



WHATCOM COUNTY

Contact Information

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Approving Authority

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Planning Process

Whatcom County began the process reviewing, updating, and adopting the 2021 Natural Hazards Mitigation Plan (NHMP or Plan) in the winter of 2020. Biweekly county wide meetings took place to guide Whatcom County through updating the plan. The planning process involved all local political subdivisions in Whatcom County as well as several special districts. The wider Whatcom County community was invited to participate through multiple webinars and outreach efforts.

Key Contributor List

- Wally Kost, Program Specialist, Whatcom County Sheriff's Office, Div. of Emergency Management
- John Gargett, Deputy Director, Whatcom County Sheriff's Office, Div. of Emergency Management
- Frances Burkhart, Program Specialist, Whatcom County Sheriff's Office, Div. of Emergency Management
- Roland Middleton, Whatcom County Public Works
- Paula Harris, River and Flood Manager, Whatcom County Public Works
- Andy Wiser, Geohazard Specialists/Planner, Whatcom County Planning and Development Services

The information contained in the Natural Hazards Mitigation Plan update regarding hazards, risks, vulnerability and potential mitigation is based on the available science, historical



occurrence, known hazards and technology available. This information is used as a planning tool and source document when the County updates other plans and programs, such as the following:

- Whatcom County Comprehensive Emergency Management Plan
- Shoreline Management Program (part of comprehensive plan)
- Transportation Plan (part of comprehensive plan)
- Urban Growth Areas SubArea Plans
- Zoning Code
- Capital Improvement Program for Whatcom County Facilities
- Whatcom County Comprehensive Emergency Management Plan
- Whatcom County Disaster Debris Management Plan
- Whatcom County Severe Storm Action Plan
- Whatcom County Tsunami Action Plan
- Whatcom County Mount Baker Action Plan

As information becomes available from other planning sources, actual incidents and events, or emerging threats that can enhance this Plan, that information will be incorporated through the periodic update process.

Plan Maintenance for Whatcom County

Each year, beginning in August, an annual review will be conducted by each community. Each community will update the status of their 2021-2025 mitigation actions using the annual review and progress table.

The Whatcom County Sheriff's Office Division of Emergency Management will initiate the action. Updates or changes to the plan will be annotated and submitted to the Whatcom County Sheriff's Office Division of Emergency Management. Should the plan require a major change(s) due to legislative or other action, a virtual public meeting will be coordinated by the Whatcom County Sheriff's Office Division of Emergency Management. The update process will be completed when a letter or amendment, as required, is sent to the Washington Military Department, Emergency Management Division Hazard Mitigation Officer stating completion of the review.

Public Outreach and Education

Exhibit A



Program	Yes/No, Year Adopted	Description
<p>Nonprofit organizations or local residents' groups focused on hazard mitigation, emergency preparedness, vulnerable populations, etc.</p>	<p>Yes</p>	<p>Map Your Neighborhood: prepares residents for the span of time when emergency services are unavailable during a disaster.</p> <p>CERT: Community Emergency Response Training prepares residents to safely and efficiently assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help.</p> <p>Volunteer Mobilization Center: The VMC is dedicated to being ready after a disaster to sign up spontaneous volunteers as temporary State emergency workers and matching their skills with emergency responders' needs.</p>
<p>School-related programs for natural hazard safety</p>	<p>Yes, 2015-2021</p>	<p>Emergency preparedness education programs for school staff in multiple Whatcom County School Districts.</p>
<p>Public education or information program</p>	<p>Yes, Continuous</p>	<p>Public Engagement: Drills, exercises in homes, workplaces, classrooms, etc.; Regular PSA and social media posts; Hazard "safety fairs"; hazard conferences, seminars; Distribution of severe weather guides, preparedness handbooks, brochures homeowner's retrofit guide, etc.; Direct Mailings; Regular newspaper articles</p> <p>Whatcom County Sheriff's Office Division of Emergency Management</p> <p>Annual correspondence: Notify residents reminding them of the need to be hazard prepared.</p>

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<p>StormReady certification</p>	<p>Yes, first adopted in 2003, and has been renewed every five years since with the most recent renewal being 2021.</p>	<p>Whatcom County is one of 14 counties in Washington State to be certified StormReady. StormReady uses a grassroots approach to help communities develop plans to handle all types of extreme weather.</p>
<p>Firewise Community certification</p>	<p>Yes, initially started in 2015.</p>	<p>There are six FireWise sites in Whatcom County: Clark’s Point, The Town of Diablo, Lummi Island Scenic Estates, The Town of Newhalen, North Cascades Environmental Learning Center, and Paradise Lakes Country Club. The national Firewise USA® recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. Any community that meets a set of voluntary criteria on an annual basis and retains an “In Good Standing Status” may identify itself as being a Firewise® Site.</p>
<p>Public-Private Partnership initiatives addressing disaster-related issues</p>	<p>Yes, 2015</p>	<p>The Whatcom County Sheriff’s Office Division of Emergency Management has undertaken multiple disaster planning and response support with industries in Whatcom County, including response support and planning in 2020 for COVID-19 and the Custer Train Derailment.</p>
<p>Other</p>		



Overview of Whatcom County, Hazards, and Assets

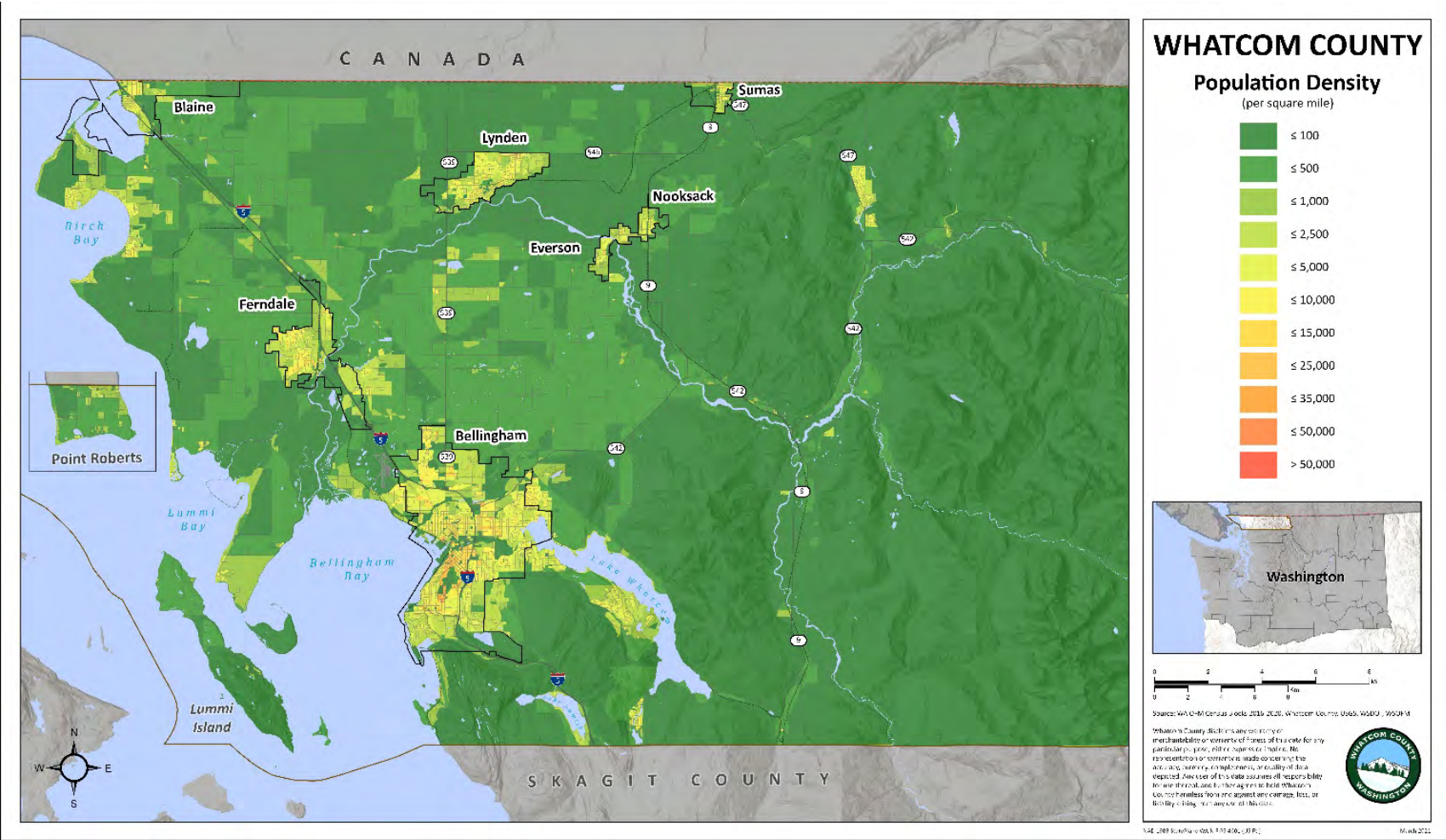
Geography of Whatcom County

Whatcom County Total Population	228,000 (2020 Census estimate)
Unincorporated Area Population	95,300 (2020 Census estimate)
Whatcom County Total Area	2,120 mi
Whatcom County Incorporated Area	95.4 mi
Whatcom County Unincorporated Area	2,024.6 mi

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Washington State Office of Financial Management (OFM) 2020 population and housing estimates for 2010-2020 census block data. This map uses the 2016-2020 average population to show population density per square mile.

Growth Trends

This map displays the UGA for the Whatcom County, as designated by the Whatcom County Comprehensive Plan.

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SECTION 3: JURISDICTION PROFILES AND MITIGATION ACTION PLANS – WHATCOM COUNTY

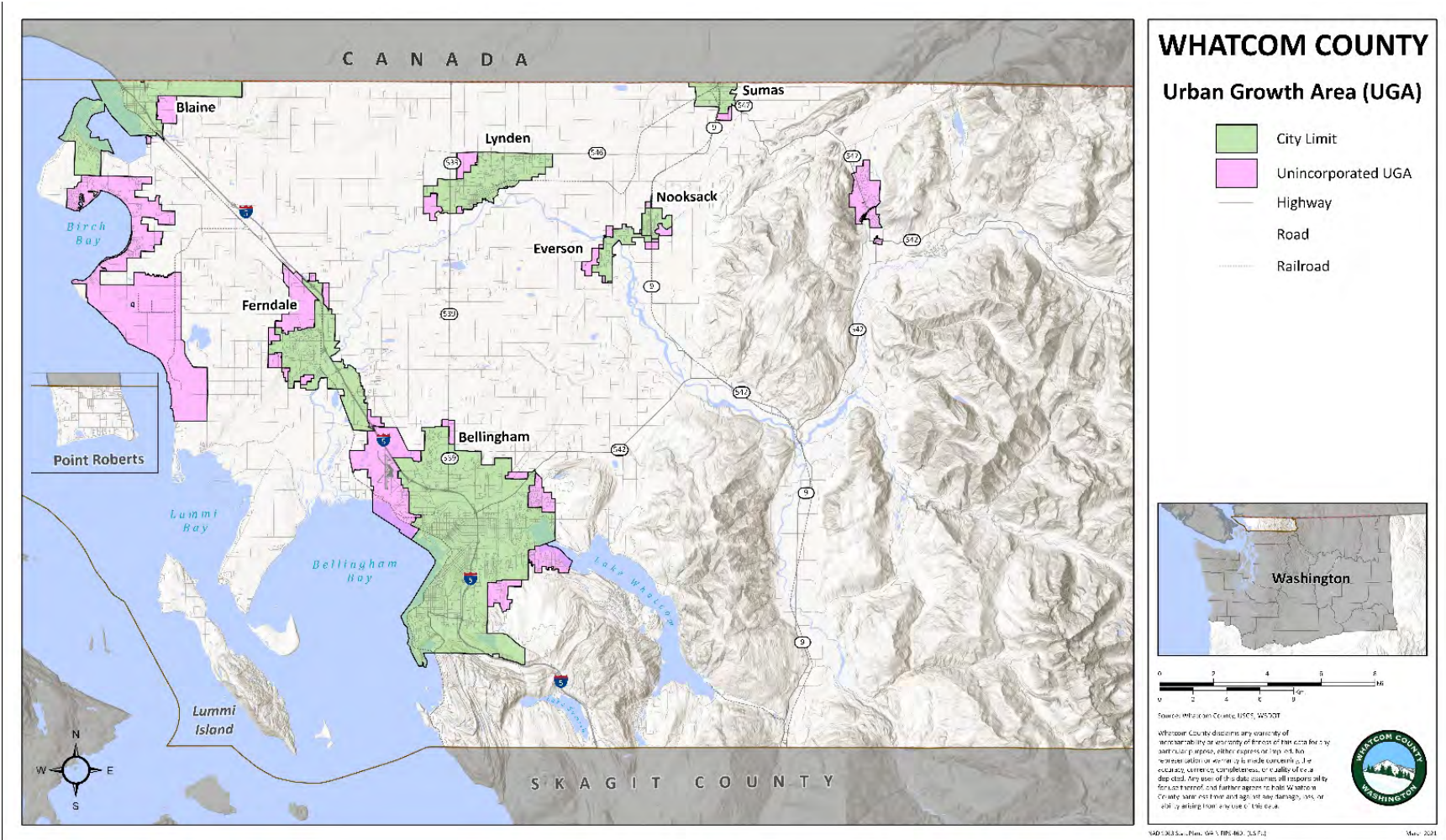


Exhibit A



Presence of Hazards and their Impacts in Whatcom County

Since its establishment in 1854, Whatcom County has experienced many of the hazards in this Plan. As recently as January of 2020, Whatcom County faced flooding costing millions of dollars in damages, across the County, with specific impact in the Sumas drainage. There have been four FEMA disaster declarations by Whatcom County from January 2016 to June 2021, including:

Declaration Year	Incident Date	Designation	Title	Individual Assistance	Public Assistance ²
2017	30-Jan-2017 thru 22-Feb-2017	DR-4309-WA	Severe Winter Storms, Flooding, Landslides, and Mudslides in 2017	x	✓ Types A, B, C, D, E, F, and G
2019	10-Dec-2018 thru 24-Dec-2018	DR-4418-WA	Straight-Line Winds, Flooding, Landslides, and Tornado	x	✓ Types A, B, C, D, E, F, and G
2020	20-Jan-2020 thru 10-Feb-2020	DR-4539-WA	Severe Storms, Flooding, Landslides, and Mudslides	x	✓ Types A, B, C, D, E, F, and G
2020	22-Mar-2020 ¹ thru unknown	DR-4481-WA	Covid-19 Pandemic	✓ (crisis counseling; funeral assistance)	✓ Type B

¹Emergency declaration on 13-Mar-2020, superseded by disaster declaration on 22-Mar-2020.

