant timber supported a number of Native American communities and served to attract United States settlement in the mid-nineteenth century. During the latter half of the nineteenth century, a number of small communities were established on Grays Harbor, but Aberdeen quickly grew to dominate as the commercial and cultural hub. Lumber, fisheries, and shipbuilding have fueled the local economy for much of the region's history. More recently extractive industries have declined and tourism and commercial retail have increased.

Climate: Aberdeen experiences a climate on the boundary between Mediterranean (Köppen *Csb*) and oceanic (Köppen *Cfb*). Although the rainfall is extremely high between October and March, July and August still have a distinct excess of evaporation over rainfall. Temperatures are generally very mild due to the proximity of the warm Pacific Ocean and the Kuroshio Current: snow is rare although during December 1964 22.3 inches (57 cm) fell. Occasionally, southeasterly winds can cause very high temperatures. For example, in August 1981, the temperature in Aberdeen reached 105 °F (40.6 °C).

Governing Body Format: The City of Aberdeen is a first-class city and consists of a Mayor, twelve Council members, two from each ward, who are elected by the voters.

Development Trends: Since the last Hazard Mitigation Plan update in 2018, the City has completed extensive work in identifying hazards throughout the City through updates to the Critical Areas Ordinance, the Floodplain Ordinance, the Shoreline Master Program, the Capital Facilities Plan, the Water Comprehensive Plan, the Wastewater Comprehensive Plan and the Comprehensive Land Use Plan. The City is also currently in the process of updating the 1999 Zoning Code and the Stormwater Comprehensive Plan. All these updates have been completed with the most current requirements regarding land use and hazard mitigation. The City has seen many changes in our land use plans, policies and procedures and these changes have resulted in more sustainable structures within the critical areas of the City.

Since 2018 the City of Aberdeen has had 258 new structures built within City limits. Because of the new development regulations referenced above, these structures have been built in a manner that will not increase the risk to Aberdeen, and in many cases actively reduce risks. Hazards mitigated are floods, severe weather, landslides, and earthquakes. These hazards have been mitigated through flood proofing, seismic requirements and limiting development in the floodplain and on critical slopes.

What is not included in the new development numbers are the significant number of permits for remodels of both residential and commercial properties that have been issued since 2018. These numbers are important not only because of the reinvestment but also because the permits issued would have resulted in flood proofing, elevating of structures, earthquake retrofitting, etc. but are difficult to quantify.

The biggest contribution to the mitigation of hazards has been through the City's investment in critical infrastructure. Table 2-12 identifies projects currently underway or recently completed that have had or will have an everlasting effect on the communities they serve. These are projects not previously identified in the strategy table, but are additional strategies which will reduce the risk from the various hazards of concern.

Economy: Aberdeen functions as the financial hub of the Grays Harbor region. The downtown retail core serves much of the surrounding area. New industries have developed at the Port of Grays Harbor. Tourism plays an important role in the economy. Aberdeen, along with its twin city Hoquiam, serves as gateway

to the Olympic National Park. Aberdeen is also the home to the Grays Harbor Historical Seaport, a non-profit organization that operates the *Lady Washington*, a full-scale reproduction of the tall ship that was the first United States vessel to visit the West Coast in 1788.

Aberdeen faces the same challenges as many Washington towns in adjusting to changes in their economies in the face of declining logging and fishing. A new mix of retail, different industries, and tourism offers a new kind of future, one that Aberdeen is embracing.

2.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the jurisdiction. Table 2-1 lists all past occurrences of natural hazards within the jurisdiction. If available, dollar loss data is also included.

Table 2-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
Flood	4650	12/26/2021	Unknown
Severe Storm(s)	4593	12/29/2020	Unknown
Flood	4539	1/20/2020	Unknown
COVID	4481	1/20/2020	Unknown
Land Slide	NA	12/21/2019	Approx. \$850,000
Severe Storm(s)	4418	12/20/2018	Unknown
Flood	4253	12/01/2015	Unknown
Severe Storm(s)	4242	08/29/2015	Unknown
Severe Storm(s)	4056	01/14/2012	Unknown
Severe Storm(s)	1825	12/12/2008	Unknown
Flood	1817	01/06/2009	Unknown
Severe Storm(s)	1734	12/01/2007	Unknown
Severe Storm(s)	1682	12/14/2006	Unknown
Severe Storm(s)	1671	11/02/2006	Unknown
Severe Storm(s)	1641	01/27/2006	Unknown
Severe Storm(s)	1499	10/15/2003	Unknown
Earthquake	1361	02/28/2001	Unknown
Flood	1172	03/18/1997	Unknown
Severe Storm(s)	1159	12/26/1996	Unknown
Flood	1100	01/26/1996	Unknown
Severe Storm(s)	1079	11/07/1995	Unknown

**Table 2-1
Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
Fishing Losses	1037	05/01/1994	Unknown
Flood	883	11/09/1990	Unknown
Flood	852	01/06/1990	Unknown
Volcano	623	05/21/1980	Unknown
Flood	612	12/31/1979	Unknown
Flood	545	12/10/1977	Unknown
Flood	492	12/13/1975	Unknown
Flood	322	02/01/1972	Unknown
Flood	300	02/09/1971	Unknown
Flood	185	12/29/1964	Unknown

2.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

2.6 NATIONAL FLOOD INSURANCE INFORMATION

The City of Aberdeen maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 15.55 of the Aberdeen Municipal Code. Within Section 15.55.060 AMC there are definitions for "substantial damage" and "substantial improvement" as follows:

- "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred. "Substantial damage" also means flood-related damage sustained by a structure on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damage occurred.

- “Substantial improvement” means any repair, reconstruction, rehabilitation, addition, replacement, or other improvement of a structure, taking place during a five (5) year period, the cumulative cost of which equals or exceeds fifty (50) percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not include any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.

Chapter 15.55 also provides that the "significant damage or improvement" provisions allow for any improvement of a structure to correct exiting violations of state or local health sanitary, or safety code specifications which have been identified by the local building or electrical code and which are the minimum necessary to assure safe living conditions; or

Any alteration of a "historic structure" provided that the alteration will not preclude the structures continued designation as a "historic structure."

Floodplain Hazard Protection Chapter 15.55 includes requirements for all new and substantially improved development within the Special Flood Hazard Area (SFHA) -- including, but not limited to, development permits, elevation certificates, floodproofing, freeboard elevation above the base flood elevation, 5 year cumulative, required elevation benchmark for all new development within all zones.

The City maintains a Floodplain Administrator and Building Inspectors, that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Information on the community’s National Flood Insurance Program (NFIP) compliance is presented in Table 2-2. This identifies the status of the jurisdiction’s involvement with the NFIP. The City of Aberdeen (Community Number 530058) currently has 227 NFIP policies in force, with a total insured value of \$43,582,000, with a total insurance premium cost citywide of \$183,996. This equates to 370 fewer policies in place in 2024 than 2017 during the last plan update.

Repetitive flood loss records supplied by the State of Washington for this 2024 update are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 4 – Single Family Residence
- Number of FEMA-Identified Severe Repetitive Loss Properties: 1 – Single Family Residence
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: None

Table 2-2 National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Public Works and Community Development
What department is responsible for floodplain management in your community?	Community Development
What department is responsible for floodplain management in your community?	Community Development
Who is your community's floodplain Administrator?	Community Development/Renee Reynolds
Do you have any certified floodplain managers on staff in your community?	Yes
What is the date of adoption of your flood damage prevention ordinance?	February 1, 2017; however, we are currently working with FEMA on an updated ordinance
When was the most recent Community Assistance Visit or Community Assistance Contact?	7-Jun-22
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	None
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	The City of Aberdeen is in the process of joining the CRS program. We are currently in the process of getting our CAV approved.

2.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 2-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 2-3 Legal and Regulatory Capability					
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments	
Codes, Ordinances & Requirements					
Zoning Ordinance	X				
Floodplain Ordinance	X				
Stormwater Management	X		X		
Post Disaster Recovery					
Real Estate Disclosure	X			State mandated	
Growth Management	X		X	The City does not plan under GMA	
Site Plan Review	X		X		
Public Health and Safety	X				
Coastal Zone Management	X		X		
Climate Change Adaption	X		X		
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	X		X	Critical Areas Ordinance (CAO) updated in 2022	
Environmental Protection	X		X		
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	X		X	Includes critical areas.	
Environmental Protection	X		X		
Planning Documents					
Comprehensive Plan	X			Updated in 2021	Comprehensive Plan
Floodplain or Basin Plan				X	x
Stormwater Plan	X		X		
Capital Improvement Plan	X				
Habitat Conservation Plan	x		X	Lies within the CAO	
Economic Development Plan				The City does not have one	
Shoreline Management Plan	X		X	Updated in 2023	

Table 2-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Community Wildfire Protection Plan				
Transportation Plan	X			
Historic Preservation Plan	X			Adopted in 2013
Active Living Transportation Master Plan	X			Adopted in 2015
Comprehensive Plan	X			Updated in 2021
Response/Recovery Planning				
Comprehensive Emergency Management Plan				
Threat and Hazard Identification and Risk Assessment	X			
Terrorism Plan				
Post-Disaster Recovery Plan				
Community of Operations Plan	X			
Public Health Plan	X			
Boards and Commissions				
Planning Commission	X			
Historic Preservation Commission	X			
Mitigation Planning Committee				
Maintenance programs to reduce risk (tree trimming, clearing, drainage systems, chipping, etc.)	X			
Mutual Aid Agreements/Memorandums of Understanding	X			
Other				

2.6.2 Administrative and Technical Capabilities

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 2-4. These are elements

which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 2-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development – Director Public Works – City Engineer
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Public Works – City Engineer Public Works – Director Community Development – Building Inspector III Community Development – Director
Engineers specializing in construction practices?	Yes	Public Works – City Engineer
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development – Director Public Works - Director Public Works – City Engineer
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Public Works – City Engineer Public Works – Director Community Development – Building Inspector III Community Development – Director
Engineers specializing in construction practices?	Yes	Public Works – City Engineer
Planners or engineers with an understanding of natural hazards	Yes	Community Development – Director Public Works – City Engineer
Staff with training in benefit/cost analysis	Yes	Public Works – City Engineer Community Development – Building Inspector III
Surveyors	Yes	Public Works – Engineer Public Works – Engineer Tech
Personnel skilled or trained in GIS applications	Yes	Public Works – Engineer Tech
Personnel skilled or trained in Hazus use	No	
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	Grays Harbor County EMD
Grant writers	Yes	Public Works – City Engineer Community Development – Director
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)		

Table 2-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Hazard data and information available to public	Yes	Public Works Community Development
Maintain Elevation Certificates	No	
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Grays Harbor County – Community Emergency Response Team (CERT)
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	City of Aberdeen – Aberdeen Stream Team Grays Harbor College – Grays Harbor Stream Team Private – Friends of Grays Harbor
Organization focused on individuals with access and functional needs populations	Yes	Grays Harbor Housing Authority NeighborWorks United Way of Grays Harbor Union Gospel Mission
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	City of Aberdeen – K-3 Fire Safety Program City of Aberdeen – Aberdeen Stream Team (4-6 grades)
Natural disaster or safety related school programs?	Yes	School earthquake and tsunami evacuation drills
Public-private partnership initiatives addressing disaster-related issues?		
Multi-seasonal public awareness program?	Yes	City of Aberdeen – Utility bill inserts, radio interviews, website bi-monthly newsletter “Aberdeen Matters” and social media posts
Other	Yes	City of Aberdeen – Utility bill inserts, radio interviews, website bi-monthly newsletter “Aberdeen Matters” and social media posts
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	
Noxious Weed Eradication Program or other vegetation management	Yes	Public Works – Mowing of stormwater ditches and herbicide application within rights-of-way
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Public Works – Stream Team waterway cleanups and City stormwater maintenance crews

Table 2-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Stream restoration program	Yes	Public Works – Stream Team waterway cleanups and Fry Creek restoration project

2.6.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 2-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 2-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other: Good Neighbors Revolving Loan Fund	Yes

2.6.4 Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 2-6. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 2-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Protection Class	5	
Building Code Effectiveness Grading Schedule	Yes	
Commercial	4	
Dwelling	4	
Storm Ready	Yes	7-Mar-07
Firewise	No	
Tsunami Ready (if applicable)	Yes	2022

2.7 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the City of Aberdeen. Table 2-7 presents the ranking of the hazards of concern based on their CPRI score. Table 2-8 identifies the CPRI scoring. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ❑ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- ❑ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ❑ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- ❑ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.

- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 2-7. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.6	High
2	Tsunami	3.6	High
3	Landslides	3.55	High
4	Severe Weather	3.25	High
5	Flood *	3.05	High
6	Wildfire	2.8	Medium
7	Other Hazards of Concern ***	2.3	Medium
8	Climate Change **	1.55	Low
9	Volcano	1.35	Low
10	Drought	1.15	Low
11	Erosion	1.15	Low
* Includes coastal flooding, local flooding, and dam failure			
** Includes sea level rise			
*** Hazardous materials incident			

Table 2-8. City of Aberdeen 2024 CPRI Score and Hazard Ranking																							
Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change		2			1				1							1				4	1.55	8	Low
Drought	1				1				1							1				4	1.15	10	Low

Table 2-8.
City of Aberdeen 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Earthquake			3					4				4	4							4	3.60	1	High
Erosion	1				1				1							1				4	1.15	11	Low
Flood				4			3			2					2				3		3.05	5	High
Landslides				4			3				3		4						3		3.55	3	High
Severe Weather				4			3				3				2				3		3.25	4	High
Tsunami			3					4				4	4							4	3.60	2	High
Volcano	1				1				1					3				2			1.35	9	Low
Wildfire		2					3				3		4							4	2.80	6	Medium
Hazmat		2				2				2			4					2			2.30	7	Medium

In addition to the hazards of concern, the City of Aberdeen also owns several high hazard dams. After completion of the 2018 plan, in order to gain additional sources of grant funds, the City developed additional data on the Dam Hazard and filed a supplement to its 2018 HMP to incorporate additional information. For this update, that data is included in the Flood profile (Section 8.1.2) of the Base Plan and is therefore not repeated in its entirety in the City of Aberdeen's Annex. For sake of brevity, the City owns the following dams for which it has developed some response plans (data deemed confidential except as indicated in Section 8.1.2 of the base plan):

- Fairview Reservoir #1 – WA00548 Hazard Category - 1B
- Fairview Reservoir #2 – WA01728 Hazard Category - 1B
- Lake Aberdeen Dam – WA00112 Hazard Category – 1C
- Malinowski Dam – WA00341 Hazard Category – 2D
- Wynoochee Dam – WA00302 Hazard Category - 1B
- Wynoochee Fish Barrier Dam – WA01406 Hazard Category – 3

2.8 MITIGATION GOALS AND OBJECTIVES

The City of Aberdeen adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

2.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 2-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Table 2-9. Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 – Locate Dedicated Emergency Coordination & Operation Center Outside of Tsunami Inundation Zone									
New Assets	Ea, T, F, L, SW, OHC, W, V	O-1, O-5, O-6, O-7, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County, Region
INITIATIVE #2 – Citywide Critical Facilities Hazard Assessment & Mitigation Upgrades									
Existing Assets	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-2, O-3, O-4, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County, Region

**Table 2-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #3 – Seek grant funding to replace or significantly upgrade City Hall.									
Existing Assets	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-2, O-3, O-4, O-6, O-8, O-9	City of Aberdeen	High	Grants, City Funds	Short-Term	Yes, Modified	Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local
INITIATIVE #4 – Seek grant funding to replace the Fire Station based on structural assessment completed.									
New	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-1, O-2, O-3, O-4, O-6, O-7, O-8, O-9	City of Aberdeen	High	Grants, City Funds	Short-Term	No	Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County, Region
INITIATIVE #5 – Seek grant funding to replace or significantly remodel existing Police Station									
Existing Assets	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-1, O-2, O-3, O-4, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes, modified	Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County
INITIATIVE #6 – Seek grant funding to continue Sewer System Upgrades									
Existing Assets	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-2, O-3, O-4, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	No	Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Facility, Local
INITIATIVE #7 – Water System Hazard Assessment & Mitigation Upgrades									
Existing Assets	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-1, O-2, O-3, O-4, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local

**Table 2-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #8 – Citywide Seismic Vulnerability Structure Assessment									
Existing Assets	Ea, T	O-1, O-2, O-4, O-5, O-6, O-8, O-9	City of Aberdeen	Low	Grants, City Funds	Short-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Recovery	Facility, Local
INITIATIVE #9 – Citywide Seismic Upgrade Incentives									
Existing Assets	Ea, T	O-1, O-2, O-4, O-5, O-6, O-8, O-9	City of Aberdeen	Low	Grants, City Funds	Long-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Recovery	Facility, Local
INITIATIVE #10 – Tsunami Preparedness Planning									
New and Existing Assets	T	O-1, O-2, O-3, O-5, O-6, O-7, O-8	City of Aberdeen	Low	Grants, City Funds	Long-Term	Yes	Public Information, Preventative Activities, Emergency Services	Local, County, Region
INITIATIVE #11 – Tsunami Vertical Shelters									
New and Existing Assets	T	O-1, O-2, O-3, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	High	Grants, City Funds	Long-Term	Yes	Public Information, Preventative Activities, Structural Projects, Emergency Services, Recovery	Facility, Local

**Table 2-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #12 – Citywide Slope Assessment & Landslide Risk Reduction									
New and Existing Assets	L, SW	O-2, O-3, O-6, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Preventative Activities, Structural Projects, Property Protection, Natural Resource Protection	Local
INITIATIVE #13 – Hazard Outreach Program									
New and Existing Assets	Ea, T, F, L, SW, CC, OHC, D, W, V, Er	O-2, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	Low	Grants, City Funds	Long-Term	Yes	Public Information, Preventative Activities, Emergency Services, Recovery	Local, County
INITIATIVE #14 – FEMA Community Rating System Participation									
New and Existing Assets	F, SW	O-1, O-2, O-3, O-4, O-5, O-6, O-8, O-9	City of Aberdeen	Low	Grants, City Funds	Long-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Recovery	Local
INITIATIVE #15 – North Shore Levee (TimberWorks Master Plan)									
New and Existing Assets	F, SW, CC	O-2, O-4, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	High	Grants, City Funds	Short-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County, Region

**Table 2-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #16 – Fry Creek Restoration & Flood Reduction (TimberWorks Master Plan)									
New and Existing Assets	F, SW, CC	O-2, O-4, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Facility, Local
INITIATIVE #17 – Stormwater Detention Facilities at City Parks (TimberWorks Master Plan)									
New and Existing Assets	F, SW, CC	O-2, O-4, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local
INITIATIVE #18 – Stormwater Pump System Assessment & Upgrades (TimberWorks Master Plan)									
New and Existing Assets	F, SW, CC	O-2, O-4, O-6, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local
INITIATIVE #19 – Undersized Culvert Replacements (TimberWorks Master Plan)									

**Table 2-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing Assets	F, SW, CC	O-2, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	No	Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Facility, Local, County, Region
INITIATIVE #20 – Local Creek Floodplain Restoration (TimberWorks Master Plan)									
Existing Assets	F, SW, CC	O-2, O-5, O-6, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Local
INITIATIVE #21 – Pioneer Boulevard Stormwater Retrofit (TimberWorks Master Plan)									
Existing Assets	T, F, L, SW, CC	O-2, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Short-Term	Yes	Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local
INITIATIVE #22 – East Aberdeen Levee (TimberWorks Master Plan)									

**Table 2-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New and Existing Assets	F, SW, CC	O-2, O-4, O-5, O-6, O-7, O-8, O-9	City of Aberdeen	High	Grants, City Funds	Short-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County, Region
INITIATIVE #23 – Flood Risk & Reduction Studies (TimberWorks Master Plan)									
New and Existing Assets	F, SW, CC	O-2, O-3, O-5, O-6, O-8	City of Aberdeen	Low	Grants, City Funds	Short-Term	Yes	Public Information, Preventative Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Local
INITIATIVE #24 – Repetitive Loss Property Buyouts									
Existing Assets	F, L, SW, CC	O-1, O-2, O-6, O-8, O-9	City of Aberdeen	Medium	Grants, City Funds	Long-Term	Yes	Preventative Activities, Structural Projects, Property Protection, Natural Resource Protection	Facility, Local
Initiative #25 – Seek grant funding to complete a climate change adaptation study to determine level of impact to the City and identify mitigation efforts to reduce the impact of Climate Change.									

Table 2-9.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New and Existing	All	All	City of Aberdeen	Medium	Grant Funds	Short-Term	No	Preventative, Natural Resource Protection, Property Protection	Local

2.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 2-10 identifies the prioritization for each initiative.

Table 2-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	5	High	Medium	Yes	Yes	Partially	Medium
2	7	High	Medium	Yes	Yes	Partially	Medium
3	6	High	High	Yes	Yes	Partially	High
4	8	High	High	Yes	Yes	Partially	High
5	8	High	High	Yes	Yes	Partially	High
6	7	High	Medium	Yes	Yes	Partially	Medium
7	8	High	Medium	Yes	Yes	Partially	Medium
8	7	High	Low	Yes	Yes	No	High
9	7	High	Low	Yes	Yes	Partially	High
10	7	High	Low	Yes	Yes	Partially	High
11	8	High	High	Yes	Yes	No	Medium

Table 2-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority ^a
12	5	Medium	Medium	Yes	Yes	Partially	Medium
13	6	Medium	Low	Yes	Yes	Partially	Medium
14	8	Medium	Low	Yes	Yes	Partially	Medium
15	7	High	High	Yes	Yes	Partially	Medium
16	7	High	Medium	Yes	Yes	Partially	Medium
17	7	High	Medium	Yes	Yes	Partially	Medium
18	5	High	Medium	Yes	Yes	No	Medium
19	6	Medium	Medium	Yes	Yes	No	Medium
20	5	Medium	Medium	Yes	Yes	No	Medium
21	6	Medium	Medium	Yes	Yes	Partially	Medium
22	7	High	High	Yes	Yes	No	Medium
23	5	High	Low	Yes	Yes	No	High
24	5	High	Medium	Yes	Yes	No	Medium
25	9	High	Medium	Yes	Yes	No	Medium

a. See Chapter 1 for explanation of priorities.

2.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 2-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan, and their implementation status at the time this update was prepared. Table 2-12 identifies additional mitigation projects which the City has undertaken. Several of these projects include significant FEMA and other grant funding awards, as indicated. The status of those efforts is also provided.

Table 2-11. 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
		Completed	Continual / Ongoing Nature	Removed - / No Longer Relevant / No Action	Carried Over
Mitigation Strategy	Project Status				
INITIATIVE #1 – Locate Dedicated Emergency Coordination & Operation Center Outside of Tsunami Inundation Zone	Surplus vehicle has been acquired and is being converted for use as a mobile command vehicle EOC; however, the City may elect to continue to seek grant funding to construct a new Operations Center outside of the Tsunami Inundation Zone.	X			X
INITIATIVE #2 – Citywide Critical Facilities Hazard Assessment & Mitigation Upgrades	Carried forward - Ongoing, assessment Completed, Projects - WEPFFCF, FFFCF, PBSR, EAL, WCFR, NAFS, ACCI, ARU				X
INITIATIVE #3 – City Hall Hazard Assessment & Mitigation Upgrades	Building assessment Completed, roof replaced; additional work still needed on structure. Strategy modified to include grant funding for structure upgrades or new structure.	X			X
INITIATIVE #4 – Fire Station Hazard Assessment & Mitigation Upgrades	Assessment Completed - Building to be replaced. Strategy modified to include grant funding for structure upgrades or new structure.	X			

Table 2-11. 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
Mitigation Strategy	Project Status	Completed	Continual / Ongoing Nature	Removed - / No Longer Relevant / No Action	Carried Over
INITIATIVE #5 – Police Station Hazard Assessment & Mitigation Upgrades	Building assessment Completed, roof replaced - Building to be replaced or rehabbed. Strategy modified to include grant funding for structure upgrades or new structure.	X			X
INITIATIVE #6 – Sewer System Hazard Assessment & Mitigation Upgrades	Assessment Completed, NSL design changed to protect the WWTP from coastal flooding. Strategy modified to include grant funding for system upgrades.	X			X
INITIATIVE #7 – Water System Hazard Assessment & Mitigation Upgrades	Assessment Completed, From assessment, Fairview Reservoir #1 taken out of service; additional assessments are still necessary	X			X
INITIATIVE #8 – Citywide Seismic Vulnerability Structure Assessment	The City has taken steps to identify structures at risk or vulnerable to seismic impact were completed, such as with the fire and police stations, but additional structures still need to be assessed.	X			x
INITIATIVE #9 – Citywide Seismic Upgrade Incentives	Some seismic studies and upgrades have occurred, but additional studies are necessary.	X			x

Table 2-11. 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
		Completed	Continual/Ongoing Nature	Removed -/No Longer Relevant / No Action	Carried Over
Mitigation Strategy	Project Status				
INITIATIVE #10 – Tsunami Preparedness Planning	New DNR maps for tsunami evacuation and inundation zones have been completed and utilized in this risk assessment; however, continued public outreach is necessary to ensure citizens remain aware of the evacuation routes and inundation areas.	X	X		X
INITIATIVE #11 – Tsunami Vertical Shelters	The City continues to view this as a valid project, but no work has been completed since the 2018 plan was completed.				X
INITIATIVE #12 – Citywide Slope Assessment & Landslide Risk Reduction	Some slope stability projects have been completed, such as for the Fairview Reservoir, but additional assessments will be needed.	X			X
INITIATIVE #13 – Hazard Outreach Program	With the completion of this mitigation plan, additional hazard outreach to the citizens will be necessary to continue to present hazard data pursuant to plan maintenance section of the HMP.	X			X

Table 2-11. 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
Mitigation Strategy	Project Status	Completed	Continual/Ongoing Nature	Removed -/No Longer Relevant / No Action	Carried Over
INITIATIVE #14 – FEMA Community Rating System Participation	While the City feels this would be a valuable tool, it lacks current funding and staffing to administer the program, but it is carrying the project forward in hopes of someday achieving this goal.				X
INITIATIVE #15 – North Shore Levee (TimberWorks Master Plan)	A FEMA BRIC grant was received for this project, which is currently in the design/permitting phase (see Table 1-12).				X
INITIATIVE #16 – Fry Creek Restoration & Flood Reduction (TimberWorks Master Plan)	Various elements of this project are currently underway, including the Fry Creek Pump Station, which will increase stormwater conveyance from the largest drainage basin affecting both the Cities of Aberdeen and Hoquiam. Also incorporates automatic flood control structures which remain normally open increasing habitat benefits to Fry Creek as well. (See Table 1-12 for grant award information). With potential future improvements also anticipated to allow for public access and trails, this project remains active and is carried forward.				X

Table 2-11. 2024 Status of 2018 Hazard Mitigation Action Plan				
		Current Status		
Mitigation Strategy	Project Status	Completed	Continual / Ongoing Nature	Removed - / No Longer Relevant / No Action Carried Over
INITIATIVE #17 – Stormwater Detention Facilities at City Parks (TimberWorks Master Plan)	Several stormwater projects are underway as identified in Table 1-12, but additional work in other areas is necessary, and therefore this project is carried forward.			X
INITIATIVE #18 – Stormwater Pump System Assessment & Upgrades (TimberWorks Master Plan)	Several stormwater projects are underway as identified in Table 1-12, but additional work in other areas is necessary, and therefore this project is carried forward.			
INITIATIVE #19 – Undersized Culvert Replacements (TimberWorks Master Plan)	Fry Creek project includes culvert replacements; however, additional work is necessary in other areas.	X		X
INITIATIVE #20 – Local Creek Floodplain Restoration (TimberWorks Master Plan)	This project is currently under development; received grant funds. Please see Table 1-12.			X
INITIATIVE #21 – Pioneer Boulevard Stormwater Retrofit (TimberWorks Master Plan)	Project remains active, but no funding has become available to address the project.			X

Table 2-11. 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
Mitigation Strategy	Project Status	Completed	Continual /Ongoing Nature	Removed - /No Longer Relevant / No Action	Carried Over
INITIATIVE #22 – East Aberdeen Levee (TimberWorks Master Plan)	Project remains current, but no action has been taken since completion of the 2018 plan.				X
INITIATIVE #23 – Flood Risk & Reduction Studies (TimberWorks Master Plan)	While some studies have been completed and appropriate action taken to implement the studies, such as for the Farragut Street Pump Station, additional studies are needed.	X			X
INITIATIVE #24 – Repetitive Loss Property Buyouts	No buy outs conducted; project remains valid and may be a future grant project.				X

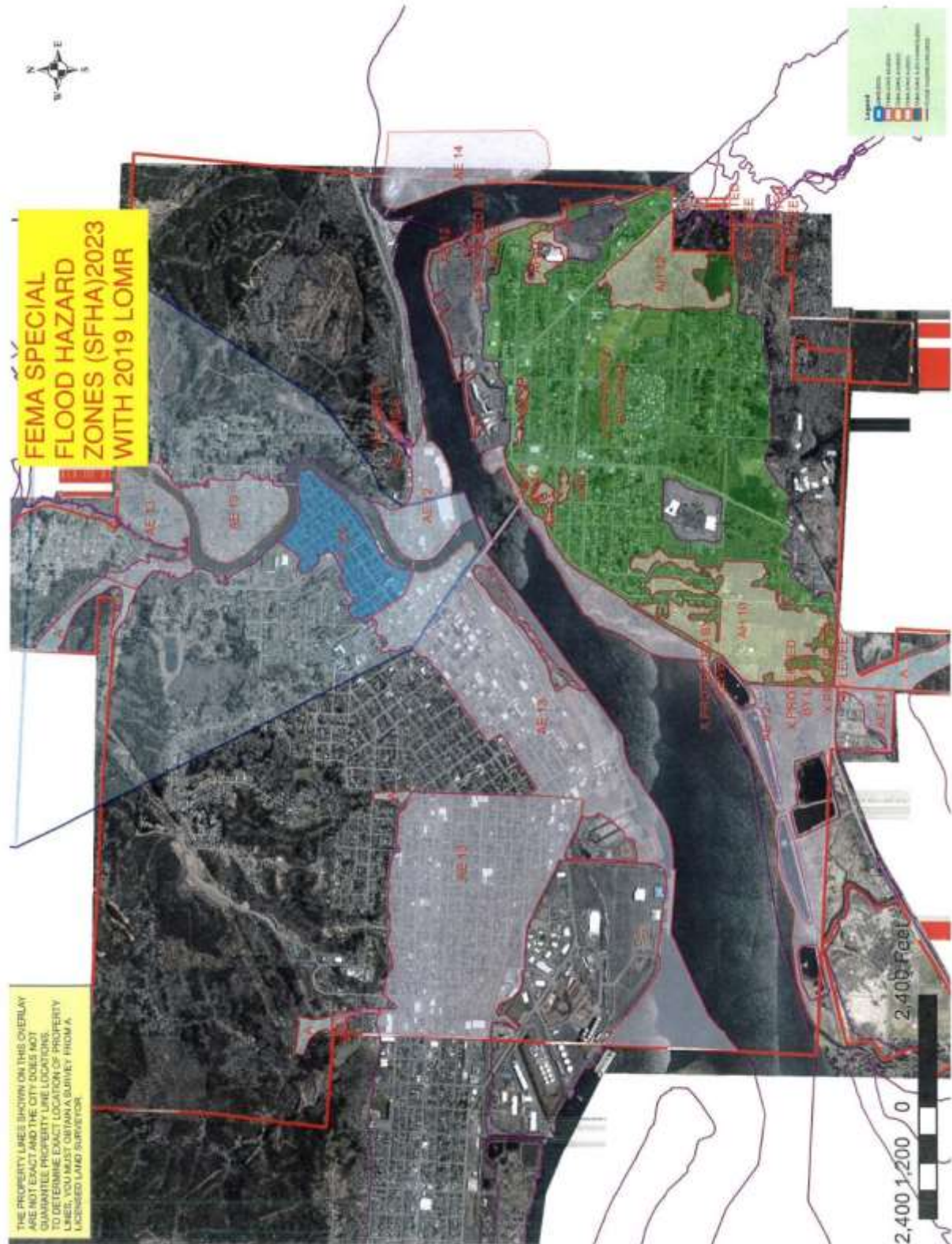
Table 2-12. Additional Mitigation Projects Completed or Underway by City of Aberdeen					
Project Name	Acronym	HMP Year	Funding Source	Project Description	2024 Status
North Shore Levee Project	NSL	2018	FEMA BRIC (\$50M), FEMA PDM (\$4.94M), FEMA PDM (\$9.8M), State (\$18M)	North Shore Levee – Provides protection from coastal flooding to over 3100 properties, including the City of Aberdeen Wastewater Treatment Plant. Additionally, the work removes these properties from the special flood hazard areas, eliminating the requirement of flood insurance.	Currently in Design / Permitting. Construction in 2026
Fry Creek Pump Station	FCPS	2018	State (\$20.1M), County (\$300k)	Fry Creek Pump Station – Increases stormwater conveyance from the largest drainage basin affecting both the Cities of Aberdeen and Hoquiam. Also incorporates automatic flood control structures which remain normally open increasing habitat benefits to Fry Creek as well.	Completion Date: Summer 2024
Fry Creek Restoration Project	FCR	2018	State (\$2.73M), City (\$900k)	Fry Creek Restoration – Increases flood storage and conveyance in addition to enhancing habitat in salmon stream. Future improvements also include public access and trails.	Currently out for bid. Completion Date Fall 2024

Table 2-12. Additional Mitigation Projects Completed or Underway by City of Aberdeen					
Project Name	Acronym	HMP Year	Funding Source	Project Description	2024 Status
Division Street Pump Station	DSPS	2018	State (\$500k)	Division Street Pump Station – Increases stormwater conveyance and provides additional reliability in providing overflow capacity from multiple drainage basins of downtown Aberdeen.	Currently in Design Phase.
Farragut Street Pump Station	FSPS	2018	State (\$1.12M)	Farragut Pump Station Upgrade – Increase stormwater conveyance in a frequently flooded basin.	Currently in Design Phase.
TsunamiReady City (NOAA)	TRC	2018		Certification as a TsunamiReady city is a volunteer program helps communities minimize the risk posed by tsunamis through better risk assessment, planning, education and warning communications.	Completed
Fairview Reservoir 1 - Slope Stability Study Phase I	FRSSS1	2018	FEMA HHPD (\$118k)	Slope stability analysis of the North slope of Fairview Reservoir #1	Completed
Fairview Reservoir 1 - Slope Stability Study Phase II	FRSSS2	2018	FEMA HHPD (\$60k)	Slope stability analysis of the South slope of Fairview Reservoir #1	Completed

Table 2-12. Additional Mitigation Projects Completed or Underway by City of Aberdeen					
Project Name	Acronym	HMP Year	Funding Source	Project Description	2024 Status
North Aberdeen Bridge Replacement	NABR	2018	FFY 2022 Local Bridge Program (\$23.16M)	Replacement of the Antiquated North Aberdeen Bridge	Currently in Design Phase. Construction fully funded.
North Aberdeen Feasibility Study	NAFS	2023		A flood reduction study is necessary to identify specific projects to reduce flood risk. Potential work may include enhancement of existing streams and/or wetlands in addition to flood storage and conveyance improvements. An ancillary benefit of future work will be the potential for public access and trails.	Alternatives Analysis. Looking for funding.
Alder Creek Capacity Improvements	ACCI	2023		Corrective action is necessary to mitigate runoff diversion affecting adjacent drainage basins. Future improvements can increase flood storage and conveyance as well as stream habitat.	Alternatives Analysis. Looking for funding.
Alden Road Upgrade	ARU	2023		Conduct corrective action to convey stormwater runoff from the North of Alden Road - South to Canyon Court.	Construction to begin Summer 2024

2.12 HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. These maps were prepared by the City outside of the HMP process. Questions concerning the maps should be directed to the City's primary point of contact for this effort.













CHAPTER 3.

CITY OF COSMOPOLIS 2024 ANNEX UPDATE

3.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Cosmopolis (City), a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update (Base Plan). This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the Grays Harbor County Hazard Mitigation Plan. For planning purposes, this Annex provides additional information specific to the city with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data have been carried over and updated with added information as appropriate and as identified within the planning process discussed in Volume 1.

3.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Darrin Raines, City Administrator 1300 1 st Street Cosmopolis WA 98537 360-532-9230 draines@cosmopoliswa.gov	Primary Point of Contact	Attended all Base Plan meetings as primary point of contact for Cosmopolis. Coordinated information from previous HMP as well as added information to be placed in Annex Update
Heath Layman, Police Chief 111 D Street Cosmopolis, WA 98537 360-532-9237 hlayman@cosmopoliswa.gov	Alternate Point of Contact	Served as Alternate to the Base Plan planning team for Cosmopolis. Contributed information on existing and future needs for Cosmopolis.
Nick Falley, Fire Chief 111 D Street Cosmopolis WA 98537 360-532-9230 firechief@cosmopoliswa.gov	Fire Chief	Serves as second Alternate for City Administrator and Chief of Police. Contributed information on existing and future needs.

3.3 COMMUNITY PROFILE

The following is a summary of key information about the City and its history:

Date of Incorporation—1891

Current Population—The 2020 census population was 1,638, and the estimated 2017 population was 1,660 from the Grays Harbor Council of Governments.

Population Growth—The population was 1,734 as of 2023, with some increases in population and some decreases during each of the previous census periods. The highest population since 1900 was 1,943 in 1930 and lowest population during this period was 1,004 in 1900. The City population in 1890 was 287.

Location and Description—The City is located on the shore of the Chehalis River, with the populated area on the left bank of the Chehalis. The total land area is 1.23 square miles. Some of the City is low-lying ground relatively flat from sea level to about forty feet in elevation. The southern and western parts of the City are rolling hills with elevations ranging from 40 to 240 feet in elevation.

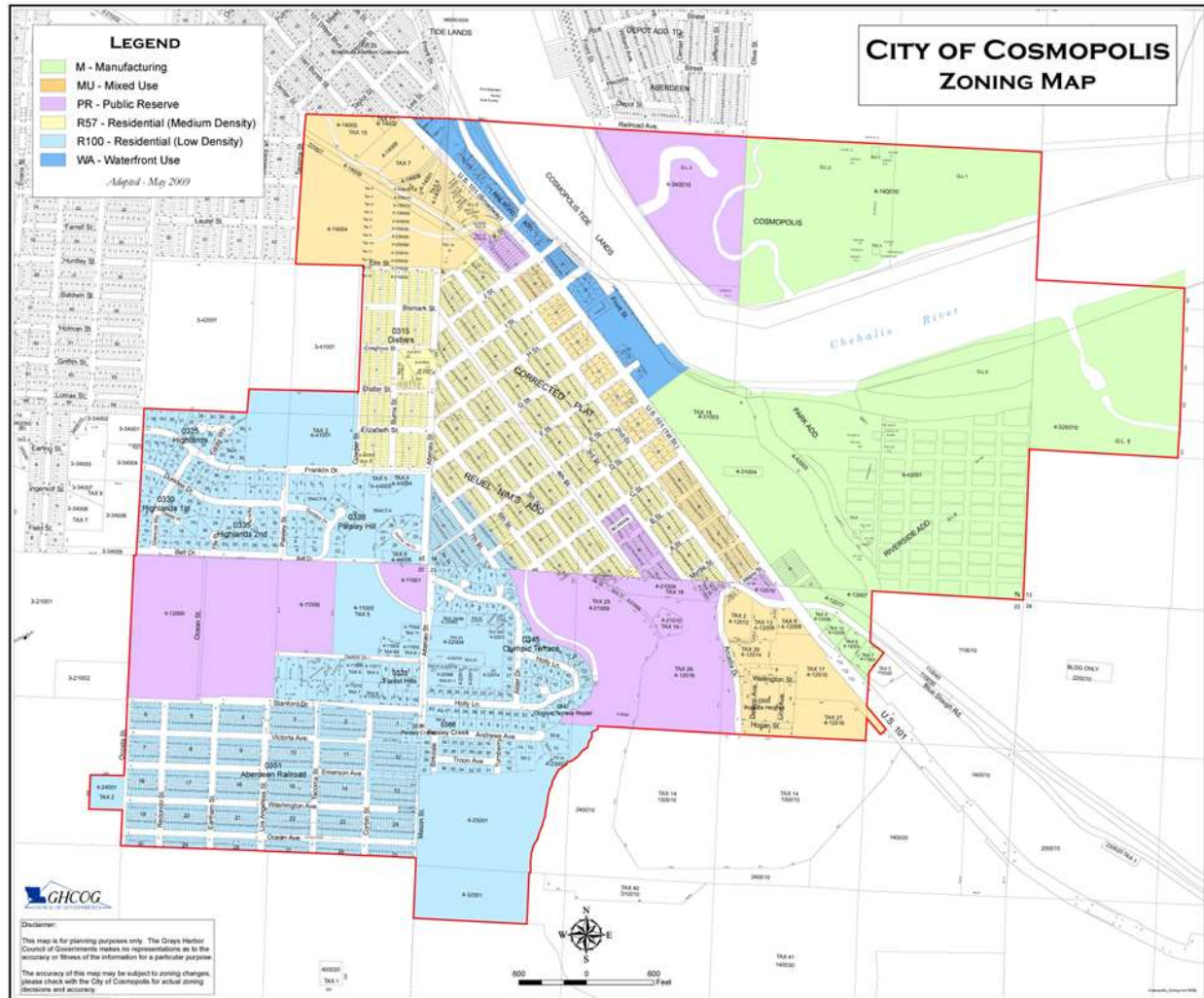
Brief History—The City has had a history of supporting the timber industry, with a large pulp mill as the major industry. The pulp mill closed in January 2023, and remains closed at this time.

Climate—The region experiences warm and dry summers and cool, mild winters with periods of heavy rainfall and a maritime climate being located near the Pacific Ocean, with typically a westerly airflow.

Governing Body Format—The City has a Mayor-Council form of government, with a mayor and five council members.

Development Trends—There has been no major development in the City in the last several years, with the most significant being the development of River-Run RV Park in 2022 and 2023. That development which has occurred has not increased the City's risk or vulnerability factor. All new construction is built to current standards and under existing land use development requirements. The City's boundaries are identified in the zoning map below.

Economy – The City's economic base consists primarily of the pulp mill, Cosmo Specialty Fibers, which employs 180 people, has been closed since January 2023.



3.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the City of Cosmopolis. There have been no additional natural hazard events in the City after the City's 2018 Hazard Mitigation Plan was adopted. The only specific natural hazard event identified in the 2018 Hazard Mitigation Plan was the failure of the Mill Creek Dam in November 2008. This was an isolated event, and no federal or local disaster was declared for this event. Table 3-1 lists all past occurrences of natural hazards within the County, which included the City, since the last update of the City's Hazard Mitigation Plan in 2018. No dollar loss data is available.

**Table 3-1
Grays Harbor County Disaster History 1953-2022**

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
4650	3/29/22	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	2/15/2022
4593	4/8/2021	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	1/16/2021
4539	4/23/20	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	2/10/2020
4481	3/22/20	COVID	Biological	1/20/2020	5/11/2023
4418	3/4/2019	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	12/24/2018
4253	2/2/2016	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015	12/14/2015
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	8/29/2015	8/29/2015
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012	1/23/2012
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008	1/5/2009
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009	1/16/2009
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007	12/17/2007
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006	12/15/2006
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006	11/11/2006
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006	2/4/2006
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	10/15/2003	10/23/2003
1361	3/1/2001	Earthquake	Earthquake	2/28/2001	3/16/2001

**Table 3-1
Grays Harbor County Disaster History 1953-2022**

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997	3/28/1997
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996	2/10/1997
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	1/26/1996	2/23/1996
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995	12/18/1995
1037	8/2/1994	Fishing Losses	The El Nino (The Salmon Industry)	5/1/1994	10/31/1994
883	11/26/1990	Flood	Severe Storms, Flooding	11/9/1990	12/20/1990
852	1/18/1990	Flood	Severe Storms, Flooding	1/6/1990	1/14/1990
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980	5/21/1980
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979	12/31/1979
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	12/10/1977	12/10/1977
492	12/13/1975	Flood	Severe Storms and Flooding	12/13/1975	12/13/1975
322	2/1/1972	Flood	Severe Storms and Flooding	2/1/1972	2/1/1972
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	2/9/1971
185	12/29/1964	Flood	Heavy Rains and Flooding	12/29/1964	12/29/1964
EMERGENCY DECLARATIONS					
3227	9/7/2005	Coastal Storm	Hurricane Katrina Evacuation	8/29/2005	10/1/2005
SIGNIFICANT LOCAL INCIDENTS					
NA	NA	Landslides/Floods	Heavy Rains and Landslides (Countywide)	1/4/2015	1/5/2017

3.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the City's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

3.6 NATIONAL FLOOD INSURANCE INFORMATION

Information on the community's National Flood Insurance Program (NFIP) compliance is presented in Table 3-2. This identifies the current status of the City's involvement with the NFIP.

The City of Cosmopolis maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 18.48 of the Cosmopolis Municipal Code. Within Section 18.48.050 CMC there are definitions for "substantial damage" and "substantial improvement" as follows:

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a "historic structure"; provided, that the alteration will not preclude the structure's continued designation as a "historic structure."

Elsewhere in that same Chapter, the requirements of the Chapter—including development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, and so on—are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Repetitive flood loss records are as follows:

Number of FEMA-Identified Repetitive Loss Properties: 0

Number of FEMA-Identified Severe Repetitive Loss Properties: 0

Number of Repetitive Flood Loss/Severe Repetitive Loss Properties Mitigated: 0

Table 3-2 National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	City Administrator/Public Works
Who is your community's floodplain administrator? (department/position)	Darrin Raines, City Administrator
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	1/18/2017
When was the most recent Community Assistance Visit or Community Assistance Contact?	April 2021
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, no staff have specific training in floodplain management. Assistance provided by the State Department of Ecology, Chehalis River Basin Flood Authority, or Grays Harbor Council of Government would be most helpful
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	The City does not participate but would be interested in joining if additional staff support were available.

3.6.1 Regulatory Capability

The assessment of the City's legal and regulatory capabilities is presented in Table 3-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 3-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version Year	YES, Chapter 14.04, Building Code		State Building Code	International Building Code 2012, adopted 4/17/13
Zoning Ordinance	YES			Title 18-Zoning, Ord. 984, adopted 6/19/68
Subdivision Ordinance	YES			Ord. #984 adopted 1993
Floodplain Ordinance	YES	None	No	Chapter 18.48, Flood Damage Prevention, Adopted 1/18/2017
Stormwater Management	YES	State	State standards	Chapter 12.12 Adopted State standards 2/16/2000
Post Disaster Recovery	NO			
Real Estate Disclosure	NO			
Growth Management	NO			Not a growth management community
Site Plan Review	YES			Title 17 adopted 1982
Public Health and Safety	YES			
Coastal Zone Management	NO			
Climate Change Adaptation	NO			
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	NO			
Environmental Protection	NO			
Planning Documents				
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan?</i>				Yes Chapter 17.24 Adopted 1970
Floodplain or Basin Plan	NO			No basin-wide plan
Stormwater Plan	YES			
Capital Improvement Plan	YES			
Habitat Conservation Plan	NO			
Economic Development Plan	NO			
Shoreline Management Plan	YES			
Community Wildfire Protection Plan	NO			
Transportation Plan	YES			

Table 3-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Response/Recovery Planning				
Comprehensive Emergency Management Plan	NO			
Threat and Hazard Identification and Risk Assessment	YES			The City was part of the planning effort in 2022 to develop a countywide THIRA document.
Terrorism Plan	NO			
Post-Disaster Recovery Plan	NO			
Continuity of Operations Plan	NO			
Public Health Plans	NO			
Boards and Commission				
Planning Commission	YES			
Mitigation Planning Committee	YES			Participating in County-led committee; served on City's internal planning team.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	YES			
Mutual Aid Agreements / Memorandums of Understanding	YES			With Aberdeen, Hoquiam, and Grays Harbor Co.
Other				

3.6.2 Administrative and Technical Capabilities

The assessment of the City administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 3-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information. The City has essentially no staff other than the part-time building official, Volunteer Fire Chief, Police Chief, and City Administrator when available.

Table 3-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	NO	
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	YES	BUILDING OFFICIAL
Engineers specializing in construction practices?	NO	
Planners or engineers with an understanding of natural hazards	YES	FIRE CHIEF
Staff with training in benefit/cost analysis	NO	
Surveyors	NO	
Personnel skilled or trained in GIS applications	YES	VOLUNTEER FIRE CHIEF CITY ADMINISTRATOR
Personnel skilled or trained in Hazardous use	NO	
Scientist familiar with natural hazards in local area	NO	
Emergency Manager	NO	
Grant writers	YES	CITY ADMINISTRATOR and DEPARTMENT HEADS
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood, or fire warning program, etc.?)	YES	CITY ADMINISTRATOR
Hazard data and information available to public	YES	CITY ADMINISTRATOR
Maintain Elevation Certificates	YES	BUILDING OFFICIAL
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	NO	
Local citizen groups or non-profit organizations focused on environmental protection?	NO	
Organization focused on individuals with access and functional needs populations	NO	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	NO	
Natural disaster or safety related school programs?	YES	POLICE AND FIRE DEPARTMENTS
Public-private partnership initiatives addressing disaster-related issues?	NO	RED CROSS IS AVAILABLE IF NEEDED
Multi-seasonal public awareness program?	NO	COUNTY WEBSITE IS AVAILABLE
Other	YES	PARKS AND RECREATION ADVISORY COMM.

Table 3-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	YES	CITY ADMINISTRATOR PUBLIC WORKS SUPERINTENDANT
Noxious Weed Eradication Program or other vegetation management	YES	CITY ADMINISTRATOR PUBLIC WORKS SUPERINTENDANT
Fire Safe Councils	NO	
Creek, stream, culvert or storm drain maintenance or cleaning program	YES	CITY ADMINISTRATOR PUBLIC WORKS SUPERINTENDANT
Stream restoration program	YES	CITY ADMINISTRATOR
Erosion or sediment control program	YES	CITY ADMINISTRATOR PUBLIC WORKS SUPERINTENDANT
Address signage for property addresses	YES	CITY ADMINISTRATOR BUILDING OFFICIAL

3.6.3 Fiscal Capability

The assessment of the City's fiscal capabilities is presented in Table 3-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 3-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	YES
Capital Improvements Project Funding	YES
Authority to Levy Taxes for Specific Purposes	YES
User Fees for Water, Sewer, Gas or Electric Service	YES
Incur Debt through General Obligation Bonds	YES
Incur Debt through Special Tax Bonds	YES
Incur Debt through Private Activity Bonds	NO
Withhold Public Expenditures in Hazard-Prone Areas	NO
State Sponsored Grant Programs	YES
Development Impact Fees for Homebuyers or Developers	NO
Other	

3.6.4 Community Classifications

The City's classifications under various hazard mitigation programs are presented in Table 3-6. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 3-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	NO	
Building Code Effectiveness Grading Schedule	YES	Class 4
Storm Ready	NO	
Firewise	NO	
Tsunami Ready (if applicable)	NO	

3.7 HAZARD RISK AND VULNERABILITY RANKING

The City's Planning Team reviewed the hazard list identified within the Base Plan and has identified the hazards that affect the City of Cosmopolis.

Table 3-7 presents the ranking of the hazards of concern based on their CPRI score. Table 3-8 identifies the CPRI values utilized to gain the scores. Once the hazards were ranked, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or extremely limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact on government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.

- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 3-7. Hazard Risk and vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.85	High
2	Tsunami	3.35	High
3	Erosion	2.65	Medium
4	Landslides	2.75	Medium
5	Severe Weather	3.25	High
6	Flood	3.25	High
7	Drought	2.35	Low
7	Climate Change	2.75	Medium
8	Wildfire	2.9	Medium
9	Others	3.15	Medium
10	Volcano	1.35	Low

Table 3-8. City of Cosmopolis 2024 CPRI Score and Hazard Ranking																							
Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time			Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)	
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)				> 1 week (4)
Climate Change				4		2				2						1				4	2.75	8	Medium
Drought			3			2				2						1				4	2.35	10	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion			3			2				2				3						4	2.65	9	Medium
Flood				4			3				3				2				3		3.25	3	High
Landslides			3			2				2			4						3		2.75	7	Medium

Table 3-8.
City of Cosmopolis 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Severe Weather				4			3					4				1		2			3.25	4	High
Tsunami			3					4			3		4						3		3.35	2	High
Volcano	1				1					2						1				4	1.35	11	Low
Wildfire			3			2					3		4					2			2.90	6	Medium
Other Hazmat			3				3				3		4						3		3.15	5	Medium

Additional information on the specific impacts of the hazards of concern is contained in the hazard profiles in Volume 1 of the Grays Harbor County 2024 Multi-Jurisdictional Hazard Mitigation Plan, to which this Annex is a part. Direct impact loss data is defined therein. Extent and Location maps incorporated at the end of this annex were also utilized to determine the risk and vulnerability to the City, and utilized by the City's planning team when it completed its Hazard Ranking process.

3.8 MITIGATION GOALS AND OBJECTIVES

The City of Cosmopolis adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

3.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the City identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the City's assets and hazards of concern. Table 3-9 lists the action items/strategies that make up the City's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the City limits), potential funding sources, the time frame, who will benefit from the activity, and the type of initiative associated with each item are also identified.

**Table 3-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Investigate joining the Community Rating System									
Existing and new	Flood, tsunami, severe weather	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Medium	General Fund	Short-Term	Yes	Preventive Activities, Property Protection, Natural Resource Protection	City residents and City facilities
INITIATIVE # 2 Become a Storm Ready and Tsunami Ready community									
Existing and new	Tsunami	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Low	General Fund	Short-Term	Yes	Preventive Activities, Emergency Services	City residents and City facilities
INITIATIVE # 3 Install Flood Control Pumps at Dike									
Existing and New	Flood, tsunami, severe weather	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	High	General Fund, HMGP, Flood Authority	Short-Term	Yes	Structural Projects, Property Protection, Natural Resource Protection	City residents and City facilities, County facilities
INITIATIVE # 4 Mill Creek Culverts Replacement (Multiple)									
Existing and New	Flood, severe weather	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	High	General Fund, HMGP, Flood Authority	Long-Term	No	Structural Projects, Property Protection, Natural Resource Protection	City residents and City facilities, County facilities
INITIATIVE # 5 Install Stormwater Pumps									
Existing and New	Flood, severe weather	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Medium	General Fund, HMGP, Bonds, Flood Authority	Short-Term	No	Structural Projects, Property Protection, Emergency Services, Recovery	City residents, City facilities, County Maintenance Shop
INITIATIVE # 6 Improvements to storm drainage facilities									

**Table 3-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing and New	Flood	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Medium	General Fund, HMGP, Flood Authority	Short-Term	Yes	Structural Project, Property Protection	City residents, City facilities,
INITIATIVE # 7 Purchase quick attack vehicle for emergency response									
Existing and New	All hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Medium	General Fund, Grant	Short-Term	Yes	Emergency Services, Recovery	City
INITIATIVE # 8 Conduct annual Disaster Preparedness workshops									
Existing and New	All hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Low	General Fund	Short-Term	Yes	Preventive Activity	City
INITIATIVE # 9 Update interagency radio links between City, E 911, adjacent entities, and Grays Harbor County EOC									
Existing and New	All hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Medium	General Fund, County	Short-Term	Yes	Preventive Activity	City, County
INITIATIVE # 10 Update Hazard Mitigation Plan every 5 years									
Existing and New	All hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Medium	General Fund, HMGP	Long-Term	Yes	Preventive Activity	City
INITIATIVE # 11 Complete City Emergency Response Plan									
Existing and New	All hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Low	General Fund	Short-Term	Yes	Preventive Activity	City
INITIATIVE # 12, 4TH Street Drainage Improvements from A to C Street									
Existing and New	All Hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	Low	General Fund, TIB	Short - Term	No	Structural Project	City of Cosmopolis, Cosmopolis School
INITIATIVE # 13 Mill Creek Drive and Alder Drive Slope Stabilization									

Table 3-9.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing	All Hazards	1,2,3,4,5, 6,7,8,9	City of Cosmopolis	High	General Fund, TIB, HMGP, Federal Grants	Long Term	No	Preventative Activity Structural Activity	City Residents, City Facilities

3.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 3-10 identifies the prioritization for each initiative.

Table 3-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	1,2,3,4,5,6, 7,8,9	Medium	Medium	Yes	Yes	No	Medium
2	1,2,3,4,5,6, 7,8,9	Medium	Low	Yes	Yes	Yes	High
3	1,2,3,4,5,6, 7,8,9	High	High	Yes	Yes	No	High
4	1,2,3,4,5,6, 7,8,9	High	High	Yes	Yes	No	High
5	1,2,3,4,5,6, 7,8,9	High	Medium	Yes	Yes	Yes	High
6	1,2,3,4,5,6, 7,8,9	High	Medium	Yes	Yes	No	High
7	1,2,3,4,5,6, 7,8,9	High	Medium	Yes	Yes	No	High
8	1,2,3,4,5,6, 7,8,9	Medium	Low	Yes	No	Yes	Medium

Table 3-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
9	1,2,3,4,5,6,7,8,9	Medium	Medium	Yes	Yes	No	Medium
10	1,2,3,4,5,6,7,8,9	High	Medium	Yes	Yes	No	Medium
11	1,2,3,4,5,6,7,8,9	High	Low	Yes	Yes	No	Medium
12	1,2,3,4,5,6,7,8,9	Medium	Low	Yes	Yes	No	High
13	1,2,3,4,5,6,7,8,9	High	High	Yes	Yes	No	High
a. See Chapter 1 for explanation of priorities.							

3.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 3-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 3-11.
2024 Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Associated Hazards							Previous Timeline	Project Status	Current Status			
	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire				Completed	Continual /Ongoing Nature	Removed -/No Longer Relevant / No Action	Carried Over
Purchase generators		x		x				Short term	Some generators still needed.				X
Evaluate/prioritize critical facilities	x	x	x	x	x	x		Short term			X		

Table 3-11.
2024 Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Associated Hazards							Previous Timeline	Project Status	Current Status			
		Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire			Completed	Continual /Ongoing Nature	Removed -/No Longer Relevant / No Action	Carried Over
Retrofit critical facilities		x	x	x	x	x	x	Medium term	Planning has begun to construct a new Municipal Services Building to be our EOC.		X		
Analysis of storm drainage facilities			x		x			Short term	Funding needed to develop Stormwater Management Plan		X		
Improvements to storm drainage facilities			x		x			Medium term	Dependent upon completion of Stormwater Management Plan		X		
Improve City-owned EOC facility		x	x	x	x	x	x	Medium term	Some work has been done in the short term. Long term remedy is new Municipal Services Building to be used as EOC.				X
Analyze potential slide areas		x		x				Medium term	Funding needed to perform Geotechnical Analysis				X
Evaluate options, estimate costs and available grants to repair or remove failed Mill Creek Dam			x		x			Short term	Options were evaluated, decision made to replace dam, funding obtained from Flood Authority, dam and fish ladder constructed in fall 2017	X			
Purchase quick attack vehicle for emergency response			x		x			Short term	Seeking Funding				X
Conduct annual Disaster Preparedness Workshops		x	x	x	x	x	x	Short term					X
Improve tsunami evacuation signs						x		Short term	Route has been established; new signs need to be installed.				X
Coordinate interagency radio links between City and Grays Harbor Co. EOC		x	x	x	x	x	x	Short term	Seeking funding for Amateur Radio to be used during disaster.				X

**Table 3-11.
2024 Status of Previous Hazard Mitigation Action Plan**

Mitigation Strategy	Associated Hazards							Previous Timeline	Project Status	Current Status			
		Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire			Completed	Continual /Ongoing Nature	Removed -/No Longer Relevant / No Action	Carried Over
Update Hazard Mitigation Plan every 5 years		x	x	x	x	x	x	Medium term	City joined Grays Harbor County in the update of the County HMP in 2017				X
Complete City Emergency Response Plan		x	x	x	x	x	x	Short term	Seeking funding to prepare Emergency Response Plan.				X

3.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

None identified.

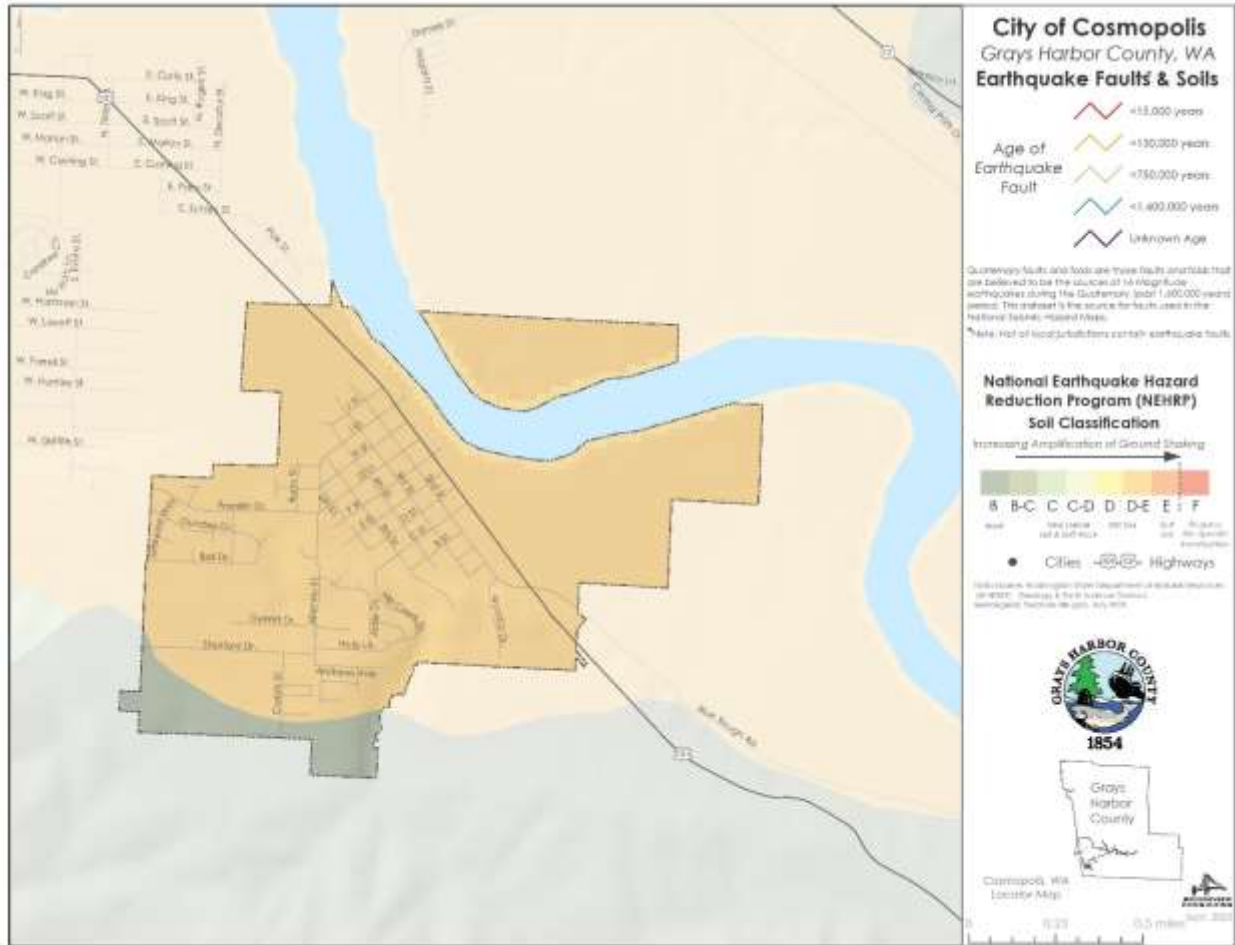
3.13 ADDITIONAL COMMENTS

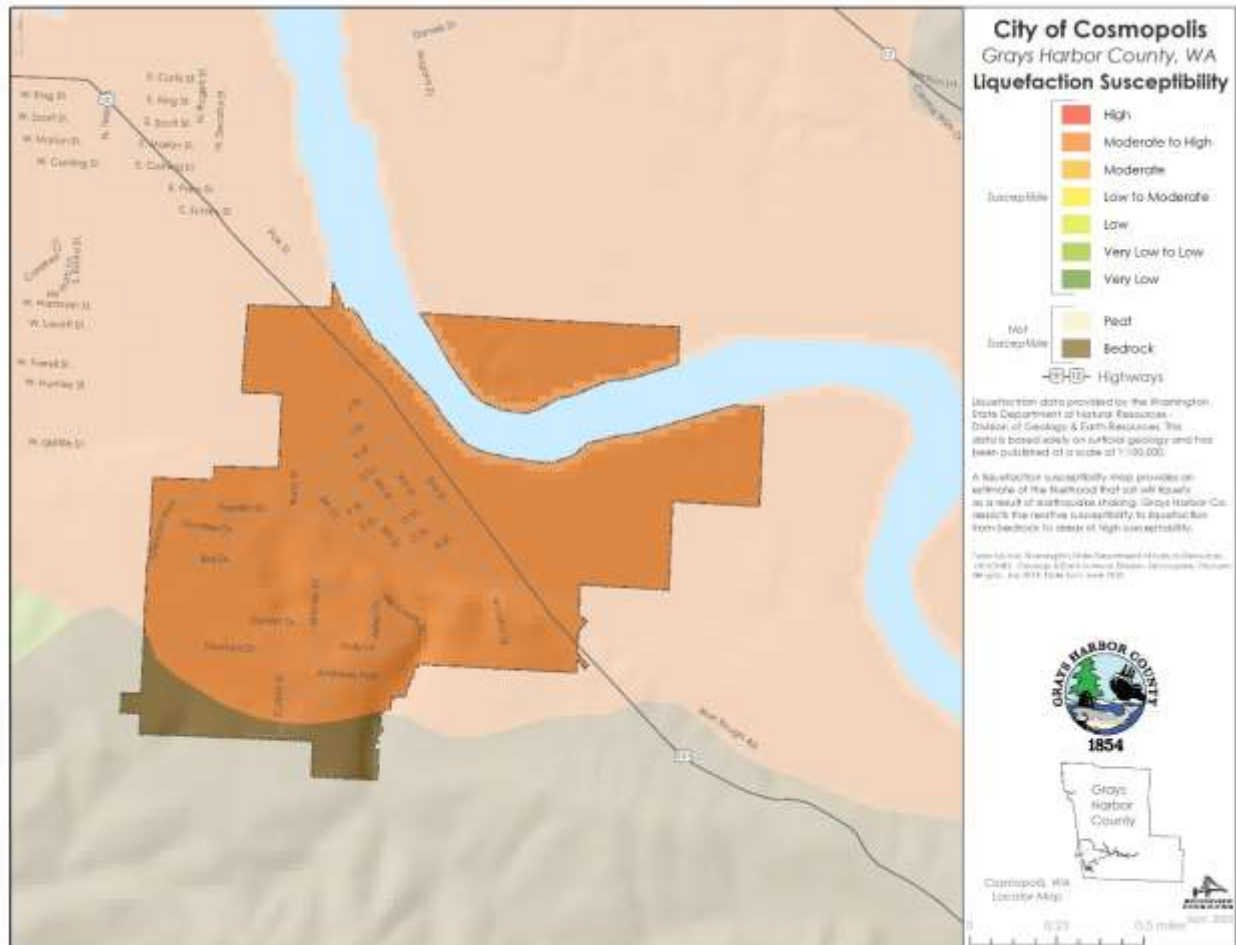
Because of the limited number of flood insurance policy holders within the City, and the work associated with implementing the requirements for joining and maintaining membership in the CRS, it is not cost-effective for the City to join and continue as a CRS community. The City has no existing staff which could perform the workload associated with the CRS requirements and does not have funding, nor would it be cost-effective for the City to hire a new staff person for this.

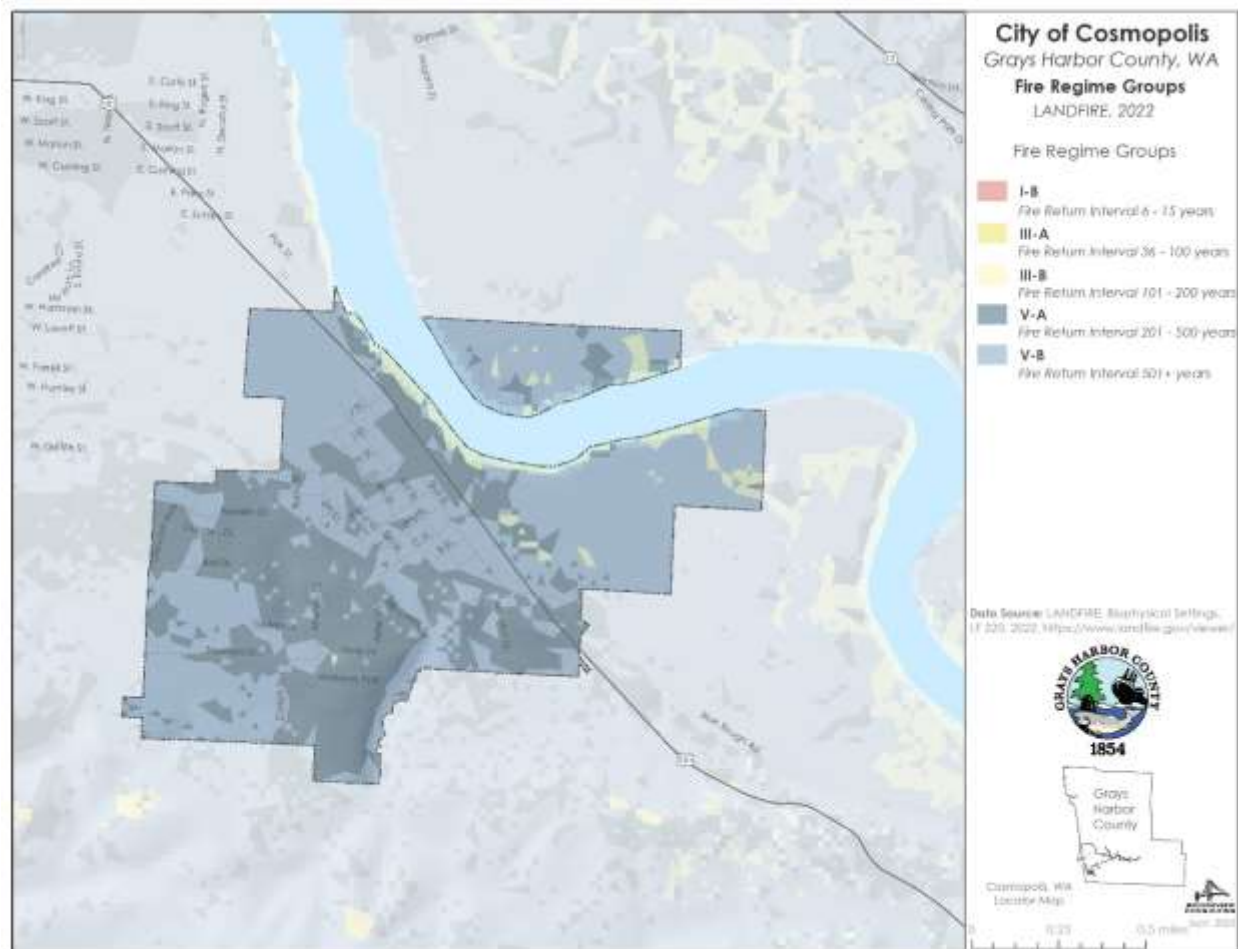
Even though the number of policy holders is low within the City, with only five current policies, equating to \$1.198 million in coverage, flood insurance premiums are continuing to rise, and, in some cases, homeowners are finding it difficult financially to continue to maintain their flood insurance coverage.

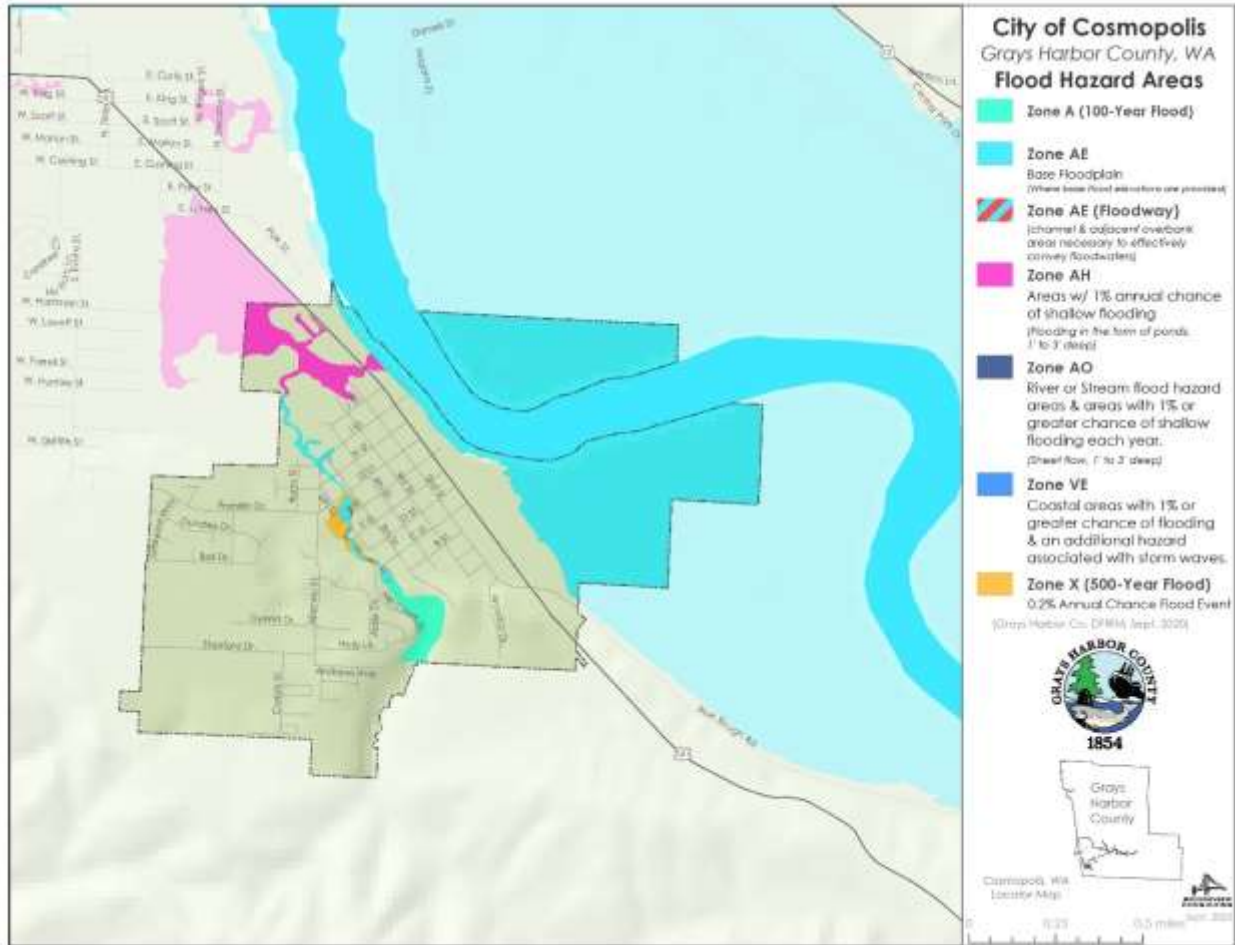
3.14 HAZARD AREA EXTENT AND LOCATION

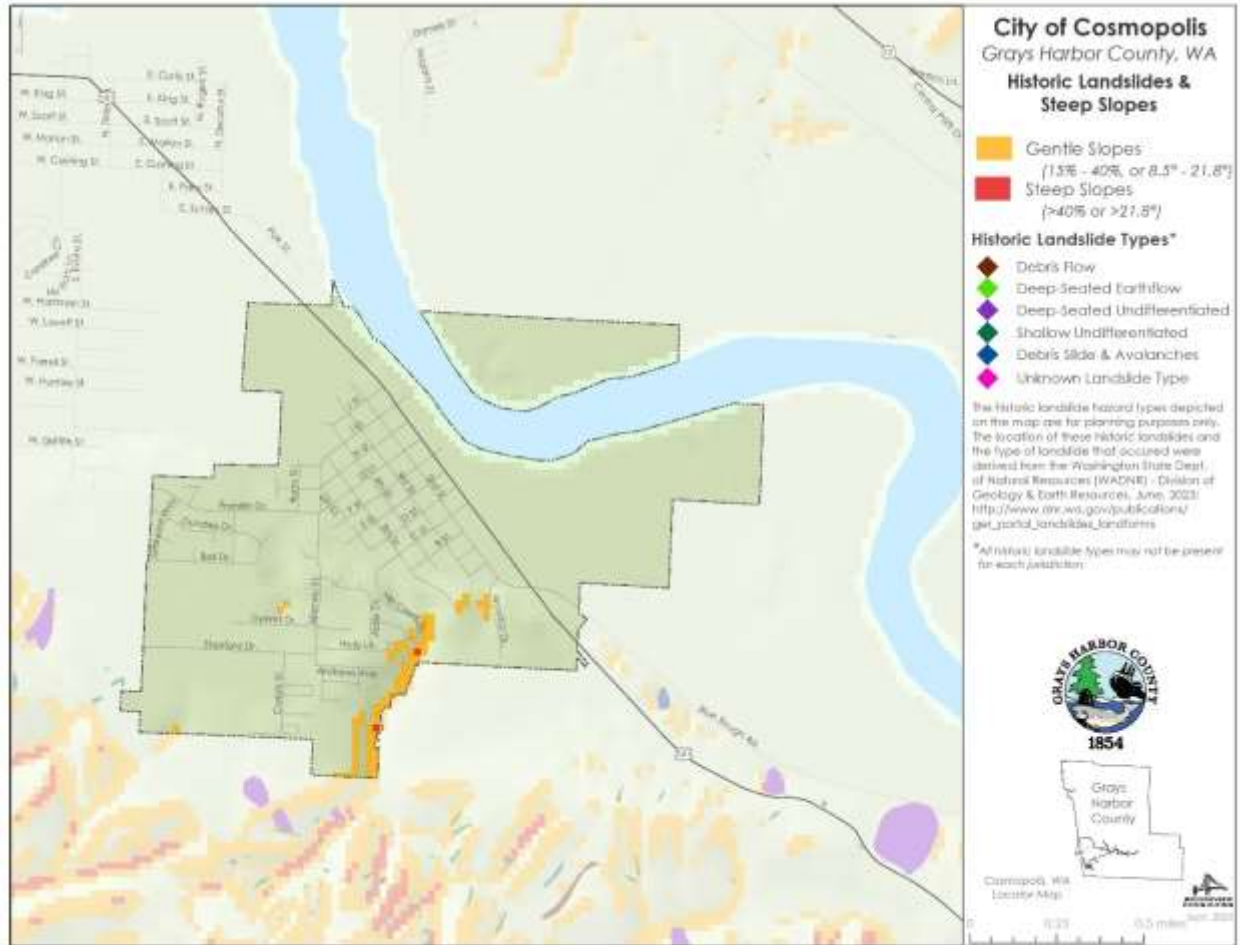
Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes.

