

**RESOLUTION NO. 771**

**A RESOLUTION OF THE CITY OF GIG HARBOR, WASHINGTON,  
ADOPTING THE CITY OF GIG HARBOR ALL-HAZARD MITIGATION PLAN  
AS A COMPONENT OF THE CITY'S EMERGENCY MANAGEMENT  
PROGRAM.**

---

**WHEREAS**, Reducing the severity of disasters affecting the City of Gig Harbor is integral to protecting the community's health and safety; and

**WHEREAS**, Mitigation planning provides guidance on actions to effectively protect public facilities against disaster damage; and


**WHEREAS**, The Federal government has adopted regulations requiring mitigation planning as a condition of eligibility for federal disaster mitigation grant funds; and

**WHEREAS**, The City has cooperated with Pierce Co. and other local jurisdictions within the county in the development of the required, FEMA approved, All-Hazard Mitigation Plan.

**NOW, THEREFORE, THE GIG HARBOR CITY COUNCIL RESOLVES AS FOLLOWS:**

The Council hereby adopts the City of Gig Harbor, All-Hazards Mitigation Plan as a component of the City's emergency management program and encourages City staff to work with other County jurisdictions and response partners to develop strategies to implement the mitigation measures contained therein as future funding allows.

APPROVED:

  
\_\_\_\_\_  
Chuck Hunter, Mayor

ATTEST:

  
\_\_\_\_\_  
Molly Towslee, City Clerk

Filed with City Clerk: 10/20/08  
Passed by City Council: 10/27/08  
Resolution No.: 771



City of Gig Harbor  
Emergency Management  
Program  
All-Hazards Mitigation Plan

Adopted October 27, 2008

# City of Gig Harbor All-Hazard Mitigation Plan

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## Section 1

### Plan Process Requirements

***Planning Process---Requirement §201.6(b):***

An open public involvement process is essential to the development of an effective plan.

***Documentation of the Planning Process---Requirements §201.6(b):***

In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

***Documentation of the Planning Process---Requirements §201.6(c)(1):***

[The plan **shall** document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

- Does the plan provide a narrative description of the process followed to prepare the plan?
- Does the plan indicate who was involved and how they contributed to the planning process, including who led the development at the staff level and were there any external contributors such as contractors?
- Does the plan indicate how the public was involved?
- Was the public provided an opportunity to comment on the plan during the draft stage and prior to plan approval?
- Was there an opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?
- Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

## **SECTION 1**

# **REGION 5 HAZARD MITIGATION PLAN CITY OF GIG HARBOR PROCESS SECTION**

The Process Section – Section 1 is presented as a Master Section shared with all 48 jurisdictions and so is referenced here, but found in the main project documentation. The Process Section is a summation of every step taken to accomplish this project in its entirety.

In the Process Section you will find the following information:

- Team Meetings, Regional Meetings, Elected Official Meetings, Site Visits
- Public Information Meetings and Public Involvement Process
- Listing of all 48 jurisdictions and the representatives for those jurisdictions as broken down into four working groups
- Profile Section Process
- Capability Section Process
- Risk Assessment Process and Hazard Identification Process
- Mitigation Strategy Process
- Infrastructure Summary Process
- Plan Maintenance Process

Please refer to the Master Process Section for specific information on any of the above referenced items.



**SECTION 2**

**REGION 5 HAZARD MITIGATION PLAN  
CITY OF GIG HARBOR  
PROFILE SECTION**

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## Vision Statement

The vision of the City of Gig Harbor is as follows:

**Our vision for the City of Gig Harbor is a community:**

**That is well planned and comprised of identifiable residential and business neighborhoods that are safe, secure and have access to high quality municipal services and amenities;**

**With pedestrian, bicycle, vehicular, and police service systems that enable people to move safely between neighborhoods, work places, shopping and other destinations;**

**That continuously develops partnership of citizens, city government, business and education, and that fosters meaningful involvement and civil exchange of ideas;**

**That provides an integrated system and natural features, open space, recreational and cultural opportunities;**

**That develops and preserves its natural and historical assets, while adapting to a changing environment; and**

**Whose government is responsive to the needs of its citizens and serves as a steward of public resources and confidence.**

## Services Summary

The City of Gig Harbor was incorporated in the year 1888.

The jurisdiction provides the following services through their own capabilities:

Table 2-1 City Services<sup>1</sup>

CITY SERVICES			
Service	Yes	Service	Yes
Mayor/City Manager	Yes	Municipal Airport	No
City Attorney	Yes	Municipal Court	Yes
City Clerk	Yes	Public Works/Improvements	Yes
City Treasurer	Yes	Comprehensive Planning	Yes
Sheriff or Police	Yes	Parking Meter Revenue	No
Parks Commissioners	Yes	Construction and Operation of Boat Harbors, Marinas, Docks, etc.	Yes
City Council	Yes	Issue Bonds and Levies of General Tax	Yes
License and Tax Fees	Yes	Fire Department/EMS	Yes
Non-Polluting Power Generation	No	Parking, Off-street Facilities	No
Hydroelectric Resources	No	Sanitary Landfill/Refuse Service	No
Radio Communications	Yes	Sidewalks	Yes
Streets	Yes	Storm Drains	Yes
Waste Water Treatment	Yes	Streets/Alleys	No
Water Utility	Yes	Parks and Parkways	Yes
Public Transportation Systems	No	Water Pollution Abatement	Yes
Residential Care Facilities	No	Local Improvement Districts	Yes
Child Care Facilities	No		No
Emergency Management	Yes	Historic Preservation	Yes
Building Construction Permitting	Yes	Fire Prevention	Yes

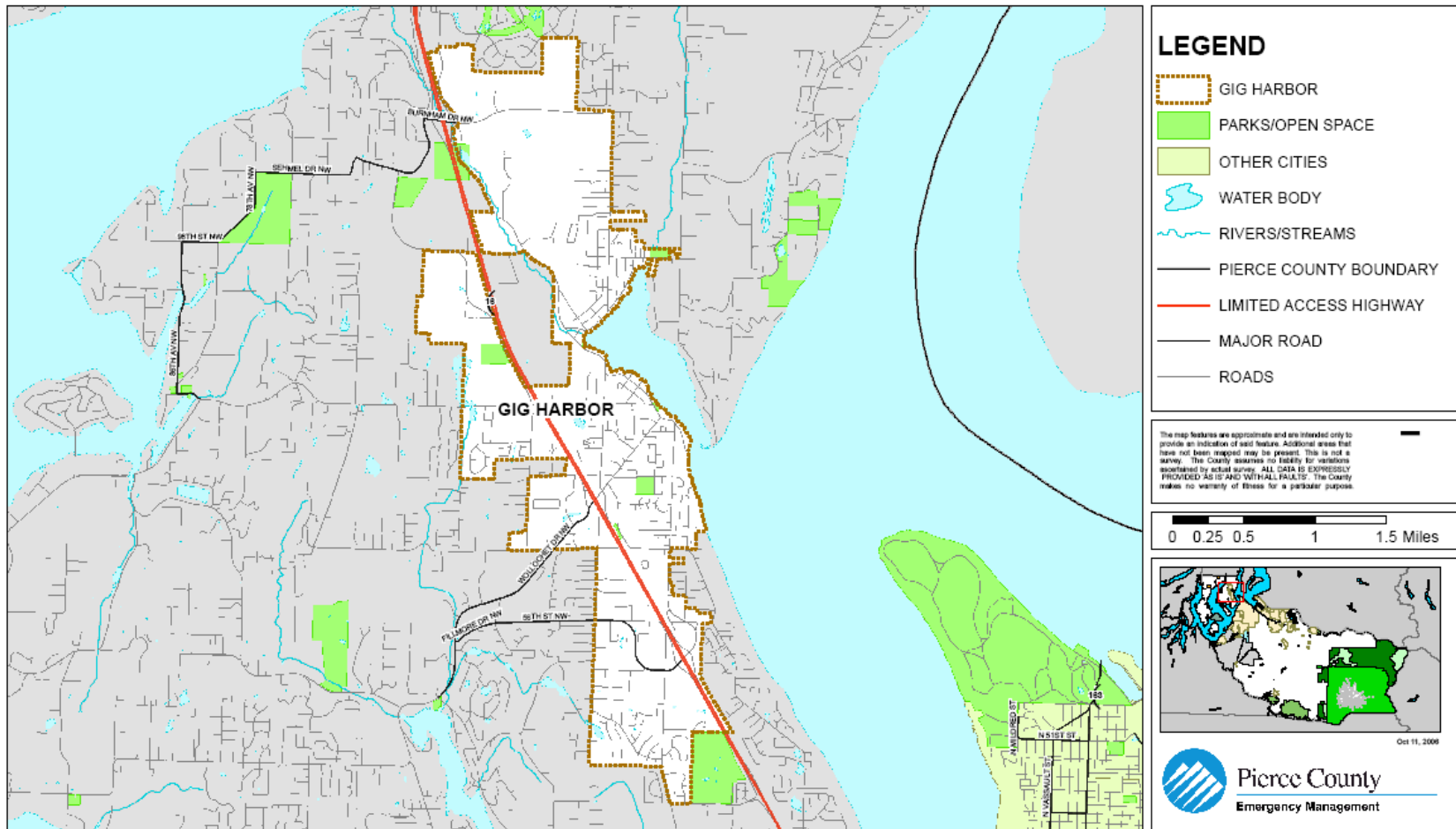
## Geo-Political Summary

Table 2-2 Geo-Political Summary<sup>2</sup>

Jurisdiction	Area (sq mi)	Elevation Range (ft)	Major Water Features	Regional Partners	
				Shared Borders	Land Use Authorities
City of Gig Harbor	4.05	0-320	<ul style="list-style-type: none"> <li>Kitsap Watershed</li> <li>5-Gig Harbor Basin</li> </ul>	<ul style="list-style-type: none"> <li>Unincorporated Pierce</li> </ul>	<ul style="list-style-type: none"> <li>Gig Harbor</li> <li>Unincorporated Pierce</li> </ul>

Map 2- 1

# CITY OF GIG HARBOR - BASEMAP



# Population Summary

## Demographics

Table 2-1 Population<sup>3</sup>

Jurisdiction	Population	Population Density (people/sq mi)	Population Served	Projected Year 2017 Population Change (%)	Projected Population Density	Projected 2017 Population Served
City of Gig Harbor	6,502	1,604	6,502	23.6%	1,643	14,900
Region 5	700,820	418	700,820	1.04%	435	729,471

## Special Populations

Table 2-2 Special Populations<sup>4, 5</sup>

Jurisdiction	Population	Population 65 Plus	% of Total	Population Under 18	% of Total
City of Gig Harbor	6,502	1,527	23%	1,316	20%
Region 5	700,820	71,620	10.2%	190,569	27.2%
WA State	5,894,121	662,148	11.2%	1,513,843	25.7%

# Infrastructure Summary

## General

**Table 2-5 Parcel Summary<sup>6</sup>**

Jurisdiction	# Parcels	Land Value	Average Land Value	Improved Value	Average Improved Value
City of Gig Harbor	3,269	\$854,473,100	\$261,387	\$828,686,300	\$253,498
Region 5	292,666	\$39,054,414,761	\$133,444	\$47,992,756,413	\$163,984.73

Jurisdiction	Total Assessed Value	Average Assessed Value
City of Gig Harbor	\$1,683,159,400	\$514,885
Region 5	\$87,047,171,174	\$297,428

**Table 2-6 Housing Summary<sup>7</sup>**

Jurisdiction	# Houses	Housing Density	Avg Year Built	Avg Year Built (%)
City of Gig Harbor	3,085	636	<ul style="list-style-type: none"> <li>• &gt;1939: 158</li> <li>• 1940-1979: 1,240</li> <li>• 1980-2000: 1,716</li> </ul>	<ul style="list-style-type: none"> <li>• &gt;1939: 5.1%</li> <li>• 1940-1979: 39.9%</li> <li>• 1980-2000: 55.1%</li> </ul>
Region 5	277,060	165	<ul style="list-style-type: none"> <li>• &gt;1939: 34,857</li> <li>• 1940-1979: 133,531</li> <li>• 1980-2000: 108,672</li> </ul>	<ul style="list-style-type: none"> <li>• &gt;1939: 12.6%</li> <li>• 1940-1979: 48.2%</li> <li>• 1980-2000: 39.2%</li> </ul>

## Jurisdiction Infrastructure

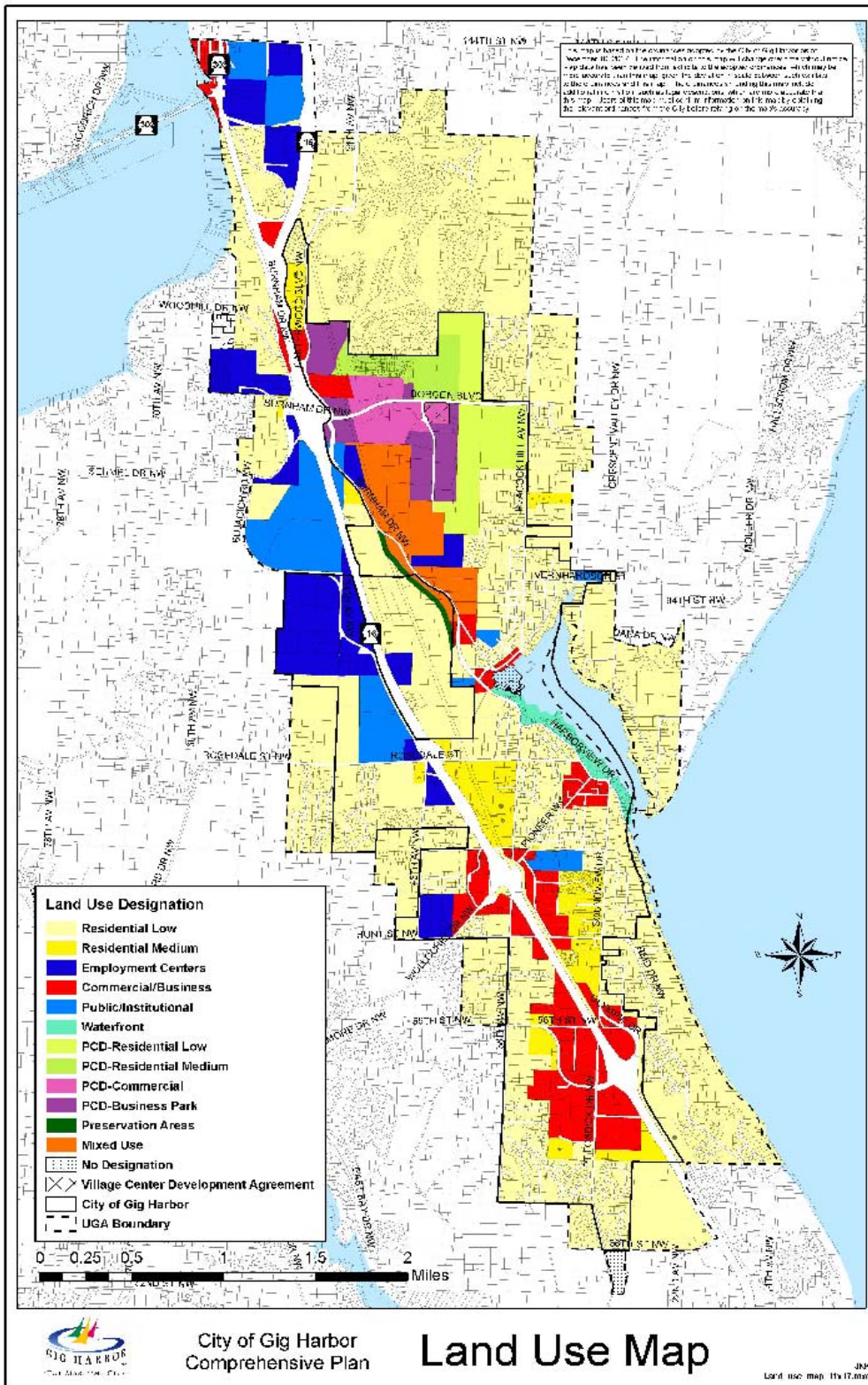
The following table shows the overview of infrastructure owned by the City of Gig Harbor. The infrastructure is categorized according to the infrastructure sectors as designated by the Department of Homeland Security. This chart is intended as a summary only.