²Public Assistance Types: A-debris removal, B-emergency protective measures, C-permanent work (roads and bridges), D-permanent work (water control facilities), E-permanent work (buildings and equipment), F-permanent work (utilities), G- permanent works (other) , H-fire management.

Since 2016, Whatcom County Unincorporated has grown by roughly 5,000 residents. This growth has increased the threat of natural hazards, particularly wildfires in the wildland urban interface.

In the table below is a list of the major hazards that effect Whatcom County. The second column provides the percentage of Whatcom County’s total area that is exposed to each hazard. The third column indicates the severity of anticipated impacts to community function, considering the credible worst-case hazard scenario. Severity of anticipated impacts considers

Exhibit A



effects on basic community function such as shelter, transportation, utilities, commerce, industry, agriculture, education, health, recreation, and cultural identity. Severity ranges from none to extreme, as shown in the key below the table. Finally, the last column of the table describes where the hazard impacts the community and which services the hazard would most significantly impact.

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	Hazard	% area Exposed	Severity of Anticipated Impacts	Hazard Descriptions
Geological	Earthquake	86.4%	Moderate to High	The risk of earthquakes to the county is moderate to high. Shorelines, wetlands and river/stream beds are especially subject to damage through liquefaction. There are also potential threats from landslides impacting transportation routes. Structural damage could be moderate to high for many older structures in Whatcom County.
	Liquefaction	25.5%	Moderate to High	The loss of intergranular strength in saturated, loosely-packed sediment due to elevated pore pressures typically generated by seismic shaking during large magnitude earthquakes. Liquefaction can result in a loss of foundation bearing support and significant building damage, as well as lateral spreading, sand boils, and excessive ground settlement with associated disruption of utilities, roadway systems, and infrastructure.
	Landslide	5.8%	Moderate	Landslides can affect many places throughout the county, caused destruction to infrastructure, property, and interrupting transportation. Landslides could be caused by earthquakes or erosion, including excess rainfall. Mount Baker, the Chuckanut Mountains, and the Nooksack are just some of the areas susceptible to landslides.
	Volcano	33.9%	High	The principal threat from Mount Baker are lahar flows. Lahar flows to the west will impact the Nooksack drainages, with the potential for the greatest impact in the Sumas Plain north to British Columbia. Lahar flows to the east will, and have (1975), threatened the Baker River project

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				dams. In 2019 it was estimated that the damage from an eruption of Mount Baker could reach 12-15 billion dollars in damage and long-term impact.
	Tsunami	1.2%	Low	All Whatcom County shorelines are at risk of tsunami damage based on current modeling, however the only area in unincorporated Whatcom County where evidence of a tsunami has been found is in Birch Bay at Birch Bay State Park.
	Mine Hazards	0.1%	Low	Mine hazards are minimal in Whatcom County and generally the mines are deep enough that even a collapse of the shafts would have minimal impact on the surface. Coal mining occurred in Whatcom County over 100 years ago, but there are no active coal mines since then.
Hydrological	Flooding	4.8%	Moderate	<p>The Nooksack River is the primary river basin subject to flooding in Whatcom County that causes significant impacts, however there are other rivers and creeks that cause flooding, including Johnson Creek, Sumas River, and Jones Creek. All Whatcom County shorelines are at risk of coastal flooding based on actual events over the last 100 years.</p> <p>The communities in unincorporated Whatcom County impacted by coastal flooding are Sandy Point, Birch Bay, Blaine, Point Roberts, and Lummi Peninsula and Lummi Island. Damages have included structural damage to residences, seawalls and transportation as large debris is carried by waves hitting the shoreline, inundation damage to structures, and debris accumulation and flooding of roadways. In December of 2018 over 3.5 million dollars in damage occurred in Birch Bay and Blaine from coastal flooding.</p>

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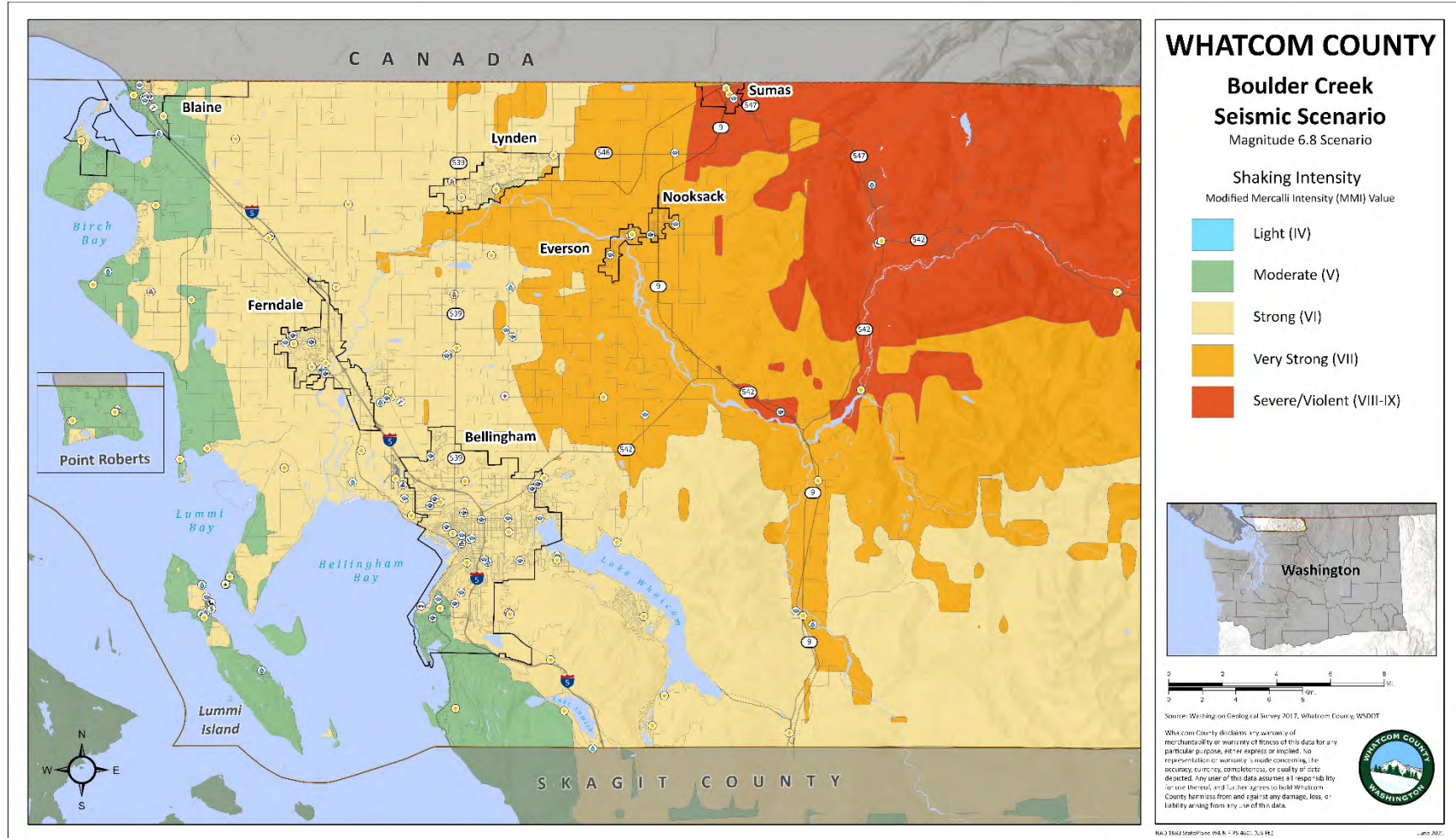
Meteorological	Wildfire	12.3%	Moderate	<p>Certain communities at risk have been identified, as well as levels of fire risk. Smaller communities on the Mt Baker Highway, as well as residents around the North and South shore of Lake Whatcom, along Highway 2 and 542, Pt. Roberts, and Lummi Island are some of the the WUI intermix and interface areas and at the highest risk.</p>
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Severity Scale: **None** = no impact to community function
Low = minor degradation of community functions, not widespread
Moderate = moderate degradation over multiple weeks or widespread
High = degradation or loss over many weeks, widespread



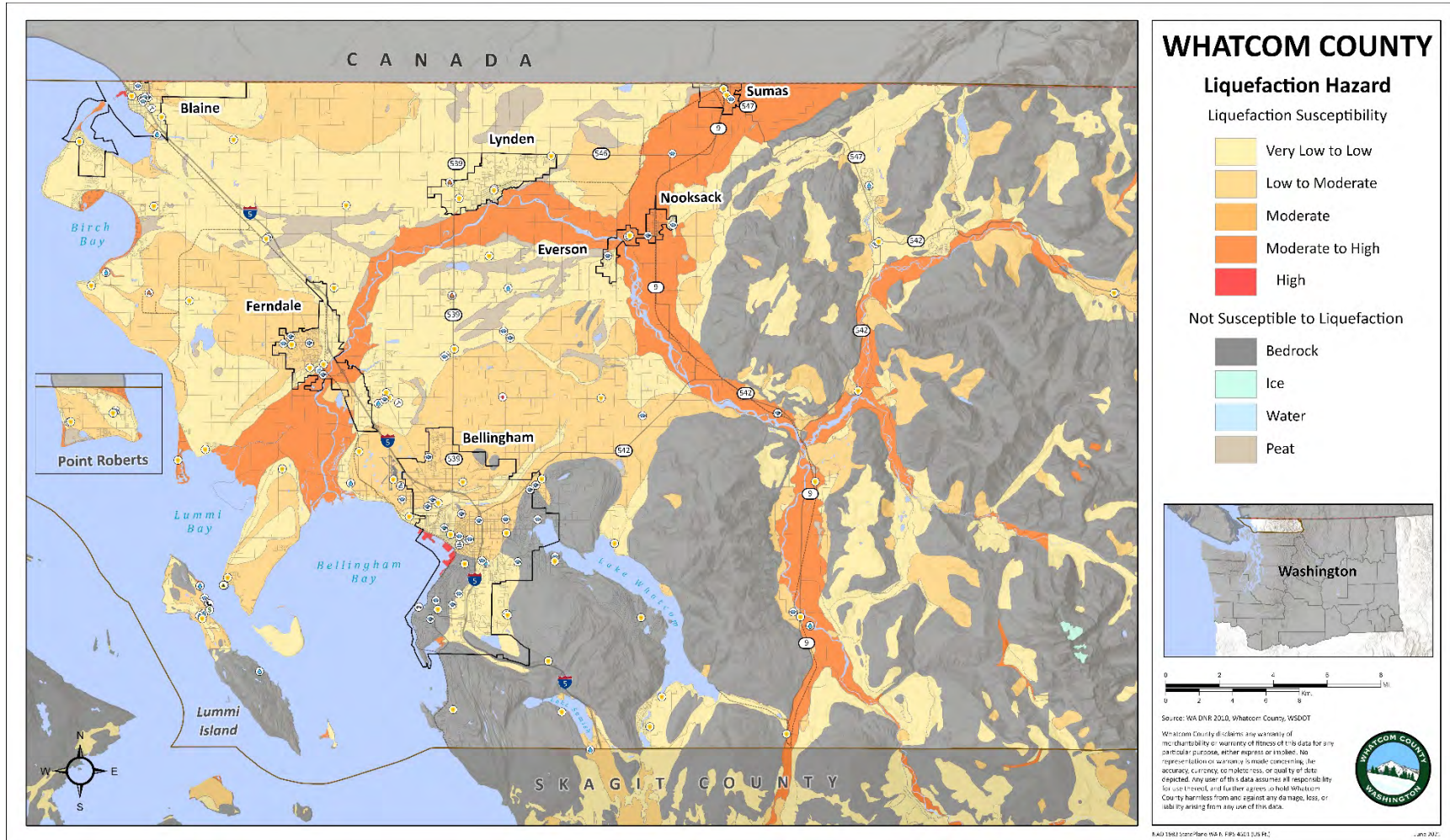
Natural Hazard Maps

The following figures depict the natural hazards present within the jurisdiction.



