

Executive Summary

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Executive Summary

Five-Year Action Plan

The *Jefferson County – City of Port Townsend Hazard Mitigation Plan* (the Plan) is an **All-Hazard** Plan, and includes resources and information to assist county residents, public and private sector organizations, and others interested in participating in planning for natural hazards. The Plan provides a list of activities that may assist Jefferson County in reducing risk and preventing loss from future natural hazard events. The action items address multi-hazard issues, natural hazards from avalanche, drought, earthquake, fire, flood, landslide, severe storm, tsunami, and volcano, as well as man-made hazards that are significant to Jefferson County entities.

The Plan Organization:

The Plan contains a five-year plan matrix, background on the purpose and methodology used to develop the plan, a profile of Jefferson County, sections on the most threatening natural and man-made hazards that can occur within the County (avalanche, drought, earthquake, flood, landslide, severe local storm, tsunami, volcano, and wildfire, power outage, etc.), profiles and mitigation activities of special jurisdictions, mitigation issues with coordinating agencies and jurisdictions that impact Jefferson County, and the appendices. The sections are delineated as follows:

Executive Summary contains a summary of the plan and a five-year action plan matrix.

Section I contains the introduction and an overview of the planning and participation process.

Section II contains information regarding the most serious natural hazards within the State that can affect Jefferson County, and additional man-made hazards that are of concern to Jefferson County. *New this year is recognition of possible effects of predictable climate change.*

Section III contains multi-jurisdictional community profile information as well as information regarding multi-jurisdiction/multi-hazard mitigation measures and a listing of multi-jurisdictional mitigation strategies and projects suggested by stakeholders and citizens as part of the public process associated with the development of this plan.

Section IV contains jurisdiction-specific and special purpose district specific information as well as vulnerability assessment information for each jurisdiction and special purpose district that has participated in the hazard mitigation planning process.

Section V contains the mitigation strategies of each jurisdiction and special purpose district that has participated in the hazard mitigation planning process

Section VI contains the mitigation issues of coordinating agencies that impact Jefferson County's plan.

Section VII contains the various appendices to the plan. These include copies of the adoption resolutions, public participation, and the FEMA evaluation crosswalk.

The Plan Development Participants:

The Plan is the result of a collaborative effort among Jefferson County citizens, public agencies, the private sector, and regional and state organizations. Public participation played a key role in development of goals and action items. Interviews were conducted with stakeholders across the county, and public meetings were held to include Jefferson County residents in the process of developing the plan. Where possible, Hazard Mitigation planning was brought into workshops and classes hosted by stakeholders for related topics. A detailed recounting of the planning process is contained in Section I. New this year is the use of both Neighborhood Emergency Preparedness (NPREP) groups and an online capability for citizens to review the document and make comments.

The Plan Mission:

The primary mission of the Plan is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, the county's economy and environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the County towards building a safer community.

The secondary mission of the Plan is to provide the foundation for creating an "All Hazards Mitigation Plan" that effectively addresses issues of man-made hazards in addition to natural hazards.

The Plan Goals:

The Plan goals describe the overall direction that Jefferson County and Port Townsend agencies, organizations, special districts, private industry and citizens can take toward mitigating risk from natural hazards. The goals are the guiding principles from the broad direction of the mission statement to the specific recommendations of the action items.

- (1) Protect Life and Property
 - Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural hazards.
 - Improve hazard assessment information to make recommendations encouraging preventive measures for existing development in areas vulnerable to natural hazards
 - Enhance Jefferson County Neighborhood Emergency Response Teams to provide citizens from all areas of Jefferson County with the information and tools they need to help them, their families, and their neighbors in the hours and days immediately following an emergency or disaster event.
 - Encourage homeowners and businesses to purchase insurance coverage for damages caused by natural hazards.
 - Encourage homeowners and businesses to take preventative actions in areas that are especially vulnerable to natural hazards.

