

RESOLUTION NO. 1258

**A RESOLUTION OF THE EDMONDS CITY COUNCIL  
ADOPTING THE NORTH KING AND SOUTH SNOHOMISH  
COUNTIES REGIONAL MITIGATION PLAN UPDATE AS  
DEVELOPED THROUGH THE EMERGENCY SERVICES  
COORDINATING AGENCY AND IN COOPERATION  
WITH A TOTAL OF FOURTEEN CITIES, TOWNS AND  
SPECIAL PURPOSE DISTRICTS.**

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**WHEREAS**, the Federal Emergency Management Agency requires each local jurisdiction to adopt and have in place a Mitigation Plan in order to minimize loss of life, and recurring property damage; and

**WHEREAS**, the Federal Emergency Management Agency has indicated that future mitigation grant monies will not be made available to jurisdictions without a current and adopted Mitigation Plan; and

**WHEREAS**, mitigation planning is a logical and reasonable step in public safety as well as emergency management, response, and recovery; and

**WHEREAS**, the City of Edmonds recognizes the benefit and necessity of mitigation as well as regional planning and cooperation; and

**WHEREAS**, the Emergency Services Coordinating Agency developed and coordinated a Regional Plan in 2004 involving the Cities of Kenmore, Brier, Edmonds, Lynnwood, Mill Creek, Mountlake Terrace, and Woodway; and the Edmonds School District, Olympic View Water and Sewer District, and the Port of Edmonds; and

**WHEREAS**, the Emergency Services Coordinating Agency updated and coordinated a Regional Plan in 2010 involving the original jurisdictions from 2004, plus the addition of the Cities of Lake Forest Park, Mukilteo, and Woodway *and* Edmonds Community College; and

**WHEREAS**, this plan maintains consistency with existing emergency response plans, promotes regional cooperation, and meets the Federal Emergency Management Agency's requirements; and

**WHEREAS**, this Regional Mitigation Plan is made up of both regional and localized, jurisdiction-specific information; and

WHEREAS the City of Edmonds is a member of the Emergency Services Coordinating Agency; and

WHEREAS, updates to the North King and South Snohomish Counties Regional Mitigation Plan are conducted on a five-year cycle and therefore, the Regional Plan is due for update; and

WHEREAS, *the City of Edmonds* is responsible only for funding and implementing those projects as funds are available and as specified under the Section III entitled, *the City of Edmonds*;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF EDMONDS THAT:**

The *City Council* does hereby adopt the *North King and South Snohomish Counties Regional Mitigation Plan Update*.

PASSED by the *City Council* of the City of Edmonds this 25<sup>th</sup> day of October, 2011, and signed in authentication of its passage this 25<sup>th</sup> day of October, 2011.

  
MIKE COOPER, MAYOR

ATTEST:

  
SANDRA S. CHASE, CITY CLERK

FILED WITH THE CITY CLERK: 10/21/2011  
PASSED BY THE CITY COUNCIL: 10/25/2011  
RESOLUTION NO. 1258

## **Edmonds**

The City of Edmonds is located in the southwest corner of Snohomish County, about 14 miles north of Seattle. (See map on Page III-86.) It has a population of about 40,760<sup>1</sup> people residing on about 8.9 square miles, or 5,717 acres, of land.

The City is about 95% developed. Of the remaining undeveloped land, about 75% is designated for single-family residential use.

Edmonds' commercial activity is concentrated in two areas: the Downtown/Waterfront and the Highway 99 corridor. The latter includes Stevens Hospital and the medical facilities affiliated with the Hospital. This Hospital region provides critical facilities, and restoring routes to and from the Hospital will be a priority in any disaster.

The City of Edmonds is a key link in the region's transportation routes. The City has three state routes that connect the region to both the Port of Edmonds and the site of the Edmonds-Kingston Ferry Terminal. The former provides mooring for approximately 1,000 boats and watercraft. The latter is located in the Downtown/Waterfront core and provides a steady stream of vehicles and ferry-commuters into the area.

The Burlington-Northern Railroad runs adjacent to the City's shoreline and links Everett to Edmonds to the north and Seattle to the south. The rail line is currently used for freight and AMTRAK passenger rail service; approximately 35 trains pass through the City each day. Conflict between north-south rail traffic and east-west access to the waterfront and its regional facilities (ferry, port, and parks) is an ongoing concern for its potential effect on response and recovery activities in emergency situations.

**For a list of critical facilities located in Edmonds, see *Annex B*.**

### **Hazard Identification**

The City of Edmonds uses a GIS system, but is currently limited in the information and functions available within that system. County base information is included in the City's GIS system, plus local zoning and Comprehensive Plan information.

GIS development is an ongoing project and will be expanded in the future as funds for training and personnel allow. At some point in the future, the City plans to incorporate HAZUS as well, but resources have not been identified for this project within the foreseeable future.

Based on past experience, GIS data, and hazard maps from the Department of Natural Resources and FEMA, Edmonds rates its risk of natural hazards as follows:

HAZARD	RATING (out of 80 possible)
Drought	07
Earthquake	45
Flood	
100-year	12
Urban	12
Landslide	14
Severe Storm	48
Tsunami & Seiche	08
Volcano	08
Wildland Urban Interface Fire	05

### Drought

Rating: 7

Drought is not considered to be a high-risk hazard for Edmonds. The City's potable water is supplied by the Cities of Seattle and Everett via Alderwood Water District and is relatively stable for short-term (one season) droughts. Citizens may be asked to take conservation measures and limit lawn watering, but the City will still receive adequate potable water for its needs.

At greater risk are Lake Ballinger and the streams running through the City of Edmonds. Even a short-term drought is likely to reduce water levels in Lake Ballinger and the City's streams. Reduced water levels lead to higher water temperatures which, in turn, may make the streams uninhabitable for salmon and other aquatic organisms downstream. With several species of salmon listed as "endangered" or "threatened," this could delay recovery efforts.

The City of Edmonds considers the threat of drought to be EXTREMELY LOW.