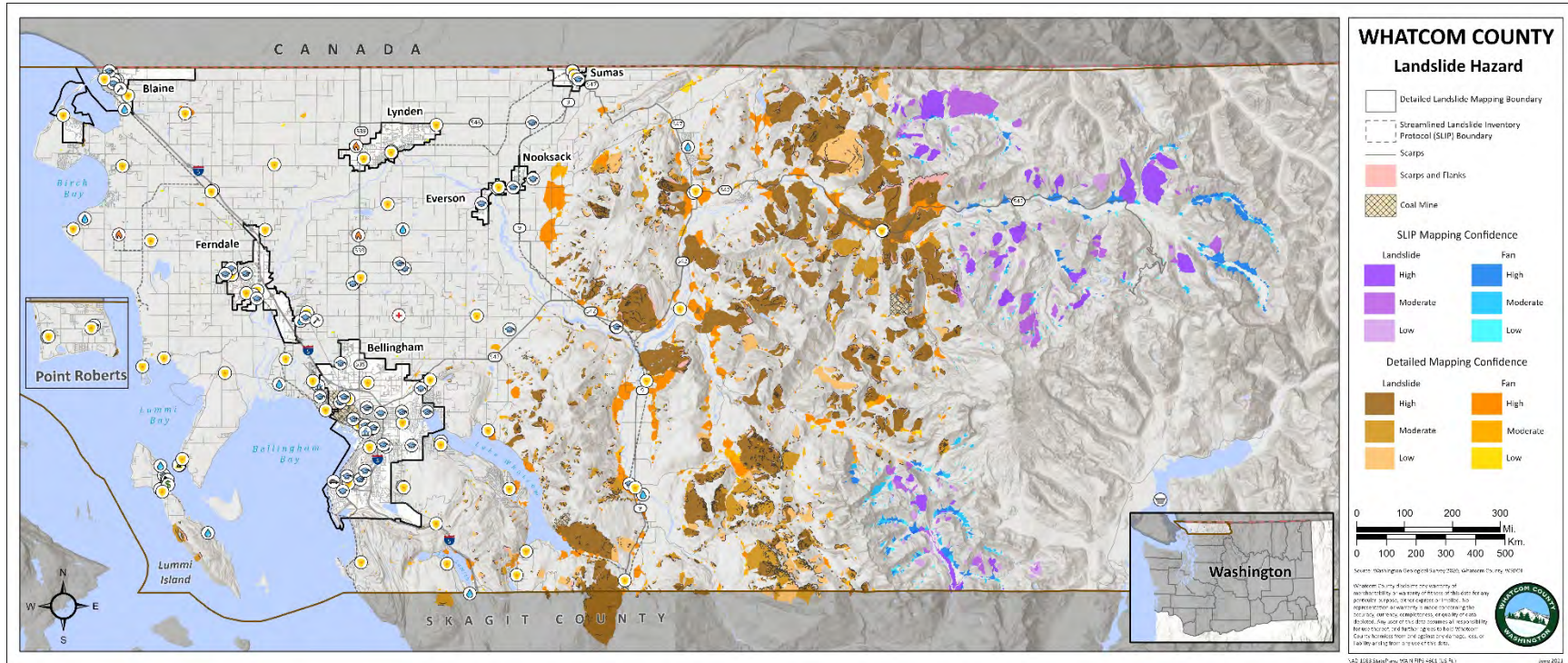
Washington Department of Natural Resources (WA DNR) 2017 Boulder Creek Fault Zone seismic scenario of magnitude 6.8 data. Displays extent and severity of the modeled earthquake in the Modified Mercalli Intensity (MMI) scale.

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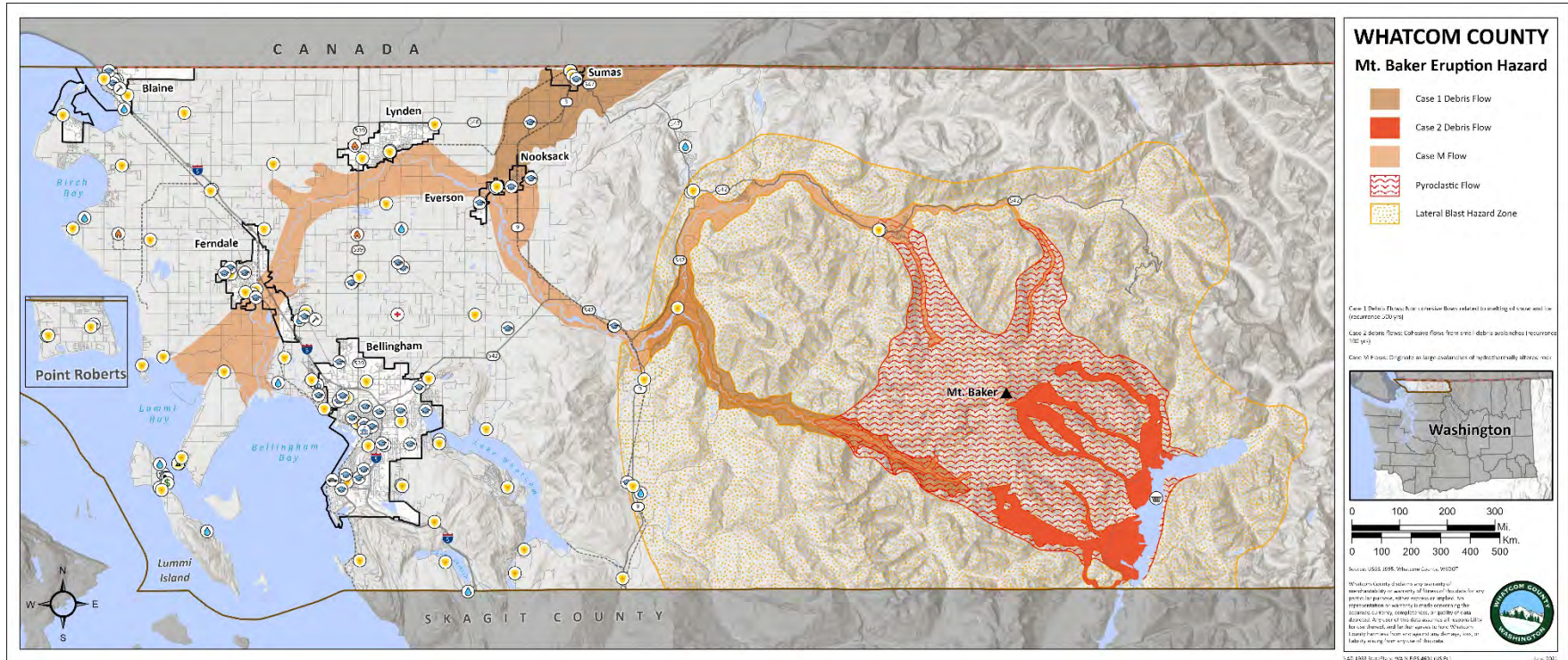
Washington Department of Natural Resources (WA DNR) 2010 liquefaction susceptibility data. This feature class is part of a geodatabase that contains statewide ground response data for Washington State.

Exhibit A



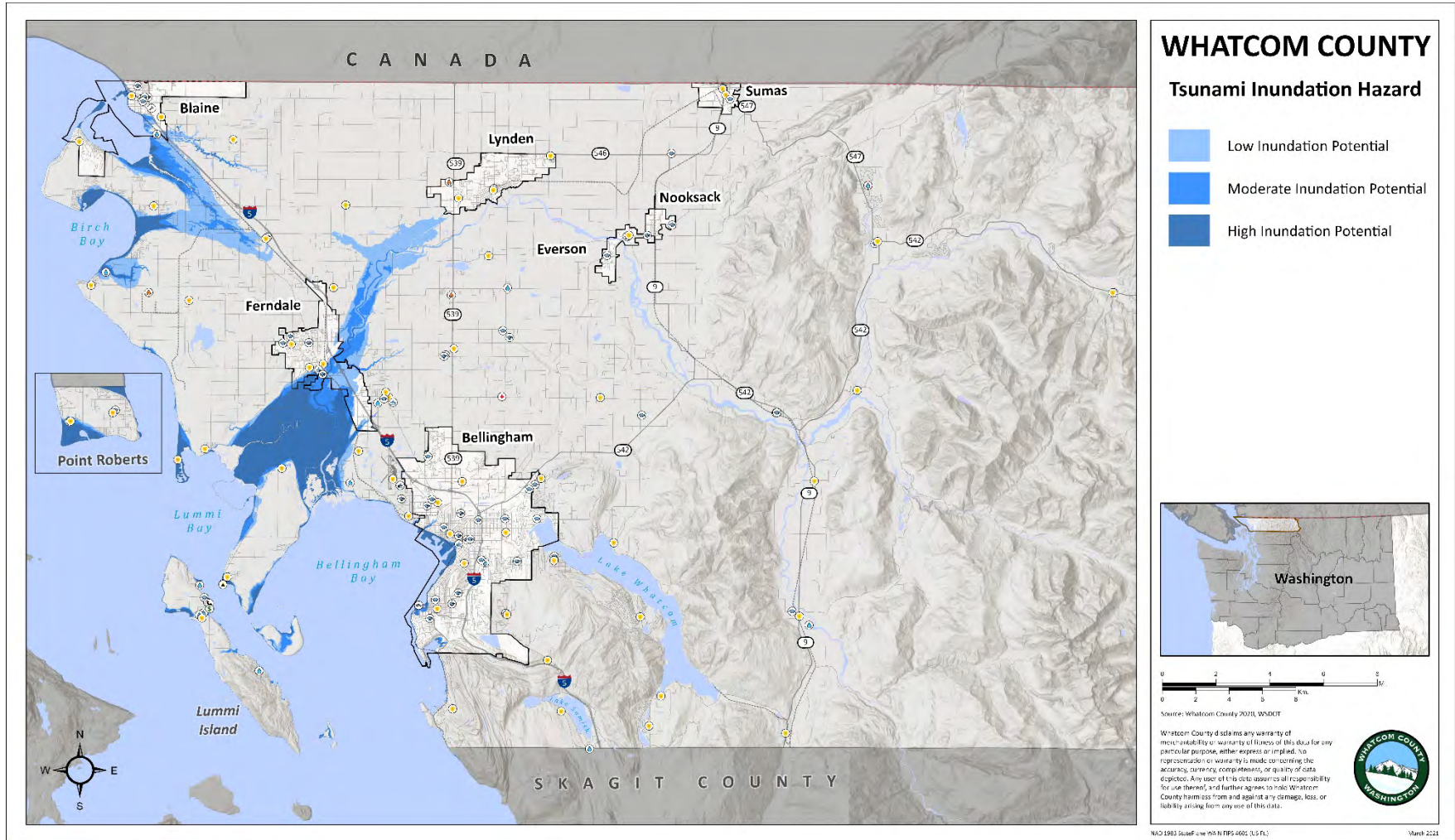
Washington Geological Survey (WGS) 2020 Washington landslide inventory data compiled following streamline landslide mapping protocol (SLIP). SLIP was developed by the WGS's Landslide Hazards Program to help geologists rapidly map landslide landforms from lidar. This data shows both detailed mapping and SLIP landslide data.

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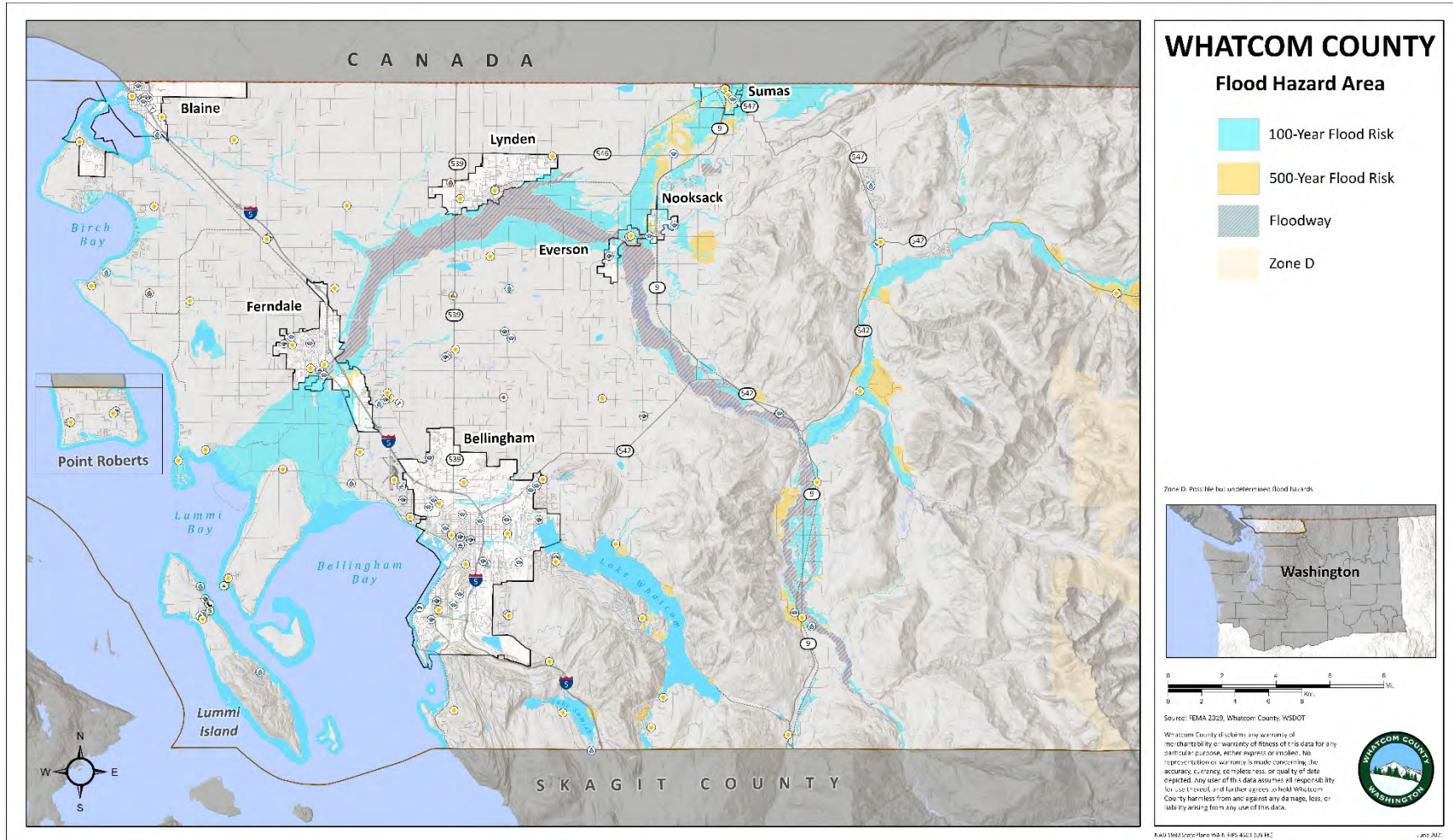


USGS Hazards from Future Activity of Mount Baker, WA (1995) data shows different volcanic flows. Case M flows originate as large avalanches of hydrothermally altered rock. Case 1 debris flows are non-cohesive flows related to melting of snow and ice, with a recurrence of 500 years. Case 2 debris flows are cohesive flows from small debris avalanches, with a recurrence of 100 years.

