

Section III: Multi-Jurisdictional Breakouts

Section III provides individualized information for each jurisdiction. It includes a brief description of each City or Special Purpose District. Additionally, each jurisdiction has individually rated the risk from all eight identified natural hazards.

Once each jurisdiction identified local risks, they developed a schedule of mitigation action-items to be implemented within their borders. ***These action items were developed through coordination with, and consideration of, existing documents*** such as budgets and Capital Improvement Plans (CIP), public input, internal policies, local knowledge, and staff expertise.

Additionally, each jurisdiction recognizes the necessity for regional cooperation in both day-to-day activities as well as regional mitigation efforts.

The jurisdictions participating in this plan are committed to developing regional projects as necessary and appropriate, and as funds are available.

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Multi-Jurisdictional / Multi-Hazard Mitigation

The pages in Section III provide the individual breakouts for each jurisdiction.

Each breakout contains the following sections:

- A brief summary or description of the City or Special Purpose District. It includes information such as population, area covered, and other features or concerns unique to the jurisdiction.
- A hazard rating score and description of the identified vulnerabilities.
- A list of some mitigation projects that have been completed in the past or are currently in process.
- A summary of the Mitigation Action Items identified for future efforts.

Local Hazard Identification and Vulnerability Analysis (HIVA)

While each jurisdiction has some potential exposure to each of the natural hazards identified in Section II of this document, the levels of risk and vulnerability may widely vary between the jurisdictions. As a result, each jurisdiction addresses these issues individually with a brief description of the local concerns.

Hazard Ratings

In 2003, the State of Washington provided 20/20 software to the counties to provide a consistent rating system for natural hazards. The North *King and South Snohomish Counties Regional Mitigation Plan* adapted the rating criteria into a spreadsheet and used this tool to rate local hazards. There was no effort made to duplicate all the functions of the 20/20 software. Instead, the intent was to ensure that the rating system was consistent with that being used by the counties.

Based on the description of this software, and using the same basic criteria as derived from the 20/20 software, the following spreadsheet was developed:

**Criteria for Scoring Natural Hazards
(Based on 20/20 software)**

<i>Impacted Areas</i>	<i>Rating</i>	<i>"Areas impacted by the hazard"</i>
	1	Less than 25% of developed areas
	2	Less than 50% of developed areas
	3	Less than 75% of developed areas
	4	More than 75% of developed areas

<i>Health and Safety</i>	<i>Rating</i>	<i>"Probability of persons killed or injured"</i>
	1	Few injuries/illnesses
	2	Few fatalities, but many injuries/illnesses
	3	Numerous fatalities

<i>Property</i>	<i>Rating</i>	<i>"Probability of property damaged or destroyed"</i>
	1	Few properties destroyed/damaged
	2	Few destroyed/many damaged -- OR -- Many destroyed, few damaged
	3	Many properties destroyed and damaged

<i>Environment</i>	<i>Rating</i>	<i>"Probability of environmental damage"</i>
	1	Resources damaged with short-term recovery
	2	Resources damaged with long-term recovery
	3	Resources damaged beyond recovery

<i>Economic</i>	<i>Rating</i>	<i>"Probability of economic disruption"</i>
	1	Low direct and/or low indirect costs
	2	High direct and low indirect costs -- OR -- Low direct and high indirect costs
	3	High direct and high indirect costs

<i>Probability of Occurrence</i>	<i>Rating</i>	<i>"Probability or frequency of occurrence"</i>
	1	Unknown but rare occurrence
	2	Unknown but anticipated
	3	100 years or less
	4	25 years or less
	5	Once per year or more

Using the criteria as defined above, members filled out the following form, with one section provided for each of the eight natural hazards identified for the North King and South Snohomish Counties region.

Drought

	Rating Scale	Risk Categories
	(1-4)	Areas impacted by the hazard
	(1-3)	Probability of persons killed or injured
	(1-3)	Probability of property damaged or destroyed
	(1-3)	Probability of environmental damage
	(1-3)	Probability of economic disruption
0	Sum of Risk Categories	
	(1-5)	Probability or frequency of occurrence
0	Natural Hazard Rating	
	(Sum of Risk Categories x Probability or frequency of occurrence)	

Earthquake

	Rating Scale	Risk Categories
	(1-4)	Areas impacted by the hazard
	(1-3)	Probability of persons killed or injured
	(1-3)	Probability of property damaged or destroyed
	(1-3)	Probability of environmental damage
	(1-3)	Probability of economic disruption
0	Sum of Risk Categories	
	(1-5)	Probability or frequency of occurrence
0	Natural Hazard Rating	
	(Sum of Risk Categories x Probability or frequency of occurrence)	

The rating scales varied from “1 to 3” to “1 to 5,” with six criteria being considered independently. The first five criteria were rated and subtotaled. These were:

- Impacted Areas (scale of 1 – 4)
- Health and Safety (scale of 1 – 3)
- Property (scale of 1 – 3)
- Environment (scale of 1 – 3)
- Economic (scale of 1 – 3)

Once these ratings were established, they were multiplied by the “Probability of Occurrence” (scale of 1- 5). The maximum score possible was 80 points.