### Earthquake

Rating: 45

Edmonds is located in Seismic Zone 3, between several fault lines, and earthquakes are therefore considered to be a significant risk for the City.

As discussed in this document's HIVA, earthquakes occur in Washington State on an almost daily basis. While most quakes are minor, seismologists tell us that we can expect a deep or intraplate earthquake at a magnitude of 7.0 about every 70 years and an 8.0 or greater subduction quake every 150 to 1,100 years.

Based on this information, when a major earthquake occurs in the region, the City can expect significant damage, injuries, and possibly deaths. This is due in part to the relatively dense concentration of both buildings and people in about 8.9 square miles.

Secondary effects of an earthquake can include tsunami or seiche as well as landslides and soil displacement. The Edmonds waterfront which includes the Port of Edmonds facilities, two major restaurants, and the Senior Center are potentially vulnerable to damages and loss of life.

Edmond's risk from earthquake is MODERATE.

### **Flood**

Rating: 12

The City contains the following creeks and watersheds within the City limits:

<b><u>Body of Water</u></b>	<b><u>Description</u></b>
Shell Creek	753 acre watershed, plus 527 acres of overflow in the winter months.
Willow Creek	434 acres
Shellabarger Creek	354 acres
Northstream Creek	248 acres
Fruitdale	243 acres
Hindley Creek	178 acres
Perrinville Creek	805 acres
Goodhope Pond	474 acre watershed
Lake Ballinger	Shared with the City of Mountlake Terrace

In addition, a portion of the city is located on Puget Sound. As a result, the City of Edmonds experiences floods from three separate types of events: 100-year flooding, urban flooding, high tides, and shoreline flooding.

### **100-Year**

Flood Insurance Rate Maps (FIRMs), with an effective date of November 8, 1999, were developed for the City. These include panel numbers 1285, 1305, and 1575. These maps identify areas along the

shoreline as "Zone AE," and establishes base flood elevations. Other areas, further inland, are identified as "Zone A," recognized as part of the 100-year floodplain, but no base flood elevations are established. Additionally, the maps identify several areas as part of the 500-year floodplain.

Approximately 90 lots, encompassing 129.6 acres, lie within the 100-year floodplain. The affected property is valued at approximately \$43,987,080.

No critical buildings are located in the affected area.

The City of Edmonds has incorporated the information as provided by the FIRMs in the development of the City's Comprehensive Plan. As a result, the City restricts building in these areas.

#### Urban

Urban flooding is a semi-regular occurrence in the City of Edmonds. This is caused by excessive rainfall or snowmelt which overwhelms the stormwater system, wetlands, lake, and streams. In general, urban flooding is intensified by the increasing amount of impervious surface as surrounding jurisdictions and areas upstream develop and Edmonds continues to in-fill.

#### Shoreline

Shoreline properties may experience flooding as part of the 100-year or urban flooding events. In addition, storm events are often accompanied by significant wave action, and this can intensify the flooding experienced along the Edmonds shoreline if this coincides with high tide cycles.

*The City is in good standing with the NFIP and has no findings.*

*For more complete information on the City's NFIP standings, please see **Section VI, Addendum B.***

NFIP / CRS Components	
Flood Insurance Rate Map (FIRM)	Maintained in paper format by the Building Official and Assistant Building Official
Firm updates in process?	No
Firm updates expected within next 2 years?	No. Longer term, Lake Ballinger should be updated. There is no defined flood plain on the current FIRM.
NFIP Coordinator assigned?	Yes. Building Official
Next scheduled date for Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown. Not scheduled at this time. (Last CAV was May 2008. Identified actions completed; City is in compliance.)
Do you participate in the Community Rating System (CRS)?	Yes

Edmond's overall hazard rating for flooding is LOW.

### **Landslide and Soil Displacement**

Rating: 14

The City of Edmonds has several areas with steep slopes and one designated landslide hazard area. These are the primary areas that may experience landslide.

To mitigate for this hazard, the City has enacted a very strict ordinance that governs development, enforces current building codes, and requires soil testing and soil stabilization techniques as necessary. Nevertheless, it is still possible for soil saturation or liquefaction to cause a landslide to occur with the right combination of factors and circumstances.

Edmonds could also experience soil displacement in conjunction with the creeks that run through the City. In the case of a heavy or excessive stream-flow, it is possible that the movement of the water could erode and destabilize portions of the creek banks.

Excessive rainfall or snowmelt or a major earthquake are possible contributors to a landslide or soil displacement event.

Having identified the hazard and assessed the possible risks, Edmonds considers landslide to be a LOW risk.

## **Severe Storm**

Rating: 48

The City of Edmonds is subjected to severe storms on a regular basis. Windstorms occur nearly every winter, and rainstorms are not unusual. While rarer, the City has also experienced heavy snows and freezing rains.

Winds and snow or ice regularly cause tree branches to break and/or trees to fall. This may cause power outages or damage buildings. As mentioned in the discussion of floods (above), severe rain or snowstorms can also be associated with and compound the severity of flood events.

The Inaugural Day Storm in 1993 had winds of 66 mph. This storm interrupted power to the City for more than three days. Branches and trees were downed and laid across streets, roads, and yards. City facilities were relatively unscathed, but fences were blown over, and houses received damage from both branches and the wind itself. Since the majority of damage occurred on private property, damage totals are not available.

In the winter of late 1996/early 1997, the City and region experienced a significant snowfall following by drenching rain. This resulted in mudslides and required the City of Edmonds Public Works crews to plow snow and remove mud and debris. Funds in the amount of \$83,685 were approved by FEMA for clean-up and debris removal as a result of this storm event.

In early December 2007, the City experienced a significant rainfall event that produced 5 inches of rainfall in a 36 hour period of time. During the peak of the heavy rains, there was also a high tide and consequently there was nowhere for the storm water to go and it backed up, flooding homes, streets and any low-lying areas. The volume of water also soaked into hillsides, causing many landslides. The some of the most significant damage occurred on Olympic View Drive near 76<sup>th</sup> Avenue West in the Perrinville neighborhood where a culvert failed and a large sinkhole developed. In addition, damage also occurred on 76<sup>th</sup> Ave West which required significant road repair work. The total combined repair costs for these two projects amounted to \$639,295.93.