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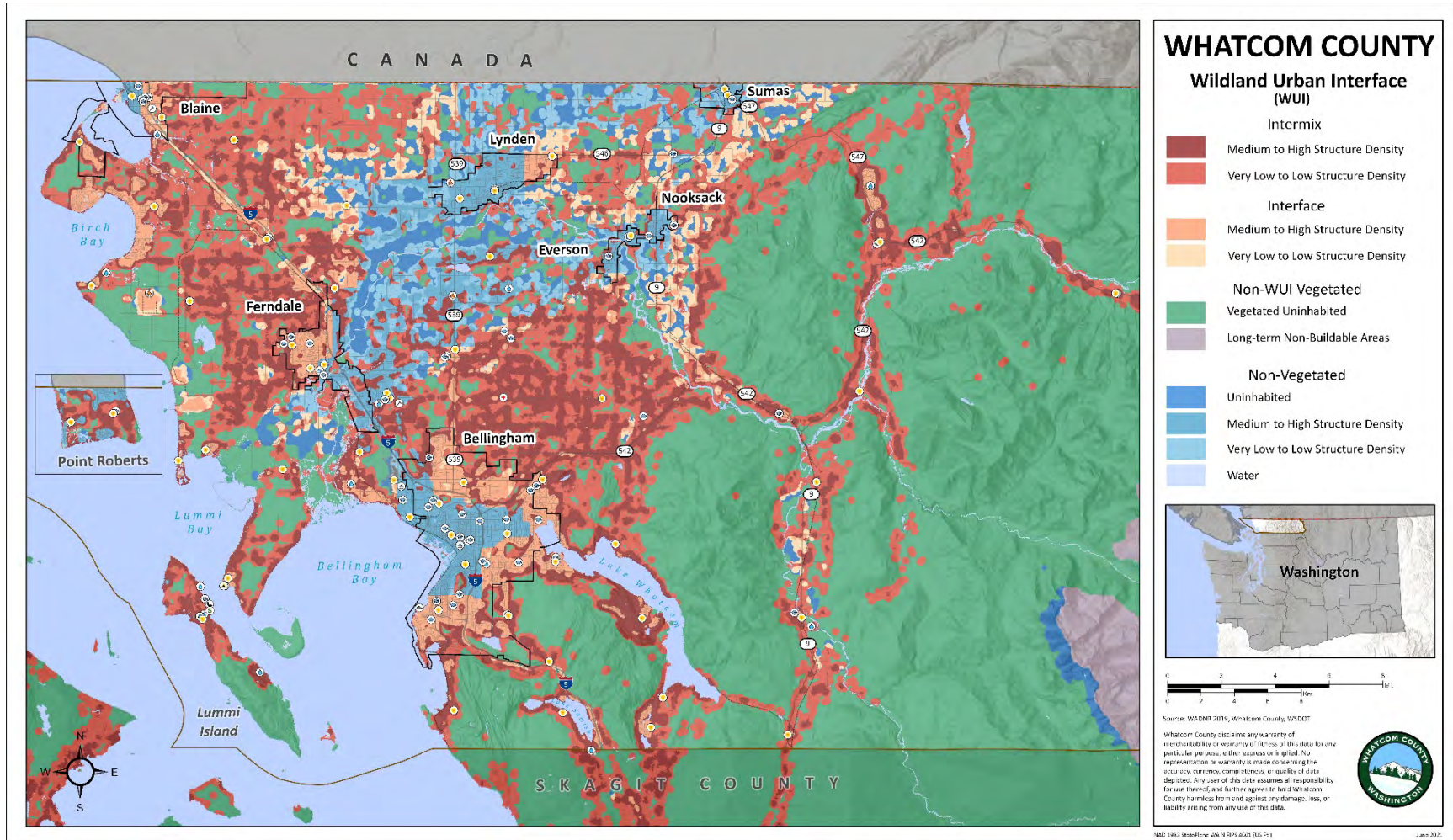


Whatcom County 2020 tsunami inundation data. Assumes, magnitude 9.0 Cascadia Subduction Zone earthquake-induced tsunami scenario. This scenario predicts a maximum wave height of about 9.6 feet, which could come on top of a 10 ft high tide. Additionally, tsunami inundation can be “funneled” into bays, river and stream deltas, pushing water well inland of the coast and past 20 ft elevation.



FEMA 2019 flood hazard data showing 100-year flooding, 500-year flooding, floodways, and flood zones. FEMA flood data includes both riverine and coastal flooding.

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Washington Department of Natural Resources (WA DNR) 2019 mapped data of Washington’s Wildland Urban Interface (WUI). The WUI displays areas of WA where structures and wildland overlap with specific structure densities.

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Whatcom County Critical Facility List

While this section of the Whatcom County Natural Hazards Mitigation Plan focuses on unincorporated Whatcom County, the list of critical facilities includes all critical facilities in the county, whether located in the unincorporated section of the county or within a city limit. First response critical facilities, in particular, engage in mutual aid; fire and police stations in a city also support response in unincorporated county. Water and sewage pumping stations and treatment sites are often located in unincorporated county while servicing cities and vis-versa. School district boundaries do not always follow city boundaries; during a disaster, schools may serve as educational site and/or mass care sites and serve residents beyond their traditional school catchment area.

Facility Name	Facility Type	Significance	Location	Assessed Dollar Value	Notes
Columbia Valley Water District	LUS	3	6229 Azure Way, Maple Falls, WA 98266		Water District
Beach School Elementary School	EF	1	3786 Centerview Road		Shelter for Lummi Island Residents
Fairhaven Alaskan Ferry Terminal	EF	3	355 Harris Ave, Bellingham, WA 98225		Southern terminus of Alaska Marine Highway system.
Gooseberry Point Ferry Dock	EF	3	Lummi View Drive		Ferry dock for Lummi Island
Isle Aire Beach Association	LUS	2	P.O. Box 211		Water District on Lummi Island
LISECC	LUS	2	1211 Island Drive		Water District on Lummi Island
Lummi Island Dock	EF	3	N Nugent Road		Ferry dock for Lummi Island
Lummi Island Grange	EF	1	2210 N. Nugent Road		Shelter for Lummi Island Residents
Lummi Island Post Office	EF	1	2211 N Nugent Road		Post Office for Lummi Island
Lummi Point Water	LUS	3	3766 Blizzard Rd.		Water District on Lummi Island
Owners Association	LUS	3	2174 Granger Way		Utility: Water

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Beach Club Condos					
Puget Sound Energy Switch	LUS	3	Gooseberry Point		Utility: Power for Lummi Island
Sunset Water and Maintenance Association	LUS	3	2040 Granger Way		Utility: Water
					Private contractor, not essential
The Islander	EF	1	2130 S. Nugent Road		Lummi Island Store
Vander Yacht Propane	LUS	3	6811 WA-539, Lynden, WA 98264		Largest propane distributor in Whatcom County with thousands of customers and serves the San Juan Islands
Whatcom Farmers Co-op	LUS	3	2041 Agronomy Way, Lynden, WA 98264		propane distributor in Whatcom County with thousands of customers
Lummi Law & Order	EF	3	Lummi Reservation		Lummi Police
Nooksack Police Department	EF	3	111 W Main St, Everson, WA 98247		Nooksack Police
Northwest Water Association	LUS	3	5207 Graveline Rd, Bellingham, WA 98226		Utility: Water
Pole Road Water Association	LUS	3	6912 Hannegan Rd #105, Lynden, WA 98264		Utility: Water
Alderwood Elementary School	EF	1	3400 Hollywood Avenue, Bellingham, WA 98225-1134		School, possible shelter, distribution site or staging area.
Birchwood Elementary School	EF	1	3200 Pinewood Avenue, Bellingham, WA 98225-1436		School, possible shelter, distribution site or staging area.
Carl Cozier Elementary School	EF	1	1330 Lincoln Street, Bellingham WA 98229-6238		School, possible shelter, distribution site or staging area.

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Columbia Elementary School	EF	1	2508 Utter Street, Bellingham WA 98225-2708	School, possible shelter, distribution site or staging area.
Cordata Elementary School	EF	1	4420 Aldrich Road, Bellingham, WA 98226-9680	School, possible shelter, distribution site or staging area.
Geneva Elementary School	EF	1	1401 Geneva Street, Bellingham WA 98229-5218	School, possible shelter, distribution site or staging area.
Happy Valley Elementary School	EF	1	1041 24th Street, Bellingham WA 98225-8603	School, possible shelter, distribution site or staging area.
Lowell Elementary School	EF	1	935 14th Street, Bellingham WA 98225-6305	School, possible shelter, distribution site or staging area.
Northern Heights Elementary School	EF	1	4000 Magrath Road, Bellingham WA 98226-1729	School, possible shelter, distribution site or staging area.
Parkview Elementary School	EF	1	3033 Coolidge Drive, Bellingham WA 98225-1803	School, possible shelter, distribution site or staging area.
Roosevelt Elementary School	EF	1	2900 Yew Street, Bellingham WA 98226-6127	School, possible shelter, distribution site or staging area.
Silver Beach Elementary School	EF	1	4101 Academy Street, Bellingham WA 98226-4443	School, possible shelter, distribution site or staging area.
Sunnyland Elementary School	EF	1	2800 James Street, Bellingham WA 98225-2639	School, possible shelter, distribution site or staging area.
Wade King Elementary School	EF	1	2155 Yew Street Road, Bellingham, WA 98229-8812	School, possible shelter, distribution site or staging area.
Fairhaven Middle School	EF	1	110 Parkridge Road, Bellingham WA 98225-7907	School, possible shelter, distribution site or staging area.
Kulshan Middle School	EF	1	1250 Kenoyer Drive, Bellingham WA 98229-2346	School, possible shelter, distribution site or staging area.

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Shuksan Middle School	EF	1	2717 Alderwood Avenue, Bellingham WA 98225-1222	School, possible shelter, distribution site or staging area.
Whatcom Middle School	EF	1	810 Halleck Street, Bellingham WA 98225-3243	School, possible shelter, distribution site or staging area.
Bellingham High School	EF	1	2020 Cornwall Avenue, Bellingham WA 98225-3648	School, possible shelter, distribution site or staging area.
Options High School	EF	1	2015 Franklin Street, Bellingham WA 98225-4220	School, possible shelter, distribution site or staging area.
Sehome High School	EF	1	2700 Bill McDonald Parkway, Bellingham WA 98225-5909	School, possible shelter, distribution site or staging area.
Squalicum High School	EF	1	3773 E McLeod Road, Bellingham WA 98226-7728	School, possible shelter, distribution site or staging area.
Blaine High School	EF	1	1055 H Street Blaine, WA 98230	School, possible shelter, distribution site or staging area.
Blaine Middle School	EF	1	975 H Street Blaine, WA 98230	School, possible shelter, distribution site or staging area.
Blaine Elementary School	EF	1	836 Mitchell Avenue Blaine, Washington 98230	School, possible shelter, distribution site or staging area.
Blaine Primary School	EF	1	820 Boblett Street Blaine, WA 98230	School, possible shelter, distribution site or staging area.
Point Roberts Primary School	EF	1	2050 Benson Road Pt. Roberts, WA 98281	School, possible shelter, distribution site or staging area.
Irene Reither Elementary School	EF	1	954 East Hemmi Road Everson, WA 98247	School, possible shelter, distribution site or staging area.

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Meridian Middle School	EF	1	861 Ten Mile Road Lynden, WA 98264	School, possible shelter, distribution site or staging area.
Meridian High School	EF	1	194 West Laurel Road Bellingham, WA 98226	School, possible shelter, distribution site or staging area.
Acme Elementary School	EF	1	5200 Turkington Rd, Acme, WA 98220	School, possible shelter, distribution site or staging area.
Harmony Elementary School	EF	1	5060 Sand Rd, Bellingham, WA 98226	School, possible shelter, distribution site or staging area.
Kendall Elementary School	EF	1	7547 Kendall Rd, Maple Falls, WA 98266	School, possible shelter, distribution site or staging area.
Mt. Baker Junior/Senior High School	EF	1	4936 Deming Rd Deming, WA 98244	School, possible shelter, distribution site or staging area.
Ferndale High School	EF	1	5830 Golden Eagle Drive PO Box 428 Ferndale WA 98248	School, possible shelter, distribution site or staging area.
Horizon Middle School	EF	1	2671 Thornton Road PO Box 1769 Ferndale WA 98248	School, possible shelter, distribution site or staging area.
Vista Middle School	EF	1	6051 Vista Drive PO Box 1328 Ferndale WA 98248	School, possible shelter, distribution site or staging area.
Beach Elementary School	EF	1	3786 Centerview Road Ferndale WA 98262	School, possible shelter, distribution site or staging area.
Cascadia Elementary School	EF	1	6175 Church Road PO Box 2009 Ferndale WA 98248	School, possible shelter, distribution site or staging area.
Central Elementary School	EF	1	5610 Second Avenue PO Box 187 Ferndale WA 98248	School, possible shelter, distribution site or staging area.
Custer Elementary School	EF	1	7660 Custer School Road Custer WA 98240	School, possible shelter, distribution site or staging area.