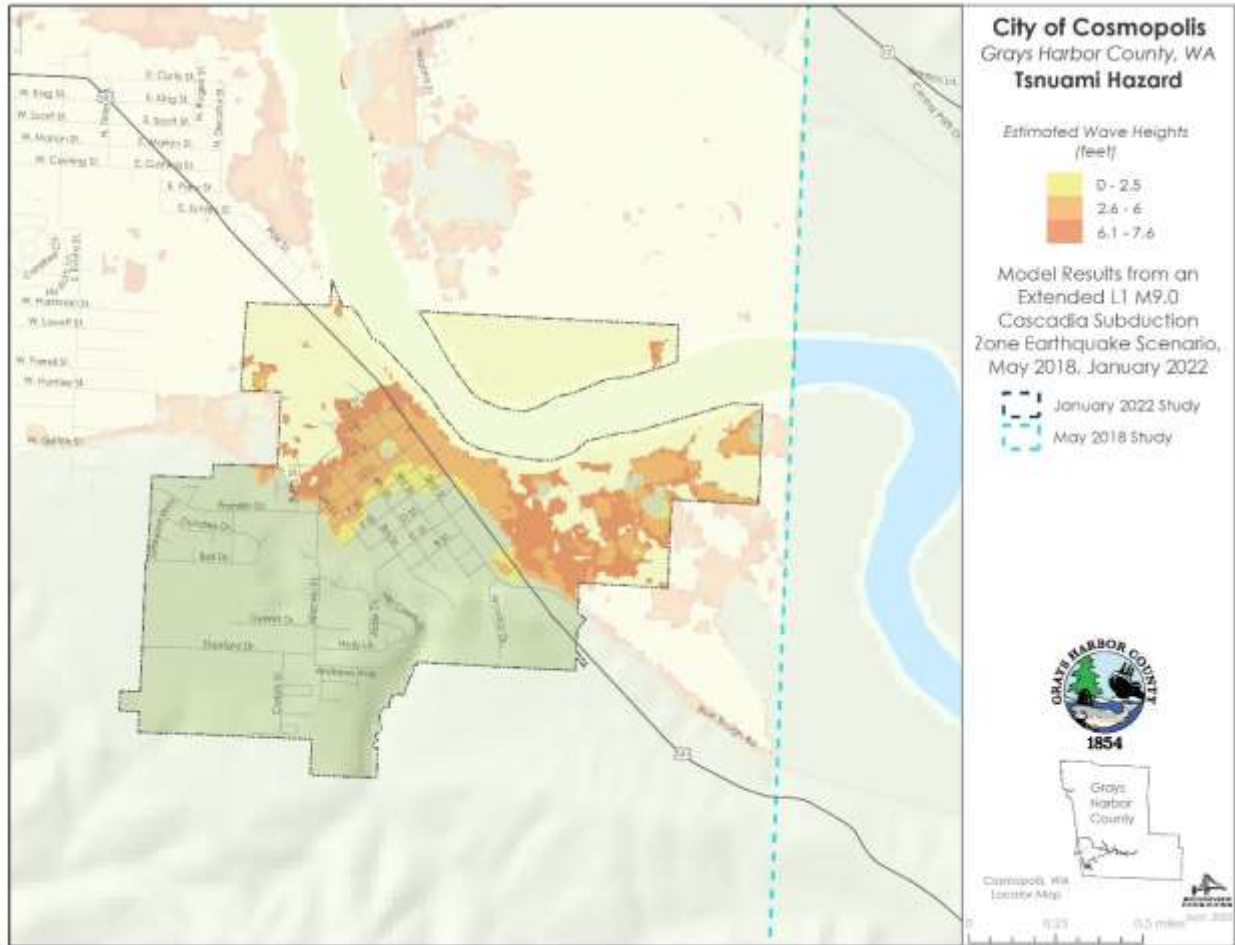












CHAPTER 4.

CITY OF ELMA 2024 ANNEX UPDATE

4.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City Of Elma, a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City Of Elma. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only.

4.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City Of Elma followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City Of Elma also formulated its own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Rick Eaton 202 West Main St. Elma WA, 98541 360-482-2212 pwdirector@cityofelma.com	Public Works Director	Principle liaison, monitoring, evaluating, and updating the annex. Primary author of plan. Assisted with plan adoption and public outreach.
Chief Susan Shultz PO Box 3011 Elma, WA 98541 chief@cityofelma.com	Police Chief	Monitoring, evaluating, and updating the annex. Conducted public outreach at various stages of plan development.
Joe Chrystal	Building Official - Former	Assisted with risk assessment.
Jim Starks 202 West Main St. Elma, WA 98541 jim@cityofelma.com	Public Works Special Projects	Assist with updating annex. Provided information on various portions of the annex template; assisted with identifying previous impact data, and strategy development.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
City Council 202 West Main St Elma, WA 98541 360-482-2212	City Council	Plan review and adoption.

4.3 COMMUNITY PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1888
- **Current Population**—3,390 as of 2021
- **Population Growth**— The City has experienced a relatively flat rate of growth. The overall population has increased only 2.5% since 2010, averaging 2.5% per year from 2010 to 2017 and averaging 1.9% per year from 2017 to 2021.
- **Location and Description**—The Elma area is a combination of the average territory served by the community facilities and the natural topographic barriers of the drainage basins of the tributaries of the Chehalis river within the service zone. Although the town is located in the flat agricultural valley at the junction of the Chehalis and Cloquallam rivers, it also borders the intersection of highway 12 and ST Route 9
- **Brief History**—The Elma area was settled during the cry of timber, the crash of giant firs, the screech of donkey engines and the hum of sawmills. Suddenly, in 1938 the Malone mill, which provided employment for over one third of the area’s mill hands and loggers, closed, dismantled its machinery, and moved out. After the first shock had passed, community leaders determined to survey the remaining resources of the region, both physical and human, and upon the basis of facts revealed lay plans for the future.
- **Climate**— The climate of the Elma region is typical of the Puget Sound country. Rain falls in what appears to be excessive amounts, but a study of its distribution shows the summer months to be abnormally dry. Precipitation averages 62.58 inches annually but the heavy rains of November, December, January, February, and March supply nearly all. The monthly average drops to 2.18 inches in June; .73 inches in July; 1.17 inches in August, and 2.70 inches in September. The rains are generally misty with heavy downpours rarely occurring
- Elma’s location in the Chehalis River valley, sandwiched into a break in the coastal range , has a definite effect on rainfall distribution.
- **Governing Body Format**—The City of Elma is a mayor format governed by a five-member City Council. The City consists of six departments: Finance, Community Development, Public Works, Police, and the Mayor’s office.
- **Development Trends**—Development trends for Elma are focused primarily at expanding local employment opportunities in light industrial and wholesale trade activities; expanding housing opportunities to provide for a moderate annual increase in population; buttress support for education including, local schools, Grays Harbor College continuing education opportunities, and career guidance services; providing adequate child care services to allow

single parent families to successfully compete in the job market; and encouraging the development and redevelopment of the Central Business District as the service and trade center for the community.

Since completion of the 2018 plan, the City's development has been relatively minimal. Smaller commercial developments have occurred consisting of storage units and an RV storage facility, a few fast-food restaurants, retail establishments, and some single-family residents. Approximately 52 new construction building permits were issued since completion of the last update in 2018 through the end of 2022. This includes permits for any significant remodels as required pursuant to our land use ordinance. As a result of the new development, with the exception of a potential minor hazmat release from the RV storage facility, risk and vulnerability remain consistent with the last plan, with the exception of increased structure values/potential losses, and increased population, which have occurred within the planned growth of the City.

- **Economy** – The City Of Elma economic base consists of construction, retail sales, services, and healthcare services, agricultural, and light manufacturing. The largest employers include Summit Pacific Hospital, and the Elma School Dist.

The jurisdiction boundaries are identified in the maps below.

4.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the jurisdiction. Table 4-1 lists all past occurrences of hazard events within the jurisdiction. The City has not tracked dollar loss, but recognizes the need to do so, and this has been identified as a countywide mitigation project. With the exception of COVID, the City of Elma was minimally affected by the five hazard events that occurred since the last plan update.

Table 4-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
Flood	4650	12/26/2021	Unknown
Severe Storm(s)	4593	12/29/2020	Unknown
Flood	4539	1/20/2020	Unknown
Biological (COVID)	4481	1/20/2020	Unknown
Severe Storm(s)	4418	12/20/2018	Unknown
Flood	4253	12/01/2015	Unknown
Severe Storm(s)	4242	08/29/2015	Unknown
Severe Storm(s)	4056	01/14/2012	Unknown
Severe Storm(s)	1825	12/12/2008	Unknown

**Table 4-1
Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
Flood	1817	01/06/2009	Unknown
Severe Storm(s)	1734	12/01/2007	Unknown
Severe Storm(s)	1682	12/14/2006	Unknown
Severe Storm(s)	1671	11/02/2006	Unknown
Severe Storm(s)	1641	01/27/2006	Unknown
Severe Storm(s)	1499	10/15/2003	Unknown
Earthquake	1361	02/28/2001	Unknown
Flood	1172	03/18/1997	Unknown
Severe Storm(s)	1159	12/26/1996	Unknown
Flood	1100	01/26/1996	Unknown
Severe Storm(s)	1079	11/07/1995	Unknown
Fishing Losses	1037	05/01/1994	Unknown
Flood	883	11/09/1990	Unknown
Flood	852	01/06/1990	Unknown
Volcano	623	05/21/1980	Unknown
Flood	612	12/31/1979	Unknown
Flood	545	12/10/1977	Unknown
Flood	492	12/13/1975	Unknown
Flood	322	02/01/1972	Unknown
Flood	300	02/09/1971	Unknown
Flood	185	12/29/1964	Unknown

4.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

4.6 NATIONAL FLOOD INSURANCE INFORMATION

Information on the community's National Flood Insurance Program (NFIP) compliance is presented in Table 4-2. This identifies the current status of the jurisdiction's involvement with the NFIP.

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 5
- Number of FEMA-Identified Severe Repetitive Loss Properties: 1
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: none.
- All of NFIP properties that have been impacted are single family residences.

Table 4-2 National Flood Insurance Program Compliance	
What department is responsible for floodplain management in your community?	Public Works
Who is your community's floodplain administrator? (department/position)	Rick Eaton
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	September 8, 2020
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 3, 2020
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	Yes

The City of Elma maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 14.28 of the Elma Municipal Code. Within Section 14.28.030 EMC there are definitions for "substantial damage" and "substantial improvement" as follows:

"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent of the value of the structure before the damage occurred. For purposes of determining this value, in the discretion of the city it shall be the greater of the assessed value or the value provided by a qualified expert.

"Substantial improvement" means any repair, reconstruction, or improvement of a structure taking place within a five-year period, the cumulative cost of which equals or exceeds fifty percent of the market value of the structure either: (1) before the improvement or repair is started; or (2) if the structure has been damaged and is being restored, before the damaged occurred.

1. For purposes of determining the value of the proposed improvement, in the discretion of the city it shall be the greater of the assessed value or the value provided by a qualified expert.
2. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.
3. The term does not, however, include either:
 - a. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
 - b. Any alteration of a "historic structure"; provided, that the alteration will not preclude the structure's continued designation as a "historic structure."

The Chapter also requires development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, and so on—are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

4.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 4-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 4-3 Legal and Regulatory Capability					
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments	
Codes, Ordinances & Requirements					
Building Code / yes Version ICC Year 2018	Yes	Yes	Yes	IBC,IRC,IFC,IPC,IEC,IMC,IEBC,ISPSC	
Zoning Ordinance 1982	Yes	No	Yes	1982	
Subdivision Ordinance 2004	Yes	No	No	Unified Development Code	
Floodplain Ordinance 9-8-2020	Yes	No	Yes	ORD #1158	
Stormwater Management	Yes	No	Yes		
Post Disaster Recovery	No	No			
Real Estate Disclosure	No	No	No	-	
Growth Management	Yes	No	No		
Site Plan Review	Yes	No	No		
Public Health and Safety	Yes	No	No		
Coastal Zone Management	No	No	No		
Climate Change Adaptation	No	No	No		
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes	No	No		
Environmental Protection	Yes	No	Yes		
Planning Documents					
General or Comprehensive Plan	Is the plan equipped to provide linkage to this mitigation plan? Yes				
Floodplain or Basin Plan	No				
Stormwater Plan	No				
Capital Improvement Plan	No				
Habitat Conservation Plan	No				
Economic Development Plan	No				
Shoreline Management Plan	No				
Community Wildfire Protection Plan	No				
Transportation Plan	No				
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes				
Threat and Hazard Identification and Risk Assessment	No				
Terrorism Plan	No				

Table 4-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Post-Disaster Recovery Plan	No	No	No	
Continuity of Operations Plan	No	No	No	
Public Health Plans	No	No	No	
Boards And Commission				
Planning Commission	No			
Mitigation Planning Committee	Yes			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			
Mutual Aid Agreements / Memorandums of Understanding	Yes	Yes		Various MOU/MOAs in place with surrounding jurisdictions.
Other				

4.6.2 Administrative and Technical Capability

The assessment of the jurisdiction's administrative and technical capabilities, educational outreach efforts, and on-going programmatic efforts are presented in Table 4-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 4-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	yes	Comm. development. / Pub. Works Dir.
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Building Official
Engineers specializing in construction practices?	Yes	Gibbs, Olsen
Planners or engineers with an understanding of natural hazards	Yes	Comm. development
Staff with training in benefit/cost analysis	Yes	Pub. Works Dir.
Surveyors	Yes	Chehalis Valley Surveyors

Table 4-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Personnel skilled or trained in GIS applications	Yes	Chehalis Valley Surveyors
Personnel skilled or trained in Hazmat use	No	
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	G.H. COUNTY Emergency Management
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	
Hazard data and information available to public	Yes	Grays Harbor County's Website
Maintain Elevation Certificates	Yes	Building Dept. / Comm. Development
Education And Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	No	
Local citizen groups or non-profit organizations focused on environmental protection?	No	
Organization focused on individuals with access and functional needs populations	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	County Level
Natural disaster or safety related school programs?	Yes	Earthquake drills, active shooter plans, etc.
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	Yes	County provides this service through their public outreach
On-Going Mitigation Efforts		
Defensible space inspections program	Yes	Building Dept.
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Shoreline Master Plan / Public Works
Stream restoration program	Yes	Shoreline Master Plan / Public Works
Erosion or sediment control program	Yes	Shoreline Master Plan / Public Works
Address signage for property addresses	Yes	Public Works Dir.

Table 4-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Other		

4.6.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 4-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 4-5. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

4.6.4 Community Classifications

Classifications under various community mitigation programs are presented in Table 4-6. Each of the classifications identified establish requirements which, when met, are known to increase the resilience of a community.

Table 4-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes	1978
Building Code Effectiveness Grading Schedule	Yes	1978
Storm Ready	No	

Table 4-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Firewise	No	
Tsunami Ready (if applicable)	N/A	

4.7 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the areas of impact and hazard list identified within the Base Plan and have identified the hazards that affect the City Of Elma.

Table 4-7 presents the ranking of the hazards of concern based on their CPRI score. Table 4-8 identifies the actual CPRI scores as determined by the internal planning team. Once the hazards were ranked, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ❑ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- ❑ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ❑ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- ❑ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- ❑ Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

The hazards of concern ranked in Table 4-7 demonstrates our level of impact as determined by the Calculator Priority Risk Index process as defined in Chapter 4 The process included a review of critical facilities impacted, dollar losses, and impact to the people, property, economy, and environment for each hazard of concern. The reviewers have examined Chapter 4 for information of the type of data included in determining the hazard rank and vulnerability levels identified above.

4-12

April 2024

Bridgeview Consulting, LLC

4-12

**Table 4-8.
City of Elma
2024 CPRI Score and Hazard Ranking**

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Volcano	1				1					2			4						3		1.75	7	Low
Wildfire		2				2				2			4					2			2.30	4	Medium

Additional information on the specific impacts of the hazards of concern is contained in the hazard profiles in Volume 1 of the Grays Harbor County 2024 Multi-Jurisdictional Hazard Mitigation Plan, to which this Annex is a part. Direct impact loss data is defined therein. Extent and Location maps incorporated at the end of this annex were also utilized to determine the risk and vulnerability to the City, and utilized by the City's planning team when it completed its Hazard Ranking process.

4.8 MITIGATION GOALS AND OBJECTIVES

The City Of Elma adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

4.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 4-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

**Table 4-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Study and develop an inventory of private, public and commercial buildings, retrofit and/or improve the critical facilities that may be particularly vulnerable to severe damage, including equipment, communications, renovation or replacement of existing facilities and/or equipment.									
Existing	All	1,2,3,4,5, 6,8,9,	Planning Dept.	High	HMGP, HUD, PDM, Earthquake & Tsunami	Long Term	Yes	Preventive, Structural Projects, Emergency Services, Recovery	LOCAL
INITIATIVE # 2 Determine the need to install , re-route, or increase the capacity of the City Storm Drainage System, particularly in areas that frequently flood, to include culverts, and determine a limit for the percentage of allowable impervious surface with new development on individual parcels.									
New and Existing	F,SWW, MH	1,2,3,4,5, 6,8,9	Public Works, Planning	High	HMGP, HUD, PDM, Earthquake & Tsunami	Long-Term	Yes	Preventive Structural Projects, Property Protection, Natural Resource Protections	Facility, Local
INITIATIVE # 3 Work with Grays Harbor Emergency Management, public and private parties to determine the location of shelter facilities and begin development of recovery and response plans including, creating and educating citizens regarding the hazards of concern.									
New	All	All	Planning	High	HMGP, HUD, PDM	Long-Term	Yes	Public Information Preventive, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Facility Local County
INITIATIVE # 4 Determine the need for specific water hydration systems, dedicated power sources and/or dedicated cisterns if no water source is available.									
New	All	All	Water Department Public Works, Fire Department	High	HMGP, HUD, EPA, Earthquake & Tsunami Grant Funds	Long-Term	Yes	Preventive, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resources Protection	Local

Table 4-9.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 5 Obtain staff training to assist in disaster response including, form ATC-20 for post-earthquake building evaluation, procedures, decisions and guidelines for making on-the –spot evaluations regarding continued use and occupancy of damage building									
Existing	All	2,3,4,5,6, 8	Planning Building	Low	General Fund, EMPG	Short-term	Yes	Preventive, Emergency Services, Recovery	Facility Local
INITIATIVE #6 Seek granting funding and as funding allows, construct a new Public Safety/Resilience Center to include the Elma Police Department and Emergency Operations Center, including space to potentially allow for heating/cooling shelters and space to assist during times of disaster recovery.									
New	All	All	Police / EM	High	BRIC, HLS	Long-Term	No	Emergency Services, Recovery	Local, County
INITIATIVE #7 Seek grant funding to establish citywide a storm utility service.									
New and Existing	All	All	Public Works	High	BRIC, DOH, HMGP	Long-Term	No	Recovery, Natural Resource Protection	Local
INITIATIVE #8 Seek funding to construct or replace a new Public Works Shop. At present, the existing structures serves as a critical facility housing all necessary equipment, tools and supplies necessary to respond to disaster incidents; however, the structure is in poor condition and needs a major renovation or complete replacement.									
New and Existing	All	All	Public Works	High	BRIC, HMGP	Long-Term	No	Response, Recovery, Emergency Services	Local

4.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 4-10 identifies the prioritization for each action item.

Table 4-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	8	High	High	Exceeds	Yes	No	High

Table 4-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
2	8	High	High	Exceeds	Yes	No	High
3	9	High	High	Exceeds	Yes	No	High
4	9	High	High	Exceeds	Yes	No	Medium
5	6	Medium	Low	Exceeds	Yes	No	Medium
6	9	High	High	Exceeds	Yes	No	Low
7	9	High	High	Exceeds	Yes	No	High
8	9	High	High	Exceeds	Yes	No	High

a. See Chapter 1 for explanation of priorities.

4.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 4-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

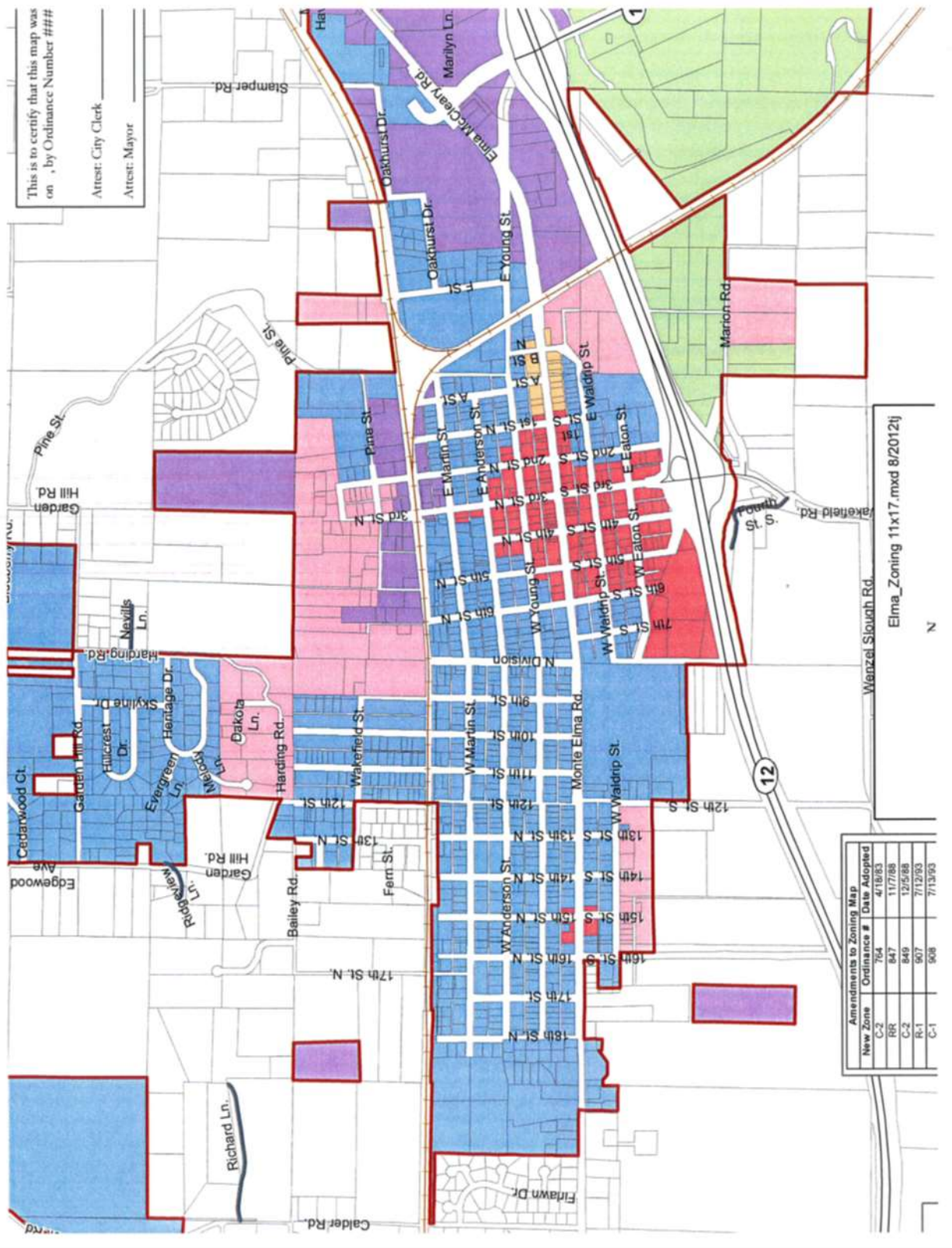
Table 4-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 1 Study and develop an inventory of private, public and commercial buildings, retrofit and/or improve the critical facilities that may be particularly vulnerable to severe damage, including equipment, communications, renovation or replacement of existing facilities and/or equipment.	✓	✓	✓	✓	✓	✓	✓	No update.				✓
INITIATIVE # 2 Determine the need to install , re-route, or increase the capacity of the City Storm Drainage System, particularly in areas that frequently flood, to include culverts, and determine a limit for the percentage of allowable impervious surface with new development on individual parcels.			✓		✓			Identified the need to establish storm utility in Capital Facility Plan 2023-2028. Plan adopted October 2023.				✓

Table 4-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy	2024 Project Status											
INITIATIVE # 3 Work with Grays Harbor Emergency Management, public and private parties to determine the location of shelter facilities and begin development of recovery and response plans including, creating and educating citizens regarding the hazards of concern.	✓	✓	✓	✓	✓	✓	✓	No update. No action taken since last plan.				✓
INITIATIVE # 4 Determine the need for specific water hydration systems, dedicated power sources and/or dedicated cisterns if no water source is available.	✓	✓	✓	✓	✓	✓	✓	No update. No action taken since last plan.				✓

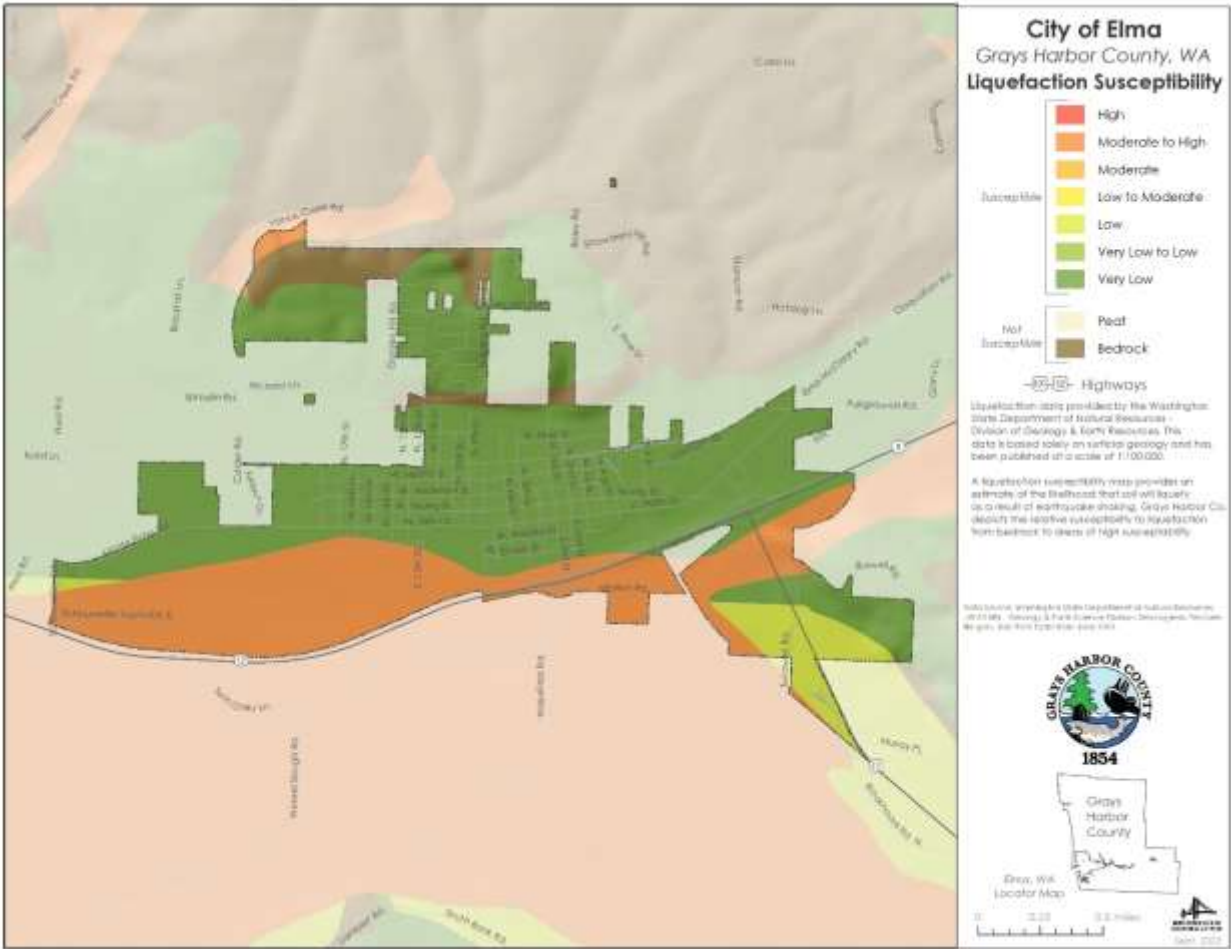
Table 4-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 5 Obtain staff training to assist in disaster response including, form ATC-20 for post-earthquake building evaluation, procedures, decisions and guidelines for making on-the –spot evaluations regarding continued use and occupancy of damage building	✓	✓	✓	✓	✓	✓	✓	No update.				✓
INITIATIVE # 6 Require and maintain FEMA elevation certificates for all newly constructed buildings located in floodplain. Require elevation data collection during platting of a new subdivision and to have buildable space on lots above the base flood elevation.			✓					Completed since completion of the last plan update. Continual/ongoing status due to the nature of the ordinance.	✓			

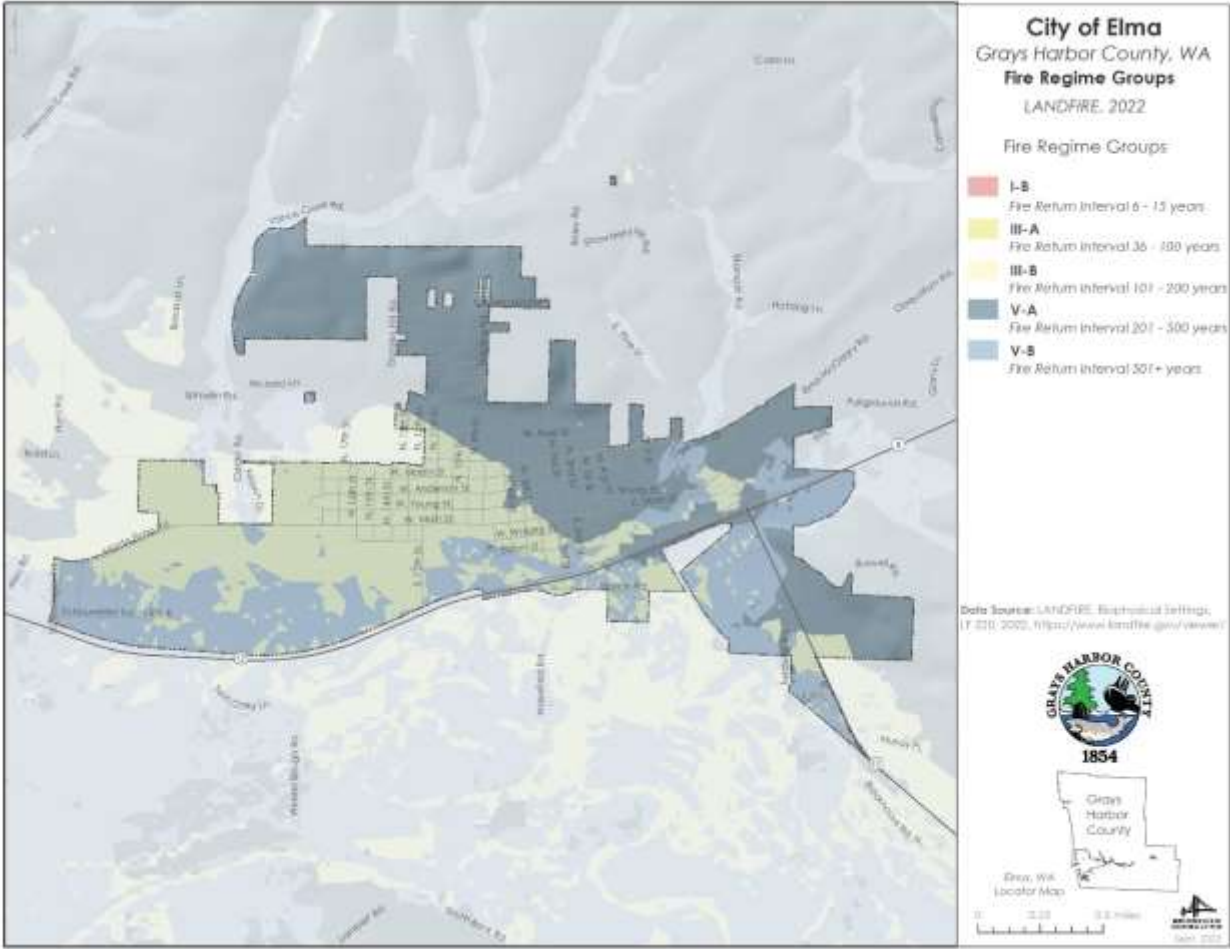
4.12 HAZARD AREA EXTENT AND LOCATION

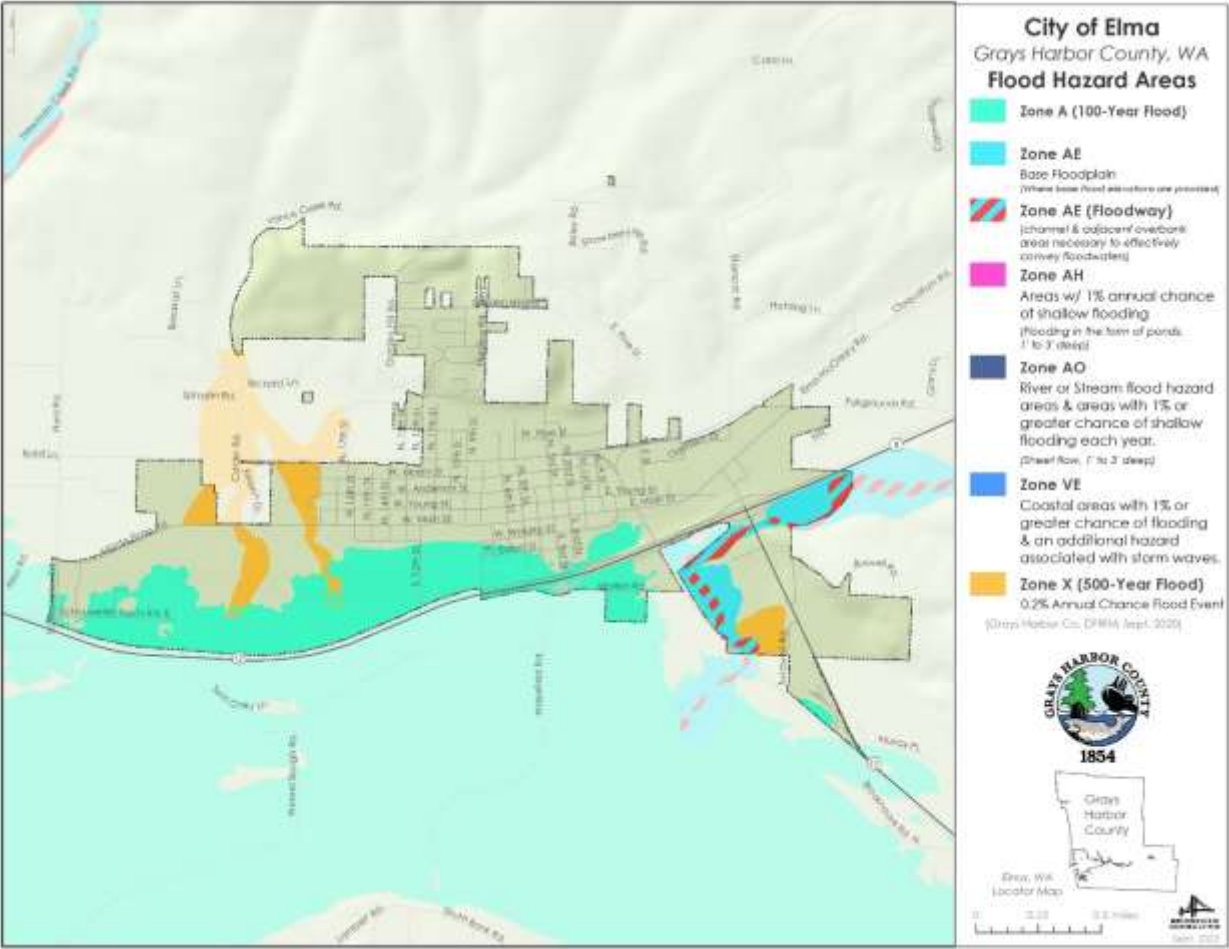
Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes.

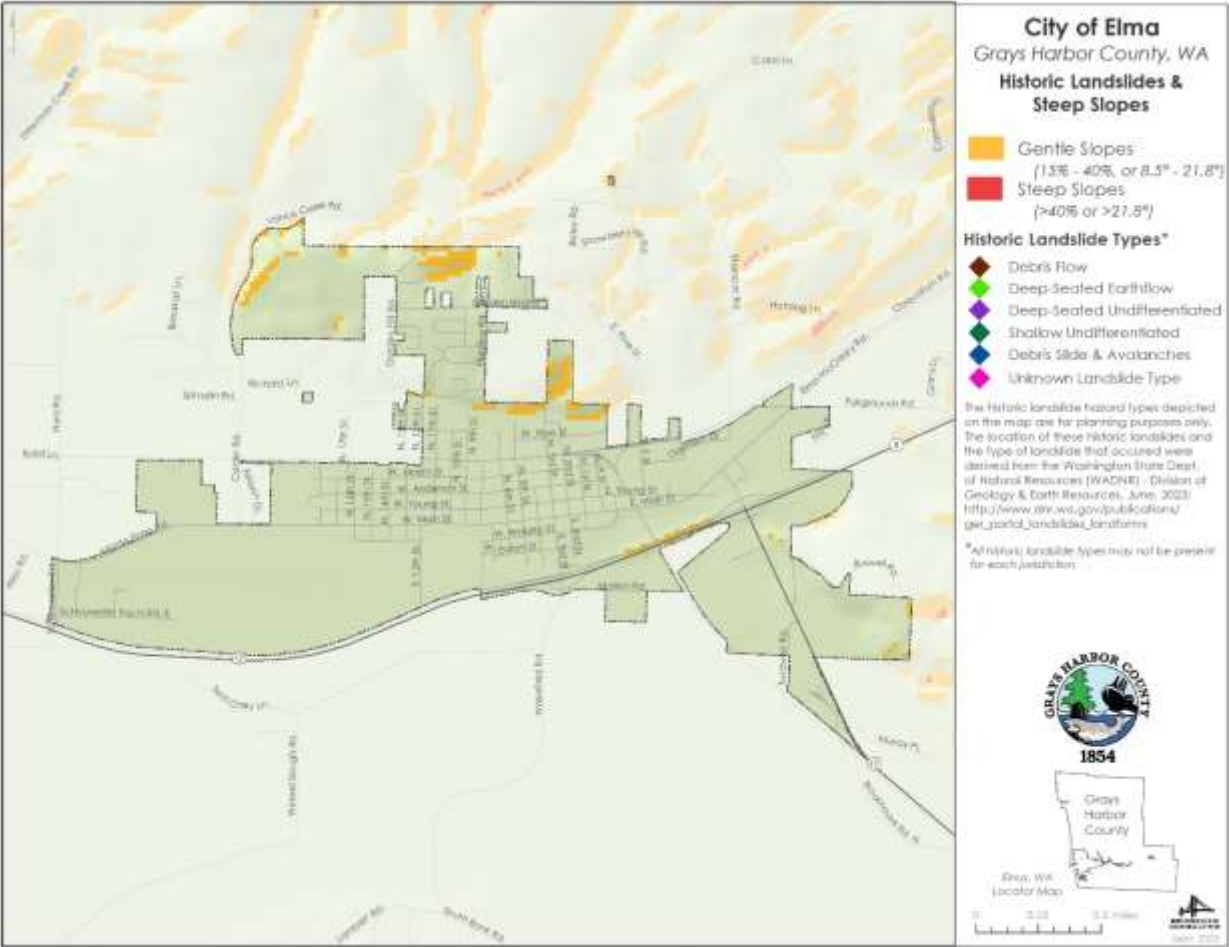












CHAPTER 5.

CITY OF HOQUIAM 2024 ANNEX UPDATE

5.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Hoquiam (City), a participating jurisdiction to the 2024 Grays Harbor County Hazard Mitigation Plan. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the Grays Harbor County Hazard Mitigation Plan. For planning purposes, this Annex provides additional information specific to the City, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data have been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1. The City of Hoquiam, after initial approval of the HMP in April 2024, updated its annex document to include additional dam and dam safety data with respect to the dams owned by the city. This annex represents the version approved by FEMA on June 26, 2024, including the High Hazard Dam requirements.

5.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

2024 City of Hoquiam Local Planning Team Members		
Name	Position/Title	Planning Tasks
Brian Shay City Administrator 609 8 th Street Hoquiam, WA 98550 360-538-3983 bshay@cityofhoquiam.com	Primary Point of Contact	Lead person for City, attend meetings for County HMP, coordinate providing material for City Annex and County plan. Assisted with risk ranking process; review of risk materials; review of draft plan. Assisted with public outreach efforts, including presentation of risk and final plan for adoption to Council
Matt Miller, Fire Chief 625 8 th Street Hoquiam, WA 98550 360-538-3962	Alternate Point of Contact	Back-up person for planning effort; performed review of draft materials; assimilated and drafted Annex document to

2024 City of Hoquiam Local Planning Team Members		
Name	Position/Title	Planning Tasks
mmiller@cityofhoquiam.com		include relevant data. Attended planning meetings. Conducted review of hazard profiles, assisted in risk ranking, assisted with public outreach efforts, and reviewed drafts of county plan.
Dorian Wylie, Building and Planning Department 609 8 th Street Hoquiam, WA 98550 360-538-3973 jwylie@cityofhoquiam.com	Building Official	Assisted with City plan development; provide input and information relating to floodplain development, permit requirements, and the capability assessment. Also provided information with respect to land use development trends, etc.

5.3 COMMUNITY PROFILE

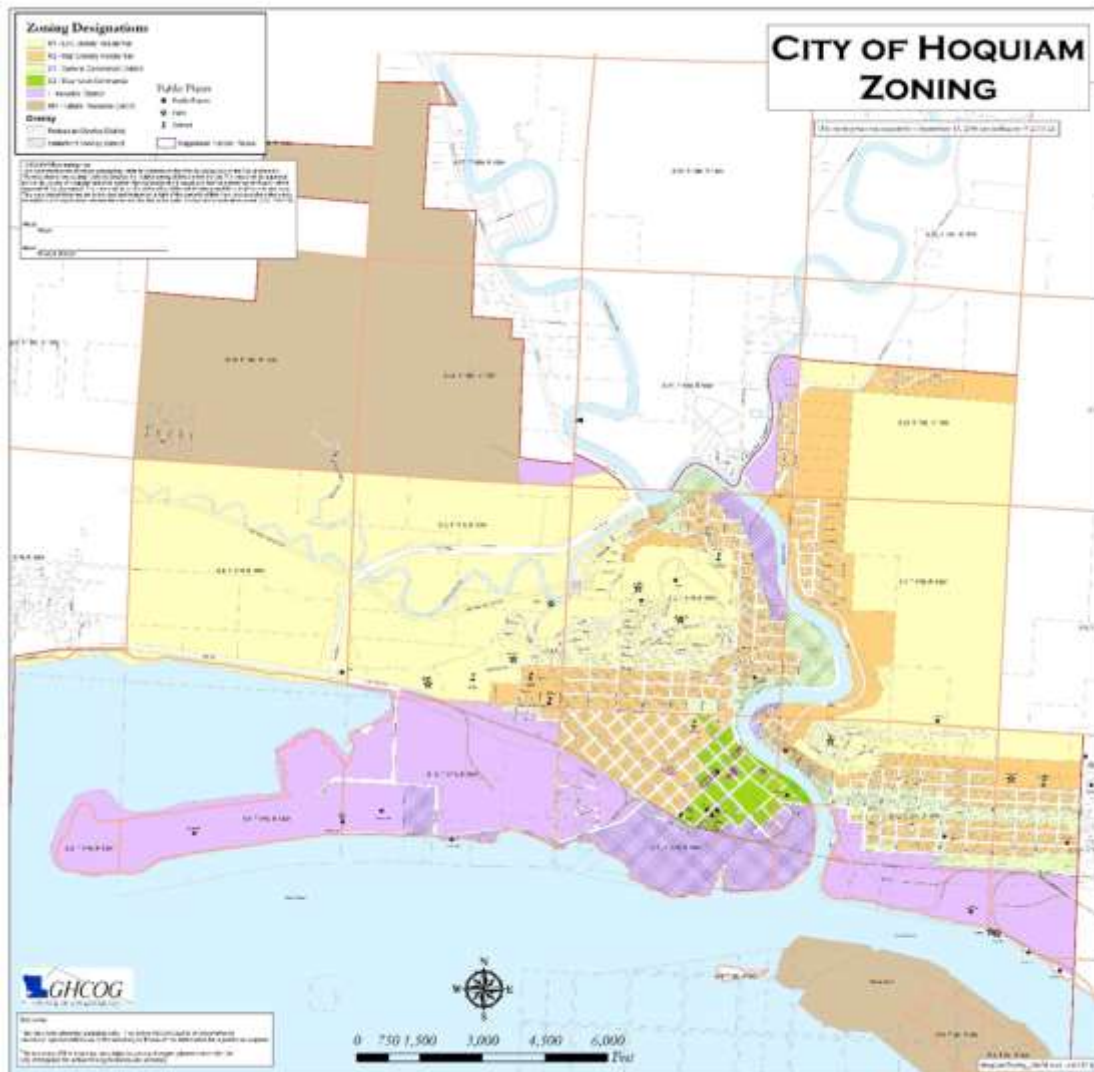
The following is a summary of key information about the City and its history:

- **Date of Incorporation**—May 21, 1890
- **Current Population**—The 2020 census population was 8,774, and the estimated population in 2015 was 8,405 from the Grays Harbor Council of Governments.
- **Population Growth**—The population was 9,097 as of the 2000 census, with some increases in population and some decreases during each of the previous census periods. The highest population since 1900 was 12,766 in 1930 and the lowest recorded population period was 1,302 in 1890.
- **Location and Description**— The City is located in the vicinity of the confluence of the Hoquiam River, the Chehalis River and the estuary of these rivers as they enter Grays Harbor. The easterly City limits of Hoquiam is adjacent to the westerly City limits of the City of Aberdeen. The total land area is approximately 9 square miles and the total water area within the City limits is approximately 6.6 square miles for a total area within the City limits of approximately 15.6 square miles. The majority of the land area within the City limits is in the City watershed area north of the populated area and has very limited population. Most of the populated land area of the City is low-lying ground relatively near sea level in elevation. The northerly limit of the populated area is on a steep bluff area which rises to an elevation of over 100 feet. The northerly portion of the City limits is in the watershed area of the Hoquiam River.
- **Brief History**—The early history of the City involved the timber industry with the first logging operation established in 1872. Several mills were developed during these early days and have continued to be the focal point of industry for the City. Extension of the railroad from

Aberdeen to Hoquiam beginning in 1898 contributed to the development of the timber industry.

- **Climate**— Located near the Pacific Ocean, the region experiences warm and dry summers and cool mild winters, with a maritime climate, with typically a westerly airflow from the ocean. Annual rainfall is approximately 70 inches, with the majority of the rainfall occurring from November through March. During this time period, there can also be frequent windstorms, which are sometimes accompanied by heavy rainfall.
- **Governing Body Format**— The City has a Mayor-Council form of government, with an elected mayor presiding over 12 council members.
- **Development Trends**—There has been little residential development occurring within the City in recent years. Continuing development at the Port of Grays Harbor facilities adjacent to the Grays Harbor estuary continues to be the primary industry with new development in the Hoquiam area. The primary focus of the City since completion of the last plan has been the various flood reduction projects, for which the City received BRIC grant funding (discussed below). That development which has occurred has not increased the level of vulnerability as the various building codes in place has restricted development in high hazard areas, or required appropriate building codes. The construction of the various levy projects will reduce the impact of flood, severe weather, and climate change as it relates to increased precipitation.
- **Economy** – The City’s economic base over the years has consisted of the timber industry and the Port of Grays Harbor properties. The current largest employers within the City include the Hoquiam School District, the City of Hoquiam, Grays Harbor Transit, and the leaseholders to Port of Grays Harbor properties within the City.

The City boundaries are identified in the zoning map below. Zoning since completion of the 2018 Annex has not changed, and this map remains the most current for the 2024 update.



5.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the City. Table 5-1 lists all past occurrences of natural hazards within the County, which included the City. No dollar loss data are available; however, the City is attempting to establish a method for better tracking of this data as staffing levels allow. Since the 2018 HMP was completed, the 2022 Severe Winter Storm declared event (DR 4650) had significant flood and landslide impact on the City.

Table 5-1
Grays Harbor County Disaster History 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
4650	3/29/22	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	2/15/2022
4593	4/8/2021	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	1/16/2021
4539	4/23/20	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	2/10/2020
4481	3/22/20	COVID	Biological	1/20/2020	5/11/2023
4418	3/4/2019	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	12/24/2018
4253	2/2/2016	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015	12/14/2015
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	8/29/2015	8/29/2015
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012	1/23/2012
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008	1/5/2009
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009	1/16/2009
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007	12/17/2007
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006	12/15/2006
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006	11/11/2006
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006	2/4/2006

Table 5-1 Grays Harbor County Disaster History 1953-2022					
Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	10/15/2003	10/23/2003
1361	3/1/2001	Earthquake	Earthquake	2/28/2001	3/16/2001
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997	3/28/1997
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996	2/10/1997
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	1/26/1996	2/23/1996
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995	12/18/1995
1037	8/2/1994	Fishing Losses	The El Nino (The Salmon Industry)	5/1/1994	10/31/1994
883	11/26/1990	Flood	Severe Storms, Flooding	11/9/1990	12/20/1990
852	1/18/1990	Flood	Severe Storms, Flooding	1/6/1990	1/14/1990
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980	5/21/1980
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979	12/31/1979
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	12/10/1977	12/10/1977
492	12/13/1975	Flood	Severe Storms and Flooding	12/13/1975	12/13/1975
322	2/1/1972	Flood	Severe Storms and Flooding	2/1/1972	2/1/1972
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	2/9/1971
185	12/29/1964	Flood	Heavy Rains and Flooding	12/29/1964	12/29/1964
EMERGENCY DECLARATIONS					
3227	9/7/2005	Coastal Storm	Hurricane Katrina Evacuation	8/29/2005	10/1/2005
SIGNIFICANT LOCAL INCIDENTS					

Table 5-1 Grays Harbor County Disaster History 1953-2022					
Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
NA	NA	Landslides/Floods	Heavy Rains and Landslides (Countywide)	1/4/2015	1/5/2017

5.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the City’s capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

5.6 NATIONAL FLOOD INSURANCE INFORMATION

The City of Hoquiam maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 11.05 of the Hoquiam Municipal Code. Within Sect 11.05.250 HMC there is a definition of “development” and “substantial improvement” as follows:

- “Development” means the construction or exterior alteration of buildings or structures; dredging; drilling; dumping; filling; removal of sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or a project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to Chapter 90.58 RCW at any state of water level (RCW 90.58.030(3)(a)). “Development” does not include dismantling or removing structures if there is no other associated development or re-development.
- “Substantial development” means a development of which the total cost or fair market value exceeds, eight thousand five hundred four dollars or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established in this definition must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2022, based upon changes in the consumer price index during that time period. “Consumer price index” means, for a calendar year, that year’s annual average consumer price index in the Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the Bureau of Labor and Statistics, United States Department of Labor. The Office of

Financial Management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the Washington State Register at least one month before the new dollar threshold is to take effect (RCW 90.58.030(3)(e)). A list of developments, uses, and activities that shall not be considered substantial development is provided in Article VII, Shoreline Administration, of this chapter (WAC 173-27-040(2)(a)).

Elsewhere in that same Chapter, the requirements of the Chapter—including development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, and so on—are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Information on the community's National Flood Insurance Program (NFIP) compliance is presented in Table 5-2. This identifies the most current status of the City's involvement with the NFIP as of this 2024 update.

Repetitive flood loss records are as follows (year end 2022):

- Number of FEMA-Identified Repetitive Loss Properties: 2 – Single Family Residence
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0

Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 2 Previous to this 2024 update; no additional properties have been mitigated since 2018.

Table 5-2 National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Building and Planning
Who is your community's floodplain administrator? (department/position)	Dorian Wylie, Building and Planning Official
Do you have any certified floodplain managers on staff in your community?	County
What is the date of adoption of your flood damage prevention ordinance?	June 26, 2017
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 12, 2006
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes

**Table 5-2
National Flood Insurance Compliance**

Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No training needed, but additional staff support is needed.
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	Not at the present time but interested in joining if additional staff support could be available.

5.6.1 Regulatory Capability

The assessment of the City's legal and regulatory capabilities for this 2024 update is presented in Table 5-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

**Table 5-3
Legal and Regulatory Capability**

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	IBC	Chapter 2.08		
Version		ORD # 17.08		
Year	2015	Adopted 6/26/2017		
Zoning Ordinance	Chapter 10.03	ORD # 17.08 Adopted 6/26/2017		
Subdivision Ordinance	Title 9	ORD # 17.08 Adopted 6/26/2017		
Floodplain Ordinance	Chapter 11.16	ORD # 17.08 Adopted 6/26/2017		
Stormwater Management	Chapter 8.14	ORD # 17.08 Adopted 6/26/2017		

Table 5-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Post Disaster Recovery	NO			
Real Estate Disclosure	YES		X	
Growth Management	YES		X	
Site Plan Review	Chapter 9.09	ORD # 17.08 Adopted 6/26/2017		
Coastal Zone Management	NO			
Climate Change Adaptation	NO			
Environmental Protection	Title 11	ORD # 17.08 Adopted 6/26/2017		
Planning Documents				
General or Comprehensive Plan	YES			
<i>Is the plan equipped to provide linkage to this mitigation plan?</i> YES				
Floodplain or Basin Plan	YES			
Stormwater Plan	YES			
Capital Improvement Plan	YES			
Habitat Conservation Plan	YES			
Economic Development Plan	YES			
Shoreline Management Plan	YES			
Community Wildfire Protection Plan	NO			
Transportation Plan	YES	YES		
Response/Recovery Planning				
Comprehensive Emergency Management Plan	YES			
Threat and Hazard Identification and Risk Assessment	YES			
Post-Disaster Recovery Plan	NO			
Public Health Plans	NO			
Boards and Commission				

Table 5-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Planning Commission	YES			
Mitigation Planning Committee	YES			Team established for purpose of 2024 update; City was also part of the County's overall HMP Committee.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	YES			
Mutual Aid Agreements / Memorandums of Understanding	YES			
Other				

5.6.2 Administrative and Technical Capabilities

The assessment of the City's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 5-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 5-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	YES	Building Official
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	YES	Building Official
Engineers specializing in construction practices?	NO	Contracted Services As Needed
Planners or engineers with an understanding of natural hazards	YES	Planning Department
Staff with training in benefit/cost analysis	YES	City Administrator
Surveyors	NO	Contracted Services As Needed
Personnel skilled or trained in GIS applications	YES	County Services

Table 5-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Emergency Manager	YES	City Administrator
Grant writers	YES	Various Departments as needed
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	YES	City Administrator
Hazard data and information available to public	YES	City Administrator
Maintain Elevation Certificates	YES	Building Official
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	NO	
Local citizen groups or non-profit organizations focused on environmental protection?	YES	
Organization focused on individuals with access and functional needs populations	YES	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	YES	Various city departments provide public education and outreach efforts.
Natural disaster or safety related school programs?	YES	This is performed primarily by the local schools, but the city and county provide assistance when requested when staffing levels allow.
Public-private partnership initiatives addressing disaster-related issues?	NO	
Multi-seasonal public awareness program?	YES	This is many times accomplished in conjunction with the County outreach efforts.
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	YES	
Noxious Weed Eradication Program or other vegetation management	YES	Public Works
Creek, stream, culvert or storm drain maintenance or cleaning program	YES	Public Works
Stream restoration program	YES	Public Works
Erosion or sediment control program	YES	Public Works
Address signage for property addresses	YES	Public Works

Table 5-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Other		

5.6.3 Fiscal Capability

The assessment of the City's fiscal capabilities is presented in Table 5-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 5-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	YES
Capital Improvements Project Funding	YES
Authority to Levy Taxes for Specific Purposes	YES
User Fees for Water, Sewer, Gas or Electric Service	YES
Incur Debt through General Obligation Bonds	YES
Incur Debt through Special Tax Bonds	YES
Incur Debt through Private Activity Bonds	NO
Withhold Public Expenditures in Hazard-Prone Areas	NO
State Sponsored Grant Programs	YES
Development Impact Fees for Homebuyers or Developers	NO
Other	

5.6.4 Community Classifications

The City's classifications under various hazard mitigation programs are presented in Table 5-6. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 5-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	NO	
Building Code Effectiveness Grading Schedule - Commercial	YES	Class 4
Building Code Effectiveness Grading Schedule – Dwelling	YES	Class 4
Storm Ready	YES	
Tsunami Ready (if applicable)	YES	

5.7 HAZARD RISK AND VULNERABILITY RANKING

The City’s Planning Team reviewed the hazard list identified within the Base Plan and has identified the hazards that affect the City of Hoquiam. Table 5-7 presents the ranking of the hazards based on their CPRI score for the 2024 update. Table 5-8 identifies the CPRI scoring. The hazards remain consistent with the 2018 edition, with earthquake, flood, and landslide being the hazards of greatest concern.

On completion of the ranking process, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ❑ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- ❑ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ❑ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- ❑ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- ❑ Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 5-7. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.9	High
2	Flood	3.8	High
3	Landslide	3.5	High
3	Tsunami	3.5	High
4	Severe Weather	3.35	High
5	Erosion	2.8	Medium
6	Wildfire	2.65	Medium
7	Climate Change	2.35	Medium
8	Drought	1.75	Low
9	Volcano	1	Low

Table 5-8.
HOQUIAM 2024 CPRI SCORE AND HAZARD RANKING

Hazards Of Concern	Probability				Magnitude Severity /				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change		2					3				3					1				4	2.35	7	Medium
Drought	1					2					3					1				4	1.75	8	Low
Earthquake				4				4				4	4					2			3.90	1	High
Erosion			3				3			2					2	1			3		2.80	5	Medium
Flood				4				4				4		3					3		3.80	2	High
Landslides				4			3				3		4					2			3.50	3	High
Severe Weather			3				3					4	4						3		3.35	4	High
Tsunami			3					4				4	4					2			3.50	3	High
Volcano	1				1				1							1	1				1.00	9	Low
Wildfire		2						4			3				2				3		2.65	6	Medium
Other Hazard of Concern																					NR		

Flooding and landslides have continued to negatively impact the City since completion of the 2018 plan, with one disaster declaration occurring in 2022 (severe storm, which caused extensive flooding). In addition to that event, during January 2023, the city sustained flooding beyond historical norms from an extreme King Tide event that caused the closure of State Highway 101, impacting ingress and egress to the City and other areas in the planning region.

5.8 MITIGATION GOALS AND OBJECTIVES

The City of Hoquiam adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

5.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the City identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the City's assets and hazards of concern. Table 5-9 lists the action items/strategies that make up the City's hazard mitigation plan. Many of these are carried over from the 2018 plan, with minor revisions. Background information and information on how each action item will be administered, responsible agency/office (including outside the City limits), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Table 5-9. Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 North Shore Levee Construction									
Both	Flood, Tsunami	1,2,3, 4,5,6, 8,	Public Works	High	State, Flood Authority, Federal BRIC and HMGP, General Fund	Long-Term	Yes	Structural	City facilities, property owners
INITIATIVE #2 Broadway Road Stabilization Project									
Both	Flood, Tsunami	1,2,3, 4,5,6, 8	Public Works	High	State, Flood Authority, Federal BRIC and HMGP, General Fund	Long-Term	Yes	Structural	City facilities, property owners
INITIATIVE #3 Westside Levee, predesign, design, and construction									

**Table 5-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Both	Flood, Tsunami	1,2,3, 4,5,6, 8,	Public Works	High	State, Flood Authority, Federal Grants (BRIC, HMGP) General Fund	Long-Term	Yes	Structural	City facilities, property owners
INITIATIVE #4 Woodlawn Levee, predesign, design, and construction									
Both	Flood, Tsunami	1,2,3, 4,5,6, 8,	Public Works	High	State, Flood Authority, Federal Grants (BRIC, HMGP), General Fund	Long-Term	Yes	Structural	City facilities, property owners
INITIATIVE # 5 Broadway-Beacon Hill Road Project for alternate road access									
Both	Landslide, Earthquake	2,3,6, 8,9	Public Works	High	State, Flood Authority	Short-Term	Yes	Structural	City facilities, hospital access, property owners
INITIATIVE #6 Purchase and maintain fire/hazmat response equipment for Port industrial facilities									
Both	Others	2,4,5, 6,7	Port of Grays Harbor	High	Port, State DOE	Short-Term	Yes	Preventive Activity, Emergency Services Recovery	Region
INITIATIVE #7 Continue seeking grant funds to help staff the required City positions to allow joining the Community Rating System									

**Table 5-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Both	Flood, Tsunami	1,2,3, 4,5,6, 7,8,9	City Administrator, Building & Planning	Medium	Grant Funds (BRIC, HMGP, others)	Short-Term	Yes, Modified	Preventive Activities, Property Protection, Natural Resource Protection	City facilities, property owners
INITIATIVE #8 Wastewater Treatment Plant Relocation, seismic upgrade or retrofitting									
Both	Flood, Tsunami, Severe Weather	1,2,3, 4,5,6, 8,9	City Administrator	High	General Fund, State grants, Federal grants (BRIC, HMGP)	Short-Term	Yes, Updated	Preventive Activities, Structural Projects	City and City of Aberdeen
INITIATIVE #9 Continue to acquire generators to avoid disruption of power during emergencies at critical facilities and infrastructure locations.									
Both	Flood, Tsunami, Severe Weather, Earthquakes	4,6,7	Public Works	Medium	General Fund, HMGP, State grants	Short-term	Yes, Modified	Emergency Services, Recovery	City facilities
INITIATIVE #10 Continue developing Quick Reference Guides for City personnel and City vehicles									
Both	All hazards	5,6,7, 8	Public Works	Low	General Fund	Short-Term	Yes	Emergency Services, Recovery	City facilities, property owners
INITIATIVE #11 Continue searching for grants and set annual funding priorities for Hazard Mitigation Projects. Consider seeking outside source funding to assist with full-time staffing of a grant writer to assist with the technical applications for various grants, allowing the City to further pursue potential mitigation projects.									

Table 5-9.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Both	All hazards	4,5,6,7,8	City Administrator	Low	General Fund	Short-Term	Yes, Modified	Preventive Activities	City facilities, property owners
INITIATIVE #12 Establish City-owned Tsunami Assembly Area and Emergency Response Facility									
Both	All hazards	4,6,7	City Administrator	High	General Fund, HMGP, BRIC	Long-Term	Yes	Emergency Services, Recovery	City facilities, property owners
INITIATIVE #13 City Reservoirs Replacement									
Both	EQ	2,4,7,8	Public Works	High	BRIC, HMGP, General Fund	Long-Term	Yes	Preventive Activities, Property Protection	City facilities, property owners
INITIATIVE #14 Complete City Emergency Response Plan									
Both	All hazards	5,6,7,8	City Administrator	Low	General Fund	Short-Term	Yes	Preventive Activities, Emergency Services	City facilities, property owners
INITIATIVE #15 Maintain a disaster contingency fund in the City budget									
Both	All hazards	All	City Administrator	Medium	General Fund	Short-Term	Yes	Preventive Activities, Property Protection	City facilities, property owners

5.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 5-10 identifies the prioritization for each initiative.

Table 5-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	7	High	High	Yes	Yes	No	High
2	7	High	High	Yes	Yes	No	High
3	7	High	High	Yes	Yes	No	High
4	7	High	Medium	Yes	Yes	No	High
5	5	High	Medium	Yes	Yes	No	High
6	8	High	High	Yes	Yes	No	High
7	5	High	Medium	Yes	Yes	No	High
8	9	High	Medium	Yes	No	No	Medium
9	3	High	Medium	Yes	Yes	No	High
10	4	Medium	Low	Yes	No	Yes	High
11	5	High	Low	Yes	No	Yes	High
12	3	High	High	Yes	Yes	No	Medium
13	4	Medium	Low	Yes	No	Yes	Medium
14	4	Medium	Low	Yes	No	Yes	Medium
15	9	Medium	Low	Yes	No	Yes	Medium

a. See Chapter 1 for explanation of priorities.

5.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 5-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 5-11.
2024 Status of Previous Hazard Mitigation Action Plan**

Mitigation Strategy	Associated Hazards							Previous Timeline	Project Status	Current Status			
	Others	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire			Completed	Continual /Ongoing Nature	Removed -/No Longer Relevant /	Carried Over
INITIATIVE #1 North Shore Levee Construction		X	X	X	X	X		Long-Term	Design, permitting and ROW underway. City has FEMA BRIC grant for construction planned in 2026-2027				X
INITIATIVE #2 Broadway- Road Stabilization Project			X			X		Long-Term	Design, permitting and ROW underway. City has FHWA funding for construction planned in 2026-2027				X
INITIATIVE #3 Westside Levee, predesign, design, and construction			X			X		Long-Term	Design, permitting and ROW underway. City has FEMA BRIC grant for construction planned in 2025-2027				X
INITIATIVE #4 Woodlawn Levee, predesign, design, and construction			X			X		Long-Term	This project is on hold until state/federal funding is available.				X
INITIATIVE # 5 Broadway-Beacon Hill Road Project for alternate road access		X		X				Medium term	This project is on hold until state/federal funding is available. The City has applied for funding but was not successful.				X
INITIATIVE #6 Purchase and maintain fire/hazmat response equipment for Port industrial facilities	X							Short term	This project is on-going as funding because available.				X

Table 5-11.
2024 Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Associated Hazards							Previous Timeline	Project Status	Current Status			
	Others	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire			Completed	Continual /Ongoing Nature	Removed -/No Longer Relevant /	Carried Over
INITIATIVE #7 Further consideration and actions for the City joining the Community Rating System		X				X		Medium term	This project is on hold pending training by the building official and the city's construction of the North Shore Levee.				X
INITIATIVE #8 Wastewater Treatment Plant Relocation or seismic and hazard mitigation retrofitting			X	X		X		Short term	The City is completing a Wastewater Facility Plan in 2023 and will begin seeking funding to initiate the results of that planning effort. Actual project completion is dependent upon gaining federal and/or state funding.	X			X
INITIATIVE #9 Purchase generators to avoid disruption of power during emergencies		X	X	X	X	X		Short term	This project is on-going as funding becomes available. Two generators were purchased in 2023, but additional generators are necessary.	X	X		X
INITIATIVE #10 Develop a Quick Reference Guide for City personnel and City vehicles	X	X	X	X	X	X	X	Short term	This project is on-going until staff time is available.				X

Table 5-11.
2024 Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Associated Hazards							Previous Timeline	Project Status	Current Status			
	Others	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire			Completed	Continual /Ongoing Nature	Removed -/No Longer Relevant /	Carried Over
INITIATIVE #11 Search for grants and set annual funding priorities for Hazard Mitigation Projects	X	X	X	X	X	X	X	Short term	The City was successful in gaining some grant funding to move forward portions of the previous mitigation initiatives; however, there is more funding required. Prioritization of the existing initiatives will be supported by the maintenance process identified in the 2024 HMP Update, which includes an annual plan maintenance review.	X	X		X
INITIATIVE #12 Establish City-owned Tsunami Assembly Area and Emergency Response Facility	X	X	X	X	X	X	X	Long term	This project is on-going pending federal and state funding. The City plans to apply for a FEMA BRIC grant in 2024.		X		X
INITIATIVE #13 City Reservoirs Replacement		X						Long term	A seismic study was conducted in 2023 that determined the reservoirs should be replaced. Based on that completed assessment, the City will seek state and federal funding to replace the reservoirs.	X	X		X
INITIATIVE #14 Complete City Emergency Response Plan	X	X	X	X	X	X	X	Short term	This project is on-going as staff is able to work on planning and procedures for emergency response.		X		X
INITIATIVE #15 Maintain a disaster contingency fund in the City budget	X	X	X	X	X	X	X	Short term	This strategy is on-going on an annual basis as the city implements its emergency plan.	X	X		X

5.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

The City feels that there are certain studies and assessments which could be completed to assist in identifying potential risks. One example of this was the seismic study completed in 2023 to help identify and prioritize reservoirs which need replacing. The City does not maintain enough staff or subject matter experts to regularly and independently conduct such assessments. As funding opportunities become available, the City intends to seek technical assistance (or other) grants to help identify potential weaknesses in its existing and aged infrastructure.

5.12.1 Mitigation Initiatives and Funding

Since the last Hazard Mitigation Plan in 2018, the City of Hoquiam was awarded a \$34.65M FEMA BRIC grant for construction of the North Shore Levee West, along with matching funding from Washington State. Construction is planned after permitting is completed between 2025-2027.

The City also received \$9.95M in FEMA funding for final design and permitting of the North Shore Levee and North Shore Levee West. Design and permitting are underway with the NSL West currently at 90% final design and the NSL approaching 65%. The City of Aberdeen has been awarded \$50M in FEMA BRIC funding to construct the North Shore Levee which is likely to be ready for construction in 2026 or 2027. Washington State has also supplied the match to this BRIC grant. The City of Hoquiam was a subrecipient of FEMA funds awarded to the Department of Ecology to analyze the seismic stability of the Hoquiam Water Reservoirs. That analysis is underway and will be completed by early 2024. Federal Highway Administration funding was awarded for the design, permitting and right of way for the Broadway Road Stabilization Project. These tasks are underway, and construction is planned to start in 2026 or 2027 with federal funding.

5.13 ADDITIONAL COMMENTS

As of this 2024 update, the City remains interested in joining the Community Rating System (CRS) to reduce flood insurance premiums for the existing and future NFIP policy holders within the City limits. In addition to reducing flood insurance premiums for policy holders, by implementing provisions within the CRS for improvements in flood damage reduction, the City could expect to benefit from reduced potential flood damages within the City.

Because of the number of flood insurance policy holders within the City, and the work associated with implementing the requirements for joining and maintaining membership in the CRS, the City is currently not in a position to join and continue as a CRS community. The City has no existing staff which could perform the workload associated with the CRS requirements and does not have the financial resources to hire a new staff person for this. The City does still feel that this is a valid program and will revisit the initiative as staffing and funding allow.

Current data on NFIP policies shows that there was a significant reduction in the number of policy holders within the City since the last plan's completion. During the 2018 update, the City had 722 policies. As of this 2024 update, the number has been reduced to 267. Flood insurance premiums are continuing to rise and in some cases homeowners are finding it very difficult financially to continue to maintain their flood insurance coverage.