The level of risk from Severe Storms is 48, or MODERATELY-HIGH.

## **Tsunami & Seiche**

Rating: 8

As mentioned in the Earthquake section, the South County Senior Center may be occupied by as many as 300 people at any given time. In addition,

the Edmonds waterfront has two large restaurants and a marina which may be occupied by several hundred more people. These facilities are located directly on the Puget Sound waterfront, making them a prime concern during a tsunami event.

Another area of concern is the Edmonds Ferry Terminal. This facility handles two state ferries that run up to 28 ferry trips each day. During periods of heavy traffic volume, the dock could be fully loaded with 60 vehicles, and the ferry's passenger waiting lanes may have as many as 300 additional vehicles within a mile of the dock. During peak traffic periods, as many as 600 walk-on passengers may be in the dock area.

Located on the Puget Sound coast, Edmonds is potentially vulnerable to tsunami, though the likelihood of this occurring is EXTREMELY LOW on the rating scale.

### **Volcano**

Rating: 8

The City of Edmonds is unlikely to suffer direct damage from a volcano eruption. In the event of an eruption, Edmonds may experience ashfall, which can interfere with the operation of motor vehicles and back-up generators, require expensive clean-up efforts by the City, and cause respiratory distress to the citizens. The City is highly unlikely to experience any lava flow, lahar activity, or any of the other risks associated with volcanoes.

A secondary effect of a volcano eruption is the influx of refugees into the area. This may be an issue to the City, and the region as a whole, as resources are overwhelmed by numbers of people that the infrastructure is not designed to handle. This includes everything from roads and highways, water and electric utilities, to the regional hospital.

Overall, the level of risk from a volcanic eruption is EXTREMELY LOW.

### **Wildland-Urban Interface Fire**

Rating: 5

Wildland-urban interface fire is a concern to Edmonds due to the parks, wetlands, greenbelts, and undeveloped land parcels that are scattered throughout the City. The threat is in inverse proportion to the amount of rainfall in the region. When rain is scarce, the fire threat increases.

During the summer of 2003, new records were set for number of days without rain. As a result, Edmonds and the north King and south Snohomish Counties region experienced several fires next to the freeway

(1-5) that were caused by improperly extinguished cigarettes or sparks from machinery being operated next to dry grass. These fires were quickly contained and suppressed, but the close proximity of houses to these wildland areas, and the relative density of the housing units and wood shake roofs, makes wildland-urban interface fires a risk during periods of drought or excessive dryness.

Offsetting the risk of fire, the region is very well developed and has adequate infrastructure to address this hazard. Fire stations are placed strategically, and are within a 4-minute average response time anywhere in the area. Additionally, interlocal agreements are in place with the surrounding jurisdictions to allow for the nearest available unit to respond to any call for fire suppression.

The City of Edmonds considers the level of risk from wildland-urban interface fire to be **EXTREMELY LOW**.

## Mitigation

### Existing and Ongoing Mitigation Activities

The City of Edmonds is taking the following actions in ongoing efforts to mitigate for natural hazards and to maintain public safety.

#### All Hazards

- The City of Edmonds is a member of the Emergency Services Coordinating Agency (ESCA). As a member, Edmonds receives emergency management planning, coordination, and response services.

As part of its preparation and mitigation services, ESCA provides education in the form of Community Emergency Response Team (CERT) training. This training is provided to the citizens of the member Cities and Towns. The goal is to prepare people to be self-sufficient for as much as three days after a major disaster until safety personnel can get to them. CERT also provides the students with suggestions and training for personal mitigation projects such as securing water heaters and attaching tall, heavy furniture to the wall.

- The City updated the fire alarm system for City Hall in 1996.
- The South County Senior Center received a new fire alarm system in 2006.
- Edmonds rebuilt the public safety buildings to meet current building code requirements in 1999.
- The City completely upgraded the electrical wiring at the Francis Anderson center in 2002.
- An emergency generator for backup electrical power was installed for City Hall in 2007.
- Installed a new HVAC system for City Hall.
- The Frances Anderson Center, the City's primary recreation center was structurally reinforced to withstand a major earthquake in 2008.

## Codes and Plans

<i>The City of Edmonds</i>		
<b>Name of Document</b>	<b>Purpose</b>	<b>Review Schedule*</b>
Edmonds Ordinance No. 2224: Emergency Services – Disaster Coordination Chapter 6.60 of the Edmonds Municipal Code	Govern disaster preparedness and disaster response in the City.	Adopted August 1981
State Environmental Policy Act – City Environmental Policy (SEPA)	Implement procedures and policies to improve and coordinate plans, functions, programs, and resources consistent with state and county policies for environmental protection.	Adopted 1983
Shoreline Master Program	Protect against adverse effects to the public health, the land and its vegetation and wildlife by managing shorelines.	Adopted 2000 (last amended in 1984)
Critical Areas Ordinance	Protect the public from damages from landslides, subsidence erosion and flooding.	Adopted 1996 Updated 2005
Stormwater Comprehensive Plan	Provide guidance on the estimation and control of stormwater runoff quantity and quality.	Adopted May 2003
International Building Code	Construct to the highest standards available.	Adopted July 2007
International Fire Code	Construct to the highest standards available.	Adopted July 2007.
International Mechanical Code	Construct to the highest standards available.	Adopted July 2007
Uniform Plumbing Code	Construct to the highest standards available.	Most recent version Adopted July 2007
National Electric Code	Construct to the highest standards available.	Most recent version Adopted July 1, 1998
Edmonds Comprehensive Plan	Contains community's vision of the City's future, provides a statement of long-range goals and policies.	Adopted 1995 Updated annually
Water Comprehensive Plan	Proves the City's water utility with long-term planning strategies for a twenty-year period.	June 2002 Scheduled for update in 2009
6-Year Capital Facilities Plan 20-Year Capital Facilities Plan 6-Year Capital Improvement Plan	Ongoing plans for the replacement and upgrade of infrastructure and critical facilities.	2008 – 2014 Updated annually