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Eagleridge Elementary School	EF	1	2651 Thornton Road PO Box 1127 Ferndale WA 98248		School, possible shelter, distribution site or staging area.
Skyline Elementary School	EF	1	2225 Thornton Road PO Box 905 Ferndale WA 98248		School, possible shelter, distribution site or staging area.
North Bellingham Learning Center (Ferndale Schools)	EF	1	5275 Northwest Drive Bellingham, WA 98226		School, possible shelter, distribution site or staging area.
Nooksack Valley High School	EF	1	3326 E. Badger Rd. Everson, WA 98247		School, possible shelter, distribution site or staging area.
Nooksack Valley Middle School	EF	1	404 W. Columbia Everson, WA 98247		School, possible shelter, distribution site or staging area.
Everson Elementary School	EF	1	216 Everson Goshen Rd Everson, WA 98247		School, possible shelter, distribution site or staging area.
Nooksack Elementary School	EF	1	3333 Breckenridge Rd Everson, WA 98247		School, possible shelter, distribution site or staging area.
Sumas Elementary School	EF	1	1024 Lawson St Sumas, WA 98295		School, possible shelter, distribution site or staging area.
Whatcom County Search & Rescue	EF	3	1041 W Smith Rd, Bellingham, WA 98226		
Seattle City Light Ross Dam	LUS	3	Newhalem		Utility: Power
Seattle City Light Diablo Dam	LUS	3	Newhalem		Utility: Power
Seattle City Light Gorge Dam	LUS	3	Newhalem		Utility: Power
Puget Sound Energy Upper Baker Dam	LUS	3	Baker Lake		Utility: Power
Water District #2 – Bellingham	LUS	3	Bellingham		Utility: Water

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Water District #7 – Bellingham	LUS	3	Bellingham		Utility: Water
Water District #4 – Point Roberts	LUS	3	Point Roberts		Utility: Water
Water District #10 – Geneva/Sudden Valley	LUS	3	Bellingham		Utility: Water
Water District #12 – Lake Samish	LUS	3	Bellingham		Utility: Water
Water District #13 – Maple Falls	LUS	3	Maple Falls		Utility: Water
Water District #14 – Glacier	LUS	3	Bellingham		Utility: Water
Water District #18 – Acme	LUS	3	Acme		Utility: Water
BP-Cherry Point Refinery	Fuel	2	4519 Grandview Road		
Birch Bay Water and Sewer (District 8)	LUS	3	7096 Pt. Whitehorn Road		Utility: Water
Birch Bay Water Connection	LUS	3	2701 Bell Road		Utility: Water
Whatcom County Sheriff's Office Emergency Coordination Center	EF	3	3888 Sound Way Bellingham, WA 98226		Critical Government Facility
Whatcom County Sheriff's Office	EF	3	311 Grand Avenue Public Safety Office Bellingham, WA 98225		Critical Government Facility
Fire Station 01 – Bellingham Fire Station	EF	3	1800 Broadway St, Bellingham, Wa 98225		Critical Government Facility

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Fire Station 02 – Bellingham Fire Station	EF	3	1590 Harris Ave, Bellingham, Wa 98225		Critical Government Facility
Fire Station 03 – Bellingham Fire Station	EF	3	1111 Billy Frank Jr St, Bellingham, Wa 98225		Critical Government Facility
Fire Station 04 – Bellingham Fire Station	EF	3	2306 Yew St, Bellingham, Wa 98229		Critical Government Facility
Fire Station 05 – Bellingham Fire Station	EF	3	3314 Northwest Ave, Bellingham, Wa 98225		Critical Government Facility
Fire Station 06 – Bellingham Fire Station	EF	3	4060 Deemer Rd, Bellingham, Wa 98226		Critical Government Facility
Fire Station 10 – Bellingham Fire Station	EF	3	858 E Smith Rd, Bellingham, Wa 98226		Critical Government Facility
Fire Station 31 – Bellingham Fire / WCFD 08 Station	EF	3	752 Marine Dr, Bellingham, Wa 98225		Critical Government Facility
Fire Station 34 – Bellingham Fire / WCFD 08 Station	EF	3	2600 Mackenzie Rd, Bellingham, Wa 98226		Critical Government Facility
Fire Station 33 – Bellingham Fire / WCFD 08 Station	EF	3	4504 Curtis Rd, Bellingham, Wa 98229		Critical Government Facility
Fire Station 32 - Bellingham International Airport ARFF	EF	3	2005 West Bakerview Road, Bellingham, WA 98226		Critical Government Facility
Fire Station 96 – WCFD 19	EF	3	9953 Mt Baker Hwy Deming Wa 98244		Critical Government Facility
Fire Station 71 – Lynden Fire Department	EF	3	203 19th St Lynden Wa 98264		Critical Government Facility
Fire Station 75 – Lynden Fire Department	EF	3	215 4th St Lynden Wa 98264		Critical Government Facility

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Fire Station 72 – Lynden Fire Department	EF	3	1507 E Badger Rd Lynden Wa 98247		Critical Government Facility
Fire Station 13 – North Whatcom Fire Rescue	EF	3	2308 E Smith Rd, Bellingham, Wa 98226		Critical Government Facility
Fire Station 11 – North Whatcom Fire Rescue	EF	3	3131 Y Road Bellingham Wa 98226		Critical Government Facility
Fire Station 12 – North Whatcom Fire Rescue	EF	3	4142 Britton Loop Bellingham Wa 98226		Critical Government Facility
Fire Station 36 – North Whatcom Fire Rescue	EF	3	633 E Wiser Lake Rd Lynden Wa 98264		Critical Government Facility
Fire Station 61 – North Whatcom Fire Rescue	EF	3	9408 Odell Rd Blaine Wa 98230		Critical Government Facility
Fire Station 62 – North Whatcom Fire Rescue	EF	3	9001 Semiahmoo Pkwy Blaine Wa 98230		Critical Government Facility
Fire Station 63 – North Whatcom Fire Rescue	EF	3	4581 Birch Bay Lynden Rd Blaine Wa 98230		Critical Government Facility
Fire Station 64 – North Whatcom Fire Rescue	EF	3	7625 Custer School Rd Custer Wa 98240		Critical Government Facility
Fire Station 65 – North Whatcom Fire Rescue	EF	3	3401 Haymie Rd Blaine Wa 98230		Critical Government Facility
Fire Station 68 – North Whatcom Fire Rescue	EF	3	8118 N Enterprise Rd Custer Wa 98240		Critical Government Facility

Exhibit A



Fire Station 69 – North Whatcom Fire Rescue	EF	3	6028 Guide Meridian Bellingham Wa 98226		Critical Government Facility
Fire Station 56 – Sandy Point Fire	EF	3	4332 Sucia Dr Ferndale Wa 98248		Critical Government Facility
Fire Station 57 – Sandy Point Fire	EF	3	3685 Prevost Way Ferndale Wa 98248		Critical Government Facility
Fire Station 16 – South Whatcom Fire Authority	EF	3	2095 Yew St Rd Bellingham Wa 98229		Critical Government Facility
Fire Station 18 – South Whatcom Fire Authority	EF	3	686 Chuckanut Dr Bellingham Wa 98229		Critical Government Facility
Fire Station 21 – South Whatcom Fire Authority	EF	3	4518 Cable St Bellingham Wa 98229		Critical Government Facility
Fire Station 22 – South Whatcom Fire Authority	EF	3	2050 Lake Whatcom Blvd Bellingham Wa 98229		Critical Government Facility
Fire Station 28 – South Whatcom Fire Authority	EF	3	5170 Samish Way Bellingham Wa 98229		Critical Government Facility
Fire Station 29 – South Whatcom Fire Authority	EF	3	705 W Lake Samish Dr Bellingham Wa 98229		Critical Government Facility
Fire Station 80 – WCFD 01	EF	3	101 E Main St Everson Wa 98247		Critical Government Facility
Fire Station 81 – WCFD 01	EF	3	3740 Mt Baker Hwy Everson Wa 98247		Critical Government Facility
Fire Station 58 – WCFD 05	EF	3	2030 Benson Rd Point Roberts Wa 98281		Critical Government Facility
Fire Station 59 – WCFD 05	EF	3	1431 Gulf Rd Point Roberts Wa 98281		Critical Government Facility

Exhibit A



Fire Station 41 – WCFD 07	EF	3	2020 Washington St Ferndale Wa 98248	Critical Government Facility
Fire Station 42 – WCFD 07	EF	3	4047 Brown Rd Ferndale Wa 98248	Critical Government Facility
Fire Station 43 – WCFD 07	EF	3	5368 Northwest Dr Bellingham Wa 98226	Critical Government Facility
Fire Station 44 – WCFD 07	EF	3	5491 Grandview Rd Blaine Wa 98230	Critical Government Facility
Fire Station 45 – WCFD 07	EF	3	1886 Grandview Rd Ferndale Wa 8248	Critical Government Facility
Fire Station 46 – WCFD 07	EF	3	6081 Church Rd Ferndale Wa 98248	Critical Government Facility
Fire Station 38 – Lummi Island	EF	3	3809 Legoe Bay Rd Lummi Island Wa 98262	Critical Government Facility
Fire Station 91 – WCFD 14	EF	3	841 Sumas Ave Sumas Wa 98295	Critical Government Facility
Fire Station 92 – WCFD 14	EF	3	7528 Kendall Rd Maple Falls Wa 98266	Critical Government Facility
Fire Station 93 – WCFD 14	EF	3	5640 Mosquito Lake Rd Deming Wa 98244	Critical Government Facility
Fire Station 86 – WCFD 16	EF	3	5491 Potter Rd Acme Wa 98220	Critical Government Facility
Fire Station 87 – WCFD 16	EF	3	2036 Valley Hwy Acme Wa 98220	Critical Government Facility
Fire Station 88 – WCFD 16	EF	3	319 Valley Hwy Acme Wa 98220	Critical Government Facility
Fire Station 25 – WCFD 18	EF	3	3250 South Bay Dr Sedro Woolley Wa	Critical Government Facility
Fire Station 26 – WCFD 18	EF	3	431 Cain Lake Rd Sedro Woolley Wa 98284	Critical Government Facility
Ferndale Police Department	EF	3	2220 Main St, Ferndale, WA 98248	Critical Government Facility
Blaine Police Department	EF	3	322 H St, Blaine, WA 98230	Critical Government Facility
Lynden Police Department	EF	3	203 19th St, Lynden, WA 98264	Critical Government Facility
Sumas Police Department	EF	3	433 Cherry Street, Sumas, WA 98295	Critical Government Facility

Exhibit A

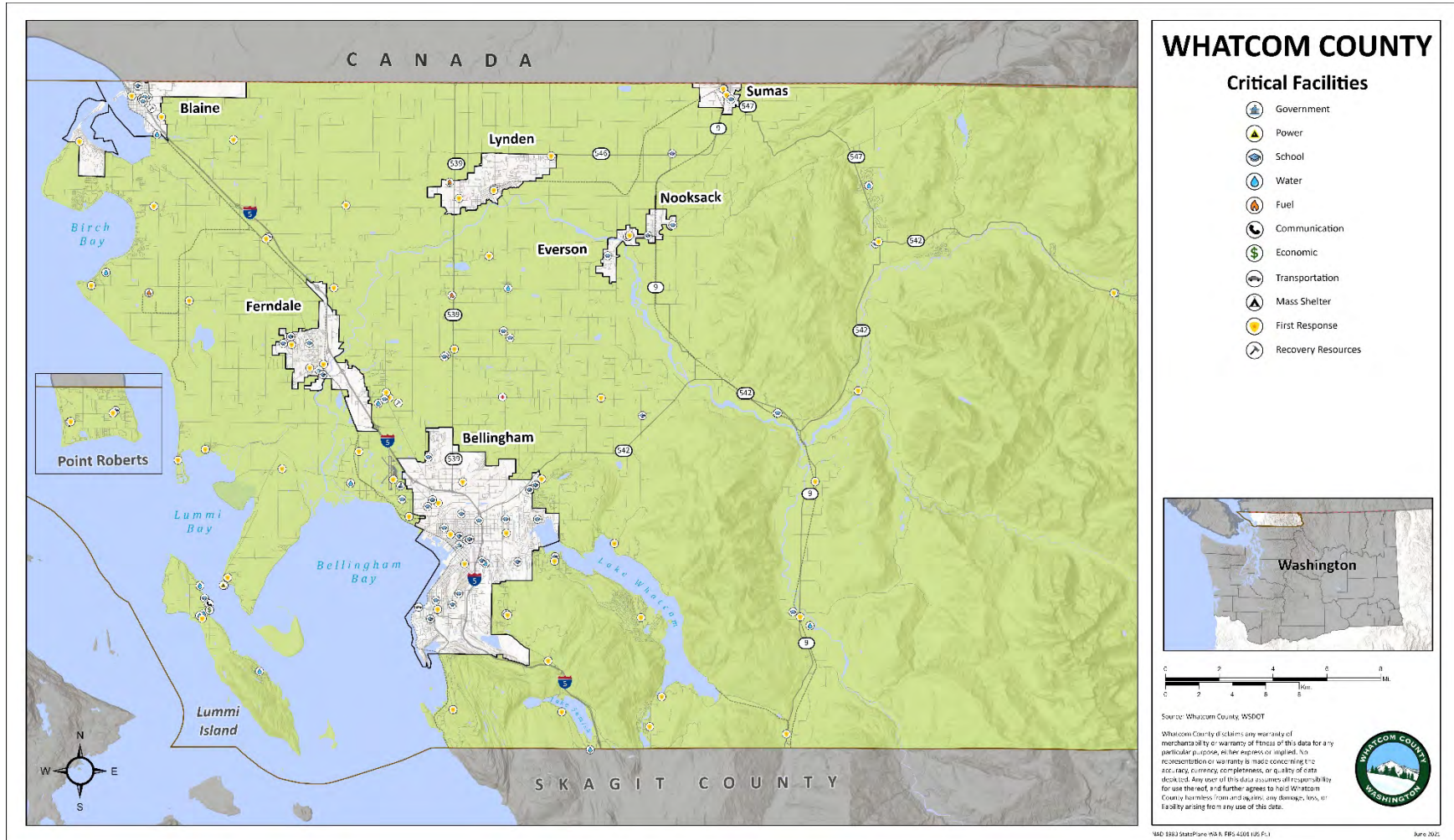


Everson Police Department	EF	3	111 W Main St, Everson, WA 98247		Critical Government Facility
Whatcom County Public Works	EF	3	901 East Smith Road, Bellingham, WA 98226		Critical Government Facility
Sumas Public Works Department	EF	3	433 Cherry Street, Sumas, WA 98295		Critical Government Facility
Ferndale Public Works Department	EF	3	2095 Main St, Ferndale, WA 98248		Critical Government Facility
Blaine Public Works Department	EF	3	1200 Yew Ave, Blaine, WA 98230		Critical Government Facility
Lynden Public Works Department	EF	3	300 4th St, Lynden, WA 98264		Critical Government Facility
Everson Public Works Department	EF	3	111 West Main Street, Everson, WA 98247		Critical Government Facility

Facility Type: EF = Essential Facility; HMF = Hazardous Materials Facility; HPL = High Potential Loss; LUS = Lifeline Utility System

Significance to community function: 1=Moderate; 2= High; 3 =Very High

Exhibit A



Map of critical facilities identified by Unincorporated Whatcom County. Across Whatcom County, critical facilities fell into 15 categories. Unique categories developed for this plan update include mass shelter, assisted living, and recovery resources. Mass shelter includes facilities such as fairgrounds and community centers. Recovery resources are facilities that are required post-hazard event, for example public works and private construction companies. Not all jurisdictions identified or included critical facilities in each category.