For further details on Department of Homeland Security infrastructure sectors, please see the Process Section 1.

**Table 2-7 Owned Infrastructure<sup>8</sup>**

Total Infrastructure	Emerg. Services	Tele-comm	Transportation	Water	Energy	Government	Commercial	Total Value (\$)
43	1	0	1	23	0	18	0	\$479,959,901

Map 2- 2



## Economic Summary

**Table 2-8 Fiscal Summary<sup>9</sup>**

Jurisdiction	Operating Costs (per month)	Operating Budgeted Revenues <sup>10</sup>	Operating Budgeted Expenditures <sup>11</sup>	Fund Balance as % of Operating Cost	Avg. Fund Balance (5 yrs)
City of Gig Harbor	\$591,372	\$9,041,541	\$7,455,691	112	\$7,228,912

**Table 2-9 Employment Profile<sup>12</sup>**

Employment Category (SIC)	City of Gig Harbor	Pierce County
Agriculture, Forestry, Fishing, Mining and Hunting	73	3,126
Construction	182	24,340
FIRES (Finance, Insurance, Real Estate, and Services)	196	18,212
Wholesale Trade	147	13,919
Transportation and Warehousing and Utilities	169	21,555
Manufacturing	238	39,511
Retail	291	39,408
Education, Health and Social Services	734	65,256
Professional, Scientific, Management, Administrative, Waste Management	232	23,095
Public Administration	112	18,363

**Table 2-10 Unemployment<sup>13</sup>**

Jurisdiction	Unemployment Rate
City of Gig Harbor	4.9%
Region 5	6.5%
WA State	6.2%



## Resource Directory

### Regional

- **City of Gig Harbor**  
<http://www.cityofgigharbor.net>
- **Pierce County Government**  
<http://www.piercecountywa.org/PC/>
- **Pierce County DEM**  
<http://www.piercecountywa.org/pc/abtus/ourorg/dem/abtusdem.htm>
- **Pierce County PALS**  
<http://www.piercecountywa.org/pc/services/home/property/pals/palsmain.htm>
- **Municipal Research & Services Center of Washington (MRSC)**  
<http://www.mrsc.org>

### National

- **US Census**  
[www.census.gov/](http://www.census.gov/)

## Endnotes

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<sup>1</sup> Information from survey completed by the City.

<sup>2</sup> Information from Pierce County GIS application, CountyView Pro (7/06).

<sup>3</sup> Information provided by the Gig Harbor Planning Department and the Gig Harbor Finance Department. It should be noted that current (as of July 2007) population for the City of Gig Harbor is reported by the Office of Financial Management as 6,780.

<sup>4</sup> "Population" provided by the Gig Harbor Planning Department.

<sup>5</sup> Other Special Population information from Pierce County GIS application, CountyView Pro projected for 2007.

<sup>6</sup> Information provided by the Gig Harbor Planning Department and the Gig Harbor Finance Department.

<sup>7</sup> Information from Census 2000, Office of Financial Management.

<sup>8</sup> Information obtained from Jurisdiction from Infrastructure Matrix.

<sup>9</sup> Information obtained from Gig Harbor Finance Department.

<sup>10</sup> Non-Capital

<sup>11</sup> Non-Capital

<sup>12</sup> Information from Census 2000, Office of Financial Management.

<sup>13</sup> Information from Census 2000, Office of Financial Management.

## Section 3

### Capability Identification Requirements

**Planning Process---Requirement §201.6(b):**

An open public involvement process is essential to the development of an effective plan.

**Documentation of the Planning Process---Requirements §201.6(b):**

In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

- Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

**Assessing Vulnerability: Analyzing Development Trends---Requirement §201.6(c)(2) (ii)(C):**

[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

- Does the plan describe land uses and development trends?

**SECTION 3**

**REGION 5 HAZARD MITIGATION PLAN  
CITY OF GIG HARBOR  
CAPABILITY IDENTIFICATION SECTION**

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## Legal and Regulatory

Table 3-1 Legal and Regulatory

Regulatory Tools (Ordinances and Codes)	Yes or No
<b><u>Jurisdiction Capabilities</u></b>	
Building Construction/Design Construction Codes	Yes
Flood Damage Prevention Ordinance	Yes
Growth Management Ordinance	Yes
Critical Area Ordinance	Yes
Hazard Setback Requirements	Yes
Hillside and Steep Slope Ordinance	Yes
Land Use and Regulatory Codes	Yes
Mechanical Codes	Yes
Plan Review Requirements	Yes
Plumbing Codes	Yes
Real Estate Disclosure Requirements	No
Storm Water Management	Yes
Subdivision Ordinance or Regulations	Yes
Tax and License Codes	Yes
Wildfire Ordinance	Yes
Zoning Ordinance	Yes

## Administrative Capability

Table 3-2 Administrative Capability

Administrative Tools (Agency, Departments or Programs)	Yes or No
<b>Jurisdiction Capabilities</b>	
Architectural Review Board/Historic Review	Yes
Board of Adjustments/Hearing Examiner	Yes
Building Official	Yes
Chamber of Commerce	Yes
City/Town Website	Yes
Commercial Fire Safety/Code Inspection Program	Yes
Community CPR/First Aid Program	No
Community Emergency Response Teams	No
Downtown Revitalization Committee	No
Economic Development Board	No
Emergency Manager	Yes
Engineers	Yes
Families First Coalition	No
Fire and Injury Prevention Program	Yes
Fire Chief	No
Fire Safety & Disaster Classes in Schools	No
Flood Plan Manager	Yes
Government TV Access	No
Grant Writers	Yes
Home Safety Council	No
Information included in Utility Bills	Yes
Lahar Warning System	No
Planners	Yes
Planning Commission	Yes
Police Chief	Yes
Police Department	Yes
Public Utility	Yes
Public Works Department	Yes
Safe Streets Program	Yes
Safety Fairs	No
Stream Team	No
Surveyors	No
City/Town Council	Yes
City/Town Meetings	Yes
City/Town Planning Commission	Yes

Table 3-3 Administrative Capability (Con'd)

Administrative Tools (Agency, Departments or Programs)	Yes or No
<b>Regional Capabilities</b>	
Local Business Districts	Yes
Local Department of Emergency Management	Yes
Local Fire Agencies plus Mutual Aid with others	Yes
Local Hospitals	Yes
Local Law Enforcement Agencies and Mutual Aid with others	Yes
Local Neighborhood Associations	Yes
Local Neighborhood Emergency Teams (NET)	Yes
Local Newspapers	Yes
Local Parks Commission/Board	Yes
Local Power Companies	Yes
Local Parent Teacher's Association	Yes
Neighboring Counties	Yes
Pierce County Department of Emergency Management	Yes
Pierce County Fire Chiefs Association	No
Pierce County Neighborhood Emergency Teams (PCNET)	Yes
Pierce County Police Chiefs Association	Yes
Pierce County Safe Kids Coalition	No
Pierce County Sheriffs Department	Yes
Puget Sound Clean Air Agency	Yes
Puget Sound Energy	Yes
Puget Sound Regional Council	Yes
Puget Sound Water Quality Management Plan	No
Service Organizations	Yes
Tacoma/Pierce County Health Department	Yes
Tribes	No

# Technical Capability

Table 3-4 Technical Capability

Technical Tools (Plans and Other)	Yes or No
<b>Jurisdiction Capabilities</b>	
After Action Reports of Any Incident	Yes
Capital Improvement Plan	Yes
Comprehensive Emergency Management Plan	Yes
Comprehensive Plan	Yes
Continuity of Governmental Services and Operations Plan (COOP and COG)	Yes
Critical Facilities Plan	Yes
Drainage Master Plan	Yes
Economic Development Plan	No
Emergency Evacuation Plan	No
Emergency Response Plan	Yes
Generator Placement Plan	No
Habitat Plan	No
Hazardous Materials Response Plan	Yes
Lahar Evacuation Plan	No
Oil Spill Response Plan	Yes
Pandemic Flu Plan	Yes
Post-Disaster Recovery Plan	No
Sewer/Wastewater Comprehensive Plan	Yes
Storm Comprehensive Plan	Yes
Water Comprehensive Plan	Yes
<b>Regional Capabilities</b>	
Coordinated Water System Plan and Regional Supplement 2001	
Local and Regional Emergency Exercises – All Types	Yes



## Fiscal Capability

Table 3-5 Fiscal Capability

Fiscal Tools (Taxes, Bonds, Fees, and Funds)	Yes or No
<b><u>Jurisdiction Capabilities</u></b>	
<b>TAXES:</b>	
Authority to Levy Taxes	Yes
<b>BONDS:</b>	
Authority to Issue Bonds	Yes
<b>FEES:</b>	
Fees for Water, Sewer, Gas or Electric Service	Yes
Impact Fees for Homebuyers/Developers for New Developments/Homes	Yes
Local Improvement District (LID)	Yes
<b>FUNDS:</b>	
Capital Improvement Project Funds	Yes
Enterprise Funds	Yes
General Government Fund (Departments)	Yes
Internal Service Funds	Yes
Special Revenue Funds	Yes
Withhold Spending in Hazard-Prone Areas	No
<b><u>Regional Capabilities</u></b>	
Pierce County Land Conservancy	No
Cascade Land Conservancy	No

## Specific Capabilities

Table 3-6 Specific Capabilities

Jurisdiction Specific Capabilities
<b><u>Legal &amp; Regulatory</u></b>
City Attorney
City Prosecutor
Hearing Examiner
Building Code Advisory Board
<b><u>Administrative &amp; Technical</u></b>
US Coast Guard
Key Peninsula Fire District 16
Peninsula School District
Bogue Volunteer Center
KGHP Radio
Peninsula Regional Planning Team
Local Emergency Planning Committee (LEPC)
Pierce County Type III Incident Management Team
Flood Hazard Construction Standards
Hazard Inventory and Vulnerability Assessment
Harborview Marina Fire Investigation Report
<b><u>Fiscal</u></b>

## Section 4

### Risk Assessment Requirements

#### **Identifying Hazards--- Requirement §201.6(c)(2)(i):**

[The risk assessment **shall** include a] description of the type ... of all natural hazards that can affect the jurisdiction.

- Does the plan include a description of the types of all hazards that affect the jurisdiction?
- Does the plan describe the sources used to identify the hazards?
- Does the plan indicate any data limitations?
- Does the plan provide an explanation for eliminating any hazards from consideration?

#### **Profiling Hazard Events---Requirement §201.6(c)(2)(i):**

[The risk assessment **shall** include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.

- Does the risk assessment identify the location of each hazard being addressed in the plan?
- Does the risk assessment identify the extent of each hazard being addressed in the plan?
- Does the plan provide information on the previous occurrences of each natural hazard?
- Does the risk assessment identify for each hazard, a scale of likelihood of occurrence and the impact?
- Is the location of the natural hazard specifically defined?
- Is the quality of information on the extent above average
- Does the plan document the sources of the information on local, extent, and previous occurrences?

#### **Assessing Vulnerability: Identifying Assets---Requirement §201.6(c)(2) (ii)(A):**

[The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community. The plan **should** describe vulnerability in terms of:§ The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas...

- Does the plan include an overall summary description of the jurisdiction vulnerability to the hazards?
- Does the plan address the impacts of the hazards on the community?
- Does the plan provide information on the types and numbers of vulnerable buildings--infrastructures--critical facilities?
- Does the plan address the vulnerability to future buildings, infrastructure, and critical facilities based on current planned development or anticipated areas of growth within the community?
- Does the plan identify the jurisdictions' repetitive loss areas/structures?

#### **Assessing Vulnerability: Estimating Potential Losses---Requirement §201.6(c)(2) (ii)(B):**

[The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate...

- Does the plan identify vulnerability assets as required in Part 201.6 (c)(ii)(A)?

#### **Assessing Vulnerability: Analyzing Development Trends---Requirement §201.6(c)(2) (ii)(c):**

[The plan **should** describe vulnerability in terms of providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

- Does the plan describe the vulnerability to hazards as required in 201.6(c)(ii)(a)?
- Does the plan indicate the methodology used to prepare the estimate?

**SECTION 4**

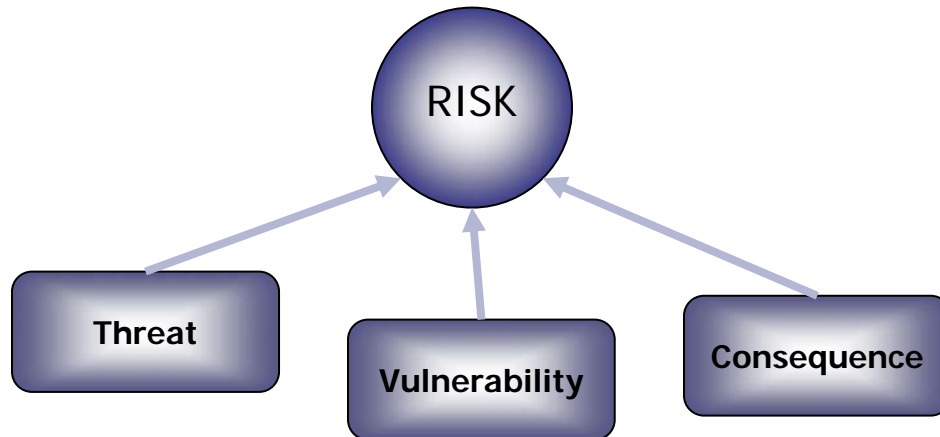
**REGION 5 HAZARD MITIGATION PLAN  
CITY OF GIG HARBOR  
RISK ASSESSMENT SECTION**

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## Section Overview

The Risk Assessment portrays the threats of natural hazards, the vulnerabilities of a jurisdiction to the hazards, and the consequences of hazards impacting communities. Each hazard is addressed as a threat and is identified and profiled in the Hazard Identification. The vulnerabilities to and consequences of a given hazard are addressed in the Vulnerability Analysis. Vulnerability is analyzed in terms of exposure of both population and infrastructure to each hazard. Consequences are identified as anticipated, predicted, or documented impacts caused by a given hazard when considering the vulnerability analysis and the characteristics of the hazard as outlined in its identification.



The WA Region 5 **Hazard Identification** was used for this plan. Each jurisdiction's Vulnerability and Consequence Analysis are based on the Region 5 Hazard Identification. The Region 5 Hazard Identification can be found in Annex (TBD). Each hazard is identified in subsections. The subsections are grouped by hazard-type (i.e., geological and meteorological hazards) and then alphabetically within each type. A summary table of the WA Region 5 Hazard Identification is included in this section as Table 4-1a and Table 4-1b.

The **Vulnerability Analysis** is displayed in five tables:

- **Table 4-2 General Exposure**
- **Table 4-3 Population Exposure**
- **Table 4-4 General Infrastructure Exposure**
- **Table 4-5a Consequence Analysis Chart – Geological**
- **Table 4-5b Consequence Analysis Chart – Meteorological**

Each jurisdiction has its own Vulnerability Analysis, and it is included in this section.

The **Consequence Identification** is organized by Threat. Each threat page summarizes the hazard, graphically illustrates exposures from the Vulnerability Analysis, and lists corresponding Consequences. Each jurisdiction has its own Consequence Identification and it is included in this section: avalanche, earthquake, landslide, tsunami, volcanic, drought, flood, severe weather, and wildland/urban interface fire.

Specific information and analysis of a jurisdiction's owned (public) infrastructure is addressed in the Infrastructure Section of its Plan.