<b>The City of Edmonds</b>		
<b>Name of Document</b>	<b>Purpose</b>	<b>Review Schedule*</b>
Edmonds Environmentally Sensitive Areas Map	Identifies sensitive areas in the Edmonds Shoreline area.	N/A
National Flood Insurance Program		Most recent version Adopted July 1, 1998
Community Assistance Visit (NFIP)		Completed May 13, 2008

<b>Other Jurisdictions' Plans</b>	
Edmonds School District No. 15 Capital Facilities Plan	Adopted annually 2008
Edmonds-Woodway High School Master Plan	--
Port of Edmonds Master Plan	Adopted May 2001
Stevens Memorial Hospital Master Plan	October 1994
Washington State Ferry's Safety Management System	--

### Drought

- Encourage water conservation.
- Edmonds' Water Conservation Program is consistent with the conservation programs developed by the two entities that provide water to the City: the Cities of Everett and Seattle.

### Earthquake

- Edmonds' City Hall was retrofitted for seismic reinforcement in 1997.
- Edmonds recreation center, the Frances Anderson Center was structurally retrofitted for major earthquakes in 2008. This project was partially funded through a FEMA hazard mitigation project grant.
- The City of Edmonds encourages voluntary seismic upgrade to properties.
- The City of Edmonds is aware of and supports the Washington State Ferry System's emergency management protocols: the *Safety Management System*. This system establishes:
  - "Drop, cover, and hold" policies during an earthquake.
  - As soon as the shaking stops, ferry vessels are moved away from the docking areas and taken ½ to 1 mile away from the beach.
  - Cars and foot passengers are evacuated from the dock and directed to move uphill and away from the shore.
  - Personnel and passengers wait a minimum of half an hour – longer if a threat of tsunami is established – before anyone is allowed back into the dock area.

- Before ferry operations are resumed, trained staff conduct a safety inspection of the docks and associated facilities. If there is no damage, operations may resume.

### Flood

- The City of Edmonds restricts development in the floodway. These restrictions are codified in ECDC 19.75.050C.
  - Evaluated and set elevation requirements for new residential and non-residential structures in the floodplain area.
  - Identify alternatives to reduce development in the floodplain.
- The City of Edmonds is primarily vulnerable to urban flooding. To minimize damage from this hazard, Edmonds has several City-owned and –operated stormwater outfalls with tidal gate systems to provide drainage control. The City also has several open detention ponds and a number of stormwater infiltration systems to manage stormwater flows.

### Landslide

- To mitigate for landslide, the City of Edmonds relies on the adoption and enforcement of current building codes. In addition, the City has established building requirements to mitigate for Meadowdale landslide hazards.
- The City maintains the drainage system in the Meadowdale landslide area to minimize build-up of water that could erode the embankments.
- The Critical Areas Ordinance provides guidelines for, and places restrictions on, development in hazard-prone areas.

### Severe Storm

- The City of Edmonds has completed a series of projects to restore and replace bulkhead on the waterfront to minimize damage from wave action during a severe storm.
- The Comprehensive Stormwater Plan and Capital Improvement Plan are maintained in accordance with State guidelines and are used both to develop policies and as a financial management tool. The City uses these plans to maintain and enhance stormwater systems in order to minimize the effects of severe storms and the secondary effects of these storms: flooding and landslide.
- As part of the Comprehensive Stormwater Plan and Capital Improvement Plan, culverts have been inventoried and mapped. Drainage problems are identified and included in the Capital Improvement Plan for future work.
- Edmonds rebuilt the waterfront bulkheads to replace deteriorated wood. This reduces wave damage and shoreline erosion.

### Tsunami and Seiche

- As discussed above, the City of Edmonds is aware of and supports the Washington State Ferry System's emergency management protocols: the *Safety Management System*. If a tsunami was expected, the Washington Ferry System's personnel would:
  - Move the vessel(s) away from the docking areas and take the ferries ½ to 1 mile away from the beach.
  - Evacuate cars and foot passengers from the dock areas and direct all traffic to move uphill and away from the shore.
  - Before ferry operations are resumed, trained staff will conduct a safety inspection of the docks and associated facilities. If there is no damage, operations may resume.

### Volcano

- None at this time.

### Wildland-Urban Interface Fire

- Maintain right-of-way to minimize dry grasses and undergrowth.
- Ban the use of fireworks within the City.

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## **Mitigation Action Items**

The Mitigation Plan identifies short- and long-term action items developed through data collection, research, and the public participation process. Mitigation Plan activities may be considered for funding through federal and state grant programs and when other funds are made available through the budgeting process or the passage of bonds.

Action items address multi-hazard (MH) or hazard-specific issues. Upon implementation, the coordinating organizations may look to partner organizations for resources and technical assistance.

To help ensure activity implementation, each action item includes several pieces of information in the description. These include:

- *Coordinating Organization*  
The coordinating organization is that which is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring and evaluation. The coordinating organizations may be local or regional agencies. Organizations written in *italics* are not participating in this Plan but have an established relationship with this jurisdiction.
- *Timeline*  
Action items include both long- and short-term activities. Each action item includes an estimate of the timeline for implementation. *Short-term* action items (ST) are activities that organizations may implement with existing resources and authorities within one to two years. *Long-term* action items (LT) may require new or additional resources or authorities, and may take between two and five years to implement.
- *Ideas for Implementation*  
Each action item includes ideas for implementation. This may be individual steps for one project, or it may be several related projects that address the natural hazard.
- *Plan Goals Addressed*  
The plan goals are identified to monitor and evaluate how well the Mitigation Plan is achieving its goals once implementation begins.
- *Benefit-to-Cost Review*  
Due to limitations in staff time, and because project priorities may shift based on changes in funding options and local events, a generalized benefit-to-cost review is used. The steps associated with prioritizing the mitigation projects are as follows:

1. The jurisdiction rates the project cost as “high,” “medium,” or “low” in relation to budget and previous projects, and each rating is assigned a numerical value.
2. The project outcome is then rated as “low,” “medium,” or “high,” and each of these ratings is assigned a numerical value.
3. The two values are added together, and the total provides the cost-benefit and the priority.