Critical Facility Rankings for the Whatcom County

The table below indicates whether each critical facility falls within known hazard zones for earthquake, liquefaction, landslide, tsunami, volcano, riverine flooding, coastal flooding and wildfire zones. A rank assessment in the last column indicates how the relative risk of community impact. This ranking considers the significance of the facility to the community and the number of hazard zones the facility is within. The frequency of each hazard is also considered, such that being in a low frequency hazard zone would receive a lower ranking than that same facility being in a high frequency hazard zone. Ranking is on a scale of 1 to 10, with 1 being the facility with the highest-ranking score, and 10 being a facility with the lowest ranking score in the jurisdiction.

$$\text{Rank} = \text{Significance} * \left[\frac{\text{EQ_Zone}}{\text{EQ_Freq}} + \frac{\text{LQ_Zone}}{\text{LQ_Freq}} + \frac{\text{LS_Zone}}{\text{LS_Freq}} + \dots + \frac{\text{WF_Zone}}{\text{WF_Freq}} \right]$$

Ranking value will be from 0.0 to 1.0, scaled to the highest ranking in the jurisdiction.

Significance: 1=moderate; 2=high; 3=very high, as assessed in the critical facilities list in the previous section

Zone: 0=facility not in hazard zone; 1 = facility in the hazard zone

Frequency (e.g. EQ_Freq, LQ_Freq) is the most difficult variable to which to assign a value. Frequency varies based upon the magnitude of a hazard event and varies from one place to another. It was not possible within the time constraints to assess frequency of hazard at each critical facility location. Instead, a qualitative assessment of the hazard frequency across the entire county was made, as shown in the chart below.

Description	Freq Value used in formula	Hazards
Frequent, occurring on the order of decades	3	Riverine flooding (FL); Coastal flooding (COA)
Rare, occurring on the order of centuries	2	Earthquake (EQ); Liquefaction (LQ); Landslide (LS); Wildfire (WF)
Very rare, occurring on the order of millennia	1	Tsunami (TSU); Volcano (VOL)

Note: Severe storm, a very frequent hazard, was omitted because it is ubiquitous and because no hazard map of storm severity was available.

Exhibit A



Critical Facilities Ranking Table

Facility Name	Facility Type	Significance	EQ	LQ	LS	TSU	VOL	FL	COA	WF	Rank Assessment
Columbia Valley Water District	LUS	3	1	1	0	0	0	0	0	1	0.45
Beach School Elementary School	EF	1	1	1	0	0	0	1	1	1	0.22
Fairhaven Alaskan Ferry Terminal	EF	3	1	0	0	1	0	0	1	0	0.55
Gooseberry Point Ferry Dock	EF	3	1	1	0	1	0	0	1	1	0.85
Isle Aire Beach Association	LUS	2	1	1	0	0	0	0	0	0	0.2
LISECC	LUS	2	1	0	0	0	0	0	0	1	0.2
Lummi Island Dock	EF	3	1	1	0	0	0	0	0	0	0.3
Lummi Island Grange	EF	1	1	1	0	0	0	0	0	1	0.15
Lummi Island Post Office	EF	1	1	0	0	1	0	0	0	1	0.2
Lummi Point Water	LUS	3	1	0	0	1	0	0	1	1	0.7
Owners Association Beach Club Condos	LUS	3	1	1	0	0	0	0	0	1	0.45
Puget Sound Energy Switch	LUS	3	1	1	0	1	0	0	1	1	0.85
Sunset Water and Maintenance Association	LUS	3	1	1	0	0	0	0	0	1	0.45
The Islander	EF	1	1	1	0	1	0	0	0	1	0.25
Vander Yacht Propane	LUS	3	1	1	0	0	0	0	0	0	0.3
Whatcom Farmers Co-op	LUS	3	1	1	0	0	0	0	0	0	0.3

Exhibit A



Lummi Law & Order	EF	3	1	1	0	0	0	0	0	1	0.45
Nooksack Police Department	EF	3	1	1	0	0	0	0	0	0	0.3
Northwest Water Association	LUS	3	1	1	0	0	0	0	0	0	0.3
Pole Road Water Association	LUS	3	1	1	0	0	0	0	0	0	0.3
Alderwood Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Birchwood Elementary School	EF	1	1	1	1	0	0	0	0	0	0.15
Carl Cozier Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Columbia Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Cordata Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Geneva Elementary School	EF	1	1	0	0	0	0	0	0	1	0.1
Happy Valley Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Lowell Elementary School	EF	1	1	0	0	0	0	0	0	1	0.1
Northern Heights Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Parkview Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Roosevelt Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1

Exhibit A



SECTION 3: JURISDICTION PROFILES AND MITIGATION ACTION PLANS – WHATCOM COUNTY

Silver Beach Elementary School	EF	1	1	0	0	0	0	0	0	1	0.1
Sunnyland Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Wade King Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Fairhaven Middle School	EF	1	1	0	0	0	0	0	0	1	0.1
Kulshan Middle School	EF	1	1	0	0	0	0	0	0	1	0.1
Shuksan Middle School	EF	1	1	1	1	0	0	0	0	0	0.15
Whatcom Middle School	EF	1	1	1	0	0	0	0	0	0	0.1
Bellingham High School	EF	1	1	1	0	0	0	0	0	0	0.1
Options High School	EF	1	1	1	0	0	0	0	0	0	0.1
Sehome High School	EF	1	1	0	0	0	0	0	0	0	0.05
Squalicum High School	EF	1	1	0	0	0	0	0	0	1	0.1
Blaine High School	EF	1	1	1	0	0	0	0	0	1	0.15
Blaine Middle School	EF	1	1	1	0	0	0	0	0	1	0.15
Blaine Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Blaine Primary School	EF	1	1	1	0	0	0	0	0	1	0.15
Point Roberts Primary School	EF	1	1	1	0	0	0	0	0	1	0.15
Irene Reither Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Meridian Middle School	EF	1	1	1	0	0	0	0	0	1	0.15
Meridian High School	EF	1	1	1	0	0	0	0	0	1	0.15

Exhibit A



SECTION 3: JURISDICTION PROFILES AND MITIGATION ACTION PLANS – WHATCOM COUNTY

Acme Elementary School	EF	1	1	1	1	0	1	1	0	1	0.33
Harmony Elementary School	EF	1	1	1	0	0	1	0	0	1	0.25
Kendall Elementary School	EF	1	1	1	0	0	0	0	0	1	0.15
Mt. Baker Junior/Senior High School	EF	1	1	1	0	0	1	0	0	1	0.25
Ferndale High School	EF	1	1	1	0	0	0	0	0	0	0.1
Horizon Middle School	EF	1	1	1	0	0	0	0	0	0	0.1
Vista Middle School	EF	1	1	1	0	0	0	0	0	0	0.1
Beach Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Cascadia Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Central Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Custer Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Eagleridge Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Skyline Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
North Bellingham Learning Center (Ferndale Schools)	EF	1	1	1	0	0	0	0	0	0	0.1
Nooksack Valley High School	EF	1	1	1	0	0	0	0	0	0	0.1

Exhibit A



Nooksack Valley Middle School	EF	1	1	1	0	0	0	0	0	0	0.1
Everson Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Nooksack Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Sumas Elementary School	EF	1	1	1	0	0	0	0	0	0	0.1
Whatcom County Search & Rescue	EF	3	1	1	0	0	0	0	0	0	0.3
Seattle City Light Ross Dam	LUS	3	1	0	0	0	0	1	0	0	0.25
Seattle City Light Diablo Dam	LUS	3	1	0	0	0	0	1	0	0	0.25
Seattle City Light Gorge Dam	LUS	3	1	0	0	0	0	1	0	0	0.25
Puget Sound Energy Upper Baker Dam	LUS	3	1	1	0	0	0	0	0	0	0.3
Water District #2 – Bellingham	LUS	3	1	1	0	0	0	0	0	1	0.45
Water District #7 – Bellingham	LUS	3	1	1	0	0	0	0	0	1	0.45
Water District #4 – Point Roberts	LUS	3	1	1	0	1	0	0	0	1	0.75
Water District #10 – Geneva/Sudden Valley	LUS	3	1	1	0	0	0	0	0	1	0.45
Water District #12 – Lake Samish	LUS	3	1	1	0	0	0	0	0	1	0.45
Water District #13 – Maple Falls	LUS	3	1	1	0	0	0	0	0	1	0.45
Water District #14 – Glacier	LUS	3	1	1	1	0	1	1	0	1	1

Exhibit A



Water District #18 – Acme	LUS	3	1	1	0	0	1	1	0	1	0.85
BP-Cherry Point Refinery	Fuel	2	1	1	0	0	0	0	0	1	0.3
Birch Bay Water and Sewer (District 8)	LUS	3		1	0	1	0	0	0	1	0.75
Birch Bay Water Connection	LUS	3	1	1	0	1	0	0	0	1	0.75
Whatcom County Sheriff's Office Emergency Coordination Center	EF	3	1	1	0	0	0	0	0	0	0.3
Whatcom County Sheriff's Office	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 01 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 02 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 03 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 04 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 05 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 06 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 10 – Bellingham Fire Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 31 – Bellingham Fire / WCFD 08 Station	EF	3	1	1	0	0	0	0	0	0	0.3

Exhibit A



Fire Station 34 – Bellingham Fire / WCFD 08 Station	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 33 – Bellingham Fire / WCFD 08 Station	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 32 – Bellingham International Airport ARFF	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 96 – WCFD 19	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 71 – Lynden Fire Department	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 75 – Lynden Fire Department	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 72 – Lynden Fire Department	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 13 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 11 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 12 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 36 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 61 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 62 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 63 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45

Exhibit A



Fire Station 64 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 65 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 68 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 69 – North Whatcom Fire Rescue	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 56 – Sandy Point Fire	EF	3	1	1	0	1	0	0	1	1	0.85
Fire Station 57 – Sandy Point Fire	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 16 – South Whatcom Fire Authority	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 18 – South Whatcom Fire Authority	EF	3	1	0	0	0	0	0	0	1	0.3
Fire Station 21 – South Whatcom Fire Authority	EF	3	1	0	0	0	0	0	0	1	0.3
Fire Station 22 – South Whatcom Fire Authority	EF	3	1	0	0	0	0	0	0	1	0.3
Fire Station 28 – South Whatcom Fire Authority	EF	3	1	0	0	0	0	0	0	1	0.3
Fire Station 29 – South Whatcom Fire Authority	EF	3	1	0	0	0	0	0	0	1	0.3
Fire Station 80 – WCFD 01	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 81 – WCFD 01	EF	3	1	1	0	0	1	1	0	0	0.7
Fire Station 58 – WCFD 05	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 59 – WCFD 05	EF	3	1	1	0	0	0	0	0	1	0.45

Exhibit A



SECTION 3: JURISDICTION PROFILES AND MITIGATION ACTION PLANS – WHATCOM COUNTY

Fire Station 41 – WCFD 07	EF	3	1	1	0	0	1	0	0	0	0.6
Fire Station 42 – WCFD 07	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 43 – WCFD 07	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 44 – WCFD 07	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 45 – WCFD 07	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 46 – WCFD 07	EF	3	1	1	0	0	0	0	0	1	0.45
Fire Station 38 – Lummi Island	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 91 – WCFD 14	EF	3	1	1	0	0	1	0	0	0	0.6
Fire Station 92 – WCFD 14	EF	3	1	1	0	0	1	0	0	1	0.75
Fire Station 93 – WCFD 14	EF	3	1	0	0	0	1	0	0	1	0.6
Fire Station 86 – WCFD 16	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 87 – WCFD 16	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 88 – WCFD 16	EF	3	1	1	0	0	0	0	0	0	0.3
Fire Station 25 – WCFD 18	EF	3	1	0	1	0	0	0	0	0	0.3
Fire Station 26 – WCFD 18	EF	3	1	1	0	0	0	0	0	1	0.45
Ferndale Police Department	EF	3	1	1	0	0	0	0	0	0	0.3
Blaine Police Department	EF	3	1	1	0	0	0	0	0	0	0.3
Lynden Police Department	EF	3	1	1	0	0	0	0	0	0	0.3
Sumas Police Department	EF	3	1	1	0	0	0	0	0	0	0.3
Everson Police Department	EF	3	1	1	0	0	1	1	0	0	0.7
Whatcom County Public Works	EF	3	1	1	0	0	0	0	0	0	0.3