5.14 COORDINATION WITH THE STATE OF WASHINGTON REGARDING HIGH HAZARD POTENTIAL DAMS

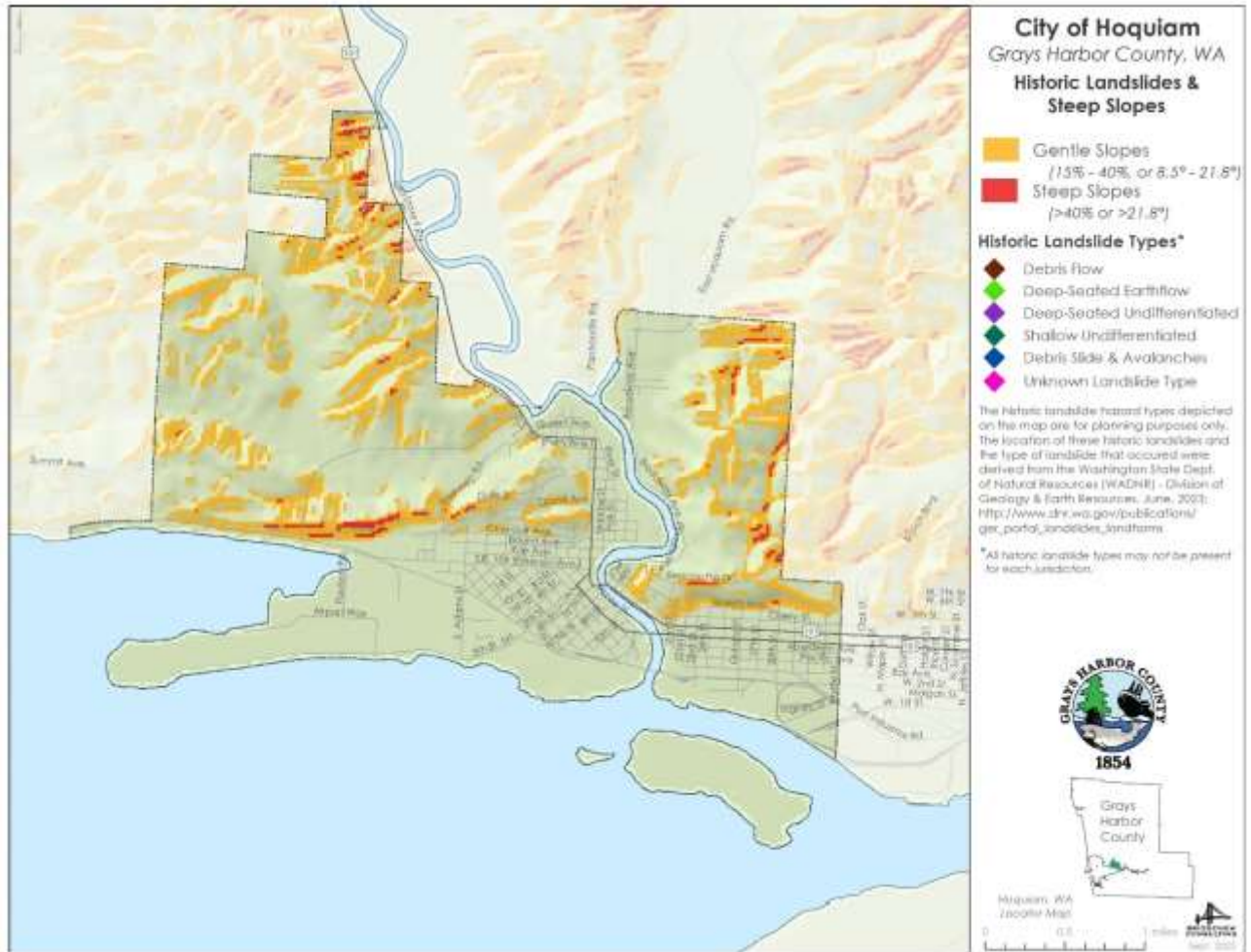
The City of Hoquiam and the Washington State Department of Ecology coordinate annually regarding the City of Hoquiam High Hazard Potential Dams. Since at least 2007, the City of Hoquiam has maintained and filed a formal Simplified Emergency Action Plan for the Beacon Hill Reservoir and the College Hill Reservoir with the Dam Safety Office, within the Washington State Department of Ecology's Water Resources Program. These plans are assigned the numbers GH22-1790 and GH22-663 by the Dam Safety Office. The purpose of this Emergency Action Plan form is to reduce the risk of injury or loss of life and to minimize property damage during an unusual event or emergency. The EAP defines responsibilities and provides procedures designed to:

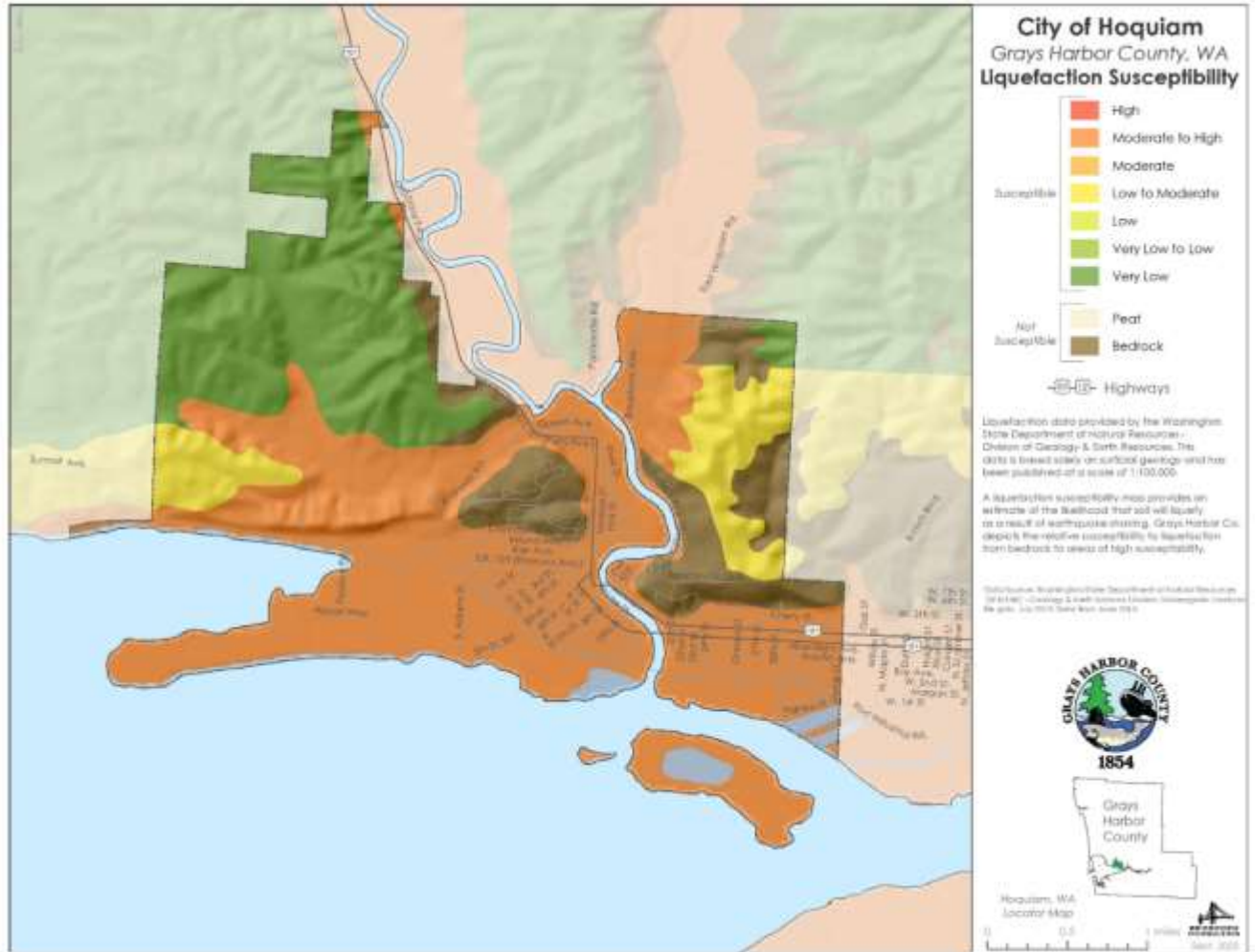
- Identify conditions that may endanger the dam.
- Begin remedial actions to prevent or minimize the downstream impacts of a dam failure.
- Notify local emergency personnel and effectively communicate conditions.
- Warn downstream residents of impending or actual failure of the dam.
- Conclude the response to the unusual or emergency event.

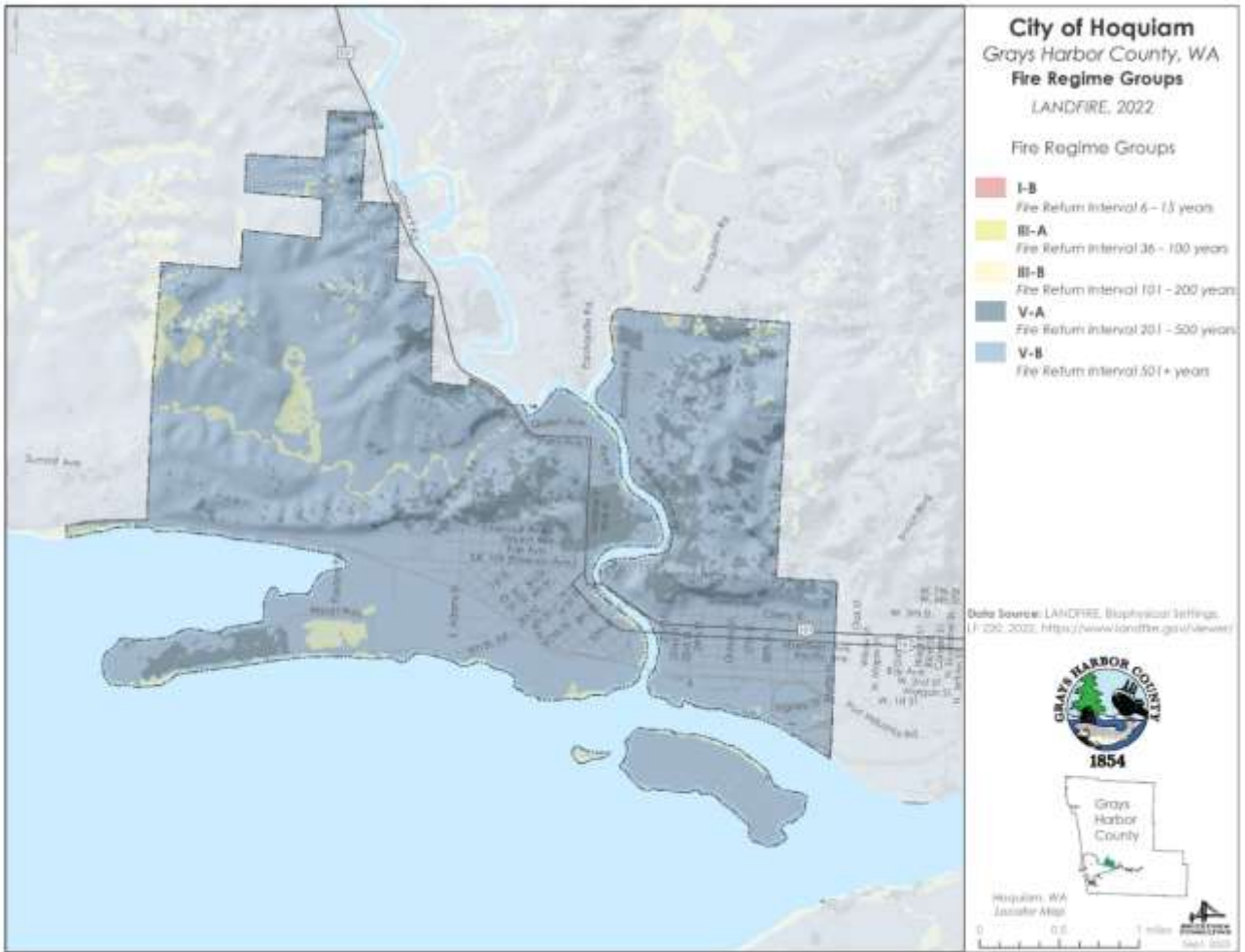
Each year, the Department of Ecology issues the city a permit to operate these dams and they conduct an annual safety inspection looking for any deficiencies that the city would be responsible to correct. The City of Hoquiam and the Dam Safety Office have been working together to address seismic safety concerns at the two Hoquiam High Hazard Dams since 2021. Ecology was awarded a FEMA grant to conduct seismic safety analysis at several high hazard dams, including the two in Hoquiam which were authorized to proceed in 2023. During the analysis of the two Hoquiam Reservoirs, they were deemed to be very high hazard during a seismic event and that retrofitting the reservoirs is not feasible. As a result of this information, the city will continue to work with the State of Washington to find a funding source to build new dams or above ground tanks that meet current seismic safety standards.

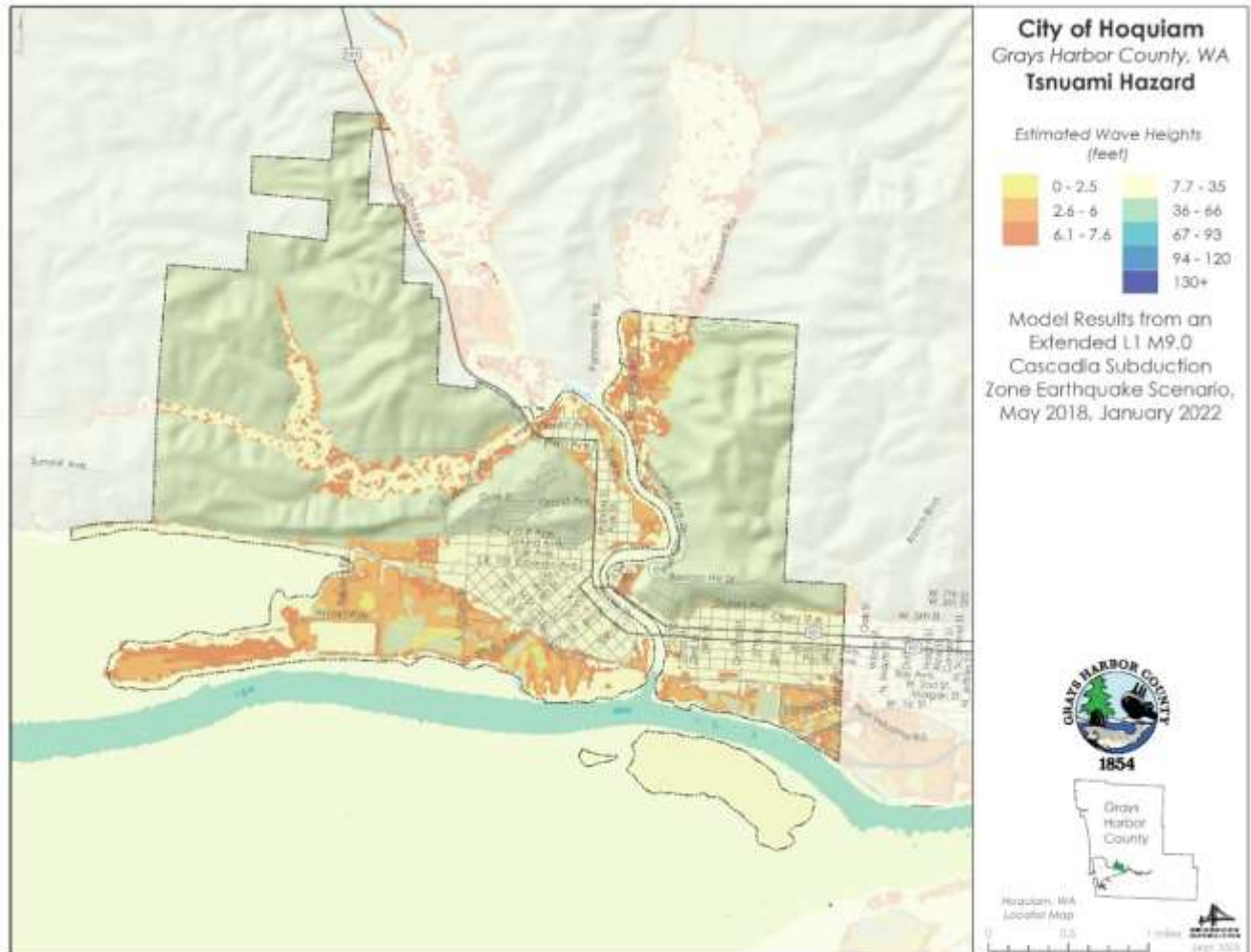
5.15 HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes.









CHAPTER 6.

CITY OF MCCLEARY 2024 ANNEX UPDATE

6.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of McCleary, a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of McCleary. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only.

6.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City of McCleary followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of McCleary also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Chad Bedlington, Director of Public Works 100 S. 3 rd Street McCleary, WA 98557 Telephone: 360-495-3667 e-mail chadb@cityofmccleary.com	Primary Point of Contact	Conducted public outreach; provided information, attended all meetings, and assisted in overall plan development.
Sam Patrick, Chief of Police 100 S. 3 rd Street McCleary, WA 98557 Telephone: 360-495-3667 e-mail spatrick@cityofmccleary.com	Alternate Point of Contact	Provided information and research; conducted reviews and attended meetings.
Tyson Ryder, Public Works/Planning Assistant 100 S. 3 rd Street	Building and Planning, Alternate Point of Contact	Primary author of annex, attended meetings, conducted

Local Planning Team Members		
Name	Position/Title	Planning Tasks
McCleary, WA 98557 Telephone: 360-495-3667 e-mail tysonr@cityofmccleary.com		public outreach, researched relevant data.
Paul Nott, Senior Lineman & Fire Chief 100 S. 3 rd Street McCleary, WA 98557 Telephone: 360-495-3667 e-mail pauln@cityofmccleary.com	Alternate Point of Contact	Provided information and research; conducted reviews and attended meetings.

6.3 COMMUNITY PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**— January 9, 1943
- **Current Population**—2,181 as of 2021 Census
- **Population Growth**— The City had a stagnant population for decades, until the moderate housing “boom” started in the mid 2000’s and again in 2020 due to the Covid-19 pandemic.
- **Location and Description**— McCleary is located 20 minutes west of I-5 in Grays Harbor County on "the road to the beach." The city is also located at the southern terminus of SR 108, the "shortcut from Shelton to the beach." The city encompasses a land area of 2.05 sq. miles, a water area of 0.02 sq. miles and an elevation of 276 ft.
- **Brief History**— Henry McCleary came to the land in 1897, building two sawmills and a door manufacturing company. He sold the land and the companies to Simpson Logging Company, December 31, 1941. On January 9, 1943, the land became an incorporated city named after its founder.
- **Climate**— McCleary gets an average of 79 inches of rain per year and snowfall is an average of 2 inches. On average, there are 129 sunny days per year in McCleary. The July temperature average is around 76 degrees, and the January average low is 34 degrees.
- **Governing Body Format**— The City of McCleary is governed by a mayor, as well as five councilmembers.
- **Development Trends**— The City has had ~16 plus new homes permitted for 2018-2022. This is a direct result of the City’s proximity to the growing Olympia area. The city has seen little

commercial / industrial development in recent years. At the end of this document is the current zoning plan, however the city will be updating this map before the end-of-life cycle of the HMP.

- **Economy** – The City of McCleary economic base consists of manufacturing, healthcare services and retail sales and services. (e.g., retail sales and services; recreational and healthcare services; agricultural; and light manufacturing. The largest employers include Simpson Door, Summit Pacific Healthcare Clinic, McCleary School and City of McCleary.

The jurisdiction boundaries are identified in the map below.

6.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the jurisdiction. Table 6-1 lists all past occurrences of hazard events within the jurisdiction. If available, dollar loss data is also included. While the county has had five disaster declarations since the last plan, only COVID has directly impacted the city.

Table 6-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
COVID	4481-DR-WA	1/20/2020	
Severe Storm	4056-DR-WA	3/5/2012	\$38,864
Severe Storm	1825-DR-WA	3/2/2009	
Flood	1817-DR-WA	1/30/2009	
Severe Storm	1734-DR-WA	12/8/2007	
Severe Storm	1682-DR-WA	2/14/2007	

6.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and

other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

6.6 NATIONAL FLOOD INSURANCE INFORMATION

Information on the community's National Flood Insurance Program (NFIP) compliance is presented in This Table 6-2 identifies the status of the jurisdiction's involvement with the NFIP.

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

At present, the City has one NFIP policy in force, with a total insurance coverage of \$300,000, with a premium of \$575 (based on June 30, 2023 NFIP data provided by the State).

The City of McCleary maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 15.12 of the McCleary Municipal Code. Within Section 15.12.030 MMC there are definitions for "substantial damage" and "substantial improvement" as follows:

- Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent of the value of the structure before the damage occurred. For purposes of determining this value, in the discretion of the city it shall be the greater of the assessed value or the value provided by a qualified expert.
- Substantial improvement means any repair, reconstruction, rehabilitation, addition, replacement, or other improvement of a structure, taking place during a five-year period, the cumulative cost of which equals or exceeds fifty percent of the value of the structure before the improvement or repair is started. For purposes of determining this value, in the discretion of the city it shall be the greater of the assessed value or the value provided by a qualified expert.

This term includes requested improvements to structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not include:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by a code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of an historic structure provided that the alteration will not preclude the structure's continued designation as an historic structure.

Contained within that same Chapter are the requirements for development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, etc. All of these requirements

are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Table 6-2 National Flood Insurance Program Compliance	
What department is responsible for floodplain management in your community?	Building / Planning
Who is your community's floodplain administrator? (department/position)	Director of Public Works
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	01/25/2017
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	Unknown
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, certification of floodplain manager.
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No

6.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 6-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 6-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code: International Building Codes, International Residential Code, International Mechanical Code, International Fire Code, Uniform Plumbing Code, Washington State Energy Code, International Fuel Gas Code				
Version: International Code Council - Year: 2015				
Zoning Ordinance: Title 17	Yes	No	Yes	
Subdivision Ordinance: Title 16	Yes	No	No	
Floodplain Ordinance: Title 15	Yes	No	Yes	
Stormwater Management: Title 13	Yes	No	No	
Growth Management	No	No		
Site Plan Review: Title 15	Yes	No	No	
Public Health and Safety: Title 8	Yes	No	No	
Coastal Zone Management	No	No	No	
Climate Change Adaptation	No	No	No	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	No	No	No	
Environmental Protection: Title 18	Yes	No	Yes	
Planning Documents				
General or Comprehensive Plan				
<i>Is the plan equipped to provide linkage to this mitigation plan?</i> Yes				
Floodplain or Basin Plan	No			
Stormwater Plan	No			
Capital Improvement Plan	No			
Habitat Conservation Plan	No			
Economic Development Plan	No			
Shoreline Management Plan	No			
Community Wildfire Protection Plan	No			
Transportation Plan	No			
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes			The County provides these services under their CEMP, which the city has adopted.

Table 6-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Threat and Hazard Identification and Risk Assessment	No			
Terrorism Plan	No	No	No	
Post-Disaster Recovery Plan	No	No	No	
Continuity of Operations Plan	No	No	No	
Public Health Plans		No	No	These services are provided by the County.
Boards and Commission				
Planning Commission		No		
Mitigation Planning Committee	Yes	No		The City is part of the County's Hazard Mitigation Planning Team, as well as having its own Planning Team established.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	No	No		
Mutual Aid Agreements / Memorandums of Understanding	Yes	Yes		Various MOU/MOAs in place with surrounding jurisdictions.
Other				

6.6.2 Administrative and Technical Capability

The assessment of the jurisdiction's administrative and technical capabilities, educational outreach efforts, and on-going programmatic efforts are presented in Table 6-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 6-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	YES	
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	YES	
Engineers specializing in construction practices?	YES	
Planners or engineers with an understanding of natural hazards	YES	
Staff with training in benefit/cost analysis	YES	
Surveyors	YES	
Personnel skilled or trained in GIS applications	YES	
Personnel skilled or trained in Hazus use	NO	
Scientist familiar with natural hazards in local area	NO	
Emergency Manager	YES	
Grant writers	YES	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood, or fire warning program, etc.?)	YES	
Hazard data and information available to public	YES	Grays Harbor County's Website
Maintain Elevation Certificates	NO	
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Local Neighborhood Watch
Local citizen groups or non-profit organizations focused on environmental protection?	No	
Organization focused on individuals with access and functional needs populations	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	County Level

Table 6-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Natural disaster or safety related school programs?	Yes	Earthquake drills, etc.
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	No	
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	
Noxious Weed Eradication Program or other vegetation management	No	
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert, or storm drain maintenance or cleaning program	Yes	Public Works Department
Stream restoration program	No	
Erosion or sediment control program	Yes	Building Department
Address signage for property addresses	Yes	Building Department
Other		

6.6.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 6-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 6-5. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

6.6.4 Community Classifications

Classifications under various community mitigation programs are presented in Table 6-6. Each of the classifications identified established requirements which, when met, are known to increase the resilience of a community.

Table 6-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes	
Building Code Effectiveness Grading Schedule	Yes	
Storm Ready	No	
Firewise	No	
Tsunami Ready (if applicable)	No	

6.7 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the City of McCleary.

Table 6-7 presents the ranking of the hazards of concern based on their CPRI score. Table 6-8 provides the CPRI scoring. Once the hazards were ranked, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact on government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 6-7. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.85	High
2	Wildfire	2.90	High
3	Severe Weather	3.05	High
4	Flood	3.10	Medium
5	Other Hazards of Concern	2.65	Medium
6	Climate Change	2.75	Low
7	Landslides	2.95	Low
8	Drought	2.35	Low
9	Erosion	3.05	Low
9	Tsunami	3.30	Low

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
10	Volcano	1.35	Low

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4		2				2						1				4	2.75	6	Low
Drought			3			2				2						1				4	2.35	8	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion				4		2				2				3						4	3.05	9	Low
Flood				4			3				3					1			3		3.10	4	Medium
Landslides			3			2					3		4						3		2.95	7	Low
Severe Weather				4		2						4				1		2			3.05	3	High
Tsunami			3					4			3		4					2			3.30	9	Low
Volcano	1				1					2						1				4	1.35	10	Low
Wildfire			3			2					3		4					2			2.90	2	High
Other Hazards of Concern (Hazmat)			3			2				2			4				1				2.65	5	Medium

The hazards of concern ranked demonstrates our level of impact as determined by the Calculator Priority Risk Index process as defined in Chapter 4. The process includes a review of critical facilities impacted, dollar losses, and impact to the people, property, economy, and environment for each hazard of concern.

The reviewers have examined Chapter 4 for information of the type of data included in determining the hazard rank and vulnerability levels identified above.

In addition to the CPRI index, for the 2024 update, the internal planning team also considered additional factors for the hazards identified.

- Flood: While our community can expect some level of flooding on a regular basis, for the most part, it is more in line with a nuisance-type flooding rather than a catastrophic flooding.
- Earthquake: Given the age of much of our infrastructure and structures, earthquakes have the potential to impact us significantly, including the potential for evacuation as roadways in our area would be impacted.
- Wildfire: The city is surrounded by forest lands, in the case of a wildfire, the city could see devastating impacts if the proper measures, equipment and manpower were not available.
- Severe Weather: In past events, the city has experienced extended outages due to severe weather. Due to the amount of manpower and limited equipment, this is a concern of the city.
- Volcano, Tsunami, Erosion, Drought, Landslides and Climate Change: Although these are all low on our Vulnerability Ranking, we do recognize the surrounding areas which could be affected seeking places of refuge within the City of McCleary.
- Other Hazards of Concern: A main gas line borders the city limits and in certain locations, enters the city limits. Further research needs to be done to identify any other possible hazards which may impact on the city.

6.8 MITIGATION GOALS AND OBJECTIVES

The City of McCleary adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

6.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 6-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

**Table 6-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Develop new or upgrade existing water delivery systems to eliminate breaks and leaks. Adopt ordinances to prioritize or control water use for emergency situations. Obtain easements for planned and regulated public use of privately-owned land for temporary water use, retention and/or drainage. (Carry down to table 5-10)									
New & Existing	D, F, MH, WF	2, 3, 5, 6, 9	Public Works, Water Department, Planning	Medium	HMGP, HUD, PDM, EPA, Earthquake & Tsunami Grant Funds	Long-Term	No	Preventive Activities, Structural Projects, Emergency Services, Recovery	Local
INITIATIVE # 2 Study and Develop an inventory of private, public, and commercial buildings, retrofit and/or improve the critical facilities that may be particularly vulnerable to severe damage, including equipment, communications, renovation, or replacement of existing facilities and/or equipment.									
Existing	All	1, 2, 3, 4, 5, 6, 8, 9	Planning, Building	High	HMGP, HUD, HLS / EMPG, PDM, DOT, Earthquake & Tsunami Grant Funds	Long-Term	No	Preventive Activities, Structural Projects, Emergency Services, Recovery	Facility, Local
INITIATIVE # 3 Obtain staff training to assist in disaster response and recoveries including, form ATC-20 for post-earthquake building evaluation, procedures, decisions, and guidelines for making on-the-spot evaluations regarding continued use and occupancy of damaged buildings.									
Existing	All	2, 3, 4, 5, 6, 8	Planning, Building	Low	General Fund, EMPG	Short-Term	NO	Preventive Activities, Emergency Services, Recovery	Facility, Local,
INITIATIVE # 4 Require and maintain FEMA elevation certificates for all newly constructed buildings located in floodplains. Require elevation data collection during platting of a new subdivision and to have buildable space on lots above the base flood elevation.									

**Table 6-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New	F	2, 3, 6, 8, 9	Building, Planning,	Low	General Fund, EMPG	Short-Term	No	Preventive Activities, Structural Projects	Facility, Local,
INITIATIVE # 5 Determine the need to install, re-route, or increase the capacity of the City Storm Drainage System, particularly in areas that frequently flood, to include culverts, and determine a limit for the percentage of allowable impervious surface with new development on individual parcels.									
New and Existing	F, SWW, MH	1, 2, 3, 4, 5, 6, 8, 9	Public Works, Planning	High	HMGP, HUD, PDM, Earthquake & Tsunami Grant Funds	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Natural Resource Protection	Facility, Local
INITIATIVE # 6 Determine the need to install back-up generators for pumping and lift stations in all sanitary sewer systems.									
New	All	All	Wastewater Treatment Plant, Public Works	Medium	Search Grant opportunity	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Facility, Local
INITIATIVE # 7 Determine the need for specific water hydration systems, dedicated power sources and/or dedicated cisterns if no water source is available.									
New	All	All	Water Department, Public Works, Fire Department	High	HMGP, HUD, EPA, Earthquake & Tsunami Grant Funds	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Local

**Table 6-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 8 Determine and create defensible zones around power lines, oil and gas lines, and other infrastructures and/or systems, equipment needs, including tools, trucks, PPE etc.									
New and Existing	All	All	Light and Power, Public Works	Medium	HMGP, HUD, PDM, FIRE GRANTS	Long-Term	No	Preventive Activities, Property Protection, Emergency Services, Recovery	Local
INITIATIVE # 9 Work with Grays Harbor Emergency Management, public and private parties to determine the location of shelter facilities and begin development of recovery and response plans including, creating, and educating citizens regarding the hazards of concerns.									
New	All	All	Planning	High	HMGP, HUD, PDM	Long-Term	No	Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Facility, Local, County
INITIATIVE # 10 Seek grant funding for generators, including installation of quick-connect emergency generator hook-ups, at critical facilities.									
New	All	All	Public Works, Light and Power	High	HMGP, PDM, HUD	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County
INITIATIVE # 11 Develop and prepare fueling plans, include identifying equipment needed, in case of prolonged isolation and/or disaster response and recoveries efforts.									
New	All	All	Public Works, Light and Power	High	Various Grants	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery,	Facility, Local, County

								Natural Resource Protection	

6.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 6-11 identifies the prioritization for each action item.

Table 6-10. Mitigation Strategy Priority Schedule							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority
1	5	Medium	High	Equal	Yes	No	Medium
2	8	High	High	Exceed	Yes	No	High
3	6	Medium	Low	Exceeds	Yes	No	Medium or High
4	5	Low	Low	Equal	Yes	No	Low
5	8	High	High	Exceeds	Yes	No	High
6	All	High	High	Exceeds	Yes	No	High
7	All	High	High	Equal	Yes	No	Medium
8	All	High	Medium	Exceeds	Yes	No	High
9	All	High	High	Exceeds	Yes	No	High
10	All	High	High	Exceeds	Yes	No	High
11	All	High	High	Exceeds	Yes	No	High
a. See Chapter 1 for explanation of priorities.							

6.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 6-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 6-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Develop new or upgrade existing water delivery systems to eliminate breaks and leaks. Adopt ordinances to prioritize or control water use for emergency situations. Obtain easements for planned and regulated public use of privately-owned land for temporary water use, retention and/or drainage.		✓	✓		✓		✓	The planning team thoroughly examined data from the 2018 plan and the McCleary 2022 Comprehensive Plan. We've identified areas for improvement and are actively working to enhance this system.		✓		✓
Study and develop an inventory of private, public, and commercial buildings, retrofit and/or improve the critical facilities that may be particularly vulnerable to severe damage, including equipment, communications, renovation, or replacement of existing facilities and/or equipment.		✓	✓		✓		✓	No action has been taken on this project.			✓	✓

Table 6-11. 2024 Status of Previous Hazard Mitigation Strategies											
Mitigation Strategy	Associated Hazards						2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Obtain staff training to assist in disaster response and recoveries including, form ATC-20 for post-earthquake building evaluation, procedures, decisions, and guidelines for making on-the-spot evaluations regarding continued use and occupancy of damaged buildings.		✓	✓	✓	✓	✓	This is an ongoing project that is being hampered by employee turnover.		✓		✓
Require and maintain FEMA elevation certificates for all newly constructed buildings located in floodplains. Require elevation data collection during platting of a new subdivision and to have buildable space on lots above the base flood elevation.		✓	✓				The City of McCleary is current and in compliance.		✓		✓

Table 6-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards							Current Status				
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Determine the need to install, re-route, or increase the capacity of the City Storm Drainage System, particularly in areas that frequently flood, to include culverts, and determine a limit for the percentage of allowable impervious surface with new development on individual parcels.		✓	✓		✓		✓	The planning team thoroughly examined data from the 2018 plan and the McCleary 2022 Comprehensive Plan. We've identified areas for improvement and are actively working to enhance this system.		✓		✓
Determine the need to install back-up generators for pumping and lift stations in all sanitary sewer systems.		✓	✓		✓		✓	The planning team has identified that the small lift stations don't require dedicated backup power, however we have portable generators if the need arises.			✓	✓

Table 6-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Work with the City of McCleary Light and Power Department and other companies or agencies, to determine the need of designed-failure mode for power line design. Seek grant funding to support the effort of allowing lines to fall or fail in small sections rather than as a complete system to enable faster restoration and install redundancies, loop feeds, and identify areas that may be exceptionally vulnerable to long-term power outages.		✓	✓		✓		✓	The planning team thoroughly examined data from the 2018 plan and the McCleary 2022 Comprehensive Plan. We've identified this initiative has been removed.			✓	
Determine the need for specific water hydration systems, dedicated power sources and/or dedicated cisterns if no water source is available.		✓	✓		✓		✓	The planning team thoroughly examined data from the 2018 plan and the McCleary 2022 Comprehensive Plan. We've identified the city’s wells and water system have dedicated backup generators installed.	✓			

Table 6-11. 2024 Status of Previous Hazard Mitigation Strategies											
Mitigation Strategy	Associated Hazards						2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Determine and create defensible zones around power lines, oil and gas lines, and other infrastructures and/or systems, equipment needs, including tools, trucks, PPE etc.		✓	✓		✓		No action has been taken on this project.			✓	✓
Acquire land and title in the name of a local governing body, in known hazard areas to restore as functional public parks.		✓	✓		✓	✓	The planning team thoroughly examined data from the 2018 plan and the McCleary 2022 Comprehensive Plan. We've identified this initiative has been removed.			✓	
Work with Grays Harbor Emergency Management, public and private parties to determine the location of shelter facilities and begin development of recovery and response plans including, creating, and educating citizens regarding the hazards of concerns.		✓	✓	✓	✓	✓	The planning team has determined in addition to this plan, McCleary will continue to partner with Grays Harbor County on emergency management procedures.		✓		✓

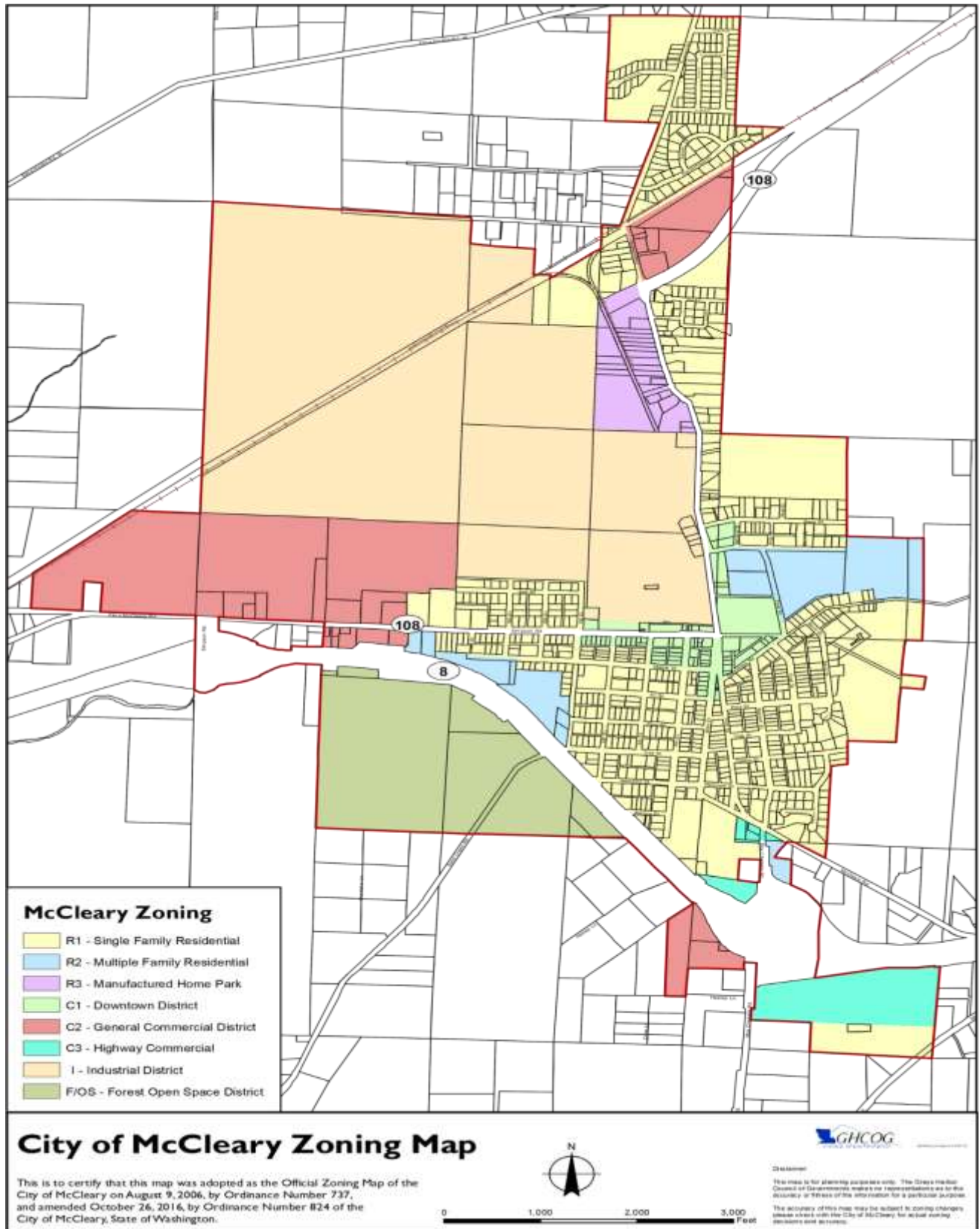
Table 6-11. 2024 Status of Previous Hazard Mitigation Strategies											
Mitigation Strategy	Associated Hazards						2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Seek grant funding for generators, including installation of quick-connect emergency generator hook-ups, at critical facilities.					✓		Generators have been purchased and installed at the McCleary City Hall campus, wastewater treatment plant, and wells. Additional generators are needed for remaining facilities, and as such, this strategy is carried forward.		✓		✓
Develop and prepare fueling plans, include identifying equipment needed, in case of prolonged isolation and/or disaster response and recoveries efforts.		✓	✓		✓	✓	The planning team thoroughly examined data from the 2018 plan and the McCleary 2022 Comprehensive Plan. We've identified this initiative has fueling processes and procedures written and adopted.		✓		

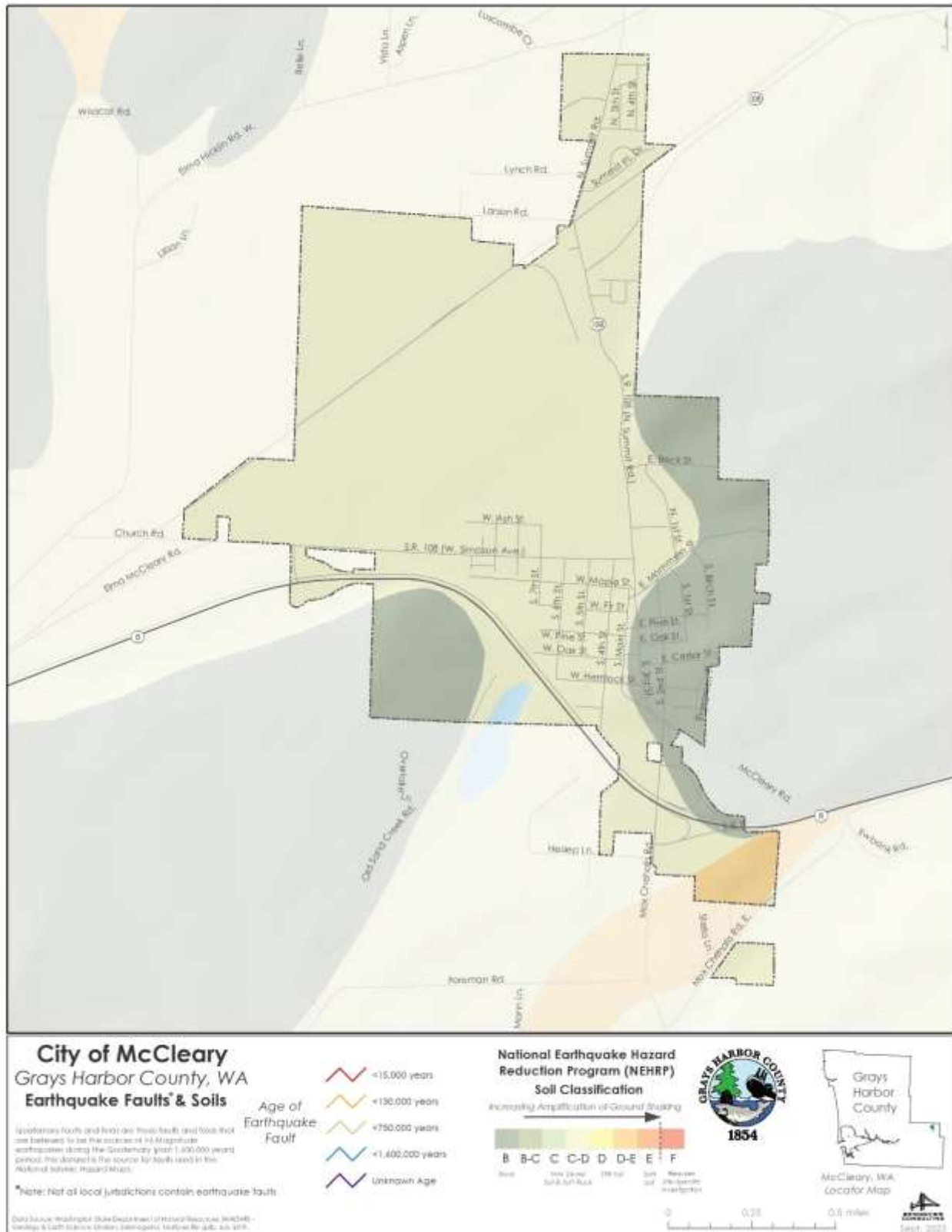
6.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

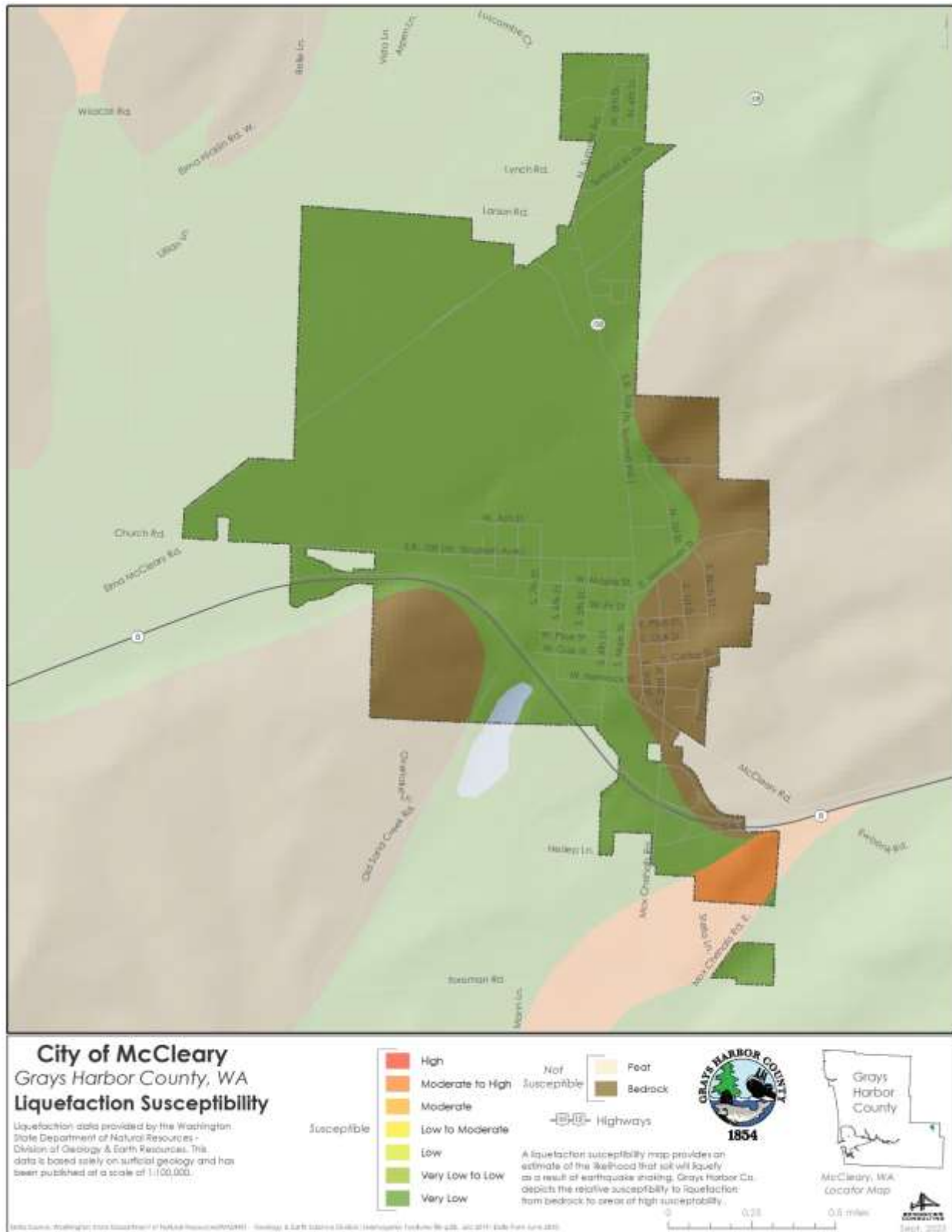
The City's understanding of each Hazard comparable to each existing critical facilities, along with the ability to manage severe damage by providing the necessary equipment, acquiring the needed emergency communications, providing public information and outreach, within the constraints of a limited budget.

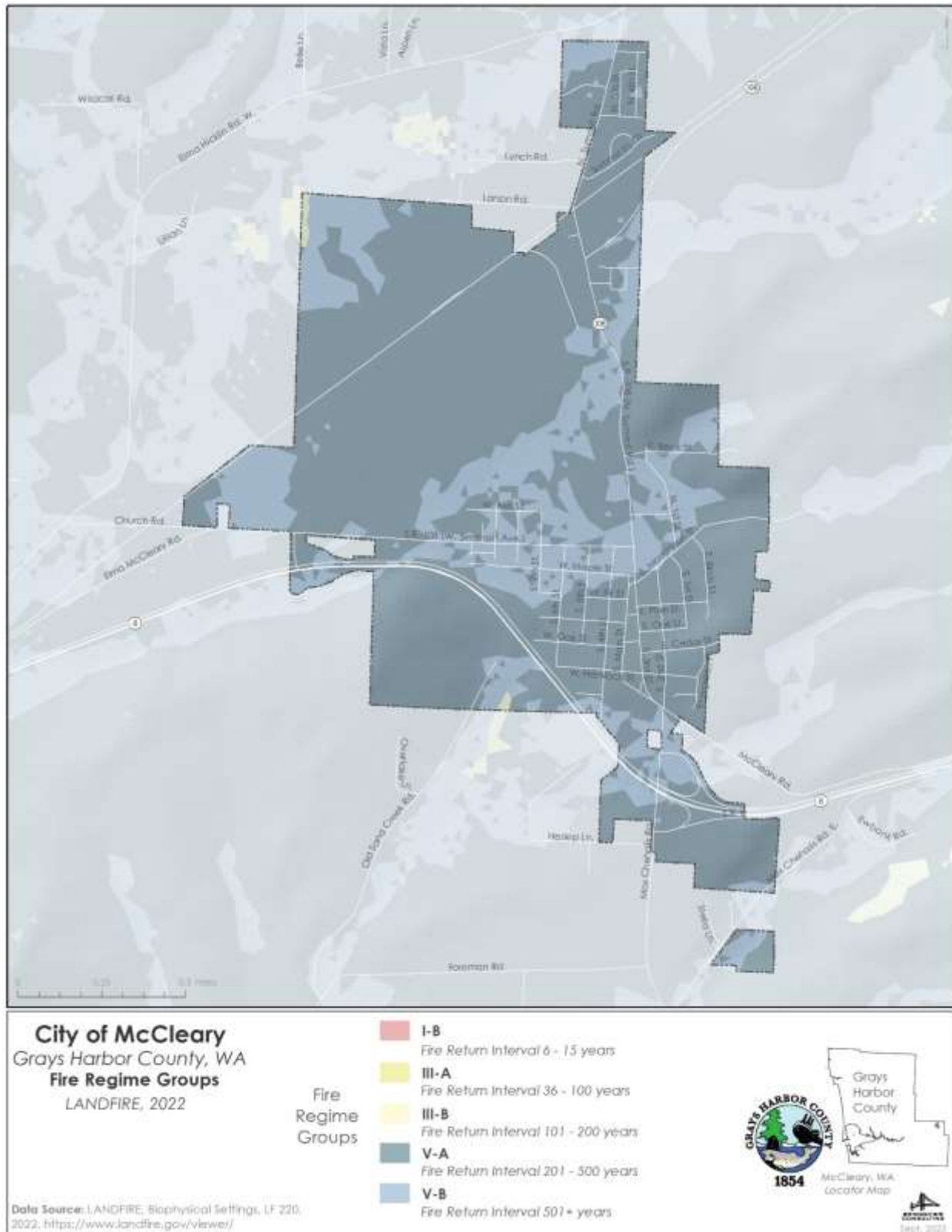
6.13 HAZARD AREA EXTENT AND LOCATION

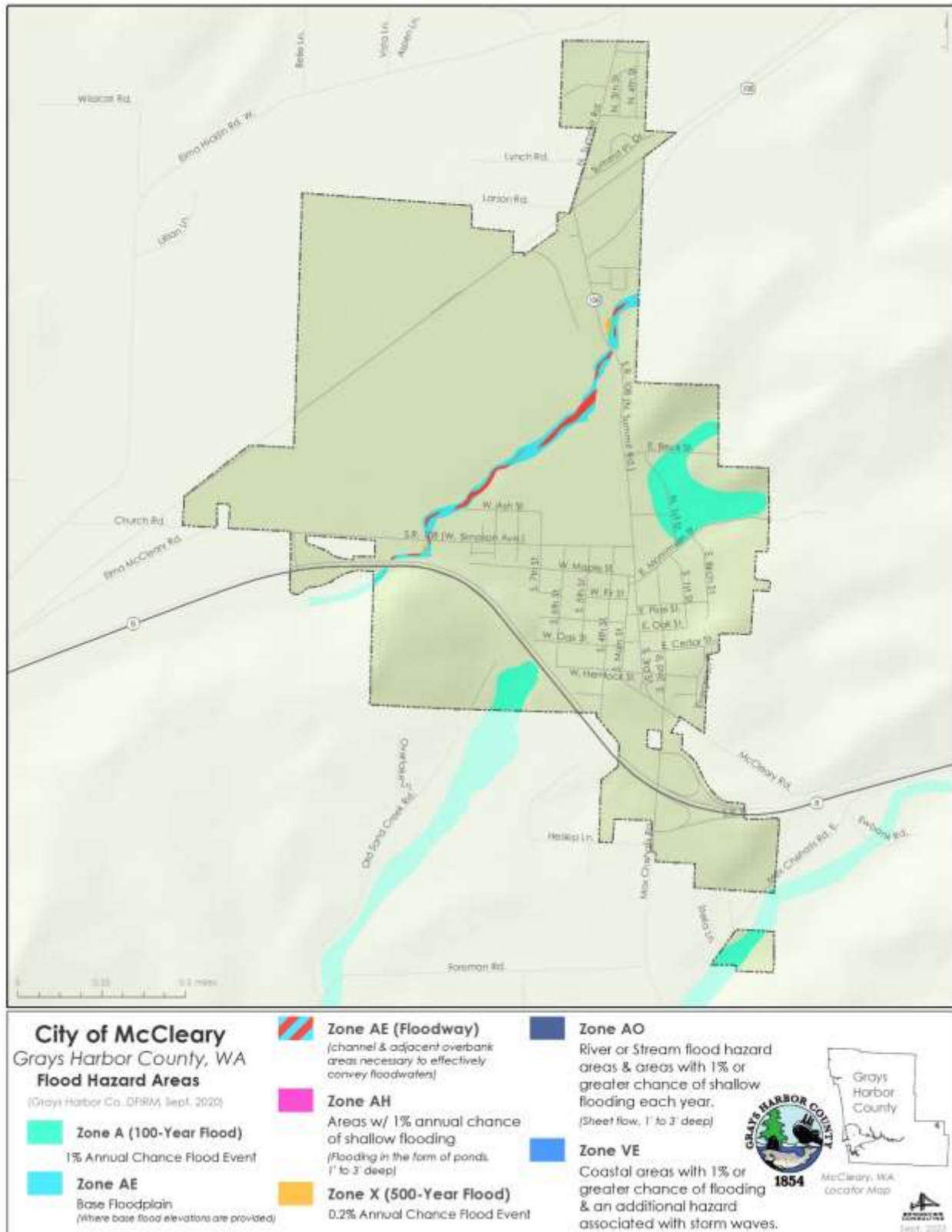
Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes.

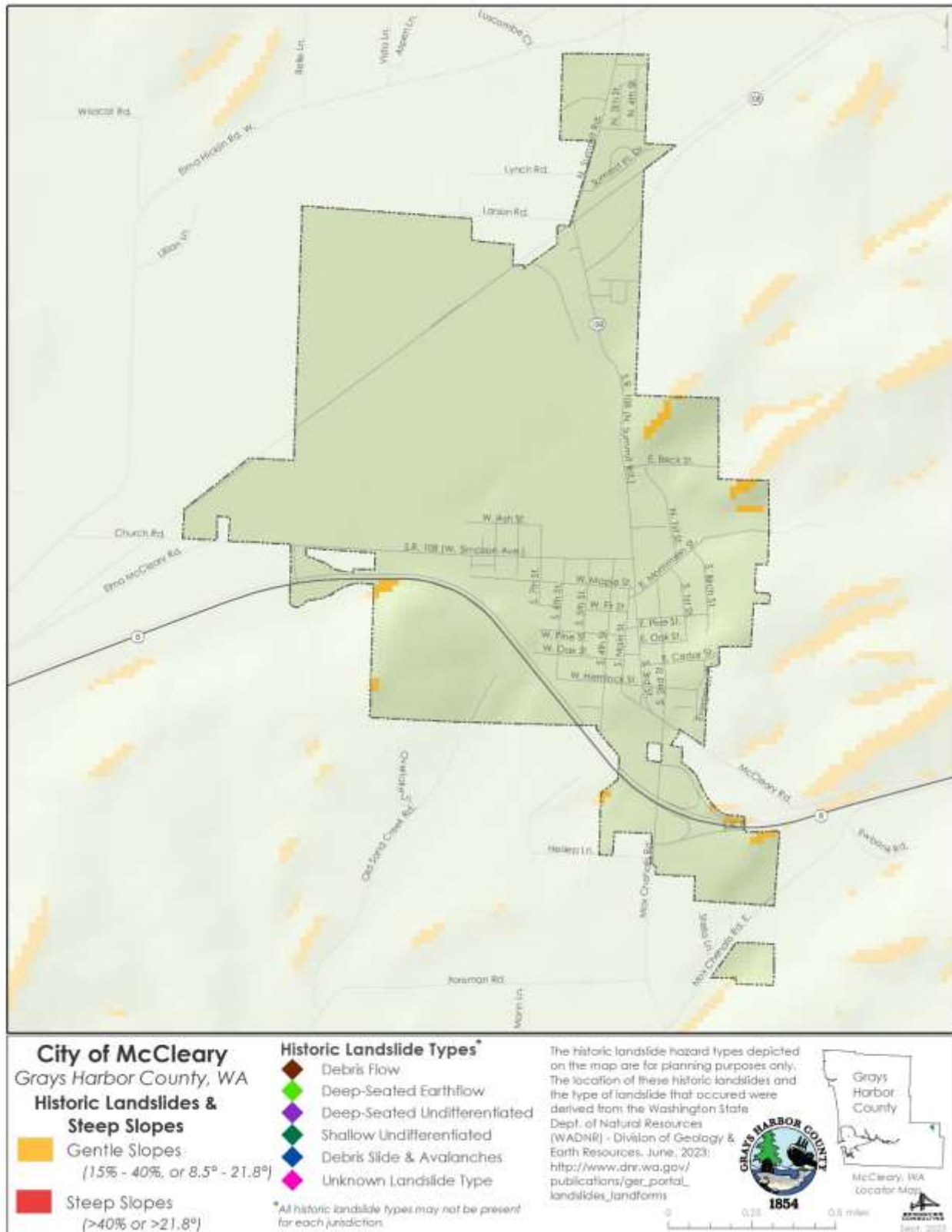












CHAPTER 7. CITY OF MONTESANO 2024 ANNEX

7.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Montesano, a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Montesano. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only.

7.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City of Montesano followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Montesano also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
David Busz, Fire Chief 310 E Pioneer Ave Montesano WA 98563 360-249-4851 dbusz@montesano.us	Primary Point of Contact	Planning Team Lead, Principal Liaison, Public Safety Emergency Response; meeting attendance; assisted with plan development and review; risk assessment development and review; presentation of information at public meetings; council adoption.
Brett Vance, Police Chief 112 N Main Street Montesano WA 98563 360-249-3021 ext. 122 bvance@montesano.us	Alternate Point of Contact	Planning Team Member, Secondary Liaison, Public Safety, Emergency Response; meeting attendance; assisted with plan development and review; risk assessment review; presentation of information at public meetings; council adoption

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Mike Olden, Public Works Director 112 N Main Street Montesano WA 98563 360-249-3021 molden@montesano.us	Planning Team Member,	Planning Team Member, Public Works, Community Development provided historic impact data; assisted with risk assessment review and development; assisted with capabilities assessment; draft plan reviews; land use and development data.
Gretchen Sagen, CFO 112 N Main Street Montesano WA 98563 360-249-3021 Ext. 109 gsagen@montesano.us	Chief Financial Officer	Financial Consultant; provided information on capabilities assessment; loss data; draft plan review and comment.

7.3 COMMUNITY PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1883
- **Current Population**—4167 as of 2020 census
- **Population Growth**—The City of Montesano Population growth has been approximately 1% per year over the last dozen years.
- **Location and Description**— The City of Montesano is centrally located in Grays Harbor County in southwest Washington and serves as the County seat. It lies at the nexus between the Pacific beaches and the Oregon coast on SR 107 and US Hwy 12 to Westport and Ocean Shores. The city of Montesano is bordered by the Wynoochee River to west, The Chehalis River to the south and Lake Sylvia State Park to the North.
- **History**- In 1883 Montesano officially became a city as it was incorporated with a population of 300. The city of Montesano is the birthplace of the tree farm in America. The city continues this tradition by owning and managing its own 5400-acre forest and working towards continuing goals for sustainable timber, fish, wildlife and recreation. The city forest is home to over 15 miles of hiking and biking trails. Lake Sylvia State Park is within the city limits and attracts campers, hikers and fisherman alike.

Montesano is surrounded by farms that grow and produce a wide variety of food crops such as corn, tomatoes, Finnish yellow potatoes, squash, pumpkins, natural raised beef, yak & buffalo, strawberries, blueberries, dairy products like milk, cheese and butter and Christmas trees.

The City's position as the county seat features one of the most historical courthouses in the state. Built in 1911, the Grays Harbor County Courthouse is a three-story structure with a

dome tower. As a testament to the historic architecture, it holds a series of murals which depict the local history.

- **Climate**—This region experiences warm (but not hot) and dry summers, with no average monthly temperatures above 71.6 °F, and very wet autumns and springs due to the maritime Chinook winds. Average annual precipitation is approximately 120 inches. Precipitation figures indicate an oceanic climate due to frequent summer rainfall, even though there is a significant drying trend during that season. The summer highs are warmer than in Aberdeen courtesy of its inland position. This also renders frequent but most often minor frosts in winter, with the climate retaining a significant maritime influence.
- **Governing Body Format**—The City is governed through a city Council/Mayor format. The city council is comprised of 7 elected members and an elected mayor. The staff consists of 33 people in 7 different departments. The City is also served by a 35-member Volunteer Fire Department which has been in place since 1892.
- **Development Trend** - The development trend has largely remained residential as it incorporates approximately 90% of the city. The downtown core makes up the remaining 10% of light industrial and/or commercial. Since completion of the last plan, limited land use development has occurred.

7.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the jurisdiction. Table 7-1 lists all past occurrences of hazard events within the jurisdiction. If available, dollar loss data is also included.

Table 7-1 Natural Hazard Events						
Disaster Number	Declaration Date	Incident Type	Title			Dollar Losses or Impact
4650	12/26/2021	Flood	Severe Winter Storms, Snowstorms, Flooding			Ingress/Egress/Power Failure/Flooding
4593	12/29/2020	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, and Mudslides			Ingress/Egress/Power Failure/Flooding
4539	1/20/2020	Flood	Severe Winter Storm, Flooding, Landslides, and Mudslides			Ingress/Egress/Power Failure/Flooding
4481	1/20/2020	COVID	Biological			Economic

**Table 7-1
Natural Hazard Events**

Disaster Number	Declaration Date	Incident Type	Title	Dollar Losses or Impact
4418	12/20/2018	Severe Storms	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, and Mudslides	
4253	2/2/2016	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	Ingress/Egress/Power Failure/Flooding
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	Ingress/Egress/Power Failure/Flooding
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	Ingress/Egress/Power Failure/Flooding
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	Ingress/Egress/Power Failure/Flooding
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	Ingress/Egress/Power Failure/Flooding
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	
1361	3/1/2001	Earthquake	Earthquake	Building Damage
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	Ingress/Egress/Power Failure
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	Ingress/Egress/Power Failure/Flooding
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	
1037	8/2/1994	Fishing Losses	The El Nino (The Salmon Industry)	
883	11/26/1990	Flood	Severe Storms, Flooding	
852	1/18/1990	Flood	Severe Storms, Flooding	
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	Ashe Accumulation
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	
492	12/13/1975	Flood	Severe Storms and Flooding	
322	2/1/1972	Flood	Severe Storms and Flooding	
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	

**Table 7-1
Natural Hazard Events**

Disaster Number	Declaration Date	Incident Type	Title	Dollar Losses or Impact
185	12/29/1964	Flood	Heavy Rains and Flooding	

7.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction’s capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

7.6 NATIONAL FLOOD INSURANCE INFORMATION

The City of Montesano maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 17.40 of the Montesano Municipal Code. Within Section 17.40.070 MMC there are definitions for “substantial damage” and “substantial improvement” as follows:

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions;
or

2. Any alteration of a “historic structure”; provided, that the alteration will not preclude the structure’s continued designation as a “historic structure.”

The requirements of the Chapter also include development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, etc., which are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Information on the community’s National Flood Insurance Program (NFIP) compliance is presented in Table 7-2. This identifies the current status of the jurisdiction’s involvement with the NFIP.

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 4
- Number of FEMA-Identified Severe Repetitive Loss Properties: 1
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: None
- Currently, the City of Montesano has 4 policies in force, covering \$1,362,000 with total premiums of \$7898.
- Total claims filed based on FEMA and State data as of August 2020 is 11, with 11 claims closed and total flood payments of \$144,286.

Table 7-2 National Flood Insurance Program Compliance	
What department is responsible for floodplain management in your community?	Public Works/Community Development
Who is your community’s floodplain administrator? (department/position)	Mike Olden, Public Works and Community Development Director
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	2020
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 2020
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	None
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, Administration and Program Management

Table 7-2
National Flood Insurance Program Compliance

Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No, Potentially

7.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 7-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 7-3
Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code:	Yes			
International Building Code				
Version: Current				
Year: Current				
Zoning Ordinance	Yes	No	Yes	#1366 Year 1995
Subdivision Ordinance	Yes	No	Yes	#1383 Year 1996
Floodplain Ordinance	Yes	No	Yes	#1602 Year 2017
Stormwater Management	Yes	No	Yes	#1419 Year 1999
Growth Management	No	No		
Site Plan Review	Yes	No		#1222 Year 1985
Public Health and Safety	No	Yes		Grays Harbor County
Coastal Zone Management	No	No		
Climate Change Adaptation	Yes	No		Res. #866 Year 2012
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes	No		#1545 Year 2010
Environmental Protection	Yes	No		#1545 Year 2010
Planning Documents				
General or Comprehensive Plan	Yes	No		Year 2006
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>				No
Floodplain or Basin Plan	No	Yes		
Stormwater Plan	Yes			Year 1994
Capital Improvement Plan	Yes			Various/Ongoing

Table 7-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Economic Development Plan	No			
Shoreline Management Plan	Yes			Year 1992
Community Wildfire Protection Plan	Yes			Updated Annually
Transportation Plan	No	Yes		Grays Harbor COG
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes			Updating 2023
Threat and Hazard Identification and Risk Assessment	Yes			Updating 2023
Terrorism Plan	No			
Post-Disaster Recovery Plan	No			
Continuity of Operations Plan	Yes			Updating 2023
Public Health Plans	No	Yes		Grays Harbor County
Boards and Commission				
Planning Commission	Yes			
Mitigation Planning Committee	Yes			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			
Mutual Aid Agreements / Memorandums of Understanding	Yes			
Other				

7.6.2 Administrative and Technical Capability

The assessment of the jurisdiction's administrative and technical capabilities, educational outreach efforts, and on-going programmatic efforts are presented in Table 7-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 7-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	City of Montesano/Public Works & Community Development Director
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	City of Montesano/Public Works & Community Development Director
Engineers specializing in construction practices?	Yes	City of Montesano/Public Works & Community Development Director
Planners or engineers with an understanding of natural hazards	Yes	City of Montesano/Public Works & Community Development Director
Staff with training in benefit/cost analysis	Yes	City of Montesano/Public Works & Community Development Director
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Emergency Manager	Yes	Grays Harbor County Emergency Management
Grant writers	Yes	Various
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Grays Harbor County
Hazard data and information available to public	Yes	Grays Harbor County Emergency Management
Maintain Elevation Certificates	Yes	City of Montesano/Public Works & Community Development Director
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Red Cross
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	FOSLS
Organization focused on individuals with access and functional needs populations	Yes	Community Action Council
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Grays Harbor County Emergency Management/Montesano Fire Department/Montesano Police Department
Natural disaster or safety related school programs?	Yes	Grays Harbor County Emergency Management/Montesano Fire Department/Montesano Police Department
Public-private partnership initiatives addressing disaster-related issues?	No	

Table 7-4. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Multi-seasonal public awareness program?	Yes	County provides updated data on its website on behalf of all citizens.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	City of Montesano
Noxious Weed Eradication Program or other vegetation management	Yes	City of Montesano
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	City of Montesano
Stream restoration program	No	
Erosion or sediment control program	Yes	City of Montesano/DOE
Address signage for property addresses	Yes	City of Montesano
Other		

7.6.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 7-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 7-5. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

7.6.4 Community Classifications

Classifications under various community mitigation programs are presented in Table 7-6. Each of the classifications identified established requirements which, when met, are known to increase the resilience of a community.

Table 7-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Protection Class	4	Unknown
Building Code Effectiveness Grading Schedule		
Commercial / Residential	4	Unknown
Residential	4	Unknown
Storm Ready	No	
Firewise	No	

7.7 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan, and have identified the hazards that affect the City of Montesano.

Table 7-7 presents the ranking of the hazards of concern based on their CPRI score. Table 7-8 illustrates the CPRI scoring. Once completed, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ☐ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact on government functions with no disruption to essential services.
- ☐ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ☐ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- ☐ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this

category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.

- ☐ Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 7-7. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.9	High
2	Wildfire	3.6	High
3	Severe Weather	3.3	High
4	Flood	3.2	High
5	Other Hazards	2.7	Low
6	Climate Change	2.55	Medium
7	Tsunami	2.45	High
8	Drought	2.35	Low
9	Volcano	2.35	Low
10	Landslide	2.15	Medium
11	Erosion	2.1	Low

Table 7-8. City of Montesano 2024 CPRI Score and Hazard Ranking																							
Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4		2			1							1				4	2.55	6	Medium
Drought		2					3			3						1				4	2.35	8	Low
Earthquake				4				4				4	4					2			3.90	1	High
Erosion		2				2				2					2					4	2.10	11	Low
Flood				4			3				3				2			2			3.20	4	High

Table 7-8.
City of Montesano 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Landslides		2				1				2			4						3		2.15	10	Medium
Severe Weather				4			3				3				2					4	3.30	3	High
Tsunami		2					3			2				3						4	2.45	7	High
Volcano	1						3				3		4						3		2.35	9	Low
Wildfire			3					4				4	4							4	3.60	2	High
Hazmat			3				3				3					1			3		2.70	5	Low

Additional information on the specific impacts of the hazards of concern is contained in the hazard profiles in Volume 1 of the Grays Harbor County 2024 Multi-Jurisdictional Hazard Mitigation Plan, to which this Annex is a part. Direct impact loss data is defined therein. Extent and Location maps incorporated at the end of this annex were also utilized to determine the risk and vulnerability to the City, and utilized by the City's planning team when it completed its Hazard Ranking process.

7.8 MITIGATION GOALS AND OBJECTIVES

The City of Montesano adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

7.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 7-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

**Table 7-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Determine necessity to retrofit city owned facilities to withstand damage from severe weather events to include earthquake. Once need is determined, seek grant funding to retrofit structures.									
Existing	EQ, SW	1,2,4,5,6	City of Montesano	High	GF, Grants	Long Term	Yes	Property protection, Emergency Service Response	Local
INITIATIVE # 2 Develop a review program to evaluate all buildings within the city jurisdiction for compliance with current seismic codes. Once need is determined seek grant funding to retrofit structures.									
Existing	EQ, SW	1,2,4,5,6	City of Montesano	High	Grants	Long Term	Yes	Property Protection	Local
INITIATIVE #3 Retrain the Wynoochee River to protect the critical city infrastructure including the waste water treatment plan and state route 107									
Existing	Erosion	2,3,4,6,9	City of Montesano	High	Reserves, Flood Authority, Rates	Short Term	Yes	Property Protection, Resource Protection	Local
INITIATIVE #4 Conduct geotechnical investigation to include all potential landslide areas within the city jurisdiction.									
Existing	LS	2,3,4,6,8	City of Montesano	Medium	GF, Grants	Short Term	Yes	Property Protection, Preventative Activity	Local
INITIATIVE # 5 Continue with forest land management program to include thinning, harvesting, planting, security patrols and emergency response.									
Existing	WF	2,3,6,8,9	City of Montesano	Low	Forrest Revenue	Short Term	Yes	Property Protection Resource Protection	Local
INITIATIVE #6 Purchase and Install emergency generators and automatic transfer switches at all critical city facilities.									
Existing	SW, EQ	1,2,4,5,6	City of Montesano	High	Various	Short Term	Yes	Structural Projects Emergency Services	Local

7.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 7-10 identifies the prioritization for each action item.

Table 7-10.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	5	High	High	Yes	Yes	No	High
2	5	High	High	Yes	Yes	No	Low
3	5	High	High	Yes	Yes	No	High
4	5	High	Medium	Yes	Yes	No	High
5	5	High	Low	Yes	No	Yes	Medium
6	5	High	High	Yes	Yes	No	Medium

a. See Chapter 1 for explanation of priorities.