Example:

If a project has a *medium approximate cost*, and is considered to be *highly effective*, the boxes would be marked as shown below.

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

The priority ratings with the highest numbers are considered to be the highest priorities. As always, however, these are subject to financial realities and may not be carried out in the exact order indicated.

**MULTI-HAZARD Mitigation Actions (MH)**

**ED-01-MH-ST:** Replace water mains to maintain and/or enhance critical functions; minimize damage or breakage from natural hazards such as earthquakes or landslides; and ensure adequate water pressure to be effective in fire suppression.

**Ideas for implementation:**

- The City of Edmonds is replacing steel line water mains with ductile iron pipe mains. This replacement cycle will be completed by 2008.
- Beginning in 2008-2009, the City will begin replacing cast iron water mains with ductile iron or as required by current codes or technology.
- The 138 miles of water mains are scheduled to be replaced at a rate of 1% per year.

**Coordinating Organization:** Edmonds Public Works

**Estimated Price:** \$1,990,000

**Funding Source:** Water Utility Fund

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life and Property; Provide for Emergency & Critical Services; Facilitate Continuity and Recovery

**Benefit-to Cost Review:** 4

Approx Cost +	Effectiveness	=	Priority
<input checked="" type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**DROUGHT Mitigation Actions (D)**

**ED-02-D-ST: Work with Alderwood Water District to educate consumers about drought impacts and ways to minimize water waste.**

**Ideas for implementation:**

- Insert water conservation information in utility bills.
- Work with schools to educate young people on the importance of water conservation and the impact of drought on watersheds.
- The City loans out a Car Wash kit that removes pollutants from the water and this comes with a brochure for water conservation.

**Coordinating Organization:** Edmonds Public Works; Edmonds Administration; Alderwood Water District  
**Estimated Price:** \$10,000  
**Funding Source:** Storm Utility Fund  
**Timeline:** Ongoing  
**Plan Goals Addressed:** Increase Public Awareness; Encourage Partnerships  
**Benefit-to Cost Review:** 4

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input checked="" type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**EARTHQUAKE Mitigation Actions (E)**

**ED-03-E-ST: Integrate new earthquake hazard mapping data for the City of Edmonds and improve technical analysis of earthquake hazards.**

**Ideas for implementation:**

- Update GIS system data.
- Install and train on HAZUS software; conduct HAZUS analysis.

**Coordinating Organization:** Edmonds Development Services

**Estimated Price:** \$100,000

**Funding Source:** General Fund/Grants

**Timeline:** 5 years

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery

**Benefit-to Cost Review:** 5

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-04-E-ST: Conduct non-structural retrofit activities.**

**Ideas for implementation:**

- Strap down and secure computers and other office equipment and machinery.
- Secure shelves, lockers, and furniture to walls.
- Conduct walk-throughs to ensure that heavy items are not stored overhead. Secure in place or move to safer locations.
- Mount computer servers on seismic isolation platforms, or use other appropriate technology to secure servers.
- Ensure facility water heaters are strapped securely to wall studs in accordance with current requirements.
- Secure ceiling tiles and light fixtures with wires.
- Secure the back-up generator and HVAC equipment for City Hall (Completed).
- Secure ducts and piping.
- Use plastic sleeves on fluorescent lighting tubes.
- Secure artwork.
- Replace untempered glass with tempered glass, or install polyester shatter-resistant film over existing glass.
- Install child-proof latches on drawers and cabinets in appropriate locations.

**Coordinating Organization:** Edmonds Public Works  
**Estimated Price:** \$150,000  
**Funding Source:** General Fund/Grants  
**Timeline:** 5 years, ongoing  
**Plan Goals Addressed:** Protect Life & Property; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery  
**Benefit-to Cost Review:** 5

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-05-E-ST: Encourage reduction of nonstructural and structural earthquake hazards in homes, schools, businesses, and government offices.**

**Ideas for implementation:**

- Provide information to all Edmonds School District, City and government departments and school facility managers and teachers on securing bookcases, filing cabinets, light fixtures, and other objects that can cause injuries and block exits.
- Explore partnerships to provide retrofitting classes for homeowners, renters, building professionals, and contractors.

**Coordinating Organization:** Edmonds School District; Edmonds Development Services

**Estimated Price:** \$20,000

**Funding Source:** General Fund/Grants

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships

**Benefit-to Cost Review:** 5

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-06-E-ST: Identify public buildings and infrastructure that require structural retrofitting.**

**Ideas for implementation:**

- Conduct a seismic survey of all public buildings and infrastructure.
- Coordinate with State to identify transportation infrastructure in Edmonds that requires seismic retrofits.

**Coordinating Organization:** Edmonds Public Works; Edmonds Development Services

**Estimated Price:** \$5,000

**Funding Source:** General Fund

**Timeline:** 2 years & ongoing

**Plan Goals Addressed:** Protect Life and Property; Encourage Partnerships; Provide for Emergency or Critical Services; Facilitate Continuity and Recovery

**Benefit-to Cost Review:** 5

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-07-E-ST: Identify funding sources for structural and nonstructural retrofitting of structures that are identified as seismically vulnerable.**

**Ideas for implementation:**

- Provide information for property owners, small businesses, and organizations on sources of funds (loans, grants, etc.).

**Coordinating Organization:** *Edmonds Chamber of Commerce; Edmonds Development Services*

**Estimated Price:** \$5,000

**Funding Source:** Grants

**Timeline:** Ongoing

**Plan Goals Addressed:** Increase Public Awareness; Encourage Partnerships

**Benefit-to Cost Review:** 4

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input checked="" type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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## FLOOD Mitigation Actions (F)

**ED-08-F-LT:** Enhance data and mapping for floodplain information within the city, and identify and map flood-prone areas outside of designated floodplains.