- (2) Public Awareness
 - Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.
 - Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.
 - Continue the current flood awareness programs conducted by various jurisdictions as part of the National Flood Insurance Program Community Rating System.
 - Create an earthquake awareness program conducted by various jurisdictions in which the vulnerability to earthquakes is high.
 - Enhance the awareness programs for Wildland – Urban Interface fire risks, particularly with Homeowners Associations in wildland settings.
- (3) Natural Systems
 - Balance watershed planning, natural resource planning, and land use planning with natural hazard mitigation to protect life, property, the economy, and the environment.
 - Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.
- (4) Partnerships and Implementation
 - Encourage leadership within private and public sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.
 - Strengthen inter-jurisdiction and inter-agency communication and coordination and partnering of jurisdictions and agencies within Jefferson County to foster the establishment and implementation of natural hazard mitigation strategies and/or projects designed to benefit multiple jurisdictions.
 - Develop a partnership with the local and regional newspapers to produce a series of in-depth articles on each natural hazard and both personal and public mitigation techniques.
 - Develop and strengthen coordination and cooperation with local business and industries that are particularly vulnerable to natural hazards in Jefferson County.
- (5) Emergency Services
 - Strengthen Emergency Management capabilities to prepare for, and to respond to disasters of all types.
 - Encourage the establishment of policies at the local level to help insure the prioritizing and implementation of mitigation strategies and/or projects designed to benefit critical/essential facilities, services, and infrastructure.
 - Where appropriate, coordinate and integrate natural hazard mitigation activities with existing local emergency operations plans.
 - Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.
 - Improve the interoperability capabilities among Emergency Services.
 - Improve the survivability of communications and disaster response effectiveness of Emergency Service entities.



Photo by Bob Hamlin

The Plan Is All About People.

The Five-Year Action Plan Matrix:

The *action items* are a listing of activities in which county and city agencies and jurisdictions and citizens can be engaged to reduce risk. **Each action item includes an estimate of the timeline for implementation.** *Short-term action items (ST)* are activities that may be implemented with existing resources and authorities within one to three years. *Long-term action items (LT)* may require new or additional resources or authorities, and may take between one and five years to implement. *Ongoing action items (OG)* are continuous activities such as the annual review and update of the mitigation plan, itself.

The action items are organized within the following matrix, which lists all of the multi-hazard and hazard-specific action items included in the mitigation plan. These action items are the culmination of the data collection, research and analysis, and public participation process leading up to this plan. The Action Plan Matrix organizes this information into a management tool to be used in implementing the actions. The matrix includes the following information for each action item:

- **Natural Hazard ID.** A unique identifier within the document that tells the type of action item (short-term or long-term), the type of hazard, and the action item number for that action in the plan.
- **Action Item.** A description of the action to be taken.
- **Champions.** The organizations or individuals who are taking the lead responsibility in making the action happen. This can be the public agency with regulatory responsibility to address natural hazards, or that is willing and able to oversee activity, implementation, monitoring, and evaluation. Champions may include local, county, regional public and private agencies, businesses or individuals that are capable of or willing to be responsible for implementing activities and programs.
- **Timeline.** Action items include both short-term and long-term activities. The time-line attempts to put a gross estimate of the time it will take to implement the action given the availability of resources needed. Some items will be an ongoing effort that effectively requires a lifestyle change or permanent allocation of resources, while other items may be events or programs with specific accomplishments by a specific time.
- **Plan Goals.** This cell of the matrix contains the item numbers of the plan goals from the previous page that this activity seeks to meet.
- **Action Item Lifecycle Stage.** Each activity that is not continuous has a life cycle that it goes through: action item concept, public input & planning, funding, execution of action item, adoption or implementation, maintenance, monitor and evaluate. This grid within the matrix provides a visual quick-reference to progress on a given activity. Life Cycle Stages include:
 - (1) **Action Item Concept** - Indicates a concrete idea or plan has been developed to take forward in the process.
 - (2) **Public Input & Planning** – Indicates that the process is at the stage where it is collecting public input and planning, if appropriate.
 - (3) **Funding** – Indicates that funds are being sought to implement the action as appropriate. This can be from budget, grants, donations, etc.
 - (4) **Execution of Action Item** – May be drafting of a report, adoption of policy resolutions, implementation of building projects, etc.
 - (5) **Adoption or Implement** – Adoption of resolutions to implement plans or approve projects.
 - (6) **Maintenance, Monitor, and Evaluate** - Review, evaluate and maintain the project or plan as defined by the project charter.

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Multi-Hazard Mitigation Action Items				
OG-MH-0*	Adopt and Participate in the Jefferson County – City of Port Townsend Hazard Mitigation Plan as official plan.	Jefferson County, City of Port Townsend, and all Special Districts	Ongoing – Participation in update – 2016; Adoption – after FEMA review.	4. Partnerships and Implementation 5. Emergency Services
OG-MH-1	Identify and pursue funding opportunities to develop and implement local and county mitigation activities.	Jefferson County, City of Port Townsend and all Special Districts.	Ongoing	4. Partnerships and Implementation
OG-MH-2	Identify, improve, and sustain collaborative programs focusing on the real estate and insurance industries, public and private sector organizations, and individuals to avoid activity that increases risk to natural hazards.	DEM, Economic Development Council	Ongoing	1. Protect Life & Property, 2. Public Awareness, 4. Partnerships and Implementation
OG-MH-3	Educate the citizenry in the role of the 1 st Responder through Citizen’s Police Academy.	Port Townsend Police and Jefferson County Sheriff’s Office	Ongoing	2. Public Awareness,
OG-MH-4*	Train personnel on how to react in a natural disaster.	PTPD, JCSO, JCFD1, JCPUD1	Ongoing	1. Protect Life & Property. 5. Emergency Services