7.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 7-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 7-11.
2024 Status of Previous Hazard Mitigation Strategies

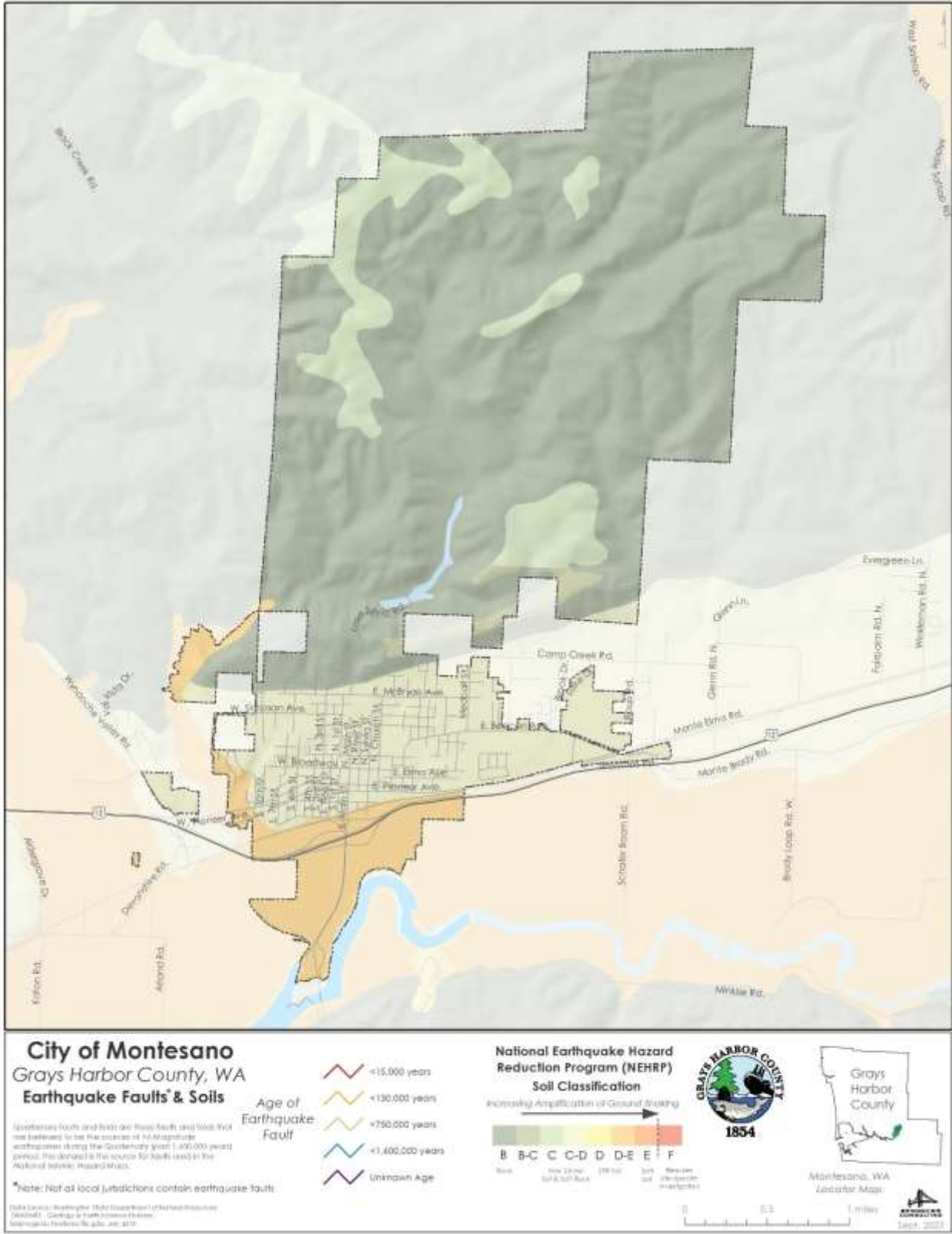
Mitigation Strategy	Associated Hazards							Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 1 Determine necessity to retrofit city owned facilities to withstand damage from severe weather events to include earthquake. Once need is determined, seek grant funding to retrofit structures.		X			X						X

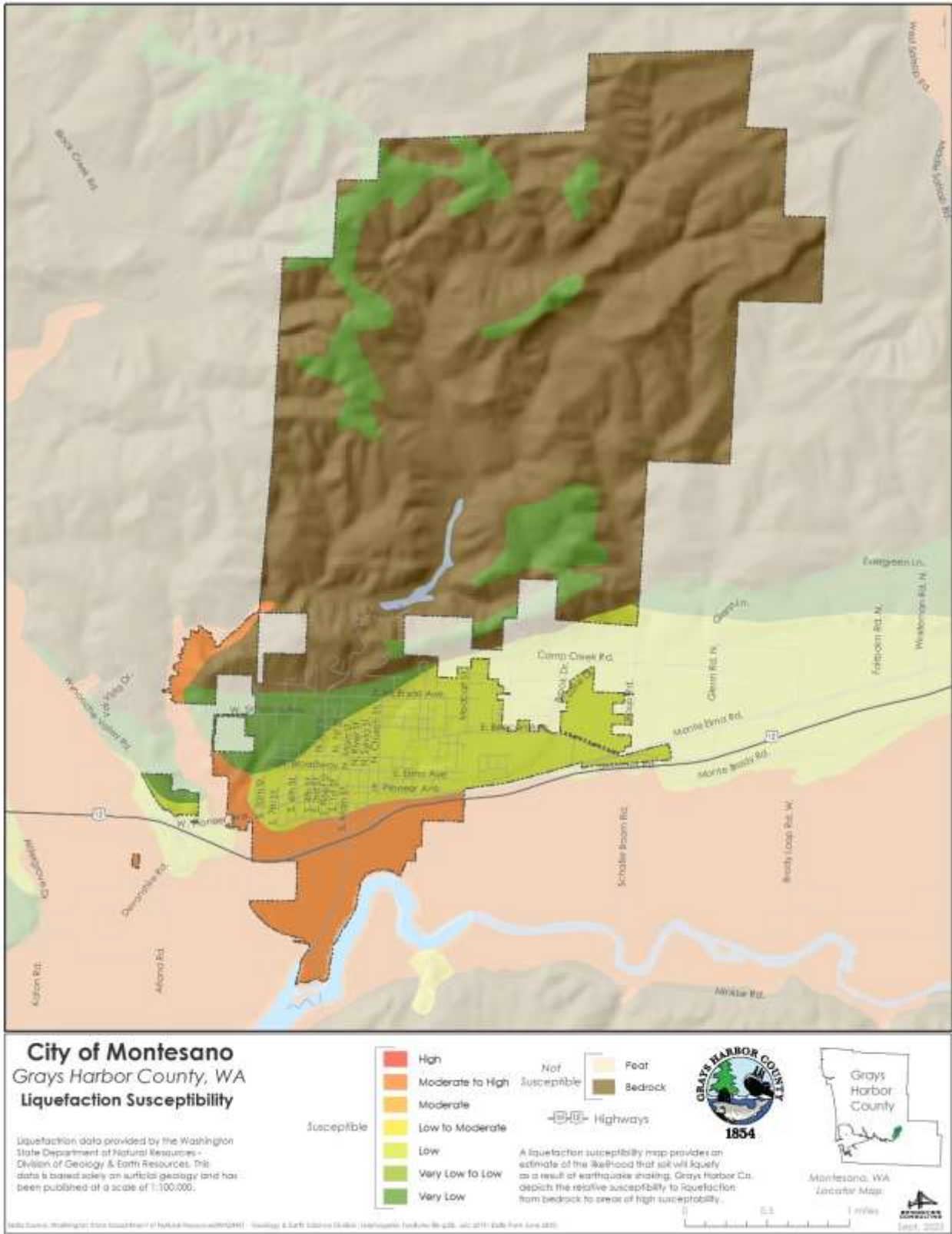
Table 7-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 2 Develop a review program to evaluate all buildings within the city jurisdiction for compliance with current seismic codes. Once need is determined seek grant funding to retrofit structures.		X			X			No appreciable progress; will continue to seek grant funding to completion progress.				X
INITIATIVE #3 Retrain the Wynoochee River to protect the critical city infrastructure including the waste water treatment plan and state route 107	X							Wastewater Treatment plant has installed some erosion control and is realizing significant erosion reversal. SR107 erosion protection has not begun.		X		X
INITIATIVE #4 Conduct geotechnical investigation to include all potential landslide areas within the city jurisdiction.				X				No appreciable progress				X
INITIATIVE # 5 Continue with forest land management program to include thinning, harvesting, planting, security patrols and emergency response.							X	Ongoing and successful; fire management initiatives have helped reduce the impact from wildfires.		X		X

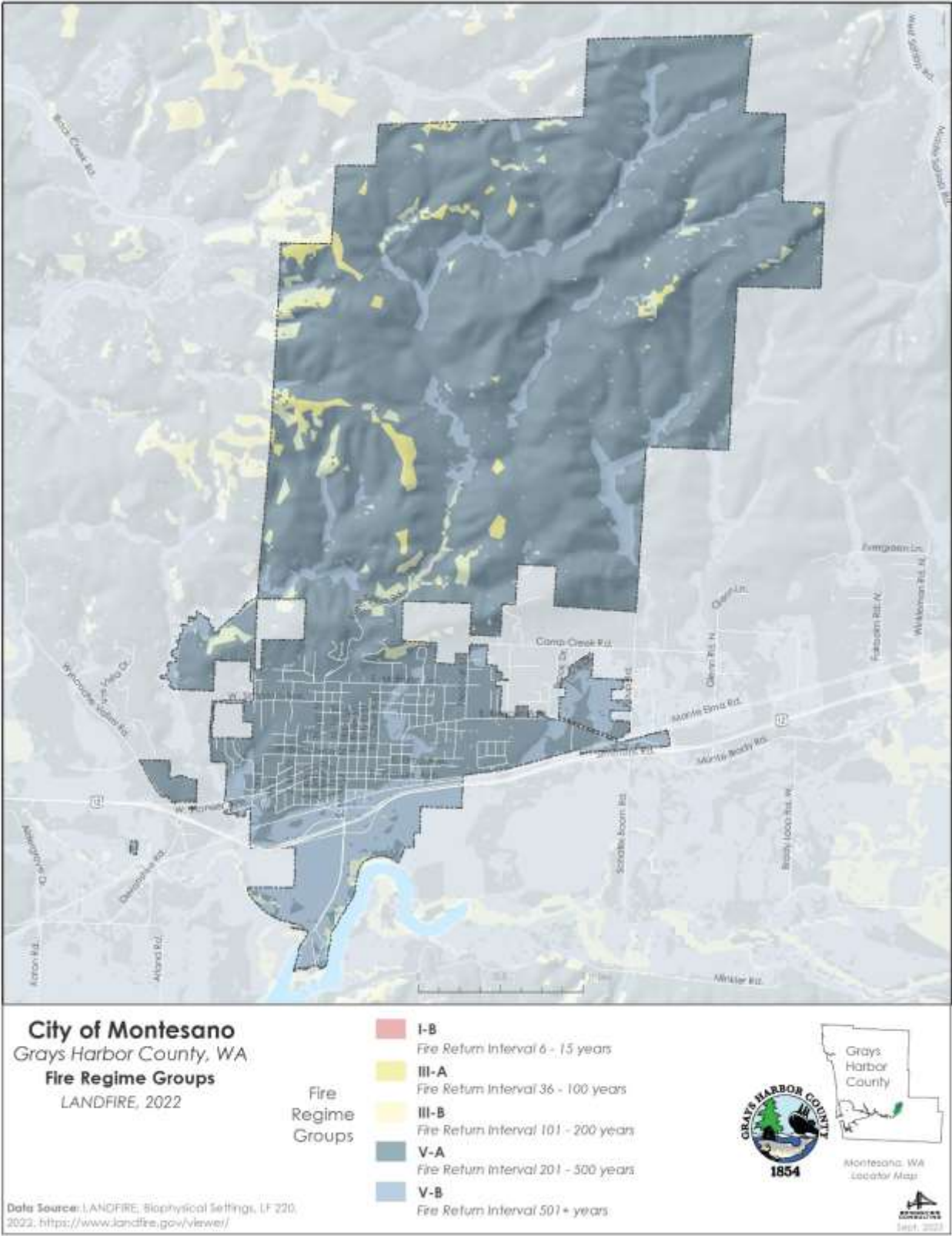
Table 7-11. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE #6 Purchase and Install emergency generators and automatic transfer switches at all critical city facilities		X			X			Fire Station Generator installed and operating as designed. No appreciable progress on other City facilities.		X		X

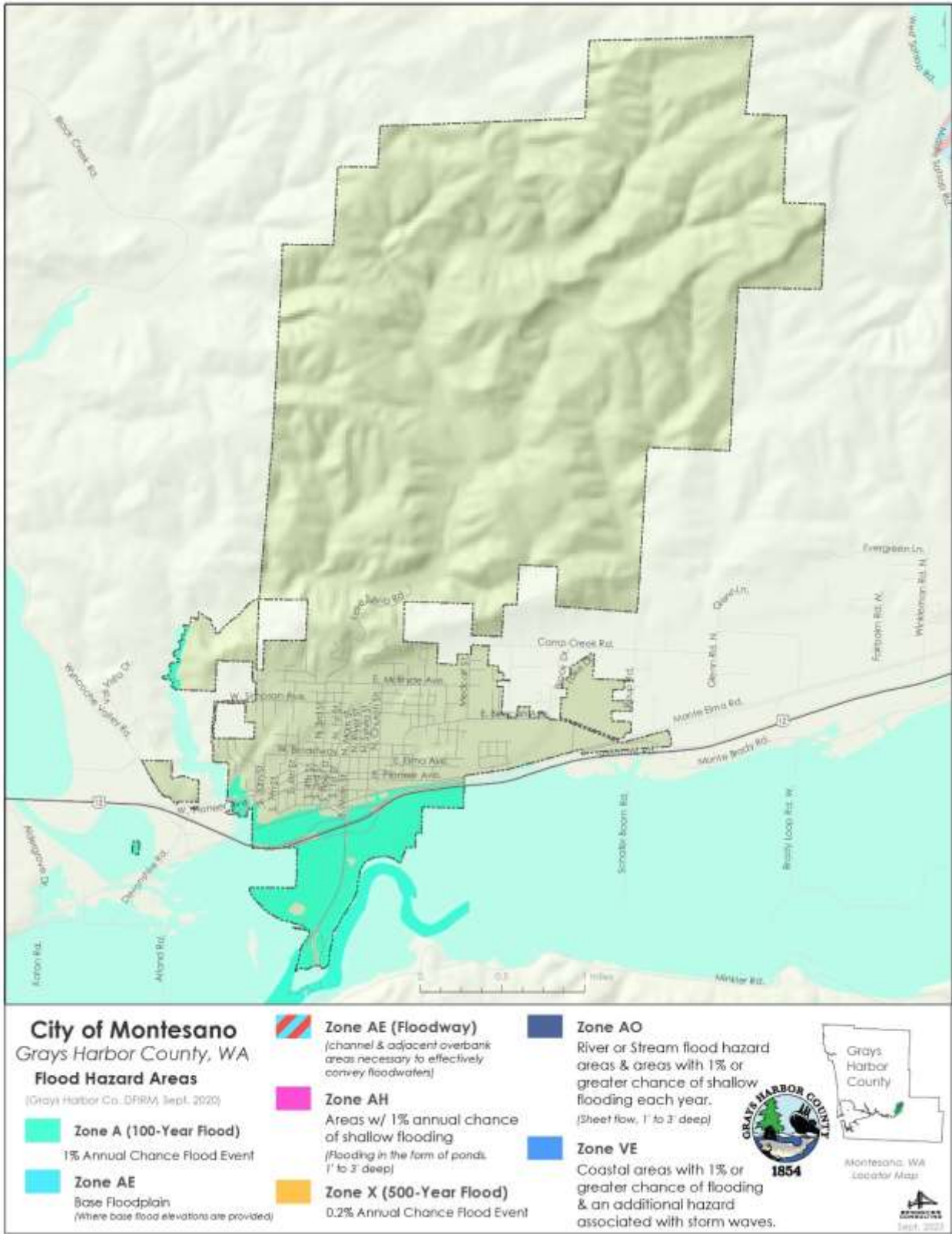
7.12 HAZARD AREA EXTENT AND LOCATION

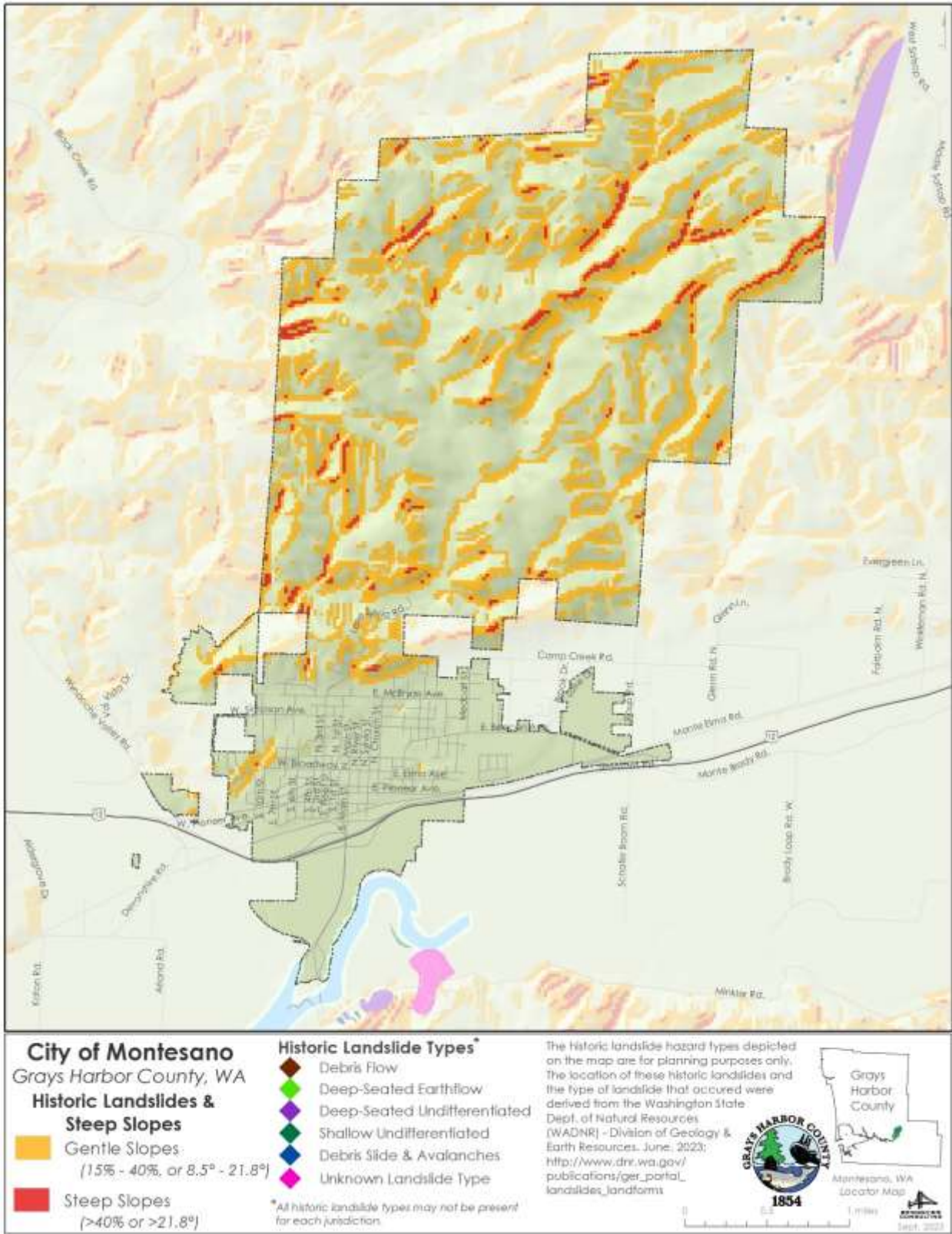
Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Additional hazard-related data is contained within each of the hazard profiles within Volume 1 of the County's 2024 Hazard Mitigation Plan. Readers are encouraged to review that portion of the planning document for more additional impact data.











CHAPTER 8.

CITY OF OAKVILLE 2024 ANNEX UPDATE

8.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Oakville, a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Oakville. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

8.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City of Oakville followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Oakville also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Richard Armstrong, Cell Phone # 360-791-8772 oakvillepublicworks@gmail.com	Director of Public Works *Primary Point of Contact	Primary author of HMP update and POC for the County's effort. Developed updated information, presented risk data and general information to Council for review, approval, and adoption.
John Hedgers Cell Phone # 360-790-9432 jhedgers@ghfd1.org	Assistant Fire Chief GH Fire District #1	Assisted with plan development by providing updated information for the annex update; reviewed hazards of concern; provided strategy information for update and continued projects; reviewed draft plans.
Allen Werth Cell Phone # 253-606-1063 councilwerth@gmail.com	Oakville City Council	Assisted review of annex update.
Carlton Rhoades Cell Phone # 360-660-2381	Fire Chief GH Fire District #1	Alternate POC; provided updated information for the annex

Local Planning Team Members		
Name	Position/Title	Planning Tasks
crhoades@ghfd1.org		update; reviewed hazards of concern; provided strategy information for update and continued projects; reviewed draft plans.
Don Terry Cell Phone # 360-701-6619 dterry@chehalistribe.org	Building Official/Inspector and Code Enforcement Officer	Provided information on past events & past mitigation efforts.
Buck Graham Cell Phone # 360-239-1772 buck.graham@comcast.net	Citizen, City of Oakville and former Fire Chief	Provided information and impact of past events.
Bob Johnson Cell Phone # 360-878-2323 goatherder101@outlook.com	Citizen/Business Owner	Provided information on past events.

8.3 COMMUNITY PROFILE

- Date of Incorporation and Brief History** The City of Oakville Washington was incorporated on December 18, 1905 and was named for the for the Garry Oak trees found in the area.

Oakville has been called a "frontier logging town nestled between two centuries." Take a walk or drive through town for a unique flavor of the past. From antiques and historical buildings to rodeos and scenic tours; you will experience the millennium with both the rustic past and the brightening future. Historic buildings, like the old corner-style bank, that has its place in the history books as it is the last bank to be robbed by horseback. Many other historic buildings throughout Oakville give the area a unique and welcoming appeal.

- Physical Setting/Location and Description** - The City of Oakville, Washington is located in the Southeastern corner of Grays Harbor County, is bordered by the Capital Forest in the Black Hills Range to the North and North-West, is within the Chehalis River watershed and is adjacent to State Highway 12 between the cities of Rochester and Elma. The Chehalis Indian Reservation abuts the southerly City limits.

Harris Creek flows from north to south just east of the City limits and then in a westerly direction after crossing Highway 12, flowing along the southern and western boundary of the City limits until reaching the Chehalis River about ¼ mile west of the westerly City limits. The Black River flows in a southerly and westerly direction from approximately one mile east of the easterly City limits until it reaches the confluence with the Chehalis River about one mile south of the southerly City limits. The Chehalis River flows in a westerly direction about one mile south of the City limits and then in a northerly direction as close as within about ¼ mile west of the westerly City limits.

Oakville's incorporated city limit land area is approximately one square mile. The majority of the City is relatively flat, with gradual elevation increases from the southerly and easterly portions of

the City in the vicinity of Harris Creek to US Highway 12. North of Highway 12 and the railroad, the land area is relatively flat until areas near the northerly city limits where the land is 100 or more feet higher in elevation than the majority of the city.

- **Climate** - The climate in Oakville, Washington is generally mild with the majority of the precipitation falling in the cooler months from October through April. The approximate annual precipitation is 58 inches of rain and 3 inches of snow with an average of 130 sunny days per year. The U.S. average of annual precipitation is 39 inches of rain and 26 inches of snow with approximately 132 days of measurable precipitation.

The July high temperature is around 77 degrees, and the January low is around 35. Sperling's comfort index for Oakville is 76 out of 100, where a higher score indicates a more comfortable year-around climate. The US average for the comfort index is 54. Sperling's index is based on the total number of days annually within the comfort range of 70-80 degrees, with an applied penalty for days of excessive humidity. The graph below provides a summary of climate conditions in Oakville.

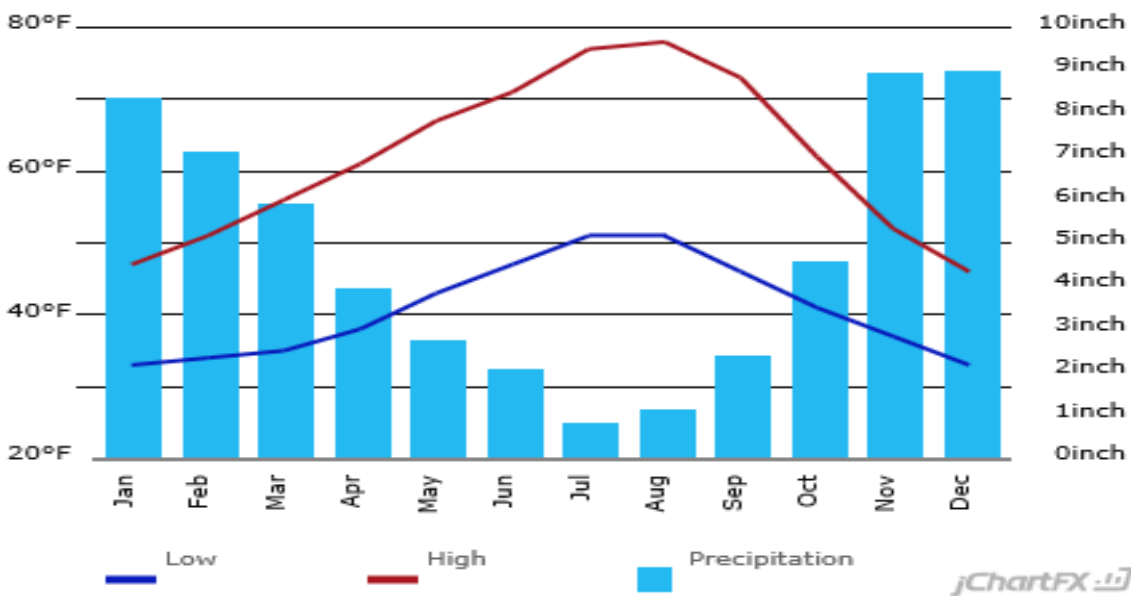


Figure 8-1 City of Oakville Monthly Weather

- **Population Growth** The current estimated population is approximately 715 according to the 2020 United States Census Bureau. The Washington Office of Financial Management April 2017 estimate was 690. As of the 2010 Census there were 684 people, 260 households, and 176 families in the City of Oakville. The 2008-2009 Association of Washington Cities publication estimated Oakville's population as 715. As of the 2000 Census there were 675 people, 233 households, and 170 families residing in the city. This shows a slight increase in the population base within the City.

In 2000, there were 233 occupied housing units identified; this represents 89.6 percent of the total 260 housing units identified in Oakville. This means there were approximately 27 vacant

housing units in Oakville in 2000, which represents 10.4 percent of the total housing stock. The table below reflects the Historical Census population from the Washington Office of Financial Management.

Oakville Historical Population 1910-2023		
Census	Pop.	%±
<u>1910</u>	465	—
<u>1920</u>	396	-14.8%
<u>1930</u>	469	18.4%
<u>1940</u>	418	-10.9%
<u>1950</u>	372	-11.0%
<u>1960</u>	377	1.3%
<u>1970</u>	460	22.0%
<u>1980</u>	537	16.7%
<u>1990</u>	493	-8.2%
<u>2000</u>	675	36.9%
<u>2010</u>	684	1.3%
<u>2017</u>	690	+0.9%
<u>2020</u>	715	+0.9%
*The Washington Office of Financial Management April 2023 10-year population estimate.		

- **Governing Body Format** - Oakville is a Code City operating under a Mayor-Council Governing Body format.
- **Development Trends** - Important land uses in Oakville and its vicinity include agriculture, logging, and forestry, industrial and manufacturing. Growth in the City has been slow, particularly with the impact from COVID. Limited development has occurred since completion of the last plan.

- **Economy** - The City of Oakville's economic base consists mainly of retail and wholesale sales and services, and wood product manufacturing. The largest Employers include Willis Industries and Auto Sales Unlimited.

8.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the jurisdiction. Table 8-1 lists all past occurrences of natural hazards within the jurisdiction. If available, dollar loss data is also included.

Table 8-1 Natural Hazard Events				
Disaster Number	Declaration Date	Incident Type	Title	Dollar Losses or Impact
4650	3/29/22	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	Unknown
4593	4/8/2021	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	Unknown
4539	4/23/20	Flood	Severe Storms, Flooding, Landslides, And Mudslides	Unknown
4481	3/22/20	COVID	Biological	Unknown
4418	3/4/2019	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	Unknown
4253	2/2/2016	Flood	Severe Winter Storm, Straight-line Winds, Flooding, Landslides, Mudslides	
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	

Table 8-1 Natural Hazard Events				
Disaster Number	Declaration Date	Incident Type	Title	Dollar Losses or Impact
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	
1361	3/1/2001	Earthquake	Earthquake	
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	
1037	8/2/1994	Fishing Losses	The El Nino (The Salmon Industry)	
883	11/26/1990	Flood	Severe Storms, Flooding	
852	1/18/1990	Flood	Severe Storms, Flooding	
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	
492	12/13/1975	Flood	Severe Storms and Flooding	
322	2/1/1972	Flood	Severe Storms and Flooding	
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	
185	12/29/1964	Flood	Heavy Rains and Flooding	

In addition to the above disasters, the City of Oakville has been impacted by historic events as follows, with additional information on Oakville-specific impact found within Volume 1 of the Countywide Multi-Jurisdictional Hazard Mitigation Plan, which provides greater detail within each specific hazard profile.

Flood History

Flooding is one of the City's most significant hazards of concern, with the most severe flooding events in Oakville occurring when heavy rainfall has caused the Chehalis River and Harris Creek to overflow their banks. The record December 2007 flood in Oakville was the result of heavy rains and resulting flooding from the Black River and the Chehalis River that overflowed Blockhouse Road east of the City into the Harris Creek drainage, which then overflowed into the southeasterly portion of the City as shown in the aerial photo. The flood waters effectively isolated Oakville for days with flood water blocking residents

from traveling on Highway 12 to the east to Rochester, west to Elma, or south on South Bank Road. Oakville was without power for 54 hours as flood waters prevented utility crews from reaching the electrical substation serving the area. Generators also had to be connected to the City's water well to begin refilling the reservoir to ensure safe drinking water for residents. County-wide, firefighters and sheriff's deputies had to evacuate hundreds of people stranded by the high water. In Oakville, as many as 200 people had to seek help at local shelters because of dwindling gasoline and food supplies available within the City. National Guard members brought in food and bottled water for residents.

There are multiple contributing factors to the flooding events in Oakville that determine the severity and duration of impact. The coastal tide, Chehalis River, Black River, Harris Creek, Roundtree Creek, water flowing from Capitol State Forest/Jackpot Hill North of Oakville, Rainfall, melting snow, and low elevation deliver varying degrees of impact depending on which factor or factors are occurring at the given time.

12/5/23	Flood	Flooding Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
3/02/22	Flood	Flooding Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
1/7/22		Flooding Hwy 12 East of Oakville/ Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
11/13/21		Flooding Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
1/14/21	Flood	Flooding Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
12/22/19		Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
2/10/17	Flood	Flooding Hwy 12 East of Oakville/ Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas
11/26/16		Flooding Arla & Avarie Ct/E Elma Gate Rd/E Blockhouse Rd areas

Earthquake History

Reports of earthquakes in Grays Harbor County are available from pioneer accounts in the 1800s to current real time observations found on the internet. The 1949 Olympia earthquake measured 7.1 magnitude and was large enough to be recorded at many seismograph stations around the world. The two most recent damaging earthquakes to affect Grays Harbor County were the 1999 Satsop and the 2001 Nisqually events. A magnitude 5.8 deep earthquake occurred 11 miles north of Satsop on July 2, 1999. There were no fatalities, but there was heavy damage to the Grays Harbor County Courthouse. The PUD Station in Aberdeen, which is the main connection between Grays Harbor and the Bonneville Power Administration, was also damaged. Considering the magnitude and proximity to so many buildings and structures, the impact to Grays Harbor County was relatively minimal. There have been no significant earthquakes affecting Grays Harbor County since 2004. The Nisqually earthquake occurred February 28, 2001 with the epicenter about 11 miles northeast of the City of Olympia. It was a deep magnitude 6.8 event and due to extensive damage in several counties, was declared Federal Disaster #1361. Impacts included major traffic disruptions; small power outages; and temporary closure of state offices. Cracks in roads and buildings and falling bricks also resulted from the shaking. There was only limited damage in Oakville due to either of these earthquakes.

Severe Weather History

Windstorms

Windstorms have historically been frequent and important weather events in Oakville and Grays Harbor County. Early settlers of the county recorded accounts of hard wind, southerly gales and rain during the winter of 1852. In 1855, “rough, squally weather on Grays Harbor, very cold, wind blowing a gale from the northwest” is described in the Michael Luark diary. P. W. Gilette writes that the hardest windstorm in 10 years occurred late December 1862. A severe windstorm was noted on May 6, 1889 and a gale blew down trees in Hoquiam on Christmas Day 1890. Windstorms continued to make headlines in the early 1900s. They hampered jetty construction at Grays Harbor in late May 1900 and a storm on May 17, 1909 isolated the Grays Harbor area causing heavy damage. Several windstorms of impressive magnitude have occurred in Grays Harbor County which have made national headlines, as described below.

- *The Great Blow Down* - A severe windstorm on January 29, 1921 which caused damage in many communities in the region became known as the great blow down. Wind velocity on Grays Harbor was estimated at 100 miles per hour. Ships and river craft broke loose of moorings, in some cases smashing into bridges, and whole sections of timber were blown down all along the west side of the Olympic Peninsula.
- *The Columbus Day Storm* - On October 12, 1962 the strongest non-tropical windstorm recorded in the lower 48 states in American history struck Grays Harbor County. Peak wind gusts of more than 100 mph were recorded. The storm caused extensive damage to property, and power and telephone outages occurred throughout the county. An estimated 15 billion board feet of timber throughout the Olympic Peninsula were blown down. Total damages in the county reported to be approximately \$2.5 Million.
- *The Inauguration Day Storm* - On January 20, 1993 a fierce windstorm hit western Washington. At the height of the storm more than 750,000 residential and commercial customers in the Puget Sound region were without power. Grays Harbor County was included in the federal disaster declaration specified for the storm.
- *Other Windstorm Events*
 - In November 2002, nearly one-third of Grays Harbor PUD customers were without power during parts of the night on November 23rd and 24th.
 - In November 2006, a windstorm toppled trees and knocked out power to about 8,000 customers. Wind gusts of 78 mph were reported in Aberdeen.
 - On December 2-3, 2007 approximately 90 percent of county residents were without power, from two to seven days. This outage resulted from a windstorm with sustained winds of 45-50 mph, and a measured wind gust of 81 mph which was recorded at Bowerman Field (this station was later shut down by a stronger gust).
 - On March 31, 1997, a windstorm with gusts to 71 mph caused power outages and resulted in three deaths in the region. Approximately 15,000 customers lost electricity as a result of high winds. It was reported that a kerosene lamp being used during the power outage caused a fire that heavily damaged a house north of Hoquiam.

Snow and Ice

- Winter storms with snow and icy conditions presented a challenge to early pioneers. The Henry Coonse diary describes a winter storm the first week of March 1852 with “west wind with hail, snow on ground and ice.” Several days of very cold weather were reported in December 1856 and again in the winter of 1862. Snow and ice was reported in the Grays Harbor region in December 1884 and a snowfall of 40 inches at Copalis was described in a letter John Porter sent to his father. The Grays Harbor area experienced a severe winter in 1893 with 26 inches of snow reported on February 1st and 2nd. The most momentous winter storm in Grays Harbor County began on December 29, 1949 and continued throughout the month of January 1950. The winter of 1949 - 1950 is the coldest winter on record, with snow sweeping over the entire county from New Year’s Eve continuing throughout the next several days causing enormous damage and disruption.
- In December 1989 and January 1990, cold temperatures and high winds iced streets and left nearly 150,000 western Washington residents without power for several hours.
- An ice storm in December 1996 lasted for four days and left almost 14 inches of snow and ice in western Washington.

Volcano History

- Observation by local Indians and early settlers as well as scientific studies indicates Mt. St. Helens has been active over time. Explorers, traders, and missionaries all heard reports of a major explosive eruption about 1800. Other descriptions indicating possible activity included: a physician at Fort Vancouver writing of darkness and haze in 1831 and reports by Reverend Josiah Parrish, corroborated by missionaries at the Dalles, Oregon of an eruption (Grays Harbor County All Hazards Mitigation Plan, 2005).

An eruption of Mt. St. Helens in 1980 is the only completely documented volcanic event to affect Grays Harbor County. After about a 150-year time span, a catastrophic eruption occurred on May 18, 1980. A new period of unrest began in September of 2004. Initial increases in seismic activity were followed by magma rising to the surface on September 23rd. After 14 days, new lava was visible and seismic activity and dome building continues to the date of this report (Grays Harbor County All Hazards Mitigation Plan, 2005).

The May 18th eruption carried huge amounts of ash to the east all the way to the State of Montana in a matter of hours. Grays Harbor County escaped the initial ash fall because of prevailing wind direction; however, a smaller but significant eruption on May 25th affected the county for a short period of time. Prevailing winds from the southeast during this eruption deposited ash from the volcanic plume over Grays Harbor County from east to west (Grays Harbor County All Hazards Mitigation Plan, 2005).

Landslide History

- Landslides take lives, destroy buildings, interrupt transportation systems, damage utilities, and cover marine habitat. Washington has a history of landslides; however, Oakville is not known as an area that is considered to be at high risk for landslides (Washington State Hazard Mitigation

Plan, 2004). Elevation contour maps indicate the location of steep slopes on the north side of the City and north of the City with the potential to cause landslides in Oakville. Although there has been no history of landslides in Oakville, there is the potential in the northerly portion of the City.

Wildfire History

- There are no historic examples of wildfires in the City.

Hazardous Material Incident History

- Hazardous materials incidents occur in Grays Harbor County frequently. However, most incidents involve small quantities and/or happen at a fixed facility with very limited to no impact to people or the environment. For example, the log at the Grays Harbor County Division of Emergency and Risk Management for 2003 through 2004 showed 15 separate incidents, 10 at fixed facilities, three involving transportation systems, and two miscellaneous situations. The number of drug labs reported was 50 in 2003 and 24 in 2004 (Grays Harbor County All Hazards Mitigation Plan, 2005). Information about serious hazardous materials incidents in Grays Harbor County is available through the county records, state documents, and archived newspapers. The vast majority of these reports were considered minor. Most hazardous waste enforcement actions in Grays Harbor County have focused on small, routine, or periodic releases beyond what state or federal permits allow. For instance, this has happened frequently with several local manufacturing firms who exceed their air and water pollution control permit standards (Grays Harbor County All Hazards Mitigation Plan, 2005). Many reported hazardous materials incidents involve small-scale spills and atmospheric releases of hazardous materials due to human error or equipment failure that require minimal response. Between 1995 and 2004, the Department of Ecology received reports of over 1,200 such incidents. While the cumulative consequences of small toxic releases into the environment can be extremely dangerous to humans and the environment over the long-term, they are not equivalent to a serious one-time hazardous materials incident (Grays Harbor County All Hazards Mitigation Plan, 2005). There have been no documented historic events of hazardous materials spills in Oakville.

8.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and

other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

8.6 NATIONAL FLOOD INSURANCE INFORMATION

The City of Oakville participates in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 14.08 of the Oakville Municipal Code. Within Section 14.08.030 OMC there are definitions for “substantial damage” and “substantial improvement” as follows:

“Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.

“Substantial improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

- 1 Any project for improvement of a structure to correct previously identified existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions; or
- 2 Any alteration of a “historic structure”; provided, that the alteration will not preclude the structure’s continued designation as a “historic structure.”

The Chapter also includes requirements for development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, and so on—are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Information on the community’s National Flood Insurance Program (NFIP) compliance is presented in Table 10-2. This identifies the current status of the jurisdiction’s involvement with the NFIP.

NFIP participation effective August 2023 are as follows:

- Oakville, City of (530064)
- Policies in Force: 14
- Total Insurance Coverage in Place: \$4,368,000
- Total Written Premium: \$10,885

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: None
- Number of FEMA-Identified Severe Repetitive Loss Properties: None

- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated:
None

Table 8-2 National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Public Works
Who is your community's floodplain administrator? (department/position)	Public Works/Director
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	January 30, 2017 September 14, 2020
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes. Certification, Continuing Education, Resource Partnerships
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No

8.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 3-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 8-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	Y			
Zoning Ordinance	Y			
Subdivision Ordinance	Y			
Floodplain Ordinance	Y			Updated 2017, Updated 2020
Stormwater Management	Y			
Post Disaster Recovery	N			
Real Estate Disclosure	N			
Growth Management	Y			Oakville Comprehensive Plan
Site Plan Review	Y			Code Enforcement
Public Health and Safety	Y	Y		Relies on Grays Harbor County
Coastal Zone Management	N			
Climate Change Adaptation	N			
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	N			
Planning Documents				
General or Comprehensive Plan				
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>				Yes
Floodplain or Basin Plan	Y			Part of the Chehalis River Basin Plan
Stormwater Plan	Y			
Capital Improvement Plan	Y			
Habitat Conservation Plan	Y			Through growth management
Economic Development Plan				
Shoreline Management Plan	Y			Permitting Process
Community Wildfire Protection Plan	N			
Transportation Plan	N			
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Y			
Threat and Hazard Identification and Risk Assessment	N			
Terrorism Plan	N			
Post-Disaster Recovery Plan	N			

Table 8-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Continuity of Operations Plan	Y			
Public Health Plans	Y			Relies on Grays Harbor County
Boards and Commission				
Planning Commission	N			
Mitigation Planning Committee	Y			Part of the Grays Harbor County plan
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Y			Tree trimming, clearing drainage systems
Mutual Aid Agreements / Memorandums of Understanding	Y	Y		DOT, GHC (PW, Sheriff, EMS), GHFD #1, CRBFA, ERWOW

8.6.2 Administrative and Technical Capabilities

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 10-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 8-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	N	Contracted Service as needed
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Y	Code Enforcement/Chief Building Official
Engineers specializing in construction practices?	N	Contracted Service
Planners or engineers with an understanding of natural hazards	N	We do have the capacity of hiring engineers under contract.
Staff with training in benefit/cost analysis	N	
Surveyors	N	Contracted Service.

Table 8-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Personnel skilled or trained in GIS applications	Y	County staff occasionally provides this assistance.
Personnel skilled or trained in Hazus use	N	
Scientist familiar with natural hazards in local area	N	
Emergency Manager	Y	Director of Public Works
Grant writers	N	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Y	Rely on county to provide service, do have Reverse 9-1-1
Hazard data and information available to public	Y	Hazard Mitigation Plan is a public document which will remain accessible to the citizens of the community.
Maintain Elevation Certificates	N	Property owner/surveyor file with Grays Harbor County
Education and Outreach		
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	County provides service
Public-private partnership initiatives addressing disaster-related issues?	N	
Multi-seasonal public awareness program?	Y	County provides service
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Y	Public Works
Noxious Weed Eradication Program or other vegetation management	Y	Public Works
Fire Safe Councils	N	
Chipper program	N	
Defensible space inspections program		
Creek, stream, culvert or storm drain maintenance or cleaning program	Y	Public Works
Stream restoration program	N	
Erosion or sediment control program	N	Building Code Ordinance
Address signage for property addresses	Y	
Other		

8.6.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 10-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 8-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Y
Capital Improvements Project Funding	Y
Authority to Levy Taxes for Specific Purposes	Y
User Fees for Water, Sewer, Gas or Electric Service	Y
Incur Debt through General Obligation Bonds	Y
Incur Debt through Special Tax Bonds	Y
Incur Debt through Private Activity Bonds	Y
Withhold Public Expenditures in Hazard-Prone Areas	Y
State Sponsored Grant Programs	Y
Development Impact Fees for Homebuyers or Developers	Y
Other	

8.6.4 Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 10-6. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 8-6. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Building Code Effectiveness Grading Schedule (Commercial)	5	October 2017
Building Code Effectiveness Grading Schedule (Residential)	5	October 2017
Public Protection Classification	5	Unknown
Storm Ready	Y	County
Firewise	N	
Tsunami Ready (if applicable)	Y	County

8.7 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the City of Oakville.

Table 3-7 presents the ranking of the hazards of concern based on their CPRI score. Table 8-8 represents the CPRI scoring. Once the risk ranking was completed, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 8-7. Hazard Risk and vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.45	High
1	Flood	3.45	High
2	Severe Weather	3.05	High
3	Landslides	2.55	Medium

Table 8-7. Hazard Risk and vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
4	Drought	2.35	Medium
4	Climate Change	2.35	Medium
5	Wildfire	2.3	Medium
6	Hazardous Materials	2	Medium
7	Tsunami	1.85	Low
8	Volcano	1.5	Low
9	Erosion	1.15	Low

Table 8-8. City of Oakville 2024 CPRI Score and Hazard Ranking																							
Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change			3			2				2						1				4	2.35	4	Medium
Drought			3			2				2						1				4	2.35	4	Medium
Earthquake			3				4				4	4					1				3.45	1	High

Table 8-8.
City of Oakville 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Erosion	1				1				1						1					4	1.15	9	Low
Flood				4			3					4			2				3		3.45	1	High
Landslides		2					3				3			3				2			2.55	3	Medium
Severe Weather				4		2						4				1		2			3.05	2	High
Tsunami	1					2				2				3						4	1.85	7	Low
Volcano	1					2				2						1			3		1.50	8	Low
Wildfire		2				2				2			4					2			2.30	5	Medium
Hazmat	1					2				2			4							4	2.00	6	Medium

8.8 ADDITIONAL HAZARD IMPACT

Volume 1 of the Grays Harbor County Hazard Mitigation Plan provides specific loss data contained within each hazard profile concerning the impact of the various hazards on concern for the City's built environment. Readers should review the hazard profiles contained in the base plan for additional and specific information.

8.9 MITIGATION GOALS AND OBJECTIVES

The City of Oakville adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

8.10 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 8-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

**Table 8-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 Evaluate ingress and egress routes for Oakville area and assess alternate routes of access where possible. Evacuation or providing aid may require vehicles capable of travelling through deep water, boats, or aircraft where no alternate route is available; assistance in developing emergency preparedness kits; informing citizens of the hazards of concern, and where to obtain such information during disaster incidents.									
New/Existing	All	All	PW, County	High	Grants	Long-Term	Y-Partial	Prevention, Response, Public Information, Emergency Services, Recovery	Local and County
INITIATIVE #2 Maintain existing and acquire additional emergency generators or other alternate power options for EOC, City Hall, hazard shelters/distribution centers, Well # 1, and booster pump facility.									
New/Existing	All	All	PW	Medium	Grant	Long-Term	Y	Prevention, Emergency Services, Recovery	Local
INITIATIVE #3 Develop agreements with local suppliers for incident fuel, food & water source availability. Review and develop MOUs/MOAs with surrounding jurisdictions as needed for emergency response and recovery.									
New/Existing	All	All	Legal, PW, Council	Low	General Fund	Short-Term	N	Prevention, Public Information, Emergency Services, Recovery	Local
INITIATIVE #4 Develop an emergency response plan that identifies emergency food, water, and medical supply sources, and potential areas of distribution for those areas of the City which become potentially isolated during various storm events.									

**Table 8-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New/Existing	All	All	Council, Clerk, Legal, PW	Medium	General and Grant	Short-Term	Y- Partial	Prevention, Public Information, Emergency Services, Recovery	Local
INITIATIVE #5 Work with Red Cross and other public private partnerships to develop emergency preparedness storage plan (acquire cots/sleeping mats, blankets, food and water storage and service items, nonperishable food for emergency use).									
New/Existing	All	All	PW, Council, Clerk	High	General and Grant	Long-Term	N	Public Information, Emergency Services, Recovery	Local
INITIATIVE #6 Develop plan for travelers that become isolated from their resources and rely on Oakville during incident.									
New/Existing	All	All	PW, Council	Low	General	Long-Term	N	Public Information, Emergency Services, Recovery	Local
INITIATIVE #7 Establish city-owned EOC. Once identified, recruit, train, practice, and continually educate Emergency Coordination Center Volunteers Network.									
New/Existing	All	All	Council, PW	High	Grant	Long-Term	Y (Partial)	Prevention, Response, Public Information, Emergency Services, Recovery	Local
INITIATIVE #8 Complete formal hazard evaluation of city facilities, reservoirs, and stormwater drainage systems to determine stability during a hazard event									
New/Existing	F, EQ, SW, LS, WF	All	PW	Medium	General, Grant	Long-Term	Y	Prevention, Emergency Services, Recovery	Local
INITIATIVE #9 Consider grant opportunities to assist homeowners in elevating residential structures in frequently flooded areas. As available pursue grants to assist homeowners.									
Existing	F, SW, T	All	PW	High	Grant	Long-Term	Y	Property Protection, Structural Project	Local
INITIATIVE #10 Continue working in conjunction with the County to provide: public information program concerning risk, NOAA Radio use, damage assessment information, public health issues.									
New/Existing	All	All	PW, County EM	Low	General	Long-Term	Y	Prevention, Public Information, Emergency Services, Recovery	Local and County

**Table 8-9.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #11 Work with local businesses to identify supplies, skill personnel, equipment, and materials which support response and recovery efforts throughout the City. As identified, begin discussions and possible development of MOAs with those entities which will support efforts during disaster incidents.									
New/Existing	All	All	PW, Legal, Council	Medium	General	Short-Term	Y	Prevention, Public Information, Emergency Services, Recovery	Local
INITIATIVE #12 Develop various response plans needed to address the various hazards of concern. This includes plans and SOPs for city personnel, as well as advising and assisting (as staffing allows) private entities in identifying and developing similar-typed plans.									
New/Existing	All	All	PW, County EM	Medium	General, Grant	Short-Term	Y	Prevention, Public Information, Emergency Services, Recovery	Local and County
INITIATIVE #13 Work with DOT and County to establish mechanism to protect Highway 12 at Porter from landslide hazard. Incidents along this roadway block ingress and egress into and out of the City of Oakville.									
New/Existing	L, SW, F, EQ	All	PW	High	DOT, Grant	Long-Term	Y	Structural Project, Property Protection	Local, County, Region
INITIATIVE #14 Work with County and State DOT to address flooding issue over Highway 12 and East Elma Gate Road East of Oakville between I-5 and the City. Historical flood events have blocked ingress and egress to the City.									
New/Existing	F, SW, T	All	PW	High	DOT, Grant	Long-Term	Y	Structural Project, Property Protection	Local, County, Region
INITIATIVE #15 Seek grant funding to retrofit City Well #1 with automation, seismic upgrades (as appropriate), and electrical.									
New/Existing	All	All	PW	High	DOE, BRIC, HMGP	Short-Term	N	Structural Project, Property Protection, Recovery	Local

8.11 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 10-10 identifies the prioritization for each initiative.

Table 8-10. Mitigation Strategy Priority Schedule							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <i>a</i>
1	8	H	H	Y	Y	N	M
2	8	H	M	Y	Y	N	H
3	6	H	L	Y	N	Y	H
4	8	H	M	Y	Y	N	H
5	8	H	H	Y	Y	N	M
6	9	H	L	Y	N	Y	L
7	9	H	H	Y	Y	N	H
8	9	H	M	Y	N	N	H
9	7	H	H	Y	Y	Y	M
10	7	H	L	Y	N	Y	H
11	6	H	M	Y	N	Y	H
12	9	H	M	Y	Y	N	H
13	9	H	H	Y	Y	N	H
14	9	H	H	Y	Y	N	H
15	9	H	H	Y	Y	N	H
a. See Chapter 1 for explanation of priorities.							

8.12 STATUS OF PREVIOUS PLAN INITIATIVES

Table 11-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

The city continues to pursue ongoing efforts to explore paths to decrease the impact or mitigate the ongoing flooding that occurs frequently on the east side of the city near Harris Creek, Arla Ct, Avarie Ct, E Elma Gate Rd, E Blockhouse Rd, E Oak St, and E Eagle St/Jason Ln.

The city successfully received a grant from the CRBFA and completed a Flood Mitigation Study/Oakville Drainage Evaluation in 2016-2017 performed by Gibbs & Olson consulting. The city has pursued multiple discussions with the Chehalis River Basin Flood Authority, Grays Harbor County, the Chehalis Tribe, Ecology, Wildlife Management, Wetmore & Associates, adjacent private property owners, and in October of 2023 the city participated in a Tech Team Meeting with multiple funding agencies at the Infrastructure Assistance Coordinating Council Conference to investigate options to fund the recommendations from the Flood Mitigation Study/Oakville Drainage Evaluation, and attempt to develop strategies to develop a multi jurisdiction project to address the contributing factors outside the city limits.

Table 8-11. 2024 Status of Previous Hazard Mitigation Strategies					
Mitigation Strategy	2024 Project Status	Current Status			
		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE #1 Evaluate ingress and egress routes for Oakville area and assess alternate routes of access where possible. Evacuation or providing aid may require vehicles capable of travelling through deep water, boats, or aircraft where no alternate route is available; assistance in developing emergency preparedness kits; informing citizens of the hazards of concern, and where to obtain such information during disaster incidents.	Have had meetings with District Fire Chief to gain additional information on this matter to help provide a better understanding of the various impacted routes; will continue to seek grant funding to help develop preparedness kits, while also working with the County to continue educating our citizens on the hazards of concern through various means as required in our Plan Maintenance Section.				x

Table 8-11. 2024 Status of Previous Hazard Mitigation Strategies					
		Current Status			
		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy	2024 Project Status				
INITIATIVE #2 Maintain existing and acquire additional emergency generators or other alternate power options for EOC, City Hall, hazard shelters/distribution centers, Well # 1, and booster pump facility.	Some project was made with respect to performed maintenance; the City also hired a contractor to assist with repair and maintenance for well #3, general maintenance was performed on some of the existing generators, as well as a backup light installed over one of the generators to assist with repair of generators when they failed during power outages. No new generators purchased. Project remains valid and is carried forward.				X
INITIATIVE #3 Develop agreements with local suppliers for incident fuel, food & water source availability. Review and develop MOUs/MOAs with surrounding jurisdictions as needed for emergency response and recovery.	No action taken. Project remains valid.				X
INITIATIVE #4 Develop an emergency response plan that identifies emergency food, water, and medical supply sources, and potential areas of distribution for those areas of the City which become potentially isolated during various storm events.	Working with County to develop this project further.				X
INITIATIVE #5 Work with Red Cross and other public private partnerships to develop emergency preparedness storage plan (acquire cots/sleeping mats, blankets, food and water storage and service items, nonperishable food for emergency use).	City and fire district are working on this and will engage Red Cross to further explore this project.				X

Table 8-11. 2024 Status of Previous Hazard Mitigation Strategies					
		Current Status			
		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy	2024 Project Status				
INITIATIVE #6 Develop plan for travelers that become isolated from their resources and rely on Oakville during incident.	The City will continue to work with the County for evacuation planning. This will be particularly relevant with the new Tsunami maps which have been completed, to assist evacuees from other parts of the County.			X	X
INITIATIVE #7 Establish city owned EOC. Once identified, recruit, train, practice, and continually educate Emergency Coordination Center Volunteers Network.	No action taken due to lack of funding and staff, but still valid.				X
INITIATIVE #8 Complete formal hazard evaluation of city facilities, reservoirs, and stormwater drainage systems to determine stability during a hazard event	Some evaluations of structures have been completed, but they are limited in scope. 2020 FEMA maps helped identify additional flood issues, which the City will be addressing in the future, such as one reservoir not having seismic bracing. This project is still valid; moving forward.	X			X
INITIATIVE #9 Consider grant opportunities to assist homeowners in elevating residential structures in frequently flooded areas. As available pursue grants to assist homeowners.	Project still valid, but no work has been completed. One homeowner was required to put vents in the garage, which the homeowner did at their own cost.			X	X
INITIATIVE #10 Continue working in conjunction with the County to provide: public information program concerning risk, NOAA Radio use, damage assessment information, public health issues.	The City regularly works with the County to ensure risk information is distributed. This project will be ongoing, particularly in light of this update occurring.	X	X		X

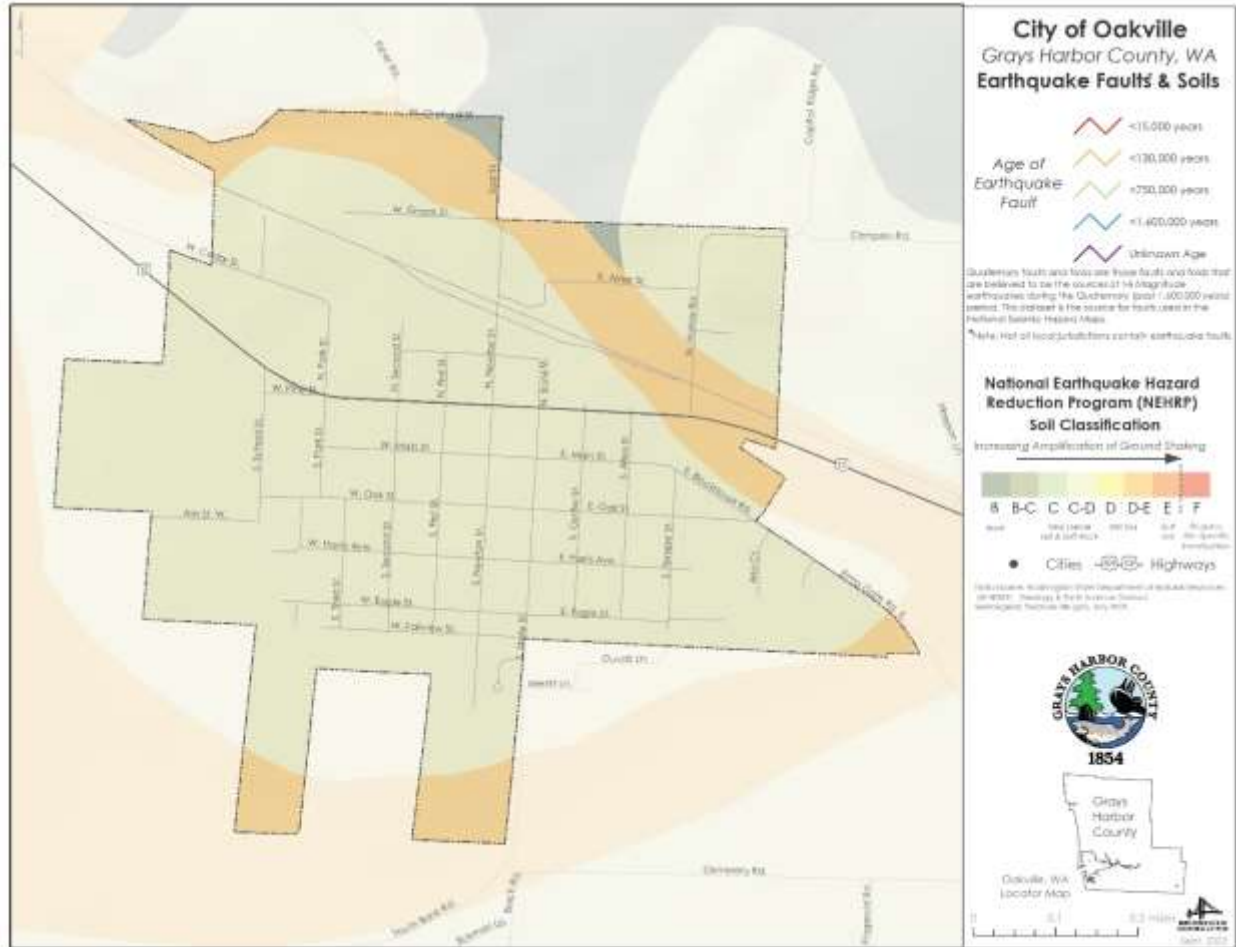
Table 8-11. 2024 Status of Previous Hazard Mitigation Strategies					
Mitigation Strategy	2024 Project Status	Current Status			
		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE #11 Work with local businesses to identify supplies, skill personnel, equipment, and materials which support response and recovery efforts throughout the City. As identified, begin discussions and possible development of MOAs with those entities which will support efforts during disaster incidents.	No action was taken on this initiative in part, due to the COVID shut down. The City still feels this is a relevant project and will carry in forward in hopes of completing it.			X	X
INITIATIVE #12 Develop various response plans needed to address the various hazards of concern. This includes plans and SOPs for city personnel, as well as advising and assisting (as staffing allows) private entities in identifying and developing similar-typed plans.	City continues to work with the fire district to work on this project, and will be attempting to join with the Chehalis Tribe to move forward on this project.				X
INITIATIVE #13 Work with DOT and County to establish mechanism to protect Highway 12 at Porter from landslide hazard. Incidents along this roadway block ingress and egress into and out of the City of Oakville.	Some work has been completed on Porter by DOT, but this continues to be an issue so the City will continue to work with DOT and the County to further stabilize this project.	X			X
INITIATIVE #14 Work with County and State DOT to address flooding issue over Highway 12 and East Elma Gate Road East of Oakville between I-5 and the City. Historical flood events have blocked ingress and egress to the City.	No action taken on this yet, but it remains a valid project and is carried forward.				X

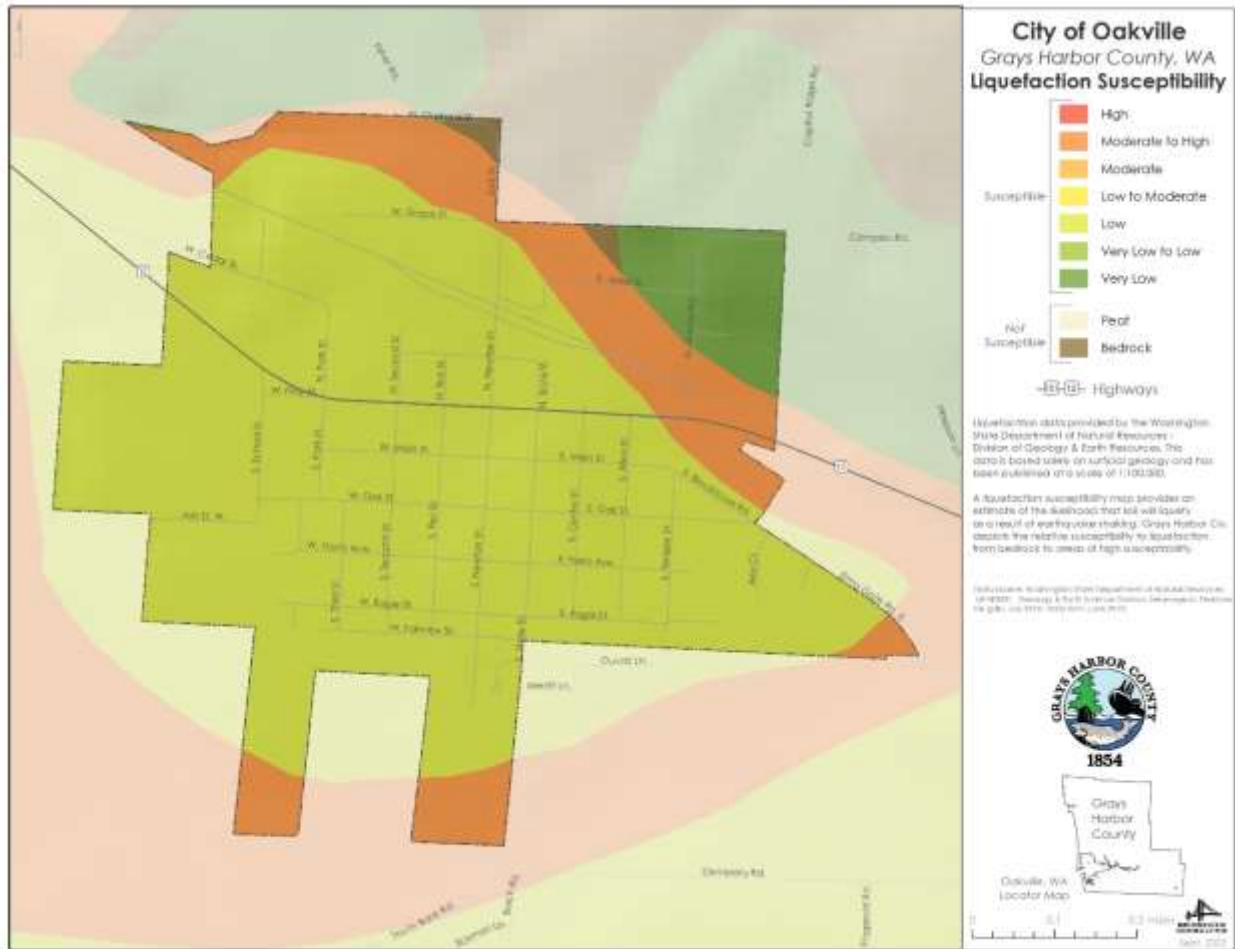
8.13 HAZARD AREA EXTENT AND LOCATION

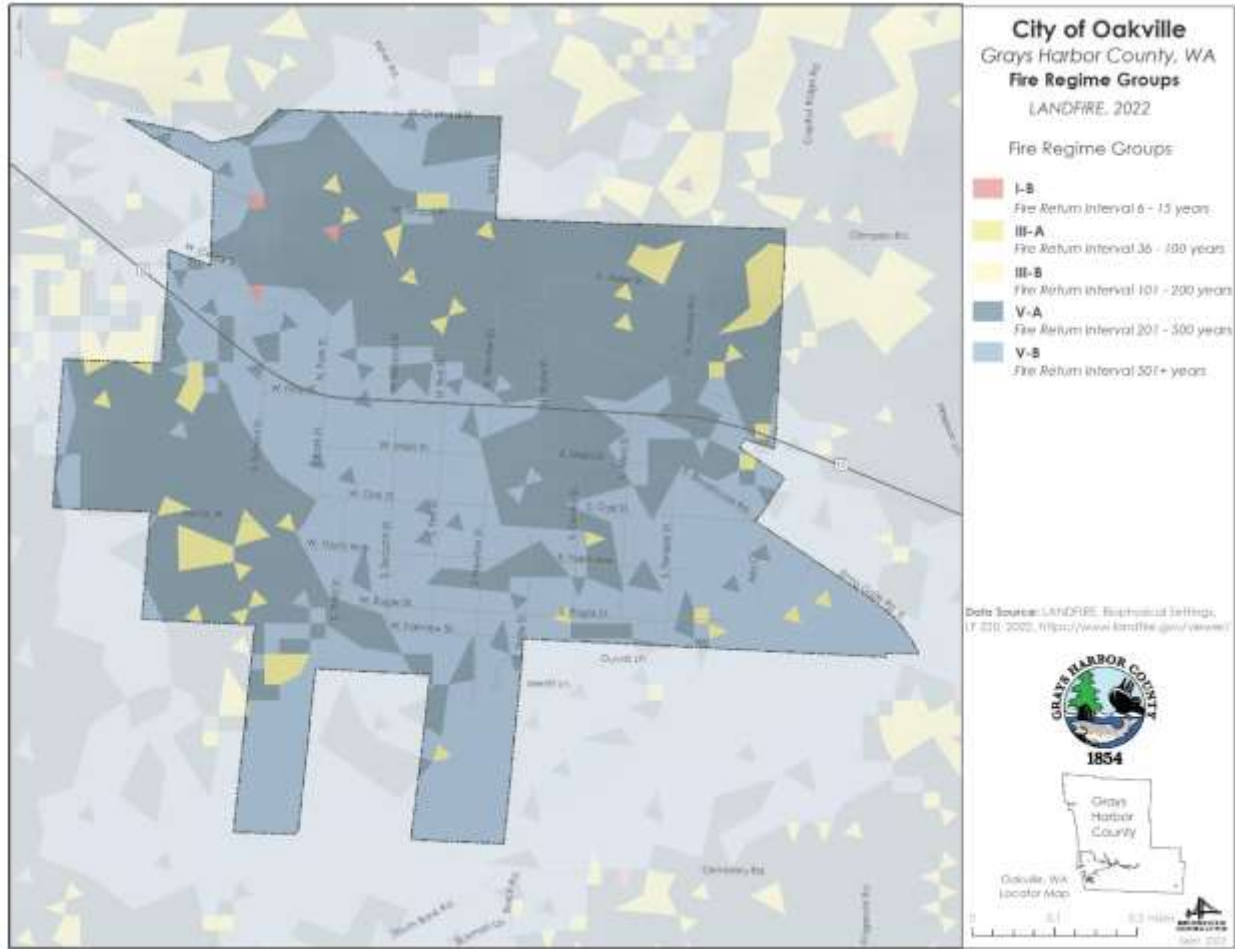
Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes.

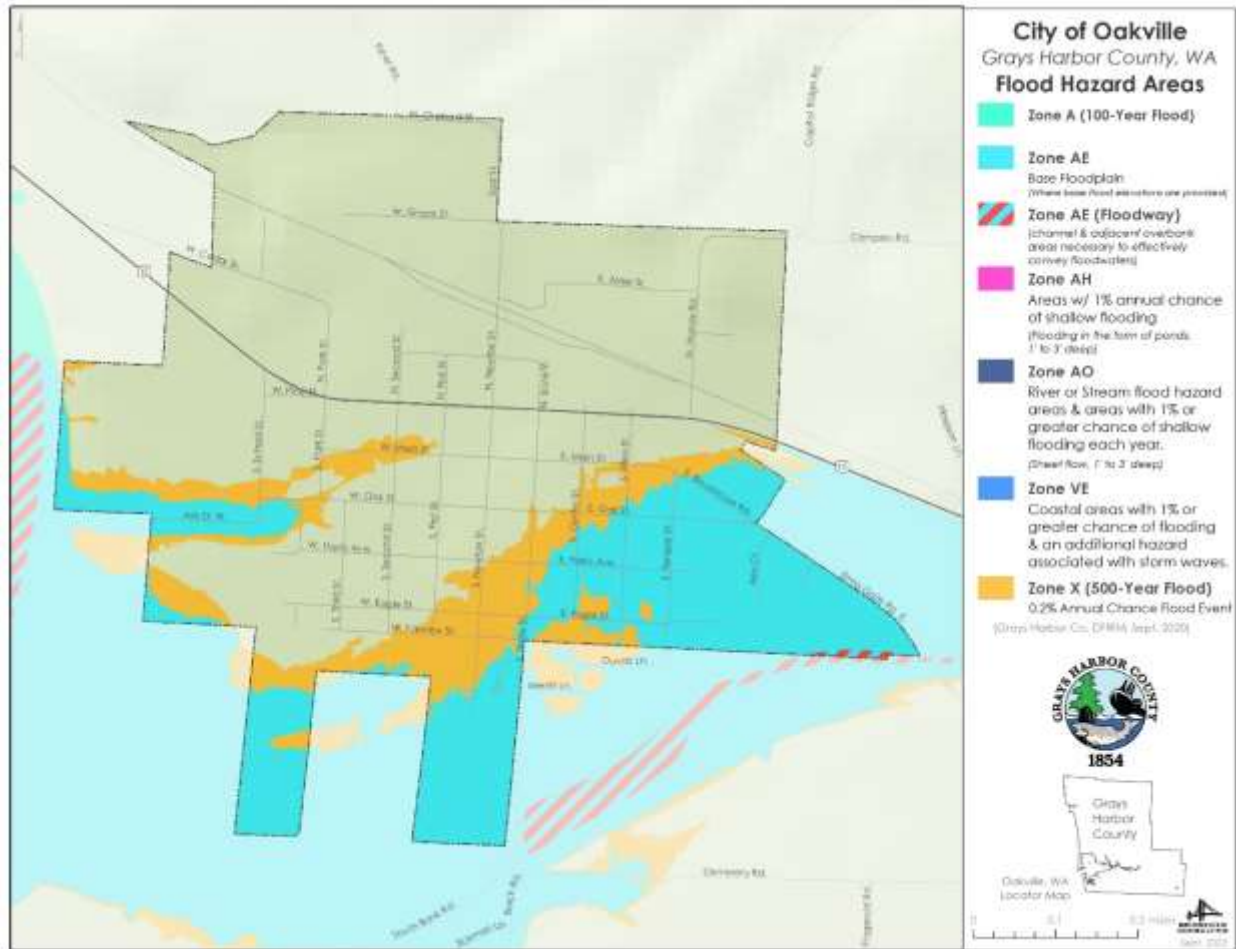
Additional items which were considered over the course of this planning effort and incorporated into the risk ranking process and determination of risk and vulnerabilities of the City include the following:

- Failure of bridges on the East, West, and South sides of Oakville and Capital Forest bordering the North side of the City has the potential to isolate the city from surrounding areas and resources.
- The North side of the city is bordered by sloping elevation terrain providing potential for landslide. There have been no landslide incidents in Oakville to the knowledge of the planning team members.
- There have been no Hazardous Material incidents in the City of Oakville. However, there is potential due to the amount of cargo truck and railroad traffic passing through the City.
- There is frequent flooding on the Eastern side of the City. These incidents happen every year and at times multiple incidents occur in a given year. This flooding impacts travel on Elma Gate Road and homes, property, and assets in the Elma Gate Road, Avarie Ct, Arla Ct, Jason Ln, and Blockhouse Road areas. In 2007 this flooding impacted a significant area of the Eastern and Southern parts of the City.









CHAPTER 9.

CITY OF OCEAN SHORES 2024 ANNEX

9.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Ocean Shores, Grays Harbor County, Washington, a participating jurisdiction to the Grays Harbor County, Washington, Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Ocean Shores, Grays Harbor County, Washington. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only.

9.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City of Ocean Shores, Grays Harbor County, Washington followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Ocean Shores, Grays Harbor County, Washington also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

LOCAL PLANNING TEAM MEMBERS		
NAME	POSITION/TITLE	PLANNING TASKS
Frank Elduen 801 Minard Avenue NW Ocean Shores, WA 98569 Phone #360-580-0272 Email: felduen@osgov.com	Mayor, City of Ocean Shores	Oversight and evaluation of the hazard plan annex for Ocean Shores.
Scott Andersen 585 Point Brown Avenue Ocean Shores, WA 98569 Phone #360-589-0797 Email: sandersen@osgov.com	City Administrator & Public Works Director, City of Ocean Shores	Primary contact and team lead for the hazard mitigation plan; plan review; review of draft plans and data; presentation at Council for review and adoption.
Sarah Bisson 165 Ocean Lake Way Ocean Shores, WA 98569 Phone #360-940-7487 Email: sbisson@osgov.com	Grant Coordinator and Development Officer & Airport Coordinator, City of Ocean Shores	Critical infrastructure review as needed; assimilation of cost data re disaster recovery funding; plan review

LOCAL PLANNING TEAM MEMBERS		
NAME	POSITION/TITLE	PLANNING TASKS
Marshall Read 165 Ocean Lake Way Ocean Shores, WA 98569 Phone #360-580-4465 Email: mread@osgov.com	Lead Planner, City of Ocean Shores	A variety of planning tasks; research; plan review; review of risk data; update of annex data; drafting of plan.
Curt Begley 858 Pt. Brown Ave NE Ocean Shores, WA 98569 Phone #360-940-7587 Email: cbegley@osgov.com	Fire Inspector	Fire advisory role; assisted with plan review; provided necessary information.
Mike Mandella 585 Pt. Brown Ave NE Ocean Shores, WA 98569 Phone #360-940-7756 Email: @osgov.com	Assistant Fire Chief	Emergency Manager; 2024 annex drafting; assimilation of data; updating pertinent information
Neccie Logan 577 Pt. Brown Ave NE Ocean Shores, WA 98569 Phone #360-940-7566 Email: nlogan@osgov.com	Police Chief	Deputy Emergency Manager; assisted with plan review

9.3 COMMUNITY PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1970
- **Current Population**— 7,344 as of 2022 (United States Census Bureau)
- **Population Growth**— The 2022 U.S. census gave Ocean Shores' population as 7,344 while the 2020 census listed the population at 6,712. The 2010 census estimated our population at 5,569, an increase of about thirty-two percent (32%) over twelve (12) years, with the majority of that growth occurring between 2010 and 2020. The population of Ocean Shores has been growing at a significantly faster rate than its neighboring cities of Aberdeen and Hoquiam
- **Location and Description**— Coordinates: [46°58'18"N 124°9'17"W](#). The City of Ocean Shores is on a peninsula approximately 6 miles long north to south and 2 miles wide east to west on the Washington coast. The City's highest point is about twenty-four (24) feet above sea level. Grays Harbor is on the east and south sides of the peninsula, while the Pacific Ocean is to the West, giving the City approximately ten (10) miles of outer shoreline. The peninsula is composed entirely of sand to a considerable depth. When the City was first developed, twenty-three (23) miles of fresh waterways including several new canals, Lake Minard and Duck Lake, were dredged to make

them navigable. The canals necessitated several bridges throughout the City. The City is replacing the original wooden bridges as funds become available.

The northern ocean shoreline beaches are accreting up to ten (10) feet of new beach yearly, while the southern beaches on the Ocean and Harbor are eroding. There are no rivers or streams in Ocean Shores, but storm drains and ditches empty into the waterways, which in turn drain through tide gates into the Ocean.

Dominant land cover is twenty-seven percent (27%) developed/human use, fourteen percent (14%) herbaceous, thirteen percent (13%) barren land, twelve (12%) emergent herbaceous wetland and five percent (5%) woody wetland. Habitat conservation areas are priority habitat for Chinook, Coho, Chum, and Steelhead Salmon, Bull Trout, Coastal Resident Cutthroat, Rainbow Trout, and Herring spawning areas as well as resident and migrating shorebird concentrations, marine mammals, and sensitive vegetation communities (Dune Grass, Eelgrass, Saltmarsh). Shoreline modifications include Shoreline armoring in the Marina and Jetty areas, and south end of Pacific Ocean South levees, overwater structures and tide gates.

Between 1912 and 1916, the Army Corps of Engineers constructed the North Jetty on the northern mouth of Grays Harbor at what would become the southern point of the City. The North Jetty stretches approximately 0.3 miles into the Pacific. Following the construction of the North Jetty, sand accreted on the north side of the North Jetty forming new land which is now largely occupied by homes and condominiums. The south shoreline is armored with huge jetty rock around the marina and across the SW land mass from the Wastewater Treatment Plant to the tip of the North Jetty. The south end of also features levees, overwater structures at the marina, and tide gates.

Two (2) miles north of the jetty, accretion along the Pacific Ocean is common. Accumulation rates increase to the north, with recent seaward shoreline migration rates in excess of ten (10) feet per year. Some scientific reports consider the dams along the Columbia River to have limited the amount of sand available for nourishing and replenishing beaches.

- **Brief History**—The peninsula was used by the various local tribes for trading, harvesting shellfish, and other purposes. The Chinook, Chehalis, and Quinault Tribes used the area, as well as others that now make up the Quinault Indian Nation. The first settler of European origin on the Point was Matthew McGee, who settled in the early 1860s. McGee sold the southern portion of the peninsula to A.O. Damon in 1878 for a trading supply center with a dock which extended into the Oyhut channel. Following the construction of the North Jetty at the mouth of Grays Harbor. By 1929, Minard grandchildren used the area as a cattle ranch until selling the land to Ocean Shores Development Corporation in 1960 for \$1,000,000. Later that year, the Corporation started selling lots. The first year 25 homes were constructed. Today, about half of the 12,000 lots have utility service, and a majority of those have dwelling units, but many cleared lots are used as camping lots. And, currently, 24% of the shoreline area (marine and fresh water) has single family homes, 29% is bare or has sheds or other accessory buildings. 17% is undeveloped, 12% wetlands, 10% is commercial, 3% is taken up by the City's airport, and the remainder given to varied uses.
- **Climate**—Mild, wet winters with spectacular storms, and dryer cool summers are normal. Winds can be up to seventy (70) miles per hour along the coast frequently throughout the winter with

gusts reaching higher. In the past few years, dry weather from last June through late September has been the norm. Ocean breezes keep it cool in the summer with rare days into the 80's.

- **Governing Body Format**— The City of Ocean Shores is a non-charter, code city, organized under the Mayor-Council form of government with seven (7) City Councilmembers. Like the Federal and State government, the City's government powers are distributed among the three separate branches: legislative (the City Council), executive (the Mayor), and judicial (the Municipal Court). Also like the Federal and State governments, the three branches of City government operate under the "separation of powers" doctrine, where each of the three branches exercises certain defined powers free from unreasonable interference by the others. The three interact with each other as part of the checks and balances system. The powers of these three City branches are defined by the Washington State statute in the Revised Code of Washington [RCW Chapter 35.A.12](#). As the Chief Executive and Administrator officer of the City, the Mayor is in charge of the day-to-day operation of the city, including the supervision, hiring, and firing of all appointed officers and employees, subject to civil laws. The Mayor also carries out the policies set by the council, seeing that local laws are enforced. The Council is a policy making body that creates the departments of the City, the offices of the City and fixes compensations. The City Council meets the 2nd and 4th Mondays of each month at 6:00 pm in the Convention Center, unless another time and place for meeting is specially designated. Should any regular council meeting fall on any legal holiday, then the meeting shall be held at the same time and place on the next regular business day unless announced in advance otherwise.
- **Development Trends**— About eighty percent (80%) of the City's 3,495 acres is privately owned with sixteen percent (16%) City-owned, and the remainder owned by the County and State. The City was platted for development in the 1960's and has largely remained the same. Developers also put in asphalt streets and water lines throughout the City so that homes have been built in all areas of the City, while the primary business area is in the north end of the City on Point Brown Avenue and Chance a la Mer Street.