### Ideas for implementation:

- Apply for FEMA's cooperative technical partnership using the 2-foot contour interval floodplain mapping data in the City of Edmonds's GIS system.
- Update 100 yr flood plain maps in the Comprehensive Plan including the Edmonds tidal marshland, SR 104 and Dayton Street right of ways and the Port of Edmonds Harbor Square property.
- Use mapping data to update the flood-loss estimates for the City of Edmonds.

**Coordinating Organization:** Edmonds Development Services

**Estimated Price:** \$120,000

**Funding Source:** Grants

**Timeline:** 5 years (as funding allows)

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery; Protect Natural Systems

**Benefit-to Cost Review:** 4

<u>Approx Cost +</u>	<u>Effectiveness</u>	<u>=</u>	<u>Priority</u>
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED- 09-F-LT: Develop acquisition and management strategies to preserve opens space for flood mitigation, fish habitat, and water quality in the floodplain.**

**Ideas for implementation:**

- Continue to implement and require conservation easements for the Shell Creek Corridor by acquiring and managing floodplain open space in the City of Edmonds.
- Explore funding for property acquisition from federal (e.g., FEMA's Hazard Mitigation Grant Program), state, regional, and county governments, as well as private and non-profit organizations, trails programs, fish programs, as well as options for special appropriations.
- Develop a regional partnership between flood mitigation, fish habitat, and water quality enhancement organizations and programs to improve educational programs.
- Identify sites where environmental restoration work can benefit flood mitigation, fish habitat, and water quality.
- Work with landowners to develop flood management practices that provide healthy fish habitat.
- Identify existing watershed education programs and determine which programs would support a flood education component.

**Coordinating Organization:** Edmonds Public Works; Edmonds Executive Department; *Adopt-A-Stream Foundation*

**Estimated Price:** \$108,500

**Funding Source:** Storm Water Utility/General Fund/Grant

**Timeline:** 2 years (as funding allows)

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery; Protect Natural Systems

**Benefit-to Cost Review:** 5

<u>Approx Cost</u>	+	<u>Effectiveness</u>	=	<u>Priority</u>
<input type="checkbox"/> 1 – High		<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
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<input type="checkbox"/> 3 – Low		<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
				<input checked="" type="checkbox"/> 5
				<input type="checkbox"/> 6 – Highest

**LANDSLIDE Mitigation Actions (L)**

**ED-10-L-ST:** Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to live and property in hazard-prone areas.

**Ideas for implementation:**

- Incorporate landslide information into GIS mapping, and planning and the City of Edmonds Comprehensive Plan.
- Develop public information to emphasize economic risk when building on potential or historical landslide areas.
- Develop or attain public information brochures to educate the community on how to maintain and enhance slope stability.

**Coordinating Organization:** Edmonds Development Services

**Estimated Price:** \$25,000

**Funding Source:** Grants/General Fund

**Timeline:** 3 years

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery; Protect Natural Systems

**Benefit-to Cost Review:** 6

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input checked="" type="checkbox"/> 6 – Highest

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**ED-11-L-ST: Encourage construction and subdivision design by professional planning staff that can be applied to steep slopes to reduce the potential adverse impacts from development.**

**Ideas for implementation:**

- Continue to implement the City's Comprehensive Plan and Municipal Code that encourages the retention of natural features of the land and minimizes impacts to steep slopes.
- Work with the City of Edmonds Planning Commission and City Council to develop guidelines to mitigate and prevent landslides.

**Coordinating Organization:** Edmonds Development Services

**Estimated Price:** \$369,086

**Funding Source:** General Fund

**Timeline:** 1 year (Completed with adoption of new critical areas regulations)

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery; Protect Natural Systems

**Benefit-to Cost Review:** 5

<u>Approx Cost +</u>	<u>Effectiveness</u>	<u>=</u>	<u>Priority</u>
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-12-L-ST: Limit activities in identified potential and historical landslide areas through regulation and public outreach.**

**Ideas for implementation:**

- Analyze existing regulations regarding development in landslide prone areas. (Completed)
- Identify existing mechanisms for public outreach (e.g., watershed councils, etc.).

**Coordinating Organization:** Edmonds Development Services

**Estimated Price:** \$200,000

**Funding Source:** General Fund

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life & Property; Public Awareness; Encourage Partnerships

**Benefit-to Cost Review:** 5

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**SEVERE STORM Mitigation Actions (S)**

**ED-13-S-ST: Enhance public safety strategies for severe storm events.**

**Ideas for implementation:**

- Develop coordinated management strategies for accident prevention through de-icing roads, plowing roads, clearing roads of fallen trees, and clearing debris from public and private property.
- Enact management strategies.

**Coordinating Organization:** Edmonds Public Works  
**Estimated Price:** \$50,000  
**Funding Source:** Street Maintenance Fund  
**Timeline:** Ongoing  
**Plan Goals Addressed:** Protect Life & Property; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery  
**Benefit-to Cost Review:** 6

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input checked="" type="checkbox"/> 6 – Highest

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**ED-14-S-ST: Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe storms.**

**Ideas for implementation:**

- Partner with responsible agencies and organizations to design and implement programs that reduce risk to life, property, and utility systems.
- Develop partnerships between utility providers and City public works agencies to document known hazard areas.

**Coordinating Organization:** Edmonds Public Works; *Alderwood Water District; Snohomish County PUD; Puget Sound Energy*

**Estimated Price:** \$25,000

**Funding Source:** Utility Fund/Grants

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life & Property; Encourage Partnerships; Provide for Emergency & Critical Services

**Benefit-to Cost Review:** 5

<u>Approx Cost +</u>	<u>Effectiveness</u>	<u>=</u>	<u>Priority</u>
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-15-S-ST: Increase public awareness of severe storm mitigation activities.**

**Ideas for implementation:**

- Collect information on public education materials for protecting life, property, and the environment from severe storm events.
- Distribute educational materials to residents and public and private sector organizations regarding evacuation routes during road closures.
- Target the vulnerable or at-risk populace for disseminating preparedness information (seniors, medically fragile, etc.).