Exhibit A



Sumas Public Works Department	EF	3	1	1	0	0	0	0	0	0	0.3
Ferndale Public Works Department	EF	3	1	1	0	0	0	0	0	0	0.3
Blaine Public Works Department	EF	3	1	1	0	0	0	0	0	0	0.3
Lynden Public Works Department	EF	3	1	1	0	0	0	0	0	0	0.3
Everson Public Works Department	EF	3	1	1	0	0	0	0	0	0	0.3

Notes: **EQ** = Earthquake; **LQ** = Liquefaction; **LS** = Landslide; **TSUN** = Tsunami; **VOL** = Volcano; **FL** = Riverine Flooding; **COA** = Coastal Flooding; **WF** = Wildland Fire

Exhibit A



Areas and Assets Exposed, Per Hazard

Unincorporated Whatcom County Exposure to Natural Hazards						
	Hazard Susceptibility				Critical Facilities	Critical Facilities Appraised Value (Million)
		Area (sq.mi.)	Population	Parcels		
Geological						
	<i>MMI IV</i>	7.7%	-	0.03%	-	-
	<i>MMI V</i>	31.7%	15.3%	15.7%	23.8%	\$161 ¹
	<i>MMI VI</i>	29.6%	63.5%	66.8%	47.6%	\$1396 ¹
	<i>MMI VII</i>	11.7%	13.8%	8.4%	9.8%	\$37
	<i>MMI VIII - IX</i>	5.7%	7.3%	7.4%	9.1%	\$44
	TOTAL	86.4%	99.9%	98.3%	90.3%	\$1,638
	<i>Very Low to Low</i>	14.6%	45.4%	41.8%	45.5%	\$283 ¹
	<i>Low to Moderate</i>	6.5%	24.4%	27.5%	28%	\$1189 ¹
	<i>Moderate</i>	-	-	-	-	-
	<i>Moderate to High</i>	4.4%	7.5%	8.5%	11.2%	\$59
	<i>High</i>	0.02%	-	0.04%	-	-
	TOTAL	25.5%	77.3%	77.84%	84.7%	\$1,531
	<i>Landslide Low</i>	0.7%	0.2%	0.25	-	-
<i>Landslide Moderate</i>	1%	0.2%	0.1%	-	-	
<i>Landslide High</i>	2.9%	1.2%	1.9%	1.4%	\$0.3	

Exhibit A



	<i>Fan Low</i>	0.1%	0.1%	0.06%	-	-
	<i>Fan Moderate</i>	0.3%	0.2%	0.2%	-	-
	<i>Fan High</i>	0.8%	2.4%	1.9%	2.8%	\$3
	<i>Mine Hazard</i>	0.1%	0.4%	2.1%	1.4%	19% ¹
	TOTAL	5.9%	4.7%	6.51%	5.6%	\$22.3
	<i>Case 1 Debris Flows</i>	1.6%	1.9%	2.1%	4.9% ²	\$19 ²
	<i>Case 2 Debris Flows</i>	0.9%	1.2%	-	-	-
	<i>Case M Flows</i>	2.9%	5.6%	6.3%	7.7% ²	\$43 ²
	<i>Pyroclastic Flows, Lava Flows, and Ballistic Debris</i>	5.8%	0.2%	0.6%	2.1% ²	\$0.3 ²
	<i>Lateral Blast Hazard Zone</i>	22.7%	3.8%	5.5%	7% ²	\$11 ²
	TOTAL	33.9%	12.7%	14.5%	21.7%	\$73.3
	<i>Low to Moderate Inundation Potential</i>	0.3%	3%	0.6%	3.5%	\$7
	<i>Moderate to High Inundation Potential</i>	0.3%	1.5%	0.5%	-	-
	<i>High Inundation Potential</i>	0.6%	3.8%	5.6%	4.2%	\$18
	TOTAL	1.6%	8.3%	6.7%	7.7%	\$25
Hydro						
	<i>100-year Flood</i>	3.5%	6.7%	8%	9.1%	\$66

Exhibit A



	<i>500-year Flood</i>	0.4%	1.9%	3.4%	4.9%	\$129
	<i>Floodway</i>	0.9%	1.4%	-	-	-
	<i>Undetermined (Zone D)</i>	52.1%	0.1%	0.05%	1.4%	\$9
	TOTAL	4.8%	10.1%	11.45%	15.4%	\$204
Meteorological	Wildfire Zones					
	<i>Interface Very Low-Low Structure Density</i>	0.9%	1.9%	7.7%	0.7%	\$0.4
	<i>Interface Medium-High Structure Density</i>	1.4%	23.2%	26.9%	39.2%	\$1,331 ¹
	<i>Intermix Very Low-Low Structure Density</i>	5.9%	17.2%	1.6%	19.6%	\$112
	<i>Intermix Medium-High Structure Density</i>	4.1%	32.1%	30.4%	23.1%	\$39
	TOTAL	12.3%	74.4%	66.6%	82.6%	\$1,482.4

¹This value shows the total of 2020 Whatcom County parcel data appraised total value and community's critical facility assessed dollar value (found in the community's critical facilities list). The critical facility's assessed dollar value was used instead of the appraised total value when available.

²Some critical facilities located in multiple hazard zones.



Status of Unincorporated Whatcom County’s 2016-2020 and Ongoing Hazard Mitigation Actions

This section describes the status of mitigation actions that were proposed in the 2016 Mitigation Plan and are now 1) currently being implemented and are ongoing, 2) are now completed, or 3) are now discontinued because they are no longer needed. The actions are organized by hazard and indicate the lead agency, funding source, and status.

Lead Agency	May be more than one lead agency indicating shared responsibility and coordination
Funding Source	Local; State; FEMA; Private; Other
Current Status	Action Discontinued / Action Completed / Action ongoing and expected completion date

Education and Outreach

EO-a. Emergency preparedness education programs for schools. Emergency preparedness and emergency management is delegated to school districts by Washington State RCW’s. The Whatcom County Sheriff’s Office Division of Emergency Management does support all the school districts in Whatcom County with emergency planning.

Lead Agency	School Districts 501, 502, 503, 504, 506, 507
Funding Source	Local, Homeland Security Grant Funding
Current Status	Action Ongoing and continuous

EO-b. Drills, exercises in homes, workplaces, classrooms, etc. Emergency drills and exercises are delegated to school districts by Washington State RCW’s. The Whatcom County Sheriff’s Office Division of Emergency Management does support all the school districts in Whatcom County with emergency drills and exercises.

Lead Agency	School Districts 501, 502, 503, 504, 506, 507
Funding Source	Local
Current Status	Action Ongoing and continuous

EO-c. Hazard "safety fairs." Hazard “safety fairs” are conducted at the local level within jurisdictions or special districts. While COVID-19 did disrupt these fairs in 2020, the Whatcom County Sheriff’s Office Division of Emergency Management did participate in a number of these (Night Out, Lummi Island Safety Fair, Sudden Valley Safety Fair, Northwest Washington Fair,

Exhibit A



etc.).

Lead Agency	Local jurisdictions and special districts
Funding Source	Local, other
Current Status	Action Ongoing and continuous

EO-d. Hazard conferences, seminars. The Whatcom County Sheriff's Office Division of Emergency Management has sponsored, participated in, or attended numerous hazard specific conferences and seminars over the last 5 years on all natural hazards listed in this plan.

Lead Agency	Whatcom County Sheriff's Office Division of Emergency Management
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action Ongoing and continuous

EO-e. Distribution of severe weather guides, preparedness handbooks, brochures homeowner's retrofit guide, etc. The Whatcom County Sheriff's Office Division of Emergency Management is the county focal point for the distribution of brochures, handbooks and guides for emergency and disaster management.

Lead Agency	Whatcom County Sheriff's Office Division of Emergency Management
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action Ongoing and continuous

EO-f. Newspaper articles - There has been no articles regularly published on disaster preparedness in the last 5 years as the local media does not support regular submissions or have a section for disaster planning. They have reported on disasters and did do a fictional (internal) account of what would happen after a major earthquake, with input from local experts and emergency managers.

Lead Agency	None
Funding Source	Other
Current Status	Ad hoc

EO-g. Annual correspondence with residents. Whatcom County Public Works does distribute an annual flood and emergency preparedness outreach paper.

Lead Agency	Whatcom county Public Works
Funding Source	Local
Current Status	Action Ongoing and continuous



Drought/heat wave

Action initiating with initial goals of identifying, documenting and determining applicability of Droughts and Heat Waves.

Earthquake

EQ-a. Incorporate Earthquake Mitigation into Local Planning. Whatcom County has incorporated building mitigation strategies for earthquakes into the Comprehensive Plan.

Lead Agency	Whatcom County Planning and Development Services
Funding Source	Local
Current Status	Action Ongoing and continuous

EQ-b. Conduct Inspections of Building Safety. Building safety inspections are carried out on a continual and regular basis.

Lead Agency	Whatcom County Planning and Development Services
Funding Source	Local
Current Status	Action Ongoing and continuous

EQ-c. Increase Earthquake Risk Awareness. The Whatcom County Sheriff’s Office Division of Emergency Management promotes earthquake awareness on a continual and ongoing basis.

Lead Agency	Whatcom County Sheriff’s Office Division of Emergency Management
Funding Source	Local, State and Federal
Current Status	Action Ongoing and continuous

Debris Slides

LS-a. Manage Development in Landslide Hazard Areas. Whatcom County Planning and Development Services does manage development in Landslide Hazard Areas on a continual and ongoing basis.

Lead Agency	Whatcom County Planning and Development Services
Funding Source	Local
Current Status	Action Ongoing and continuous

Flooding

Exhibit A



FL-a. Establish Local Funding Mechanisms for Flood Mitigation

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and continuous

FL-b. Remove Existing Structures from Flood Hazard Areas

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and expected to be completed in 2025

FL-c. Improve Stormwater Drainage System Capacity

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and continuous

FL-d. Conduct Regular Maintenance for Drainage Systems and Flood Control Structures

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and continuous

FL-e. Protect Infrastructure

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works for any infrastructure that is County property
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and continuous

FL-f. Construct Flood Control Measures

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works for any infrastructure that is County property
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and continuous



FL-g. Protect and Restore Natural Flood Mitigation Features

Lead Agency	Lead responsibility lies Flood Zone & Surface Water/ Public Works in repetitive problem areas
Funding Source	Local, state, FEMA, Private, Other
Current Status	Action ongoing and continuous

Landslide/erosion

No actions ongoing, discontinued, or completed for this hazard.

Severe Storm

No actions ongoing, discontinued, or completed for this hazard.

Severe Wind

SW-a. Protect Power Lines and Infrastructure

Lead Agency	Puget Sound Energy, Blaine Electric, Bonneville Power Administration, Western States Power Grid
Funding Source	Private Investment
Current Status	Action ongoing and continuous

Tsunami

TSU-a. Map and Assess Vulnerability to Tsunami

Lead Agency	Lead responsibility lies with the DNR. They have completed all mapping in Whatcom County in 2013.
Funding Source	State, other
Current Status	Action ongoing and expected to be completed in 2025

TSU-b. Manage Development in Tsunami Hazard Areas

Lead Agency	Lead responsibility lies with Whatcom County Planning Department
Funding Source	Local
Current Status	Action ongoing and continuous



Wildfire

WF-a. Incorporate Wildfire Mitigation in the Comprehensive Plan. The Whatcom County Sheriff’s Office Division of Emergency Management has been working with the fire community to write a Wildland Fire plan for Whatcom County.

Lead Agency	Whatcom County Sheriff’s Office Division of Emergency Management
Funding Source	Local
Current Status	Action ongoing and continuous

WF-b. Participate in Firewise Program. Firewise is managed by the Whatcom Conservation District and is a continual improvement process.

Lead Agency	Whatcom Conservation District
Funding Source	State & Local
Current Status	Action ongoing and continuous

Winter storms/Freezes

WW-a. Reduce Impacts to Roadways

Lead Agency	Whatcom County Public Works.
Funding Source	Local
Current Status	Action ongoing and continuous

WW-b. Conduct Winter Weather Risk Awareness Activities

Lead Agency	Whatcom County Sheriff’s Office Division of Emergency Management
Funding Source	Local
Current Status	Action ongoing and continuous

Multiple Hazards

MU-a. Adopt and Enforce Building Codes. Whatcom County adopts the International Building Code Suit, including the Residential and Building Codes, which include standards for seismic, wind, and snow loads, among others; it also adopts the suite’s Fire Code. It currently follows the 2018 editions of those codes per Ordinance 2021-016, passed March 23, 2021. The Whatcom County Planning Department supports enforcement through its permitting and inspection processes.

Exhibit A



Lead Agency	Whatcom County Planning and Development Services
Funding Source	Local
Current Status	Action Ongoing and continuous

MU-b. Improve Household Disaster Preparedness. The shortage in staff for the task is leveraged through social media outreach. In 2019, the Division of Emergency Management partnered with CERT and Western Washington University to pilot a door-to-door and online survey on resident hazard awareness and disaster preparedness. Residents surveyed were given information about natural hazards in Whatcom County, expected impacts, and simple ways they could be better prepare. Future iterations of the survey are planned for post-pandemic conditions.

Lead Agency	Whatcom County Sheriff's Office Division of Emergency Management.
Funding Source	Local
Current Status	Action Ongoing and continuous



Unincorporated Whatcom County 2021-2025 Hazard Mitigation Strategy

Whatcom County Hazard Mitigation Goals

Whatcom County has identified five overarching hazard mitigation goals, which represent what a community seeks to achieve through mitigation actions.

- Goal 1.** Protect Life, Property and Public Welfare
- Goal 2.** Increase Public Awareness
- Goal 3.** Preserve and Enhance Natural Systems
- Goal 4.** Encourage Partnership for Implementation
- Goal 5.** Ensure Continuity of Emergency Services

These countywide goals help guide any prioritization and implementation of mitigation actions, ensuring that the actions contribute to a community's vision for the future.