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Table 4-1a WA Region 5 Hazard Identification Summary – Geological

THREAT	DECLARATION # DATE/PLACE	PROBABILITY/RECURRENCE	MAPS, FIGURES AND TABLES
<u>AVALANCHE</u>	Not Applicable	Yearly in the mountainous areas of the County including Mt. Rainier National Park and the Cascades.	Slab Avalanche Areas Vulnerable to Avalanche Pierce County Avalanches of Record
<u>EARTHQUAKE</u>	N/A--7/22/2001 Nisqually Delta N/A--6/10/2001 Satsop DR-1361-WA--2/2001 Nisqually N/A--7/2/1999 Satsop N/A--4/29/1965 Maury Island, South Puget Sound N/A--4/13/1949 South Puget Sound N/A--2/14/1946 Maury Island	Magnitude 4.3 Magnitude 5.0—Intraplate Earthquake Magnitude 6.8—Intraplate Earthquake Magnitude 5.8—Intraplate Earthquake Magnitude 6.5—Intraplate Earthquake Magnitude 7.0—Intraplate Earthquake Magnitude 6.3 40 years or less occurrence Historical Record—About every 23 years for intraplate earthquakes	Types of Earthquakes Major Faults in the Puget Sound Basin Seattle and Tacoma Fault Segments Pierce County Seismic Hazard Major Pacific Northwest Earthquakes Notable Earthquakes Felt in Pierce County Salmon Beach, Tacoma Washington following Feb 2001 Earthquake Liquefaction Niigata Japan-1964 Lateral Spreading – March 2001
<u>LANDSLIDE</u>	DR-1159-WA--12/96-2/1997 DR-852-WA--1/1990 DR-545-WA--12/1977	Slides with minor impact (damage to 5 or less developed properties or \$1,000,000 or less damage) 10 years or less. Slides with significant impact (damage to 6 or more developed properties or \$1,000,000 or greater damage) 100 years or less.	Northeast Tacoma Landslide 01/2007 Pierce County Landslide and Soil Erosion Hazard Pierce County Shoreline Slope Stability Areas Notable Landslides in Pierce County Ski Park Road – Landslide 01/31/03 SR-165 Bridge Along Carbon River – Landslide 2/1996 Aldercrest Drive - Landslide
<u>TSUNAMI</u>	N/A--1894 Puyallup River Delta N/A--1943 Puyallup River Delta (did not induce tsunami) N/A--1949 Tacoma Narrows	Due to the limited historic record, until further research can provide a better estimate a recurrence rate of 100 years plus or minus will be used.	Hawaii 1957 – Residents Explore Ocean Floor Before Tsunami Hawaii 1949 – Wave Overtakes a Seawall Puget Sound Fault Zone Locations, Vertical Deformation and Peak Ground Acceleration Seattle and Tacoma Faults Tsunami Inundation and Current Based on Earthquake Scenario Puget Sound Landslide Areas and Corresponding Tsunamis Puget Sound River Deltas, Tsunami Evidence and Peak Ground Acceleration Salmon Beach, Pierce County 1949 – Tsunamigenic Subaerial Landslide Puyallup River Delta – Submarine Landslides Puyallup River Delta – Submarine Landslides and Scarp Damage in Tacoma from 1894 Tsunami
<u>VOLCANIC</u>	DR-623-WA--5/1980	The recurrence rate for either a major lahar (Case I or Case II) or a major tephra eruption is 500 to 1000 years.	Volcano Hazards Debris Flow at Tahoma Creek – July 26, 1988 Douglas Fir Stump – Electron Lahar Deposit in Orting Landslide from Little Tahoma Peak Covering Emmons Glacier Tephra Types and Sizes Lahars, Lava Flows and Pyroclastic Hazards of Mt. Rainier Estimated Lahar Travel Times for Lahars 10 <sub>7</sub> to 10 <sub>8</sub> Cubic Meters in Volume Ashfall Probability from Mt. Rainier Annual Probability of 10 Centimeters or more of Tephra Accumulation in the Pacific NW Cascade Eruptions Mt. Rainier Identified Tephra, last 10,000 years Pierce County River Valley Debris Flow History

Geological

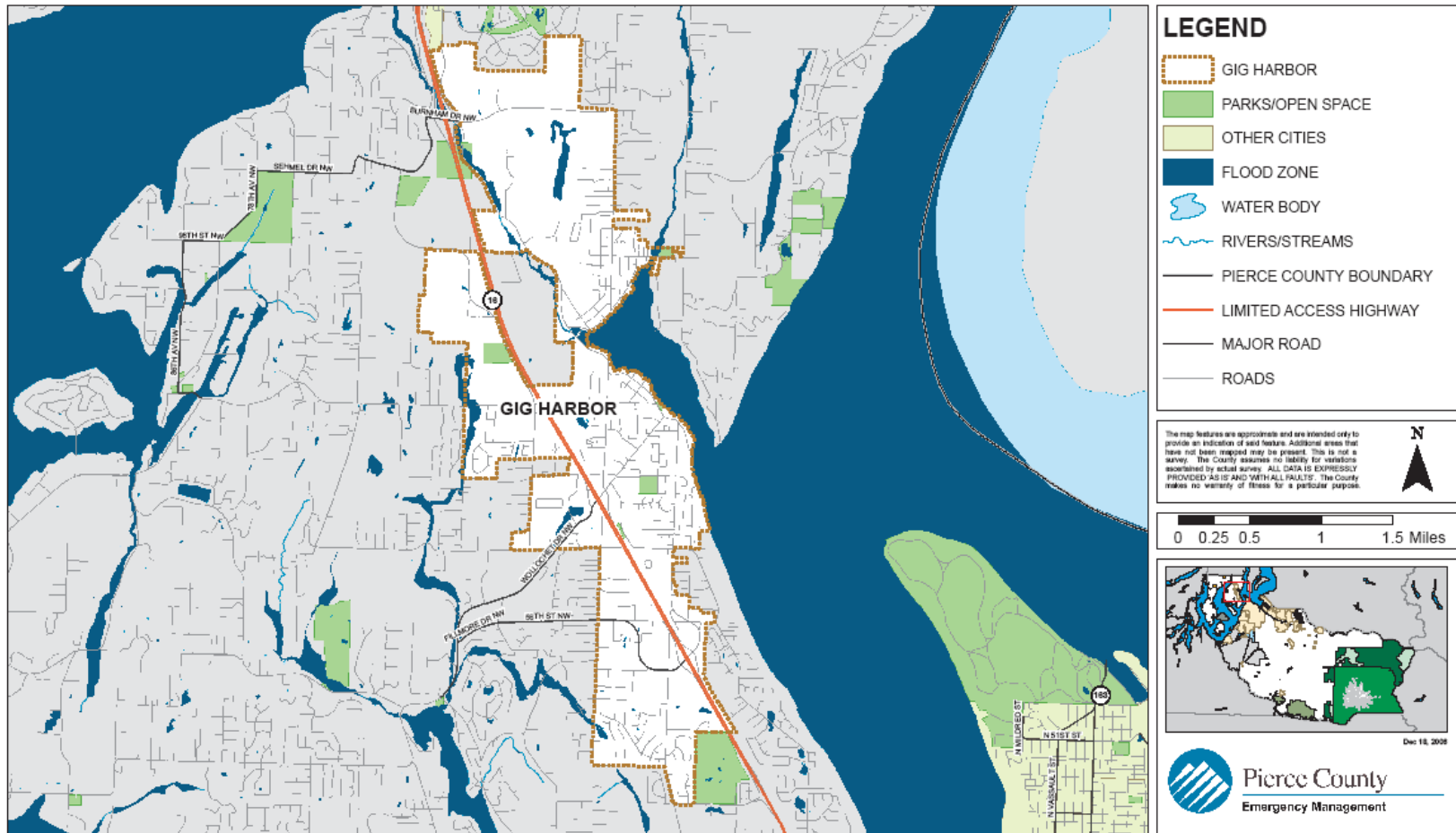
Table 4-1b WA Region 5 Hazard Identification Summary – Meteorological

HAZARD		DECLARATION # DATE/PLACE		PROBABILITY/RECURRENCE	MAPS, FIGURES AND TABLES
<b>Meteorological</b>	<b><u>CLIMATE CHANGE</u></b>	Not Applicable		Not Applicable	Global Temperature Change: 1850 to 2006 Recent and Projected Temperatures for the Pacific Northwest Comparison of the South Cascade Glacier: 1928 to 2003 Lower Nisqually Glacier Retreat: 1912 to 2001
	<b><u>DROUGHT</u></b>	DR-981-WA--1/1993 DR-137-WA--10/1962		50 years or less occurrence	Sequence of Drought Impacts Palmer Drought Severity Index Pierce County Watersheds % Area of Basin in Drought Conditions Since 1895 % Time in Severe to Extreme Drought: 1895-1995 % Time in Severe to Extreme Drought: 1985-1995 Notable Droughts Affecting Pierce County Columbia River Basin USDA Climate Zones – Washington State
	<b><u>FLOOD</u></b>  Since 1978 3 Repetitive Loss Areas have produced 83 Claims totaling Nearly \$1.78 Millions Dollars.	DR-1671-WA--11/2006 DR-1499-WA--10/2003 DR-1159-WA--12/96-2/1997 DR-1100-WA--1-2/1996 DR-1079-WA--11-12/1995 DR-896-WA--12/1990 DR-883-WA--11/1990	DR-852-WA--1/1990 DR-784-WA--11/1986 DR-545-WA--12/1977 DR-492-WA--12/1975 DR-328-WA--2/1972 DR-185-WA--12/1964	5 years or less occurrence Best Available Science--The frequency of the repetitive loss claims indicates there is approximately a 33 percent chance of flooding occurring each year.	Pierce County Watersheds Pierce County Flood Hazard Pierce County Repetitive Loss Areas Clear Creek Basin Repetitive Flood Loss Aerial Photo Flood Hazard Declared Disasters Feb 8, 1996 Flooding – Del Rio Mobile Homes Along Puyallup River Nov 2006 Flooding River Park Estates – Along Puyallup River Nov 2006 Flooding State Route 410 – Along Puyallup River Nov 2006 Flooding Rainier Manor – Along Puyallup River
	<b><u>SEVERE WEATHER</u></b>	DR-1682-WA--12/2006 DR-1671-WA--11/2006 DR-1159-WA--12/96-2/1997 DR-1152-WA--11/19/1996	DR-981-WA--1/1993 DR-137-WA--10/1962	The recurrence rate for all types of severe storms is 5 years or less.	Fujita Tornado Damage Scale Windstorm Tracks Pierce County Severe Weather Wind Hazard – South Wind Event Pierce County Severe Weather Wind Hazard – East Wind Event Notable Severe Weather in Pierce County Snowstorm 01/2004 Downtown Tacoma Satellite Image – Hanukkah Eve Windstorm Before/After Tornado Damage Greensburg KS 05/04/07 Public Works Responds 2005 Snowstorm Downed Power Pole 02/2006 Windstorm County Road December 2006 Windstorm Tacoma Narrows Bridge – November 7, 1940 Windstorm
	<b><u>WUI FIRE</u></b>	Not Applicable		Based on information from WA DNR the probability of recurrence for WUI fire hazard to Pierce County is 5 years or less.	Washington State Fire Hazard Map Pierce County Forest Canopy Industrial Fire Precaution Level Shutdown Zones Carbon Copy Fire August 2006 Washington State DNR Wildland Fire Statistics: 1973-2007 DNR Wildland Response South Puget Sound Region: 2002-2007 Pierce County DNR Fires