**Coordinating Organization:** Edmonds Fire Department; Edmonds Police Department; Edmonds School District; *Snohomish County PUD; Puget Sound Energy; ESCA*

**Estimated Price:** \$30,000

**Funding Source:** Utility Fund/General Fund/Grants

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships

**Benefit-to Cost Review:** 5

<u>Approx Cost +</u>	<u>Effectiveness</u>	=	<u>Priority</u>
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-16-S-ST:** Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during severe storm events.

**Ideas for implementation:**

- Partner with responsible agencies and organizations to design and disseminate education information to property owners to reduce risk from tree failure to life, property, and utility systems.
- Develop partnerships between utility providers and local public works agencies to document known hazard areas.
- Continue to identify potentially hazardous trees in urban areas.

**Coordinating Organization:** Edmonds Public Works; *Snohomish County PUD*

**Estimated Price:** \$10,000

**Funding Source:** Street Maintenance Fund

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery; Protect Natural Systems

**Benefit-to Cost Review:** 5

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input checked="" type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-17-S-LT: Require electrical utilities to use underground construction methods where possible to reduce power outages from severe storms.**

**Ideas for implementation:**

- Continue to require the use of underground utilities where possible to be consistent with the City of Edmonds Municipal Code.

**Coordinating Organization:** Edmonds Development Services;  
Snohomish County PUD

**Estimated Price:** \$50,000

**Funding Source:** General Fund

**Timeline:** Ongoing

**Plan Goals Addressed:** Protect Life & Property; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery

**Benefit-to Cost Review:** 6

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 3 – Low	<input checked="" type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input checked="" type="checkbox"/> 6 – Highest

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**TSUNAMI & SEICHE Mitigation Actions (T)**

None identified at this time.

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**VOLCANO Mitigation Actions (V)**

**ED-18-V-LT: Collaborate to develop ash fall models that are specific to the north King and south Snohomish Counties area.**

**Ideas for implementation:**

- Determine critical activities that must be implemented for varying degrees of ash fall.

**Coordinating Organization:** Edmonds Development Services;  
*Washington State Department of Natural Resources; ESCA*

**Estimated Price:** To be determined (low to medium cost)

**Funding Source:** Grants

**Timeline:** 5 years

**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships

**Benefit-to Cost Review:** 3

<u>Approx Cost +</u>	<u>Effectiveness</u>	<u>=</u>	<u>Priority</u>
<input type="checkbox"/> 1 – High	<input checked="" type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input type="checkbox"/> 2 – Medium		<input checked="" type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-19-V-LT: Develop and implement policy for maintaining stock of filters for key vehicles and pieces of equipment.**

**Ideas for implementation:**

- Identify key vehicles and equipment such as: back-up generators, fire and police vehicles, HVAC and/or other large or unusual equipment requiring filters.
- Establish policy and budget to maintain spare filters.

**Coordinating Organization:** Edmonds Executive Department; Edmonds Public Works; Edmonds Fire Department; Edmonds Police Department

**Estimated Price:** To be determined

**Funding Source:** General fund

**Timeline:** 5 years

**Plan Goals Addressed:** Protect Life & Property; Provide for Emergency & Critical Services; Facilitate Continuity and Recovery

**Benefit-to Cost Review:** 4

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**WILDLAND-URBAN INTERFACE FIRE Mitigation Actions (W)**

**ED-20-W-LT:** Enhance outreach and education programs aimed at mitigating wildland-urban interface fire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to natural causes.

**Ideas for implementation:**

- Visit neighborhoods and conduct education and outreach activities.
- Conduct specific community-based demonstration projects of fire prevention and mitigation in the urban interface.
- Establish neighborhood “drive-through” activities that pinpoint site-specific mitigation activities. Fire crews can give property owners personal suggestions and assistance.
- Perform public outreach and information outreach by holding open houses at fire stations. Allow the public to visit, see the equipment, and discuss wildland-urban interface fire mitigation with the crews.

**Coordinating Organization:** Edmonds Fire Department  
**Estimated Price:** To be determined  
**Funding Source:** General fund and grants  
**Timeline:** 4 years  
**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery; Protect Natural Systems  
**Benefit-to Cost Review:** 4

Approx Cost +	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High	<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium	<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low	<input type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
			<input type="checkbox"/> 5
			<input type="checkbox"/> 6 – Highest

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**ED-21-W-LT: Increase communication, coordination, and collaboration between wildland-urban interface property owners, city planners, fire prevention crews, and city officials to address risks, existing mitigation measures, and federal assistance programs.**

**Ideas for implementation:**

- Encourage all residences to practice fire plans and evacuation routes.
- Encourage a standard for the State Fire Marshall to evaluate fire plans and emergency plans.
- Require fire department notification of new business applications to ensure that appropriate fire plans have been developed.
- Have the City Planners and Planning Commission work closely with those who choose to build in the wildland-urban interface area to identify and mitigate conditions that aggravate fire hazards, including:
  - Limited access for emergency equipment due to width and grade of roadways.
  - Poor turn-around for emergency equipment.
  - Inadequate water supplies.
  - Spacing, consistency, and species of vegetation around structures.
  - Inadequate fuel breaks, or lack of defensible space.
  - Highly flammable construction materials.
  - Building lots and subdivisions that are not in compliance with state and local land use and fire protection regulations.
  - Inadequate entry/escape routes.
- Encourage all new homes and major remodels located in the interface to have fire-resistant roofs and residential sprinkler systems.