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Multi-Hazard Mitigation Action Items</i>						
OG-MH-0	X	X	X	X		X
OG-MH-1	X	X	X	X		X
OG-MH-2	X	X	X	X		X
OG-MH-3	X	X	X	X		X
OG-MH-4*	X	X	X	X		X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Multi-Hazard Mitigation Action Items				
OG-MH-5	Educate employees regarding hazards & develop Emergency Response Plan	JCDEM, Port of Port Townsend, All School Districts.	Ongoing	1. Protect Life & Property, 4. Partnerships and Implementation 5. Emergency Services
OG-MH-6*	Regular Review of Capital Improvement Plan to include newly identified mitigation plans.	Port of Port Townsend	Annual – Latest revision 2015; Prioritization in January 2016.	1. Protect Life & Property, 5. Emergency Services
ST-MH-1*	Establish a formal role for the Jefferson County Natural Hazards Mitigation Advisory Committee to develop a sustainable process for implementing, monitoring, and evaluating countywide mitigation activities.	Hazard Mitigation Advisory Committee	Short-Term – Reconstitute for 2016 update.	4. Partnerships and Implementation
ST-MH-2	Integrate goals and action items from the Jefferson County Natural Hazard Mitigation Plan into existing regulatory documents and programs where appropriate.	Hazard Mitigation Advisory Committee	Ongoing	4. Partnerships and Implementation
ST-MH-3	Develop public and private partnerships to foster natural hazard mitigation program coordination in Jefferson County	DEM, DCD, Economic Development Council; Neighborhood Emergency Groups	On-going	4. Partnerships and Implementation

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Multi-Hazard Mitigation Action Items</i>						
OG-MH-5	X	X	X	X		
OG-MH-6*	X	X	X	X		X
ST-MH-1*	X	X		X		X
ST-MH-2	X	X		X		X
ST-MH-3	X	X		X		X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Multi-Hazard Mitigation Action Items				
ST-MH-4*	Improve facilities to survive earthquakes and storms better. Provide continuity of service.	Jefferson County Water Districts 1,2,3 Opted Out in 2009	Short-Term	1. Protect Life & Property, 4. Partnerships and Implementation
ST-MH-5*	Build new 911 Dispatch Center and new Emergency Operation Center	DEM, JeffCom	Completed 2005	1. Protect Life & Property, 4. Partnerships and Implementation 5. Emergency
ST-MH-6*	Develop inventories of at-risk buildings and infrastructure and prioritize mitigation projects.	DEM, DSD, DCD, and GIS	Short-Term – Updated for 2016	1. Protect Life & Property 4. Partnerships and Implementation
ST-MH-7*	Evaluate and integrate citizen ideas into planning and implementation efforts.	Jefferson County, Port Townsend and all participating Special Districts.	Short-Term	1. Protect Life & Property 4. Partnerships and Implementation
ST-MH-8*	Improve interoperability through coordinated use of communications & OPSCAN Program.	JeffCom 911, DEM, PTPD, JCSO, All Fire Districts	Completed 2007 - 2009	1. Protect Life & Property, 4. Partnerships and Implementation 5. Emergency
ST-MH-9*	Increase fuel supply for generators to 72 hours and improve storage accessibility.	Jefferson County Hospital District 2 dba Jefferson Healthcare	Target: 12/31/2016	1. Protect Life & Property,
ST-MH-10*	Plan for Emergency Specialty Services Building power generation & fuel supply.	Jefferson County Hospital District 2 dba Jefferson Healthcare	Target: 12/31/2016	1. Protect Life & Property,

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Multi-Hazard Mitigation Action Items</i>						
ST-MH-4*	X	X	X	X	X	X
ST-MH-5*	X	X	X	X	X	X
ST-MH-6*	X	X	X	X		
ST-MH-7*	X	X				
ST-MH-8*	X	X	X	X	X	X
ST-MH-9*	X	X	X	X		
ST-MH-10*	X	X	X	X		