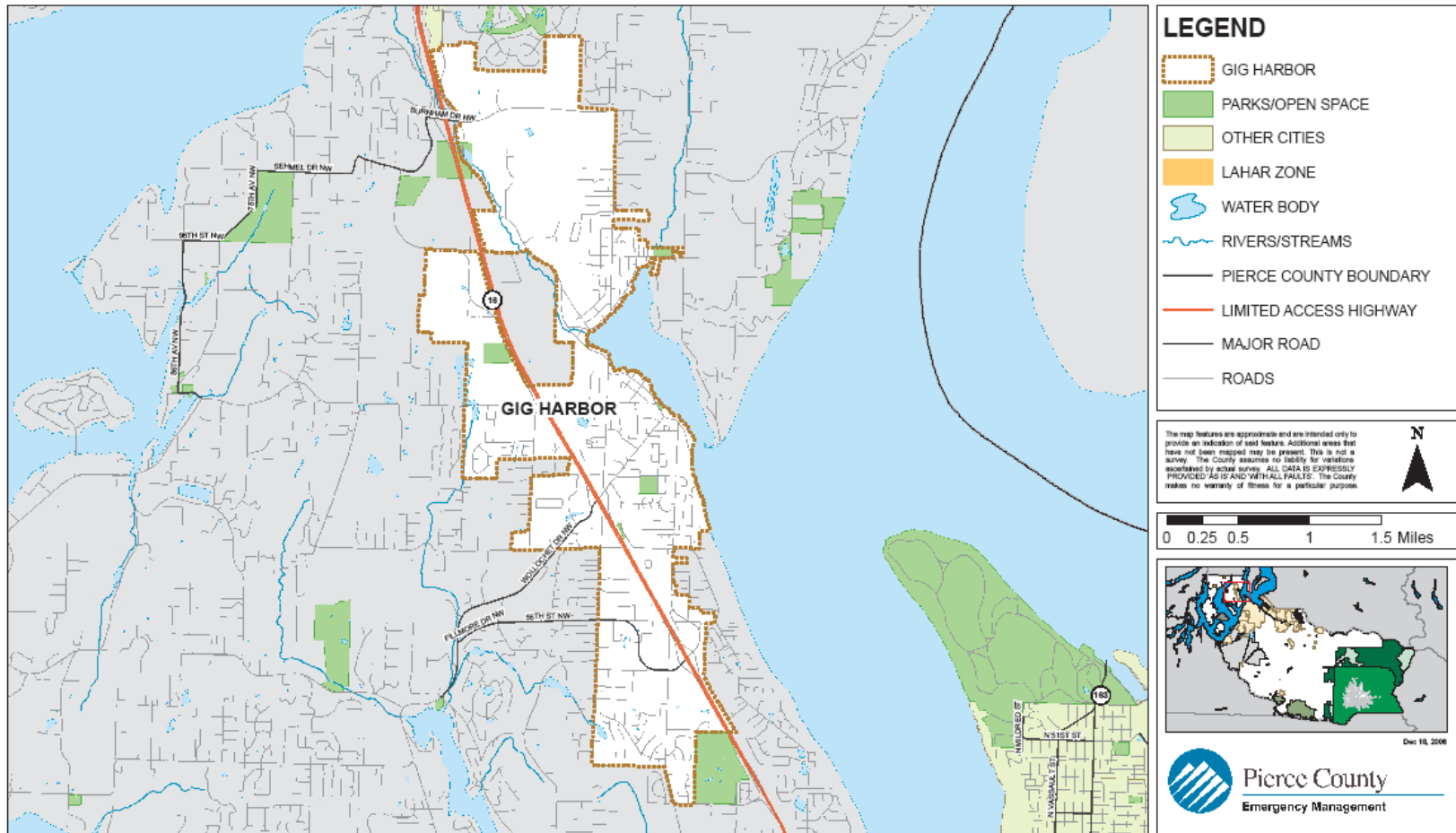
Map 4-1

# CITY OF GIG HARBOR - FLOOD HAZARD AREA



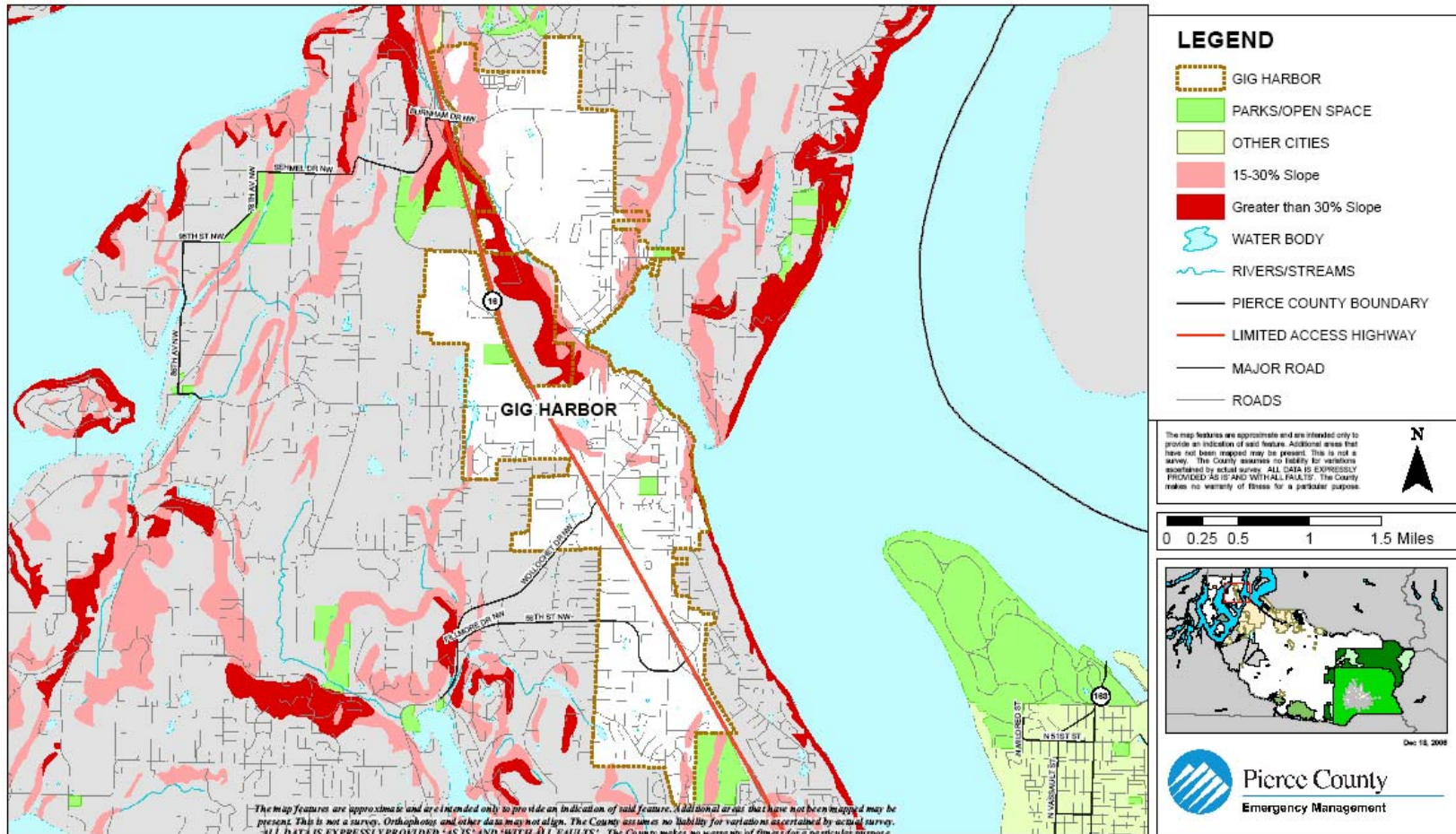
Map 4-2

# CITY OF GIG HARBOR - LAHAR HAZARD AREA



Map 4-3

# CITY OF GIG HARBOR - LANDSLIDE HAZARD AREA



Map 4-4

# CITY OF GIG HARBOR - SEISMIC HAZARD AREA

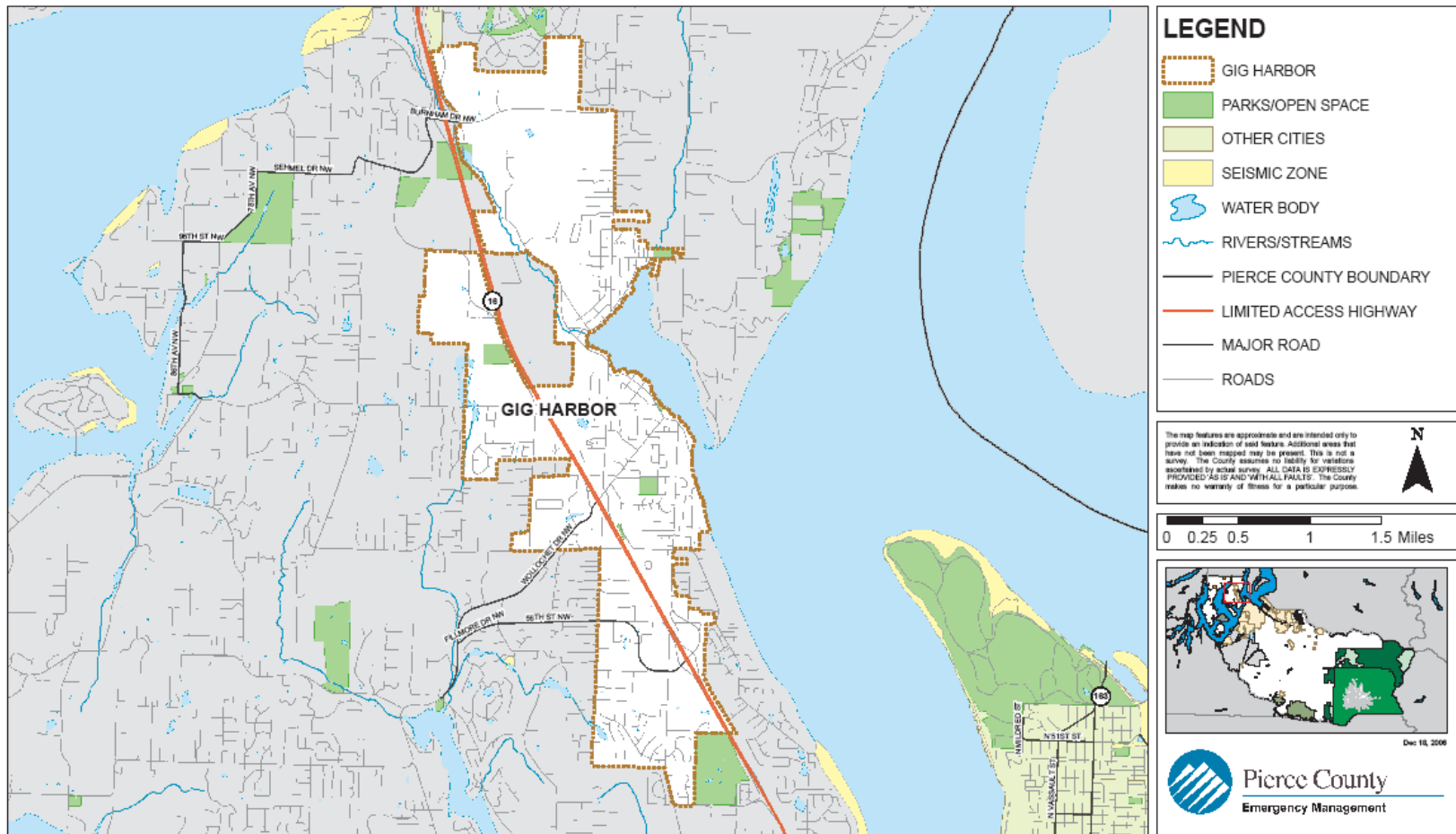


Table 4-2 Vulnerability Analysis: General Exposure

THREAT		AREA (SQ MI)		PARCELS	
		Total	% Base	Total	% Base
<b>BASE</b>		<b>4.05</b>	<b>100%</b>	<b>3,269</b>	<b>100%</b>
<b>Geological</b>	<b>Avalanche<sup>1</sup></b>	NA	NA	NA	NA
	<b>Earthquake<sup>2</sup></b>	0	0	0	0
	<b>Landslide</b>	.72	18%	555	17%
	<b>Tsunami<sup>3</sup></b>	TBD	TBD	TBD	TBD
	<b>Volcanic<sup>4</sup></b>	0	0	0	0
<b>Meteorological</b>	<b>Drought<sup>5</sup></b>	4.05	100%	3,269	100%
	<b>Flood</b>	.85	21%	201	6%
	<b>Severe Weather</b>	4.05	100%	3,269	100%
	<b>WUI Fire<sup>6</sup></b>	TBD	TBD	TBD	TBD

*Housing Information*

Based on 2000 Census Information City of Gig Harbor has 158 homes built prior to 1940, 1,240 homes built between 1940 and 1979, and 1,716 built between 1980 and 2000. All are exposed to or vulnerable to severe weather and earthquakes.

Table 4-3 Vulnerability Analysis: Population Exposure

THREAT		POPULATION			SPECIAL POPULATIONS (OF TOTAL EXPOSED POPULATION)			
		Total	% Base	Density (pop/sq mi)	65+ yrs		18- yrs	
					#	%	#	%
<b>BASE</b>		<b>6,502</b>	<b>100</b>	<b>1,604</b>	<b>1,527</b>	<b>23%</b>	<b>1,316</b>	<b>20%</b>
<i>Geological</i>	<b>Avalanche</b>	NA	NA	NA	NA	NA	NA	NA
	<b>Earthquake</b>	0	0	0	0	0	0	0
	<b>Landslide</b>	3,203	49%	7,086	611	19%	691	22%
	<b>Tsunami</b>	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	<b>Volcanic</b>	0	0	0	0	0	0	0
<i>Meteorological</i>	<b>Drought</b>	6,502	100	1,604	1,527	23%	1,316	20%
	<b>Flood</b>	3,271	50%	3,863	740	23%	722	22%
	<b>Severe Weather</b>	6,502	100	1,604	1,527	23%	1,316	20%
	<b>WUI Fire</b>	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Table 4-4 Vulnerability Analysis: General Infrastructure Exposure

THREAT		LAND VALUE			IMPROVED VALUE			TOTAL ASSESSED VALUE		
		Total (\$)	% Base	Avg. Value (\$)	Total (\$)	% Base	Avg. Value (\$)	Total (\$)	% Base	Avg. Value (\$)
<b>BASE</b>		<b>854,473,100</b>	<b>100%</b>	<b>261,387</b>	<b>828,686,300</b>	<b>100%</b>	<b>253,498</b>	<b>1,683,159,400</b>	<b>100%</b>	<b>514,885</b>
<i>Geological</i>	<b>Avalanche</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<b>Earthquake</b>	0	0	0	0	0	0	0	0	0
	<b>Landslide</b>	174,680,800	20%	314,740	146,681,900	18%	264,292	321,362,700	19%	579,032
	<b>Tsunami</b>	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	<b>Volcanic</b>	0	0	0	0	0	0	0	0	0
<i>Meteorological</i>	<b>Drought</b>	854,473,100	100%	261,387	828,686,300	100%	253,498	1,683,159,400	100%	514,885
	<b>Flood</b>	90,671,700	11%	451,103	72,953,900	9%	362,955	163,625,600	10%	814,058
	<b>Severe Weather</b>	854,473,100	100%	261,387	828,686,300	100%	253,498	1,683,159,400	100%	514,885
	<b>WUI Fire</b>	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Table 4-5a Consequence Analysis Chart – Geological<sup>7,8</sup>

THREAT		CONSEQUENCE	YES OR NO
<i>Geological</i>	<b>Avalanche</b>	Impact to the Public	No
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
		Impact to Property, Facilities and Infrastructure	No
		Impact to the Environment	No
		Impact to the Jurisdiction Economic Condition	No
	Impact to Reputation or Confidence in Jurisdiction	No	
	<b>Earthquake</b>	Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	Yes
		Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	Yes	
	<b>Landslide</b>	Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	No
		Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	Yes	
	<b>Tsunami</b>	Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	Yes
		Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	Yes	
	<b>Volcanic<sup>9</sup></b>	Impact to the Public	Yes
		Impact to the Responders	Yes
Impact to COG and/or COOP in the Jurisdiction		No	
Impact to Property, Facilities and Infrastructure		Yes	
Impact to the Environment		Yes	
Impact to the Jurisdiction Economic Condition		No	
Impact to Reputation or Confidence in Jurisdiction	No		



Table 4-5b Consequence Analysis Chart – Meteorological

THREAT		CONSEQUENCE	YES OR NO
<i>Meteorological</i>	<b>Drought</b>	Impact to the Public	Yes
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
		Impact to Property, Facilities and Infrastructure	No
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	No
		Impact to Reputation or Confidence in Jurisdiction	No
	<b>Flood</b>	Impact to the Public	Yes
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
		Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	No
		Impact to Reputation or Confidence in Jurisdiction	No
	<b>Severe Weather</b>	Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	No
		Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
		Impact to Reputation or Confidence in Jurisdiction	Yes
	<b>WUI Fire</b>	Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	No
Impact to Property, Facilities and Infrastructure		Yes	
Impact to the Environment		Yes	
Impact to the Jurisdiction Economic Condition		Yes	
Impact to Reputation or Confidence in Jurisdiction		No	

## Endnotes

---

<sup>1</sup> Jurisdiction is not vulnerable to this hazard, therefore it is marked NA or non-applicable.

<sup>2</sup> It should be noted here that although all residents, all property and all infrastructure of the City of Gig Harbor are vulnerable to earthquake shaking, not all are subject to the affects of liquefaction and liquefiable soils which is what is represented here.

<sup>3</sup> Gig Harbor with its enclosed bay has a significant threat within the harbor area itself. The marinas and other businesses adjacent to the water could sustain damage. The damage from run up has not been analyzed. However two things will limit the damage done within the Harbor. First the extremely narrow entrance leading into a larger bay will reduce the amount of water that actually enters the bay. As the wave spreads out from the entrance into the larger bay, it will continue to decrease in size as it advances up the bay. The second factor is the steepness of the downtown area. It will limit the wave's run-up into that portion of the City. Much of the rest of Gig Harbor's coastline, south of the Harbor entrance, facing Dalco Passage is high bank with few homes near enough to the water to be affected. As modeling of the impacted areas improves in the future we will be able to determine an estimate of the potential damage to property within the City.

<sup>4</sup> The threat of volcanic ashfall affects the entire Region 5, however some jurisdictions are specifically threatened by lahar flows directly from Mt. Rainier; an active volcano.

<sup>5</sup> The entire jurisdiction is vulnerable to drought. There are three things that must be understood about the affect of drought on the jurisdiction: 1) Drought is a Region wide event. When it does affect Pierce County, it will affect every jurisdiction, 2) Drought will gradually develop over time. It is a gradually escalating emergency that may take from months to years to affect the jurisdiction. Initially lack of water may not even be noticed by the citizens. However, as the drought continues, its effects will be noticed by a continually expanding portion of the community until it is felt by all, and 3) Jurisdictions will be affected differently at different times as a drought develops. This will vary depending on the needs of the each local jurisdiction. Some examples are: jurisdictions that have industry that requires a continuous supply of a large quantity of water; others have agriculture that requires water, but may only require it at certain times of the year; and, some jurisdictions have a backup source of water while others do not.

<sup>6</sup> The City of Gig Harbor while undergoing development still has areas of forested land that could develop into a wildland/urban interface fire. Further study is needed to determine the extent of the area that could be affected.

<sup>7</sup> In the Impact to Property, Facilities and Infrastructure, both Tables 4-5a and 4-5b, look at the impact to all property, facilities and infrastructure existing in the jurisdiction, not just to that owned by the jurisdiction.

<sup>8</sup> The consideration for each of these hazards, in both Tables 4-5a and 4-5b, as to whether an individual hazard's consequences exist, or not, is based on a possible worst case scenario. It must also be understood that a "yes" means that there is a good possibility that the consequence it refers to could happen as a result of the hazard, not that it will. Conversely "No" means that it is highly unlikely that that consequence will have a major impact, not that there will be no impact at all.

<sup>9</sup> While the major volcanic hazard from Mt. Rainier is from a lahar descending the main river valleys surrounding the mountain, it is not the only problem. Most jurisdictions could receive tephra in greater or lesser amounts, sometimes with damaging results. Consequence analyses in this section take into account the possibility of tephra deposition in addition to a lahar.

## Section 5

### Mitigation Strategy Requirements

**Mitigation Strategy---Requirement §201.6(c)(3):**

The plan **shall** include a strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

**Local Hazard Mitigation Goals---Requirement §201.6(c)(3)(i):**

[The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

- Does the plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?

**Identification and Analysis of Mitigation Measures---Requirement §201.6(c)(3) (ii):**

[The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

- Does the plan identify a **comprehensive range** of specific mitigation actions and projects for each hazard?
- Do the identified range of mitigation actions and projects address reducing the effects of hazards on **new** buildings and infrastructure?
- Do the identified range of mitigation actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure?

**Implementation of Mitigation Measures---Requirement: §201.6(c)(3) (iii):**

[The mitigation strategy section **shall** include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

- Does the mitigation strategy include how the actions are **prioritized**?
- Does the mitigation strategy address how the actions will be **implemented and administered**?
- Does the prioritization process include an emphasis on the use of **cost-benefit review**?