For continuity purposes, the same tool was used in this 5-year update.

Mitigation Goals

The natural hazard mitigation goals listed in this portion of the plan are intended to help guide the direction of and prioritize future natural hazard mitigation activities at the local level aimed at reducing risk and preventing loss from natural hazards.

1. Protect Life and Property

- Implement mitigation activities that will assist in protecting lives and property by making homes, businesses, infrastructure, and critical facilities more resistant to natural hazards. In addition to large-scale projects, this may include items such as:
 - Continuing the ESCA Community Emergency Response Team (C.E.R.T.) Program to provide citizens from the north King and south Snohomish Counties area with the information and tools they need to help themselves, their families, and their neighbors in the hours and days immediately following an emergency or disaster event.
 - Encouraging homeowners and businesses to purchase insurance coverage for damages caused by natural hazards.
 - Encouraging homeowners and businesses to take preventative actions in areas that are especially vulnerable to natural hazards.

2. Increase Public Awareness

- Develop and implement additional education and outreach programs to increase public awareness of the risks associated with natural hazards.

3. Encourage Partnerships

- Strengthen inter-jurisdiction and inter-agency communication and coordination and partnering of jurisdictions and agencies to foster the establishment and implementation of natural hazard mitigation strategies and/or projects designed to benefit multiple jurisdictions.

4. Provide for Emergency and Critical Services

- Encourage the establishment of policies at the local level to help insure mitigation strategies and/or projects are designed, prioritized, and implemented, to benefit critical/essential facilities, services, and infrastructure.

5. Facilitate Continuity and Recovery

- Minimize the disruption of services and enable swift recovery after a natural disaster.

6. Protect Natural Systems

- Restore damaged environments and minimize future damage or destruction.

Multiple-Hazard Mitigation Actions

For the purpose of this plan, multiple-hazard action items are those strategies and/or activities that pertain to more than one hazard, as described in the hazard identification section of this plan.

The action items included in this section of the plan may be short-term (ST) or long-term (LT). Some actions may include activities that jurisdictions may implement with existing resources and authorities. Other, more complex, actions may require new or additional resources and authorities as well as multi-agency and/or multi-jurisdictional partnering.

Timeframes are tentative and are intended to be guidelines as opposed to hard commitments. The completion of these projects is contingent upon identifying and obtaining additional resources.

Each item has an individual “code” or identifier. The conventions are as follows:

- Jurisdiction abbreviation
 - BR = Brier, City of
 - ED = Edmonds, City of
 - KM = Kenmore, City of
 - LF = Lake Forest Park, City of
 - LW = Lynnwood, City of
 - MC = Mill Creek, City of
 - MT = Mountlake Terrace, City of
 - MK = Mukilteo, City of
 - WV = Woodinville, City of
 - WW = Woodway, Town of
 - ECC = Edmonds Community College
 - ESD = Edmonds School District
 - OF = Olympic View Water and Sewer District
 - PE = Port of Edmonds
- Number
 - Progressive numbering
- Hazard abbreviation
 - MH = Multi-Hazard
 - D = Drought
 - E = Earthquake
 - F = Flood
 - L = Landslide
 - S = Severe Storm
 - T = Tsunami and/or Seiche

- V = Volcano
- W = Wildland-Urban Interface Fire
- Expected timeframe
 - LT = Long-term
 - ST = Short-term

Example:

BR - 01- MH - ST”
 Brier – Project 1 – MultiHazards – Short Term

Prioritizing Mitigation Actions

Because this plan is multi-jurisdictional, each jurisdiction will develop mitigation priorities at the local level with the direct involvement of the governing body and other participating agencies and organizations.

Due to budget constraints, most of the mitigation measures incorporated into this plan are dependent upon local jurisdictions receiving outside funding; as a general rule, local funding is not available. As a result, local jurisdictions are unsure when many of these mitigation measures will be implemented and the conditions and/or requirements under which implementation may occur.

Unless stated otherwise within an individual entity’s break-out, each jurisdiction participating in this plan should prioritize their proposed mitigation projects based on the following factors:

- ***Mitigation action items that have a benefit-to-cost review rating of “2” or greater.***
- Mitigation action items that reduce or eliminate repetitive loss properties.
- Mitigation action items that are multi-jurisdictional and/or multi-agency in nature.
- Mitigation action items that provide the greatest good for the greatest number.
- Mitigation action items that have broad-based public and/or elected official support.
- Mitigation action items that have previously-secured funding sources.
- Mitigation action items that qualify for alternate and/or matching funding.