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Multi-Hazard Mitigation Action Items (cont.)				
LT-MH-1	Strengthen emergency services preparedness and Long-Term response by linking emergency services with Multi-Hazard natural hazard mitigation programs, and enhancing public education on a regional scale.	DEM, DSD, DCD	Short-Term	5. Emergency Services
LT-MH-2	Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses and schools.	JCDEM	Long-Term	1. Protect Life & Property, 2. Public Awareness
LT-MH-3*	Use technical knowledge of natural ecosystems and events to link natural resource management and land use organizations to mitigation activities and technical assistance.	DCD, DSD	Long-Term	3. Natural Systems
LT-MH-4*	Expand SCADA Controls	JCPUD1	Short Term to Long Term	1. Protect Life & Property
LT-MH-5*	Backup Transformer for Substation	JCPUD1	Long Term	1. Protect Life & Property
LT-MH-6*	Underground conductor where possible.	JCPUD1	Long Term	1. Protect Life & Property
LT-MH-7*	Create and build Port Townsend Resiliency Center	Port Townsend, PTSD50, JCPHD2, YMCA	Short Term to Long Term	1. Protect Life & Property, 4. Partnerships and Implementation

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Multi-Hazard Mitigation Action Items (Cont.)</i>						
LT-MH-1	X	X		X		
LT-MH-2	X	X		X		
LT-MH-3	X	X		X		
LT-MH-4*	X	X	X	X		
LT-MH-5*	X	X	X	X		
LT-MH-6*	X	X	X	X		
LT-MH-7*	X	X				

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Avalanche Mitigation Action Items</i>				
ST-AV-1	None Identified			
LT-AV-1	None Identified			

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Avalanche Mitigation Action Items</i>						
ST-AV-1	N/A					
LT-AV-1	N/A					

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Drought Mitigation Action Items</i>				
ST-DR-1*	Coordinate drought policies with Port Townsend Paper.	Port Townsend Public Works	Active review during 2015 due to City water sources approaching critical levels due to drought.	1. Protect Life, Property and Local Economy

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Drought Mitigation Action Items</i>						
ST-DR-1*	X	X		X		X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Earthquake Mitigation Action Items</i>				
ST-EQ-1*	Integrate new earthquake mapping data and improve technical analysis of earthquake hazards.	USGS, JC-GIS	2 Years	1. Protect Life & Property, 4. Partnerships and Implementation
ST-EQ-2	Structural Bracing of Shelving;	JC Library	Short-term	1. Protect Life & Property,
ST-EQ-3*	Port Water System Upgrade Improvements; Improvements to Quilcene reservoir and distribution lines.	Port of Port Townsend	Short-term	1. Protect Life & Property,
ST-EQ-4	Build new Transit Facility to current earthquake codes.	Jefferson Transit Authority	Long-term Completed June 15, 2015	1. Protect Life & Property, 5. Emergency Services
ST-EQ-5	Purchase specialized equipment for water shortage emergencies	JCPUD1	Short-term	1. Protect Life & Property, 5. Emergency Services
ST-EQ-6	Secure Equipment to Floors & Walls	JCPUD1	Short-term	1. Protect Life & Property,
ST-EQ-7	Put automatic shut-off valves on all reservoirs.	JCPUD1	Short-term	1. Protect Life & Property,
ST-EQ-8*	Retrofit Fire Station for Earthquake Protection	JCFD2	Short-term – Not Done Yet.	1. Protect Life & Property
ST-EQ-8*	Retrofit Fire Station for Earthquake Protection	JCFD3	Complete	1. Protect Life & Property
ST-EQ-9	Seismically retrofit High School Gym; add seismic shut-off valves to propane tanks.	Chimacum School District	Short-term	1. Protect Life & Property
LT-EQ-1	Identify funding sources for structural and nonstructural retrofitting of structures that are identified as seismically vulnerable.	City & County Government	Ongoing – Long-term	1. Protect Life & Property, 2. Public Awareness 4. Partnerships and Implementation
LT-EQ-2*	Encourage purchases of earthquake hazard insurance.	All entities	Ongoing – Long Term	1. Protect Life & Property, 4. Partnerships and Implementation