In the late 1990's, the City built a vacuum sewer system throughout the City (replacing the individual septic systems) with several pump stations at strategic locations. The Wastewater Treatment Plant is on the south end shoreline, with jetty rock on the south and west sides, delivering treated water into the ocean. The solids are trucked to disposal areas in another county.

The City relies on groundwater as its water supply, with several wells supplying the City with drinking water. Ocean Shores uses County guidance, which identifies the entire city as a critical water recharge area. The City built a new water treatment plant which went online in 2012. The Plant is a MEX system which filters and treats the well water, stores it in above ground facilities prior to sending it to the customers throughout the City in the earlier developed pipe system. The fire hydrant system and potable water system use the same water pipe delivery system. The water piping system is asbestos lined pipes about fifty (50) years old and will need to be replaced in the next twenty (20) years.

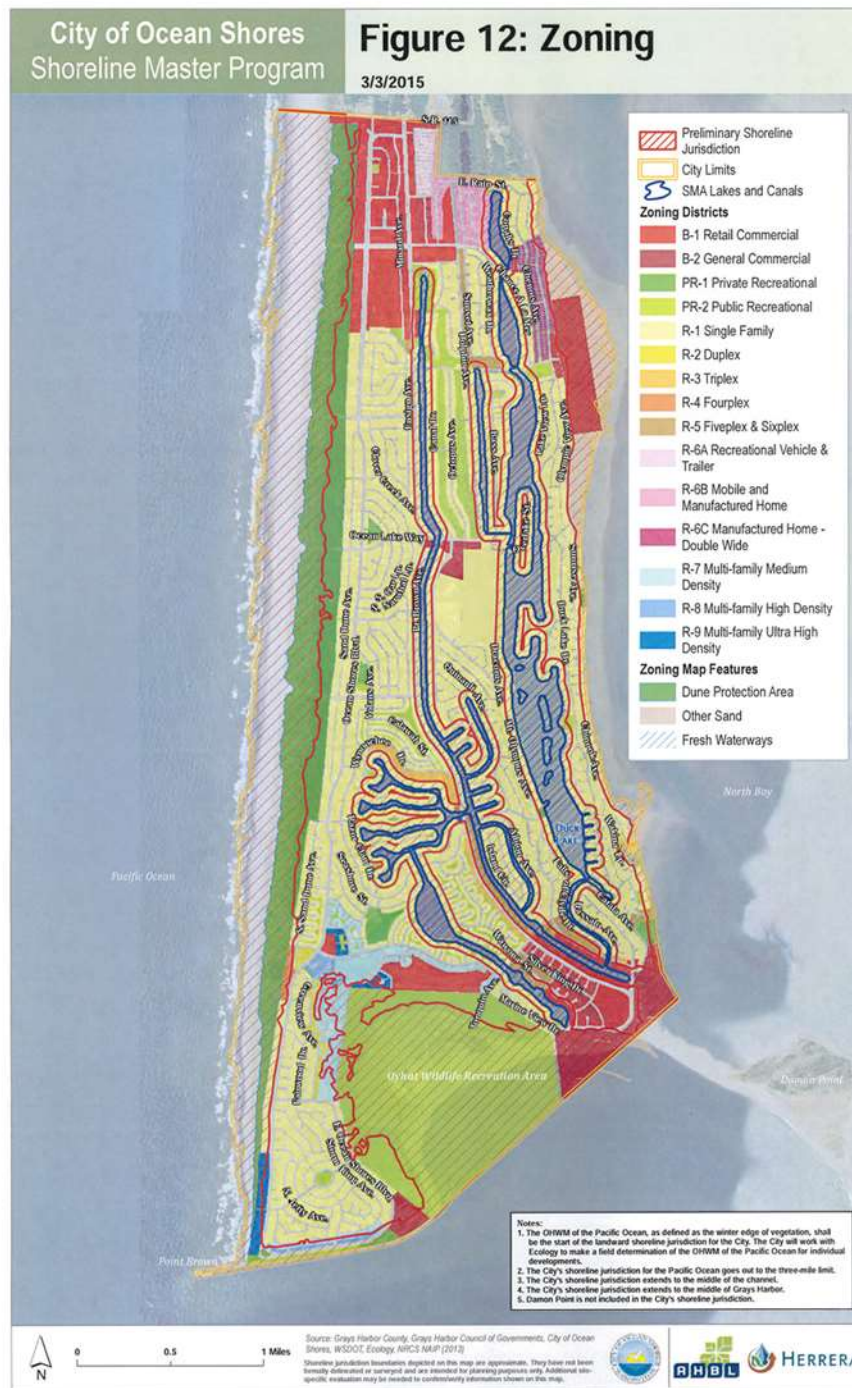
Between 2006 and 2008, up to 150 new homes were built per year. After 2008, home growth slowed to about 35 new homes per year. Since 2012, the construction of new homes has grown incrementally every year with 105 new home starts in 2017. As the economy recovered, and

people left more populated areas during the COVID epidemic, new residential construction improved as well, with 941 new homes permitted over the period covering 2018 to 2022.

Construction of commercial entities saw a slight increase for the period covering 2018 through 2022, with eleven (11) commercial construction permits issued. For the period covering the years 2015 through 2019, commercial property development lagged with the economy, but Sea-Mar built a large new medical clinic in 2016, a bistro and a coffee shop opened in Oyhut Bay development, with additional businesses slated to open there in 2018-2019. Two large commercial lots were cleared in the north end of the City in 2017. One in the center of town is likely to be an expansion of the existing hardware store currently in a mall area, the while other near the City entrance off Hwy 115 appears to have been cleared and graded on speculation. A new Thai restaurant is leasing space in the center of town.

The City's Comprehensive Plan and zoning anticipate pocket developments of small commercial stores and shops throughout the City which will serve their neighborhood populations. The average home occupancy is about two and two tenths (2.2) persons per household, with forty-one percent of the population over the age of 65. With a portion of the buildout for non-resident homeowners, the City anticipates a full-time population cap under 20,000. In our planning is a new community town hall across the street from the fire and police stations and the library, creating a consolidated city services area. Public works will also build a wastewater collection building within the public works yard to provide additional public works office area and to shelter equipment and vehicles from the salty, corrosive environment.

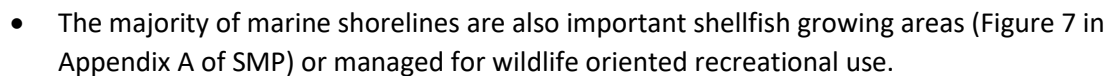
Shoreline land uses within Ocean shores are varied and they include commercial uses, low density and high-density residential uses, public recreation areas, and natural, undeveloped areas. Zoning designations within the shoreline jurisdiction include Retail Commercial, General Commercial, Dune Areas, Private Recreational, Public Recreational, Single Family Residential zones, Multiple Family Residential zones (Duplexes, Triplexes, Fourplexes, Fiveplexes, and Sixplexes), Mobile and Manufactured Homes, and Medium, High and UltraHigh Density Residential zones (Figure 12 in Appendix A from the City's 2017 Shoreline Management Plan "SMP" available on the City of Ocean Shores' website: <https://oceanshores.civicweb.net/filepro/documents>).



- The shoreline jurisdiction includes a mixture of land covers, as defined by the National Land Cover Database, including open water, woody wetlands, emergent herbaceous wetlands, low intensity development, and barren land (Figure 5 in Appendix A of the SMP).

9-8

- April 2024*





- Species use of Duck Lake and the Canal may be more limited compared to the marine areas in the city due to access constraints (tide gates) and limited connectivity with other habitats. However, these areas support a variety of freshwater dependent species and provide fishing and other recreational and aesthetic water enjoyment opportunities. Pacific Ocean North area and Pacific Ocean South area both consist of Dune Areas and they are primarily used for water-enjoyment and recreational purposes. Jetty area is zoned for General Commercial, and Multi-family High Density Residential uses Private Recreational and Public Recreational uses that include public access to the beach. The wastewater treatment plant falls within this area and is for water-related use. Oyhut Wildlife Recreation Area consists of Public Recreational areas. This area is primarily used for water-enjoyment and wildlife viewing. Ocean Shores Marina Area is comprised entirely of water-dependent, and water-enjoyment uses. Canals Area and Duck Lake Area consist primarily of Single Family residential zoned land and include areas for the public to enjoy the shoreline. Duck Lake Area includes two boat launches, other recreational facilities and areas to view wildlife.

In 2016, the City was granted the Weatherwax Mitigation Land Bank by the Department of Ecology and the Army Corps of Engineers and in 2017 received the first credits. The 120-acre property in the center of the City was partially old coastal growth trees and in the migration zone for numerous coastal and water birds. The intent is preservation of the wetlands and mature forest.

- **Economy** – The City of Ocean Shores economic base consists of retail sales to support the local population, construction, and recreational services supporting tourism. The largest employers include: the City, the larger hotels, and the building contractors. Overall, retail sales have grown. from \$120,651,099 in 2018 to \$206,841,978 in 2022. Hotel occupancy has risen about 10% with lodging tax revenues (5% of gross sales) has risen from \$1,006,652 in 2018 to \$1,445,423 in 2022. The City has about five and a half million visitors a year as calculated by the WSDOT traffic counter (as programmed to eliminate the local population) at the entrances of the City. During the Great Recession years from 2008 to 2015, the numbers dropped by over two million, but have recovered.

Generally, the City includes all lands South of Damon Road (State Route 115), West of North Bay on Grays Harbor, and East of the Pacific Ocean together with tidelands of the 2nd Class adjacent to or abutting thereon. The City limits exclude the Damon Point spit at the southeastern end of the peninsula at the marina and jutting into Grays Harbor. The City limits also exclude the Oyhut Wildlife Area west of the Marina and Damon Point.

Jurisdictional boundaries are identified in the following map (Figure 1 in Appendix A of SMP).

As mentioned in this section (Economy subsection), summer population is estimated to increase the population of the city by more than five (5) million. In particular, the city sees approximately more than 50,000 visitors in a single day.

The increase of visitors in the summer months causes an increased concern for the lack of sheltering capacity for visitors as well as pets, concern for mass congestion on Tsunami evacuation routes and a large increase in the risk of wildfires in the dunes between the beach and private dwellings as well as hotels. The increase in new home construction does not necessarily cause concern with the exception of shelter capacity for humans and pets.



9.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are hazards which are unique to the jurisdiction as follows. Table 9-1 lists all past occurrences of hazard events within the jurisdiction. If available, dollar loss data is also included.

Table 9-1 Natural Hazard Events			
TYPE OF EVENT	FEMA DISASTER #	DATE	DOLLAR LOSSES (IF KNOWN) OR ACTIVITY
Flood	4650	12/26/2021	Unknown
Severe Strom	4593	12/29/2020	\$7,978.56
Flood	4539	1/20/2020	\$37,780.46
COVID	4481	2020 - 2023	\$17,082.26
Severe Storm	4418	12/20/2018	Unknown
Severe erosion & threatened breach		1998	Unknown – City signed order proclaiming an emergency due to continued severe storms and erosion
Severe erosion		1/9/2015	Unknown – Signed order proclaiming emergency due to severe storms and erosion threatening inundation
Wind event	4242-DR-WA	08/29/15	\$10,305 - Debris (trees) removal
Erosion		10/15/14-11/30/14	Unknown – severe El Nino storms removing sand at geotubes causing undermining
Local Area Disasters – Not Declared			
Erosion and breach		11/27/17-12/12/17	Unknown, 3-5 ft of vertical erosion near the jetty and breaching of dune on jetty road w/debris
Erosion		03/13/17– 04/13/17	Unknown
Wind, rain, debris		01/20/17-02/22/17	Unknown
Erosion, king tide windstorm		01/9/16	Unknown – Army Corps of Engineer placed 300 feet of rock near geobags & geotubes
Erosion, king tide with storm		12/23/15	\$23,000 direct cost to place sand over geobags & geotubes

Table 9-1 Natural Hazard Events			
TYPE OF EVENT	FEMA DISASTER #	DATE	DOLLAR LOSSES (IF KNOWN) OR ACTIVITY
Wind, rain, erosion		12/1-12/2015	Unknown
Erosion, king tide windstorm		10/31/15	Unknown – Army Corps of Engineers placed 300 feet of sand near geobags & geotubes
WF in the dunes		08/2013	Unknown – burned 55 acres of wildland, threatened 12 homes, damaged 1 home
Rain, F, culvert failure		01/4-5/15	\$20,000 to replace culvert
Storm surges, erosion undermining geotubes		12/4-23/14	\$100,000 – Failure of geotubes, later repaired and replaced with geobags
Storm surge, erosion		10/15/14-11/30/14	Unknown – severe El Nino storms removing sand
Erosion		Winter 2009-2010	Unknown – severe storms eroded dune, uncovering geotubes
Wind event, F		12/1 – 12/3/2007	Unknown – trees and debris, no electricity, cut off for nearly a week
Storm surge, F		2003	Unknown
Storm surge, F		1/29-3/11/1999	Unknown. Requested declaration of emergency by Governor Locke denied as “not a major emergency”.
Erosion		1996-1998	Unknown. El Nino Winters cause high erosion rates
Erosion		1995-1996	Unknown. Erosion observed with no observed summer sand fill-in.
Erosion		1993-1994	Unknown. Erosion observed with summer sand fill-in.
Oil Spill during severe storm		12/23/1988	Barge “Nestucca” released 231,000 gallons of fuel oil along the coast of Grays Harbor
High water, Flood		11/21/1972	Unknown. Erosion near N. Jetty and overtopping of Jetty

9.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

Following the failure of the geotubes along the dune face north of the jetty in late December 2014, and with the considerable help of the Port of Grays Harbor and support of US Rep. Derek Kilmer, the City began meeting regularly every two (2) months or so with representatives of the Port of Grays Harbor, the State Department of Ecology, the U.S. Army Corps of Engineers, Washington Sea Grant, Coast and Harbor Engineering, State Parks, and, occasionally, the State Fish and Wildlife and Department of Natural Resources, to discuss what should and could be done to make repairs and strengthen the Cities shoreline against erosion. The group called itself the North Beach Erosion Committee. The City also secured funding from the State Legislature to support the Committee's efforts with additional research by the Department of Ecology. The Committee developed a plan of action and took it to the State Legislature but failed to get funding.

We also generally educate ourselves by attending Marine Resource Committee (MRC) meetings and developing collaborative efforts with other coastal communities and developing a close relationship with the Department of Ecology and Oregon State University coastal groups. In 2016, the Mayor presented Power Point presentations on the erosion issues to the Department of Ecology and MRC annual meetings, as well as a 2017 meeting with the Washington Coast Marine Advisory Committee (WCMAC). The City also helped spearhead the formation of the Grays Harbor Resiliency Coalition to help each community on the coast to develop plans to take to the legislature for funding and worked with the Department of Ecology, Washington Sea Grant, the Ruckleshaus Center at Washington State University, and the Governor's Office to foster support for creating a Washington coastal resilience effort to integrated coast-wide effort to strengthen coastal resilience. In addition to the standard capabilities identified in this section, the City of Ocean Shores also has a large effort underway with respect to informing our citizens about the hazards of concern. On a regular basis, our planning team has provided reports and findings of studies which we have conducted or where we have worked with others. All Power Point presentations and papers generated by these efforts were shared with the public on the City's website and through various public discussions at City Council meetings, on the City-owned KOSW Radio Station, and other avenues. We have also invited members of the Coalition to speak publicly to the Ocean Shores citizens at Council Study Sessions and Meetings on the issues and preferred actions.

The following existing codes, ordinances, policies, or plans are applicable to this hazard mitigation plan:

- Fish and Wildlife Habitat Conservation Areas in Ocean Shores, which are designated critical areas in Ocean Shores Municipal Code Chapter (OSMC) 19.02 Critical Areas Regulations, include:
 - The dune protection area as delineated in the Ocean Dunes Protection Act (OSMC Chapter 18.56) and the beaches associated with the Pacific Ocean between the OHWM and the line of extreme low tide (city limit line)
 - Marshes and tidelands are associated with Grays Harbor between the OHWM and the line of extreme low tide (city limit line).
 - The 683-acre Oyhut Wildlife Area is located at the south end of the Ocean Shores Peninsula in Grays Harbor County. The property is maintained as waterfowl habitat and for associated recreational opportunities. It is one of four remaining snowy plover nesting sites in the state. The Wildlife Area is managed by the Washington State Department of Natural Resources. This is a popular waterfowl hunting and birding area as well as a nesting area for Western Snowy Plover.
- Duck Lake and all City-owned land adjacent to and within 200 feet of the OHWM of the other freshwater canals and waterways and all City-owned land adjacent to and within 25 feet of the OHWM
- OSMC Title 13 Water and Sewers
- OSMC Title 15 Buildings and Construction
- OSMC 15.36 Flood Damage Prevention ordinance (January 23, 2017)
- OSMC Title 16 Subdivisions
- OSMC Title 17 Zoning
- OSMC Title 18 Shoreline Master Program (2018, under review)
- OSMC 18.56 Ocean Dunes Protection Act (Ord. 629 (part) (1998)
- OSMC Title 19 Environment
- 1989 North Beach Recreation Management Plan for the Ocean Beaches
- Grays Harbor North Jetty and Ocean Shores Shoreline Erosion Study, Coast and Harbor Engineering, November 15, 2016
- City of Ocean Shores Water Systems Plan, Pace Engineers, 2011
- Water Conservation Program, City of Ocean Shores, Resolution 311
- Grays Harbor Comprehensive Plan, Resource Lands and Critical Areas Element
- Shoreline Inventory and Characterization for the Cities of Ocean Shores and Westport, Herrera, April 2015
- Weatherwax Mitigation Bank Enhancement Planting Project, February 26, 2015, GeoEngineers
- Feasibility Study Report Dune Firebreak and Walk and Bike Path, May 26, 2016, GeoEngineers
- Ocean Shores Comprehensive Plan (parts under review)
- Ocean Shores Comprehensive Parks Plan 2018-2023, February 26, 2018
- 2015 Water Use Efficiency Report
- 2017 Annual Drinking Water Quality Report
- 2017 Fresh Waterways Report
- 2017 Grays Harbor Coalition Report

- 2017 Marine Spatial Planning Doc., 2017 (under review)
- [2017 Ruckleshaus Center Washington State Coastal Resiliency Report](#)
- Draft Marine Spatial Plan and Draft Programmatic EIS (October 12, 2017)
- Washington Coast Recreational Use Study, Surfrider Foundation & Point 97, 2015
- Grays Harbor North Jetty Feasibility Study, Coast & Engineering, (Nov. 15, 2016)
- Grays Harbor Coastal Resilience, Dept. of Ecology, 2016 (presentation)
- Southern Shoreline Erosion Assessment, Mott Macdonald, [2023 Southern Erosion Assessment Final \(osgov.com\)](#)
- Hazard Mitigation Plan Annex Update Presentation October 23, 2023; November 13, 2023; December 11, 2023

9.6 NATIONAL FLOOD INSURANCE INFORMATION

The City of Ocean Shores maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 15.36 of the Ocean Shores Municipal Code. Within Section 15.36.020 OSMC there are definitions for “substantial damage” and “substantial improvement” as follows:

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a “historic structure”; provided, that the alteration will not preclude the structure’s continued designation as a “historic structure.”

The Chapter also establishes the requirements for development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, and so on—are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains building officials that regularly inspect and enforce all building codes and construction regulations to ensure compliance with the established municipal codes.

Information on the community’s National Flood Insurance Program (NFIP) compliance is presented in Table 9-2. This identifies the current status of the jurisdiction’s involvement with the NFIP.

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0

- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

As of August 2023, the City of Ocean Shores had 613 Flood policies in force, for an insured value of \$174,046,900.00 and \$260,944.00 of written premiums.

Table 9-2 National Flood Insurance Program Compliance	
What department is responsible for floodplain management in your community?	Building & Permitting
Who is your community's floodplain administrator? (department/position)	Public Works, Building Official
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	February 2, 2017 City Ordinance 992
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 12, 2016
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Ongoing support/training would be welcome to keep us abreast of updates and any changes to flood regulations requirements.
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No, not at this time, due to staffing limitations

9.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 9-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place. As of this 2024 update, the information presented in the 2018 plan remains substantially unchanged, with two exceptions/changes:

1. Shoreline Management Plan periodic review completed in 2023. Ecology approval pending.
2. The City's Emergency Manager responsibility has transferred to the Assistant Fire Chief and the Assistant Emergency Manager is now the Chief of Police.

Table 9-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version: current Year	Yes			International Building Code
Zoning Ordinance	Yes			Ordinance #136 and 837
Subdivision Ordinance	Yes		Yes	Ordinance #67, 240, 755 & RCW 98.17
Floodplain Ordinance	Yes		Yes	Ordinance #992 adopted Feb 2, 2017
Stormwater Management	Yes		Yes	Ordinance #983; 2005 SWMWW
Post Disaster Recovery		County		
Real Estate Disclosure			Yes	
Growth Management	No			The City is Partial Planning Under the GMA)
Site Plan Review	Yes			
Public Health and Safety	Yes	GH County Health		
Coastal Zone Management	Yes		Dept of Ecology	The City of Ocean Shores works closely with the Dept. of Ecology for Coastal Zone Management.
Climate Change Adaptation	No			
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes			Ordinance #851 critical area regulations, Municipal Code 19.02
Environmental Protection	Yes		Yes	State Environmental Policy Act, OSMC 19.04
Planning Documents				
General or Comprehensive Plan	<i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i>			
Floodplain or Basin Plan		County	Yes	Federal FEMA
Stormwater Plan	Yes			2005 Stormwater Mgt. Manual Western Washington for design and construction standards
Capital Improvement Plan	No			
Habitat Conservation Plan	Yes			Weatherwax Conservation Area

Table 9-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Economic Development Plan	Yes			2020
Shoreline Management Plan	Yes			2017 (under Ecology review) (SMP periodic review complete 2023. Ecology approval pending.)
Community Wildfire Protection Plan	Yes			2014 to present, Firewise Community
Transportation Plan	Yes			6-Year Transportation Plan
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Fire Dept.			We have a plan for emergencies such as tsunami, wildfire, etc. We also rely on the County to provide assistance with respect to Emergency Management and utilize their CEMP for this purpose.
Threat and Hazard Identification and Risk Assessment	City Administrator			Working closely with our insurance carrier WCIA
Terrorism Plan	Police Dept			
Post-Disaster Recovery Plan		County		
Public Health Plans		County		
Boards and Commission				
Planning Commission	Yes			
Mitigation Planning Committee	Yes			In conjunction with the County and the internal planning team.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			Public Works conducts trimming, clearing ditches, etc. year-round
Mutual Aid Agreements / Memorandums of Understanding	Yes			With in-county other local agencies; Public Works Statewide Agreement

9.7 ADMINISTRATIVE AND TECHNICAL CAPABILITY

The assessment of the jurisdiction's administrative and technical capabilities, educational outreach efforts, and on-going programmatic efforts are presented in Table 9-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

**Table 9-4
Administrative and Technical Capability**

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	2 FTE Planner, Engineering (Via Contract)
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	1 FTE Building Official, 1 FTE Fire Inspector, Engineering Via Contract
Engineers specializing in construction practices?	Yes	Engineering Via Contract
Planners or engineers with an understanding of natural hazards	Yes	1 Planner/Shoreline Administrator, Engineering Via Contract
Staff with training in benefit/cost analysis	Yes	Engineering Via Contract
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Public Works
Personnel skilled or trained in Hazus use	Yes	Building Official has had some training
Scientist familiar with natural hazards in local area	No	State Dept of Ecology conducts quarterly profiling on our beaches, and we work with USACE and Ecology on erosion and flooding issues
Emergency Manager	Yes	Assistant Fire Chief: Police Chief is Assistant EM
Grant writers	Yes	0.5 FTE
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Outdoor emergency sirens (AHAB)
Hazard data and information available to public	Yes	We have a City-owned radio station that broadcasts emergency information in case of disaster or hazards
Maintain Elevation Certificates	Yes	Building Department
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	AVERT Team
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Countywide
Organization focused on individuals with access and functional needs populations	Yes	501c3 Orgs.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	A Variety of Programs, information on the City website from County Emergency Management
Natural disaster or safety related school programs?	Yes	Earthquake, tsunami preparedness (NB School Dist.)
Public-private partnership initiatives addressing disaster-related issues?	No	

Table 9-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Multi-seasonal public awareness program?	No	
Other	No	
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	In some sensitive areas
Noxious Weed Eradication Program or other vegetation management	Yes	Limited by resources
Fire Safe Councils	Yes	We are a Fire-Wise City since 2014
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Ongoing effort
Stream restoration program	No	
Erosion or sediment control program	Yes	Public Works / 2005 SWMWW
Address signage for property addresses	Yes	Chapter 15.34: Sign Code (municipal code)
Other		

9.7.1 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 9-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 9-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes

Table 9-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Grays Harbor County Conservation District	Yes

9.7.2 Community Classifications

Classifications under various community mitigation programs are presented in Table 9-6. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 9-6 Community Classifications		
	Participating (Yes/No) or Rank	Date Enrolled
Community Rating System	No	
Building Code Effectiveness Grading Schedule	Yes	
Commercial Structures	3	Rating as of 10/2020
Residential Dwellings	3	Rating as of 10/20120
Public Protection Class	4/9*	Rating as of 2020
StormReady (NOAA)	Yes	2001
FireWise Community (National Fire Protection Association)	Yes	2014
TsunamiReady - first TsunamiReady community in the nation (NOAA)	Yes	2001
* 2020 ISO rating of 4 North end. Rating of 9 South end.		

9.8 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the City of Ocean Shores, Washington. Table 9-7Table 3-7 presents the ranking of the hazards of concern based on their Calculated Priority Risk Index (CPRI) score. Table 9-8 illustrates the CPR scoring. Once the hazard ranking was completed, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent,

damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one (1) month.

Table 9-7 Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Erosion	3.35	High
2	Severe Weather	3.70	High
3	Earthquake	3.85	High
3	Tsunami	3.60	High
4	Climate Change	3.15	High
5	Wildfire	3.10	High
6	Windstorm	3.1	High
7	Flooding	2.65	High
8	Invasive Species	2.65	Medium
9	Drought	1.15	Medium
10	Volcano	1.90	Medium
11	Landslide	1.0	Extremely Low

Table 9-8
City of Ocean Shores 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4			3				3					1				4	3.15	5	High
Drought	1				1				1							1				4	1.15	9	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion				4			3					4				1				4	3.35	4	High
Flood			3				3			2					2				3		2.65	7	Medium
Landslides	1				1				1							1	1				1.00	10	Low
Severe Weather				4				4				4			2					4	3.70	2	High
Tsunami			3					4				4	4							4	3.60	3	High
Volcano	1					2						4				1			3		1.90	8	Low
Wildfire			3				3				3		4				2				3.10	6	High

In addition to the detailed information contained in the hazard profiles contained in Volume 1 of the County's Plan, the Planning Team also considered the below information in identifying and describing risk to the hazards of concern.

Erosion:

Erosion is the City of Ocean Shores' hazard of greatest concern, due to its impact throughout the city, which includes the following information (additional detailed information is also available in the hazard profile contained in the base plan):

- ☐ The dominant shoreline type is marine, but there are significant lengths of freshwater shorelines on Lake Minard, Duck Lake and the canal system.

- Erosion near the north jetty: The Army Corps of Engineers extensively repaired the entire Jetty in 1944 and 1975 and refurbished the landward end of the Jetty in 2003. It currently needs maintenance to hold sand in place.



- Lack of sediment is part of the erosion problem. Sediment transport in the City has been studied extensively (Burch and Sherwood 1992; Buijsman et al. 2003; Kaminsky et al. 2010). Burch and Sherwood (1992) determined that the most dominant modification of sediment transport was the construction of the North Jetty.
- Erosion from the North Jetty to Beach Street, along the Pacific Ocean: Update 2023. The area from the North Jetty, north to approximately Beach Street, has been an area subject to significant levels of erosion over the past 30 years. There have been three erosion control measures installed starting in the late 1990's. The history represented here is from a report dated October 12th, 1998, and prepared by Joint Venture Consultants, which included Pacific International Engineering and the Pharos Corp. This report identifies all current measures as short term with longer term alternative analysis, permitting and design, to follow.
 - The first measure was a wave bumper constructed in 1996 in front of the condominiums directly north of the jetty. The wave bumpers were rehabilitated in 1998. This structure

was intended to last only a few years, but has survived mostly intact through the early 2000's. The wave bumper is in a state of failure today, at some places along its alignment, and needs rehabilitation. Owners adjacent to this structure have reached out to the City to start the process of permitting repair of the structure.

- The next feature north of the wave bumper is the Geobag structure and was installed in 2015. The Geobags are constructed of smaller bulk bags in the 1-2 cubic yard range and are filled with native beach sand. This structure was installed as a short-term fix to the failure of the south end of the Geotube structure that was installed in 1999. Sand placed at the toe of this structure washed out in two successive storm events not more than a month apart. The Army Corps of Engineers stepped in and reinforced the toe of the Geobags with an approximately 20-foot tapered fillet, to replace the lost sand. This fillet was built with one to two-foot diameter rock. This remains today.
- The Geotube structure, which sits immediately north of the Geobags, was installed in 1999 is made from a geotextile material filled with beach sand and placed at the toe of the primary dune. Both structures are performing well today and have accumulated a significant amount of sand on the seaward side. This accumulated sand has been in place long enough to support a healthy population of dune grass which helps to retain more sand as it blows landward during the summer months.
- The third and last structure that was installed in this area is directly north of the jetty, and is a hard, structural, staircase bulkhead. This structure was built in October of 2018, and ties into the south end of the wave bumper. Sand appears to be accumulating at the toe of this structure as well.
- Erosion in Oyhut Bay, the Oyhut Wildlife Recreation Area, and Damon Point: Update 2023. Through the Cooperative Technical Partnership Risk Map Program funded by FEMA, the City contracted with Mott MacDonald, LLC, to conduct a Southern Shoreline Erosion Analysis. This analysis was completed in August of 2023 and focused on both the North and South sides of Oyhut Bay. The analysis confirms that shoreline retreat in the area from the Ocean Shores Marina West ~3000', is likely to continue if no interventions are implemented. The current rate of retreat is estimated at 60 feet per year based on cross-sectional studies from 2017 -2023. This rate of retreat poses a risk to private and public infrastructure including the fresh waterways at the South end of Lake Minard in the immediate term. As of the writing of this update the City, with Mott MacDonald LLC leading the design effort, is moving forward with a short-term measure to minimize the risk of breach and slow the rate of shoreline retreat in the area adjacent to the South End Water Reservoir and Pumpstation. As soon as the short-term measures have been placed, medium term measures are to be explored. This area of Ocean Shores presents a unique challenge due to the private ownership of the parcels between Marine View Drive and the relic jetty. In this area the erosion poses the greatest risk to private property before getting to public infrastructure. Other than the remnant deteriorating section of the North Jetty between the Wastewater Treatment Plant and the Marina, the east end of the North Jetty near the Wastewater Treatment Plant and the Marina breakwater are the two hard points that control the equilibrium shape and location of the "Oyhut Bay" shoreline. The City needs to have studies done to determine where the equilibrium shoreline is, but it appears to be quite a distance landward along its length between these two points. The Bay is likely to continue to enlarge over the coming decades. If a

hard point in the vicinity of the RV park is not maintained, this will affect the evolution of Oyhut Bay, and much of the southeast corner of Ocean Shores could be lost to erosion— in particular, the east end of Marine View Drive SE and the south end of Discovery Ave SE, with seawater intrusion into the freshwater canals.

- Erosion on the east side of the wastewater treatment plant (WWTP): Update 2023. The 2023 Southern Erosion Analysis included a comprehensive look at the shoreline behind the WWTP. It was determined that the retreat in this area has gone through periods of both erosion and progradation since 2018. It is determined that since that time, the shoreline has moved seaward ~400feet. With the scheduled maintenance of the North Jetty in 2024 it was determined that the South Focus area near the WWTP, should be monitored after the period in which the jetty rehabilitation is complete. While the WWTP is surrounded by large protective rock on the south, the other sides are not so protected. As Oyhut Bay continues to erode, the WWTP may be in some jeopardy. This is a new phenomenon and one we will be researching. Incursions of seawater into the WWTP would be catastrophic to people and wildlife, while causing enormous strain on our utility rate payers to effect repairs and protection from future erosion. The City has previously identified this as a mitigation strategy and will continue to seek grant funding for this project.
- Erosion on the east side of the peninsula: Update 2023. Erosion on the East side of the peninsula is primarily limited to storm events which produce strong winds from the East. Currently there is one area of concern on the east side of the peninsula where erosion has caused some loss of public and private property. The owner of the privately owned property which surrounds the public property, is permitting a dynamic shoreline stabilization measure to stop the retreat of shoreline in the area near Mariner Court. Once the dynamic stabilization measure is installed, this area will be monitored closely to measure the success of the new technology that is being implemented in this area. There are some hard structure bulkheads along the eastern shores that will be going through the shoreline permitting process, to maintain those structures that were previously permitted and installed.
- Between the lack of available sand to replenish our shorelines and lack of barriers like large woody debris and rock, our beaches are vulnerable to severe erosion.

Climate Change:

Higher tides, increased number and severity of storms and El Nino events causing additional erosion, flooding, and possible saltwater incursion into our wells. During extreme low-pressure storms, tides are 2 - 3 feet higher than normal, so that the action of waves, swells, and storm surges are amplified.

Severe Weather:

Unusually heavy rains cause damage to culverts, flooding, strain on the weir/tide gates, etc.

Windstorms:

The City is vulnerable to high winds that knock down or uproot trees, damage homes and habitat, and may cut-off the City from needed supplies. Generally, excessive winds, depending on direction, will do damage.

Earthquake:

Like other areas along the Pacific Rim, earthquakes are frequent, though mostly without doing severe damage. Liquefaction during and following nearby earthquake events, such as a Cascadia earthquake event, will also be a hazard in all areas of Ocean Shores. With a deep sand base and no natural rocks or dirt, seismic events will naturally liquefy the high-water table and sand into a slurry that will damage homes and infrastructure, including streets, water and sewer pipes, etc. This will make evacuation difficult. A tsunami over 10 feet or so will also do extensive damage across the City.

Tsunami:

Based on the 2014 Safe Haven Project and data collected for said study, scientists tell us that we are due for a tsunami in the next fifty (50) years or so. The last major tsunami was in 1700. Minor tsunamis take place every few years, generally following an Alaska earthquake. A Cascadia earthquake event would give 15-20 minutes warning to residents if a tsunami took place and likely cause a subsidence in the southern part of the City, and liquefaction in the sand causing breaks in water and sewer pipes, failures of electricity and communications, and breaking up of roadways. Evacuation would be difficult to impossible.

**Flooding:**

Flood hazard areas are present throughout the majority of the marine shorelines of the city.

This photo (L) shows 2016 flood damage at the Quinault RV Park next to the marina on the southern end of the Ocean Shores peninsula on Grays Harbor. Both erosion and flooding have been frequent problems in this area.

Since completion of the 2018 plan, localized flooding in the downtown core as a result of the Oyhut Ditch backing up has largely been resolved. Beginning in 2021, the City began a comprehensive look at the elevations and condition of the culverts and ditch from SR-115 to the discharge of the ditch at the head end of the Grand Canal. A plan to begin cleaning and clearing debris, vegetation and sediment from this drainage structure was started in 2021. The physical work of clearing garbage, vegetation, and sediment from the ditch, between Shoal Street and Chance A La Mere Street, began in the summer of 2022.

This action resulted in a favorable mitigation outcome as there was noticeable reduction in

flooding in the areas that had previously been plagued by flooding during any significant rainfall events. There were no reported incidences of water over the roadway at the SR-115 crossing during the winter of

2022-2023, showing the effectiveness of the project. The process to clear garbage and vegetation from the section of Oyhut Ditch from Shoal Street, North to SR-115 was completed in October of 2023. The drainage structure will be evaluated during the next dry season, to determine if additional sediment removal will be necessary in the area from Shoal Street to SR-115. In addition to a more comprehensive look at sediment removal, the City is working with owners of culverts that are nearing end of service conditions to schedule replacement of this infrastructure.

Invasive species:

Duck Lake is a 303d listed water body for both invasive species and phosphorus (Category 2). Duck Lake has had a history of aquatic invasive species, including Brazilian elodea (*Egeria densa*) and Eurasian water milfoil (*Myriophyllum spicatum*) (Northwest Aquatic Eco-Systems 2007). The Canals area also suffers from the same invasive species issues that Duck Lake has due to its proximity and interconnectedness (Northwest Aquatic Eco-Systems 2010). In addition, European green crab (*Carcinus maenas*) has been found in North Bay of Grays Harbor, Ocean Shores Residential, Oyhut Wildlife Recreation Area, and Ocean Shores Marina areas of Grays Harbor.

Wildfires:

Since the completion of this plan in 2018, the City has completed a firebreak to mitigate the impact of dune and wildfires along the western boundary of Division 1 of the Ocean Shores Plat.

While most are caused by carelessness, wildfires in the dunes and other areas of the City are fueled by brush, wax myrtle, and invasive plants that have overgrown.

The August 2013 Butterclam Wildfire blackened fifty-five (55) acres of the



southwestern dune and threatened homes on its the east side. Crews from several local fire districts and city fire stations answered the call, including prison crews brought by the WA Dept. of Natural Resources. These crews worked for several days putting out hot spots.

Volcano:

Possible volcanic activity at Mt. St. Helens, Mt. Baker, or the long-inactive Mt. Rainier could cause ash, blockage in rivers from pyroclastic flows, and other problems that would affect the City.

Drought:

Long-term drought could cause loss of vegetation or result in fires that remove the barriers to additional erosion, blowing sand from the dunes, and problems with pumping well water.

Landslide:

The highest point in the City is about 22 feet above sea level. Sand caving-in along the erosion scarp or subsidence due to earthquake is more likely.

9.8.1 Public Meeting

The City hosted public meetings in 2023 covering the subjects of erosion and tsunami within the City of Ocean Shores. A briefing was provided, as well as maps and information distributed to staff and the public. Additional meetings were held specific to the Hazard Mitigation Plan with respect to presentation of risk, and the draft plan review, as illustrated in Volume 1.

The meetings were broadcast simultaneously and recorded on the radio and made available on the City's radio station KOSW for later listening. The meetings were also recorded digitally by the local television station and aired publicly.

9.9 MITIGATION GOALS AND OBJECTIVES

The City of Ocean Shores, Grays Harbor County, Washington adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1 of the Grays Harbor County Hazard Mitigation Plan.

9.10 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 9-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified. In 2024, the City anticipates developing emergency operations plans to coincide with the hazards and risks identified in Table 8-7 and will be practicing emergency preparedness drills.

Table 9-9
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Repair, Reconstruct, and Maintain US Army Corps of Engineers-owned North Jetty per plans developed by Coast and Harbor Engineering, Inc., in 2016.									

Table 9-9
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing	Erosion, CC, SW, FL	2, 3, 4, 5, 8, 9	Facilities, Public Works, Ecology, Sea Grant	~\$11 million	State Grants, Army Corps, FEMA	Short-term	Yes	Preventive Activities, Property Protection	Facility, Local
INITIATIVE # 2 Retrofit or develop new City buildings and facilities to withstand damage from major earthquake and/or tsunami and provide a safe haven for residents and visitors.									
New and Existing	EQ, SW Tsunami	2, 3, 4, 5, 8, 9	Facilities, Risk, Public Works	High	FEMA, Ecology	Long-term	Yes	Structural Projects, Property Protection, Natural Resource Protection	Local
INITIATIVE # 3 Determine necessity to retrofit City-owned water sources and other vital needs to withstand a major earthquake or tsunami event. Seek grant funding to make determination and build/retrofit structures.									
New and Existing	EQ, Erosion, SW, T	2, 3, 4, 5, 8, 9	Facilities, Risk, Public Works	High	Federal and State Grants	Long-term	Yes	Structural Projects, Recovery, Services	Local
INITIATIVE # 4 Per Shoreline Master Plan restore and groom dunes, eliminating high hazard vegetation such as brush and other dry flammable vegetation.									
New and Existing	WF	1, 2, 3, 4, 5, 6, 8, 9	Maintenance, Risk, Public Works	High	Federal and State Grants	Long-term	Yes - Modified	Preventative Activities	Local
INITIATIVE # 5 Design a fire break – defensible firefighting area.									
New and Existing	WF	2, 3, 4, 5, 6, 8, 9	Maintenance, Fire, Public Works	\$1.6 M	Federal and State Grants	Long-term	Yes	Preventative Activities, Property Protection, Emergency Services	Local
INITIATIVE # 6 Design and construct sand fencing and other features to collect sand and hold it in place.									
New	Erosion	2, 3, 4, 5, 8, 9	Maintenance, Public Works	Medium	Federal and State Grants	Long-term	YES	Preventative Activities	Local
INITIATIVE # 7 Conduct GIS mapping of events as they happen to determine losses and calculate hot spots.									
New and Existing	All	2, 3, 4, 5, 6, 8, 9	Public Works	Low	Internal	Long-term	YES	Public Information /Property Protection	Local
INITIATIVE # 8 Outreach Educational Flier to help the public, and property buyers to understand the risks.									

Table 9-9
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New and Existing	All	2, 3, 4, 5, 6, 8, 9	Planning	Low	State Grant	Long-Term	YES	Public Information, Preventative Activities	Local
INITIATIVE # 9 Develop zoning districts for the various hazards of concern, including erosion and fire, to ensure land use development occurs more effectively.									
New and Existing	All	2, 3, 4, 5, 6, 7, 8, 9	Planning & Public Works	Low	Internal	Long-term	YES	Public Information, Preventative Activities	Local
INITIATIVE # 10 Prohibit Building in High Hazard Areas to prevent future loss of homes.									
New and Existing	Erosion, FL	1, 2, 3, 4, 5, 6, 8, 9	Planning, Permitting, Executive Depts.	Low	General Fund	Long - Term	YES	Resource Protection, Preventative Activities	Local
INITIATIVE # 11 Develop and implement an erosion / flood management plan based on data gained in the various studies completed within Ocean Shores, including WA DOE Erosion studies and FEMA's RiskMap project.									
New and Existing	Erosion, WF	2, 3, 4, 5, 6, 7, 8, 9	Planning, Public Works, Executive, Emergency Mgt.	Low	General Fund	Long-Term	YES - Modified	Resource Protection, Preventative Activities	Local
INITIATIVE #12 Form an erosion taxing district so that funds exist for ongoing prevention and maintenance efforts.									
New	Erosion, WF	2, 3, 4, 5, 6, 7, 8, 9	Planning, Public Works, Executive	Low	Self-paying	Long-Term	YES	Preventative Activities	Local
INITIATIVE #13 Increase capacity of Oyhut Ditch to prevent flooding of SR 115. This includes review of existing project work completed to determine its effectiveness, and to determine if additional work is necessary.									
New and Existing	WF	2, 3, 4, 5, 6, 8, 9	Public Works, Ecology	High	WSDOT	Long-Term	YES - Modified	Preventative Activities, Construction Activities	Local and County
INITIATIVE #14 Research and use a hybrid of hard/soft engineering techniques to prevent erosion.									
New and Existing	Erosion	2, 3, 4, 5, 6, 7, 8, 9	Planning, Public Works, Ecology, Corps	High	Local, State & Federal	Long-Term	YES	Resource Protection	Local

**Table 9-9
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 15 Installing riprap boulders or geotextile fabric to protect existing shoreline									
New	Erosion, SW, F, CC	2, 3, 4, 5, 6, 8, 9	Army Corps of Engineers, City, Public Works	High	Internal and Federal	Long-Term	YES	Preventative Action, Structural Projects	Local
INITIATIVE # 16 Install protective swales and levies.									
New and Existing	Erosion, F, SLR/CC	2, 3, 4, 5, 6, 8, 9	Public Works, Ecology	High	Ecology, Legislative	Long-Term	YES	Preventative Activities, Structural Projects, Natural Resource Protection	Local
INITIATIVE # 17 Prepare Continuity of Operations Plan to ensure continuation of critical/essential government functions during hazard events.									
New and Existing	All	2, 3, 5, 6	Executive	Low	General Fund	Short-Term	YES - Modified	Public Information, Preventative Activities, Emergency Services, Recovery	Local
INITIATIVE #18 Construct second outfall weir to increase discharge capacity during storm events									
New	FL, SLR/CC	2, 3, 4, 5, 6, 8, 9	Public Works, Ecology	High	Ecology	Long-Term	YES	Preventative Activities, Structural Activities, Recovery	Local
INITIATIVE #19 Seismically retrofit all welded steel reservoirs, central reservoir pump station piping, and other critical water sources to maintain water supply after earthquake, analyze structural resiliency to seismic events of existing concrete reservoirs, and replace existing concrete reservoirs with seismically resistant steel tanks									
New and Existing	EQ	2, 3, 4, 5, 6, 8, 9	Public Works	High		Long-Term	YES	Preventative Activities, Structural Activities	Local
INITIATIVE # 20 Seismically retrofit backup power supply generators, emergency radio tower, pump stations, and other emergency power and communication sources.									
New and Existing	EQ	2, 3, 4, 5, 6, 8, 9	Public Works	High		Long-Term	YES	Preventative Activities, Structural Activities	Local
INITIATIVE # 21 Replace AC water main with HDPE on Dolphin Ave NE to prevent flooding of homes after earthquake									

**Table 9-9
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New and Existing	EQ	2, 3, 4, 5, 6, 8, 9	Public Works	High		Long-Term	YES	Preventative Activities, Structural Activities	Local
INITIATIVE # 22 Relocate primary and standby power for WWTP to higher ground (out of area expected to subside during Cascadia Earthquake event.)									
New and Existing	EQ, T, FL	1, 2, 3, 4, 5, 6, 8, 9	Public Works	Low	WWTP Utility	Long-Term	YES	Preventative Activities, Construction Activities	Local
INITIATIVE # 23 Replace all utility bridge crossings with HDPE to prevent environmental contamination after earthquake.									
New and Existing	EQ	1, 2, 3, 4, 5, 6, 8, 9	Public Works	High		Long-Term	YES	Preventative Activities, Construction Activities, Natural Resource Protection	Local
INITIATIVE # 24 Replace City bridges to withstand seismic events and flooding.									
New and Existing	EQ	1, 2, 3, 4, 5, 6, 8, 9	WSDOT, Public Works	High	WSDOT	Long-Term	YES	Preventative Activities, Property Protection, Structural Project	Local
INITIATIVE # 25 Initiate studies to determine where the equilibrium shoreline is near the WWTP and the Marina in order to build appropriate protections.									
New and Existing	Erosion	2, 3, 5, 6, 9	Ecology, Public Works	High	NOAA Resilience	Long-Term	YES	Preventative Activity, Property Protection, Natural Resource Protection	Local
INITIATIVE # 26 Test fresh waterways for invasive species and eradicate or treat as necessary.									
New and Existing	Invasive Species	2, 4, 5, 6,	Public Works, Fresh Waterways, Ecology	Low	Storm Drain Fund	Long-Term	YES	Natural Resource Protection, Recovery	Local
INITIATIVE # 27 Retrofit South Fire Station and staff for quicker response times to South end of City.									
New and Existing	WF	1, 2, 3, 4, 5, 6, 7, 8, 9	Fire Dept.	\$50,000	Fire Utility and Levy, SAFER	Short-Term	YES	Preventative	Local
INITIATIVE # 28 Review building code to determine whether need to modify for higher winds and more severe storms.									

**Table 9-9
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New and Existing	WS, SW, CC	1, 2, 3, 4, 5, 6, 7, 8, 9	Planning, Permitting, Executive	Low	General Fund	Short-Term	YES	Preventative	Local
INITIATIVE # 29 Research and determine best use of new technology and training to save lives (drones, predictive devices, etc.).									
New and Existing	Windstorm, SW, CC, T, WF	1, 2, 3, 4, 5, 6, 7, 8, 9	Police, Fire, Planning, Public Works, Executive	Low	General Fund, EMS Utility, Sales Tax, Emergency Mgt.	Long-Term	YES	Preventative, Emergency Management	County
INITIATIVE # 30 Train citizens to respond to natural disasters (AVERT Teams, first aide, go bags, emergency preparedness).									
New and Existing	All	2, 3, 4, 5, 6, 7, 8, 9	Police, Fire, Planning, Executive	Low	General Fund, EMS Utility, Sales Tax, Emergency Mgt.	Long-Term	YES	Public Information, Preventative Activities, Structural Projects, Emergency Services, Recovery, Natural Resource Protection	County
INITIATIVE # 31 Auxiliary fuel tanks to supply generators, heavy equipment, staff vehicles (diesel and gas).									
New and Existing	All	2, 3, 4, 5, 6, 8, 9	Public Works	Low	General Fund, Emergency Mgt.	Short-Term	YES	Emergency Services, Recovery	Local
INITIATIVE # 32 A watercraft capable of hauling materials, supplies, and personnel from upriver									
New and Existing	All	2, 3, 4, 5, 6, 8, 9	Public Works	Medium	General Fund, Emergency Mgt.	Long-term	YES	Emergency Services, Recovery	Local
INITIATIVE # 33 Stockpile pipe and fittings to make distribution, collection, and transmission system repairs. Note: vacuum mains and pits are mostly filled with air and may float during seismic event.									
New and Existing	All	1, 2, 3, 4, 5, 6, 8, 9	PW	Low	General Fund & Utilities	Long-term	YES	Recovery	Local
INITIATIVE # 34 Place large water storage container tanks in the dunes to provide water for firefighting									

Table 9-9
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New and Existing	WF	1, 2, 3, 4, 9	Fire	Low	General Fund & Utilities	Short-term	YES	Emergency services, Preventative, Natural resource protection	Local
INITIATIVE # 35 Continue to work with subject matter experts to help identify potential mitigation projects to address a 2-mile scarp in the North Jetty.									
New and Existing	All	All	Public Works	High	USACE, BRIC, HMGP	Long-term	No	Recovery, Natural Resource Protection	Local
INITIATIVE # 36 Continue to work with subject matter experts to help identify potential mitigation projects to address newly discovered erosion near Damon Point.									
New and Existing	All	All	Public Works	High	USACE, BRIC, HMGP	Long-term	No	Recovery, Natural Resource Protection	Local

9.11 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 9-10 identifies the prioritization for each action item.

Table 9-10
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	6	H	~\$11 m	Y	Y	N	H
2	6	H	H	Y	Y	N	M
3	6	H	H	Y	Y	N	M
4	8	H	H	Y	Y	N	H
5	7	H	\$1.6 m	Y	Y	N	H
6	6	M	M	Y	Y	N	M
7	7	H	L	Y	Y	Y	M

Table 9-10
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
8	7	H	L	Y	Y	Y	H
9	8	M	L	Y	Y	Y	M
10	9	M	L	N	Y	Y	M
11	8	H	L	Y	Y	N	H
12	8	M	L	Y	N	N	M
13	7	M	H	N	Y	N	M
14	8	M	H	N	Y	N	M
15	7	H	H	Y	Y	N	M
16	7	M	H	N	Y	N	M
17	4	M	L	Y	N	Y	H
18	7	M	H	Y	Y	Y	M
19	7	H	H	Y	Y	Y	H
20	7	H	H	Y	Y	Y	H
21	7	M	H	Y	Y	Y	L
22	8	H	H	Y	Y	Y	H
23	8	M	H	Y	Y	N	M
24	8	H	H	Y	Y	N	H
25	5	H	H	Y	Y	N	H
26	4	M	L	Y	Y	Y	M
27	9	H	H	Y	N	Y	H
28	9	H	L	Y	N	Y	H
29	9	H	L	Y	Y	N	H
30	8	H	L	Y	N	Y	H
31	7	L	L	Y	Y	N	L
32	7	L	H	N	Y	N	L
33	8	L	L	Y	N	Y	L
34	5	H	M	Y	Y	Y	H
35	9	H	H	Y	Y	N	H
36	9	H	H	Y	Y	N	H

a. See Chapter 1 for explanation of priorities.

9.12 STATUS OF PREVIOUS PLAN INITIATIVES

Table 9-11 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared for this 2024 update. This includes identification of grant dollars received, and expenditures made by the City of Ocean Shores.

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies											
Mitigation Strategy	Associated Hazards						2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 1 Repair, Reconstruct, and Maintain US Army Corps of Engineers-owned North Jetty per plans developed by Coast and Harbor Engineering, Inc., in 2016.	✓		✓		✓		A feasibility study to repair the North Jetty has been completed with the study developed by Vladimir Shepsis of Coast and Harbor Engineering. \$10.9m to the Port of Grays Harbor has been allocated to repairing the North Jetty to begin in 2024. As this project has not yet begun, the City has determined that it will carry the effort forward for this 2024 update.		✓		✓
INITIATIVE # 2 Retrofit or develop new City buildings and facilities to withstand damage from major earthquake and/or tsunami and provide a safe haven for residents and visitors.		✓				✓	The City continues to seek grant funding for this project, either as a retrofit for existing facilities, or to construct new facilities as appropriate. As such, this project is carried forward until funding is available.				✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 3 Determine necessity to retrofit City-owned water sources and other vital needs to withstand a major earthquake or tsunami event. Seek grant funding to make determination and build/retrofit structures.		✓				✓		This project is carried forward until funding is available.				✓
INITIATIVE # 4 Per Shoreline Master Plan restore and groom dunes, eliminating high hazard vegetation such as, brush, dry flammable vegetation.							✓	The Shoreline Master Plan has been updated, and the City continues to identify ways in which to reduce high hazard vegetation that is environmentally sound. As of this 2024 update, this project is on hold pending a permitting pathway and funding.				✓
INITIATIVE # 5 Design a fire break – defensible firefighting area.							✓	A feasibility study on a firebreak/trail was completed. City has completed a firebreak trail (developed by GeoEngineering, Inc.) to mitigate the impact of dune and wildfires along the western boundary of Division 1 of the Ocean Shores Plat.		✓		✓
INITIATIVE # 6 Design and construct sand fencing and other features to collect sand and hold it in place.	✓							This project is an ongoing effort to mitigate erosion.		✓		✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 7 GIS mapping of events as they happen to determine losses and calculate hot spots.	✓	✓	✓		✓	✓	✓	This project is ongoing as it pertains to events as they occur. The City has done some mapping of the events as they have occurred in an effort to capture relevant impact data.		✓		✓
INITIATIVE # 8 Outreach Educational Flier to help the public, and property buyers to understand the risks.	✓	✓	✓		✓	✓	✓	This project is ongoing as plans evolve and to educate new citizens. Information contained in this risk assessment as well as the various studies completed in the area will assist in that process.		✓		✓
INITIATIVE # 9 Develop zoning districts for the various hazards of concern, including erosion and fire, to ensure land use development occurs more effectively.	✓		✓				✓	This project is pending per public outreach and legislative action.				✓
INITIATIVE # 10 Prohibit Building in High Hazard Areas to prevent future loss of homes.	✓		✓					This project is pending per public outreach and legislative action; however, the City’s Critical Areas Ordinance and Shoreline Master Plan do address this matter as well.				✓
INITIATIVE # 11 Develop and implement an erosion / flood management plans.	✓		✓					This project is ongoing per master plan development.		✓		✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE #12 Form an erosion taxing district so that funds exist for ongoing prevention and maintenance efforts.	✓							This project is on hold per public input and legislative action.				✓
INITIATIVE #13 Increase capacity of Oyhut Ditch to prevent flooding of SR 115.			✓					This project is ongoing due to maintenance efforts and flow performance evaluation. Actions taken since the 2018 HMP have clearly demonstrated a positive impact on the flooding impact. The City will continue to work towards further resolving this matter.		✓		✓
INITIATIVE #14 Research and use a hybrid of hard/soft engineering techniques to prevent erosion.	✓		✓		✓			This project is an ongoing effort as areas of risk are identified. With the completion of the 2023 Erosion study, the City will review the data and determine an appropriate path forward.		✓		✓
INITIATIVE # 15 Installing riprap boulders or geotextile fabric to protect existing shoreline	✓		✓		✓			This project is an ongoing effort as areas of risk are identified.		✓		✓
INITIATIVE # 16 Install protective swales and levies.	✓		✓		✓			This project is an ongoing effort as areas of risk are identified.		✓		✓
INITIATIVE # 17 Prepare Continuity of Operations Plan	✓	✓	✓		✓	✓	✓	This project is scheduled for 2024 as a companion document to the Ocean Shores Emergency Operations Plan.				✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE #18 Construct second outfall weir to increase discharge capacity during storm events			✓		✓			This project is on hold pending a permitting pathway and funding.				✓
INITIATIVE #19 Seismically retrofit all welded steel reservoirs, central reservoir pump station piping, and other critical water sources to maintain water supply after earthquake, analyze structural resiliency to seismic events of existing concrete reservoirs, and replace existing concrete reservoirs with seismically resistant steel tanks		✓				✓		This project is on hold pending funding.				✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 20 Seismically retrofit backup power supply generators, emergency radio tower, pump stations, and other emergency power and communication sources.		✓				✓		This project is on hold pending funding. While some effort has been made with respect to ensuring interoperable communications, additional and potentially redundant sources and systems are needed to ensure capacity when a significant hazard event occurs.				✓
INITIATIVE # 21 Replace AC water main with HDPE on Dolphin Ave NE to prevent flooding of homes after earthquake		✓	✓			✓		A risk assessment will be performed in 2024 to be included in our comprehensive water system plan.		✓		✓
INITIATIVE # 22 Relocate primary and standby power for WWTP to higher ground (out of area expected to subside during Cascadia Earthquake event.)		✓	✓			✓		A location analysis must be conducted to incorporate the newest inundation data. As such, this project is carried forward until further information is available.				✓
INITIATIVE # 23 Replace all utility bridge crossings with HDPE to prevent environmental contamination after earthquake.		✓				✓		This project is on hold pending funding.		✓		✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 24 Replace City bridges to withstand seismic events and flooding.		✓	✓			✓		This project is on hold pending funding. The City will continue to work with the County and WDOT for systems outside of the City, but which impact ingress and egress.		✓		✓
INITIATIVE # 25 Initiate studies to determine where the equilibrium shoreline is near the WWTP and the Marina in order to build appropriate protections.	✓		✓		✓			This project is ongoing as data is collected for a risk assessment.		✓		✓
INITIATIVE # 26 Test fresh waterways for invasive species and eradicate or treat as necessary.			✓					Ongoing as our integrated vegetation management plan is implemented.		✓		✓
INITIATIVE # 27 Retrofit South Fire Station and staff for quicker response times to South end of City.		✓	✓		✓	✓	✓	This project is on hold pending funding.				✓
INITIATIVE # 28 Review building code to determine whether need to modify for higher winds and more severe storms.			✓		✓			This project is ongoing as IBC and local codes are analyzed and a risk assessment is performed. Data from this HMP risk assessment will provide some additional information in this respect, but specific engineered analysis is necessary to address each building’s capacity.				✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 29 Research and determine best use of new technology and training to save lives (drones, predictive devices, etc.).		✓	✓		✓	✓	✓	This project is ongoing as technology changes and methods are implemented.		✓		✓
INITIATIVE # 30 Train citizens to respond to natural disasters (AVERT Teams, first aide, go bags, emergency preparedness).		✓	✓		✓	✓	✓	This is an ongoing effort as we continue to recruit new members to the team.		✓		✓
INITIATIVE # 31 Auxiliary fuel tanks to supply generators, heavy equipment, staff vehicles (diesel and gas).		✓	✓		✓	✓	✓	This project is ongoing as the City redefines and expands its need.		✓		✓
INITIATIVE # 32 A watercraft capable of hauling materials, supplies, and personnel from upriver		✓	✓			✓		This project is on hold as it evaluates best practices for emergency response.				✓

Table 9-11 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 33 Second vactor truck to facilitate sewage conveyance in extended duration power outage. Also used for chemical spill cleanup.		✓	✓		✓	✓		The first apparatus was purchased in 2021 and the second apparatus was purchased in 2023. Cost expended exceed \$600,000	✓			
INITIATIVE # 34 (now 33) Stockpile pipe and fittings to make distribution, collection, and transmission system repairs. Note: vacuum mains and pits are mostly filled with air and may float during seismic event.		✓	✓		✓	✓		Both utilities stock materials to facilitate repair and installation of new facilities.		✓		
INITIATIVE # 35 (now 34) Place large water storage container tanks in the dunes to provide water for firefigths							✓	This project is on hold as it evaluates best practices for wildfire response.				✓

9.13 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

Information identified above will require joint efforts with other agencies, and the requirement for funding on a more continual basis to ensure consistency in moving forward without the potential for

interruption due to lack of funding, which would potentially negatively impact work completed to date. But one example of this is the shoreline in the Pacific Ocean South area directly north of the North Jetty, which has experienced serious erosion over the past decade. Currently, rock and geotubes/geobags protect some homes and condominiums from continued erosion. Ocean Shores, in partnership with Ecology, the Corps of Engineers, and other federal agencies, are currently exploring alternatives to protect existing residential development. Such continued joint efforts will continue to further enhance the resiliency of the City of Ocean Shores, while also supporting the efforts on a county-level.

In 2016-2017, as part of the North Beach Erosion Committee effort, the City and the Port of Grays Harbor contracted with Vladimir Shepsis of Coast and Harbor Engineering, LLC, to provide a preliminary design to stop or slow down the erosion near the North Jetty. This effort is available on the City's website or upon request. That document illustrates erosion hot spots in Ocean Shores, as identified by George Kaminski of the Washington State Department of Ecology in 2018. Kaminski has been taking quarterly profiles of the Ocean Shores beaches since the late 1990's and has documented the significant erosion that has taken place since that time. A more recent study is also available on the City's website. Data from that study has been incorporated into this plan as appropriate.

9.14 ADDITIONAL COMMENTS

In addition to the items identified above, recently discovered is a 2-mile scarp that has appeared north of the North Jetty. Near the N. Jetty, it is 15-20 feet high, and it tapers down fairly evenly as it moves north, with some areas of erosion eating away at the cliff.

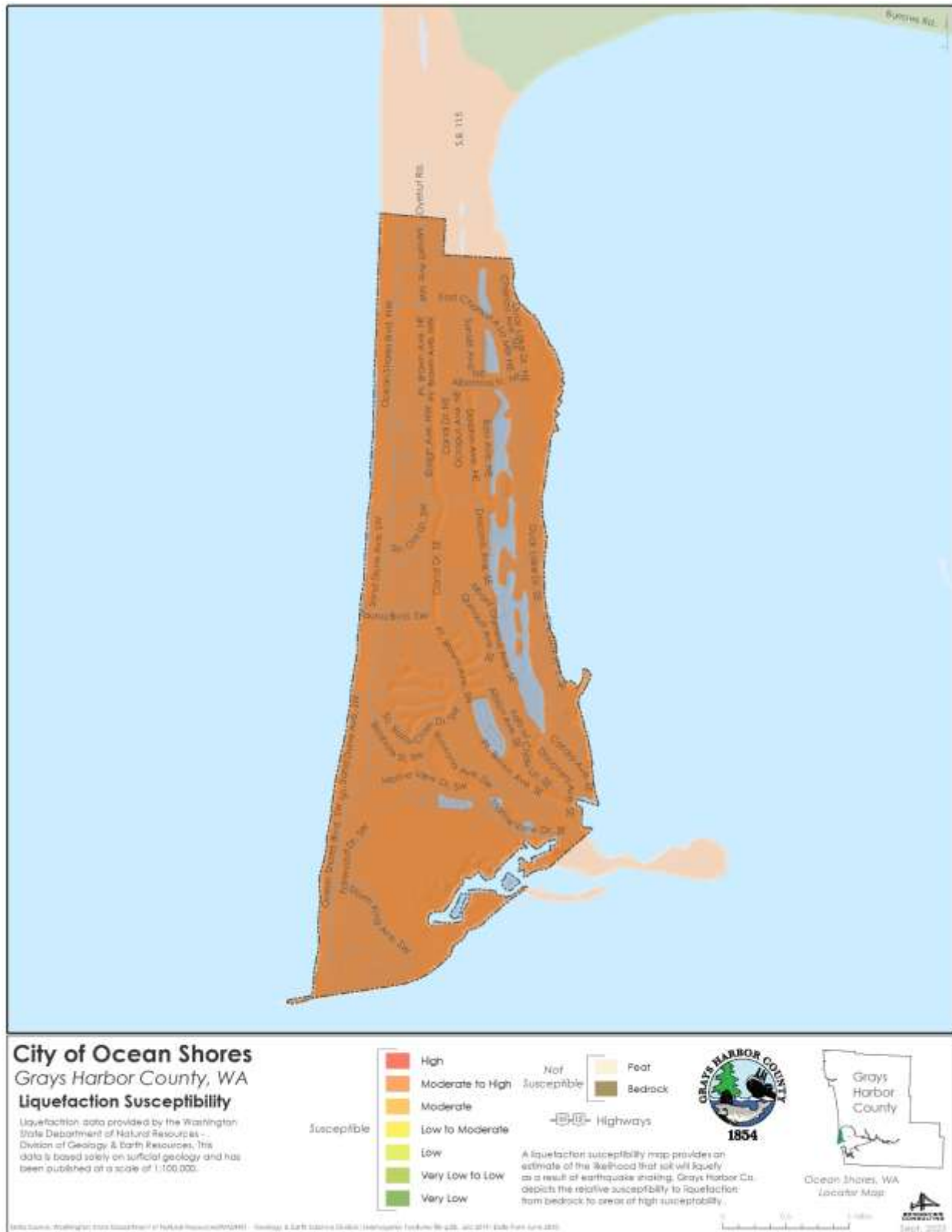
There is also erosion west and east of Damon Point with losses on the west side in the 10's of feet. Erosion on the east side of the peninsula is less severe.

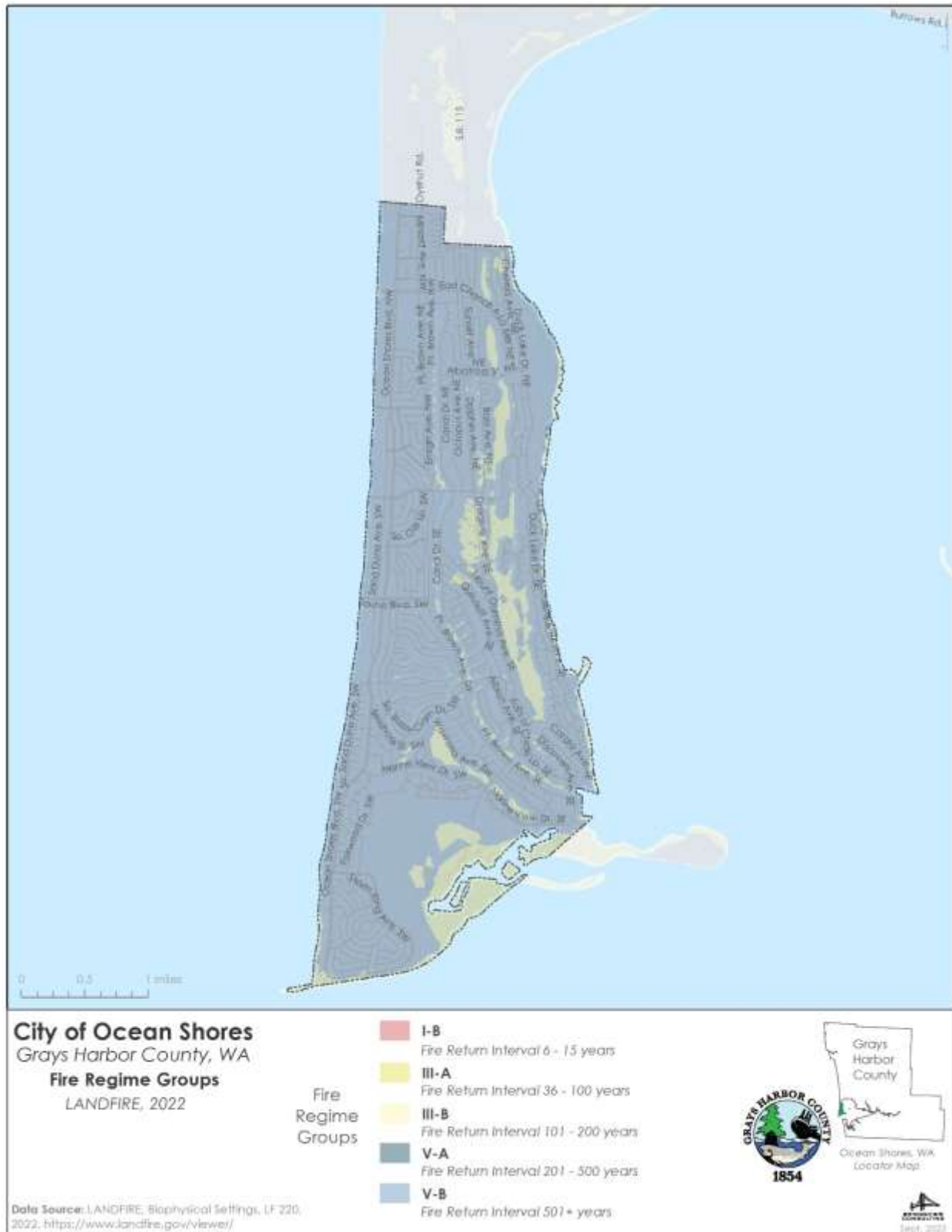
These are items which over the course of the life cycle of this plan will be addressed and identified in greater detail for future analysis. The City has included these issues as potential mitigation strategies for this 2024 update.

9.15 HAZARD AREA EXTENT AND LOCATION

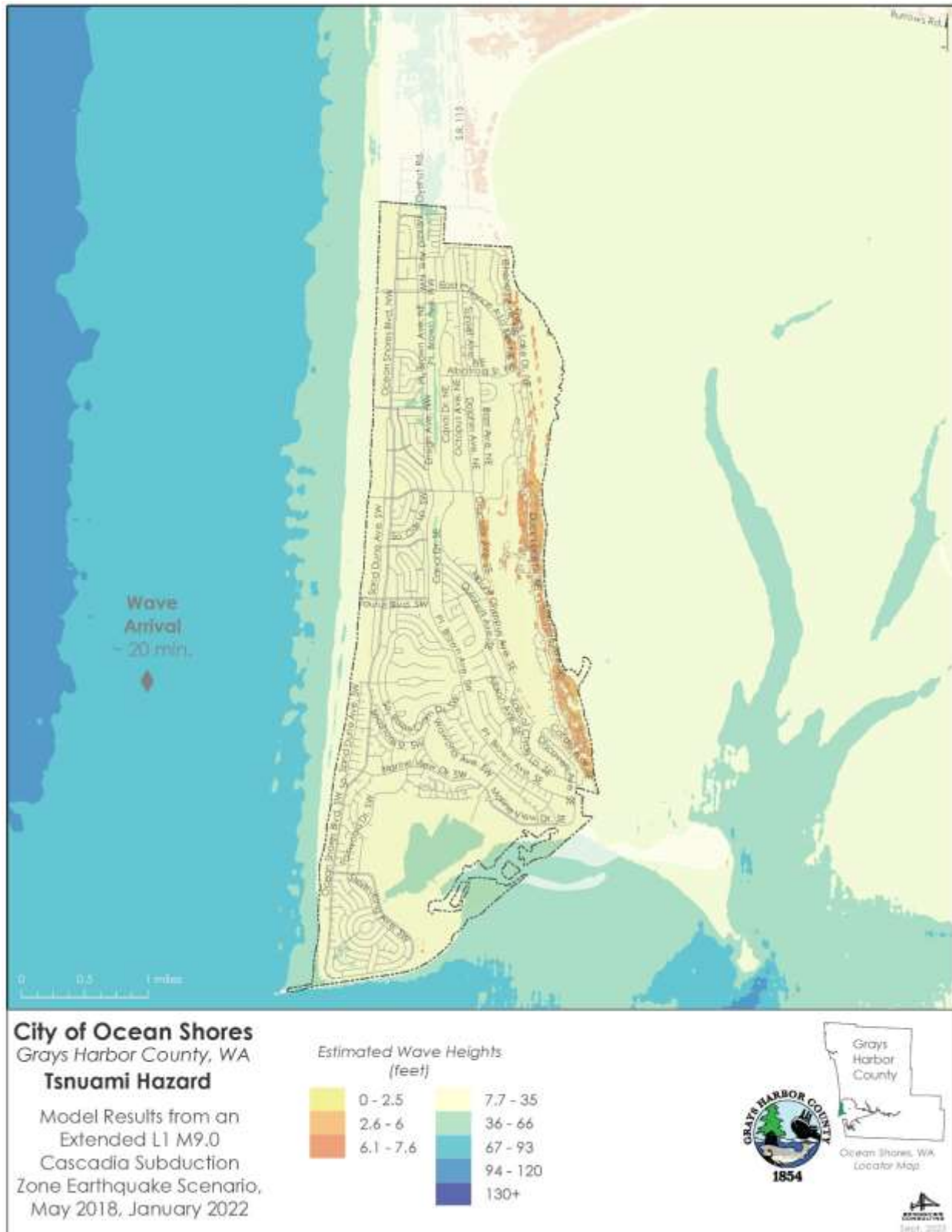
Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Additional maps developed by Dr. George Kaminsky of the WA Dept. of Ecology showing erosion hot spots in and around Ocean Shores are also available within the Erosion profile of the base plan.











CHAPTER 10.

CITY OF WESTPORT 2024 ANNEX UPDATE TO THE GRAYS HARBOR COUNTY HAZARD MITIGATION PLAN

10.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the City of Westport, a participating jurisdiction to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Westport. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

10.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The City of Westport followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Kevin Goodrich 801 N. Montesano St Westport, WA 98595 (360) 268-0131 ca@ci.westport.wa.us	City Administrator Primary Point of Contact	Revision of existing City of Westport HMP including risk assessment, hazard analysis, and mitigation strategy. Public Participation.
Nate Saunders 801 N. Montesano St Westport, WA 98595 (360) 268-0131 Police_chief@ci.westport.wa.us	Police Chief Alternate Point of Contact	Revision of existing City of Westport HMP including risk assessment, hazard analysis, and mitigation strategy. Public Participation.
Mark Davis 801 N. Montesano St Westport, WA 98595 (360) 268-0131 building@ci.westport.wa.us	Building Official Alternate Point of Contact	Revision of existing City of Westport HMP including risk assessment, hazard analysis, and mitigation strategy. Public Participation.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Troy Meyers 801 N. Montesano St Westport, WA 98595 (360) 268-0131 troy@forwestport.org	City Councilman	Revision of existing City of Westport HMP including risk assessment, hazard analysis, and mitigation strategy. Public Participation.