**Coordinating Organization:** Edmonds Fire Department  
**Estimated Price:** To be determined  
**Funding Source:** General Fund and Grants as available  
**Timeline:** Ongoing  
**Plan Goals Addressed:** Protect Life & Property; Increase Public Awareness; Encourage Partnerships; Provide for Emergency & Critical Services; Facilitate Continuity & Recovery  
**Benefit-to Cost Review:** 4

Approx Cost	+	Effectiveness	=	Priority
<input type="checkbox"/> 1 – High		<input type="checkbox"/> 1 – Low		<input type="checkbox"/> 2 – Lowest
<input checked="" type="checkbox"/> 2 – Medium		<input checked="" type="checkbox"/> 2 – Medium		<input type="checkbox"/> 3
<input type="checkbox"/> 3 – Low		<input type="checkbox"/> 3 – High		<input checked="" type="checkbox"/> 4
				<input type="checkbox"/> 5
				<input type="checkbox"/> 6 – Highest



# City of Edmonds Zoning Map

## Zoning Designations and Descriptions

### Single Family

- RS-1** Single-Family Residential
- RS-2** Single-Family Residential
- RS-3** Single-Family Residential
- RS-4** Single-Family Residential
- RS-5** Single-Family Residential
- RS-6** Single-Family Residential
- RS-7** Single-Family Residential

### Multi-Family

- MF-1** Multi-Family Residential
- MF-2** Multi-Family Residential
- MF-3** Multi-Family Residential

### Community

- CC-1** Community Center
- CC-2** Community Center
- CC-3** Community Center
- CC-4** Community Center
- CC-5** Community Center
- CC-6** Community Center
- CC-7** Community Center
- CC-8** Community Center
- CC-9** Community Center
- CC-10** Community Center
- CC-11** Community Center
- CC-12** Community Center
- CC-13** Community Center
- CC-14** Community Center
- CC-15** Community Center
- CC-16** Community Center
- CC-17** Community Center
- CC-18** Community Center
- CC-19** Community Center
- CC-20** Community Center
- CC-21** Community Center
- CC-22** Community Center
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- CC-46** Community Center
- CC-47** Community Center
- CC-48** Community Center
- CC-49** Community Center
- CC-50** Community Center

### Waterfront

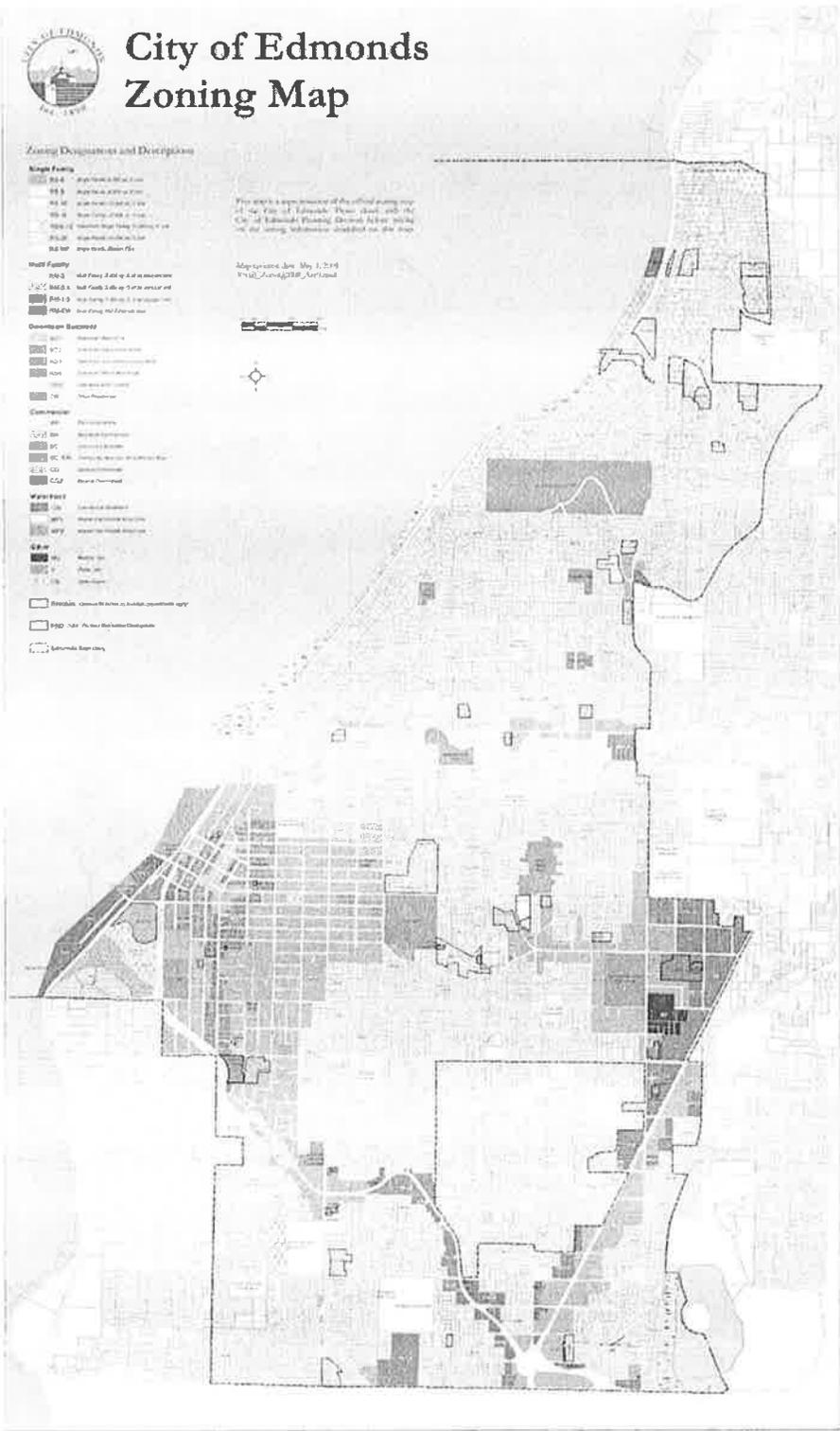
- WF-1** Waterfront Residential
- WF-2** Waterfront Residential
- WF-3** Waterfront Residential

### Other

- O-1** Office
- O-2** Office
- O-3** Office
- O-4** Office
- O-5** Office
- O-6** Office
- O-7** Office
- O-8** Office
- O-9** Office
- O-10** Office
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- O-49** Office
- O-50** Office

This map is a reproduction of the official zoning map of the City of Edmonds. Please check with the City of Edmonds Planning Director before making any zoning-related decisions on this map.

Map prepared by: May 1, 2010  
File: Zoning2010\_Aerial.mxd



<sup>1</sup> Washington Office of Financial Management, Forecasting Division.