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Earthquake Mitigation Action Items</i>						
ST-EQ-1	X					
ST-EQ-2	X	X				
ST-EQ-3*	X	X	X			
ST-EQ-4	X	X	X	X		
ST-EQ-5	X	X				
ST-EQ-6	X	X				
ST-EQ-7	X	X				
ST-EQ-8*	X	X	X	X	X	X
ST-EQ-9	X	X	X	X		
LT-EQ-1	X	X		X		X
LT-EQ-2*	X	X	X	X	X	X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Earthquake Mitigation Action Items				
LT-EQ-3	Encourage seismic strength evaluations of critical facilities in the County to identify vulnerabilities for mitigation.	City & County Government	Long-Term – started in 2007.	1. Protect Life & Property
LT-EQ-4	Encourage reduction of nonstructural and structural hazards in homes, schools, business, and government offices.	City & County Government	Long-Term	2. Public Awareness 4. Partnerships and Implementation
LT-EQ-5*	Seismically retrofit Port Townsend Historical City Hall.	PT Public Works	Long-Term – Completed 2005	1. Protect Life & Property
LT-EQ-6*	Replace Port Townsend Fire Station with seismically sound station.	PT Public Works & PTFD Construction Underway	Completed 2005	1. Protect Life & Property 5. Emergency Services
LT-EQ-7*	Move Port Townsend Police Station outside of liquefaction zone.	PT Government - Planning Underway	Completed 2009	1. Protect Life & Property 5. Emergency Services
LT-EQ-8*	Seismically Reinforce Port Townsend Library	Port Townsend	Long-term – 1st piece of funding via PDM 2007. Completed 2013.	1. Protect Life & Property
LT-EQ-9*	Seismically Reinforce Port Townsend Tunnel Lids	Port Townsend	Long-term – Funded via Budget, DR-1682, DR-1734, and DR-1817. Completed.	1. Protect Life & Property, 5. Emergency Services
LT-EQ-10*	Increase Emergency food supply for staff and patients.	JC Hospital Dist. 2	Completed.	1. Protect Life & Property,
LT-EQ-11*	Increase Emergency Water supply for staff and patients.	JC Hospital Dist. 2	Not Yet Completed.	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Earthquake Mitigation Action Items</i>						
LT-EQ-3	X					
LT-EQ-4	X					
LT-EQ-5*	X	X	X	X	X	X
LT-EQ-6*	X	X	X	X	X	X
LT-EQ-7*	X	X	X	X	X	X
LT-EQ-8*	X	X	X	X	X	X
LT-EQ-9*	X	X	X	X	X	X
LT-EQ-10*	X	X	X	X	X	X
LT-EQ-11*	X	X	X	X	X	X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Earthquake Mitigation Action Items</i>				
LT-EQ-12*	Marina redevelopment to new building codes; Upland development in Quilcene will meet new building codes.	Port of Port Townsend	Long-term; Planning is Short Term.	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services
LT-EQ-13*	Upgrade existing facilities to withstand earthquakes better.	Port Ludlow Drainage District (Opted Out – 2016)	Long-term	1. Protect Life & Property,
LT-EQ-14*	Nonstructural retrofitting of structures that are identified as seismically vulnerable.	School Districts: PTSD50; Brinnon SD46; Chimacum SD49; QVSD402	Ongoing – Long-term	1. Protect Life & Property,
LT-EQ-15*	Replace Station 1-1 with seismically sound station.	JCFD1	Completed - 2014	1. Protect Life & Property,
LT-EQ-16*	Continue hardening and upgrading infrastructure at tower sites.	JeffCom	Short Term	1. Protect Life & Property,
LT-EQ-17*	Expansion of the Library will allow the opportunity to seismically retrofit existing facilities.	Jefferson County Library District	Long-term – no immediate date.	1. Protect Life & Property
LT-EQ-18*	Enhance fire station 6-2 seismically.	Port of Port Townsend	New CIP being developed.	1. Protect Life & Property

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Earthquake Mitigation Action Items</i>						
LT-EQ-12	X	X				
LT-EQ-13*	X	X	X	X	X	X
LT-EQ-14	X	X				
LT-EQ-15*	X	X	X	X	X	X
LT-EQ-16*	X	X	X	X		
LT-EQ-17*	X					
LT-EQ-18*	X	X				

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Flood Mitigation Action Items				
ST-FL-1	Analyze each repetitive flood property within Jefferson County and identify feasible mitigation options.	DCD, DSD, Wa Dept. of Ecology, FEMA	Short-Term	1. Protect Life & Property 3. Natural Systems 4. Partnerships and Implementation
ST-FL-2	Recommend revisions to standards required for development occurring within the floodplain, where appropriate.	DCD, DSD	Short-Term	1. Protect Life & Property 3. Natural Systems
ST-FL-3*	Develop better flood warning systems.	JCDEM, DCD, DSD	Complete – Using AHAB system.	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services
LT-FL-1*	Enhance data and mapping for floodplain information within the County, and identify and map flood-prone areas outside of designated floodplains.	DSD	Long-Term – FEMA FIRMS update to be completed in 2016.	1. Protect Life & Property 3. Natural Systems 5. Emergency Services
LT-FL-2*	Encourage development of acquisition and management strategies to preserve open space for flood mitigation, fish habitat, and water quality in the floodplain.	City of Port Townsend, Jefferson County, Jefferson County Land Trust, and the Salmon Recovery Office	Long-Term	1. Protect Life & Property 3. Natural Systems 4. Partnerships and Implementation
LT-FL-3	Identify surface water drainage obstructions for all parts of unincorporated Jefferson County.	Jefferson County	Long-Term	1. Protect Life & Property 3. Natural Systems