**SECTION 5**

**REGION 5 HAZARD MITIGATION PLAN  
CITY OF GIG HARBOR  
MITIGATION STRATEGY SECTION**

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Table 5-1 City of Gig Harbor Mitigation Strategy Matrix

Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1, 2</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
<b>Startup</b>	1. Existing Mitigation Actions (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	Ongoing	✓	✓	✓	✓	✓	✓
	2. Plan Maintenance (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	Ongoing	✓	✓	✓	✓	✓	✓
<b>HMF</b>	1. Pierce County Hazard Mitigation Forum (E,L,T,V,D,F,WUI,SW,MM)	PC DEM; Gig Harbor	Ongoing	✓	✓	✓	✓	✓	✓
<b>City Government</b>	1. Capability Identification and Evaluation (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	1-2	N/A					
	2. Response and Recovery Information Collection (E,L,T,V,D,F,WUI,SW,MM)	PCDEM, Gig Harbor, Regional Partners	1-2		✓	✓			✓
	3. Develop Specific Recovery Plans (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor with Chamber of Commerce	5	✓	✓	✓			✓
	4. Encourage and Support LIDAR Mapping Project (E,L,V,F,T)	PCDEM, PCIS, LIDAR Consortium and Gig Harbor	5	N/A					
	5. Preventative Maintenance: Warning and Response Equipment (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor and Regional Partners	1-2	✓	✓				
	6. Essential Records Protection (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	5		✓	✓			✓
	7. Develop an All-Hazard Mitigation Plan (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	5	N/A					
	8. Maintain Emergency Resources (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	Ongoing	✓	✓	✓	✓		✓
	9. Coordinate Hazard Mitigation Planning (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor and the HMPT	Ongoing	✓	✓	✓	✓	✓	✓
	10. Assist in Supplying NOAA Weather Radios to the Community (E,F,V,T, SW)	Gig Harbor and Gig Harbor Fire	5	✓		✓		✓	
	11. Complete a Vulnerable Population Assessment (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor with Regional Partners	1-2	✓		✓		✓	
	12. Continue Development of Long-Term Partnerships (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor with Regional Partners	Ongoing	✓	✓	✓		✓	
	13. Coordinate mitigation Measures with Neighboring Jurisdictions (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	1-2	✓		✓		✓	✓
	14. Develop Specific Disaster Response & Recovery Procedures for Local Senior Center (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	1-2	✓		✓		✓	

Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1, 2</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	15. Evacuation Plan Development for City (E,L,T,V,F,WUI,SW,MM)	Gig Harbor, PCDEM, Gig Harbor Police	1-2	✓		✓		✓	
	16. Form an Emergency Management Team (EMT) (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	1-2	✓	✓	✓			
	17. Participate in Disaster Response Training (E,L,T,V,F,WUI,SW,MM)	Gig Harbor and Regional Partners	Ongoing	✓	✓	✓		✓	
	18. Establish Alert Systems for Vulnerable Populations (E,L,T,V,F,WUI,SW,MM)	Gig Harbor and Regional Partners	1-2	✓		✓			
	19. Establish Backup Communications Center (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	5	✓	✓	✓			✓
	20. Establish Mobile Communication System (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	5	✓	✓				✓
	21. Maintain Emergency Operations Center with 24 Hour Capability (E,L,T,V,D,F,WUI,SW,MM)	Gig Harbor	5	✓	✓	✓			
	22. Provide Equipment/Personnel for Storm and Debris Cleanup (E,L,T,V,F,WUI,SW,MM)	Gig Harbor - Public Works	5	✓	✓		✓		
	23. Review/Update the Local Emergency Operations Plan (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	1-2	✓	✓	✓			
	24. Encourage Voluntary Water Conservation (D,WUI,SW,MM)	Gig Harbor	1-2	✓	✓				
	25. Establish Standards for Safe Residential Use of Gray Water (D,WUI,SW,MM)	Gig Harbor - Water Division	1-2	✓		✓	✓	✓	
	26. Evaluate Water Quantity and Quality from New Sources (D,WUI,SW,MM)	Gig Harbor - Water Division	5	✓	✓	✓			
	27. Improve Water Conservation and Conveyance Efficiencies (D,WUI,SW,MM)	Gig Harbor - Water Division	Ongoing	✓	✓				
	28. Study Effectiveness of Conservation Measures (D,WUI,SW,MM)	Gig Harbor - Water Division	Ongoing	✓	✓	✓			
	29. Support Legislation Requiring Water Agencies to Develop Contingency Plans (D,WUI,SW,MM)	Gig Harbor - Water Division	1-2	✓	✓	✓			
	30. Support Legislation to Protect and Manage Ground Water (D,WUI,SW,MM)	Gig Harbor - Water Division	1-2	✓	✓	✓	✓		



Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1, 2</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	31. Support Legislation to Protect In-Stream Flows (D, WUI, SW, MM)	Gig Harbor - Water Division	Ongoing	✓		✓	✓		
	32. Support Local Development of Conservation Programs (D, WUI, SW, MM)	Gig Harbor - Water Division	Ongoing	✓	✓	✓	✓		
	33. Work with Community-Based Organizations to Promote Public Participation in Conservation Programs (D, WUI, SW, MM)	Gig Harbor - Water Division	Ongoing	✓	✓	✓			
	34. Develop Criteria “Triggers” for Drought-Related Actions (D, WUI, SW, MM)	Gig Harbor - Water Division	1-2	✓	✓	✓			
	35. Establish New Data Collection Networks (D, WUI, SW, MM)	Gig Harbor	1-2	✓	✓	✓			
	36. Monitor Vulnerable Public Water Suppliers and Sources (D, WUI, SW, MM)	Gig Harbor - Water Division	Ongoing	✓	✓	✓			
	37. Develop a Seismic Evaluation Program: City Facilities and Shelters (E, L, T, V, F, WUI, SW, MM)	Gig Harbor - Buildings	1-2	✓		✓		✓	
	38. Develop and Encourage Earthquake Home Retrofit Program (E, SW, MM)	Gig Harbor - Buildings	1-2	✓		✓		✓	
	39. Develop Debris Disposal Sites (E, L, V, F, WUI, SW, MM)	Gig Harbor	1-2	✓	✓	✓			
	40. Encourage Emergency Supply Kits for Homes, Schools and Businesses (E, SW, MM)	Gig Harbor	Ongoing	✓		✓		✓	
	41. Encourage Seismic Retrofit of City Structures at Risk (E, SW, MM)	Gig Harbor - Buildings	5	✓	✓				
	42. Perform Earthquake Retrofit on Free-Standing Water Tanks and Reservoirs (E, SW, MM)	Gig Harbor - Water Division	5	✓	✓	✓			
	43. Flood Control and Response with Local Cities and Towns (F, SW, MM)	Gig Harbor	Ongoing	✓	✓	✓			
	44. Surface Water Reduction: Absorbent Building Material (F, SW, MM)	Gig Harbor - Buildings	5	✓		✓			
	45. Surface Water Reduction: Control Standards (F, SW, MM)	Gig Harbor	1-2	✓	✓	✓			
	46. Surface Water Reduction: Financial Incentives (F, SW, MM)	Gig Harbor	1-2	✓		✓		✓	
	47. Surface Water Reduction: Low Impact Developments (F, SW, MM)	Gig Harbor	1-2	✓		✓		✓	
	48. Sustain Transportation Routes: Road and Bridge Mitigation (E, L, V, F, WUI, SW, MM)	Gig Harbor	5	✓	✓	✓		✓	

Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1, 2</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	49. Establish Multi-Jurisdictional Partnerships to Reduce Stormwater Runoff (F,SW,MM)	Gig Harbor	5	✓	✓	✓			
	50. Discourage Construction in Landslide Areas (E,L,SW,MM)	Gig Harbor - Buildings/Council	1-2	✓				✓	
	51. Encourage Landslide Legislation and Policies that Support Effective Landslide Hazard Mitigation (E,L,SW,MM)	Gig Harbor	1-2	✓	✓	✓			
	52. Slope Stability Project (E,L,SW,MM)	Gig Harbor	1-2	✓		✓	✓		
	53. Hazard Avoidance through Appropriate Land-Use Practices (E,L,T,SW,MM)	Gig Harbor	Ongoing	✓		✓			
	54. Develop Recovery Plan for Power Failures in the City (E,L,T,V,F,WUI,SW,MM)	Gig Harbor with Regional Partners	1-2	✓	✓	✓		✓	
	55. Encourage and Support Pre-Planning for Area Shelters (E,L,T,V,F,WUI,SW,MM)	Gig Harbor, PCDEM	1-2	✓		✓		✓	
	56. Pre-Arrange for Removal of Heavy Snow Loads from Roofs in Danger of Collapse (L,SW,MM)	Gig Harbor with Regional Partners	1-2	✓	✓	✓		✓	
	57. Purchase and Install Backup Power Generators for Key City Facilities (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	1-2	✓	✓				✓
	58. Support Buried Power Line Programs (E,L,V,WUI,SW,MM)	Gig Harbor	Ongoing	✓	✓	✓		✓	
	59. Adopt “Firewise” Communities Planning and Development and Hold Workshops on “Firewise” Program (WUI,SW,MM)	Gig Harbor with Regional Partners	1-2	✓	✓	✓		✓	✓
	60. Consider Mutual Aid and Memorandums of Understanding (MOU’s) with Surrounding Jurisdictions (E,L,T,V,F,WUI,SW,MM)	Gig Harbor with Regional Partners	Ongoing	✓	✓	✓		✓	
	61. Enforce Burn Bans and Other Burning Restrictions in the Community (WUI,SW,MM)	Gig Harbor with Gig Harbor Fire District	Ongoing	✓		✓		✓	
	62. Evaluate Access and Egress Issues, Gates, Bridges and Turnarounds (WUI,SW,MM)	Gig Harbor with Gig Harbor Fire District	Ongoing	✓	✓	✓		✓	
	63. Pre-Determine Level of Fire Suppression Needed and Pre-Plan for Areas of Highest Hazard or Potential (WUI,SW,MM)	Gig Harbor with Gig Harbor Fire District	1-2	✓	✓	✓		✓	
	64. Program to Reduce Ignitability of Structures and Plans to Remove Dead Vegetation and Potential Fuels in Hazard Zones (WUI,SW,MM)	Gig Harbor with Gig Harbor Fire District	Ongoing	✓	✓	✓		✓	

Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1, 2</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	65. Understand Local Activation Procedures for Special Task Forces (WUI,SW,MM)	Gig Harbor with PCDEM	1-2	✓	✓	✓			
	66. Work with the Insurance Industry to Provide Financial Incentives to Homeowner’s with Maintained Defensible Space (WUI,SW,MM)	Gig Harbor with Regional Partners	1-2	✓		✓		✓	
	67. Backup City Files and Records and Store in Alternate Location (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	1-2		✓				
	68. Develop/Maintain Hazardous Materials Program (E,L,T,V,F,WUI,SW,MM)	Gig Harbor and Regional Partners	1-2	✓	✓	✓	✓		
	69. Develop and Maintain Security at Water Plants (MM)	Gig Harbor	1-2	✓	✓			✓	
	70. Support Community HAZMAT Agreements and Regional HAZMAT Teams (E,L,T,V,F,WUI,SW,MM)	Gig Harbor and Regional Partners	Ongoing	✓	✓	✓		✓	
	71. Enhance Response Plans for Biological/Chemical Terrorism (MM)	Gig Harbor with Regional Partners	1-2	✓	✓	✓		✓	
	72. Install Bulletproof Court and Magistrate Benches (MM)	Gig Harbor	5	✓	✓	✓			
	73. Place Law Enforcement Officers in Schools (MM)	Gig Harbor with Police and School District	5	✓		✓		✓	
	74. Provide Protective Systems or Equipment for Cyber or Physical Risks (E,SW,MM)	Gig Harbor	1-2	✓	✓				
	75. Redundancy/Duplication of Essential Personnel, Critical Systems, Equipment, Information, Operations and Materials (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	1-2	✓	✓				
	76. Review Security of Critical and Potential Target Facilities (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	1-2	✓	✓				
	77. Update All Anti-Virus Software (MM)	Gig Harbor	1-2	✓	✓				
<b>Public Education</b>	1. Establish “Good Neighbor” Programs for Winter Storms and Severe Weather (E,L,V,F,WUI,SW,MM)	Gig Harbor and PC DEM	1-2	✓		✓		✓	
	2. Educate Local Community Groups on Natural Hazards (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	Ongoing	✓		✓		✓	
	3. Comprehensive Public Education Campaigns: Post Disaster (E,L,T,V,F,WUI,SW,MM)	Gig Harbor	Ongoing	✓		✓		✓	
	4. Provide PC NET Training (E,T,V,F,SW,MM)	PCDEM with Gig Harbor	1-2	✓	✓	✓		✓	
	5. Public Education Campaign, All Hazards	Gig Harbor with PC DEM and Regional Partners	Ongoing	✓		✓		✓	

Implementation Mechanism	Mitigation Measure ( <i>Hazard(s)</i> ) <sup>1, 2</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	6. Develop Public Education for Severe Storms and Wind Storms ( <i>F,SW,MM</i> )	Gig Harbor	1-2	✓		✓		✓	
	7. Develop Public Education: Bus Driver Evacuation Training Program ( <i>E,L,T,V,F,WUI,SW,MM</i> )	Gig Harbor with Peninsula School District and Pierce Transit	1-2	✓		✓		✓	
	8. Develop Public Education for Volcanic Ashfall ( <i>V,SW,MM</i> )	Gig Harbor	1-2	✓	✓	✓		✓	
	9. Develop Educational Materials Regarding Wildland Fire Safe Practices ( <i>WUI,SW,MM</i> )	Gig Harbor	1-2	✓	✓	✓	✓	✓	
	10. Educate Developers and Builders on Wildfire Hazards and Safe Building Practices ( <i>WUI,SW,MM</i> )	Gig Harbor with Regional Partners	1-2	✓		✓			

## Startup Mitigation Measures

---

### Existing Mitigation Actions

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will continue to implement existing programs, policies, and regulations as identified in the Capability Identification Section of this Plan. This includes such actions as updating the Critical Area Regulations and any ensuing land use policies with best available science. It also includes continuing those programs that are identified as technical capabilities.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Preserve or Restore Natural Resources; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be accomplished with local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

### Plan Maintenance

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will adopt those processes outlined in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Preserve or Restore Natural Resources; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Hazard Mitigation Forum

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### Pierce County Hazard Mitigation Forum

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will work in conjunction with the County through the Pierce County Hazard Mitigation Forum (HMF). The Forum will continue as a means of coordinating mitigation planning efforts among all jurisdictions within the County that have completed a mitigation plan. This ensures efficient use of resources and a more cooperative approach to making a disaster resistant county. The HMF meets annually; every October. This is addressed in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity Of Operations; Increase Public Preparedness for Disasters; Preserve or Restore Natural Resources; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = PC DEM; City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = Regional
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## City Government Mitigation Measures

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### Capability Identification and Evaluation

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will develop a consistent and replicable system for evaluating the City's capabilities. A comprehensive evaluation will lead to specific policy recommendations to more effectively achieve disaster resistant communities. Further, a capability evaluation involves measurable variables so that capabilities may eventually be tracked in conjunction with the implementation of all mitigation measures. This is a key component in evaluating the success of the City's overall mitigation strategy.

1. **Goal(s) Addressed** = N/A. Goals addressed are contingent upon the mitigation measures resulting from this priority.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

### Response and Recovery Information Collection

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will work in conjunction with the County to establish Memoranda of Understanding (MOUs) with departments and agencies engaged in response and recovery activities to share information in a standardized database. This will establish a framework for cataloguing recovery data and better quantifying vulnerability for mitigation purposes. This could be accomplished through GIS programs.

1. **Goal(s) Addressed** = Promote A Sustainable Economy; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget
4. **Lead Jurisdiction(s)** = PC DEM, Gig Harbor (Public Works, Fire) PC PWU, PC GIS, PC Sheriff, American Red Cross and Tacoma Pierce Health Department
5. **Timeline** = Short-term
6. **Benefit** = City of Gig Harbor and Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Specific Recovery Plans

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will develop a comprehensive Disaster Recovery Plan. This will be a pre-event plan for post-disaster recovery and reconstruction, composed of policies, plans, actions and responsibilities. It will include an element of business resumption and long-term economic sustainability. There will be an emphasis on the transition of recovery to mitigation and the synergy of these two phases of emergency management.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = PDM and Economic Development Administration (US Chamber of Commerce) grants. Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Chamber of Commerce
5. **Timeline** = Long-term
6. **Benefit** = City of Gig Harbor and Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.



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## Encourage and Support LIDAR Mapping Project

**Hazards:** E, L, T, V, F

The County will incorporate the findings of the LIDAR (Light Detection and Ranging) mapping project into its vulnerability assessment. The City of Gig Harbor will support the Puget Sound LIDAR Consortium's mapping of the Puget Sound region. LIDAR improves the accuracy of topographical maps dramatically and in other areas has revealed the existence of previously unknown fault scarps on the Kitsap Peninsula. LIDAR mapping can effectively reveal the existence of similar hazards in Pierce County, or conversely, help confirm that they are not present, improving the jurisdiction's ability to assess geologic hazards for land use management and emergency management purposes.