10.3 COMMUNITY PROFILE

- **Date of Incorporation**-1914
- **Current Population**-2,295 as of April 2023 (OFM)
- **Population Growth**—2,213 as of 2020 Census. The Washington State Office of Financial Management estimates this minimal growth to be the expected trend.
- **Location and Description**— The City of Westport, Washington is located in Grays Harbor County, at the mouth of Grays Harbor on the southernmost peninsula known as Point Chehalis. The City is situated on a sand spit that separates South Bay of Grays Harbor from the Pacific Ocean. The City is bounded by the ocean to the west, the entrance channel to Grays Harbor to the north, and South Bay to the east. Westport’s land area is very flat, with elevations ranging from sea level up to 60 feet in elevation. (Attach Current Topo Map)
- **Brief History**— The area was in regular use as a summer resort by local Native American tribes before Thomas Barker Speake and his family, the first white settlers, arrived early in the summer of 1857. By 1914, Westport was a busy, though small center for fishing, shell fish harvesting, seafood processing and tourism. Among the earliest structures built at Westport, the Westport Lighthouse, dedicated on April 14, 1898, still stands as a majestic beacon for weary mariners anxious to return home from the sea. The City of Westport was incorporated on June 26, 1914. Today Westport, with a population of approximately 2,300, still relies on fishing, shellfish harvesting, seafood processing and tourism for much of its livelihood. Maritime support businesses and yacht building are also an important part of Westport's economic base.
- **Climate**—The climate in Westport is generally mild, although wet winters and severe storms are frequent in the winter months. Cool, mild summers are normal but signs of climate change have become evident with drier, warmer weather from late June through late September.
- **Governing Body Format**—Westport operates by a Mayor/Council form of city government, with five council members serving overlapping 4-year terms.
- **Economy** – Westport’s economy is primarily driven by commercial fishing, the seafood processing industry, yacht building, tourism and sport fishing. The Port of Grays Harbor’s Westport Marina is a large contributing factor to the local economy, generating over 2,000

jobs and more than \$200 million in business revenue. The \$45.5 million in local purchases accounted for 543 indirect jobs in the Grays Harbor economy. Future development opportunities exist in the hospitality and tourism sectors, as well as additional room for growth in seafood processing. The potential for residential growth including single family, multi-family and condominium development also exists. Westport's tourism industry is very seasonal, with a large influx of tourists from May through September. This seasonal business has a considerable economic impact, and the increased population places a higher demand on police, fire and emergency medical services. It is important to note that this seasonal increase in population, potentially doubling our resident population, is centered in the Marina District. This area of the City is particularly vulnerable to inundation from King Tides, storm surge, compound flooding and Tsunami, and is the focus of our vertical evacuation project.

- **Development Trends** – The City of Westport was first platted for development in the 1890's and incorporated in 2014. City limits have largely remained the same, with only a couple minor annexations. Westport's landmass covers approximately 2,400 acres including a mix of privately owned and city-owned property. Additionally, the Port of Grays Harbor and the State of Washington. Improved asphalt streets, the water distribution system and sanitary sewer collections system have grown throughout history and the utility service area extends outside City Limits to the south. Homes have been built in all areas of the city. The north end of the city, or Marina District, is the primary business area along Westhaven Drive and the waterfront.

Recent census data shows the average age in Westport to be just over 49 years old, with 29% of the population falling in the 60-69 range. The population is a primarily white, with the remainder being 11% Hispanic and other races.

Westport has experienced a moderate increase in new residential construction since the last HMP update. In 2018 there were three permits issued for single family residential construction projects. That number jumped to 12 in 2019, then dropped to 6 in 2020. This was likely due to a slowdown caused by the Pandemic. Building rebounded to nineteen new SFRs in both 2021 and 2022, and a total of 26 new homes built in 2023. Commercial construction projects over the same period of time have been focused mainly on renovation of existing properties, which has led to several new businesses opening throughout the City. A 14,000 square foot Marine Supply and Service store was constructed and opened in 2017.

Shoreline land uses within Westport are varied and they include commercial uses, low density and high-density residential uses, public recreation areas, and natural, undeveloped areas. Zoning designations within the shoreline jurisdiction include Multi Use Tourist Commercial, Tourist Commercial, Recreation and Parks, Marine Industrial, Ocean Beach Residential and Residential zones. The city's zoning map is available on the city's website: <https://ci.westport.wa.us>.

10.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are hazards which are unique to the jurisdiction, which may not be identified in the base plan. In addition to the disaster history table

in Section 3 of the base plan, which the City confirms, Table 10-1 identifies additional information of natural hazard impact within the jurisdiction. If available, dollar loss data is also included.

Table 10-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
Severe Storm	1734	12/07	<Than \$50,000
Severe Storm, Flood	4539	1/20- 2/10/20	<Than \$50,000
Severe Storm, Flood	4593	1/12/21	<Than \$50,000
Local Area Disaster – Not Declared			
Flooding/Overtopping in the Marina District, caused by storm, tide and swell conditions. Potential hazard to citizens and tourists, as well as damage to local business and economy.			This is an annual (sometimes multiple times per year) occurrence.

10.5 CAPABILITY ASSESSMENT

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

10.6 NATIONAL FLOOD INSURANCE INFORMATION

Information on the community's National Flood Insurance Program (NFIP) compliance is presented in Table 10-2. This identifies the current status of the jurisdiction's involvement with the NFIP.

The City of Westport maintains active participation in the National Flood Insurance Program (NFIP) and implements the NFIP regulations through Chapter 15.12 of the Westport Municipal Code. Within Section 15.12.010 WMC there are definitions for “substantial damage” and “substantial improvement” as follows:

“Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred.

“Substantial improvement” means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- A. Before the improvement or repair is started; or
 - B. If the structure has been damaged and is being restored, before the damage occurred.
- For the purposes of this definition “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term can exclude:

- A. Any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- B. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

The Chapter also includes requirements for development permits, elevation certificates, floodproofing, elevation above base flood elevation, structure anchoring, etc., all of which are applied to all new construction and buildings undergoing substantial improvements, including those damaged as a result of flood events.

The City maintains a building official that regularly inspects and enforces all building codes and construction regulations to ensure compliance with the established municipal codes.

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0
 - Number of FEMA-Identified Severe Repetitive Loss Properties: 0
 - Number of Repetitive Flood Loss/Severe Repetitive Loss Properties Mitigated: 0
 - The total insurance coverage for the City equals \$17,986,000, with 68 current policies in force.
- (As of June, 2023 as provided by FEMA NFIP).

As appropriate, the City of Westport continues to support FEMA’s NFIP and CRS programs, currently being a Class 8 CRS Community. The City continues to participate in the program to the level that current staffing allows. The City’s intent is to incorporate hazard mitigation goals into other programs and policies as they are updated. These include the Comprehensive Plan, Flood Damage Prevention Code, CAO, Shoreline

Master Program and others. As these programs and policies are updated, the City will ensure that the provisions included in the HMP will be incorporated and remain consistent.

Table 10-2 National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Building
Who is your community's floodplain administrator? (department/position)	Mark Davis, Building Official
Do you have any certified floodplain managers on staff in your community?	Yes, Mark Davis
What is the date of adoption of your flood damage prevention ordinance?	Amended Feb. 3 2017
When was the most recent Community Assistance Visit or Community Assistance Contact?	June 21, 2023
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	NO
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	YES
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	NO
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	YES – Class 8

10.6.1 Regulatory Capability

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 3-3. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 10-3 Legal and Regulatory Capability			
	Local Authority	Other Jurisdictional Authority	State Mandated Comments
Codes, Ordinances & Requirements			
Building Code Version – 2021 IBC	X		WMC Ch.15
Zoning Ordinance	X		WMC Ch.17
Subdivision Ordinance	X		WMC Ch.14
Floodplain Ordinance	X		WMC Ch.15
Stormwater Management	X		WMC Ch.12
Post Disaster Recovery		X	FEMA PA
Real Estate Disclosure		X	
Growth Management			Non GMA
Site Plan Review	X		WMC Ch.17
Public Health and Safety		X	WMC Ch.6, Ch. 9, GH Co. Health, DOH
Coastal Zone Management	X		WMC Ch.17
Climate Change Adaptation		X	Comprehensive Plan Update
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	X		WMC Ch.15 CAO
Environmental Protection	X		SMP, CAO
Planning Documents			
General or Comprehensive Plan	X		
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>			Yes
Floodplain or Basin Plan	X		Update Pending
Stormwater Plan	X		Update Pending
Capital Improvement Plan	X		Utilities, Facilities
Habitat Conservation Plan		X	WDFW/ECY
Economic Development Plan	X	X	City Council/GGHI
Shoreline Management Plan	X	X	WMC Ch. 17, SMP, SMA
Community Wildfire Protection Plan			In Process – DNR Firewise

Table 10-3 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Transportation Plan	X		WMC 12,Comp. Plan, 6 Yr Str. Plan	Ch.
Response/Recovery Planning				
Comprehensive Emergency Management Plan	X			
Threat and Hazard Identification and Risk Assessment	X			
Terrorism Plan		X		
Post-Disaster Recovery Plan	X			
Continuity of Operations Plan	X			
Public Health Plans		X		Grays Harbor County Health
Boards and Commission				
Planning Commission	X			
Mitigation Planning Committee				
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	X			
Mutual Aid Agreements / Memorandums of Understanding	X			

10.6.2 Administrative and Technical Capabilities

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 10-4. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 10-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	Consultants On-Call
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	City Utility Departments including Water, Sanitary Sewer, Streets and Stormwater
Engineers specializing in construction practices?	No	Consultants On-Call
Planners or engineers with an understanding of natural hazards	No	Consultants On-Call
Staff with training in benefit/cost analysis	No	Consultants
Surveyors	No	Contracted
Personnel skilled or trained in GIS applications	Yes	Entry Level
Personnel skilled or trained in Hazus use	No	Regional Fire Authority/EMS
Scientist familiar with natural hazards in local area	No	
Emergency Manager	No	County
Grant writers	No	Contracted
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	AHAB Warning Sirens
Hazard data and information available to public	Yes	City Web Site
Maintain Elevation Certificates	Yes	Building Department
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Tsunami Safety Committee
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Friends of Grays Harbor/Water Keepers
Organization focused on individuals with access and functional needs populations	Yes	Building/Public Works
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Link to EMD and FEMA preparedness info.
Natural disaster or safety related school programs?	Yes	Ocosta School Dist. After School Program
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	No	

Table 10-4 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	
Noxious Weed Eradication Program or other vegetation management	Yes	Weed Board/Wa. State Parks
Fire Safe Councils	Yes	Firewise
Chipper program	No	
Defensible space inspections program	Yes	DNR/Firewise
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Street/Road Maintenance Department
Stream restoration program	No	
Erosion or sediment control program	No	
Address signage for property addresses	Yes	Code Enforcement/Building Dept.

10.6.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 10-5. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 10-5 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

10.6.4 Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 10-6. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 10-6 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes	Feb. 3, 2017
Building Code Effectiveness Grading Schedule	No	
Storm Ready	Yes	July 2023
Firewise	Pending	
Tsunami Ready (if applicable)	Yes	July, 2023

10.7 HAZARD RISK AND VULNERABILITY RANKING

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the City of Westport.

Error! Reference source not found. presents the ranking of the hazards of concern based on their CPRI score. Table 10-8 illustrates the CPRI scoring. Once the hazards were scored, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this

category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.

- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Additional information on hazard specific impact, dollar loss, and population impact can be found within each respective hazard profile contained within the base plan.

Table 10-7 Hazard Risk and vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.85	High
2	Severe Weather	3.85	High
3	Tsunami	3.50	High
4	Erosion	3.50	High
5	Flood	3.20	High
6	Wildfire	2.95	Medium
7	Climate Change	2.95	Medium
8	Drought	1.95	Low
9	Wildfire	1.80	Low
10	Volcano	1.15	Low
11	Landslides	1.00	Ex. Low

Table 10-8
City of Westport 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4		2					3					1				4	2.95	7	Medium
Drought		2				2				2						1				4	1.95	8	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion				4			3				3				2					4	3.30	4	High
Flood				4			3				3				2			2			3.20	5	High
Landslides	1				1				1							1	1				1.00	11	Low
Severe Weather				4			3				3	4				1		2			3.85	2	High
Tsunami			3					4				4	4					2			3.50	3	High
Volcano	1				1				1							1				4	1.15	10	Low
Wildfire			3			2					3		4						3		2.95	6	Medium
Hazmat		2				2				2						1	1				1.80	9	Low

10.8 MITIGATION GOALS AND OBJECTIVES

The City of Westport adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

10.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. Table 10-9 lists the action items/strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Table 10-9 Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1-Vertical Tsunami Evacuation Structure – Plan and Construct a Tsunami Evacuation Structure in Westport's Marina District to provide a high ground evacuation point for residents, workers and visitors in that area of the City of Westport. Project Safe Haven identified the need for vertical evacuation in this area. Ideally, vertical evacuation would be a component of a mixed-use structure.									
Existing	T, SW, F	1, 2, 3, 4, 5, 6, 7, 8, 9	City of Westport	High	FEMA, General Fund	Short Term	Yes	Structural Project	Local
INITIATIVE #2-Public Outreach Program - Conduct annual Disaster Preparedness Workshops to educate the public about actions they should take before, during and after a disaster. Distribute hazard mitigation information and publications published by FEMA, EMD, Red Cross, and other agencies and organizations to the Timberland Regional Library, public schools, and other public facilities to promote citizen commitment to hazard mitigation. Encourage citizens and businesses to have access to the NOAA Weather Radio (NWR) service, including supporting efforts to purchase NWR receivers for low-income households as well as provide public information about using receivers efficiently. Create a Disaster Information Section on the City's website with up-to-date information on current storms, road closures, evacuation routes, shelter locations, emergency contacts, and hazard mitigation planning and implementation.									
Existing	All	2, 3, 5, 6, 7, 8, 9	City of Westport	Med	General Fund/ Grants	Ongoing	Yes	Public Information	Local
INITIATIVE #3-Emergency Management Plans – Utilizing information developed during the HMP risk assessment, develop and maintain a list of assets and capabilities of all public and private entities in the City that could be utilized for emergency response to hazards. Purchase generators or similar equipment to avoid disruption of power to critical City facilities during storm events.									

**Table 10-9
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing	E,T,Er,F, SW, W	1, 2, 3, 5, 6, 7, 8, 9	City Public Works, PD, EMS	Low	General Fund, Surplus	Long Term	Yes	Recovery	Local
INITIATIVE #4-Emergency Communications Plan - Establish interagency radio links between the City and the Grays Harbor Emergency Operations Center, law enforcement agencies, fire districts, emergency medical services, the 9-1-1 call center, and state and federal agencies to ensure coordinated communication during hazard events.									
Existing	E,T,Er,F, SW, W	4, 5, 6, 7, 8	City Public Works, PD, EMS	Low	General Fund, HLS funds	Short Term	Yes	Em. Services	Region
INITIATIVE #5- Critical Facilities Evaluation - Evaluate and prioritize critical facilities in hazard areas to assess their resistance to hazard events. Retrofit critical facilities in hazard areas to increase their resistance to hazard events, including the acquisition of generators as funding permits. Conduct analysis of existing stormwater drainage system and implement recommended improvements.									
Existing	All	1, 2, 3, 4, 6, 8, 9	City Public Works	High	General Fund, Grant	Short Term	Yes	Structural Preventative	Local
INITIATIVE #6 Transportation and Right of Way Improvements - Work with Washington State Department of Transportation and Grays Harbor County to augment current tsunami evacuation signs with safe elevation markers in key areas and signs painted directly on roadways.									
Existing	E,T,Er,F, SW	2, 3, 4, 6, 8, 9	Public Works, County, DOT,	Low	General Fund, HMGP, State EQ/ Tsunami Program	Short Term	Yes	Public Information	Region
Initiative #7 Wastewater Treatment Plant – Seek grant funding to structurally enhance or relocate the wastewater treatment plant, which is located in inundation zone, highly vulnerable to earthquake/tsunami damage.									
New / Existing	E, T, F, SW	2, 3, 4, 6, 8, 9	Public Works	High	BRIC, HMGP, DOE, EQ/ Tsunami Program Funding	Long-Term	No	Structural Protects, Property Protection	Local
Initiative #8 Sanitary Sewer Collections System - Seek grant funding to mitigate impact from potential earthquake/tsunami damage to Pump Stations and 20 miles of gravity/pressure sewer mainline.									

**Table 10-9
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New / Existing	E, T, F, SW	1, 2, 3, 4, 6, 8, 9	Public Works	High	BRIC, HMGP, DOE	Long-Term	No	Structural Protects, Property Protection	Local
Initiative #9 Water Distribution System – Three wellfields, two standpipes, several miles of water distribution mains and service lines. Highly vulnerable to earthquake/tsunami damage.									
New / Existing	E, T, F, SW	1, 2, 3, 4, 6, 8, 9	Public Works	High	BRIC, HMGP, DOE	Long-Term	No	Structural Protects, Property Protection	Local

10.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 10-10 identifies the prioritization for each initiative.

**Table 10-10
Mitigation Strategy Priority Schedule**

Initiative #	# of Objective s Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority ^a
1	9	H	H	Y	Y	N	H
2	7	H	M	Y	Y	Y	H
3	8	H	M	Y	Y	Y	H
4	5	H	M	Y	Y	Y	H
5	7	H	M	Y	Y	N	H
6	6	H	L	Y	Y	Y	M
7	6	H	H	Y	Y	N	H
8	7	H	H	Y	Y	N	H
9	7	H	H	Y	Y	N	H
a. See Chapter 1 for explanation of priorities.							

10.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 10-11 summarizes the initiatives that were recommended in the 2018 version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 10-11 2024 Status of 2018 Hazard Mitigation Action Plan				
		Current Status		
		Completed	Continual /Ongoing Nature	Removed -/No Longer Carried Over
Mitigation Strategy	Project Status			
INITIATIVE #1-Vertical Tsunami Evacuation Structure – Plan and Construct a Tsunami Evacuation Structure in Westport’s Marina District to provide a high ground evacuation point for residents, workers and visitors in that area of the City of Westport. Project Safe Haven identified the need for vertical evacuation in this area. Ideally, vertical evacuation would be a component of a mixed-use structure.	Notice of award received by the City from FEMA, who funded this project through 2020-2021 BRIC grant. Currently pending contract development.			✓

Table 10-11 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
		Completed	Continual /Ongoing Nature	Removed -/No Longer	Carried Over
Mitigation Strategy	Project Status				
INITIATIVE #2-Public Outreach Program - Conduct annual Disaster Preparedness Workshops to educate the public about actions they should take before, during and after a disaster. Distribute hazard mitigation information and publications published by FEMA, EMD, Red Cross, and other agencies and organizations to the Timberland Regional Library, public schools, and other public facilities to promote citizen commitment to hazard mitigation. Encourage citizens and businesses to have access to the NOAA Weather Radio (NWR) service, including supporting efforts to purchase NWR receivers for low-income households as well as provide public information about using receivers efficiently. Create a Disaster Information Section on the City's website with up-to-date information on current storm, road closures, evacuation routes, shelter locations, emergency contacts, and hazard mitigation planning and implementation.	The City has created a disaster information section on its website. Information from this risk assessment will be utilized to update that information as appropriate. In addition, the County also provides information, outreach and notifications. PH also regularly conducts outreach efforts to provide information, as to the various Health and Social Services agencies throughout the area. The City will continue to establish protocol between the City, County and state agencies to ensure services to assure consistency of public information during a disaster. The City will continue to involve the public in the hazard mitigation planning process through council meetings and public outreach. The public will be informed of any mitigation activities, descriptions of damages, and the performance of mitigation measures.	✓	✓		✓

Table 10-11 2024 Status of 2018 Hazard Mitigation Action Plan					
		Current Status			
		Completed	Continual /Ongoing Nature	Removed -/No Longer	Carried Over
Mitigation Strategy	Project Status				
INITIATIVE #3-Emergency Management Plans – Utilizing information developed during the HMP risk assessment, develop and maintain a list of assets and capabilities of all public and private entities in the City that could be utilized for emergency response to hazards. Purchase generators or similar equipment to avoid disruption of power to critical City facilities during storm events.	As new data becomes available concerning the hazards of concern, the plans are reviewed and updated. The City has installed a new generator at the water and sewer system locations.		✓		✓
INITIATIVE #4-Emergency Communications Plan - Establish interagency radio links between the City and the Grays Harbor Emergency Operations Center, law enforcement agencies, fire districts, emergency medical services, the 9-1-1 call center, and state and federal agencies to ensure coordinated communication during hazard events.	The County and City have established interagency radio links between the City and GH EOC. The City continues to work with the local fire agencies, etc., to ensure coordinated communications exist during hazard events. Additional communications equipment may be necessary as new mitigation projects are completed, and therefore, this project remains current to ensure property channels of communication remain current and operational.	✓			✓
INITIATIVE #5- Critical Facilities Evaluation - Evaluate and prioritize critical facilities in hazard areas to assess their resistance to hazard events. Retrofit critical facilities in hazard areas to increase their resistance to hazard events, including the acquisition of generators as funding permits. Conduct analysis of existing stormwater drainage system and implement recommended improvements.	Critical Facilities Review Ongoing. New standby generators installed at water system and sewer system locations. Additional portable standby generator purchased. The City also received an Ecology FCAAP Grant for Stormwater system planning. 2024 Planning Project.				✓

Table 10-11 2024 Status of 2018 Hazard Mitigation Action Plan				
		Current Status		
		Completed	Continual /Ongoing Nature	Removed -/No Longer Carried Over
Mitigation Strategy	Project Status			
INITIATIVE #6 Transportation and Right of Way Improvements - Work with Washington State Department of Transportation and Grays Harbor County to augment current tsunami evacuation signs with safe elevation markers in key areas and signs painted directly on roadways.	With new tsunami walking time maps and inundation maps created since completion of the last plan, this project has been continually addressed, with a new warning siren erected in the City since the 2018 plan was completed. With a potential vertical evacuation tower constructed, this project will continue to be an important element, and the City is carrying forward this initiative.	✓		✓

10.12 HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps are included below. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes.

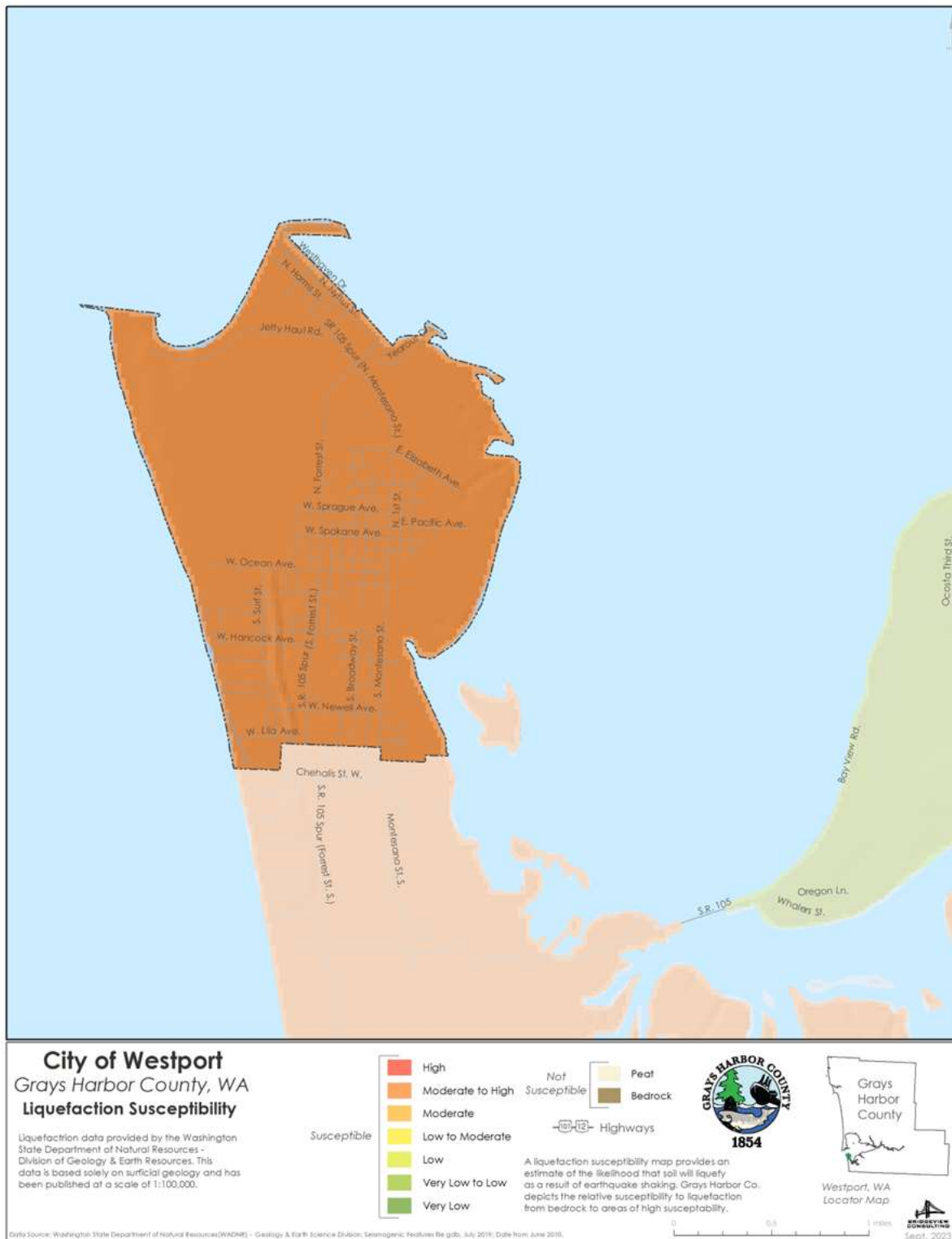
Additional information on the specific impacts of the hazards of concern is contained in the hazard profiles in Volume 1 of the Grays Harbor County 2024 Multi-Jurisdictional Hazard Mitigation Plan, to which this Annex is a part. Direct impact loss data is defined therein. Extent and Location were also utilized to determine the risk and vulnerability to the City, and utilized by the City's planning team when it completed its Hazard Ranking process.

In addition to the hazard maps, the following additional items were taken into consideration during the risk assessment portion of this annex development. These items have also been identified as new mitigation projects for this 2024 update.

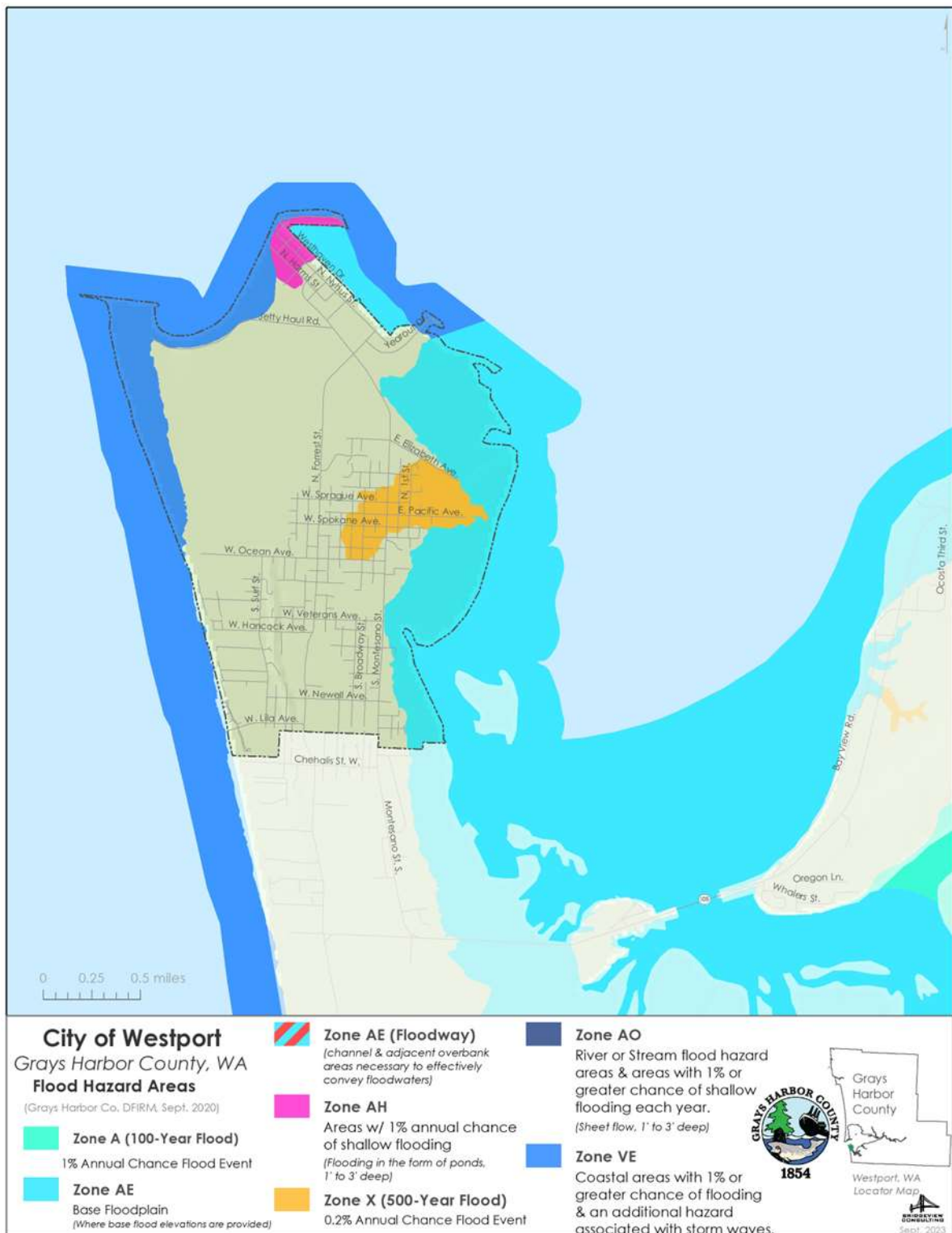
- Wastewater Treatment Plant – Located in inundation zone, highly vulnerable to earthquake/tsunami damage.
- Sanitary Sewer Collections System – 13 Sewage Pump Stations, Approx. 20 mi of gravity/pressure sewer mainline. Highly vulnerable to earthquake/tsunami damage.
- Water Distribution System – Three wellfields, two standpipes, several miles of water distribution mains and service lines. Highly vulnerable to earthquake/tsunami damage.

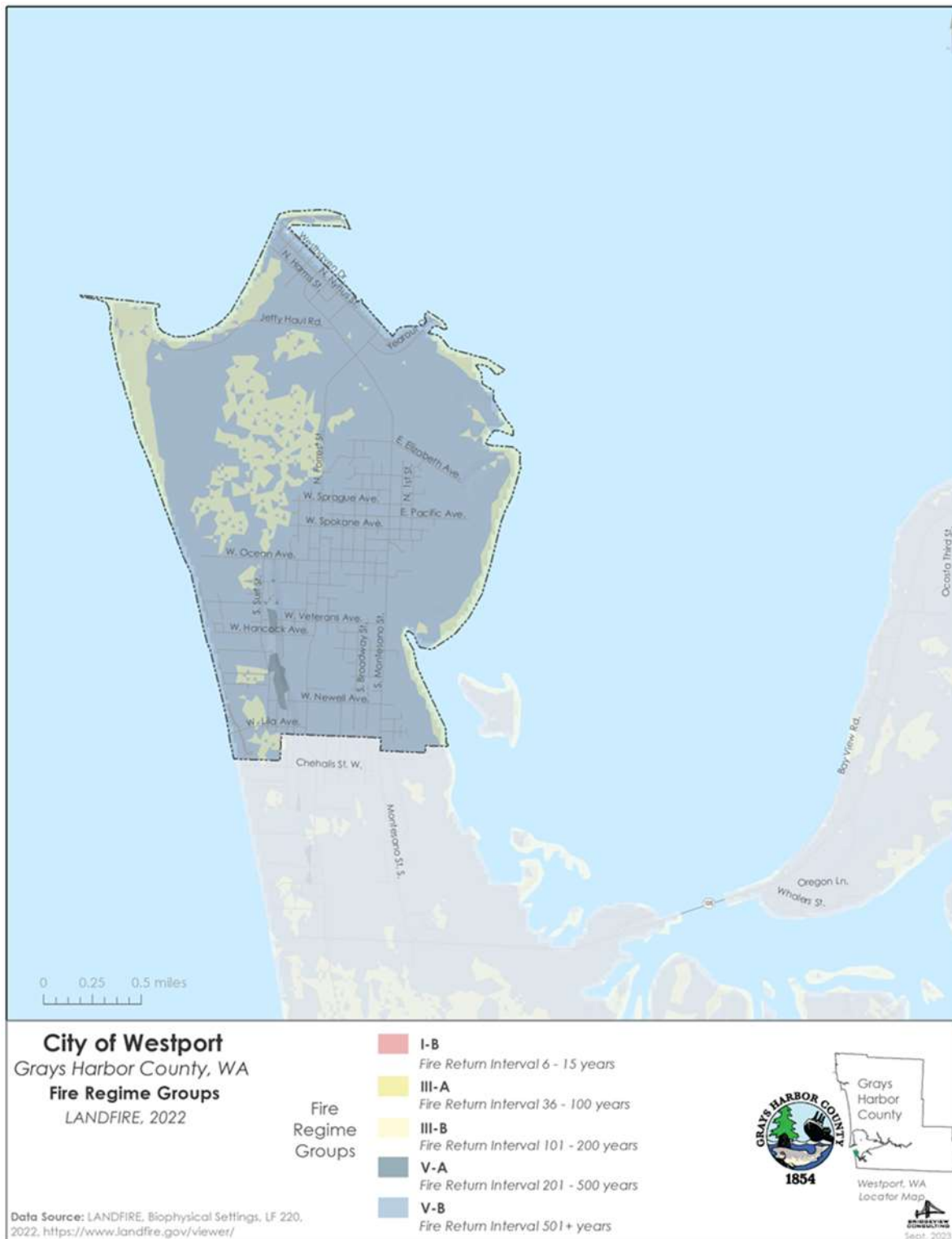












CHAPTER 11.

HARBOR REGIONAL HEALTH 2024 ANNEX UPDATE

11.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the Grays Harbor County Public Hospital District #2 – Harbor Regional Health, a participating special purpose district to the Grays Harbor County Hazard Mitigation Plan Update. In the Grays Harbor County 2018 Hazard Mitigation Plan, Grays Harbor County Public Hospital District #2 was identified as Grays Harbor Community Hospital. Since the last update, the facility has had a public name change to Harbor Regional Health but has maintained its legal ownership name of Grays Harbor County Public Hospital District #2. This 2024 Annex constitutes an update to that document.

Development of this Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by Grays Harbor County Public Hospital District #2, Harbor Regional Health. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only. This document serves as an update to the district's previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

11.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The Harbor Regional Health (HRH) followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the District also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Name, Title Street Address City, State ZIP Telephone: Phone # e-mail Address: email address	Dwayne Lunde, Director of Plant Services 915 Anderson Drive, Aberdeen, WA 98520 360-537-5024 O 360-581-7501 C Email: dlunde@ghcares.org	Attend meetings, develop Annex, review/confirm County risk assessment; review base plan.
Name, Title Street Address City, State ZIP Telephone: Phone #	Tom Jensen, CEO 915 Anderson Drive, Aberdeen, WA 98520 360-537-5117	Presented Risk data, assisted with plan review and development; Presentation of draft plan and risk data to Board

Local Planning Team Members		
Name	Position/Title	Planning Tasks
e-mail Address: email address	Email: tjensen@ghcares.org	of Commissioners. Facilitated adoption process.
Name, Title Street Address City, State ZIP Telephone: Phone # e-mail Address: email address	<u>Board of Commissioners:</u> Christopher Thomas, Position 1 (Junction City, Central Park, Montesano) Michael Bruce, Position 2 (Westport, Grayland) Lynn Csernotta, Position 3 (Ocean Shores and North Beach) Andrew Bickar, Position 4 (Hoquiam) John Shaw, Position 5 (Aberdeen) Robert Torgerson, Secretary David Quigg, At Large 1 Scott Dilley, at Large 2	Reviewed and provided comment on HMP and Annex; Plan Adoption.

11.3 DISTRICT PROFILE

Harbor Regional Health is a licensed 140-bed acute care community hospital located in Aberdeen, Washington, the largest city in mostly-rural Grays Harbor County. The hospital is owned by Grays Harbor Public Hospital District No. 2 (the District) and serves the entirety of Western Grays Harbor County. Grays Harbor County, named after the large estuarine bay near the County's southwestern corner, was until the 1960s largely dependent on the logging and fishing industries. In the 1960s, foreign mills began outbidding local timber companies based on price, and in the 1980s, Federal logging restrictions further restricted logging due to threats to the spotted owl and salmon. Fishing and clamming, once important to the county's economy, also deteriorated based on depleted stocks. Today, charter fishing and ocean beaches bring considerable tourism to the area, and as a result, employment is largely in the services sector. Grays Harbor continues to have higher rates of unemployment than most other areas of the State, and poverty is also considerably higher. The Quinault Tribe's home is contained within the District, along the coastal areas of the County. In addition to acute inpatient care (OB, intensive care and medical/surgical), HRH provides a 24/7 emergency department, radiology, physical therapy, laboratory, imaging, rehabilitation, surgery, chemical dependency, cardiac, wound care, ambulatory infusion, and respiratory care among other services. HRH also owns and operates four primary care and specialty clinics, with a total of approximately 15 providers.

The following is a summary of key information about the jurisdiction:

Governing Authority—Governed by an elected Board of Commissioners

Population Served—76,488 as of 2023

Land Area Served— 1,927 square miles/1,233,558 acres

Value of Area Served—The estimated value of the area served by the jurisdiction is \$12,608,653,297

Land Area Owned— 57 acres

Total Value of Critical Infrastructure/Equipment—The total value of critical infrastructure and equipment owned by the jurisdiction is \$82,678,741,513.

List of Critical Facilities Owned by the Jurisdiction:

- West Campus	\$ 70,427,000
- WC Education Bldg.	\$ 395,000
- East Campus	\$ 39,162,500
- Montesano Clinic	\$ 1,923,000
- Hoquiam Clinic	\$ 1,935,700
- GHI	\$ 2,236,500
- Oak Street	\$ 80,000

Total Value of Critical Facilities—The total value of critical facilities owned by the jurisdiction is \$ 116,159,700.

Current and Anticipated Service Trends—

HRH is the only level three trauma center on the Washington coast with approximately 30,000 Emergency Department visits annually. HRH provides acute care services including medical and pediatric care, surgical, critical care, inpatient chemical dependency, and obstetrics. It performs General, Orthopedic, Gynecological, Dental, and Urological surgery. Outpatient services include ambulatory infusion, laboratory, cardiac rehabilitation, cardiopulmonary, rehabilitation therapy, wound healing, and a full array of diagnostic imaging services. The hospital's Harbor Medical Group currently manages 5 rural healthcare clinics which include services for internal medicine, family medicine, pediatrics, orthopedics, general surgery, gastroenterology and urology. HRH's desired future state is to become a sustainable regional system of healthcare excellence, partnering to provide integrated care and services in inspirational work environments that support our mission to "Heal, Comfort and Serve everyone with dignity and Compassion."

11.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the special purpose district. While the County has been declared for several events, the Hospital District has been fortunate, and has sustained little direct impact to date. However, historic events have made roadways impassable, causing both first responders and patients to experience difficulties in gaining access to the hospital locations. Table 11-1 lists the past occurrences which have impacted the district since completion of the last plan, as well as one flood event from 2015. No specific dollar loss data is available.

Table 11-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
COVID-19 Pandemic	4481	01/20/2020	
Flooding/ Landslides	4253	01/05/2015	No damages. Accessibility issues.

11.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

11.5.1 Regulatory Capability

The assessment of the District's legal and regulatory capabilities which are customarily used by jurisdictions to implement hazard mitigation activities, are identified in Table 11-2. Those items applicable to the district are identified.

Table 11-2 Harbor Regional Health Legal and Regulatory Capability				
	Local Authority	Federal Jurisdictional Authority	State Mandated	Comments
Planning Documents				
Emergency Operations Plan	X			
Strategic Plan	X			
Response/Recovery Planning				
Comprehensive Emergency Management Plan	X			Emergency Operations Plan
Threat and Hazard Identification and Risk Assessment	X			Emergency Operations Plan
Active Shooter Plan	X			Code Silver policy
Post-Disaster Recovery Plan	X			Emergency Operations Plan
Continuity of Operations Plan	X			Emergency Response Policies
Public Health Plans	X			

Table 11-2 Harbor Regional Health Legal and Regulatory Capability				
	Local Authority	Federal Jurisdictional Authority	State Mandated	Comments
Specific Training for infectious diseases	X			Internal Infection Control and Prevention policies and procedures
Evacuation Plan for Patients		X		CMS compliant Evacuation Policy
Standard Operating Procedures/Guides	X			Hospital Policies and Procedures
Boards and Commission				
Planning Commission				
Mitigation Planning Committee	X			Emergency Management Committee
Maintenance Programs	X			Plant Services Department
Mutual Aid Agreements/MOU	X		X	Region 3 Healthcare coalition Disaster Medical Command Center (DMCC) to coordinate patient placement between health care organizations.
Governing Commissioners – Christopher Thomas, Position 1 (Junction City, Central Park, Montesano) – Michael Bruce, Position 2 (Westport, Grayland) – Lynn Csernotta, Position 3 (Ocean Shores and North Beach) – Andrew Bickar, Position 4 (Hoquiam) – John Shaw, Position 5 (Aberdeen) – Robert Torgerson, Secretary – David Quigg, At Large 1 – Scott Dilley, At Large 2				
Codes, Ordinances, & Requirements				
NFPA		X	X	National Fire Protection Agency
DNV		X		Det Norske Veritas
CMS standards		X		Centers for Medicare and Medicaid Services
FGI building Code			X	Facility Guidelines Institute
IBC building Code	X		X	International Building Code
L&I			X	Labor and Industries
ASHRAE		X		Air and water quality
USP		X		Pharmaceutical Codes

Table 11-2 Harbor Regional Health Legal and Regulatory Capability				
	Local Authority	Federal Jurisdictional Authority	State Mandated	Comments
HRH ERPs	X			Hospital Emergency Response Plans
CDC		X		Centers for Disease Control and Prevention
ANSI		X		American National Standards Institute
ORCAA			X	Olympic Region Clean Air Agency
OSHA			X	Occupational Safety and Health Administration
DOH			X	Department of Health
EPA			X	Environmental Protection Agency
IFC	X	X		International Fire Code
Hazardous Materials Plan	X			Organizations HAZMAT response plan
FDA		X		Food and Drug Administration
DSHS			X	Department of Social and Health Services
AFD	X			AHJ Aberdeen Fire Department

11.5.2 Administrative and Technical Capabilities

The assessment of the District's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 11-3. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 11-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices as they relate to the hospital.	Yes	Plant Services, HRH, Director
Personnel specialized in operation of hospital-specific systems.	Yes	Plant Services, HRH, Director
Staff with training in benefit/cost analysis	Yes	Value Analysis Committee
Emergency Manager	Yes	Plant Services, HRH, Director
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.)	Yes	Teleira, Hears radio, Tiger Text, Hospital PA, Amateur Radio
Hazard data and information available to public	Yes	Plant Services, HRH, Director
Education and Outreach		

Table 11-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Safety committee focused on hospital safety and emergency preparedness efforts?	Yes	Work Place Safety and Emergency Management Committees currently chaired by the hospital Safety Officer
Organization focused on individuals with access and functional needs populations	Yes	Various plans in place to ensure evacuation if needed
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Education & Marketing, HRH, Director
Natural disaster or safety related programs?	Yes	Various communicable disease programs.
Public-private partnership initiatives addressing disaster-related issues?	Yes	Plant Services, HRH, Director
Multi-seasonal public awareness program?	Yes	Education & Marketing, HRH, Director
MOUs for continuity of services	Yes	Agreements to provide care and receive goods and services for business continuity.

11.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 11-4. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 11-4 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	No

11.6 HAZARD RISK AND VULNERABILITY RANKING

The District's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the HRH. In addition to the hazard data provided in the base plan, the following further identifies the impact of the hazards of concern on HRH.

Table 11-5 identifies the Calculated Priority Risk Index (CPRI) scoring spreadsheet. Table 11-6 presents the ranking of the hazards of concern based on their CPRI score, as well as a qualitative assessment of the District's impact. A qualitative vulnerability ranking was also assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ❑ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- ❑ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ❑ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- ❑ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- ❑ Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 11-5
Harbor Regional Health
2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change		2				2				2						1				4	1.95	8	Low
Drought	1					2				2						1				4	1.55	10	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion		2				2									2					4	1.70	9	Low
Flood			3				3		1							1			3		2.30	5	Medium
Landslides				4				4			3		4						3		3.75	2	High
Severe Weather			3			2				2					2			2			2.40	4	Medium
Tsunami				4			3				3		4					2			3.50	3	High
Volcano	1				1						3					1			3		1.50	10	Low
Wildfire		2				2				2				3					3		2.20	6	Medium
Other Hazards of Concern (Hazmat)		2				2				2				3					3		2.20	7	Medium

Table 11-6 Hazard Risk and Vulnerability Ranking				
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	District Impact
1	Earthquake	3.85	High	Earthquake is the hazard of greatest concern for the district. In terms of facilities, several of the facilities are older in nature. The structures are all in a “Severe” shaking zone, although they are in a very low liquefaction zone. In a significant EQ event, accessibility for patients, responders and staff would be directly impacted. Supplies needed would also be directly impacted.
2	Landslides	3.75	High	While none of the hospitals’ structures are impacted by landslides, landslides historically have caused roadways to be blocked. This impacts not only patients, but also staffing at the hospital for personnel reporting to work.
3	Tsunami	3.5	High	As a coastal community, impact from tsunami would vary on area, but would impact first responders’ ability to transport patients; patients’ ability to gain access to the hospital; supply-chain issues for equipment, medical supplies, etc.
4	Severe Weather	2.4	Medium	Severe weather can impact not only all of the structures, but also power supplies, supplies of equipment, food, medications, etc., coming into the hospital if roadways are impacted. This would also impact capabilities of first responders to transport patients, and for patients to get into the facilities.
5	Flood	2.3	Medium	Flooding throughout the county occurs on a regular basis. The hospital, in 2015, was impacted by a flood incident, sustaining some damage, although none of the facilities are currently identified in the 100- or 500-year flood zone recently completed by FEMA. Again, patients’ ability to gain access to the hospital facilities would be of concern, both for emergency situations, and for patients seeking regular appointments.
6	Wildfire	2.2	Medium	The majority of the districts’ structures are in Fire Regime Group V. The hospitals do have fire control devices such as sprinklers in place.
7	Climate Change	1.95	Low	While climate change will exacerbate other hazards of concern, direct impact on facilities will be limited, with the exception of wildfire. The impact on the district is associated with increase in the number of patients seeking treatment.

Table 11-6 Hazard Risk and Vulnerability Ranking				
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	District Impact
8	Erosion	1.7	Low	The districts assets are not subject to erosion, although roadways in the area could be impacted, causing difficulties with first responders and patients attempting to gain access to the facilities.
9	Drought	1.55	Low	Drought would increase wildfire danger, as well as potentially impact water supply in the area since much of the area is serviced by wells. While the hospital has plans in place for water supply, the heat many times associated with a drought situation could impact more vulnerable populations serviced by the hospital, increasing the number of patients needing treatment.
10	Volcano	1.5	Low	The primary concern for the district with respect to volcano would be the potential impact to motorized equipment due to ash and the clogging of air intake systems. Vulnerable populations would also be of concern, as patients with breathing difficulties could be impacted, thereby increasing service requirements.

11.7 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

11.8 HAZARD MITIGATION ACTION PLAN

The Planning Team for the District identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 11-7 lists the action items/strategies that make up the district's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

Table 11-7
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 Evaluate and perform seismic and other upgrades to vulnerable sections of existing hospital to increase protection for patient and continuity of operations due to earthquake or other hazard impact.									
Existing	E, F, SW	All	Plant	High	HMGP, PDM	Long-Term	Yes	Structural Projects, Mitigation, Response, Recovery, Resource Protection	Region
INITIATIVE #2 Continue working with County Emergency Management to conduct educational outreach efforts to hospital staff and citizens wishing to attend concerning the hazards of concern. Provide information on the hazards and how they can impact the hospital and surrounding communities, and ways in which to be self-sustaining. This includes providing information on emergency preparedness kits, family plans, knowing safety zones, etc.									
New and Existing	All	All	EM, County EM	Low	General	Short-Term	Yes	Public Information, Prevention, Recovery	Local
INITIATIVE #3 Continue to review existing plans in place to ensure new risk assessment data is incorporated appropriately within planning documents to coincide with the risks as identified. Educate and train on those plans.									
New and Existing	All	All	EM, Risk	Medium	DOH, General	Long-Term	Yes	Prevention, Property Protection, Emergency Services, Recovery	County
INITIATIVE #4 Review and update, as appropriate, MOUs in place concerning supplies needed during incident periods.									
New and Existing	All	All	EM, Risk, Legal, Board	Low	General	Long-Term	Yes	Prevention, Protection, Emergency Services, Recovery	Facility

11.9 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 11-8 identifies the prioritization for each initiative.

Table 11-8
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	9	H	H	Y	Y	N	H
2	9	H	L	Y	N	Y	H
3	9	H	M	Y	Y	Y	H
4	9	H	L	Y	N	Y	H

a. See Chapter 1 for explanation of priorities.

11.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 11-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 11-9.
2024 Status of Previous Hazard Mitigation Strategies

Mitigation Strategy	Associated Hazards							2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Continue to look for funding opportunities to study and implement seismic support to hospital.		X	X		X			Goal is to continue to identify grant opportunities for seismic study and installation.		X		
Continue working with the county on public outreach and education regarding local hazards and preparation.	X	X	X	X	X	X	X	Work with the county for staff and public education for identified perils.		X		
Continue to review existing emergency plans to identify opportunities for improvement.	X	X	X	X	X	X	X	Emergency Management Committee is working through plans to insure that they meet the needs of the hospital.		X		

Table 11-9. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Continue to review hospital MOUs and supply chain contracts for required supplies.	X	X	X	X	X	X	X	Continue to update MOUs and contracts from key vendors to maintain 96 hour plan.		X		

CHAPTER 12.

GRAYS HARBOR FIRE PROTECTION DISTRICT NO. 2 2024 ANNEX

12.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the Grays Harbor Fire Protection District No. 2 (Fire District 2), a participating special purpose district to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements, apply to and were met by Fire District 2. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only. This document serves as an update to the district's previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

12.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

Fire District 2 followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, Fire District 2 also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
John McNutt 6317 Olympic Highway Aberdeen, WA 98520 Telephone: (360) 532-6050 Email: j.mcnutt@ghfd2.net	Fire Chief Primary Point of Contact	Coordinated Planning Process with district personnel. Conducted Commissioners' briefings and public outreach efforts. Reviewed and updated plan documents.
Anthony Broten 6317 Olympic Highway Aberdeen, WA 98520 Telephone: (360) 532-6050 Email: t.broten@ghfd2.net	Captain Alternate Point of Contact	Assisted with the coordination of the planning process. Attended meetings and public outreach efforts. Reviewed and updated plan documents, annex, and hazard/risk planning development implementation

12.3 DISTRICT PROFILE

Formed in 1949, the Grays Harbor County Fire Protection District No. 2 provides an all-hazard response to more than 330 square miles of Grays Harbor County. Services provided by the Fire District include fire suppression, Advanced Life Support (ALS) and Basic Life Support (BLS) emergency medical transport level pre-hospital care, extrication and rescue, and prevention/inspection services. It is governed by an elected three (3) member Board of Fire Commissioners.

To accomplish its mission, the Fire District uses a combination staffing model. Command and administration are provided by a board-appointed full-time Fire Chief, volunteer Deputy Chief, and part-time District Secretary/Administrative Assistant. The Fire District is staffed 24 hours from Station 2-1 (Central Park) utilizing a 3-platoon format with two (2) personnel on duty and a daytime 40-hour-per-week Captain. The Daytime Captain, three (3) Lieutenants, three (3) full-time Firefighter/Paramedics, along with 21 volunteers are the core of the operations section.

The Fire District is primarily funded by regular property taxes and an EMS levy. Taxes constitute 85 percent of available operating revenue. The remainder of the 2.4 million dollars per year budget is comprised of fees collected for ambulance transport fees, fire and EMS service contracts, cash carryover, and inter-governmental services.

The following is a summary of key information about the jurisdiction:

- **Governing Authority**— The district is governed by three (3) elected Fire Commissioners creating the Board of Fire Commissioners.
- **Population Served**— Resident population of 6,966 as of October 2022 from the 2020 Census Redistricting Data provided through the Grays Harbor GIS Office from the WA State Office of Financial Management [P.L. 94-171] Summary Files.
- **Land Area Served**— 152 square miles (within the jurisdictional boundary). EMS services are provided to 330 square miles.
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$1,049,626,901 million (information from the Grays Harbor Assessor's Office – Levies for tax year 2022 for collection in 2023).
- **Land Area Owned**— 12.17 acres
- **Total Value of Critical Infrastructure/Equipment**— Grays Harbor County Fire Protection District #2 fleet. The total value of critical infrastructure and equipment owned by the jurisdiction is 2.2 million.

Critical Facilities Owned by the Jurisdiction			
Structure	Building Value	Content Value	Total Value
Station 2-1 (Central Park)	\$4,622,500	\$225,750	\$4,848,250
Station 2-2 (Brady)	\$1,612,500	\$53,750	\$1,666,250
Station 2-3 (Wynoochee)	\$689,000	\$56,438	\$745,438
TOTALS	\$6,924,000	\$335,938	\$7,259,938

SERVICE TREND 2020 - 2023							
Major Incident Breakdown	2020	%	2021	%	2022	%	Overall Change 3-years
Fire	26	2.08%	56	4.15%	58	4.94%	4.14%
Rescue & EMS	775	61.95%	754	55.81%	839	71.47%	62.80%
Hazardous Condition (No Fire)	9	0.72%	6	0.44%	6	0.51%	0.56%
Service Call	66	5.28%	97	7.18%	76	6.47%	6.34%
Good Intent Call	353	28.22%	411	30.42%	184	15.67%	25.14%
False Alarm & False Call	19	1.52%	24	1.78%	8	0.68%	1.35%
Severe Weather & Natural Disaster	0	0.00%	0	0.00%	2	0.17%	0.05%
Special Incident Type	1	0.08%	1	0.07%	0	0.00%	0.05%
Totals	1249		1349		1173		

- Future Development** - The future development in the area has slowed, but there is some minor business growth on the horizon. Grays Harbor Transit (GHT) is working on building a maintenance center in the center of the district. This maintenance building will be a major part of the GHT system and will be a key component in the operation of their fleet. Along with this project, there is expected to be a Pape business building near the same location, and this may impact the amount of traffic near this major intersection of the highway. With the major additional businesses, it is anticipated that this will increase the calls for service.

The Fire District's boundaries and contracted EMS response area are shown in the map provided below.

12.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events that have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the special purpose district. Table 12-1 lists all past occurrences that have impacted the district. If available, dollar loss data is also included.

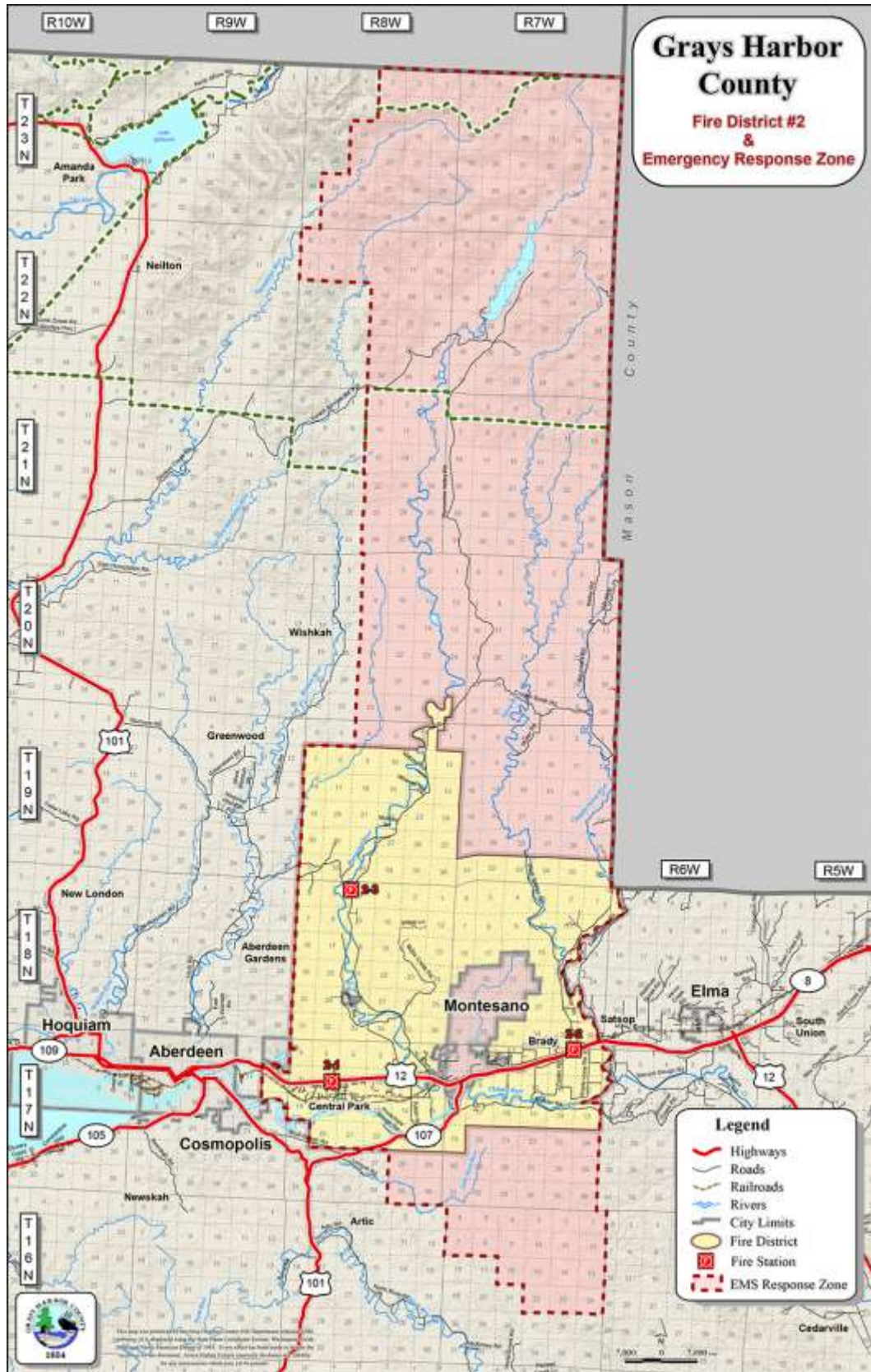


Table 12-1
Grays Harbor County Disaster History 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
4650	3/29/22	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	2/15/2022
4593	4/8/2021	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	1/16/2021
4539	4/23/20	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	2/10/2020
4481	3/22/20	COVID	Biological	1/20/2020	5/11/2023
4418	3/4/2019	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	12/24/2018
4253	2/2/2016	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015	12/14/2015
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	8/29/2015	8/29/2015
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012	1/23/2012
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008	1/5/2009
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009	1/16/2009
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007	12/17/2007
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006	12/15/2006
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006	11/11/2006
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006	2/4/2006
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	10/15/2003	10/23/2003
1361	3/1/2001	Earthquake	Earthquake	2/28/2001	3/16/2001

Table 12-1
Grays Harbor County Disaster History 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997	3/28/1997
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996	2/10/1997
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	1/26/1996	2/23/1996
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995	12/18/1995
1037	8/2/1994	Fishing Losses	The El Nino (The Salmon Industry)	5/1/1994	10/31/1994
883	11/26/1990	Flood	Severe Storms, Flooding	11/9/1990	12/20/1990
852	1/18/1990	Flood	Severe Storms, Flooding	1/6/1990	1/14/1990
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980	5/21/1980
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979	12/31/1979
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	12/10/1977	12/10/1977
492	12/13/1975	Flood	Severe Storms and Flooding	12/13/1975	12/13/1975
322	2/1/1972	Flood	Severe Storms and Flooding	2/1/1972	2/1/1972
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	2/9/1971
185	12/29/1964	Flood	Heavy Rains and Flooding	12/29/1964	12/29/1964
EMERGENCY DECLARATIONS					
3227	9/7/2005	Coastal Storm	Hurricane Katrina Evacuation	8/29/2005	10/1/2005
SIGNIFICANT LOCAL INCIDENTS					
NA	NA	Landslides/Floods	Heavy Rains and Landslides (Countywide)	1/4/2015	1/5/2017

12.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other ongoing efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies, and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities, which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other ongoing mitigation efforts; fiscal capabilities, which support mitigation efforts; and classifications under various community programs.

12.5.1 Regulatory Capability

The assessment of the district's legal and regulatory capabilities, which are customarily used by jurisdictions to implement hazard mitigation activities, are identified below.

- Grays Harbor Fire District 2 – Strategic Plan and Goals
- Fire District 2 – Policies & Procedures
- CEMP – Grays Harbor County
- Federal Mitigation Act of 2000
- Response Plans
- National Response Framework 2008
- National Incident Management System (NIMS)
- Title 52 RCW (entire)
- RCW 18.71, 18.73 EMS
- WAC 296-305 Safety Standards for Firefighters
- WAC 246-967 EMS and Trauma Systems
- International Building & Fire Code (2012 Edition)
- Grays Harbor County-wide Mutual Aid Agreement

12.5.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts and ongoing programmatic efforts, are presented in Table 12-2. These are elements that support not only mitigation but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 12-2 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	YES	Grays Harbor County
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	YES	Chief John McNutt, Grays Harbor Fire District 2 LT James Sande, Grays Harbor Fire District 2 Grays Harbor County – Fire Marshal
Engineers specializing in construction practices?	YES	TCA Architecture
Planners or engineers with an understanding of natural hazards	YES	Grays Harbor County Planning Department
Personnel skilled or trained in GIS applications	YES	Grays Harbor GIS Services
Emergency Manager	YES	The County provides this service
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	YES	The County uses a reverse 9-1-1 system; The county uses the AHAB sirens for Tsunami warnings and signage for warning systems and evacuation routes. We also use our PIO and social media for notification to citizens.
Hazard data and information available to the public	YES	Hazard maps developed through this process are available on the county's website for review.
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	NO	
Organization focused on individuals with access and functional needs populations	YES	Coastal Community Action Plan (CCAP) www.costalcap.org
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	YES	Grays Harbor Fire District 2 – direct delivery, website, and public meetings. www.ghfd2.org
Natural disaster or safety-related school programs?	YES	Grays Harbor Fire District 2 – direct delivery, website and public meetings. www.ghfd2.org Grays Harbor EM
Public-private partnership initiatives addressing disaster-related issues?	YES	NRC Environmental Services Puget Sound & Pacific Railroad
Multi-seasonal public awareness program?	YES	Grays Harbor Fire District 2 and Grays Harbor County regularly provides seasonal awareness programs via its website, safety fairs and social media posts
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	NO	
Noxious Weed Eradication Program or other vegetation management	NO	
Fire Safe Councils	YES	
Chipper program	NO	

Table 12-2 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Defensible space inspection program	YES	
Address signage for property addresses	YES	

12.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 15-4. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 12-3 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	YES
Capital Improvements Project Funding	YES
Authority to Levy Taxes for Specific Purposes	YES
User Fees for Water, Sewer, Gas or Electric Service	NO
Incur Debt through General Obligation Bonds	YES
Incur Debt through Special Tax Bonds	YES
Incur Debt through Private Activity Bonds	NO
Withhold Public Expenditures in Hazard-Prone Areas	NO
State Sponsored Grant Programs	YES
Development Impact Fees for Homebuyers or Developers	YES

12.5.4 Community Classification

The district's classifications under various hazard mitigation programs are presented in Table 14-5. Each of the classifications identified establishes requirements that, when met, are known to increase the resilience of a community. Those that specifically require district participation or enhance mitigation efforts are indicated accordingly.

Table 12-4 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	5	
Building Code Effectiveness Grading Schedule	4	
Storm Ready	Yes- County	Oct -2023
Firewise	No	
Tsunami Ready (if applicable)	Yes- County	Oct – 2023

12.6 HAZARD RISK AND VULNERABILITY RANKING

The district’s Planning Team reviewed the hazard list identified within the Base Plan and has identified the hazards that affect the Grays Harbor County Fire Protection District #2.

Table 3-7 presents the ranking of the hazards of concern based on their CPRI score. Table 12-6 identifies the values from the CPRI spreadsheet. Once the hazards were ranked, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ❑ Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact on government functions with no disruption to essential services.
- ❑ Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ❑ Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated and less costly than a more widespread disaster. Government functions are at 80% with limited impact on essential services.
- ❑ High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% of operations with limited delivery of essential services.
- ❑ Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 12-5
Hazard Risk and Vulnerability Ranking

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	District Impact
1	Flood	3.70	High	Flooding in the district frequently occurs. Although none of the stations are in the 100-year floodplain, The Station 2-2 area does have a history of being affected by flood waters, and due to the surrounding flat land, response would be hampered by floodwaters over the roadways.
2	Earthquake	3.20	High	The entire planning area is susceptible to earthquakes. The structures owned by the district range from "very low" to "high" liquefaction zones and are dated, making them susceptible to earthquake hazards. Station 2-1 existing is unreinforced masonry. There are also multiple bridges inside the response area that could sustain damage and hinder response.
3	Wildfire	2.90	High	While structures owned by the district have not been impacted by wildfire, the district's response to wildfire events has increased over the last several years, potentially due to climate change and drought. We have been fortunate enough to be able to control wildfires that have erupted in our district.
4	Climate Change	2.75	High	Climate change will continue to exacerbate other hazards of concern, including increased severity of severe storms, increased flooding events, and impact on water supplies. These have the potential to impact not only district-owned structures but also response capabilities
5	Severe Weather	2.65	Medium	Severe storms can impact all of the District's structures. Most of the structures included in this assessment were built in the 1950s era. Strong winds can damage the facilities. Severe storms also impact response capabilities. Falling trees and flooding roadways impact ingress and egress. Snow, while usually not of long duration or significant amounts, also has the potential to impact response times and increase calls. Snow-load capacities can also be of concern on aged roofs and affect driving conditions for larger apparatus.
6	Drought	2.35	Medium	Droughts continue to increase the risk of wildfire and have the ability to limit water supplies needed to fight fires. The increase in wildfire danger could also impact the risk of the district's structures.

Table 12-5 Hazard Risk and Vulnerability Ranking				
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	District Impact
7	Tsunami	2.30	Medium	The Fire District's risk for tsunami is similar to the risk of Flood. A tsunami increases the population of citizens seeking refuge out of the inundation zone. The increase in population would impact our ability to provide services greatly.
8	Landslides	2.35	Low	No structures owned by the district fall within the landslide hazard area, although the roadways could be impacted by landslides occurring throughout the county along major roads.
9	Erosion	2.25	Low	Erosion is a low hazard for the district due to being more inland. The District's assets are not subject to erosion, although roadways in the area could be impacted, causing difficulties, and impacting response times.
10	Volcano	1.35	Low	The primary concern for the district with respect to a volcano would be the potential impact on motorized equipment due to ash and the clogging of air intake systems. Vulnerable populations would also be affected, as patients with breathing difficulties could be impacted, thereby increasing respiratory and overall response calls.

Table 12-6
2024 CPRI Score and Hazard Ranking Values

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4		2				2						1				4	2.75	4	High
Drought			3			2				2						1				4	2.35	6	Medium
Earthquake			3				3				3		4							4	3.20	2	High
Erosion		2				2				2				3						4	2.25	9	Low
Flood				4				4				4			2					4	3.70	1	High
Landslides		2				2				2			4					3			2.35	8	Low
Severe Weather			3			2						4				1		2			2.65	5	Medium
Tsunami		2				2				2			4					2			2.30	7	Medium
Volcano	1				1					2						1				4	1.35	10	Low
Wildfire			3			2					3		4					2			2.90	3	High
Other Hazards																							None included

12.7 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

12.8 HAZARD MITIGATION ACTION PLAN

The Planning Team for the district identified and prioritized a wide range of actions based on the risk assessment and their knowledge of the district assets and hazards of concern. Table 12-7 lists the strategies that make up the district's hazard mitigation plan. Background information and information on

how each strategy will be administered, the responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

**Table 12-7.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Station 2-2 needs an emergency power generator with automatic transfer switch									
Existing 2-2 Station	All	1,2,3,4,6	GHCFFPD #2	\$70,000	Grants, District Funds, UTGO/ LTGO Bonds, FEMA, HUD	Short Term	Yes	Property Protection, Emergency Services, Recovery	Facility, Local, County
INITIATIVE #2 Station 2-3 needs an emergency power generator with automatic transfer switch									
Existing 2-3 Station	All	1,2,3,4,6	GHCFFPD #2	\$70,000	Grants, District Funds, UTGO/ LTGO Bonds, FEMA, HUD	Short Term	Yes	Property Protection, Emergency Services, Recovery	Facility, Local, County
INITIATIVE #3 Station 2-1 old station needs to be seismically retrofitted to withstand earthquake									
Existing 2-1 Station	EQ	1,2,3,4,6	GHCFFPD #2	225,000	Grants, District Funds, UTGO/ LTGO Bonds, FEMA, HUD	Long Term	Yes	Prevention Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Facility, Local, County
INITIATIVE #4 Create public education classes, publications, and informational outreach to raise the level of hazard awareness within the district.									

Table 12-7.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
New	All	5,6	GHCSPD#2	5,000	Grants, District Funds, UTGO/LTGO Bonds, FEMA, HUD	Short Term	No	Public Information	Facility, Local, County

12.9 STATUS OF PREVIOUS PLAN INITIATIVES

Table 12-8 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 12-8
2024 Status of Previous Hazard Mitigation Strategies

Mitigation Strategy	Associated Hazards							2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 1 Station 2-2 needs an emergency power generator with an automatic transfer switch.	✓	✓	✓	✓	✓	✓	✓	The cost for repairs and replacement of current infrastructure and equipment has pushed this project out. Exterior needs of the building are a necessity, and the District will continue to look for grant funding.				✓

Table 12-8
2024 Status of Previous Hazard Mitigation Strategies

Mitigation Strategy	Associated Hazards							2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE #2 Station 2-3 needs an emergency power generator with an automatic transfer switch.	✓	✓	✓	✓	✓	✓	✓	The cost for repairs and replacement of current infrastructure and equipment has pushed this project out. Exterior needs of the building are a necessity, and the District will continue to look for grant funding.				✓
INITIATIVE #3 Station 2-2 needs to be relocated out of the flood plain to a seismically engineered building on higher ground.		✓	✓		✓	✓		This initiative will be removed. The building is not located in the flood area. There is still a need to work on seismically re-enforcing the building or replacement of the station altogether.			✓	
INITIATIVE #4 Station 2-1 old station needs to be seismically retrofitted to withstand an earthquake.		✓						The old section of Station 2-1 had some renovation work started in 2121 and completed in 2022. None of the work pertained to the seismically retrofitting of the building. Funding was not able to support this portion of the project. Other funding opportunities will continue to be looked for.				✓
INITIATIVE #5 Station 2-1 old station needs the replacement of 80KW emergency power generator to a 120KW with ATS.	✓	✓	✓	✓	✓	✓	✓	With the addition of the new section of station 2-1, there was an additional generator unit installed.. There is no longer a need to replace the 80KW generator unit	✓			
INITIATIVE #6 Create public education classes, publications, and informational outreach to raise the level of hazard awareness within the district.	✓	✓	✓	✓	✓	✓	✓	There has been involvement on the County level with the District. There still needs to be a formal plan set and a way to fund costs associated with the activities, such as hand-out materials and educational materials.		✓		

12.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 15-9 identifies the prioritization for each initiative.

Table 12-9. Mitigation Strategy Priority Schedule							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	5	H	M	Yes	Yes	No	M
2	5	H	M	Yes	Yes	No	M
3	5	H	H	Yes	Yes	No	H
4	2	M	M	Yes	Yes	No	M
a. See Chapter 1 for explanation of priorities.							

12.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

- Although the Fire District is part of the Grays Harbor County Emergency Management Plan, a CEMP needs to be created on a local agency basis to better understand the risks and vulnerability of the specific agency.
- A Firewise Community Risk Assessment would benefit the district and its capabilities for wildfire. The only Firewise Community in Grays Harbor County is Ocean Shores, and the district feels that a broader assessment would be beneficial for the entire county.

<https://www.nfpa.org/Public-Education/By-topic/Wildfire/Firewise-USA/Become-a-Firewise-USA-site>

CHAPTER 13.
GRAYS HARBOR FIRE DISTRICT NO. 5 2024 ANNEX UPDATE
PLACEHOLDER

Pending completion.

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CHAPTER 14.

GRAYS HARBOR FIRE PROTECTION DISTRICT #7 2024 ANNEX

14.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the Grays Harbor Fire Protection District #7, a participating special purpose district to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Grays Harbor Fire Protection District #7. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only.



14.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The Grays Harbor Fire Protection District #7 followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Grays Harbor Fire Protection District #7 also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Stephanie Selin, Fire Chief PO Box 322 Copalis Beach, WA 98535 (360) 580-3586 sselin@ghfd7.com	Primary Point of Contact	Attended HMP Planning Team Meetings; Updated Annex; Conducted Risk Assessment; presented risk findings at various meetings; updated Commissioners on HMP status; presented plan to Commissioners for review and adoption.
James Richards Charles Nation Darrell Haglund PO Box 322 Copalis Beach, WA 98535 (360) 289-4338	Board of Commissioners	Received briefings at various meetings throughout the planning effort; provided input with respect to the hazards and risk assessment process; reviewed and approved the draft plan; adopted the 2024 HMP and the District's Annex

14.3 DISTRICT PROFILE

Grays Harbor Fire Protection District #7 was established in 1958 to provide fire protection services to the citizens of the North Beach of Grays Harbor County. Prior to completion of the plan, Grays Harbor Fire District #7 annexed what was formally Grays Harbor Fire District #16 which was a small, rural volunteer fire department covering the community of Copalis Crossing.

The expanded Grays Harbor Fire District #7 serves 97 square miles of unincorporated Grays Harbor County, north of the City of Ocean Shores, East to Humptulips. Staffing includes a combination of four paid employees and approximately twelve volunteers. The district provides emergency medical services at a basic life support level as well as fire protection to their 1,524 citizens in conjunction with multiple mutual aid agreements. The fire district is governed by a board of three elected commissioners.

The following is a summary of key information about the jurisdiction:

- **Governing Authority**— Fire District #7 is governed by Board of three fire commissioners
- **Population Served**—1,524 citizens as of December, 2020
- **Land Area Served**—97 Sq. Miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$435,166,814
- **Land Area Owned by District**—2.86 Acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
 - Four Fire Engines \$600,000
 - Three BLS Ambulances \$300,000
 - Three Water Tenders \$150,000
 - Five Brush Fire Vehicles \$170,000
 - Two Medical Support Vehicles \$67,000
 - Two Support Vehicles \$55,000
- **Total Value of Critical Infrastructure/Equipment**—\$1,342,000
- **List of Critical Facilities Owned by the Jurisdiction:**
 - Station #1 – Copalis Beach \$530,000
 - Water Tower – Copalis Beach \$72,800
 - Station #2 – Ocean City \$110,000
 - Station #3 – North Bay \$94,000
 - Meeting Hall – Ocean City \$310,000
 - Station #4 – Copalis Crossing \$379,00
 - Station #5 – Powell Road \$35,000
- **Total Value of Critical Facilities**— \$1,530,800

- **Current and Anticipated Service Trends**— Increased call volume is anticipated with the annexation of Grays Harbor Fire District #16. Grays Harbor Fire District #7 experienced an increased call volume prior to the annexation.

The District's boundaries are shown on the map provided below.

14.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to Grays Harbor Fire District #7. Table 14-1 lists all past occurrences which have impacted the county. No dollar loss figures were available for any damage sustained by the District for any of these events.

Table 14-1 Natural Hazard Events			
Disaster Number	Incident Type	Title	Date
4650	Flood	Severe Winter Storms, Snowstorms, Stright-Line winds, Flooding	12/26/2021
4593	Severe Storm	Severe Winter Storm, Stright-Line Winds, Flooding, Landslides, and Mudslides	12/29/2020
4539	Flood	Severe Storms, Flooding, Landslides, and Mudslides	1/20/2020
4481	COVID	Biological	1/20/2020
4418	Severe Storms	Severe Winter Storms, Stright-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018
4253	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015
4242	Severe Storm(s)	Severe Windstorm	8/29/2015
4056	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012
1825	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008
1817	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009
1734	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007

Table 14-1 Natural Hazard Events			
Disaster Number	Incident Type	Title	Date
1682	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006
1671	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006
1641	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006
1499	Severe Storm(s)	Severe Storms and Flooding	10/15/2003
1361	Earthquake	Earthquake	2/28/2001
1172	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997
1159	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996
1100	Flood	High Winds, Severe Storms, Flooding	1/26/1996
1079	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995
1037	Fishing Losses	The El Nino (The Salmon Industry)	5/1/1994
883	Flood	Severe Storms, Flooding	11/9/1990
852	Flood	Severe Storms, Flooding	1/6/1990
623	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980
612	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979
545	Flood	Severe Storms, Mudslides, Flooding	12/10/1977
492	Flood	Severe Storms and Flooding	12/13/1975
322	Flood	Severe Storms and Flooding	2/1/1972
300	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971
185	Flood	Heavy Rains and Flooding	12/29/1964

14.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

14.5.1 Regulatory Capability

The assessment of the district's legal and regulatory capabilities which are customarily used by jurisdictions to implement hazard mitigation activities, are identified in Table 14-2. Those items include capabilities which exist for both the district and the surrounding planning areas, which, combined, have the potential to impact risk and vulnerability.