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Flood Mitigation Action Items</i>						
ST-FL-1*	X	X		X		
ST-FL-2	X	X		X		
ST-FL-3*	X	X		X		
LT-FL-1*	X	X		X		
LT-FL-2*	X	X		X		
LT-FL-3	X	X		X		

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Flood Mitigation Action Items (cont.)</i>				
LT-FL-4*	Establish a framework to compile and coordinate surface water management plans and data throughout the county.	Jefferson County Public Works	Long-Term	3. Natural Systems 4. Partnerships and Implementation
LT-FL-5*	Move JCFD4 Fire Station 4-2 out of repetitive flood zone.	JCFD4	Long-Term – Completed - 2010	1. Protect Life & Property 3. Natural Systems 5. Emergency Services
LT-FL-6	Coordinate with Fish & Wildlife to develop Hoh River mitigation plan.	JC Public Works	Long-Term – Underway	1. Protect Life & Property 3. Natural Systems 4. Partnerships and Implementation
LT-FL-7*	Upgrade drainage conveyance to handle 100-year flood event.	Port Ludlow Drainage District (Opted Out – 2016)	Long-Term	1. Protect Life & Property 3. Natural Systems

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Flood Mitigation Action Items (cont.)</i>						
LT-FL-4	X					
LT-FL-5*	X	X	X	X	X	X
LT-FL-6	X	X		X		
LT-FL-7	X	X			N/A	

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Landslide Mitigation Action Items</i>				
ST-LS-1	Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas.	JC Public Works, DEM	Short-Term	<ol style="list-style-type: none"> 1. Protect Life & Property 2. Public Awareness 3. Natural Systems
ST-LS-2*	Identify safe evacuation routes in high-risk debris flow and landslide areas.	JC Public Works, DEM	Short-Term	<ol style="list-style-type: none"> 1. Protect Life & Property 2. Public Awareness 3. Natural Systems
LT-LS-1	Evaluate current landslide warning systems to ensure effectiveness and efficiency and increase coordination between local jurisdictions.	DEM	Long-Term	<ol style="list-style-type: none"> 1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services
LT-LS-2*	Limit activities in identified potential and historical landslide areas through regulation and public outreach.	County Government	Long-Term – Under review.	<ol style="list-style-type: none"> 1. Protect Life & Property 2. Public Awareness 3. Natural Systems

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Landslide Mitigation Action Items</i>						
ST-LS-1	X	X				
ST-LS-2*	X	X				
LT-LS-1	X					
LT-LS-2*	X	X				

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Severe Local Storm Mitigation Action Items				
ST-WS-1	Enhance strategies for debris management for severe winter storm events.	PT Public works, JC Public Works	Short-Term	1. Protect Life & Property 4. Partnerships & Implementation
ST-WS-2*	Develop and implement programs to identify and remove hazard trees located in public right-of-way to reduce potential danger to lives, property, and public infrastructure during windstorms events.	PT Public works, JC Public Works Puget Sound Energy sold Jefferson County assets to Jefferson County PUD #1 (JCPUD1).	Short-Term	1. Protect Life & Property 4. Partnerships & Implementation
ST-WS-3	Map and publicize locations around the county that have the highest incidence of extreme storms.	DEM	Short-Term	2. Public Awareness 4. Partnerships & Implementation
ST-WS-4	Replace flat office roof with gable roof to shed snow.	JCPUD1	Short-Term	1. Protect Life & Property
ST-WS-5*	Replace windows on Jefferson General Hospital to withstand storms.	JC Hospital Dist. #2	Short-Term – Completed 2008	1. Protect Life & Property
ST-WS-6*	Replace roof on PT High School Annex	PT School Dist.	Completed - 2013	1. Protect Life & Property
ST-WS-7	Provide emergency backup power for school building.	Queets / Clearwater School Dist.	Short-Term	1. Protect Life & Property
ST-WS-8*	Replace roof of Shop, Bus Barn & Admin Building to handle weather. Severe snow would put most roofs in jeopardy of collapse.	Quilcene School District	Completed	1. Protect Life & Property
ST-WS-9*	Develop and Implement storm water pollution and protection plan through DOE.	Quillayute School District	Long / Short Term	1. Protect Life & Property