1. **Goal(s) Addressed** = N/A – Goals addressed are contingent upon the area-specific mitigation measures resulting from this priority.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = Pierce County DEM, PC IS (GIS), LIDAR Consortium and City of Gig Harbor
5. **Timeline** = Long-Term
6. **Benefit** = County wide and Regional Partners
7. **Life of Measure** = Contingent upon best available science and technology
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Preventative Maintenance: Warning and Response Equipment

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will develop a plan to ensure the proper functioning of disaster warning and response equipment used, owned, or stored by the City. This will ensure that the necessary resources used in response activities are properly functioning in the event that they are needed.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor and Regional Partners (Public Works and Utilities)
5. **Timeline** = Short-term
6. **Benefit** = City of Gig Harbor and other Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Essential Records Protection

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will ensure that all essential records are protected and/or provided with safe back-up. This will be accomplished by developing an essential records protection schedule and a records disaster prevention, response, and recovery procedures.

1. **Goal(s) Addressed** = Promote A Sustainable Economy; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-term
6. **Benefit** = City of Gig Harbor, Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop an All-Hazard Mitigation Plan

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will expand this Natural Hazard Mitigation Plan into an All-Hazard Mitigation Plan. This plan provides a template for mitigating disasters on both a jurisdiction-wide level and a critical facility level. It was designed to consolidate a great deal of information into easy to understand profiles of hazards and critical facilities. Combining it with man made hazards and terrorism threat assessments will result in a more complete analysis of the City's vulnerabilities and mitigation strategies. In doing so, duplications of mitigation measures can be reduced and a more comprehensive prioritization of projects be achieved. Consolidating this information into one document will allow decision makers and those involved in emergency management to better coordinate resources and eliminate duplication in efforts to reduce vulnerabilities and respond to and recover from disasters. The all-hazard mitigation plan represents an essential goal in the efforts at all levels of government to achieve a more coordinated system that is able to adapt to the changing threats and vulnerabilities of our time.

1. **Goal(s) Addressed** = N/A – Goals addressed are contingent upon the mitigation measures resulting from this priority.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-Term
6. **Benefit** = City of Gig Harbor and Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Maintain Emergency Resources

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will maintain the resources needed to respond to emergency situations. This includes the following:

- Continue implementation of the Gig Harbor Comprehensive Emergency Management Plan so that the staff, equipment, communication tools, technology, materials, and contractors needed to respond to emergency events effectively are prepared.
  - Continue to update emergency evaluation/hot spot areas.
  - Continue to coordinate with other local, state, and federal agencies to review and update emergency response efforts.
1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources.
  2. **Cost of Measure** = TBD
  3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
  4. **Lead Jurisdiction(s)** = City of Gig Harbor
  5. **Timeline** = Ongoing
  6. **Benefit** = City of Gig Harbor, Regional Partners
  7. **Life of Measure** = TBD
  8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Coordinate Hazard Mitigation Planning

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will maintain the Hazard Mitigation Planning Team (HMPT) as a body to function as a means of coordinating, evaluating and updating mitigation planning efforts among departments with mitigation capabilities. This will ensure efficient use of resources and a more cooperative approach to making a disaster resistant community. The HMPT will address mitigation issues that might be included in the normal budgetary process. Converging yearly with the normal budgetary processes it will consider specific mitigation issues.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor and the HMPT
5. **Timeline** = Ongoing
6. **Benefit** = Community wide and Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Assist in Supplying NOAA Weather Radios to the Community

**Hazards:** E, T, V, F, SW<sup>1</sup>

In Pierce County, NOAA Weather Radios are now being used as the main delivery mechanisms for hazard warning information to the public. The hazard warning information can range from severe storms to volcanic lahars. This measure would develop a program to assist in distributing NOAA Weather Radios to the citizens of Gig Harbor.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = \$50 per radio
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor and Gig Harbor Fire
5. **Timeline** = Long-term
6. **Benefit** = City and citizens, first responders, regional partners
7. **Life of Measure** = 10 years
8. **Community Reaction** = the proposal would be endorsed by the entire community.

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## Complete a Vulnerable Population Assessment

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Gig Harbor will work with Pierce County and other regional partners to identify locations of vulnerable populations, i.e., elderly, disabled and other populations. Gig Harbor will maintain a list of residents with special needs so that these vulnerabilities may be addressed and potentially reduced in disaster situations.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and Residents, Special Populations, Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Continue Development of Long-Term Partnerships

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig Harbor has developed crucial and supportive partnerships with many neighboring jurisdictions, including Pierce County DEM, Pierce County PALS, Pierce County Public Works and Utilities, Gig Harbor Fire and Medic One, Key Peninsula Fire District, Peninsula School District and many others. The measure would involve a continued development of these partnerships and would provide a more sustainable and effective approach to mitigation planning.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Coordinate Mitigation Measures with Neighboring Jurisdictions

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The measure would attempt to coordinate mitigation measures with other neighboring jurisdictions which would allow for a more sustainable and effective approach to mitigation planning in Pierce County. As a member of the Pierce County Hazard Mitigation Forum (PCHMF), measures put forth in the Region 5 Hazard Mitigation Plan.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters; Promote A Sustainable Economy.
2. **Cost of Measure** = Minimal
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents, businesses, schools, regional partners
7. **Life of Measure** = Varies
8. **Community Reaction** = the proposal would be endorsed by the entire community.

## Develop Specific Disaster Response and Recovery Procedures for Local Senior Center

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will develop response and recovery procedures that speak to the specific needs of the population served by the local Senior Center.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and citizens, senior citizens, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Evacuation Plan Development for City

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will work with Pierce County and local Police to develop evacuation plans for neighborhoods in the City. The increasing population has led to strains on the various transportation routes. Should any portion of this area need evacuating, the process will pose many challenges. With proper planning and education, many of the challenges can be avoided.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor, PCDEM and Gig Harbor Police
5. **Timeline** = Short-term
6. **Benefit** = City and residents, businesses, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Form an Emergency Management Team (EMT)

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

City of Gig Harbor will establish an Emergency Management Team (EMT). The EMT will function as a means of coordinating, evaluating and updating mitigation planning efforts. This will ensure efficient use of resources and a more cooperative approach to making a disaster resistant City. The EMT will meet annually to converge with the normal budgetary process. This is addressed in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Minimal
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents; community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Participate in Disaster Response Training

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will build on its existing emergency/disaster response training and will coordinate drills and trainings with other local jurisdictions. This will help ensure that first responders, government employees, teachers and students know what to do and how to act during times of emergency/disaster.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, first responders, schools and businesses, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Establish Alert Systems for Vulnerable Populations

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Establish special alert systems or a means to notify vulnerable populations in times of danger.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Time and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and vulnerable populations, citizens and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Establish Backup Communications Center

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

In the event of damage to the primary communications center for the City, Gig Harbor would like to develop a secondary, backup communications center.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Promote a Sustainable Economy.
2. **Cost of Measure** = Time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budgets and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-Term
6. **Benefit** = City and citizens, first responders and regional partners
7. **Life of Measure** = 10 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.



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## Establish Mobile Communication System

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Establish mobile communication system for the City of Gig Harbor.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote a Sustainable Economy.
2. **Cost of Measure** = Time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budgets and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-Term
6. **Benefit** = City and citizens, first responders and regional partners
7. **Life of Measure** = 10 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Maintain Emergency Operations Center with 24-hour Capability

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig Harbor has an Emergency Operations Center in coordination with other emergency services in the City. With staffing and training it would be able to maintain operations 24-7 in the event of an emergency or disaster.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-term
6. **Benefit** = City and residents, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Provide Equipment/Personnel for Storm and Debris Cleanup

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

After any major wind storm or severe storm of any kind, there is always an abundance of debris left behind. The City would like to develop a good program and purchase specific equipment to aid in the cleanup process after an event. This would also be useful in the event of flood debris, landslides and volcanic ash.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Protect and Restore the Natural Environment.
2. **Cost of Measure** = Time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budgets and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Public Works
5. **Timeline** = Long-Term
6. **Benefit** = City and citizens, first responders and regional partners
7. **Life of Measure** = 20 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Review/Update the Local Emergency Operations Plan

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City has an Emergency Operations Plan but it needs to be reviewed and probably will need to be updated. It is our intention to do this at the earliest possible date.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, first responders, citizens and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be endorsed by the entire community.

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## Encourage Voluntary Water Conservation

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig Harbor will educate and encourage water conservation in the City in an effort to avoid drought and to be able to provide services in times of need.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, first responders, citizens and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be endorsed by the entire community.

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## Establish Standards for Safe Residential Use of Gray Water

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will encourage the use of “gray water” in times of drought and water shortage situations and will work to produce information to distribute to the public on this subject.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Short-term
6. **Benefit** = City and residents, first responders, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Evaluate Water Quantity and Quality from New Sources

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig Harbor will evaluate new sources of potential water supply for the City and its citizens that are safe, plentiful and reasonable to use.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Long-term
6. **Benefit** = City and residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Improve Water Conservation and Conveyance Efficiencies

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will develop a plan to improve water conservation and improve the efficiency of distribution.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Ongoing
6. **Benefit** = City and citizens, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Study Effectiveness of Conservation Measures

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will perform a study to determine the effectiveness of existing conservation measures and review potential conservation measures that may be implemented in the future.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Ongoing
6. **Benefit** = City and citizens, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Support Legislation Requiring Water Agencies to Develop Contingency Plans

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City believes it is imperative that water providers should have legal requirements to provide service to customers under disaster situations by having comprehensive continuity of business plans in place.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Short-term
6. **Benefit** = City and citizens, community, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Support Legislation to Protect and Manage Ground Water

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will continue to support legislation to protect and manage ground water.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Protect and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Short-term
6. **Benefit** = City and residents, community, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Support Legislation to Protect In-Stream Flows

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will continue to support legislation to protect in-stream flows.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Protect and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Support Local Development of Conservation Programs

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City supports local development of water conservation programs throughout the community and with local water purveyors.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Protect and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, community, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Work with Community-Based Organizations to Promote Public Participation in Conservation Programs

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will work with various community-based organizations to promote the public participation in water and other types of conservation programs that protect natural resources.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Ongoing
6. **Benefit** = City and citizens, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Criteria “Triggers” for Drought-Related Actions

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will be proactive in working with local water purveyors to determine those “triggers” for drought conditions that should raise awareness and determine corrective measures and response actions.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Short-term
6. **Benefit** = City and residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Establish New Data Collection Networks

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City would like to establish new data collection networks for specific information on which to base decisions going forward.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.



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## Monitor Vulnerable Public Water Suppliers and Sources

**Hazards:** D, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will regularly monitor vulnerable public water supplies and sources.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop a Seismic Evaluation Program: City Facilities and Shelters

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will develop and promote a seismic evaluation program for all critical city facilities and for City shelters to ensure availability in times of disaster.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Buildings
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents and community, regional partners
7. **Life of Measure** = 5 years per study
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop and Encourage Earthquake Home Retrofit Program

**Hazards:** E, SW<sup>1</sup>, MM<sup>2</sup>

The County Buildings Department has a plan set adopted from Seattle to guide homeowners in the seismic retrofit of their homes. This program, created for homes constructed under older building codes when tie-downs were not required, is available to any homeowner who wants to connect his or her house to the foundation. The City Building Department will make information available concerning the program and regarding engineers and contractors that will evaluate and/or provide retrofit services for residents of older homes in the City. The City will also schedule a workshop on the retrofit program for the public.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Buildings
5. **Timeline** = Short term
6. **Benefit** = City and residents, first responders, community and regional partners
7. **Life of Measure** = 25 years for retrofit structures
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Debris Disposal Sites

**Hazards:** E, L, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Many types of disasters create large quantities of debris that must be properly disposed of. Earthquakes and floods can leave behind entire structures that are destroyed and must be demolished and removed. For a large disaster much of this debris will need to be moved to temporary collection sites prior to final disposal. The City will identify one or more temporary locations for such debris removal.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents, businesses, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Encourage Emergency Supply Kits for Homes, Schools and Businesses

**Hazards:** E, SW<sup>1</sup>, MM<sup>2</sup>

The City supports and promotes emergency supply kits for all residents, schools and businesses in the City and offers information on how to create a kit and other preparedness information.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, schools and businesses, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Encourage Seismic Retrofit of City Structures at Risk

**Hazards:** E, SW<sup>1</sup>, MM<sup>2</sup>

The City would like to perform a seismic study of city owned facilities and determine those that are at risk for earthquake damage. Once the study is completed, the City would like to seek funding to seismically retrofit at risk structures and bring them up to current codes.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = Cost of study, engineering and construction
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Buildings
5. **Timeline** = Long-term
6. **Benefit** = City and staff, residents and community, regional partners
7. **Life of Measure** = 5 years for study, 50 years for retrofit
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Perform Earthquake Retrofit on Free-Standing Water Tanks and Reservoirs

**Hazards:** E, SW<sup>1</sup>, MM<sup>2</sup>

Free-standing water tanks and reservoirs do not perform well in earthquakes. They will benefit a great deal from earthquake clips and specific engineered solutions to keep them in place during times of severe ground movement. The City would like to seek funding to seismically retrofit existing water tanks and reservoirs that are at risk.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Water Division
5. **Timeline** = Long-term
6. **Benefit** = City and staff, residents and community, first responders and regional partners
7. **Life of Measure** = 25 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Flood Control and Response with Local Cities and Towns

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig Harbor will coordinate and work with other local jurisdictions to be proactive regarding flood control and response.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, community and residents, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Surface Water Reduction: Absorbent Building Material

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

The City will assess the long-term cost-benefit of standard use of absorbent building material in place of traditional concrete for sidewalks, parking lots, etc. For example, Perco-Crete can absorb at least 13 inches of water per hour—up to 18 percent of its mass—before letting water pass through.<sup>3</sup> Perco-Crete also differs from porous concrete because water passes through Perco-Crete only after saturating it. The Cities of Olympia and Everett have tested this product.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Buildings
5. **Timeline** = Long-term
6. **Benefit** = City and staff, residents, contractors, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Surface Water Reduction: Control Standards

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

The City will adopt stricter stormwater control standards for new developments. This will help reduce peak flow impacts commonly associated with increased impervious cover.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Surface Water Reduction: Financial Incentives

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

The City will offer financial incentives in the form of stormwater utility fee credits to businesses that voluntarily reduce their stormwater impacts. This will help to reduce peak flow impacts commonly associated with increased impervious cover.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents and community, businesses, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Surface Water Reduction: Low Impact Developments

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

The City will develop and implement Low-Impact Development Standards, and will encourage Low-Impact Development through model projects. This will help to reduce peak flow impacts commonly associated with increased impervious cover.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents, community, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Sustain Transportation Routes: Road and Bridge Mitigation

**Hazards:** E, L, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will adopt construction guidelines which will reduce the potential failure of key bridges and transportation routes. Projects will follow a prioritization of high risk routes or features for replacement or retrofit. This will focus on long-term closure of key bridges and transportation routes due to flooding.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-term
6. **Benefit** = City and residents, community, first responders, regional partners
7. **Life of Measure** = 25 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Establish Multi-Jurisdictional Partnerships to Reduce Stormwater Runoff

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

Working together with other local jurisdictions, the City can establish partnerships and cooperation to adopt regulations and reduce stormwater runoff in the community.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-term
6. **Benefit** = City and staff, residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Discourage Construction in Landslide Areas

**Hazards:** E, L, SW<sup>1</sup>, MM<sup>2</sup>

The City will conduct a review, with the intent to further discourage community development in areas of known landslide hazards, of the City's land use regulations.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor - Buildings/Council
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Encourage Landslide Legislation and Policies that Support Effective Landslide Hazard Mitigation

**Hazards:** E, L, SW<sup>1</sup>, MM<sup>2</sup>

The City will encourage landslide legislation on both the local and state levels and promote policies that support effective landslide hazard mitigation.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents, community, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.