While it is highly recommended that each of the jurisdictions participating in this plan use the factors listed above in prioritizing mitigation measures, it is recognized that final prioritization is determined by each jurisdiction’s Council or Board. A change in local elected officials, changing environmental

requirements, public acceptance of a project, or the occurrence of an actual disaster event may dramatically affect the priority ranking of mitigation actions at the local level.

(Note: A description and example of the benefit-to-cost review rating process is included at the beginning of each jurisdiction's Mitigation Action Items section.)

If federal funding is involved in the implementation of a hazard mitigation project, the City or Special Purpose District will conduct a cost-benefit analysis based on guidelines provided by the United States Department of Homeland Security (FEMA) and the Washington State Military Department, Emergency Management Division on how to determine cost-effectiveness of mitigation projects and how to calculate the cost-benefit ratio.

The purpose of the cost-benefit analysis is to determine if the benefits of the project exceed the federal costs of the project. Both the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program require a cost-benefit ratio of at least 1.0 for a project to be considered for funding.

While it may be important to emphasize a positive cost-benefit analysis in the prioritizing of mitigation actions, it is also important to recognize the influence of local political factors, community needs, local values, historic properties, and habitat/environmental issues upon the selection of specific mitigation actions.

Implementing Mitigation Actions

Mitigation measures are already in place at the jurisdiction level through existing plans, codes, and ordinances as well as programs such as the Community Emergency Response Team (C.E.R.T.). Current and ongoing programs are funded through existing and established budgets.

The implementation of new and/or additional mitigation measures is dependent upon the approval of the local elected body as well as obtaining funding from outside sources that have not been secured at this time. As a general rule, local funds are not available for implementation of new mitigation measures. Funding for mitigation measures is largely dependent upon individual entities applying for and receiving federal and/or State hazard mitigation grant funding.

For each action item listed and described in this plan, every effort has been made to identify the lead agency and/or community partners, current or possible funding sources, and an estimated timeline for planning and implementation.

It should be noted that **short-term** action items and/or mitigation measures are those activities that are expected to be completed in less than two years from the receipt of funding by the jurisdiction. **Long-term** action items and/or mitigation measures are those activities that are expected to take more than two years to complete from the receipt of funding by the local entity, or it is expected that it will take more than two years to obtain funding for the project. Action items and/or mitigation measures that are **current and ongoing** have been identified as such.

The jurisdictions participating in the North King and South Snohomish Counties Regional Mitigation Plan have a variety of local, state, and federal resources available to support implementing and administering the mitigation actions. Each jurisdiction will continue to identify additional resources to support implementing action items.

Local Funding Sources

Local implementation sources vary based on each jurisdiction's scope of function(s), authorities, and operational capability and capacity. They may include:

- Use of zoning ordinances and building codes.
- Enforcement of sensitive or critical areas ordinances.
- Incorporation into local emergency response plan(s).
- Incorporation into local economic development plan(s).
- Use and support of existing local personnel (planners, city engineers, GIS specialists, and/or emergency managers).
- Capital improvement project funding.
- Authority to levy taxes and special bonds.
- Fees for services.
- Other sources yet to be identified.

The current economic condition and funding level of the participating jurisdictions drastically limits the use of local resources. State or federal funding will be needed to accomplish many of the action items and mitigation measures referenced in this plan.

State Funding Sources

- State-administered Hazard Mitigation Grant Program, Flood Mitigation Act, and Pre-Disaster Mitigation Program
- Department of Ecology Flood Control Assistance Account Program (FCAAP)
- Department of Transportation Emergency Relief Program
- Office of Community Development Block Grants
- Programs administered by the Washington State Transportation Improvement Board

- Other sources yet to be identified

NOTE: An extensive listing of state funding opportunities is available at the following website: <http://www.infracfunding.wa.gov>.

Federal Funding Sources

- Stafford Act, Section 406 – Public Assistance Program Mitigation Grants
- Stafford Act, Section 404 – Hazard Mitigation Grant Program
- Disaster Mitigation Act of 2000 – Pre-Disaster Mitigation Program Competitive Grants
- United States Fire Administration – Assistance to Firefighters Grants
- United States Small Business Administration – Pre- and Post-Disaster Mitigation Grants
- United States Department of Economic Development Administration Grants
- United States Department of Housing and Urban Development Grants, such as the Community Development Block Grant Program
- United States Army Corps of Engineers
- United States Department of the Interior, Bureau of Land Management
- Federal Highway Administration
- Other sources yet to be identified

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