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
Severe Local Storm Mitigation Action Items						
ST-WS-1	X					
ST-WS-2	X					
ST-WS-3	X					
ST-WS-4	X	X				
ST-WS-5*	X	X	X	X	X	X
ST-WS-6*	X	X	X	X	X	X
ST-WS-7	X	X				
ST-WS-8*	X	X				
ST-WS-9*	X	X	X	X		

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Severe Local Storm Mitigation Action Items (cont.)				
ST-WS-10*	Establish Tree Trimming Protocols	JCPUD1	Short Term	1. Protect Life & Property
ST-WS-11*	Intertie water systems as much as possible.	JCPUD1	Short Term	1. Protect Life & Property
LT-WS-1*	Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe winter storms.	PT Public works, JC Public Works	Long-Term	1. Protect Life & Property 4. Partnerships & Implementation
LT-WS-2	Increase public awareness of severe winter storm mitigation activities.	County & City Governments	Long-Term	2. Public Awareness 4. Partnerships & Implementation
LT-WS-3*	Enhance Courthouse clock tower to be able to withstand 70-knot winds.	County & City Governments	Long-Term – Completed 2008.	1. Protect Life & Property
LT-WS-4*	Support/encourage electrical utilities in mitigation activities to reduce power outages from storms.	DEM, County & City Governments	Complete – PUD representative is now present at EOC during activations – and participates in Incident Management Team training. PUD also does pre-storm briefings and prunes rights-of-way to reduce downfall.	1. Protect Life & Property 4. Partnerships & Implementation

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
Severe Local Storm Mitigation Action Items (cont.)						
ST-WS-10*	X	X	X	X		
ST-WS-11*	X	X				
LT-WS-1*	X	X	X	X		
LT-WS-2	X			X		
LT-WS-3*	X	X	X	X	X	X
LT-WS-4*	X	X		X	X	X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Tsunami / Seiche Mitigation Action Items</i>				
ST-TS-1*	Breakwater Jetty / Wingwall Improvement	Port of Port Townsend	Long Term; Planning is Short Term	1. Protect Life & Property
LT-TS-1*	Move PT Police Station outside of inundation zone.	Port Townsend	Long-Term – Completed 2009.	1. Protect Life & Property 4. Emergency Services

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
<i>Volcanic Event Mitigation Action Items</i>				
ST-VO-1	Find ash fall models that are specific to Jefferson County.	DEM, JC GIS	Short-Term	1. Protect Life & Property 2. Public Awareness 3. Natural Systems

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Tsunami / Seiche Mitigation Action Items</i>						
ST-TS-1*	X	X				
LT-TS-1*	X	X	X	X	X	X

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Volcanic Event Mitigation Action Items</i>						
ST-VO-1	X	X		X		

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Wildfire Mitigation Action Items				
OG-WF-1				
OG-WF-2*	Public Education	JCFD2 Commissioners	Yearly Classes - Ongoing	1. Public Awareness
ST-WF-1	Enhance Emergency Services to increase efficiency of wildfire response and recovery activities.	EJFR – JCFD5, DEM	Short-Term	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services
ST-WF-2	Educate district personnel on federal cost-share and grant programs etc. so that full array of assistance to local agencies is understood.	JCFD1 – JCFD5	Short-Term	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services
ST-WF-3	Create wildfire hazard atlas for City of Port Townsend.	EJFR	Short-Term	1. Protect Life & Property 5. Emergency Services
ST-WF-4	Install fire doors and fire suppression system.	Queets Clearwater School District	Short-Term	1. Protect Life & Property
LT-WF-1	Development and dissemination of maps relating to the fire hazard to help educate and assist builders and homeowners in being engaged in wildfire mitigation activities, and to help guide emergency services during response.	EJFR	Long-Term	1. Protect Life & Property 2. Public Awareness 4. Partnerships and Implementation 5. Emergency Services
LT-WF-2*	Firewise Program - Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to natural hazards.	JCFD1, WSU, JCFD2, JCFD3	Long-Term Annual	1. Protect Life & Property 2. Public Awareness 4. Partnerships and Implementation