TABLE 14-2 LEGAL AND REGULATORY CAPABILITY				
	Local Capability or Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	Yes	Yes	Yes	Local and County adoption of building codes.
Zoning Ordinance	Yes	Yes	No	Local and county zoning ordinances
Sprinkler Codes	No	No	Yes	
RCW 52.26 (Regional Fire Protection Service)	No	Yes	Yes	
WAC 296.305	No	No	Yes	
Floodplain Ordinance	Yes	Yes	No	Local ordinance in place. Mandated for NFIP Compliance
Post Disaster Recovery	No	Yes	Yes	
Public Health and Safety	Yes	Yes	Yes	
Coastal Zone Management	Yes	Yes	No	

TABLE 14-2 LEGAL AND REGULATORY CAPABILITY				
	Local Capability or Authority	Other Jurisdictional Authority	State Mandated	Comments
Natural Hazard Specific Ordinance (steep slope, wildfire, etc.)	No	Yes	Yes	
Environmental Protection	No	Yes	Yes	
National Incident Management System	Yes	Yes	No	
Planning Documents				
General or Comprehensive Plan	Yes			
Shoreline Management Plan	No	Yes	Yes	
Community Wildfire Protection Plan	No	No	No	
Transportation Plan	No	Yes	No	
Emergency Operations Plan	Yes	Yes	Yes	The District, through County EM, takes part in planning efforts as those documents are developed. The District does operate within the ICS structure and is NIMS compliant.
Response Plan	Yes	Yes	Yes	The County and the various jurisdictions do have emergency response plans in place for their respective jurisdiction or infrastructure. As appropriate, the District utilizes those plans.
Evacuation Plan	No	Yes	Yes	Evacuation plans are in place for various hazards countywide. Implementation of those plans is coordinated through the County, with support by the District.
Response/Recovery Planning				

TABLE 14-2 LEGAL AND REGULATORY CAPABILITY				
	Local Capability or Authority	Other Jurisdictional Authority	State Mandated	Comments
Comprehensive Emergency Management Plan	No	Yes	Yes	The District is part of the countywide planning effort for the CEMP development. The District also takes part in various training efforts in support of the Core Capabilities with respect to recovery efforts.
Threat and Hazard Identification and Risk Assessment	No	Yes	Yes	
Public Health Plans	Yes	Yes	Yes	Through county and state.
Standard Operating Procedures/Guides	Yes	Yes	Yes	The District has various SOPs in place, including documents specific to hazard type for response purposes.
Boards and Commission				
Planning Team	No	Yes	Yes	
Mitigation Planning Committee	Yes	Yes	Yes	Utilized to complete the 2018 and 2024 HMP Annex Update for County and District
Governing Commissioners (3 Commissioners)	Yes	Yes	Yes	Commissioners were briefed at various stages throughout the planning effort.
Mutual Aid Agreements / Memorandums of Understanding	Yes	Yes	Yes	The mutual aid agreements in place provide for use of assets and personnel as needed throughout the County, as well as outside of the County when requested.
Other				

14.5.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 14-3. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

TABLE 14-3 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Staff trained in fire protection activities.	Yes	
NIMS Compliant	Yes	
Engineers specializing in construction practices?	Yes	County
Personnel skilled or trained in GIS applications	Yes	Marshall Read/City of Ocean Shores/Planner
Personnel skilled or trained in Hazus use	Yes	Through county GIS
Emergency Manager	Yes	The county provides emergency management services. The district works in unison with not only county emergency management, but also with the other districts within the county.
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Grays Harbor County provides this service for the District
Hazard data and information available to public	Yes	Data from the County's HMP will be available for citizens' review throughout the lifecycle of the plan. In addition, continued public outreach for the hazards of concern will continue to occur at various events, such as annual safety fairs, or other public meetings.
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Neighborhood Block Watch
Organization focused on individuals with access and functional needs populations	No	These services are provided at the County level, with input and assistance as possible from District 7.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	The County regularly provides public outreach efforts to keep citizens informed of various programs, preparedness efforts, etc.

TABLE 14-3 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Multi-seasonal public awareness program?	Yes	The County provides seasonal awareness outreach to the citizens of the County.

14.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 14-4. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

TABLE 14-4 FISCAL CAPABILITY	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

14.5.4 Community Classification

The district's classifications under various hazard mitigation programs are presented in Table 14-5. Each of the classifications identified establish requirements which, when met, are known to increase the resilience of a community. Those which specifically require district participation or enhance mitigation efforts are indicated accordingly.

TABLE 14-5 COMMUNITY CLASSIFICATIONS			
	Participating (Yes/No)	Grade	Date Enrolled/ Grade Received
Building Code Effectiveness Grading Schedule	Yes	4	2020
Protection Class	Yes	7	2017
Storm Ready	Yes		2023
Firewise	No		
Tsunami Ready (if applicable)	Yes		2023

14.6 HAZARD RISK AND VULNERABILITY RANKING

The district's Planning Team reviewed the hazard list identified within the Base Plan, and have identified the hazards that affect the Grays Harbor Fire Protection District #7.

Table 14-6 presents the ranking of the hazards of concern based on their CPRI score. Table 14-7 identifies the CPRI scoring. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

TABLE 14-6. HAZARD RISK AND VULNERABILITY RANKING			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.85	High
2	Tsunami	3.6	High
3	Flood	3.1	High
4	Severe Weather	3.05	High
5	Wildfire	2.9	Medium
6	Erosion	2.5	Medium
7	Landslide	2.35	Low
7	Climate Change	2.35	Low
7	Drought	3.35	Low
10	Other Hazards (Hazmat)	2.25	Low

Table 14-7 GHFD 7 2024 CPRI SCORE AND RANKING																							
Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change			3			2				2						1				4	2.35	7	Low
Drought			3			2				2						1				4	2.35	7	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion			3			2				2					2					4	2.50	6	Medium
Flood				4			3				3					1			3		3.10	3	High

**Table 14-7
GHFD 7 2024 CPRI SCORE AND RANKING**

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Landslides		2				2				2			4						3		2.35	7	Low
Severe Weather				4		2						4				1		2			3.05	4	High
Tsunami			3					4				4	4							4	3.60	2	High
Volcano	1				1				1							1			3		1.10	11	Low
Wildfire			3			2					3		4					2			2.90	5	Medium
Hazmat		2				2				2			4				1				2.25	10	Low

14.7 HAZARD OVERVIEW

- Tsunami – Fire District #7 is at a great risk of a tsunami due to being directly on the coastline. The District is home to Grays Harbor County Assembly Area #2. All three of the District’s Stations are located within the Tsunami induction zone.
- Earthquake – An earthquake on shore or off can result in a tsunami hitting the Pacific Coast. No District buildings or roadways are built to withstand (significant) seismic action. In the event of an earthquake, there will be very limited roadways remaining within the district. Additionally, all of the District’s Stations are older buildings. Impact from an earthquake would not only significantly impact the District’s structures themselves but would also impact the District’s ability to provide services.
- Landslides – Through the center of the district, in the Ocean City area, there are many homes built in land slide areas. In the event of a landslide, State Route 109 is susceptible to being blocked off through this area. One fire station falls within a land slide hazard zone.
- Severe Weather – During events of severe weather, the district is often divided into sections due to roadway hazards on State Route 109. While the District’s structures have not been impacted by a severe weather event, the ability to respond in the area is impacted. Additionally, the area is often times impacted by high winds. Overhead power lines are of concern, as they could impact not only the stations themselves due to the lines falling onto the structures and also impacting ingress and egress to the buildings, but also the power failure associated with a severe wind event.

The stations currently do not have generators. Due to the age of the existing structure, it is also uncertain to what wind-load capacity the structures were built.

- ☐ Erosion – The district covers approximately ten miles of coastline that is susceptible to erosion. While the district’s structures are not impacted directly, roadways are impacted.
- ☐ Flood – Due to the coastline and high amounts of rainfall, the district commonly floods in various areas. Flooding often results in water over roadways. This impacts the district’s ability to respond, and also citizen’s ability to evacuate, if needed.
- ☐ Wildfire – Along the coastline are dune grasses that are highly susceptible to wildland fires. 50% of the district total acreage is agricultural, wildland, open spaces, and/or undeveloped land. The district’s structures are within the identified wildfire regimes and could be impacted by a dune fire.
- ☐ Climate Change – Changes in weather patterns reinforce other hazards to impact the district more severely.
- ☐ Drought – Seasons of drought can increase the districts violability to landslides and wildfire hazards.
- ☐ Volcano – The district does not fall into any volcano induction zones. Ash could be of concern if a large amount accumulates on rooftops due to the weight of the ash, as well as the impact to mechanical equipment.

14.8 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

14.9 HAZARD MITIGATION ACTION PLAN

The Planning Team for the district identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 14-8 lists the action items/strategies that make up the district’s hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

Table 14-8.
HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE GHFD7-1 Seek grant funding for relocating one fire station from a high-hazard prone area. This structure will serve as a primary fire station at a central location for the whole district, emergency point of distribution, and emergency operations center. This initiative is in alliance with County-Specific Hazard Mitigation Initiatives C-1 and C-8 and Countywide Hazard Mitigation Initiatives CW-3, CW-6, CW-12 and CW-17.									
New/Existing	TS, EQ, LS, SW, F	1, 2, 3, 4, 5, 6, 7, 8	Grays Harbor Fire District 7	High	General Fund, Federal/Private Grants	Short-Term	Yes/Modified	Structural Projects	Facility, Local, and County
INITIATIVE GHFD7-2 Secure funding sources to obtain 24/7 paid fire and EMS coverage for responding to and mitigating all hazards and emergencies within the district. This will ensure the district facilities are in operation and prepared for emergencies of all degrees. This initiative is in alliance with Countywide Hazard Mitigation Initiatives CW-11, CW-19.									
Existing	All	2, 5, 6, 8	Grays Harbor Fire District 7	High	General Fund, Federal/Private Grants	Long-Term	Yes	Emergency Services	Local and County
INITIATIVE GHFD7-3 Train all fire personnel to a universal minimum level of credential: IFSAC Fire Fighter 1 and 2, FEMA ICS Training 100, 200, 700, and 800, NWCG Wildland Red Card Fire Fighter 2, and American Heart Association Basic Life Support Healthcare Provider. Train all fire officers to a universal minimum level of credential above that of fire personnel: IFSAC Fire Officer 1, FEMA ICS Training 300 and 400, Washington State Department of Health Emergency Medical Responder. This initiative is in alliance with County-Specific Hazard Mitigation Initiative C-18 and Countywide Hazard Mitigation Initiatives CW-19, CW-22.									
Existing	All	2, 5, 6	Grays Harbor Fire District 7	Medium	General Fund, Federal/Private Grants	Long-Term	Yes	Emergency Service	Local and County
INITIATIVE GHFD7-4 Work with Grays Harbor County Public Utility District to reroute power lines in front of Station #1 underground to not impede emergency response.									

Table 14-8.
HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing	All	2, 5, 6, 8	GHFD #7, GH PUD	Medium	General Fund, Federal/ State/ Private Grants	Short-Term	No	Emergency Services	Local and County
INITIATIVE GHFD7-5 Work with Grays Harbor County Public Utility District to reroute power lines in front of Station #2 underground to not impede emergency response.									
Existing	All	2, 5, 6, 8	GHFD #7, GH PUD	Medium	General Fund, Federal/ State/Private Grants	Short-Term	No	Emergency Services	Local and County
INITIATIVE GHFD7-6 Work with Grays Harbor County Public Utility District to reroute power lines in front of Station #3 underground to not impede emergency response.									
Existing	All	2, 5, 6, 8	GHFD #7, GH PUD	Medium	General Fund, Federal/ State/ Private Grants	Short-Term	No	Emergency Services	Local and County
INITIATIVE GHFD7-7 Work with Grays Harbor County Public Utility District to reroute power lines in front of Station #4 underground to not impede emergency response.									
Existing	All	2, 5, 6, 8	GHFD #7, GH PUD	Medium	General Fund, Federal/ State/ Private Grants	Short-Term	No	Emergency Services	Local and County

14.10 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 14-9 identifies the prioritization for each initiative.

TABLE 14-9 MITIGATION STRATEGY PRIORITY SCHEDULE							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant- Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority ^a
GHFD7-1	8	High	High	Yes	Yes	No	High
GHFD7-2	4	High	High	Yes	Yes	No	Med
GHFD7-3	3	Med	Med	Yes	Yes	Yes	Med
GHFD7-4	4	Med	Low	Yes	Yes	No	Low
GHFD7-5	4	Med	Low	Yes	Yes	No	Low
GHFD7-6	4	Med	Low	Yes	Yes	No	Low
GHFD7-7	4	Med	Low	Yes	Yes	No	Low
a. See Chapter 1 for explanation of priorities.							

14.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 14-10 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

TABLE 14-10 2024 STATUS OF 2018 HAZARD MITIGATION STRATEGIES												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
GHFD7-1 Seek grant funding for relocating one fire station from a high-hazard prone area into Grays Harbor County Tsunami Assembly Area #2. This structure will serve as a primary fire station, emergency point of distribution, emergency operations center, and emergency community assembly location. This initiative is in alliance with County-Specific Hazard Mitigation Initiatives C-1 and C-8 and Countywide Hazard Mitigation Initiatives CW-3, CW-6, CW-12 and CW-17		✓	✓	✓	✓	✓		Explored multiple funding opportunities. Nothing granted at this time. Area no longer designated as Tsunami Assembly Area.				✓

TABLE 14-10 2024 STATUS OF 2018 HAZARD MITIGATION STRATEGIES												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
HFD7-2 Secure funding sources to obtain 24/7 paid fire and EMS coverage for responding to and mitigating all hazards and emergencies within the district. This will ensure the district facilities are in operation and prepared for emergencies of all degrees. This initiative is in alliance with Countywide Hazard Mitigation Initiatives CW-11, CW-19.	✓	✓	✓	✓	✓	✓	✓	Have increased hours covered but not to 24/7 capabilities.				✓

TABLE 14-10 2024 STATUS OF 2018 HAZARD MITIGATION STRATEGIES												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
GHFD7-3 Train all fire personnel to a universal minimum level of credential: IFSAC Fire Fighter 1 and 2, FEMA ICS Training 100, 200, 700, and 800, NWCG Wildland Red Card Fire Fighter 2, and American Heart Association Basic Life Support Healthcare Provider. Train all fire officers to a universal minimum level of credential above that of fire personnel: IFSAC Fire Officer 1, FEMA ICS Training 300 and 400, Washington State Department of Health Emergency Medical Responder. This initiative is in alliance with County-Specific Hazard Mitigation Initiative C-18 and Countywide Hazard Mitigation Initiatives CW-19, CW-22.	✓	✓	✓	✓	✓	✓	✓	Have sent multiple people to trainings. Not everyone is certified at this time. Continual staff movement has hindered ability to obtain 100% goal.		✓		

TABLE 14-10 2024 STATUS OF 2018 HAZARD MITIGATION STRATEGIES												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
GHFD7-4 Develop CERT training, involving local teams in exercises and trainings with First Responders. This initiative is in alliance with County-Specific Hazard Mitigation Initiative C-20 and Countywide Hazard Mitigation Initiatives CW-8, CW-9.	✓	✓	✓	✓	✓	✓	✓	No progress has been made.			✓	
GHFD16-1 Structural repairs to Station One		✓			✓	✓		No repairs have been made. GHFD16 station 1 is now GHFD7 Station 4. Structure is owned by Grays Harbor County.			✓	
GHFD16-2 Structural repairs to Station Two		✓			✓	✓		No repairs have been made. GHFD16 station 2 is now GHFD7 Station 5. Currently evaluating need to keep this station.			✓	

TABLE 14-10 2024 STATUS OF 2018 HAZARD MITIGATION STRATEGIES												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
GHFD16-3: Secure funding sources to enhance fire and EMS coverage for responding to and mitigating all hazards and emergencies within the district. This will ensure the district facilities are in operation and prepared for emergencies of all degrees. This initiative is in alliance with Countywide Hazard Mitigation Initiatives CW-11, CW-19.	✓	✓	✓	✓	✓	✓	✓	Increased coverage for the District has been obtained with the annexation into Grays Harbor Fire District #7.	✓			

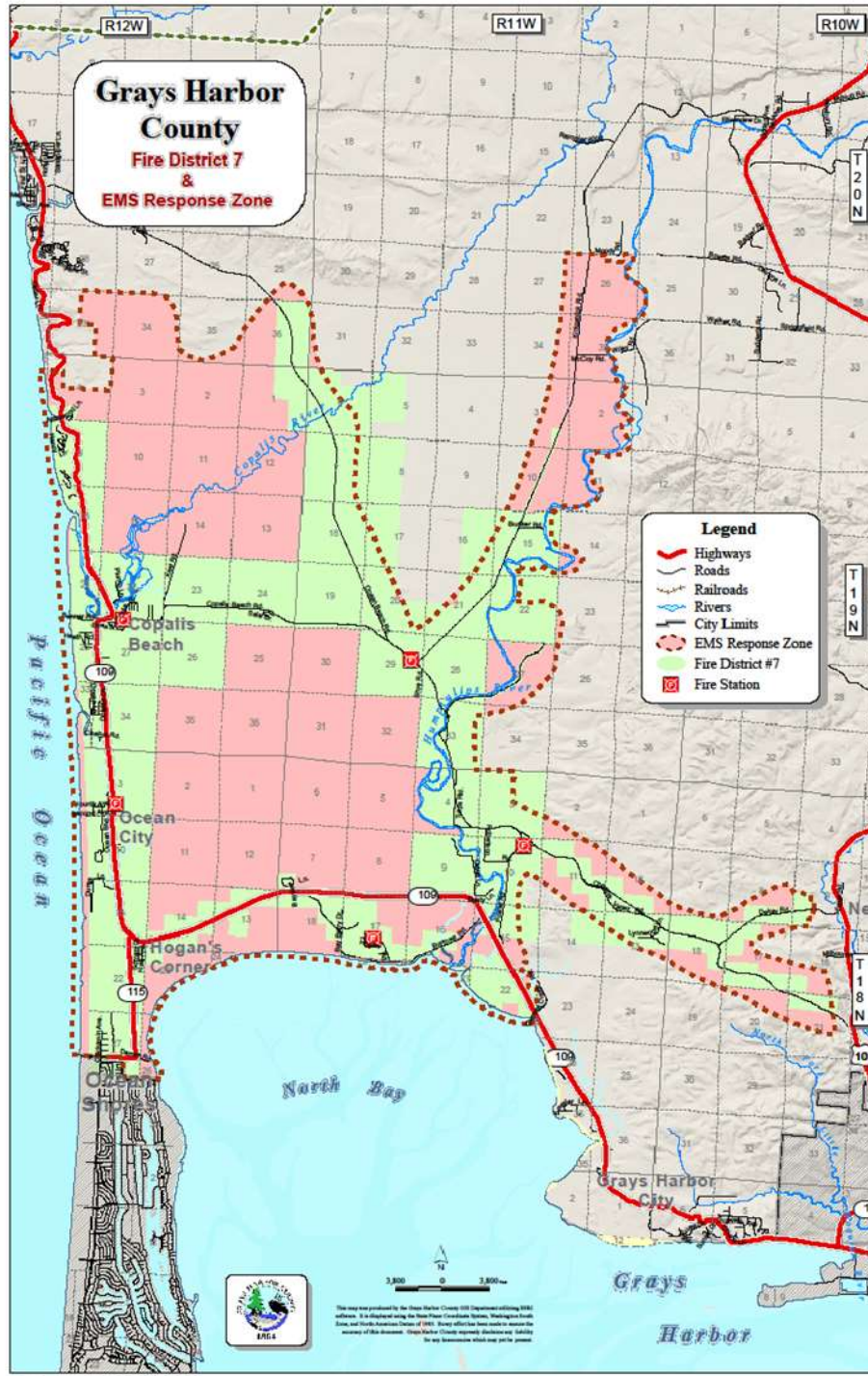


Figure 14-1 Fire District 7 Boundary and Aid Response Area

CHAPTER 15.

GRAYS HARBOR FIRE PROTECTION DISTRICT #8 2024 ANNEX



15.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the Grays Harbor Fire Protection District #8, a participating special purpose district to the Grays Harbor County 2024 Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Grays Harbor Fire Protection District #8. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only. This document serves as an update to the district's previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

15.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The Grays Harbor Fire Protection District #8 followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Grays Harbor Fire Protection District #8 also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Brian Shelley, Chief GHFD#8 PO Box 357 Pacific Beach, WA 98571 360-276-4807 Ghfd8chief@gmail.com	Chief - Primary Point of Contact	Coordinated Planning Process with district personnel. Attended various planning meetings; attended Commissioners' meetings; conducted Commissioners' briefings and public outreach efforts; conducted risk assessment; reviewed and updated various draft and final plan documents.
John Collum, Commissioner PO Box 357 Pacific Beach, WA 98571 360-276-8135 slvrback73@gmail.com	Commissioner - Alternate Point of Contact	Served as alternate POC for planning process; assisted with plan review and development; assisted with Commissioner Briefing; assisted with plan adoption process.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Shari Curtright, Asst. Chief PO Box 357 Pacific Beach, WA 98571 360-276-4807 shari@reachone.com	Asst. Chief - Planning Team Member	Assisted with the coordination of the planning process. Attended meetings and public outreach efforts. Reviewed and updated plan documents, annex, and hazard/risk assessment.

15.3 DISTRICT PROFILE

The following is a summary of key information about the jurisdiction:

- **Governing Authority**— The district is governed by a board of 3 fire commissioners
- **Population Served**—702 as of 2020 census
- **Land Area Served**—18 square miles as of 2010, there is new area due to newer developments
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$818,424,324.00 as of 2023
- **Land Area Owned**—.78 acre
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
 - One pumper \$260,000.00
 - One ladder \$300,000.00
 - Two Tenders \$356,000.00
 - Two ambulances \$396,000.00
 - One command/response rig \$42,000.00
 - One Brush rig \$50,000.00
 - Wildland Trailer \$25,000.00
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$1,429,000.00
- **List of Critical Facilities Owned by the Jurisdiction:**
 - North Beach Community Center/Fire hall \$686,000.00
 - Storage Building/Workshop \$290,000.00
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$976,000.00.
- **Current and Anticipated Service Trends**—The dollar value and exposure trends in our district are on the rise due to a large, planned community within the district. This increases the call rate due to the age of the residential homeowners but there are limited opportunities to

increase the number of responding personnel. The structure count itself also increases the level of vulnerability due to the increased number of structures at risk and their proximity to one another. While the structures themselves are built to the highest standards currently in place, the vulnerability resulting from the increased number of residents in the area increases vulnerability.

15.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the special purpose district. Table 15-1 lists all past occurrences which have impacted the district. If available, dollar loss data is also included.

Table 15-1 Natural Hazard Events				
Disaster Number	Incident Type	Title	Date	District Impact
4650	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	Chained up and Unchained E811 and A814 to be ready for a call.
4593	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	Chained up and Unchained E811 and A814 to be ready for a call.
4539	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	Used 4 wheel drive vehicle on unmaintained county right away to get to patient and get them out to ambulance for treatment and transport.
4481	COVID	Biological	1/20/2020	Done Multiple mass decontaminations prolonging getting rigs back in service.
4418	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	Chained up and Unchained E811 and A814 to be ready for a call.
4253	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015	Incident resulted in loss of accessibility to Hwy109 at the Moclips River. A citizen in the District ignored road closures signs and drove into flooded roadway. District fire truck was used to evacuate citizen, but damage was caused to truck.
4242	Severe Storm(s)	Severe Windstorm	8/29/2015	

Table 15-1 Natural Hazard Events				
Disaster Number	Incident Type	Title	Date	District Impact
4056	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012	Incident resulted in a slide along Sunset, which required district response. The incident also resulted in loss of accessibility from Hwy 109 for multiple residents.
1817	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009	
1825	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008	Incident resulted in a slide along Sunset, which required district response. Accessibility to Hwy 109 was also impacted at the Moclips River.
1734	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007	.
1682	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006	
1671	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006	
1641	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006	
1499	Severe Storm(s)	Severe Storms and Flooding	10/15/2003	
1361	Earthquake	Earthquake	2/28/2001	Throughout the area, reports of buildings settling/shifting, cracked cement foundations, thermo-pane windows losing their seals, & water pipes moving/disengaging.
1172	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997	Access to Hwy 109 was impacted at the Moclips River. The incident also resulted in a slide along Sunset, which required district response.
1159	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996	
1100	Flood	High Winds, Severe Storms, Flooding	1/26/1996	
1079	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995	
1037	Fishing Losses	The El Nino (The Salmon Industry)	5/1/1994	

Table 15-1 Natural Hazard Events				
Disaster Number	Incident Type	Title	Date	District Impact
883	Flood	Severe Storms, Flooding	11/9/1990	This storm event impacted the district's ability to utilize Highway 109 at the Moclips River. The flooding also caused a landslide, which resulted in a cabin in the district being destroyed.
852	Flood	Severe Storms, Flooding	1/6/1990	
623	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980	
612	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979	
545	Flood	Severe Storms, Mudslides, Flooding	12/10/1977	
492	Flood	Severe Storms and Flooding	12/13/1975	
322	Flood	Severe Storms and Flooding	2/1/1972	
300	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	
185	Flood	Heavy Rains and Flooding	12/29/1964	
Non-Declared Events Impacting District				
NA	Tsunami	Japanese Tsunami	3/11/2011	Evacuation of residents & tourists of Moclips flats to firehall. In the morning district personal fed all evacuees.
	Earthquake	Great Alaskan Earthquake	3/27/1964	The Joe Creek bridge was damaged on Ocean Beach Road and Hwy 109, and the Copalis Beach bridge was taken out. There were houses on the Moclips Flats that were washed away and others that were damaged. This caused many to be marooned without help from the district and the county.
	Severe Storm(s)	Columbus Day Storm	10/12/1962	Powerful winds caused houses to be damaged, roofs torn off, trees down and power outages.

15.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to

preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

15.5.1 Regulatory Capability

The assessment of the district's legal and regulatory capabilities which are customarily used by jurisdictions to implement hazard mitigation activities, are identified in Table 15-2. Those items applicable to the district are identified.

Table 15-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code		X		
Zoning Ordinance		X		
Subdivision Ordinance		X		
Sprinkler Codes		X		
RCW 52.26 (Regional Fire Protection Service)			X	
WAC 296.305			X	
Stormwater Management		X		
Post Disaster Recovery		X		
Real Estate Disclosure			X	
Growth Management		X		
Site Plan Review		X		
Public Health and Safety		X		
Coastal Zone Management				FEDERAL
Climate Change Adaptation				FEDERAL
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)			X	
Environmental Protection				FEDERAL

Table 15-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
National Incident Management System				FEDERAL
Planning Documents				
General or Comprehensive Plan				<i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i>
Floodplain or Basin Plan		X		
Stormwater Plan		X		
Capital Improvement Plan		X		
Habitat Conservation Plan		X		
Economic Development Plan		X		
Shoreline Management Plan				FEDERAL
Community Wildfire Protection Plan			X	
Transportation Plan		X		
Emergency Operations Plan		X		
Response Plan	X	X		
Evacuation Plan	X	X		
Strategic Plan		X		
Response/Recovery Planning				
Comprehensive Emergency Management Plan	X	X		
Threat and Hazard Identification and Risk Assessment	X	X		
Terrorism Plan		X		
Post-Disaster Recovery Plan	X	X		
Continuity of Operations Plan	X	X		
Public Health Plans	X	X		
Standard Operating Procedures/Guides	X			
Boards and Commission				
Planning Commission		X		

Table 15-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Mitigation Planning Committee		X		
Governing 3 Fire Commissioner Board	X			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)		X		
Mutual Aid Agreements / Memorandums of Understanding	X	X		
Storm outages protocols	X			

15.5.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 15-3. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 15-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	FF Assoc. Fire Comm.
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Chief, FF Assoc. County Fire Marshall
Engineers specializing in construction practices?	Yes	Chief, FF Assoc.
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	Yes	Fire Comm., Comm. Sec., Chief, FF Assoc.
Personnel skilled or trained in Hazus use	Yes	Chief, FF Assoc.
Technician familiar with natural hazards in local area	Yes	FF Assoc.
Emergency Manager	Yes	Chief, FF Assoc.

Table 15-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Grant writers	Yes	Comm. Sec., FF Assoc.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Chief, PIO, FF Assoc.
Hazard data and information available to public	Yes	Chief, PIO
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	HAM radio KXPB-LP
Organization focused on individuals with access and functional needs populations	Yes	Pacific Beach Food Bank Green Lantern Lunch Program
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	PIO
Natural disaster or safety related school programs?	Yes	Chief, PIO, FF Assoc.
Public-private partnership initiatives addressing disaster-related issues?	Yes	PIO, CERT
Multi-seasonal public awareness program?	Yes	PIO
Open Public Meetings/Potluck	Yes	All
District Newsletter	Yes	Fire Comm., PIO
National Incident Management System	Yes	Chief, FF Assoc.
National Response Framework	Yes	Chief, FF Assoc.
Fire Fighter 1	Yes	Chief, FF Assoc.
Fire Fighter 2	Yes	FF Assoc.
Fire Fighter 1 & 2 Trainers	Yes	FF Assoc.
AHA BLS Trainers	Yes	FF Assoc.
AHA Heartsaver Trainer	Yes	FF Assoc.
Blood Borne Pathogens Trainer	Yes	FF Assoc.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	Chief, FF Assoc.
Community Emergency Pantry	Yes	PIO, FF Assoc., CERT
Defensible Space Inspections Program	Yes	Chief

Table 15-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Emergency Operations Plan	Yes	Chief, PIO
Emergency Procedures and Policies	Yes	Chief
Address signage for property addresses	Yes	Chief, FF Assoc.
Other		

15.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 15-4. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 15-4 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State Sponsored Grant Programs	Yes

15.5.4 Community Classification

The district's classifications under various hazard mitigation programs are presented in Table 15-5. Each of the classifications identified established requirements which, when met, are known to increase the resilience of a community. Those which specifically require district participation or enhance mitigation efforts are indicated accordingly.

Table 15-5 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Building Code Effectiveness Grading Schedule	Yes	
Protection Class	6	
Commercial Structures	4	
Residential Structures	4	
Storm Ready	Yes	
Firewise	Yes	
Tsunami Ready (if applicable)	Yes	

15.6 HAZARD RISK AND VULNERABILITY RANKING

The district's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the Grays Harbor Fire Protection District #8.

Table 15-6 presents the ranking of the hazards of concern based on their CPRI score. Table 15-7 identifies the values from the CPRI spreadsheet. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 15-6.
Hazard Risk and Vulnerability Ranking

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	Hazard Impact
1	Earthquake	3.65	High	Earthquake would impact all of the District's structures due to their age, and the fact that all of the structures are in a severe liquefaction zone. Roadways would also be impacted, restricting response and evacuation capabilities. There are also a number of bridges in the area, which are very old. While not owned by the County, impact to the Joe Creek Bridge, the Moclips Bridge and the 2 nd Ave. Bridge, among others, would significantly hinder not only response, but also evacuation.
2	Tsunami	3.5	High	All of the district's structures would be impacted by a tsunami event, as would roadways. This would restrict evacuation and response. Distant Tsunamis also have the potential to significantly impact the district properties and area. During the 2011 Tsunami resulting from the Japan EQ, the District evacuated Moclips, including all hotels. Because the Tsunami hit during low-tide, the impact was not as significant. Due to the topography, the area has the potential to flood significantly even from a distant Tsunami, especially if the tsunami were to occur during a high-tide.
3	Flood	3.4	High	During flooding events, roadways become impacted. While none of the District's structures fall within the 100- or 500-year flood zone, one of the evacuation sites (the Moclips High School) has flooded. There are two points on Hwy 109 that are always susceptible to flooding. One is at the curve between the Moclips & 2 nd Ave bridges. The other is just beyond Seabrook at Elk Creek. These two points can be completely impassable during high-tide making response impossible for the District.

Table 15-6.
Hazard Risk and Vulnerability Ranking

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	Hazard Impact
4	Severe Weather	3.2	High	Severe weather events customarily cause power loss in the area. During the 2007 severe weather event which resulted in a declaration, the District's service area became isolated. As a result, the District prepared and delivered ~1,500 meals over the course of six days. Isolation to the area is a significant concern during SW events. Roadways become impassable, influencing the District's ability to respond and restricting citizens' ability to evacuate. While some of the District's structures have generators, not all do. During significant events, the District also serves as a shelter to citizens in the area.
5	Wildfire	3.2	High	All of the District's structures fall within Fire Regime Group V. The District's structures are constructed out of a combination of wood/masonry, making them more susceptible to wildfire. In addition, the primary composition of the residential structures in the district are primarily wood.
6	Climate Change	2.95	Medium	Climate Change will influence weather patterns of other hazards, which could then impact the District more severely.
7	Drought	2.35	Medium	Seasons of drought can increase the District's violability to wildfire hazards, as well as increase calls for service for heat-related incidents. Structures would not be impacted directly, except via increased wildfire danger.
8	Other Hazards of Concern (propane)	2.3	Medium	There are limited high-hazard structures within the District's boundaries; however, there are a significant number of large propane tanks within close proximity to residential structures.
9	Landslide	2.2	Medium	. Over the course of the last several years, the District has experienced landslide events, including on Roosevelt Beach. None of the District's structures are located in the landslide susceptibility zone, but response and evacuation during a significant event would be impacted due to ingress and egress over major roadways impacted by landslide events.

Table 15-6.
Hazard Risk and Vulnerability Ranking

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank	Hazard Impact
10	Erosion	1.75	Low	Over the course of the last several years, the District has experienced landslide events, including on Roosevelt Beach. None of the District's structures are located in the landslide susceptibility zone, but response and evacuation during a significant event would be impacted due to ingress and egress over major roadways impacted by landslide events.
11	Volcano	1.15	Low	The district does not fall into any volcano Lehar zones. Ash could be of concern if a large amount accumulates on rooftops due to the weight of the ash, as well as the impact to mechanical equipment.

Table 15-7.
Grays Harbor Fire District No. 8 2024 CPRI Score and Hazard Ranking

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4			3			2						1				4	2.95	6	Medium
Drought			3			2				2						1				4	2.35	7	Medium
Earthquake				4				4		3			4				1				3.65	1	High
Erosion		2			1					2						1				4	1.75	10	Low
Flood				4			3			3				3					3		3.40	3	High
Landslides		2				2				2				3					3		2.20	9	Medium
Severe Weather				4			3			3					2			2			3.20		
Tsunami				4			3			3			4					2			3.50	2	High
Volcano	1				1				1							1				4	1.15	11	Low
Wildfire			3				3			3			4							4	3.20	5	High
Other Hazards of Concern (Hazmat)		2				2				2			4					2			2.30	8	Medium

15.7 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

15.8 HAZARD MITIGATION ACTION PLAN

The Planning Team for the District identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the District assets and hazards of concern. Table 1-7 lists the action items/strategies that make up the District's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

TABLE 15-8. HAZARD MITIGATION ACTION PLAN MATRIX									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 Structural repairs to Main building and determining level of structural integrity of the District's building to withstand earthquakes and severe weather events. As necessary, begin retrofitting structures to withstand earthquakes and severe weather events.									
Existing	E, SW, T	All	Commission GH Pln/Bld	Med	General Budget	Long-Term	Yes	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Fire Protection District,
INITIATIVE #2 Structural replacement of Red Auxiliary Building to withstand earthquakes and severe weather events. As necessary, begin replacement of structure to withstand earthquakes and severe weather events.									
New	E, SW, T	All	Commission	High	PDM, HMGP, HLS, HUD Grants, General Budget	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery	Fire Protection District
INITIATIVE #3 Continued public outreach programs via District Newsletter to inform and educate the public on emergency, disaster & property protection									
Existing	All	2, 3, 4, 7, 8, 9	Commission	Low	General Budget	Long-Term	Yes	Public Information, Preventive Activities, Property Protection, Emergency Services, Recovery	Fire Protection District

**TABLE 15-8.
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #4 Apparatus additional Pumper, Tender, Ambulance. Secure funding sources to enhance fire and EMS coverage for responding to and mitigating all hazards and emergencies within the District. This will ensure the District facilities are in operation and prepared for emergencies of all degrees									
Existing	All	All	Commission	High	Grant, Public, General Budget	Long-Term	No	Preventive Activities, Structural Property Protection, Emergency Services, Recovery, Natural Resource Protection	Region

15.9 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 15-9 identifies the prioritization for each initiative.

**Table 15-9.
Mitigation Strategy Priority Schedule**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	11	High Repair of existing water damage due to age & environment of building will expand the life of the structure	Medium - \$50k	Yes	No	Yes	Medium

**Table 15-9.
Mitigation Strategy Priority Schedule**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
2	11	High Replacement of the existing structure will allow us to use the structure during incidents and increase capacity.	High	Yes	No	Yes	High
3	9	High Direct info to district residents to inform & educate disaster preparedness will support response, preparedness and recovery efforts.	Low	Yes	Yes	Yes	High
4	11	High Additional equipment will allow the district to augment water supply and EMS service for our district & region under mutual aid	High - \$700k	Yes	Yes	No	High
a. See Chapter 1 for explanation of priorities.							

15.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 15-10 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 15-10. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Structural repairs to the main building are ongoing		✓	✓		✓	✓	✓	The District has repaired the front of the building. Repairs to the roof are ongoing		✓		✓
Public outreach program via District Newsletter		✓	✓	✓	✓	✓	✓	The District continues to put out a Newsletter		✓		✓
Additional Pumper, Tender, Ambulance		✓	✓	✓	✓	✓	✓	The District has purchased a new Tender, in process of getting another ambulance then another pumper		✓		✓
Brush (wildland fire truck)		✓	✓	✓	✓	✓	✓	The District purchased a 2020 F350 4 wheel drive and had it converted over to a wildland fire truck	✓			

15.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

Ongoing education, communication and information from regional agencies that evaluate and predict disaster scenarios.

15.12 ADDITIONAL COMMENTS

This is our District's second Hazard Mitigation Plan. While we have gone through the process, we will continue to enhance the data needed for a more robust risk assessment over the lifecycle of this plan and will continue to be part of the County's HMP Committee for future updates to help ensure our various programs remain consistent with the County's efforts.

CHAPTER 16.

SOUTH BEACH REGIONAL FIRE AUTHORITY 2024 ANNEX



16.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the South Beach Regional Fire Authority, a participating special purpose district to the Grays Harbor Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the South Beach Regional Fire Authority. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only. This document serves as an update to the district's previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

16.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The South Beach Regional Fire Authority followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the South Beach Regional Fire Authority also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Dennis Benn P. O. Box 1195 Westport, WA. 98595 360-268-9832 Dennis.benn@sbrfa.org	Fire Chief	Local oversight and primary planning contact. Provided information and assistance in drafting of the County's HMP; served as primary author of the District's HMP Annex; conducted risk assessment and review of various editions of draft plan; attended meetings; conducted public outreach with respect to risk assessment at public meetings; presented plan to Commissioners for adoption.
Daryl Brown P. O. Box 1195 Westport, WA. 98595 360-268-9832 Daryl.brown@sbrfa.org	Battalion Chief	Operational oversight and secondary planning contact, Public Information management; assisted with plan development; provided historic information on hazard impact; served as a planning team member to develop the overall information in the plan.
Darin Vanderveur P. O. Box 1195	Battalion Chief	Training of fire personnel for response, preparation, and recovery of all hazard mitigation. Assisted with plan

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Westport, WA. 98595 360-268-9832 D.vanderveur@sbrfa.org		development; provided historic knowledge on risk impact; provided oversight on public education and outreach during planning process. Assisted with draft plan review.

16.3 DISTRICT PROFILE

South Beach Regional Fire Authority is a special purpose district created in 2017. The purpose is to provide fire and EMS services to the areas of the city of Westport, the unincorporated areas of Ocosta, Grayland, Rural Westport, North Cove and Tokeland. A five-member elected board, governs the district. The board assumes responsibility for the adoption of this plan. Funding for the district is primarily through tax levies. The district's boundaries are shown in the maps provided at the end of this Annex.

The following is a summary of key information about the jurisdiction:

- **Governing Authority**— The district is governed by a five-member elected board.
- **Population Served**—8863 as of 2022
- **Land Area Served**—32 square miles.
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$1,054,652,391.
- **Land Area Owned**—6.6 Acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**

5 Type 1 Engines	\$2,000,000.00
3 Type 2 Tenders	\$700,000.00
3 Type 6 Brush Engine	\$225,000.00
3 Command Vehicles	\$121,000.00
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$3,570,000.
- **List of Critical Facilities Owned by the Jurisdiction:**

Station 1, Westport	Owned by City of Westport	Station 5 Tokeland	\$125,000
Station 2, Grayland	\$200,000.00	Station 6 Training	\$600,000
Station 3, North Cove	\$150,000.00		
Station 4, Ocosta	\$165,000.00		
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$1,195,000.
- **Current and Anticipated Service Trends**—Anticipated to increase 2% per year.

16.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the special purpose district. Table 16-1 lists all past occurrences which have impacted the district. If available, dollar loss data is also included.

Table 16-1 Natural Hazard Events Impacting the District				
Disaster Number	Incident Type	Title	Date	District Impact
4650	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	Unknown
4593	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	Unknown
4539	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	Unknown
4481	Biological	Biological	1/20/2020	Unknown
4418	Severe Storm	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	Unknown
322	Flood	Severe Storms and Flooding	2/1/1972	Unknown
300	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	Unknown
185	Flood	Heavy Rains and Flooding	12/29/1964	Unknown

16.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the district's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

16.5.1 Regulatory Capability

The District has adopted/enacted codes, resolutions, policies and plans that compliment and support hazard mitigation planning and activities. The following existing District codes, resolutions, policies, and plans are applicable to this hazard mitigation plan:

Fire District Capabilities

- Capital Improvement Program
- Sprinkler Codes
- Strategic Plan
- After Quake Assessment Report
- Citizen Emergency Response Training (CERT)
- Emergency Operations Plan
- Emergency Procedures and Policies
- City/County Comprehensive Emergency Management Plan
- State of Washington Comprehensive Emergency Management Plan
- National Response Framework
- National Incident Management System
- Revised Code of Washington 52.26 (Regional Fire Protection Service)
- WAC 296.305
- Specific incident response plans
- Operations plans or policies
- Employee Handbooks and Safety Manuals
- Mutual Aid Agreements

16.5.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 16-2. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 16-2 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Staff with training in benefit/cost analysis.	Yes	Admin Assistant
Personnel skilled or trained in GIS or Hazus use.	Yes	Through county
Emergency Manager.	Yes	Through county
Grant writers.	Yes	Battalion Chief/Line Staff
Warning Systems/Services (Reverse 9-1-1, outdoor warning sirens)	Yes	Emergency Management
Hazard data and information available to public.	Yes	Chiefs
Specific equipment response plans.	Yes	Chief of Operations
Specific operational plans.	Yes	Chief of Operations
Water Shortage Contingency Plan.	No	
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	CERT
Organization focused on individuals with access and functional needs populations	Yes	Senior Group
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	PIO/Public Educator
Natural disaster or safety related school programs?	Yes	Public Education
Public-private partnership initiatives addressing disaster-related issues?	Yes	Red Cross
Multi-seasonal public awareness program?	Yes	Public Educator
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	State
Noxious Weed Eradication Program or other vegetation management	Yes	State
Fire Safe Councils	No	

Table 16-2 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Chipper program	No	
Defensible space inspections program	Yes	DNR
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	City
Address signage for property addresses	No	
Other		

16.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 16-3. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 16-3 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

16.5.4 Community Classification

The district's classifications under various hazard mitigation programs are presented in Table 16-4. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community. Those which specifically require district participation or enhance mitigation efforts are indicated accordingly.

Table 16-4 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes/ City of Westport	
Building Code Effectiveness Grading Schedule	City	
Storm Ready	No	
Firewise	No	Under Consideration
Tsunami Ready (if applicable)	City	

16.6 HAZARD RISK AND VULNERABILITY RANKING

The district's Planning Team reviewed the hazard list identified within the Base Plan, and have identified the hazards that affect the South Beach Regional Fire Authority. During discussions by the internal planning team members in identifying the potential impact of those hazards, additional factors were also discussed and considered when estimating the potential financial losses caused by hazard-related damages. Such factors include the number of facilities damaged, the extent of damage to each facility, and the length of time required for repairs, etc. For service providers which generate income, lost revenue from customers being without service and the cost of providing temporary service was also a consideration in identifying the economic losses.

Table 16-5 presents the ranking of the hazards of concern based on their CPRI score. Table 16-6 illustrates the CPRI scoring. Once the scoring was completed, a qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this

category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.

- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 16-5 Hazard Risk and Vulnerability Ranking				
Hazard Rank	Vulnerability			
	Hazard Type	CPRI Score	Rank	Description of Impact
1	Earthquake	3.85	High	The majority of all of the district's buildings were built in the early to mid-1960s. As such, all of the district's structures would be susceptible to earthquakes and liquefaction.
2	Tsunami	3.3	High	More than 95% of the district is located within the Tsunami inundation zone.
3	Flood	3.1	High	Flooding causes road closures, affecting our ability to assist our citizens in a timely manner.
4	Severe Weather	3.05	High	All structures are susceptible to severe weather incident, depending on the type of incident. The area is regularly impacted by high winds. The districts' response capabilities are slowed during times of extreme wind events, due to road closures, trees blocking roadways.
5	Erosion	3.05	High	Coastal erosion affects our ability to effectively navigate roadways which were in use only hours ago, but now are no longer passable.
6	Landslides	2.95	High	Every roadway that is used to access or evacuate the district passes through areas which are prone to landslides. Wide range landslides could severely impact the ability to evacuate the district.
7	Wildfire	2.90	High	All of the District's structures fall within Fire Regime Group V. In addition, the primary composition of the residential structures in the district are primarily wood construction
8	Climate Change	2.75	Medium	With an increase of global warming, the outcome is increased sea levels, the result of increased coastal flooding

Table 16-5
Hazard Risk and Vulnerability Ranking

Hazard Rank	Hazard Type	Vulnerability		
		CPRI Score	Rank	Description of Impact
9	Other Hazards	2.65	Medium	A hazardous materials leak anywhere within the service area could cause widespread issues, including health concerns for citizens and firefighters; environmental impact, and limit evacuations if necessary. When combined with other hazards of concern, such as a flood or severe storm, tsunami or earthquake, multiple types of chemicals could be released, severely impacting response and recovery efforts countywide.
10	Drought	2.35	Low	During times of drought, it will exponentially increase our wildfire risk.
11	Volcano	1.35	Low	The district does not fall into any volcano Lehar zones. Ash could be of concern if a large amount accumulates on rooftops due to the weight of the ash, as well as the impact to mechanical equipment.

Table 16-6
South Beach Regional Fire 2024 CPRI Score

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change				4		2				2						1				4	2.75	8	Medium
Drought			3			2				2						1				4	2.35	10	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion				4		2				2				3						4	3.05	5	High
Flood				4			3				3					1			3		3.10	3	High
Landslides			3			2					3		4						3		2.95	6	High

Table 16-6
South Beach Regional Fire 2024 CPRI Score

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Severe Weather				4		2						4				1		2			3.05	4	High
Tsunami			3					4			3		4					2			3.30	2	High
Volcano	1				1					2						1				4	1.35	11	Low
Wildfire			3			2					3		4					2			2.90	7	High
Other Hazards of Concern			3			2				2			4				1				2.65	9	Medium

16.9 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

16.10 HAZARD MITIGATION ACTION PLAN

The Planning Team for the district identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district's assets and hazards of concern. Table 16-7 lists the action items/strategies that make up the district's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

Table 16-7
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE # 1 Determine level of structural integrity of the district's buildings, to withstand earthquakes. Begin Retrofitting structures as necessary.									
Existing	Earthquake	All	District	High	Grant	Long-Term	Yes	Structural Project	Local
INITIATIVE # 2 Secure funding sources to enhance fire and EMS coverage for responding to and mitigating all hazards and emergencies within the district. This will ensure the district facilities are in operation and prepared for emergencies of all degrees. This initiative is in alliance with Countywide Hazard Mitigation Initiatives CW-11, CW-19.									
Existing	All	2,5,6,8	District	High	Grant	Long-Term	Yes	Emergency Services	Local
INITIATIVE #3 Continue to enhance Wildland fire suppression training and resources to improve response capabilities.									
All	Wildfire	All	District	Medium	Grant, Partnerships	Short Term	Yes	Prevention, Structural Project, Property Protection, Emergency Services, Recovery	Local, County, Region
INITIATIVE # 4 Improve partnerships with State and Federal resources for improvement of hazard response.									
All	All	All	District	Low	District	Long Term	Yes	Public Information, Emergency Services, Recovery, Natural Resource Protection	Local, County, Region
INITIATIVE # 5 Create opportunities to move mission critical infrastructure out of the Tsunami inundation zone by leveraging public and private partnerships to better serve the South Beach community									
All	Tsunami	2,5,6,8	Grays Harbor E.M., District	High	General Fund, Private, Grants	Long Term	Yes	Structural Projects, Public information, Response, Recovery	Local, facility, County, Region

16.11 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of four different initiative types for each identified action item was conducted. Table 16-8 identifies the prioritization for each initiative.

Table 16-8.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority ^a
1	9	High	High	Yes	Yes	No	H
2	4	High	High	Yes	Yes	No	H
3	4	Medium	Low	Yes	No	No	H
4	4	Medium	Low	Yes	No	Yes	M
5	4	High	High	Yes	Yes	No	High

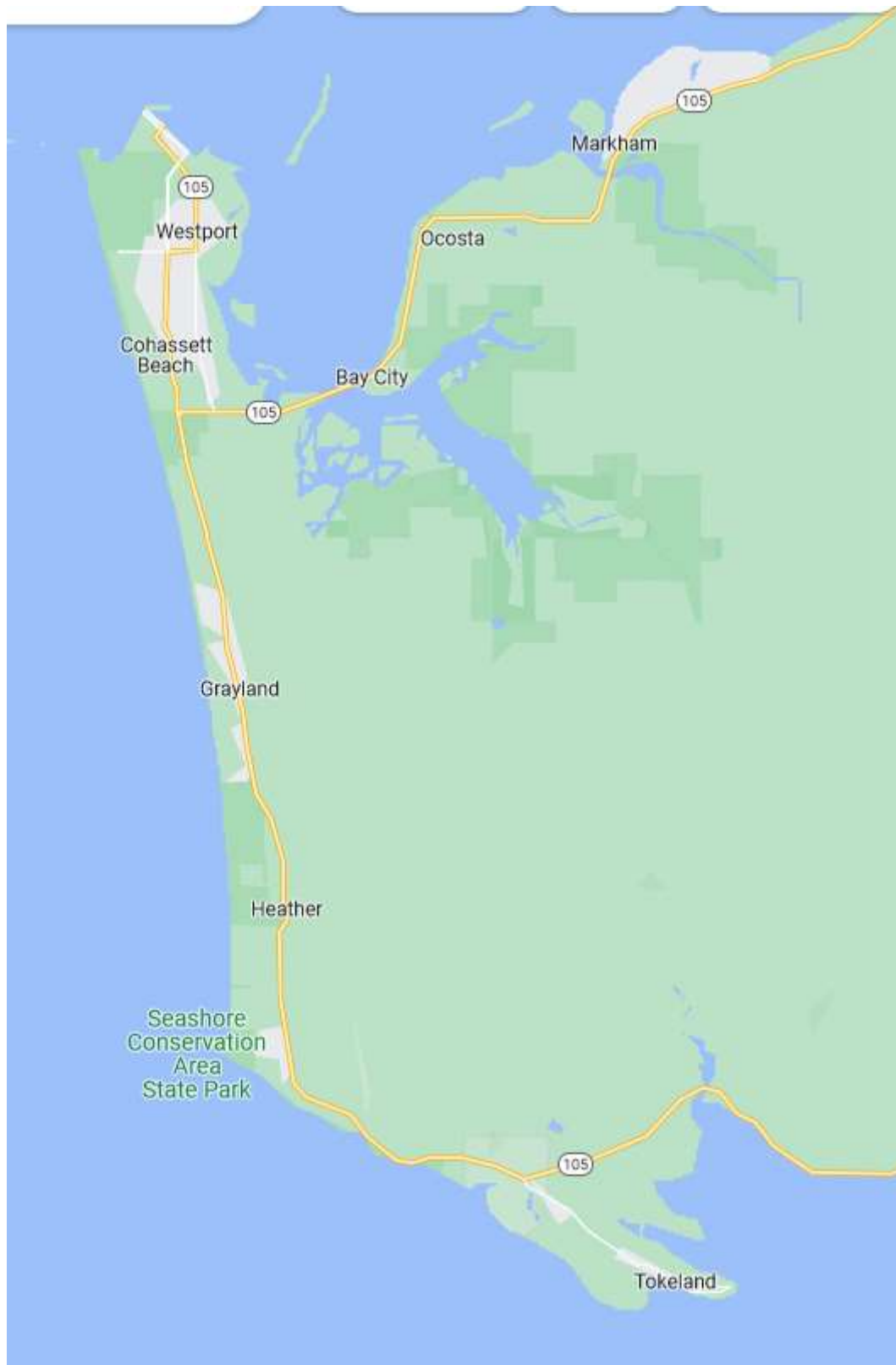
a. See Chapter 1 for explanation of priorities.

Table 16-9.
2024 Status of Previous Hazard Mitigation Strategies

	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
INITIATIVE # 1 Determine level of structural integrity of the district’s buildings, to withstand earthquakes. Begin Retrofitting structures as necessary.		✓				✓		SBRFA has been working on a facility maintenance plan and has established a maintenance budget. We are in design and feasibility phases of developing a new headquarters fire station		✓		✓

Table 16-9. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 2 Secure funding sources to enhance fire and EMS coverage for responding to and mitigating all hazards and emergencies within the district. This will ensure the district facilities are in operation and prepared for emergencies of all degrees. This initiative is also in alliance with various Countywide Initiatives.	✓		✓	✓	✓	✓	✓	SBRFA is continuing to leverage public and private revenue sources to establish operational and a modest emergency reserve.		✓		✓
INITIATIVE #3 Continue to enhance Wildland fire suppression training and resources to improve response capabilities.							✓	SBRFA has continued to train ALL its fire members in fundamental wildfire fighting tactics. SBRFA has currently has 20 wildland certified members and will continue to maintain or grow this number.		✓		✓
INITIATIVE # 4 Improve partnerships with State and Federal resources for improvement of hazard response.	✓	✓	✓	✓	✓	✓		SBRFA continues to be a seat at the table for local State and federal discussions for all hazard mitigation improving relationships and becoming more aware of partnership opportunities.		✓		✓

Table 16-9. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
INITIATIVE # 5 Create opportunities to move mission critical infrastructure out of the Tsunami inundation zone by leveraging public and private partnerships to better serve the South Beach community						✓		SBRFA is working on a relocation plan for Station 3-1 to higher ground less in the tsunami inundation zone balanced by operational needs and call volume. SBRFA is working on a pacific county relationship with SWB Tribe to partner in the future with a modest station build in their planned community and replacing station 3-2 and 3-6 which is out of the tsunami zone		✓		✓



CHAPTER 17.

PORT OF GRAYS HARBOR 2024 ANNEX

17.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the Port of Grays Harbor, a participating special purpose district to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Port of Grays Harbor. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only. This document serves as an update to the Port's Annex completed in 2017. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

17.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

The Port of Grays Harbor followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Port of Grays Harbor also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Randy Lewis, Director of Health, Safety & Environment 111 S. Wooding Street Aberdeen, WA 98520 360-533-9513 rlewis@portgrays.org	Primary Point of Contact	Review County Planning Process and Comment. Attend meetings, participate in countywide effort; conducted review of risk assessment data and draft plans; developed Port Specific Plan Elements and Update based on Internal Review Comments
Aaron Aschim, Contract & Projects Manager 111 S. Wooding Street Aberdeen, WA 98520 360-533-9518 aaschim@portgrays.org	Support Port contacts in updating critical facilities	Review and Comment on Port Specific Plan Sections
Leonard Barnes, Deputy Executive Director 111 S. Wooding Street	Property Manager, Business Development and Retention, Primary Tenant Liaison	Review and Comment on Port Specific Plan Sections

Local Planning Team Members		
Name	Position/Title	Planning Tasks
Aberdeen, WA 98520 360-533-9528 lbarnes@portgrays.org		
Nolan Wyatt, Marine Terminal Superintendent 111 S. Wooding Street Aberdeen, WA 98520 360-533-9528 nwyatt@portgrays.org	Alternate Point of Contact Facility Security Officer	Review and Comment on Port Specific Plan Sections; attended countywide meetings as alternate POC; assisted in risk assessment data and impact information; reviewed various drafts; provided input into overall countywide elements and Port specific elements.
Alissa Shay, General Manager of Satsop Business Park 150 Technology Way, Suite 100 Elma, WA 98541 ashay@portgrays.org	Manages Satsop Business Park	Review and Comment on Port Specific Plan Sections

17.3 DISTRICT PROFILE

The Port District also known as the Port of Grays Harbor was founded in 1911 as the second port district formed in Washington State. The Port of Grays Harbor boundaries include all of Grays Harbor County, on Washington State's Pacific Coast. Governed by three elected commissioners, the Port of Grays Harbor's diverse facilities include marine terminals, upland industrial and commercial properties, Washington's largest commercial fishing marina, a decommissioned nuclear facility that has been converted into a business park, recreational facilities, and an airport with the state's only jet capable runway on the coast.

The following is a summary of key information about the jurisdiction:

- **Governing Authority**— The district is governed by Three-member board of commissioners.
- **Population Served**—75,636 as of 2020 Census
- **Land Area Served**—1,902 sq. miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$12,050,602,701.
- **Land Area Owned**—3640 acres.
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
 - Bowerman Field and Fuel Station- \$7,179,890
 - Marine Rail Infrastructure- \$25,652,698

- Terminal 1 and 2- \$19,200,751
- Terminal 3- \$23,855,893
- Terminal 4- \$41,962,766
- Port Industrial Road- 5,247,864
- Aberdeen Heavy Construction Equipment- \$5,232,348
- Westport Marina Fuel Dock- \$76,000
- Westport Main Dock- \$3,204,451
- Westport Marina Boat Launch- \$1,060,240
- Westport Marina Merino’s Seafood Piers- \$3,466,610
- Westport Marina Public Restrooms- \$313,166
- Westport Marina Outfall \$836,000
- Westport Marina Yearout Drive- \$730,408
- Satsop Cooling Tower- \$22,408,447
- Satsop Keys Road Well- \$520,000
- Satsop Ranney Well- \$17,500,000
- Satsop Heavy Construction Equipment- \$65,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$178,512,532.
- **List of Critical Facilities Owned by the Jurisdiction:**
 - Bowerman Airport- \$7,450,433
 - Port Cargo Yard- \$10,696,908
 - Terminals 1 and 2 Complex- \$2,091,000
 - Terminal 3- \$76,485
 - Terminal 4- \$23,132,538
 - Aberdeen Maintenance Facility- \$4,866,375
 - Port Main Office Complex- \$9,375,517
 - Westport Marina Main Office Complex- \$1,053,493
 - Westport Marina Boat Launch/Parking Lot- \$1,097,000
 - Satsop Development Main Park Complex-\$45,613,904
 - Satsop Development West Park- \$9,083,673
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$114,537,326.

- **Current and Anticipated Service Trends**— The Port of Grays Harbor is projecting the following service patterns related to its critical infrastructure.

- Marine Terminals —During the last 5 years, the Port has seen a decrease in vessel activity of approximately 47% due to a combination of the loss of the auto import line of business, and general downturn due to the pandemic. A major expansion project is in design to develop a second soy meal transload facility at Terminal 4. The project is planned to begin operations in 2025. This project will include significant expansions of rail infrastructure, as well as improvements to the fender system and stormwater infrastructure at Terminal 4.

A second project is in the permitting stage to develop a dry bulk export facility at Terminal 3 which will not result in significant expansion of the infrastructure but will increase vessel traffic.

Based on these projects and normal Port marketing efforts, vessel traffic is anticipated to return to 2017 levels in the next 3 years, increase by 50% over 2017 levels in the next five years, and double over the next ten years.

- Industrial Complex – An element of the Terminal 4 Expansion project will add additional cargo yard area on the adjacent former casting basing site. This will allow for the relocation of existing cargo storage areas and/or be used to attract new lines of business.
- Westport Marina – the Port completed a Marina Modernization Plan in 2022 that developed a plan to reconfigure and upgrade the marina infrastructure including floats, ramps, and utilities. The improvements are required to accommodate the larger commercial fishing vessels that are increasingly locating in Westport, while also accommodating the large number of recreational and charter fishing vessels that also use the marina. The project will be completed in phases over the next several decades. The Port has received funding to design an partially build the first phase and will be seeking additional funding over the coming years.
- Satsop Business Park – The Port has seen a significant increase in modification to and leases of several warehouse and industrial facilities, as well as proposed development related to renewable fuels. It is anticipated that interest in commercial and industrial development will continue into the foreseeable future, which may trigger upgrades and potential expansions of the potable water and sewer system.

The Port of Grays Harbor is a countywide port district. Therefore, the district's boundaries are the same as the county's which is shown in Figure 3-1 of the Base Plan.

17.4 HAZARD EVENT HISTORY

Within Chapter 3 of the Base Plan, the Planning Team identified all presidentially declared hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the Port of Grays Harbor. Table 18-1 below identifies specific information as it relates to the Port.

Table 17-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
Severe Storm	1825	12/8/2007	\$1,135,144
Local Area Disaster – Not Declared			
Chehalis River Erosion Event		3/3/2022	\$1,800,000
COVID		1/20/2020	\$81,000

17.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

17.5.1 Regulatory Capability

The assessment of the district's legal and regulatory capabilities which are customarily used by jurisdictions to implement hazard mitigation activities, are identified in **Error! Reference source not found..** Under Washington State law, the Port does not have regulatory authority. Regulatory authority related to codes, ordinances, and regulatory requirements for port facilities and activities comes from those established by the County, or from the municipalities each facility is located in. Those items applicable to the district are identified.

Table 17-2 Legal and Regulatory Capability	
Planning Documents	
Bowerman Field Airport Master Plan (August 2016 Edition)	
Satsop Business Park – Satsop Development Park Master Plan (As Amended in 2017)	

Table 17-2 Legal and Regulatory Capability		
Satsop Water System Capital Improvement Plan (2017 Edition)		
Westport Marina Boat Basin Master Plan (2009 Edition)		
Westport Marina Tsunami Maritime Response and Mitigation Strategy (2022 Edition)		
Westport Marina Modernization Plan (2022 Edition)		
Port of Grays Harbor Facilities Security Plan (2022 Edition)		
Procedures for Plant Emergency – AGP/PGH - Terminal 2 Facility (2007 Edition)		
Emergency Response/Evacuation Plan (2021 Edition)		
Emergency Action Plan (2021 Edition)		
Spill Prevention Control and Countermeasures Plan (SPCC) (2022 Edition)		
Stormwater Pollution Prevention Plan for each ISGP Facility (SWPPP) (2020 – 2023 Editions)		
Chemical Hazard Communication Plan (2011 Edition)		
Rail Yard Operations Plan (2007 Edition)		
Boards and Commission		
Grays Harbor Safety Committee (Includes stakeholder representatives and is focused on all areas of navigation safety in Grays Harbor)		
Port Safety Committee (made up of reps from all facilities)		
Governing Commissioners (Phil Papac District 1, Tom Quigg District 2, Stan Pinnick District 3)		

17.5.2 Administrative and Technical Capabilities

The assessment of the district’s administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 17-3. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 17-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position

Table 17-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Port Engineer Position was added in 2022 and is augmented by professional consultant contracts
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	No	Port relies on municipal officials
Engineers specializing in construction practices?	Yes	Port Engineer, and new Contracts Manager both have experience in this area and are augmented by professional consultant contracts
Planners or engineers with an understanding of natural hazards	Yes	Planning Department, augmented by consultant contracts for specific projects or plans
Staff with training in benefit/cost analysis	No	
Surveyors	No	Provided by Consultant Contracts
Personnel skilled or trained in GIS applications	No	Port staff have basic knowledge but rely by Consultant Contracts
Personnel skilled or trained in Hazus use	No	
Scientist familiar with natural hazards in local area	No	Provided by Consultant Contracts
Emergency Manager	No	Coordinates with County
Grant writers	Yes	Planning/Finance Department augmented by professional consultant contracts
Education and Outreach		
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Information is included in Port Public Outreach Program including, website and social media updates, 4 th grade and general public tour programs – Public Affairs
Natural disaster or safety related school programs?	No	Coordinates with County/municipalities
Public-private partnership initiatives addressing disaster-related issues?	No	Coordinates with County/municipalities
Multi-seasonal public awareness program?	No	Coordinates with County/municipalities
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	Port has active mowing program at several facilities
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Port Maintenance Crew

Table 17-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Stream restoration program	No	
Erosion or sediment control program	Yes	Port Maintenance Crew as well as contracts for dredging and stormwater facility cleaning
Address signage for property addresses	Yes	Facility Security Officer
Forestry Management Program at Satsop Facility	Yes	Administered by Grays Harbor College

17.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in **Error! Reference source not found..** These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 17-4 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes – 5 year budget
Authority to Levy Taxes for Specific Purposes	Yes-Voted Only
User Fees for Water, Sewer, Gas or Electric Service	Yes at Satsop
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Some programs
Development Impact Fees for Homebuyers or Developers	No

17.5.4 Community Classification

The Port does not have a separate classification under the various hazard mitigation programs such as the Community Rating System, Storm Ready, etc. These classifications reside with the jurisdiction each facility

is located in. The district participates with each jurisdiction when establishing and updating their classifications.

17.6 HAZARD RISK AND VULNERABILITY RANKING

The district's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the Port of Grays Harbor. The Port did include both Erosion and Hazmat (Other Hazard of Concern) within their risk ranking as specific to the District.

Error! Reference source not found. presents the ranking of the hazards of concern based on their CPRI score. Table 17-6 presents the CPRI scoring. A qualitative vulnerability ranking was also assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 17-5. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Tsunami	3.5	High
2	Earthquake	3.45	High
3	Severe Weather	3.3	High

Table 17-5. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
4	Flood	2.9	High
5	Drought	2.95	Medium
6	Hazmat	2.8	Medium
7	Erosion	2.5	Medium
8	Volcano	2.6	Low
9	Landslides	2.35	Low
10	Climate Change	2.35	Low
11	Wildfire	2.3	Low

Table 17-6. Port of Grays Harbor 2024 CPRI Score and Hazard Ranking																							
Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change			3			2				2						1				4	2.35	10	Low
Drought				4		2					3					1				4	2.95	5	Medium
Earthquake			3					4				4	4				1				3.45	2	High
Erosion			3			2				2					2					4	2.50	7	Medium
Flood				4		2					3					1			3		2.90	4	High
Landslides		2				2				2			4						3		2.35	9	Low
Severe Weather				4			3				3					1			3		3.30	3	High
Tsunami			3					4				4	4					2			3.50	1	High
Volcano		2				2					3		4							4	2.60	8	Low

**Table 17-6.
Port of Grays Harbor 2024 CPRI Score and Hazard Ranking**

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Wildfire		2				2				2			4					2			2.30	11	Low
Other Hazards of Concern (Hazmat)			3			2				2			4							4	2.80	6	Medium

The Planning Team for the Port identified the following impacts for the hazards listed above:

- Climate Change – Several facilities are vulnerable to damage from the effects of predicted sea level rise, increases in total water height, and increases in frequency and intensity of ocean waves.
- Drought – Most of the effects would be the result of impacts to utility providers, however the Satsop Business Park has its own potable water system which is tied to the Chehalis River and could be impacted by prolonged drought.
- Earthquake-The Port has several older structures at all facilities built under lower building codes than currently exist and would be vulnerable to damage.
- Erosion-The Port operates several facilities that could be affected by erosion, both directly by increased damage from storms and surges in the eroded area, and by impacts to the navigation channel which would affect access to Port terminals.
- Flood- While most of the Port facilities are not within the 100-year flood zones, the Westport Marina is and is vulnerable. The rest of the Port facilities could be impacted during significant flooding events due to being isolated by adjacent flooding.
- Landslides-Similar to flooding, Satsop Business Park is on elevated ground that is in an area that has a landslide potential. The park could be directly impacted however it is highly likely that access would be impacted by adjacent landslides. The primary rail and road access to the marine terminals is also adjacent to a bluff that has a history of landslide events.
- Severe Weather-All facilities in the Port are vulnerable to the effects of large storms and all have been impacted to some extent during the identified declared disasters. In addition to damage, severe weather impacts the ability of vessels to access the marine terminals and causes business disruptions.

- Tsunami-Most of the Port facilities are within the mapped inundation and liquefaction zones and would be devastated by a tsunami.
- Volcano-The primary effects of volcanic action would be the potential for sedimentation of the Chehalis River and the resulting impacts to vessel traffic.
- Wildfire-The Satsop Business Park is surrounded by timberlands and could be directly impacted by a wildfire. Other facilities have very little if any vulnerability
- Hazmat-While the Port uses and stores fuels and lubricants for its equipment, several tenants are large quantity generators and Port facilities would be impacted by spills and releases either as stand-alone events or in conjunction with another listed disaster.

17.7 MITIGATION GOALS AND OBJECTIVES

The Port adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

17.8 HAZARD MITIGATION ACTION PLAN

The Planning Team for the district identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Strategy #3, related to wildfire at the Satsop Business Park from the 2017 plan was completed and not carried forward. A new Strategy to address erosion impacts along the Chehalis and Satsop Rivers was added as #5. Strategy #1 was expanded to include coordination efforts with state and federal agencies. Table 17-7 lists the action items/strategies that make up the district's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

Mitigation Initiative Explanation

- Initiative 1- The Port will continue coordination with the County Emergency Management Office, as well as state and federal agencies, by participating in established and newly formed committees, work groups and planning efforts, related to hazard identification, response, and recovery.
- Initiative 2- The Port will coordinate with local fire and EMS agencies to develop response plans related to hazmat spills and vessel fire response.
- Initiative 3-The Port will work internally with its safety committee to update the current response plans to include a schedule for updates, trainings, and testing which do not exist in the current plan.
- Initiative 4- The Port will seek funding to complete seismic analysis of existing critical facilities and include seismic measures in facility upgrade projects.
- Initiative 5 – The Port will work with applicable agencies including the County and Office of the Chehalis Basin, along with partners to complete reach scale studies and identify solutions and projects to reduce or eliminate erosion impacts to critical infrastructure on the Chehalis and Satsop River.

**Table 17-7.
Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1. Emergency Coordination with County/Local Jurisdictions									
All	All	O-2 O-5 O-8	Port County	Low	General Fund	Ongoing	Yes	Emergency Services	County
INITIATIVE #2. Emergency Response Coordination with Local EMS and Fire Agencies									
All	Hazmat Earthquake Flood Tsunami	O-5 O-7	Port and Local Fire/EMS Agencies	Low	General Fund	Short Term	Yes	Emergency Services	County
INITIATIVE #3. Update Emergency Response Plans to Include Updated, Training and Testing Schedules									
All	All	O-2 O-3 O-7	Port	Low	General Fund	Short Term	Yes	Emergency Services	District Facilities
INITIATIVE #4. Complete Seismic Stability Inspections of Infrastructure Based on Geologic Hazards of Concern									
All	Earthquake Tsunami	O-2 O-8	Port	High	General Fund Grant	Long Term	Yes	Property Protection	District Facilities
INITIATIVE #5. Coordinate with Agencies/Partners to Identify Projects to Address Chehalis/Satsop River Erosion									
Existing	Erosion	O-2 O-4 O-5	Office of the Chehalis Basin	Medium/High	General Fund Grant	Long Term	No	Property Protection	Local along Chehalis River including Satsop Facility

17.9 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 17-8 identifies the prioritization for each initiative.

Table 17-8. Mitigation Strategy Priority Schedule							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
1	3	Medium	Low	Yes	No	Yes	High
2	2	High	Low	Yes	No	Yes	High
3	2	Medium	Low	Yes	No	Yes	High
4	3	Medium	Low	Yes	No	Yes	High
5	3	Medium	High	Unknown	Yes	Yes	Medium
a. See Chapter 1 for explanation of priorities.							

17.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 17-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 17-9. 2024 Status of Previous Hazard Mitigation Strategies													
	Associated Hazards									Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides / Erosion	Severe Weather	Tsunami	Wildland Fire	Other Hazard - Hazmat	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
#1 Emergency Coordination with County/Local Jurisdictions.	✓	✓	✓	✓	✓	✓	✓	✓	The Port has assigned staff and continues to coordinate with the County Emergency Management Office by participating in established and newly formed committees, work groups and planning efforts related to hazard identification, response, and recovery. Port staff worked with State Emergency Management Staff to develop a tsunami response plan for the Westport Marina.		✓		

Table 17-9.
2024 Status of Previous Hazard Mitigation Strategies

Mitigation Strategy	Associated Hazards								2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides / Erosion	Severe Weather	Tsunami	Wildland Fire	Other Hazard - Hazmat		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
#2 Emergency Response Coordination with Local EMS and Fire Agencies.		✓	✓			✓		✓	Port staff worked with local Fire agencies, shipping agents, and facilities to develop and implement coordinated plans for vessel fires. This effort is ongoing. Staff have worked with local Fire to understand their hazmat procedures. Port participated as a stakeholder in Ecology led oil spill risk analysis and response planning efforts.		✓		
#3 Update Satsop Forrest Management Plan to Identify Wildfire Mitigation.							✓		The Port worked with forestry management team to include wildfire considerations in harvest practices. Three thinning operations were completed since this was adopted to reduce fire loading.	✓			
#4 Update Emergency Response Plans to Include Updated Training and Testing Schedules.	✓	✓	✓	✓	✓	✓	✓	✓	The office closure related to COVID and changes in port staffing prevented significant work on this strategy during the period. The Port has identified new staffing and will be focusing on this strategy moving forward.		✓		

Table 17-9.
2024 Status of Previous Hazard Mitigation Strategies

Mitigation Strategy	Associated Hazards							2024 Project Status	Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides / Erosion	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
#5 Complete Seismic Stability Inspections of Infrastructure Based on Geologic Hazards of Concern.		✓						The office closure and fiscal impacts related to COVID reduced staff availability and funding opportunities to address this strategy. One seismic analysis of an existing warehouse was completed and upgrades included the roof replacement project during this period. The new Port Engineer position will be focusing on this strategy moving forward.		✓		

17.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

The Port will continue to work with the County, State and Federal Partners to identify updates in risk hazard mapping, especially related to tsunamis as the best available science is rapidly changing. The Port continues to work with the Department of Homeland Security to identify security related requirements and new information.

CHAPTER 18.