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## Slope Stability Project

**Hazards:** E, L, SW<sup>1</sup>, MM<sup>2</sup>

The City will encourage slope stability projects to prevent erosion and landslides. A key component is to utilize trees and shrubs on slopes to assist in anchoring the slope surfaces to the underlying soils. Gig Harbor will encourage slope stability utilizing tree and shrub planting.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Protect and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Hazard Avoidance through Appropriate Land-Use Practices

**Hazards:** E, L, T, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig harbor has in the past and continues to promote specific land-use practices to avoid hazards and building in hazardous areas.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and residents, first responders, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Recovery Plan for Power Failures in the City

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

As part of overall Operational Planning, develop recovery plans for the aftermath of a major area-wide power failure.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents, community, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Encourage and Support Pre-Planning for Area Shelters

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Working with regional partners and Pierce County DEM, plan for and support local area shelters to be opened on short notice in the event of a disaster requiring any kind of evacuation or relocation for residents.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Pierce County DEM
5. **Timeline** = Short-term
6. **Benefit** = City and residents, community, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Pre-Arrange for Removal of Heavy Snow Loads from Roofs in Danger of Collapse

**Hazards:** L, SW<sup>1</sup>, MM<sup>2</sup>

Western Washington does not normally get heavy snow on an annual basis, but older buildings are often not able to withstand heavy snow loads on the roof when the occasional storm hits. It is prudent to pre-plan for removal of heavy snow from city facilities, and also to know of contractors in the event residents, marinas, etc. need assistance.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and citizens, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Purchase and Install Backup Power Generators for Key City Facilities

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Almost any disaster can cause power failures and shut down business if a generator is not available. The City would intend to purchase and install power generators for key city facilities to remain operational in times of power failures.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, residents, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Support Buried Power Line Programs

**Hazards:** E, L, V, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City of Gig Harbor supports buried power lines to eliminate some of the potential power failures during times of high wind, slides, and other severe situations. Although it is expensive to bury lines, it is often offset by the stability and reliability of power. Most power companies have programs to encourage buried lines in new areas.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, residents, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Adopt "Firewise" Communities Planning and Development and Hold Workshops on "Firewise" Program

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City would like to obtain materials on the "Firewise" Community planning program and initiate a program in the community for employees and citizens.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters; Promote and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Mutual Aid and Memorandums of Understanding (MOU's) with Surrounding Jurisdictions

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Develop and maintain Mutual Aid agreements and MOU's with surrounding jurisdictions and other outside agencies that could be of help in times of disaster.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Enforce Burn Bans and Other Burning Restrictions in the Community

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City has the authority and will continue to enforce burn bans and discourage burning under dry conditions that could prove hazardous or dangerous.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Gig Harbor Fire District
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, first responders, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Evaluate Access and Egress Issues, Gates, Bridges and Turnarounds

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City has an ongoing program of evaluating new construction to provide ample space for emergency vehicles to turn around, gain access and egress from a community and clear necessary gates, bridges and overpasses. This is important not only for existing infrastructure but particularly in new construction.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Gig Harbor Fire District
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, first responders, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Pre-Determine Level of Fire Suppression Needed and Pre-Plan for Areas of Highest Hazard or Potential

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will pre-determine the level of fire suppression that will likely be needed for a given area as well as pre-planning for areas of highest hazard.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Gig Harbor Fire District
5. **Timeline** = Short-term
6. **Benefit** = City and staff, first responders, residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Program to Reduce Ignitability of Structures and Plans to Remove Dead Vegetation and Potential Fuels in Hazard Zones

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

Good outdoor housekeeping is imperative in areas where wildland fire can get started. The City will continue to look at ways to reduce potential fuels and make city infrastructure more fire resistant.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Gig Harbor Fire District
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, first responders, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Understand Local Activation Procedures for Special Task Forces

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will investigate and determine procedures for activation of the special task forces that fight wildland fires and train appropriate personnel on activation procedures.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Pierce County DEM
5. **Timeline** = Short-term
6. **Benefit** = City and residents, first responders, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Work with the Insurance Industry to Provide Financial Incentives to Homeowner's with Maintained Defensible Space

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

When dealing with wildland/urban interface fires, defensible space for homes and the City facilities is critical. While many homes located in wooded areas have a maintained defensible space around the perimeter of the home the City would like to see even more of that done. In order to facilitate this, the City proposes to work with area insurance companies to gain incentives for those citizens who take the time and trouble to protect their properties from wildland fires.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and residents, first responders, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Backup City Files and Records and Store in Alternate Location

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

In the event of any disaster situation, it is imperative that the City be able to recover important records and documentation in order to maintain continuity of government. In order to do this the City will first require regular backing up of files for all departments and second designate an off site location for the storage of departments' back up files.

1. **Goal(s) Addressed** = Ensure Continuity of Operations.
2. **Cost of Measure** = Cost of duplication, transportation and storage fees
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.



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## Develop/Maintain Hazardous Materials Program

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Any situation can be made worse by the presence of hazardous materials. It is imperative the City know critical facilities that contain hazardous materials, inventories of what those materials are and information on how to deal with them in various situations. Part of this program will be to maintain a presence on the Local Emergency Planning Committee (LEPC), and routinely access the Pierce County Portal to identify those facilities with large enough quantities of hazardous materials to adversely impact Gig Harbor.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Protect and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor and Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and citizens, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop and Maintain Security at Water Plants

**Hazards:** MM<sup>2</sup>

This measure would develop and maintain security at important water facilities to prevent or limit acts of terrorism at those locations. It is important to ensure that access to water resources that serve the community are limited.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Time and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and citizens, regional partners
7. **Life of Measure** = 5-10 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Support Community HAZMAT Agreements and Regional HAZMAT Teams

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will encourage communities to join in HAZMAT Regional Agreements and to support local and regional HAZMAT teams for response and recovery efforts.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Time and Materials, special equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Ongoing
6. **Benefit** = City and staff, community and residents, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Enhance Response Plans for Biological/Chemical Terrorism

**Hazards:** MM<sup>2</sup>

The City will work to enhance existing response plans and support those agencies that respond to biological/chemical acts of terrorism. This will also strengthen response and recovery efforts in accidental spills and other types of chemical issues.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Install Bulletproof Court and Magistrate Benches

### Hazards: MM<sup>2</sup>

The City would encourage the installation of bulletproof court and magistrate benches to protect the administrators of the judicial system in Gig Harbor from acts of violence or terrorism.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Long-term
6. **Benefit** = City and staff, judicial system, community and regional partners
7. **Life of Measure** = 5-10 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Place Law Enforcement Officers in Schools

### Hazards: MM<sup>2</sup>

In the aftermath of Columbine and other school related shootings and violence the City of Gig Harbor feels it is necessary to increase school security. One method of doing this that the City would support is the placing of law enforcement officers in the schools. This should serve as a security presence and a deterrent to those thinking about committing violent acts or terrorism in schools.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Staff time and officer time
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Police and School District
5. **Timeline** = Long-term
6. **Benefit** = City and residents, school district and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Provide Protective Systems or Equipment for Cyber or Physical Risks

**Hazards:** E, SW<sup>1</sup>, MM<sup>2</sup>

The City will provide protective systems and special equipment to prevent cyber or physical attacks on City computer systems.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = Time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = 10 years for special equipment
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Redundancy/Duplication of Essential Personnel, Critical Systems, Equipment, Information, Operations and Materials

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City recognizes the need for cross-training, backup of critical records and redundancy in critical equipment and hopes to put a program in place to cover these needs.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = Staff time, materials and equipment
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Review Security of Critical and Potential Target Facilities

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will review security measures to ensure that all critical facilities and those that could be potential targets for terrorism or other types of criminal activities are secure and have proper protective equipment to prevent tampering or break in.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Update All Anti-Virus Software

**Hazards:** MM<sup>2</sup>

The City will support and encourage updating of all anti-virus software on City computer systems and those systems that interface with City computer systems.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = Software costs and labor
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Public Education Mitigation Measures

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### Establish "Good Neighbor" Programs for Winter Storms and Severe Weather

**Hazards:** E, L, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Educate homeowners on the necessity of knowing your neighbors and knowing who may need assistance during winter cold and storms. As part of this encourage neighbors to check on each other during these times of severe cold and storms; especially vulnerable populations and those who may become isolated.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
  2. **Cost of Measure** = TBD
  3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
  4. **Lead Jurisdiction(s)** = City of Gig Harbor and PC DEM
  5. **Timeline** = Short-term
  6. **Benefit** = City and staff, residents, community and regional partners
  7. **Life of Measure** = Perpetual
  8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.
- 

### Educate Local Community Groups on Natural Hazards

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The measure builds on an existing foundation of presentations on natural hazards to schools and at local annual community events. The goal is to expand this to elderly groups, business groups, church groups, Boy Scouts and others.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and citizens, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be endorsed by the entire community.

---

## Comprehensive Public Education Campaigns: Post Disaster

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Post disaster recovery plans include actions to be taken immediately after a disaster (within 24 hours), mid-term and long term. For example, following a flood, measures need to be taken to avoid the growth of toxic molds. The City will incorporate post-disaster public education campaigns into its disaster recovery plan. These campaigns will speak specifically to the previously occurring disaster, and will focus on at-risk and affected areas. These campaigns will work in conjunction with the FEMA post-disaster public education efforts to ensure that local needs and issues are addressed.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and citizens, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Provide PC NET Training

**Hazards:** E, T, V, F, SW<sup>1</sup>, MM<sup>2</sup>

City of Gig Harbor will continue to support Pierce County's PC NET program in the City. PC NET is a neighborhood-oriented approach to emergency preparedness. Based on the belief that the most effective way to protect neighborhoods and to prepare for a major disaster must be locally based, it organizes neighborhoods into a variety of disaster response teams, each with a one-page checklist outlining their tasks. No special skills or equipment are needed and only a minimal time commitment is required. Individuals are trained to mutually assist each other to render aid, save lives and protect property. It reinforces 72 hours of individual preparedness.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = Time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = Pierce County DEM with City of Gig Harbor
5. **Timeline** = Ongoing
6. **Benefit** = City and citizens, first responders, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

## Public Education Campaign, All Hazards

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will continue to deliver public education campaigns many times throughout the year to audiences ranging from preschoolers to senior citizens, on topics from appropriate use of 911 to organizing communities for disaster response (PCNET). In general these programs focus on preparing citizens to prepare for and respond to disasters. Such programs are critical to reminding the public of the natural hazards in and around Gig Harbor, and of the necessity of having on hand the supplies and materials to survive independently for a minimum of 72 hours. These programs will be continued and expanded.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
  2. **Cost of Measure** = Time and materials
  3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
  4. **Lead Jurisdiction(s)** = City of Gig Harbor with PC DEM and Regional Partners
  5. **Timeline** = Ongoing
  6. **Benefit** = City and citizens, community and business, regional partners
  7. **Life of Measure** = Perpetual
  8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.
- 

## Develop Public Education for Severe Storms and Wind Storms

**Hazards:** F, SW<sup>1</sup>, MM<sup>2</sup>

The windstorm of December 2006 was a wake up call for many people in the Peninsula area. As a result the City of Gig Harbor will develop and distribute specific information for the public regarding the types and intensity of storms that are likely to affect the area.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.



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## Develop Public Education: Bus Driver Evacuation Training Program

**Hazards:** E, L, T, V, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

The City will develop a training program to provide a quick method of evacuating schools and transporting the children to safer locations. This program can also be further developed with public transportation and utilizing public buses in time of need to evacuate those people in harms way.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Peninsula School District and Pierce Transit
5. **Timeline** = Short-term
6. **Benefit** = City and staff, students, residents of community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Public Education for Volcanic Ashfall

**Hazards:** V, SW<sup>1</sup>, MM<sup>2</sup>

Because we live in a volcano zone, it is important to educate the public on what to expect and how to react in the event of a volcanic eruption such as experienced in the past. One of the most damaging aspects of a volcano is the volcanic ash or tephra that can blanket the entire area causing roofs to collapse, respiratory problems in people and animals, and equipment damage. The City will develop a program to inform the public about this specific hazard.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Develop Educational Materials Regarding Wildland Fire Safe Practices

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

In conjunction with local fire departments, Department of Natural Resources and other agencies, develop educational materials to teach citizens about the dangers of wildland fire and how to be proactive in defending their homes through fire safe landscaping practices and defensible space rules.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters; Protect and Restore the Natural Environment.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

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## Educate Developers and Builders on Wildfire Hazards and Safe Building Practices

**Hazards:** WUI, SW<sup>1</sup>, MM<sup>2</sup>

Provide educational materials to developers and construction companies building in the community regarding the wildfire threat and safe building practices to avoid this hazard.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Gig Harbor with Regional Partners
5. **Timeline** = Short-term
6. **Benefit** = City and staff, community and residents, regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

# Endnotes

<sup>1</sup> Hazard Codes:

Where necessary, the specific hazards addressed are noted as follows:

<b>A:</b>	Avalanche
<b>E:</b>	Earthquake
<b>F:</b>	Flood
<b>D:</b>	Drought
<b>T:</b>	Tsunami
<b>V(l or t):</b>	Volcanic (lahar or tephra-specific)
<b>SW:</b>	Severe Storm (wind-specific)
<b>L:</b>	Landslide
<b>WUI:</b>	Wildland/Urban Interface Fire
<b>MM:</b>	Manmade to include terrorism
<b>All:</b>	All hazards, including some man made. Where only natural hazards are addressed, it is noted.

<sup>2</sup> While this Plan is strictly a *Natural* hazard mitigation plan, where a measure stems from a facility recommendation (Infrastructure Section) that deals specifically with terrorism, the mitigation strategy will use that analysis. Other measures, such as those that deal with multi-hazard community preparedness or recovery planning, mitigate man-made hazards and are noted as such. It is not the intent of this notation to imply that all measures were analyzed with regards to man-made hazards or that measures were identified with that in mind. Rather, the notation merely illustrates the potential on this template for the inclusion of man-made hazard analysis.

<sup>3</sup> Quote from Frank Michiels, president of Michiels International, a Kenmore-based real estate and trading company that is marketing Perco-Crete in the United States. He said he wants the state Department of Ecology to recognize Perco-Crete as a stormwater management alternative. "It can be a much broader range of use, especially where aesthetics are more important," Michiels said, comparing Perco-Crete with porous concrete. "It has an ability to be engineered on a broader basis. You can tailor it to the needs of a local site." Paul Crane, a landscape architect who works for the city of Everett, said the city will monitor the parking lot to see how well Perco-Crete holds water and controls stormwater runoff. The University of Washington's School of Engineering is running it through materials standards tests.

## **SECTION 6**

# **REGION 5 HAZARD MITIGATION PLAN CITY OF GIG HARBOR INFRASTRUCTURE SECTION**

The Infrastructure Section is exempt from public disclosure pursuant to RCW 42.56.420. Request for public disclosure of this document or parts thereof should be referred immediately to the City of Gig Harbor's City Manager.

Distribution or changes to this document without the express written consent of the City of Gig Harbor's City Manager is prohibited.

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## Section 7

### Plan Maintenance Procedures Requirements

#### ***Monitoring, Evaluating, and Updating the Plan---Requirement §201.6(c)(4)(i):***

[The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

- Does the plan describe the method and schedule for **monitoring** the plan?
- Does the plan identify the party responsible for monitoring and include a schedule for reports, site visits, phone calls, and meetings?
- Does the plan describe the method and schedule for **evaluating** the plan?
- Does the plan identify the party responsible for evaluating and include the criteria used to evaluate the plan?
- Does the plan describe the method and schedule for **updating** the plan within the five-year cycle?

#### ***Incorporation into Existing Planning Mechanisms---Requirement §201.6(c)(4) (ii):***

[The plan **shall** include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate...

- Does the plan identify other local planning mechanisms available for incorporating the requirements of the mitigation plan?
- Does the plan include a process by which the local government will incorporate the requirements in other plans, when appropriate?

#### ***Continued Public Involvement---Requirement §201.6(c)(4) (iii):***

[The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.

- Does the plan explain how **continued public participation** will be obtained?
- Will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?

**SECTION 7**

**REGION 5 HAZARD MITIGATION PLAN  
CITY OF GIG HARBOR  
PLAN MAINTENANCE SECTION**

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The planning process undertaken in the last two years is just the foundation of breaking the disaster cycle by planning for a disaster resistant Gig Harbor and Pierce County Region 5. This Section details the formal process that will guarantee the Gig Harbor Hazard Mitigation Plan remains an active and relevant document. The Plan Maintenance Section includes a description of the documentation citing the Plan's formal adoption by the Gig Harbor City Council. The Section also describes: the method and schedule of monitoring, evaluating, and updating within a five-year cycle; the process for incorporating the mitigation strategy into existing mechanisms; and, the process for integrating public participation throughout the plan maintenance. The Section serves as a guide for implementation of the hazard mitigation strategy.