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
<i>Wildfire Mitigation Action Items</i>						
OG-WF-1*						
OG-WF-2*	X	X	X	X	X	X
ST-WF-1	X					
ST-WF-2	X					
ST-WF-3	X	X	X	X		
ST-WF-4	X	X	X	X		
LT-WF-1	X					
LT-WF-2*	X	X	X	X	X	X

Five-Year Action Plan Matrix				
Natural Hazard ID	Action Item	Champion	Timeline	Plan Goals
Wildfire Mitigation Action Items (cont.)				
LT-WF-3	Increase communication, coordination, and collaboration between wildland/urban interface property owners, local and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance.	City & County Government	Long-Term	2. Public Awareness 4. Partnerships and Implementation 5. Emergency Services
LT-WF-4*	Consolidate fire districts to put more apparatus and personnel on wildfires.	PTFD & JCFD6 merged into JCFD1; JCFD3 & Kitsap County	Long-Term JCFD1 Completed; JCFD3 executed MOU with Kitsap	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services
LT-WF-5*	Develop a "battalion" strategy to more effectively coordinate rural districts on wildfires.	JCFD1 through JCFD5	Long-Term – Completed in 2006.	1. Protect Life & Property 4. Partnerships and Implementation 5. Emergency Services

Five-Year Action Plan Matrix: Action Item Lifecycle						
Natural Hazard ID	Action Item Concept	Public Input & Planning	Funding	Execution of Action Item	Completion	Maintain, Monitor, and Evaluate
Wildfire Mitigation Action Items (cont.)						
LT-WF-3	X					
LT-WF-4*	X	X	X	X	X	X
LT-WF-5*	X	X	X	X	X	X

The Plan Maintenance: Implementation, Monitoring and Evaluation

The Plan Maintenance Section of this document details the formal process that will ensure that the *Jefferson County – City of Port Townsend Hazard Mitigation Plan (Plan)* remains active and relevant. The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section includes an explanation of how Jefferson County and the City of Port Townsend intend to incorporate the mitigation strategies outlined in this plan into existing planning mechanisms such as the Jefferson County Comprehensive Plan.

Plan Adoption

The Board of Jefferson County Commissioners and the Port Townsend City Council will be responsible for adopting the Plan for their respective jurisdictions. Special Districts participating in the Plan must have their own governing body adopt the Plan as the official plan of the special district. Coordinating agencies, jurisdictions, and entities will be responsible for adopting their own plans within their own jurisdictions.

Coordinating Body

A Jefferson County Hazard Mitigation Advisory Committee will be responsible for coordinating implementation of Plan action items and undertaking the formal review process.

Convener

The Board of Jefferson County Commissioners and the Port Townsend City Council will adopt the Plan, and the Hazard Mitigation Advisory Committee will take responsibility for Plan implementation. The County Administrator will serve as convener to facilitate the Hazard Mitigation Advisory Committee meetings, and will assign tasks such as updating and presenting the Plan to members of the committee. Plan implementation and evaluation will be a shared responsibility among all Natural Hazard Advisory Committee Members.

Implementation through Existing Programs

Jefferson County and the City of Port Townsend address statewide planning goals and legislative requirements through GMA, CRS, and NFIP requirements, capital improvement plans, and building codes. The Plan provides a series of recommendations that are closely related to the goals and objectives of these existing planning programs. Local plans, such as Emergency Response Plans, that have sections related to Hazard Mitigation will be coordinated with the Plan so that requirements of the Plan are incorporated into local guiding documents and ordinances, and vice versa.

Economic Analysis of Mitigation Projects

The Federal Emergency Management Agency's approaches to identify costs and benefits associated with natural hazard mitigation strategies or projects fall into two general categories: benefit/cost analysis (BCA) and cost-effectiveness analysis. Where appropriate, proposed activities will be evaluated using the BCA tools and

Hazus_{MH} modeling software, along with empirical data to assess whether or not the mitigation strategy is justified.

Formal Review Process

The Plan will be evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The convener will be responsible for contacting the **Hazard Mitigation Advisory Committee** members and organizing the annual meeting. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan.

Continued Public Involvement

Jefferson County and the City of Port Townsend are dedicated to involving the public directly in the continual review and updates of the Hazard Mitigation Plan. Copies of the plan will be cataloged and kept at all of the public libraries in the county. The existence and location of these copies will be publicized on the Jefferson County and the City of Port Townsend websites along with the Plan, itself. This site will also contain an email address and phone number to which people can direct their comments and concerns on an ongoing basis.

Public hearings will be held concomitant with the evaluation of the program so that changes in needs and perceptions can be addressed and updated in the Plan as appropriate.

The plan also includes the contact information for the county department responsible for keeping track of public comments on the Plan.