GRAYS HARBOR COLLEGE 2024 ANNEX

18.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to Grays Harbor College, a participating special purpose district to the Grays Harbor County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by Grays Harbor College. For planning purposes, this Annex provides additional information specific to the district, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only. This document serves as an update to the district's previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

18.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

Grays Harbor College followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, Grays Harbor College also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members		
Name	Position/Title	Planning Tasks
David Parkinson Safety and Security Coordinator 1620 Edward P. Smith Drive Aberdeen, WA 98520 Telephone: 360-538-4120 e-mail: david.parkinson@ghc.edu	Primary Point of Contact	Annex Update; provided critical facility information; lead author of update; attended planning team meetings; led effort for annex development; provided information on countywide data and risk assessment review; reviewed draft plan; presented plan to Board for review and approval.
Keith Penner Chief of Campus Operations 1620 Edward P. Smith Drive Aberdeen, WA 98520 Telephone: 360-538-4154 e-mail: keith.penner@ghc.edu	Alternate Point of Contact	Oversight over planning team; provided information on critical facilities and annex development; review of risk assessment as

Local Planning Team Members		
Name	Position/Title	Planning Tasks
		completed; annex and base plan review.
Chris Macht Coordinator 1620 Edward P. Smith Drive Aberdeen, WA 98520 Telephone: 360-538-4020 e-mail: chris.macht@ghc.edu	Coordinator Campus Operations	Assisted with data capture; provided information on previous impact data; reviewed risk assessment; assisted with plan development.

18.3 DISTRICT PROFILE

Grays Harbor College is a community college located in Aberdeen, Washington, United States. Founded in 1930, the college sits on a 120-acre campus overlooking the town of Aberdeen and its seaport on the edge of the Pacific Ocean. Additional "learning centers" are located in Raymond and Ilwaco. The mission of Grays Harbor College is to provide meaningful education and cultural enrichment through academic transfer, workforce preparation, basic skills, and service to community. In keeping with service to community, the College serves as a tsunami evacuation point for the County, Red Cross Disaster Site and back-up ECC for the City of Aberdeen.

The following is a summary of key information about the jurisdiction:

- **Governing Authority**— The district is governed by The State Board of Technical and Community Colleges (SBCTC)
- **Population Served**—76,841 as of 2021
- **Land Area Served**—2,224 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$12,050,602,701 as of 2022
- **Land Area Owned**—120 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**

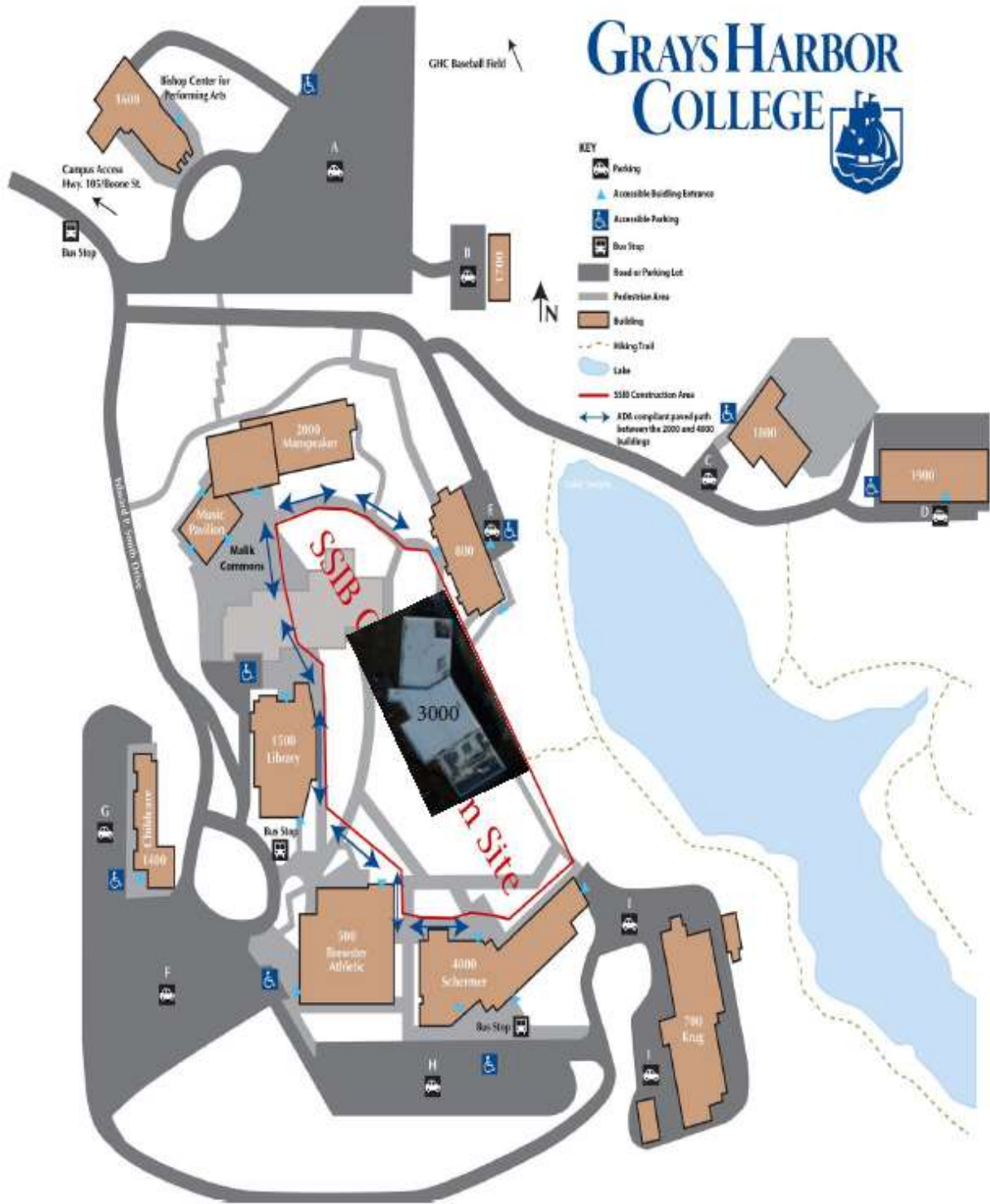
Campus Generators	(various)	\$200,000
Snow Plows (including vehicles)		\$100,000
Tractors (JD and Kubota)		\$150,000
Water Purification System		\$5,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is **\$455,000**
- **List of Critical Facilities Owned by the Jurisdiction:**

500 Building	\$6,300,000
700 Building	\$8,800,000
800 Building	\$8,500,000

1400 Building	\$2,200,000
1500 Building	\$9,000,000
1600 Building	\$7,000,000
1700 Building	\$850,000
1800 Building	\$3,500,000
1900 Building	\$8,300,000
2000 Building	\$26,000,000
3000 Building	\$55,000,000
4000 Building	\$25,000,000

- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is **\$160,450,000**
- **Current and Anticipated Service Trends**—We are focused on success of all varieties - helping students as they work towards an Associate or Bachelor degree; teaching new skills that could lead to a new or improved job; or encouraging someone as they strive to earn a GED®, master English as a new language, or enroll in any one of our community special interest courses while providing necessary emergency support to the surrounding area. The College continues to add baccalaureate programs as it tries to provide better educational service to the area. It is anticipated that the school will continue to grow and expand in the future. As it does, any new structure development will include the most current building codes in place to help ensure the safety of our students, faculty and guests.

The district's campus is shown on the map provided below.



18.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to the special purpose district. Table 18-1 lists those past occurrences which have impacted the district since completion of the last plan. If available, dollar loss data is also included.

Table 18-1 Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Dollar Losses (if known)
COVID-19	3427	March 2020	
Severe Winter Storm	4056	January 2012	\$250.00
Severe Winter Storm	1825	December 2008	\$100.00

18.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs.

18.5.1 Regulatory Capability

The assessment of the district's legal and regulatory capabilities which are customarily used by jurisdictions to implement hazard mitigation activities, are identified in Table 18-2. Those items applicable to the district are identified.

Table 18-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	Yes			The college applies the most current building codes in place with all new construction, or re-construction of structures that are remodeled or rebuilt at 51% or greater in value.
Post Disaster Recovery	Yes			
Site Plan Review	Yes			
Public Health and Safety	Yes			
Environmental Protection	Yes			The GHC is required to enforce all environmental standards which impact their facilities or operations, including within its various labs, etc.
National Incident Management System	Yes			
Planning Documents				
General or Comprehensive Plan				<i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i>
Capital Improvement Plan	Yes			This plan will be reviewed when granting opportunities arise to determine if there are any potential funding streams on the CIP projects identified.
Emergency Operations Plan	Yes			Various types of plans in place, which help reduce the impact from the hazards of concern.
Response Plan	Yes			The College does have different response plans in place to assist in hazard-specific incidents.
Evacuation Plan	Yes			The College serves as evacuation site for the City of Aberdeen, as well as a Red Cross Disaster location.
Strategic Plan	Yes			
Response/Recovery Planning				

Table 18-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Comprehensive Emergency Management Plan	No			
Threat and Hazard Identification and Risk Assessment	Yes			The college itself has not completed a THIRA; however, the college relies on local law enforcement agencies to provide response to any incident. Those agencies have completed threat assessments for the area as a whole.
Terrorism Plan	Yes			The college does have an active shooter response plan in place, which may be considered a terrorist action.
Post-Disaster Recovery Plan	No			
Continuity of Operations Plan	No			
Public Health Plans	No			GHC works with the local health department to ensure accurate information is relayed to students and faculty. The College relies heavily on the local health department as well as Grays Harbor EM to provide assistance and guidance when public health emergencies arise.
Standard Operating Procedures/Guides	Yes			SOPs exist for a variety of tasks, including for response activities, and equipment specific SOPs to ensure compliance with EAP, OSHA/WISHA regulations.
Boards and Commission				
Mitigation Planning Committee	Yes			The College is a part of the County's Mitigation Planning Committee utilized to develop this HMP.
Governing Board	Yes			The Governing Board for GHC was involved in this update process, and approved the plan itself, as well as the strategies identified within this document.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			Various programs in place which help reduce the impact of the hazards of concern on the campus and its students.

Table 18-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Mutual Aid Agreements / Memorandums of Understanding	Yes			Various types of MOUs in place.
Other	No			

18.5.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 18-3. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 18-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices (facilities personnel, maintenance personnel.)	Yes	Campus Operations
Personnel skilled or trained in GIS applications	No	
Emergency Manager	Yes	Campus Operations/Campus Safety
Grant writers	Yes	Director of Grant Development
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	IT/Student Services/Campus Operations/Student Life
Hazard data and information available to public	Yes	The mitigation plan's risk assessment is available to the public for review.
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	The county has various groups and teams in place which activate when an incident occurs.
Organization focused on individuals with access and functional needs populations	Yes	Accessibility Support Services/Student Support Center

Table 18-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Ongoing public education or information program	Yes	The campus has safety programs in place pursuant to state and federal requirements.
Natural disaster or safety related school programs?	Yes	The campus has safety programs in place pursuant to state and federal requirements.
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	Yes	The college provides information related to weather events, policies in place with respect to campus closure during incidents, etc.
On-Going Mitigation Efforts		
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Campus Operations
Erosion or sediment control program	Yes	Campus Operations

18.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 18-4. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 18-4 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No

Table 18-4 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

18.5.4 Community Classification

The district's classifications under various hazard mitigation programs are presented in Table 18-5. Each of the classifications identified established requirements which, when met, are known to increase the resilience of a community. Those which specifically require district participation or enhance mitigation efforts are indicated accordingly.

Table 18-5 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Storm Ready	Yes	Through County
Firewise	No	
Tsunami Ready (if applicable)	Yes	Through County

18.6 HAZARD RISK AND VULNERABILITY RANKING

The district's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect the Grays Harbor College.

Table 18-6 presents the ranking of the hazards of concern based on their CPRI score. Table 18-7 provides the CPRI scores utilized to establish the rankings. For the 2024 update, the internal planning team again confirmed the hazard ranking based on the existing materials utilized for the 2024 update, including an updated critical facilities list. The only change was the removal of "extremely" high for the earthquake hazard.

A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- Extremely Low – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- Low (Negligible) – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- Medium (Limited) – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- High (Critical) – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- Extremely High (Catastrophic) – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 18-6. Hazard Risk and Vulnerability Ranking			
Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.85	High
2	Landslides	3.15	High
3	Tsunami	3.1	High
4	Severe Weather	3.05	High
5	Erosion	2.75	Medium
6	Other Hazards	2.65	Medium
7	Wildfire	2.5	Medium
8	Climate Change	2.35	Medium
9	Flood	2.1	Medium
10	Drought	1.75	Low
11	Volcano	1.35	Low

**Table 18-7.
GRAYS HARBOR COLLEGE
2024 CPRI Score and Hazard Ranking**

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely / High (3)	Highly Likely / Very High (4)	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Climate Change			3			2				2						1				4	2.35	8	Medium
Drought		2				2				1						1				4	1.75	10	Low
Earthquake				4				4				4	4				1				3.85	1	High
Erosion				4		2				2						1				4	2.75	5	Medium
Flood		2				2					3					1			3		2.10	9	Medium
Landslides			3				3				3		4						3		3.15	2	High
Severe Weather				4		2						4				1		2			3.05	4	High
Tsunami			3				3				3		4					2			3.10	3	High
Volcano	1				1					2						1				4	1.35	11	Low
Wildfire		2				2					3		4					2			2.50	7	Medium
Hazmat			3			2				2			4				1				2.65	6	Medium

18.6.1 Additional Impact Data

The College has been previously impacted by a severe weather event in 2007 and a landslide in 2012. As the College sits along the Cascadia Subduction Zone and in close proximity to the Washington Coast, earthquakes and severe weather continue to be at the forefront of our mitigation efforts. In addition, the College is nestled between a massive hillside to the south, Swano Lake to the east and another hillside to the north that overlooks the lower part of campus. Landslides and erosion are constant concerns. We have noted erosion at various points around the periphery of Swano Lake. The erosion has claimed a wooden overlook platform, the southern portion of the lake is filled with fallen trees, and we note fairly frequent treefalls along the entire periphery of the lake.

Of particular note, Swano Lake Dam has been classified as a High Hazard Dam in need of rehabilitation. The rehabilitation is required to increase the dam's resilience to seismic impact or overtopping of the earthen structure. Grays Harbor College is working with Grays Harbor Emergency Management and the

Washington State Department of Ecology in applying for grants to fund the design and construction necessary to mitigate seismic and/or overtopping risks.

The College is a Tsunami Evacuation site for the City of Aberdeen as well as a Red Cross Disaster location. Due to this fact, during a natural disaster, many of the residents in the area will seek refuge at our location. The 500, 1400, 1500, 2000, 3000 and 4000 buildings become critical as these structures will serve as housing and food services for the men, women and children utilizing our facility during these events. The 700 building will serve as the Emergency Command Center and Emergency Operations Center in any situation.

As the college is built on a hill, the majority of buildings are elevated out of the flood inundation zone. However, the impact to the college has been raised to medium as there are four structures that lie in the zone and Swano Lake Dam has been classified as a High Hazard Dam in need of rehabilitation as noted above.

18.7 MITIGATION GOALS AND OBJECTIVES

The District adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

18.8 HAZARD MITIGATION ACTION PLAN

The Planning Team for the district identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 18-8 lists the action items/strategies that make up the district's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

Table 18-8. Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #A-1 Construct parking garage with helipad 200 space min.									
New	TS, SW, F	1,2,3,5,6,7	Facilities, Risk Planning	High	Grant	Long-term	Yes	Preventive Activity Emergency Services Recovery	Region County Facility
INITIATIVE #A-2 Work with the Washington State Dam Safety Office to address Swano Lake Dam structural concerns									

Table 18-8.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
	TS, SW, F	1,3,4	Facilities	High	Grant	Long-term	Yes	Property Protection Mitigation Natural Resource Protection	Facility Local County
INITIATIVE #A-3 Purchase a Container to house Emergency supplies									
New	TS,EQ,F, SW, LS	1,2,3,4,5, 6,7,9	Facilities Risk Planning	Low	Grant	Short-term	Yes	Emergency Services Mitigation Recovery	Facility Local County Region
INITIATIVE #B-1 Purchase PA system to utilize to make public safety announcements.									
New	EQ, TS, SW, O	1,2,7	Facilities Risk Planning	Low	Grant	Short-term	Yes	Emergency Services Recovery	Facility

18.9 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of six different initiative types for each identified action item was conducted. Table 18-9 identifies the prioritization for each initiative.

The initiatives identified as 'A' are purposed to directly mitigate our hazards of greatest impact. These are earthquake, landslides, tsunamis and severe weather. Initiatives identified as 'B' are general that will benefit the community we serve in any hazardous condition. The numerical designation is assigned according to the initiative that will have the impact for the most people going down to the one that has the impact for the least amount of people.

Table 18-9.
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
A1	1,2,3,5,6, 7	High	High	Yes	Yes	No	High
A2	1,3,4	High	High	Yes	Yes	No	High

Table 18-9. Mitigation Strategy Priority Schedule							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
A3	1,2,3,4,5,6,7,9	High	Low	Yes	Yes	No	High
B1	1,2,7	Medium	Low	Yes	Yes	Yes	Medium
a. See Chapter 1 for explanation of priorities.							

18.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 18-10 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 18-10. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Construct parking garage with helipad		x	x	x	x	x	x	No action taken, but GHC feels this is a viable project, particularly based on its importance within the City for an evacuation site and sheltering and feeding capacity.				x
Work with the Washington State Dam Safety Office to address Swano Lake Dam structural concerns		x	x	x	x							
Purchase a Container to house Emergency supplies	x	x	x	x	x	x	x					

Table 18-10. 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire		Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Mitigation Strategy								2024 Project Status				
Purchase PA system to utilize to make public safety announcements.	X	X	X	X	X	X	X					

18.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

An ongoing effort must be made to continually assess our risks and capabilities. As a major cog in the city and counties emergency response, care should be taken to insure the College is always ready to receive persons displaced by natural disasters and severe weather.

18.12 ADDITIONAL COMMENTS

Grays Harbor College has researched the construction of a parking garage with helipad capabilities. A minimum 200 space garage would be of significant expense with the cost rising exponentially for each 100 spaces added. The College feels this is a valid project, which would support the surrounding community, particularly in light of the fact that it serves as evacuation and sheltering sites for its students, faculty, and surrounding community.

CHAPTER 19.

GRAYS HARBOR TRANSPORTATION AUTHORITY 2024 ANNEX



19.1 INTRODUCTION

This Annex details the hazard mitigation planning elements specific to the Grays Harbor Transportation Authority (GHT), a participating municipal corporation to the Grays Harbor County Hazard Mitigation Plan Update. GHT provides county-wide multimodal transportation services to residents of Grays Harbor County. As such, all hazards identified in the County's plan have the potential of impacting GHT. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements, apply to and were met by GHT. For planning purposes, this Annex provides additional information specific to GHT, with a focus on providing greater details on the risk assessment and mitigation strategy for this entity only.

19.2 HAZARD MITIGATION PLANNING TEAM POINT(S) OF CONTACT

Grays Harbor Transit followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, GHT also formulated their own internal planning team to support the broader planning process. GHT Team Members regularly provided updates and information to its governing Board throughout the HMP process, including presentation of risk data, and presentation of the final draft plan for review. These are open public meetings, which are advertised. Team members also posted information to the GHT website. Information was also presented on the GHT website. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated. This list is not all-inclusive.

Local Planning Team Members	
Name	Planning Tasks
Ken Mehin, General Manager 343 W. Wishkah Street Aberdeen, WA 98520 360-532-2770 ext. 101 kmehin@ghtransit.com	Oversight over planning team; provided information on annex development; review of risk assessment as completed; annex and base plan review.
Shawn Brewer, Safety & Training Manager 705 30 th Street Hoquiam, WA 98550 360-532-2770 ext. 128 sbrewer@ghtransit.com	Annex Update; lead author of update; attended planning team meetings; led effort for annex development; provided information on countywide data and risk assessment review; reviewed draft plan; presented plan to Board for review and approval.

Local Planning Team Members	
Name	Planning Tasks
Todd Tobeck, Maintenance Manager 705 30 th Street Hoquiam, WA 98550 360-532-2770 ext. 129 ttobeck@ghtransit.com	Technical Support; assisted with data capture; provided information on previous impact data; reviewed risk assessment; assisted with plan development.

19.3 ORGANIZATIONAL PROFILE

The Grays Harbor Transportation Authority is a County Transportation Authority (CTA), authorized under Chapter 36.57 RCW, located in the southwestern portion of Washington State. The Grays Harbor Transportation Authority began providing transportation services in June 1975. Our system map below indicates the extent of our service area. The three Grays Harbor County Commissioners, the Mayors of Aberdeen, Hoquiam, and Elma, comprise the current Board of Directors. The position held by the Mayor of Westport alternates with the Mayors from McCleary, Elma, Montesano, Oakville, Ocean Shores, or Cosmopolis. The Board of Directors holds public meetings on the second Tuesday of each month at the Grays Harbor Transportation Authority's Administrative Offices in Aberdeen. Resolution 11 Establishes By-Laws 1975 The following is a summary of key information about the jurisdiction:

- **Governing Authority**— Chapter 36.57 RCW
- **Land Area Served**—1,917 square miles
- **Land Area Owned**—Approximately 25 acres. Since completion of the last plan, the Authority has acquired approximately 18 additional acres in the Central Park area. At present, the property has no structures located on it, but it is anticipated that the site will be developed, potentially during the life cycle of this 2024 update.
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**

Full size buses (36)	\$21,466,596.00
Mini buses (18)	\$2,754,000.00
Vanpool Vans(20)	\$1,334,600.00
Shop Equipment	\$1,000,000.00
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$26,555,196.00.
- **List of Critical Facilities Owned by the Authority:**

GHT Main Facility	\$5,000,000.00
Aberdeen Transit Center	\$2,149,000.00
Hoquiam Transit Center	\$1,200,000.00
Montesano Transit Center	\$ 500,000.00

Elma Transit Center \$ 500,000.00

Gavett Lane (Central Park) \$1,500,000.00

- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$10,849,000.
- **Current and Anticipated Service Trends**—Bus ridership has been increasing approximately 8% a year over the last several years and is expected to continue the current trends.

Building Description	Address	City	Real Property	Personal Property (Equipment & Bldg Contents)	Property Rental Incomes	Total Insured Values for 2022 Renewal
SHELTERS			\$ 274,018	\$ -	\$ -	\$ 274,018
MONTESANO TRANSFER STATION	214 E. PIONEER	MONTESANO	\$ 210,731	\$ 50,500	\$ -	\$ 261,231
OCEAN SHORES TRANSFER STATION	205 W CHANCE A LA MER NW	OCEAN SHORES	\$ 920,110	\$ -	\$ -	\$ 920,110
ABERDEEN TRANSFER STATION	320 E. WISHKAH	ABERDEEN	\$ 587,182	\$ 193,489	\$ -	\$ 780,671
HOQUIAM TRANSFER STATION	706 J STREET	HOQUIAM	\$ 422,900	\$ 186,189	\$ -	\$ 609,089
ELMA TRANSFER STATION	601 W. MAIN STREET	ELMA	\$ 920,110	\$ -	\$ -	\$ 920,110
ADMINISTRATION I	705 30TH ST.	HOQUIAM	\$ 507,453	\$ 100,517	\$ -	\$ 607,970
BUS WASH	705 30TH ST.	HOQUIAM	\$ 273,336	\$ 96,691	\$ -	\$ 370,027
BUS SHED	705 30TH ST.	HOQUIAM	\$ 617,794	\$ 273,321	\$ -	\$ 891,115
MOBILE EQUIPMENT	705 30TH ST.	HOQUIAM	\$ -	\$ 250,000	\$ -	\$ 250,000
EDP VALUE	705 30TH STREET	HOQUIAM	\$ -	\$ 171,039	\$ -	\$ 171,039
BUS MAINT.	705 30TH STREET	HOQUIAM	\$ 1,197,358	\$ 530,502	\$ -	\$ 1,727,860
PUMP ISLAND	705 30TH STREET	HOQUIAM	\$ 136,517	\$ 36,069	\$ -	\$ 172,586
ADMINISTRATION II	615 30TH ST	HOQUIAM	\$ 163,485	\$ 11,491	\$ -	\$ 174,976
ABERDEEN TRANSFER STATION	303 E. MARKET	ABERDEEN	\$ 173,051	\$ -	\$ -	\$ 173,051
PARK AND RIDE LOT	702 S. ENGLEWOOD	WESTPORT	\$ 152,143	\$ -	\$ -	\$ 152,143
COMMERICAL BUILDING	300 E WISHKAH ST	ABERDEEN	\$ 338,625	\$ -	\$ -	\$ 338,625
COMMERCIAL LAND	1193 US Highway 12, 41 Gavett Lane	Montesano	\$ 1,100,000			\$ 1,100,000
			\$ 7,994,813	\$ 1,899,808	\$ -	\$ 9,894,621



Figure 19-1 GHT Area of Operation Boundaries

19.4 HAZARD EVENT HISTORY

Within the Base Plan, the Planning Team identified all hazard events that have occurred within the County. In the context of the planning region, it was determined that there are no additional hazards that are unique to Grays Harbor Transit. Being a county-wide service provider, Table 19-1 lists all past occurrences that have impacted the County, and potentially GHT operations and facilities since operations began in 1975.

While the County was declared five times since the 2018 HMP was completed, the Authority sustained no damages. At most, there may have been some delay in operations due to roadway impact, but no damages were sustained.

Table 19-1
Grays Harbor County Disaster History 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
4650	3/29/22	Flood	Severe Winter Storms, Snowstorms, Straight-Line Winds, Flooding (Incident resulted in two deaths in the County.)	12/26/2021	2/15/2022
4593	4/8/2021	Severe Storm	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, And Mudslides	12/29/2020	1/16/2021
4539	4/23/20	Flood	Severe Storms, Flooding, Landslides, And Mudslides	1/20/2020	2/10/2020
4481	3/22/20	COVID	Biological	1/20/2020	5/11/2023
4418	3/4/2019	Severe Storms	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, Mudslides, Tornado	12/20/2018	12/24/2018
4253	2/2/2016	Flood	Severe Winter Storm, Straight-Line Winds, Flooding, Landslides, Mudslides	12/1/2015	12/14/2015
4242	10/15/2015	Severe Storm(s)	Severe Windstorm	8/29/2015	8/29/2015
4056	3/5/2012	Severe Storm(s)	Severe Winter Storm, Flooding, Landslides, and Mudslides	1/14/2012	1/23/2012
1825	3/2/2009	Severe Storm(s)	Severe Winter Storm, Record and Near Record Snow	12/12/2008	1/5/2009

Table 19-1
Grays Harbor County Disaster History 1953-2022

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
1817	1/30/2009	Flood	Severe Winter Storm, Landslides, Mudslides, and Flooding	1/6/2009	1/16/2009
1734	12/8/2007	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	12/1/2007	12/17/2007
1682	2/14/2007	Severe Storm(s)	Severe Winter Storm, Landslides, and Mudslides	12/14/2006	12/15/2006
1671	12/12/2006	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mudslides	11/2/2006	11/11/2006
1641	5/17/2006	Severe Storm(s)	Severe Storms, Flooding, Tidal Surge, Landslides, and Mudslides	1/27/2006	2/4/2006
1499	11/7/2003	Severe Storm(s)	Severe Storms and Flooding	10/15/2003	10/23/2003
1361	3/1/2001	Earthquake	Earthquake	2/28/2001	3/16/2001
1172	4/2/1997	Flood	Heavy Rains, Snow Melt, Flooding, Land and Mudslides	3/18/1997	3/28/1997
1159	1/17/1997	Severe Storm(s)	Severe Winter Storms, Land and Mudslides, Flooding	12/26/1996	2/10/1997
1100	2/9/1996	Flood	High Winds, Severe Storms, Flooding	1/26/1996	2/23/1996
1079	1/3/1996	Severe Storm(s)	Severe Storms, High Wind, and Flooding	11/7/1995	12/18/1995
1037	8/2/1994	Fishing Losses	The El Nino (The Salmon Industry)	5/1/1994	10/31/1994
883	11/26/1990	Flood	Severe Storms, Flooding	11/9/1990	12/20/1990

**Table 19-1
Grays Harbor County Disaster History 1953-2022**

Disaster Number	Declaration Date	Incident Type	Title	Incident Begin Date	Incident End Date
852	1/18/1990	Flood	Severe Storms, Flooding	1/6/1990	1/14/1990
623	5/21/1980	Volcano	Volcanic Eruption, Mt. St. Helens	5/21/1980	5/21/1980
612	12/31/1979	Flood	Storms, High Tides, Mudslides, Flooding	12/31/1979	12/31/1979
545	12/10/1977	Flood	Severe Storms, Mudslides, Flooding	12/10/1977	12/10/1977
492	12/13/1975	Flood	Severe Storms and Flooding	12/13/1975	12/13/1975
322	2/1/1972	Flood	Severe Storms and Flooding	2/1/1972	2/1/1972
300	2/9/1971	Flood	Heavy Rains, Melting Snow, Flooding	2/9/1971	2/9/1971
185	12/29/1964	Flood	Heavy Rains and Flooding	12/29/1964	12/29/1964
EMERGENCY DECLARATIONS					
3227	9/7/2005	Coastal Storm	Hurricane Katrina Evacuation	8/29/2005	10/1/2005
SIGNIFICANT LOCAL INCIDENTS					
NA	NA	Landslides/Floods	Heavy Rains and Landslides (Countywide)	1/4/2015	1/5/2017

19.5 APPLICABLE REGULATIONS AND PLANS

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other ongoing efforts. It also identifies the jurisdiction's capabilities with respect to

preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies, and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: regulatory capabilities, which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other ongoing mitigation efforts; fiscal capabilities, which support mitigation efforts, and classifications under various community programs.

19.5.1 Regulatory Capability

The assessment of the district's legal and regulatory capabilities which are customarily used by jurisdictions to implement hazard mitigation activities, are identified in Table 19-2. Those items applicable to the district are identified. It should be noted that as the Authority begins to update various emergency and other plans, information from this risk assessment will help identify potential areas of concern, as well as areas where mitigation efforts would help reduce the impact.

Table 19-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	No	Yes	Yes	The Transit Authority complies with all building codes when construction or re-construction occurs.
Sprinkler Codes	Yes	Yes	Yes	All structures meet the IBC, which include sprinkler codes. All structures meet the codes in place at the time of construction.

Table 19-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Post Disaster Recovery	Yes	Yes	Yes	The Transit Authority does have plans in place to assist with recovery and re-establishment of services as quickly as possible after a disaster incident. The Authority also has various response plans and priority routes established to address various hazard impact scenarios.
Public Health and Safety	Yes	Yes	Yes	The Transit Authority works to assist with transportation with individuals with access or functional needs. The Authority works with various social and health services agencies to ensure services are provided to all individuals equitably.
National Incident Management System	Yes	Yes	Yes	
Planning Documents				
Capital Improvement Plan	Yes	Yes	Yes	
Economic Development Plan	Yes	Yes	Yes	
Transportation Plan	Yes	Yes	Yes	
Emergency Operations Plan	Yes	Yes	Yes	
Response Plan	Yes	Yes	Yes	

Table 19-2 Legal and Regulatory Capability					
		Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Evacuation Plan		Yes	Yes	Yes	The Transportation Authority works with the County with respect to evacuation planning to support the mass movement of citizens should an event occur.
Response/Recovery Planning					
Comprehensive Management Plan	Emergency	Yes	Yes	Yes	The County has identified the Transportation Authority in its CEMP in ESF 1.
Public Health Plans		Yes	Yes	Yes	The Transportation Authority regularly assists with real life incidents and response activities. The Transportation Authority is included in various response and recovery plans for the County.
Standard Procedures/Guides	Operating	Yes	Yes	Yes	Various SOPs exist for the Transportation Authority. Several of those SOPs are directly related to the hazards of concern.
Boards and Commission					
Planning Commission		Yes	Yes	Yes	The Transportation Authority does provide input to countywide planning initiatives to include transportation planning.
Mitigation Planning Committee		Yes	Yes	Yes	

Table 19-2 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Governing Commissioners	Yes	Yes	Yes	
Other				

19.5.2 Administrative and Technical Capabilities

The assessment of the district's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 19-3. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 19-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Administrative Services
Engineers specializing in construction practices?	Yes	Contracted Services
Planners or engineers with an understanding of natural hazards	Yes	Administrative Services
Staff with training in benefit/cost analysis	Yes	Administrative Services
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Operations/Dispatch
Personnel skilled or trained in Hazus use	Yes	Administrative Services
Emergency Manager	Yes	Safety & Training

Table 19-3 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Grant writers	Yes	Operations/Administrative Services
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	No	
Hazard data and information available to the public	Yes	Risk Assessment from HMP is available on the County's website. This includes the Transportation Authorities Annex Document.
Education and Outreach		
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	The Transportation Authority, as part of the HMP process, includes a plan maintenance section which provides hazard information on a regular basis.
Public-private partnership initiatives addressing disaster-related issues?	Yes	In partnership with the County to provide emergency management information, the Transportation Authority supports the various emergency management activities, including public education outreach concerning the hazards of concern.
Multi-seasonal public awareness program?	Yes	In conjunction with GH County EM partnership.
Other	No	

19.5.3 Fiscal Capability

The assessment of the jurisdiction's fiscal capabilities is presented in Table 19-4. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 19-4 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	

19.5.4 Community Classification

GHT's classifications under various hazard mitigation programs are presented in Table 19-5. Each of the classifications identified establish requirements which, when met, are known to increase the resilience of a community. Those that specifically require district participation or enhance mitigation efforts are indicated accordingly.

Table 19-5 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Building Code Effectiveness Grading Schedule	Yes	
Storm Ready	Yes	Through County
Tsunami Ready (if applicable)	Yes	Through County

19.6 HAZARD RISK AND VULNERABILITY RANKING

GHT's Planning Team reviewed the hazard list identified within the Base Plan and have identified the hazards that affect Grays Harbor Transit.

Table 19-6 presents the ranking of the hazards of concern based on their CPRI score, and their CPRI scores. Once the CPRI scores were determined, a qualitative vulnerability ranking was also assigned based on a summary of potential impact determined by past occurrences, spatial extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- ❑ **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- ❑ **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- ❑ **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- ❑ **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- ❑ **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for in excess of one month.

Table 19-6
2024 CPRI SCORE AND HAZARD RANKING

Hazards Of Concern	Probability				Magnitude / Severity				Geographic Extent and Location				Warning Time				Duration				CPRI Score	Rank	Vulnerability Rank (H/M/L)
	Unlikely / Low (1)	Possible / Medium (2)	Likely/ High (3)	Highly Likely / Very High	Negligible (1)	Limited (2)	Critical (3)	Catastrophic (4)	Negligible (1)	Limited (2)	Significant (3)	Extensive (4)	< 6 hours (4)	6 - 12 hours (3)	12 - 24 hours (2)	> 24 hours (1)	< 6 hours (1)	< 24 hours (2)	< 1 week (3)	> 1 week (4)			
Earthquake				4				4				4	4								3.80	1	High
Severe Weather				4		2					3			3				2			3.15	2	High
Tsunami			3					4		2			4				2				3.10	3	High
Flood				4			3			2						1			3		2.90	4	High
Other Hazards of Concern			3			2				2			4				1				2.65	5	Medium
Wildfire		2				2				2			4					2			2.30	6	Low
Erosion			3			2			1						2			2			2.20	7	Low
Landslides			3				3			2											2.20	8	Low
Drought		2			1					2						1				7	1.90	9	Low
Climate Change		2			1					2						1				7	1.90	10	Low
Volcano	1				1						3					1				4	1.55	11	Low

19.6.1 Additional Hazard Data - Risk Overview

The hazards listed above have been ranked in relationship to the potential impact to Grays Harbor Transit operations and facilities and demonstrate our level of potential impact as established by the Calculated Priority Risk Index process defined in Chapter 4. This process included a review of our critical facilities

that could be impacted, estimated dollar losses, and the impacts to people, property, regional economy, and environment for each of the identified hazards of concern. Reviewers should examine Chapter 4 of the County plan for information on the type of data included in determining the hazard rank and vulnerability identified above.

For the 2024 update, the internal planning team again reviewed the impact to critical facilities and followed the same process as with the 2018 risk ranking. In addition to the CPRI process, the GHT internal planning team also considered the following additional factors for the hazards identified. Once completed, the hazards remained consistent in their ranking for the 2024 update.

Since completion of the 2018 plan, GHT has not acquired or built any new structures. There was one structure removed in Aberdeen due to the structure's status, including black mold resulting from a leaking roof. That structure, now removed, has lowered the vulnerability to the GHT. Now cleared, that area will be utilized for expansion purposes when GHT initiates that effort. At present, GHT anticipates updating its main transit facility in Aberdeen within the next year. It also anticipates upgrading its communications center, moving that to a larger room within the same structure (remodel). Those anticipated renovations are not expected to increase the risk or vulnerability to GHT, but rather decrease the risk. When reviewing the hazards of concern, the Planning Team discussed the following:

- Earthquakes are the primary concern to both GHT's daily operations as well as our facilities. Our key maintenance and operations facilities are essential to maintaining fleet operations and can be expected to be adversely impacted by earthquakes. Additionally, the potential adverse impacts to the bridges and road systems in Grays Harbor from an earthquake would have a significant impact on our ability to provide essential transportation support.
- Severe Weather events are significant to GHT primarily from an operational perspective as well as the frequency of events. Ice/snowstorms, windstorms with downed trees and powerlines, etc., have an immediate impact on our transportation routes, significantly reducing our ability to provide essential transportation services in a safe and timely manner.
- Tsunamis, like earthquakes, are a primary concern to both GHT's daily operations as well as our facilities. Our key maintenance and operations facilities are located in the tsunami inundation zone and would be impacted by any significant tsunami wave action in the harbor. Additionally, the potential adverse impacts to the bridges and road systems in Grays Harbor from a tsunami would have a significant impact on our ability to provide essential transportation support.
- Floods are less frequent events but have the potential to impact both our road-based transportation activities and our main Hoquiam facility as well. Water over roads, bridges, and road closures are common flood-related events and impact our service delivery of essential transportation services county-wide.
- Other Hazards of Concern were identified primarily as HAZMAT-type incidents due to the location of our main Hoquiam facility within the Port of Grays Harbor in relationship to facilities that utilize various types of chemicals, including a fueling station, grain silo, and refinery for biodiesel.
- The "low" ranked hazards, Wildfire, Erosion, Landslides, Climate Change, Drought, and Volcano, all would have an impact on daily operations – to one extent or another – versus an impact on our facilities. Wildfire, erosion, volcano, and landslide hazards have the potential to impact the

road and bridge infrastructure systems, while climate change and drought would have a minimal direct impact on either our operations or facilities.

19.7 MITIGATION GOALS AND OBJECTIVES

GHT adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

19.8 HAZARD MITIGATION ACTION PLAN

The GHT Planning Team identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 19-7 lists the action items/strategies that make up the GHT hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified.

Table 19-7 Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1 Assess needs for backup power generator									
Existing	All	1, 4, 6, 8	Operations	Low	GF	Short-term	Yes	Preventive, Property Protection, Emergency Services, Recovery	Facility and Local
INITIATIVE #2 Assess locations for satellite parking of buses									
Existing	All	1, 2, 3, 4, 6, 8	Operations	Medium	GF, WSDOT	Med	Yes	Prop Protection, Recovery, Emergency Services	Facility, County, Region

Table 19-7
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/Medium/Low) or \$ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #3 Seismic retrofit of shop									
Existing	EQ	1, 4, 6, 8	Maintenance	High	GF, WSDOT, HMGP	Long-term	Yes	Preventive, Structural, Recovery	Facility
INITIATIVE #4 Relocate facility outside tsunami inundation zone									
Existing	EQ, T	1, 2, 3, 4, 5, 6, 8	Admin	High	GF, WSDOT, HMGP	Long-term	Yes	Preventive, Structural, Recovery, EM	Facility, County, Region
INITIATIVE #5 Update GPS mapping for dispatch to include tsunami and other hazard evacuation routes									
Existing	EQ, T	2, 5, 7, 8	Operations	Low	GF	Short-Term	Yes	Prop Protection, Emergency Services, Preventive	Facility, County, Region

19.9 PRIORITIZATION OF MITIGATION INITIATIVES

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. An analysis of five different initiative types for each identified action item was conducted. Table 19-8 identifies the prioritization for each initiative.

Table 19-8
Mitigation Strategy Priority Schedule

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority ^a
1	4	H	L	Yes	Yes	Yes	H
2	6	H	M	Yes	Yes	Yes	H
3	4	H	H	Yes	Yes	No	H
4	7	H	H	Yes	Yes	No	H
5	4	H	L	Yes	No	Yes	H
a. See Chapter 1 for explanation of priorities.							

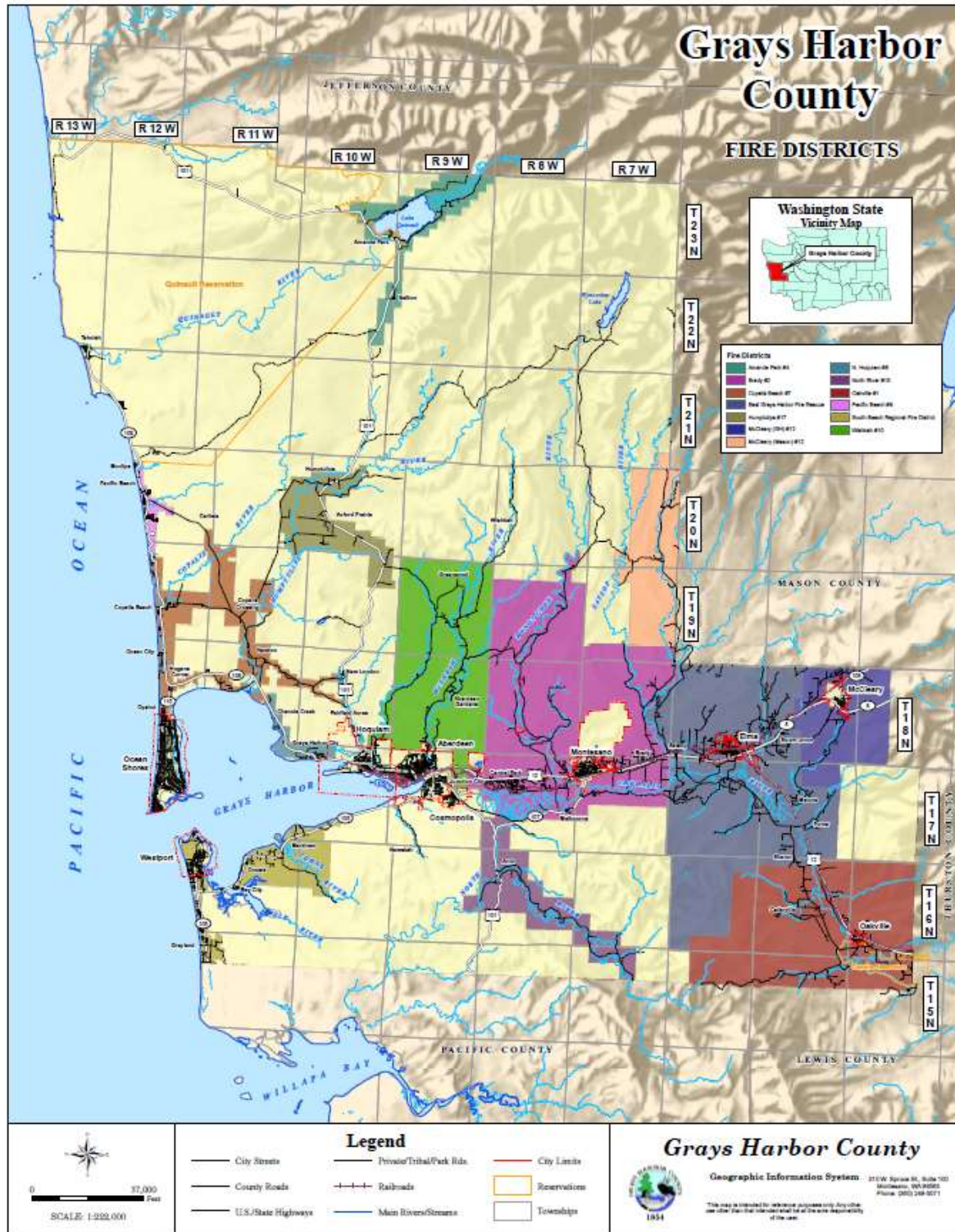
19.10 STATUS OF PREVIOUS PLAN INITIATIVES

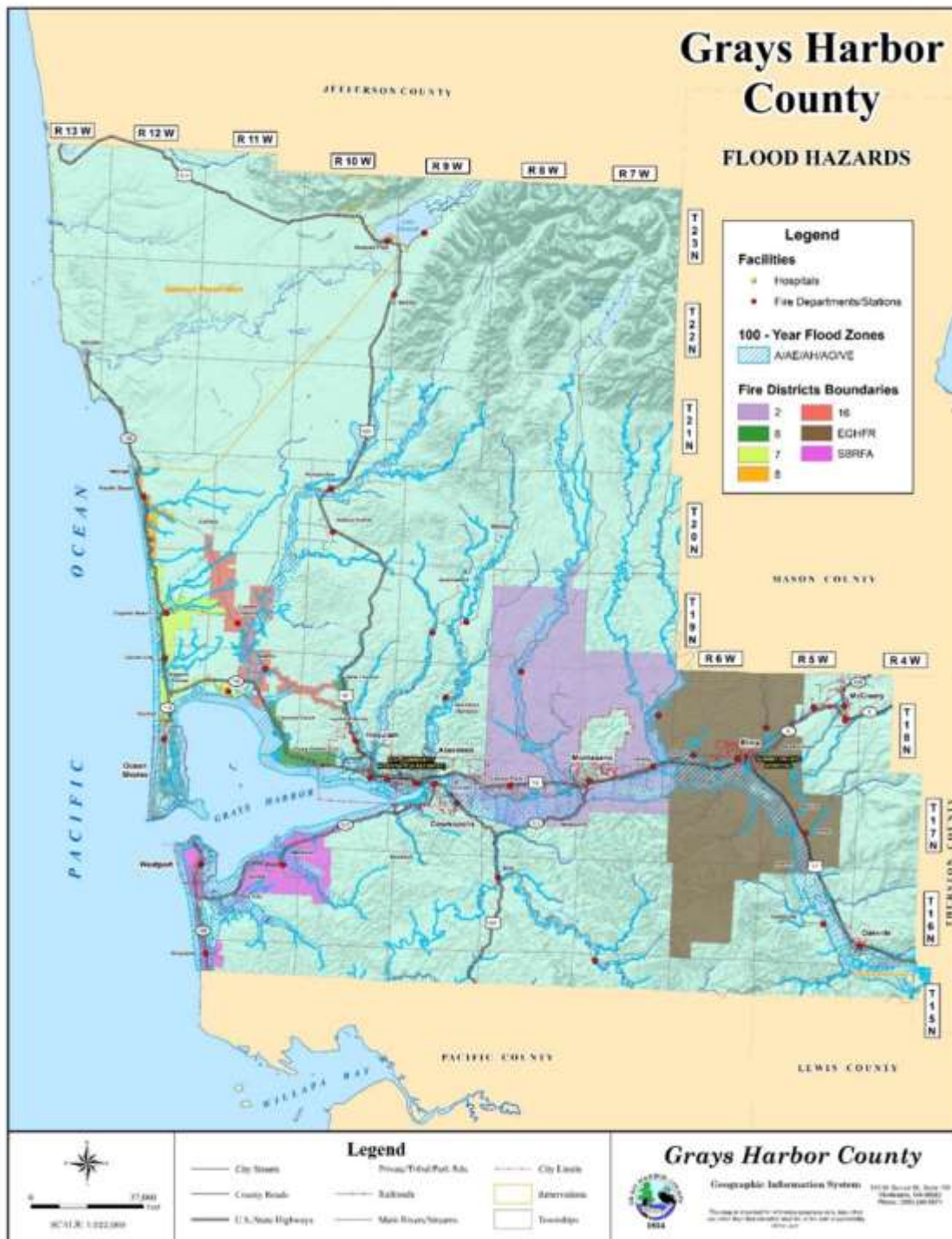
Table 19-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 19-9 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Assess needs for backup power generator	X	X	X	X	X	X	X	GHT is in the process of acquiring a new generator at the maintenance facility, which should be installed within the next year. GHT does feel that this project remains valid, as additional generators are needed for other structures to ensure continuity of operations.	X			X
Assess locations for satellite parking of buses	X	X	X	X	X	X	X	During the life cycle of the existing plan, the transit has not been required to relocate its fleet due to hazard impact; however, this remains a valid project for long-term and recovery planning, and therefore the project is carried forward.				X
Seismic retrofit of shop		X						No action taken. Project remains valid and is carried forward.				X

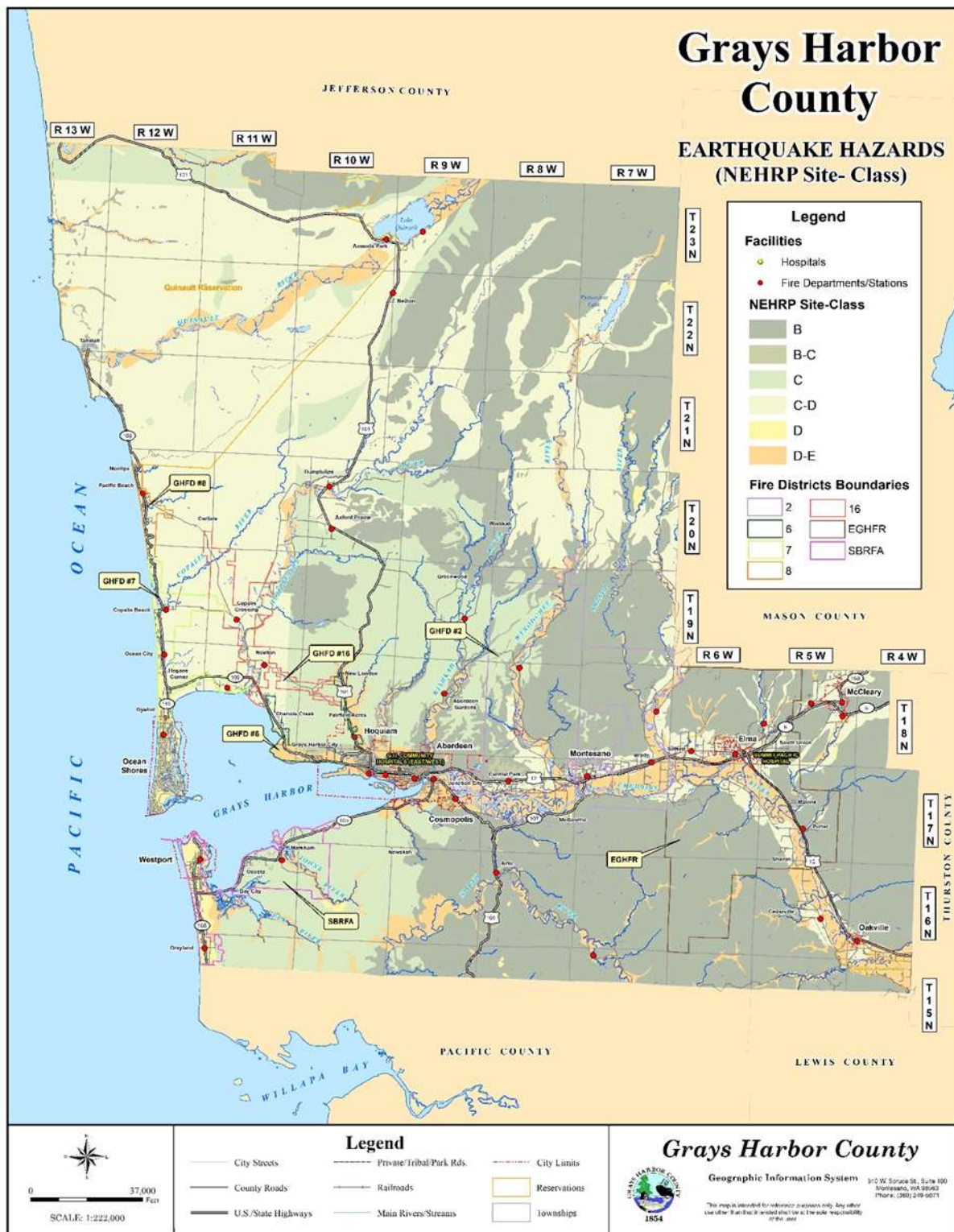
Table 19-9 2024 Status of Previous Hazard Mitigation Strategies												
	Associated Hazards								Current Status			
Mitigation Strategy	Coastal Erosion	Earthquakes	Floods	Landslides	Severe Weather	Tsunami	Wildland Fire	2024 Project Status	Completed	Continual /Ongoing Nature	Removed /No Longer Relevant /No Action	Carried Over
Relocate facility outside tsunami inundation zone						X		GHT is moving forward with this project and is actively working towards relocation onto the newly acquired 17 acres.				X
Update GPS mapping for dispatch to include tsunami evacuation routes	X	X	X	X	X	X	X	GHT has lacked the funding and staffing to work on this project but does feel it is significant. This project is carried forward.				X

DISTRICT MAPS – HAZARD EXTENT AND LOCATION









Grays Harbor County 2024 Multi-Jurisdiction Hazard Mitigation Plan Update
Volume 2: Planning Partner Annexes

APPENDIX A.
PLANNING PARTNER EXPECTATIONS TO
THE HAZARD MITIGATION PLAN UPDATE

Appendix A.

PLANNING PARTNER EXPECTATIONS ACHIEVING DMA COMPLIANCE

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. There are several different groups who can be involved in this process at different levels, and as determined by the planning partnership. In order to provide clarity, the following is a general breakdown of those groups:

- ✓ The Hazard Mitigation Planning Team (referred to herein as “planning team”, whose makeup includes the project management team (county and consultant), Bridgeview Consulting members, and those planning partners responsible for the plan’s written development;
- ✓ The planning partners, who are those jurisdictions or special purpose districts that are actually developing an annex to the regional plan; and
- ✓ The planning stakeholders, which are the individuals, groups, businesses, academia, etc., from which the planning team gains information to support the various elements of the plan.

DMA compliance requires that *participation* be defined in order to maintain eligibility with respect to meeting the requirements which allow a jurisdiction or special purpose district to develop an annex to the base plan. To achieve compliance for *all* partners, the plan must clearly document how each planning partner that is seeking linkage to the plan participated in the plan’s development. The best way to do this is to clearly define “participation”. For this planning process, “participation” is defined by the following criteria examples (this list is not all-inclusive):

- ✓ **Estimated level of effort.** It is estimated that the total time commitment to meet these “participation” requirements for a planning partner would be ***approximately 40 - 50 hours during the planning process.*** This time is reduced somewhat for special purpose districts.
- ✓ **Participate in the process.** As indicated, it must be documented in the plan that each planning partner “participated” in the process to the best of your capabilities. There is flexibility in defining “participation,” which can vary based on the type of planning partner (i.e.: City or County, vs. a Special Purpose District) involved. However, the level of participation must be defined at the on-set of the planning process, and we must demonstrate the extent to which this level of participation has been met for each partner.

- ✓ The planning team will be responsible for supporting the partnership during the public involvement phases of the planning process. Support could be in the form of providing venues for public meetings, attending these meetings as participants, providing technical support, etc.
- ✓ **Duration of planning process.** This process is anticipated to take seven to nine months to complete (not including state and FEMA review). It will be easy to become disconnected with the process objectives if you do not participate in some of these meetings to some degree. General tasks associated with this effort include review of existing plans, updating of general profile and Census data, identification and/or verification of critical infrastructure, and public outreach efforts (to be identified and defined during planning meetings, but at a minimum will require two efforts).
- ✓ **Capability Assessment.** All planning partners will be asked to identify their capabilities during this process. This capability assessment will require a review of existing documents (plans, studies, and ordinances) pertinent to each jurisdiction to identify policies or recommendations that are consistent with those in the “base” plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).
- ✓ **Hazard Identification and Risk Ranking.** All planning partners will participate in the identification of hazards to be addressed during this effort and the overall risk ranking exercise for the base plan. Once the base plan risk ranking has occurred, each planning partner will complete their own risk ranking exercise for their own jurisdiction/entity. This is a facilitated process and requires mandatory attendance at the risk ranking planning meeting to gain compliance. This meeting will be mandatory attendance.
- ✓ **Action/Strategy Review.** All previous planning partners will be required to perform a review of the strategies from their respective prior action plan to: determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed. Note – even if your plan has expired, it is still considered an update, and not a new plan. The planning team will be available to assist with this task; however, for existing planning partners, this is mandatory.
- ✓ **Annex Template Development.** Each planning partner will be required to develop their own annex template, which will be the data specific to their entity or jurisdiction. Information contained in this document will include, but is not limited to: community profile, population or service area data, disaster history information, identification of critical facilities. The template itself will be provided; however, the actual completion of the document is a requirement of each planning partner. This element is mandatory for active participation.

- ✓ **Consistency Review.** All planning partners will be required to review the entire base plan when completed, and their respective annex document after final editing by the planning team. Customarily, there is a minimum of two weeks provided for this review process, but normally we attempt to give an entire month for this element of the project.
- ✓ **Plan adoption.** Each jurisdiction and special purpose district involved in the effort must adopt the plan once FEMA and State approval have been gained. If not adopted by each jurisdiction, that jurisdiction's plan is not considered to be "in place," meaning that in essence, they have no hazard mitigation plan in place even though they have gone through the process.

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan.

It is anticipated that two or three workshop sessions will be required to complete this plan. Those sessions will last three or four hours each, and take the place of monthly meetings. While the workshop sessions will provide the bulk of actual meeting attendance, based on the progress of the planning partnership as a whole, there may be additional meetings which may be required; *however, each planning partner will be required to attend, at a minimum, the two-three workshops.* Much of the data exchange can occur through email or telephone calls, which will supplement the workshops.

With the above participation requirements in mind, each planning partner will be asked to aid this process by being prepared to develop its own section of the plan. To be an eligible planning partner in this effort, each Planning Partner will be asked to provide the following:

- A. A "Letter of Intent to participate" or Resolution to participate to the Planning Team (see exhibit A).
- B. Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.
- C. Identify their hourly rate of pay for this point of contact, which will be used to calculate the in-kind match for the grant that is funding this project.
- D. If requested, provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed during this planning process.
- E. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:

- a. Hazard Mitigation Planning Team meetings;
- b. Public meetings or open houses;
- c. Workshops/ Planning Partner specific training sessions;
- d. Public review and comment periods prior to adoption.

At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. While attendance at every meeting may not be practical, there are meetings which are mandatory. Each planning partner should attempt to attend as many meetings and events as possible, but must attend the minimum established requirement.

- F. There will be **mandatory** workshops that all planning partners will be required to attend. These workshops will cover specific items, one of which will be the proper completion of the jurisdictional annex template which is the basis for each partner's jurisdictional chapter in the plan. Failure to have a representative at these mandatory workshops will disqualify the planning partner from participation in this effort. The scheduling for these workshops will be far enough in advance to allow the planning partners to attend.
- G. In addition to participation in the mandatory workshops, each partner will be required to complete their annex document, and provide it to the planning team in the time frame established. Technical assistance in the completion of these annexes will be available, but the actual writing of the annex document is the responsibility of each planning partner. Failure to complete your annex in the required time frame *may* lead to disqualification from the partnership.
- H. Each partner will be asked to perform a "consistency review" and "capabilities assessment" of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the County (parent) Plan. In the same category, each partner will also be required to review the entire base plan once completed, as well as their edited annex.
- I. Each partner will be asked to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Resources will provide the jurisdiction specific mapping and technical consultation to aid in this task if the jurisdiction/entity does not have their own capacity, but the determination of risk and vulnerability will be up to each partner (through a facilitated process during one of the mandatory workshops).
- J. Each partner will be asked to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each

jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.

- K. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- L. Each partner will be required to formally adopt the plan.

Planning tools and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be asked to complete their annexes in a timely manner and according to the timeline established during the initial planning meeting.

**** Note**:** Once this plan is completed, and FEMA approval has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan's maintenance protocol identified in the plan.

Exhibit A.
Example Letter of Intent to Participate

Date: _____

Grays Harbor County Hazard Mitigation Planning Partnership

C/O Bev O'Dea, Bridgeview Consulting, LLC.

915 No. Laurel Lane

Tacoma, WA 98406

Via email at: bevodea@bridgeviewconsulting.org

Re: Statement of Intent to Participate - Grays Harbor County Multi-Jurisdictional Hazard Mitigation Plan

Dear Grays Harbor County Planning Partnership,

In accordance with the Federal Emergency Management Agency's (FEMA) Local Mitigation Plan requirements, under 44 CFR §201.6, which specifically identify criteria that allow for multi-jurisdictional mitigation plans, the [Participating Jurisdiction] is submitting this letter of intent to confirm that [Participating Jurisdiction] has agreed to participate in the Grays Harbor County Multi-Jurisdiction Hazard Mitigation Planning effort.

Further, as a condition to participating in the mitigation planning; [Participating Jurisdiction] agrees to meet the requirements for mitigation plans identified in 44 CFR §201.6 and to provide such cooperation as is necessary and in a timely manner to Grays Harbor County to complete the plan in conformance with FEMA requirements.

[Participating Jurisdiction] understands that it must engage in the following planning process, as more fully described in FEMA's *Local Multi-Hazard Mitigation Planning Guidance*, including, but not limited to:

- Identification of hazards unique to the jurisdiction and not addressed in the master planning document;
- Conducting a vulnerability analysis and identification of risks, where they differ from the general planning area;
- Formulation of mitigation goals responsive to public input and development of mitigation actions complementary to those goals. A range of actions must be identified specific for each jurisdiction;
- Demonstration that there has been proactively offered an opportunity for participation in the planning process by all community stakeholders (examples of participation include relevant involvement in any planning process, attending meetings, contributing research, data, or other information, commenting on drafts of the plan, etc.);
- Documentation of an effective process to maintain and implement the plan;
- Formal adoption of the Multi-Jurisdiction Hazard Mitigation Plan by the jurisdiction's governing body (each jurisdiction must officially adopt the plan); and
- Documentation of participation in the National Flood Insurance Program (NFIP), continued compliance with NFIP requirements, and address NFIP insured structures that have been repetitively damaged by floods.

Therefore, with a full understanding of the funding obligations incurred by an agreement between the Lead Jurisdiction and the Participating Jurisdiction, I [Name of authorized jurisdiction official], commit [Name of Participating Jurisdiction] to the [Name of Lead Jurisdiction] Multi-Jurisdiction Hazard Mitigation Planning effort.

Executed this ____ day of _____, 20____.

Sincerely,

[Jurisdiction official's signature]

Grays Harbor County 2024 Multi-Jurisdiction Hazard Mitigation Plan Update
Volume 2: Planning Partner Annexes

APPENDIX B.
PLANNING TEAM GROUND RULES

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THE GRAYS HARBOR COUNTY PLANNING TEAM GROUND RULES 2024 MULTI-JURISDICTION HAZARD MITIGATION PLAN UPDATE

PURPOSE

As the title suggests, the role of the Planning Team (PT) is to guide the development of the Hazard Mitigation Plan through a facilitated process that will result in a plan that can be embraced both politically and by the constituency within the planning area. The PT will provide guidance and leadership, oversee the planning process, and act as the point of contact for all agency representatives, stakeholders and the various interest groups in the planning area. The PT, made up of all planning partners involved in this process, provides the best possible cross section of views to enhance the planning effort and to help build support for hazard mitigation.

CHAIRPERSON

The Planning Committee has selected a chairperson, Ms. Hannah Cleverly, from Grays Harbor County Emergency Management. The role of the chair is to:

1. Lead meetings so that agendas are followed and meetings adjourn on-time;
2. Allow all members to be heard during discussions;
3. Moderate discussions between members with differing points of view;
4. Be a sounding board for staff in the preparation of agendas and how to best involve the full team in work plan tasks; and
5. Serve as the primary spokesperson for this planning effort.

ATTENDANCE

Participation of all Team members in meetings is important and members should make every effort to attend each meeting. If Team members cannot attend, they should inform the planning team before the meeting is conducted. Each Planning Team member should attempt to identify an alternate who will represent that member at any meeting for which attendance cannot be met. If a member accumulates:

- One unexcused absence, or
- Two consecutive excused absences

that member will be contacted by the Chair to see if there are any issues with regards to that individual's participation on the Team.

The Planning Team determined that in order to achieve an active level of participation in this planning efforts, 75 percent of all meetings must be attended by the entity developing an Annex to the Grays Harbor County Multi-Jurisdiction Hazard Mitigation Plan. Any final action determining active participation will be at the direction of the Planning Team. The Planning Team will strive to maintain the Planning Team membership as one from each participating entity.

QUORUM

The Planning Team determined that a minimum attendance at each meeting will not be required in order to conduct business. With the anticipation of an alternate Planning Team member being appointed by each of the participating entities, the Planning Team felt that the different viewpoints of team member will be adequately represented. Alternatively, if neither the primary or alternate team members are present, the decisions reached during meetings will be binding upon absent members based on decisions reached through consensus voting. It should be understood that all entities must maintain an active level of participation in this effort; decisions made during the absence of the member does not meet active participation.

ALTERNATES

There may be circumstances when regular planning team members cannot attend the planning meeting. To address these circumstances, alternate members will be pre-identified as appropriate. The Planning Team determined that the role of alternates will be the same as the primary planning team member. Therefore, the planning team alternate can make a binding decision or vote on any issue at a meeting in which they preside as a fully empowered team representative.

DECISION-MAKING

As the Planning Team provides advice and guidance on the Plan, it will strive for consensus on all decisions that need to be made, with special effort to hear and consider all opinions within the group. Consensus is defined as a recommendation that may not be ideal for each member, but every member can live with it (using the consensus continuum as a gage). Strong minority opinions will be recorded in meeting summaries and the team may choose to note such opinions in their final recommendations.

RECOMMENDATIONS

If differing opinions exist for any significant portion of this planning effort, the Planning Team determined that such recommendations will be recorded in the meeting summaries and reflected in the plan as appropriate.

SPOKESPERSONS

Ideally, the Planning Team will present a united front after considering the different viewpoints of its members, recognizing that each member might have made a somewhat different viewpoint. In order to ensure consistent information is provided, and to consistently represent the Team's united recommendations to participating organizations, the public, and the media, the Chairperson will act as the Team's spokesperson(s). In addition, each member should have a responsibility to represent the Team's recommendation when speaking on plan-related issues as a Team member. Any differing personal or organizational viewpoints should be clearly distinguished from the Team's work. In an effort to enhance community involvement and participation, the Planning Team determined that if questions were posed to the Chairperson about a specific jurisdiction, the community member would be re-directed back to the appropriate Planning Team member so as to allow for relationship building and enhanced communications within the specific planning area.

STAFFING

The Planning Team for this project includes appropriate personnel from Grays Harbor County, along with contract consultant assistance provided by Bridgeview Consulting, LLC. The Planning Team will schedule meetings, distribute agendas, prepare information/presentations for Planning Team meetings, write meeting summaries, and generally seek to facilitate the Team's activities.

PUBLIC COMMENT

As they conduct Planning Team work, members will seek to keep the public and the groups to which they are affiliated informed about the plan. Information of such outreach will be provided to contract consultant for recording in the plan milestones.

All Planning Team meetings will be open to the public and advertised as such. The Planning Team will adhere to the "Rules of Conduct" which are consistent with the Open Public Meetings Act (Chapter 42.30 RCW) and have been administered by the Board of Grays Harbor County Commissioners. Members of the public wishing to address the Planning Team may do so based on the following protocol:

- General guidelines
 - The purpose of the meeting is to address the hazard mitigation plan; therefore, only items identified on the previous meeting's agenda will be recognized - no new items will be addressed.
 - Speakers will be required to sign in previous to the beginning of the meeting so that they may be recognized by the Chair;
 - Presentations by citizens will be made at the onset of the meeting;
 - Any person submitting letters or documents should provide a minimum of six (6) copies prior to the meeting or at the meeting. All copies should be given to the Chair of the Planning Team. The Chair will be officially responsible for distributing the submittal(s).
 - Demonstrations, the displaying of banners, signs, buttons, or apparel expressing opinions on political matters or matters being considered by the Planning Team will not be permitted at meetings to maintain the decorum befitting the deliberative, legislative or executive process.
 - A speaker asserting a statement of fact may be asked to document and identify the source of the factual datum asserted.
 - When addressing the Planning Team, members of the public shall direct all remarks to the PT Chair and shall confine remarks to the matters that are specifically before the board.
- Speaking Time Limits
 - Unless deemed otherwise by the Chair, each person addressing the Planning Team shall be limited to five (5) minutes speaking time. The speaking time limit does not include time necessary to respond to questions asked by members.
 - Speakers may not allocate their five (5) minutes to another speaker.

MEETINGS

Meetings will be advertised on the County's webpage a minimum of one week prior to the meeting occurring. Planning meetings will be established on an as-needed basis throughout the planning process, and will be established customarily as a workshop. All meetings will be held at the Coupeville Recreation Hall unless otherwise identified. The Planning Team also has the option to adjust this schedule due to holidays or other extenuating circumstances. Meetings will be open to the public and advertised as such.

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APPENDIX C.
PROCEDURES FOR LINKING TO
THE HAZARD MITIGATION PLAN UPDATE

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Not all eligible local governments within Grays Harbor County are included in the *Grays Harbor County 2018 Multi-Jurisdiction Hazard Mitigation Plan Update*. It is assumed that some or all of these non-participating local governments may choose to “link” to the Plan at some point to gain eligibility for programs under the federal Disaster Mitigation Act. In addition, some of the current partnership may not continue to meet eligibility requirements due to a lack of participation as prescribed by the plan. The following “linkage” procedures define the requirements established by the Planning Committee for dealing with an increase or decrease in the number of planning partners linked to this plan. It should be noted that a currently non-participating jurisdiction within the defined planning area is not obligated to link to this plan. These jurisdictions can choose to do their own “complete” plan that addresses all required elements of 44 CFR Section 201.6.

INCREASING THE PARTNERSHIP THROUGH LINKAGE

Eligible linking jurisdictions are instructed to complete all of the following procedures during this time frame:

- The eligible jurisdiction requests a “Linkage Package” by contacting the Point of Contact (POC) for the plan:

Name:	Hannah Cleverly
Title:	Deputy Director
Address:	310 West Spruce Street
City, State ZIP:	Montesano, WA 98563
Phone:	(360) 249-3911 x 290

The POC will provide a linkage packages that includes:

- Copy of Volume 1 and 2 of the plan
- Planning partner’s expectations package.
- A sample “letter of intent” to link to the hazard mitigation plan update.
- A Special Purpose District or City template and instructions.
- Catalog of Hazard Mitigation Alternatives
- A “request for technical assistance” form.
- A copy of Section 201.6 of Chapter 44, the Code of Federal Regulations (44 CFR), which defines the federal requirements for a local hazard mitigation plan.

- The new jurisdiction will be required to review both volumes of the hazard mitigation plan update, which includes the following key components for the planning area:
 - The planning area risk assessment
 - Goals and objectives
 - Plan implementation and maintenance procedures
 - Comprehensive review of alternatives
 - County-wide initiatives.

Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC. Technical assistance can be provided upon request by completing the request for technical assistance (TA) form provided in the linkage package. This TA may be provided by the POC or any other resource within the Planning Partnership such as a member of the Planning Team Committee or a currently participating City or Special Purposes District partner. The POC will determine who will provide the TA and the possible level of TA based on resources available at the time of the request.

- The new jurisdiction will be required to develop a public involvement strategy that ensures the public's ability to participate in the plan development process. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process and a minimum of one public meeting to present their draft jurisdiction specific annex for comment, prior to adoption by the governing body. The Planning Partnership will have resources available to aid in the public involvement strategy such as the Plan website. However, it will be the new jurisdiction's responsibility to implement and document this strategy for incorporation into its annex. It should be noted that the Jurisdictional Annex templates **do not** include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the planning area described in Volume 1 of the plan. Since new partners were not addressed by that strategy, they will have to initiate a new strategy, and add a description of that strategy to their annex. For consistency, new partners are encouraged to follow the public involvement format utilized by the initial planning effort as described in Volume 1 of the plan.
- Once their public involvement strategy is completed and they have completed their template, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the Regional plan format.
- The POC will review for the following:
 - Documentation of Public Involvement strategy
 - Conformance of template entries with guidelines outlined in instructions
 - Chosen initiatives are consistent with goals, objectives and mitigation catalog of the hazard mitigation plan update
 - A designated point of contact

- A ranking of risk specific to the jurisdiction.

The POC may utilize members of the Planning Committee or other resources to complete this review. All proposed linked annexes will be submitted to the Planning Team for review and comment prior to submittal to State Emergency Management.

- Plans approved and accepted by the Planning Team will be forwarded to Washington State Emergency Management for review with a cover letter stating the forwarded plan meets local approved plan standards and whether the plan is submitted with local adoption or for criteria met/plan not adopted review.
- Washington State Emergency Management Division (EMD) will review plans for federal compliance. Non-Compliant plans are returned to the Lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.
- FEMA reviews the new jurisdiction's plan in association with the approved plan to ensure DMA compliance. FEMA notifies new jurisdiction of results of review with copies to Washington State EMD and approved planning authority.
- New jurisdiction corrects plan shortfalls (if necessary) and resubmits to Washington State EMD through the approved plan lead agency.
- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan (if not already accomplished) and forwards adoption resolution to FEMA with copies to lead agency and Washington State EMD.
- FEMA regional director notifies new jurisdiction governing authority of plan approval.

The new jurisdiction plan is then included with the regional plan with the commitment from the new jurisdiction to participate in the ongoing plan implementation and maintenance.

DECREASING THE PARTNERSHIP

The eligibility afforded under this process to the planning partnership can be rescinded in two ways. First, a participating planning partner can ask to be removed from the partnership. This may be done because the partner has decided to develop its own plan or has identified a different planning process for which it can gain eligibility. A partner that wishes to voluntarily leave the partnership shall inform the POC of this desire in writing. This notification can occur any time during the calendar year. A jurisdiction wishing to pursue this avenue is advised to make sure that it is eligible under the new planning effort, to avoid any period of being out of compliance with the Disaster Mitigation Act.

After receiving this notification, the POC shall immediately notify both Washington State EMD and FEMA in writing that the partner in question is no longer covered by the hazard mitigation plan update, and that the eligibility afforded that partner under this plan should be rescinded based on this notification.

The second way a partner can be removed from the partnership is by failure to meet the participation requirements specified in the "Planning Partner Expectations" package provided to each partner at the beginning of the process, or the plan maintenance and implementation procedures specified within Volume 1 of the plan. Each partner agreed to these terms by adopting the plan.

Eligibility status of the planning partnership will be monitored by the POC. The determination of whether a partner is meeting its participation requirements will be based on the following parameters:

- Are progress reports being submitted annually by the specified time frames?
- Are partners notifying the POC of changes in designated points of contact?
- Are the partners supporting the Planning Team by attending designated meetings or responding to needs identified by the body?
- Are the partners continuing to be supportive as specified in the Planning Partners expectations package provided to them at the beginning of the process?

Participation in the plan does not end with plan approval. This partnership was formed on the premise that a group of planning partners would pool resources and work together to strive to reduce risk within the planning area. Failure to support this premise lessens the effectiveness of this effort. The following procedures will be followed to remove a partner due to the lack of participation:

- The POC will advise the Planning Team of this pending action and provide evidence or justification for the action. Justification may include: multiple failures to submit annual progress reports, failure to attend meetings determined to be mandatory by the Planning Committee, failure to act on the partner's action plan, or inability to reach designated point of contact after a minimum of five attempts.
- The Planning Team will review information provided by POC, and determine action by a vote. The Planning Committee will invoke the voting process established in the ground rules established during the formation of this body.
- Once the Planning Team has approved an action, the POC will notify the planning partner of the pending action in writing via certified mail. This notification will outline the grounds for the action, and ask the partner if it is their desire to remain as a partner. This notification shall also clearly identify the ramifications of removal from the partnership. The partner will be given 30 days to respond to the notification.
- Confirmation by the partner that they no longer wish to participate or failure to respond to the notification shall trigger the procedures for voluntary removal discussed above.
- Should the partner respond that they would like to continue participation in the partnership, they must clearly articulate an action plan to address the deficiencies identified by the POC. This action plan shall be reviewed by the Planning Team to determine whether the actions are appropriate to rescind the action. Those partners that satisfy the Planning Team's review will remain in the partnership, and no further action is required.
- Automatic removal from the partnership will be implemented for partners where these actions have to be initiated more than once in a 5 year planning cycle.