## **Plan Adoption**

Upon completion of the Gig Harbor Plan it will be submitted to Washington State Emergency Management Division (EMD) for a Pre-Adoption Review. The EMD has 30 days to then take action on the Plan and forward it to the Federal Emergency Management Agency (FEMA) Region X for review. This review, which is allowed 45 days by law, will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201.6. In completing this review there may be revisions requested by the EMD and/or FEMA. Revisions could include changes to background information, editorial comments, and the alteration of technical content. Pierce County Department of Emergency Management (PC DEM) will call a Planning Team Meeting to address any revisions needed and resubmit the changes.

The Gig Harbor City Council is responsible for the adoption of the Plan after the Pre-Adoption Review by the EMD and the FEMA Region X. Once the City adopts the Plan, the Emergency Management Director will be responsible for submitting it, with a copy of the resolution, to the State Hazard Mitigation Officer at the Washington State EMD. EMD will then take action on the Plan and forward it to the FEMA Region X for final approval. Upon approval by FEMA, the City will gain eligibility for both Hazard Mitigation Grant Program and Pre-Disaster Mitigation Grant Program funds.

Appendix A will list the dates and include a copy of the of Washington State EMD and FEMA approval of the Gig Harbor Plan. A copy of the local resolution will be attached there following State and FEMA approval. In future updates of the Plan Appendix C will be used to track changes and/or updates.

## **Maintenance Strategy**

The Gig Harbor maintenance strategy for implementation, monitoring, and evaluation provides a structure that encourages collaboration, information transference, and innovation. Through a multi-tiered implementation method, the City will provide its citizens a highly localized approach to loss reduction while serving their needs through coordinated policies and programs. The method's emphasis on all levels of participation promotes public involvement and adaptability to changing risks and vulnerabilities. Finally, it will provide a tangible link between citizens and the various levels of government service, ranging from



community action to the Department of Homeland Security. Through this strategy, the citizens of Gig Harbor will continue to break the disaster cycle and achieve a more disaster resistant community.

## Implementation

In order to ensure efficient and effective implementation, the City of Gig Harbor will make use of its capabilities, infrastructure, and dedicated population. The City will implement its mitigation strategy over the next five years primarily through its annual budget process and varying grant application processes. All programs and entities identified in the Capability Identification will serve as the implementing mechanisms within those processes.

The City administration will work in conjunction with those departments/agencies/entities identified in both the capability identification and under each mitigation measure to initiate the mitigation strategy. For example, any infrastructure-related measures will be implemented through the Critical Facilities and Capital Improvement Plans and the various departments involved through the normal budget schedule. Any regulatory and land use measures will continue to be implemented through collaboration with the planning department and its updates of the City's Comprehensive Plan. Other measures will be implemented through collaboration with the identified jurisdictions/departments listed under each measure's evaluation and through the mechanisms and funding sources identified in the Capability Identification Section.

These efforts fall under a broader implementation strategy that represents a county-wide effort. This strategy must be adaptable to change while being consistent in its delivery.

The mitigation implementation strategy is a three-tiered method that emphasizes localized needs and vulnerabilities while addressing the City's as well as multi-jurisdictional policies and programs. The first tier is implementation through individual citizen level—existing Public Education Programs already existing in the City (for example, at the individual level through the Safe Streets Program and at the neighborhood level through PC NET). The second is the City-Wide mechanism for implementation, in this case the City Administration. The third tier is a more external and multi-jurisdictional mechanism, the Hazard Mitigation Forum (HMF).

This method ensures that implementation speaks to unique vulnerabilities at the most local level, allows for coordination among and between levels, and promotes collaboration and innovation. Further, it provides a structured system of monitoring implementation. Finally, it is a method that can adapt to the changing vulnerabilities of the City, the region, and the times. These three levels and their means of implementation and collaboration are described below.

*Public Education Programs*

At the individual citizen level, Public Education Programs provide the City with a localized mechanism for implementation. This approach to mitigation can adapt to the varying vulnerabilities and needs within a growing City and region. Public Education Programs are also a means for involving the public in mitigation policy development. Departments conducting mitigation-related programs will provide the existing targeted neighborhoods and special-needs populations a catalogue of mitigation measures from which individuals can choose those that would be most effective in their communities. For example, currently Gig Harbor is working with PC DEM to begin forming Gig Harbor PC NETs to better prepare for, and respond to, disasters. PC NETs provide a coordinated group of communities through which individuals can implement home and neighborhood level mitigation measures.

*Jurisdiction-Wide: City Administration*

The City administration will be the body responsible for determining the direction of the Plan's implementation. The administration is responsible to the Mayor for the day-to-day operations of the City and its departments, the annual budget, and personnel. The City Administrator follows the general policy as set by the City Council. The Department is responsible for the City's selection, evaluation, and training of all city staff. It oversees, coordinates, and manages the activities of all city departments and offices in carrying out the requirements of ordinances, laws, rules and regulations.

Initially, the administration will be responsible for the overall review of the plan and will designate mitigation measures to those departments responsible for their implementation. This will be done with assistance from the Emergency Management Director, Planning Director, and Public Works Director. The administration will address the Plan on an annual basis. Recommendations will be made to coincide with the normal budgeting processes and provide an ample time period for review and adoption of any necessary changes to the implementation schedule.

Eventually, the administration may choose to cede this responsibility to an Emergency Management Committee. This committee would be composed of representatives from the departments identified in the Capability Identification Section as having a role in hazard mitigation. The Committee would ultimately provide a mechanism for coordination among those departments engaged in mitigation to ensure that a comprehensive and efficient approach be undertaken in the City's efforts at all-hazards mitigation.

*Hazard Mitigation Forum*

The PC Hazard Mitigation Forum (HMF) represents a broader and multi-jurisdictional approach to mitigation implementation. The PC HMF will be comprised of all representatives from unincorporated Pierce County and all jurisdictions, partially or wholly, within its borders, that have undertaken mitigation planning efforts. The PC HMF will serve as coordinating body for projects of a multi-jurisdictional nature and will provide a mechanism to share successes and increase the cooperation necessary to break the disaster cycle and achieve a disaster resistant Pierce County. Members of the PC HMF will include the following jurisdictions who have completed, or who have begun the process of completing, DMA 2000 compliant plans:

- City of Bonney Lake
- City of Puyallup
- City of Roy
- City of Sumner
- City of Tacoma
- City of University Place
- Puyallup Tribe of Indians
- Pierce County
- 48 Jurisdictions in this effort
- Pierce County Fire District #3
- Pierce County Fire District #14
- Pierce County Fire District #17
- Pierce County Fire District #22
- Firgrove Mutual Water Company
- Bethel School District
- Clover Park School District
- Sumner School District

Coordinated by the PC DEM, the PC HMF will meet annually in August and will be coordinated by PC DEM. The City of Gig Harbor will be an active participant in the PC HMF, and will be represented by the emergency management director. Only through this level of cooperation can these jurisdictions meet all of their mitigation goals.

**Plan Evaluation and Update**

It should be noted this planning process began in early 2006 following the then current CFR 201.6 Hazard Mitigation Planning Requirements. Based on new requirements in the Stafford Act put forth in the summer of 2008, the City of Gig Harbor will evaluate and update the plan to incorporate these new requirements as necessary. Furthermore, if there are additional Stafford Act changes affecting CFR 201.6 in the coming years, the planning process will incorporate those as well.

The Gig Harbor Plan will guide the city’s mitigation efforts for the foreseeable future. Gig Harbor representatives on the Planning Team have developed a method to ensure that regular review and update of the Plan occur within a five year cycle. The administration will coordinate any reviews noted above.

PC DEM will collaborate with the Emergency Management Director and the PC HMF to monitor and evaluate the mitigation strategy implementation. PC DEM will track this implementation through Pierce County’s GIS database. Findings will be presented and discussed at the annual meeting.

Gig Harbor Emergency Management will provide a report of the Plan's implementation to the administration at an annual meeting. This report will drive the meeting agendas and will include the following:

- Updates on implementation throughout the City;
- Updates on the PC HMF and mitigation activities undertaken by neighboring jurisdictions;
- Changes or anticipated changes in hazard risk and vulnerability at the City, county, regional, State, FEMA Region X, and Homeland Security levels;
- Problems encountered or success stories;
- Any technical or scientific advances that may alter, make easier, or create measures.

The administration and local experts will decide on updates to the plan's strategy based on the above information and a discussion of:

- The various resources available through budgetary means as well as any relevant grants;
- The current and expected political environment and public opinion;
- Meeting the mitigation goals with regards to changing conditions.

PC DEM will work with the emergency management director to review the Risk Assessment Section to determine if the current assessment should be updated or modified based on new information. This will be done during the regularly scheduled reviews of the Hazard Identification and Vulnerability Analysis and the Comprehensive Emergency Management Plan.

Additional reviews of this Plan will be required following disaster events and will not substitute for the annual meeting. Within ninety days following a significant disaster or an emergency event impacting the City, the emergency management director will provide an assessment that captures any "success stories" and/or "lessons learned." The assessment will detail direct and indirect damages to the city and its infrastructure, response and recovery costs, as part of the standard recovery procedures that use EMD Forms 129, 130, and 140. This process will help determine any new mitigation initiatives that should be incorporated into the Plan to avoid or reduce similar losses due to future hazard events. In this manner, recovery efforts and data will be used to analyze mitigation activities and spawn the development of new measures that better address any changed vulnerabilities or capabilities. Any updates to the Plan will be addressed at the annual meeting.

As per 44 CFR 201.6, the City of Gig Harbor must re-submit the Plan to the State and FEMA with any updates every five years. This process will be coordinated by PC DEM through the Pierce County Hazard Mitigation Forum. In 2013 and every five years following at the Hazard Mitigation Forum, the City of Gig Harbor will submit the updated plan to PC DEM. PC DEM's Mitigation and Recovery Program Manager will collect updates from the Region 5 Plan jurisdictions and submit them to the State EMD and FEMA.

## **Continued Public Involvement**

The City of Gig Harbor is dedicated to continued public involvement and education in review and updates of this Plan. Gig Harbor Emergency Management will retain copies of the Plan and will post it on the City's website.<sup>1</sup>

Prior to submitting the Plan to WA EMD and FEMA for the five year review, Gig Harbor Emergency Management will hold a public information and comment meeting. This meeting will provide the public a forum during which they can express their concerns, opinions, or ideas about the City's Plan. This meeting will be advertised in the Gig Harbor community through a variety of media, including the Peninsula Gateway and a posting on the City's website.

## Endnotes

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<sup>1</sup> <http://www.cityofgigharbor.net>

## Section 7

### Plan Maintenance Procedures Requirements

***Monitoring, Evaluating, and Updating the Plan---Requirement §201.6(c)(4)(i):***

[The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

- Does the plan describe the method and schedule for **monitoring** the plan?
- Does the plan identify the party responsible for monitoring and include a schedule for reports, site visits, phone calls, and meetings?
- Does the plan describe the method and schedule for **evaluating** the plan?
- Does the plan identify the party responsible for evaluating and include the criteria used to evaluate the plan?
- Does the plan describe the method and schedule for **updating** the plan within the five-year cycle?

***Incorporation into Existing Planning Mechanisms---Requirement §201.6(c)(4) (ii):***

[The plan **shall** include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate...

- Does the plan identify other local planning mechanisms available for incorporating the requirements of the mitigation plan?
- Does the plan include a process by which the local government will incorporate the requirements in other plans, when appropriate?

***Continued Public Involvement---Requirement §201.6(c)(4) (iii):***

[The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.

- Does the plan explain how **continued public participation** will be obtained?
- Will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?

**SECTION 7**

**REGION 5 HAZARD MITIGATION PLAN  
CITY OF GIG HARBOR  
PLAN MAINTENANCE SECTION**

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The planning process undertaken in the last two years is just the foundation of breaking the disaster cycle by planning for a disaster resistant Gig Harbor and Pierce County Region 5. This Section details the formal process that will guarantee the Gig Harbor Hazard Mitigation Plan remains an active and relevant document. The Plan Maintenance Section includes a description of the documentation citing the Plan's formal adoption by the Gig Harbor City Council. The Section also describes: the method and schedule of monitoring, evaluating, and updating within a five-year cycle; the process for incorporating the mitigation strategy into existing mechanisms; and, the process for integrating public participation throughout the plan maintenance. The Section serves as a guide for implementation of the hazard mitigation strategy.

## **Plan Adoption**

Upon completion of the Gig Harbor Plan it will be submitted to Washington State Emergency Management Division (EMD) for a Pre-Adoption Review. The EMD has 30 days to then take action on the Plan and forward it to the Federal Emergency Management Agency (FEMA) Region X for review. This review, which is allowed 45 days by law, will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201.6. In completing this review there may be revisions requested by the EMD and/or FEMA. Revisions could include changes to background information, editorial comments, and the alteration of technical content. Pierce County Department of Emergency Management (PC DEM) will call a Planning Team Meeting to address any revisions needed and resubmit the changes.

The Gig Harbor City Council is responsible for the adoption of the Plan after the Pre-Adoption Review by the EMD and the FEMA Region X. Once the City adopts the Plan, the Emergency Management Director will be responsible for submitting it, with a copy of the resolution, to the State Hazard Mitigation Officer at the Washington State EMD. EMD will then take action on the Plan and forward it to the FEMA Region X for final approval. Upon approval by FEMA, the City will gain eligibility for both Hazard Mitigation Grant Program and Pre-Disaster Mitigation Grant Program funds.

Appendix A will list the dates and include a copy of the of Washington State EMD and FEMA approval of the Gig Harbor Plan. A copy of the local resolution will be attached there following State and FEMA approval. In future updates of the Plan Appendix A will be used to track changes and/or updates.

## **Maintenance Strategy**

The Gig Harbor maintenance strategy for implementation, monitoring, and evaluation provides a structure that encourages collaboration, information transference, and innovation. Through a multi-tiered implementation method, the City will provide its citizens a highly localized approach to loss reduction while serving their needs through coordinated policies and programs. The method's emphasis on all levels of participation promotes public involvement and adaptability to changing risks and vulnerabilities. Finally, it will provide a tangible link between citizens and the various levels of government service, ranging from

community action to the Department of Homeland Security. Through this strategy, the citizens of Gig Harbor will continue to break the disaster cycle and achieve a more disaster resistant community.

## Implementation

In order to ensure efficient and effective implementation, the City of Gig Harbor will make use of its capabilities, infrastructure, and dedicated population. The City will implement its mitigation strategy over the next five years primarily through its annual budget process and varying grant application processes. All programs and entities identified in the Capability Identification will serve as the implementing mechanisms within those processes.

The City administration will work in conjunction with those departments/agencies/entities identified in both the capability identification and under each mitigation measure to initiate the mitigation strategy. For example, any infrastructure-related measures will be implemented through the capital facilities and capital improvement plans and the various departments involved through the normal budget schedule. Any regulatory and land use measures will continue to be implemented through collaboration with the planning department and its updates of the City's Comprehensive Plan. Other measures will be implemented through collaboration with the identified jurisdictions/departments listed under each measure's evaluation and through the mechanisms and funding sources identified in the Capability Identification Section.

These efforts fall under a broader implementation strategy that represents a county-wide effort. This strategy must be adaptable to change while being consistent in its delivery.

The mitigation implementation strategy is a three-tiered method that emphasizes localized needs and vulnerabilities while addressing the City's as well as multi-jurisdictional policies and programs. The first tier is implementation through individual citizen level—existing Public Education Programs already existing in the City (for example, at the individual level through the Public Safety Fair and at the neighborhood level through PC NET). The second is the City-Wide mechanism for implementation, in this case the City Administration. The third tier is a more external and multi-jurisdictional mechanism, the Hazard Mitigation Forum (HMF).

This method ensures that implementation speaks to unique vulnerabilities at the most local level, allows for coordination among and between levels, and promotes collaboration and innovation. Further, it provides a structured system of monitoring implementation. Finally, it is a method that can adapt to the changing vulnerabilities of the City, the region, and the times. These three levels and their means of implementation and collaboration are described below.

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