Mitigation Action Options

Appendix E of the Whatcom County Natural Hazard Mitigation Plan provides a list of mitigation options. Unincorporated Whatcom County considered mitigation options related to geological, hydrological, and meteorological hazards, especially those related to earthquake, liquefaction and volcano because these hazards have the potential to cause the greatest loss and damage. Not all mitigation options in Appendix E were relevant or a strong priority for Unincorporated Whatcom County. Some options have already been implemented or are ongoing in Unincorporated Whatcom County, as documented in the section above on the status of 2016-2020 and ongoing hazard mitigation actions.

Mitigation Action Prioritization

The mitigation actions in this section are new actions that Unincorporated Whatcom County has prioritized for the 2021-2025 planning period and beyond. Mitigation options were prioritized based upon review of the following two criteria: 1) The action's Overall Feasibility based on engineering, environmental, financial and political considerations, 2) The Criticality of the action, based upon a consideration of which actions had the greatest potential to protect life, property and public welfare. Unincorporated Whatcom County is working with other participating communities and special districts to develop a systematic methodology that would use multiple evaluation criteria to determine mitigation action prioritization. This new methodology will be used in future updates of this Plan.

Unincorporated Whatcom County has, since the first Natural Hazards Mitigation Plan in 2005, consistently maintained the goals of the plans to be similar and addressed the natural hazards

Exhibit A



in a maintenance format. Since 2005, many of the understandings of the natural hazards, along with the science supporting these hazards, has changed. In this 2021-2025 plan, Whatcom County will focus on mitigation actions that will help Unincorporated Whatcom County integrate the new science, assumptions and realities for each of the major natural hazards, coupled with an expansion of the use of GIS, both for documentation and geospatial analysis, as well as multiagency coordination. Finally, it will focus on enhanced education outreach. The goal is to establish a baseline that will be up-to-date, accurate and based on best available science, from which the most appropriate mitigation actions can be chosen.

In the following Identified Mitigation Actions 2021-2025 table, each priority action is listed by hazard. Each action is followed by planning goals, lead agency, the priority evaluation, timeline, funding source and estimated cost, where such information is available. This information can be used by local decision makers in pursuing strategies for implementation.

1	Goals	Indicates the hazard mitigation planning goal or goals this action addresses; countywide and/or community-specific
2	Lead Agency	May be more than one lead agency indicating shared responsibility and coordination
3	Priority	H (High); M (Medium); L (Low)
4	Timeline	Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing
5	Funding Source	Local; State; FEMA; Private; Other
6	Estimated Cost	Actual; Estimated

Exhibit A



Unincorporated Whatcom County Identified Mitigation Actions 2021-2025

UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
MULTIPLE HAZARDS	These are actions that inform and educate citizens, elected officials, and property owners about hazards and ways to mitigate them.						
	<p><i>MU-a Ongoing -- Adopt and Enforce Building Codes</i> Whatcom County adopts the International Building Code Suit, including the Residential and Building Codes, which include standards for seismic, wind, and snow loads, among others; it also adopts the suite's Fire Code. It currently follows the 2018 editions of those codes per Ordinance 2021-016, passed March 23, 2021. The Whatcom County Planning Department supports enforcement through its permitting and inspection processes.</p>	1	Whatcom County Planning and Development Services	H	O	Local	
	<p><i>MU-b Ongoing -- Improve Household Disaster Preparedness</i> The shortage in staff for the task is leveraged through social media outreach. In 2019, the Division of Emergency Management partnered with CERT and Western Washington University to pilot a door-to-door</p>	1	Whatcom County Sheriff's Office Division of Emergency Management.	H	O	Local	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	and online survey on resident hazard awareness and disaster preparedness. Residents surveyed were given information about natural hazards in Whatcom County, expected impacts, and simple ways they could be better prepare. Future iterations of the survey are planned for post-pandemic conditions.						
	<p>MU-1 Assess Community Risk Task:</p> <ol style="list-style-type: none"> 1. Obtain local data including tax parcels, building footprints, critical facility locations, and other information for use in risk analysis. 2. Develop and maintain a database to track community exposure in known hazard areas. 3. Establish a process to coordinate with state and Federal agencies to maintain up-to-date hazard data, maps, and assessments. 	1,2, 3	Whatcom County Sheriff's Office Division of Emergency	H	MR	Local, State, FEMA	\$250,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	4. Update aerial photography current, especially in rapidly developing areas. 5. Identify the most at-risk critical facilities and evaluating potential mitigation techniques. 6. Perform a social vulnerability analysis to identify neighborhoods of high vulnerability to hazard impacts, considering income, age, insurance rates, education, length of time in community and other potential indicators.						
	MU-2 Integrate Mitigation into Local Planning Tasks: 1. Incorporate risk assessment and hazard mitigation principles into comprehensive planning efforts. 2. Incorporate a stand-alone element for hazard mitigation into the local comprehensive (land use) plan.	1, 4	Whatcom County Planning and Development Services	M	LR	Local, State, FEMA	\$250,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	3. Incorporate hazard mitigation into broader growth management (i.e., Smart Growth) initiatives. 4. Incorporate a hazard risk assessment into the local development and subdivision review process.						
	MU-3 Monitor Mitigation Plan Implementation Tasks: 1. Form a plan implementation steering committee to monitor progress on local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government. 2. Prepare a plan implementation monitoring schedule and outlining roles for those responsible for monitoring (i.e., local departments, agencies, and committees). 3. Prepare and submit an annual plan implementation progress report to the local elected body.	1,4	Whatcom County Sheriff's Office Division of Emergency	H	MR	Local, State, FEMA	\$125,000
	MU-4 Protect Structures	1,5	Task 1:	H	MR	Local,	\$5,000,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	Tasks: 1. Acquire or relocating structures located in hazard areas. 2. Assess the need to retrofit fire and police stations to become hazard resistant.		Whatcom County Public Works Task 2: Whatcom County Sheriff's Office Division of Emergency			State, FEMA	
	MU-5 Increase Hazard Education and Risk Awareness Tasks: 1. Develop and implement a multi-hazard public awareness program. 2. Establish a "hazard awareness week" in coordination with the media to promote hazard awareness (seasonal). 3. Create a speaker's bureau for disaster-related topics that focus on mitigation and preparedness measures.	2	Whatcom County Sheriff's Office Division of Emergency	H	MR	Local, State, FEMA	\$100,000
Education and Outreach	<i>EO-a Ongoing -- Emergency preparedness education programs for schools</i> Emergency preparedness and emergency	2	School Districts 501, 502, 503, 504, 506, 507	H	O	Local, Homeland Security	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	management is delegated to school districts by Washington State RCW's. The Whatcom County Sheriff's Office Division of Emergency Management does support all the school districts in Whatcom County with emergency planning.					Grant Funding	
	<p><i>EO-b Ongoing -- Drills, exercises in homes, workplaces, classrooms, etc.</i> Emergency drills and exercises are delegated to school districts by Washington State RCW's. The Whatcom County Sheriff's Office Division of Emergency Management does support all the school districts in Whatcom County with emergency drills and exercises.</p>	1, 2	School Districts 501, 502, 503, 504, 506, 507	H	O	Local	
	<p><i>EO-c Ongoing -- Hazard "safety fairs."</i> Hazard "safety fairs" are conducted at the local level within jurisdictions or special districts. While COVID-19 did disrupt these fairs in 2020, the Whatcom County Sheriff's Office Division of Emergency Management did participate in a number of these (Night Out, Lummi Island Safety Fair, Sudden Valley Safety Fair, Northwest Washington Fair,</p>	2	Local jurisdictions and special districts	H	O	Local, Other	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	etc.).						
	<p><i>EO-d Ongoing -- Hazard conferences, seminars</i> The Whatcom County Sheriff's Office Division of Emergency Management has sponsored, participated in, or attended numerous hazard specific conferences and seminars over the last 5 years on all natural hazards listed in this plan.</p>	2	Whatcom County Sheriff's Office Division of Emergency Management	M	O	Local, state, FEMA, Private, Other	
	<p><i>EO-e Ongoing -- Distribution of severe weather guides, preparedness handbooks, brochures homeowner's retrofit guide, etc.</i> The Whatcom County Sheriff's Office Division of Emergency Management is the county focal point for the distribution of brochures, handbooks and guides for emergency and disaster management.</p>	2	Whatcom County Sheriff's Office Division of Emergency Management	M	O	Local, state, FEMA, Private, Other	
	<p><i>EO-f Ongoing -- Newspaper articles</i> There has been no articles regularly published on disaster preparedness in the last 5 years as the local media does not support regular submissions or have a section</p>	2	None	L	O	Other	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	for disaster planning. They have reported on disasters and did do a fictional (internal) account of what would happen after a major earthquake, with input from local experts and emergency managers.						
	<i>EO-g Ongoing -- Annual correspondence with residents</i> Whatcom County Public Works does distribute an annual flood and emergency preparedness outreach paper.	2	Whatcom county Public Works	M	O	Local	
Hazard Specific (Reference: Whatcom County Mitigation Ideas)							
Droughts/Heat Waves	D-1 Assess Vulnerability to Drought Risk Tasks: 1. Gather and analyze existing water and climate data and projection modeling to gain a better understanding of local climate and changes in future precipitation and temperature patterns.	1, 5	Whatcom County Sheriff's Office Division of Emergency Management	L	M	State, FEMA, and Federal	\$75,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	2. Identify factors that affect the severity of a drought, including water usage and population projections. 3. Identify available water supplies and projected shortages. 4. Identify appropriate water saving and use reduction strategies that may reduce impact of drought. 5. Integrate drought mitigation into public awareness actions.						
Earthquakes	<i>EQ-a Ongoing -- Incorporate Earthquake Mitigation into Local Planning.</i> Whatcom County has incorporated building mitigation strategies for earthquakes into the Comprehensive Plan.	1	Whatcom County Planning and Development Services	M	O	Local	
	<i>EQ-b Ongoing -- Conduct Inspections of Building Safety</i> Building safety inspections are carried out on a continual and regular basis.	1	Whatcom County Planning and Development Services	M	O	Local	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<p><i>EQ-c Ongoing -- Increase Earthquake Risk Awareness.</i> The Whatcom County Sheriff's Office Division of Emergency Management promotes earthquake awareness on a continual and ongoing basis.</p>	1	Whatcom County Sheriff's Office Division of Emergency Management	M	O	Local, State, Federal	
	<p>EQ-1 Increase Earthquake Risk Awareness Tasks: 1. Develop an outreach program about earthquake risk and mitigation activities in homes, schools, and businesses.</p>	2	Whatcom County Sheriff's Office Division of Emergency Management	H	M	Local, state, FEMA, Private, Other	\$100,000
	<p>EQ-2 Conduct Outreach to Builders, Architects, Engineers, and Inspector Tasks: 1. Training building department staff and officials on Form ATC-20 for post-earthquake building evaluation. The ATC-20 report and addendum, prepared by the Applied Technology Council, provide procedures and guidelines for making on-the-spot evaluations and decisions regarding continued use and</p>	2,3	Whatcom County Sheriff's Office Division of Emergency Management	M	M	Local, state, FEMA, Private, Other	\$75,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	occupancy of earthquake-damaged buildings.						
Erosion	<p>ER-1 Map and Assess Vulnerability to Erosion Tasks:</p> <ol style="list-style-type: none"> 1. Use satellite and aerial photography to identify and map erosion hazard areas. 2. Develop and maintain a database to track community vulnerability to erosion. 3. Use GIS to identify concentrations of at-risk structures. 	1	Whatcom County Sheriff's Office Division of Emergency Management	M	M	Local, State, FEMA, Private, Other	\$150,000
Landslides	<p>LS-a Ongoing -- Manage Development in Landslide Hazard Areas. Whatcom County Planning and Development Services does manage development in Landslide Hazard Areas on a continual and ongoing basis.</p>	1, 3	Whatcom County Planning and Development Services	M	O	Local	
	<p>LS-1 Map and Assess Vulnerability to Landslides Tasks:</p>	1, 2	Whatcom County Sheriff's Office Division of	H	M	Local, State, FEMA,	\$150,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<ol style="list-style-type: none"> 1. Study areas where riparian landslides may occur. 2. Complete an inventory of locations where critical facilities, other buildings, and infrastructure are vulnerable to landslides. 3. Develop and maintaining a database to track community vulnerability to landslides. 		Emergency Management			Private, Other	
Flooding	<i>FL-a Ongoing -- Establish Local Funding Mechanisms for Flood Mitigation</i>	1	Lead responsibility lies Flood Zone & Surface Water/ Public Works	M	O	Local, state, FEMA, Private, Other	
	<i>FL-b Ongoing -- Remove Existing Structures from Flood Hazard Areas</i>	1	Lead responsibility lies Flood Zone & Surface Water/ Public Works	M	O	Local, state, FEMA, Private, Other	
	<i>FL-c Ongoing -- Improve Stormwater</i>	1	Lead	M	O	Local,	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<i>Drainage System Capacity</i>		responsibility lies Flood Zone & Surface Water/ Public Works			state, FEMA, Private, Other	
	<i>FL-d Ongoing -- Conduct Regular Maintenance for Drainage Systems and Flood Control Structures</i>	1	Lead responsibility lies Flood Zone & Surface Water/ Public Works	M	O	Local, state, FEMA, Private, Other	
	<i>FL-e Ongoing -- Protect Infrastructure</i>	1	Lead responsibility lies Flood Zone & Surface Water/ Public Works for any infrastructure that is County property	M	O	Local, state, FEMA, Private, Other	
	<i>FL-f Ongiong -- Construct Flood Control Measures</i>	1	Lead responsibility	M	O	Local, state,	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
			lies Flood Zone & Surface Water/ Public Works for any infrastructure that is County property			FEMA, Private, Other	
	<i>FL-g Ongoing -- Protect and Restore Natural Flood Mitigation Features</i>	1	Lead responsibility lies Flood Zone & Surface Water/ Public Works in repetitive problem areas	M	O	Local, state, FEMA, Private, Other	
Coastal Flooding	CF-1 Map and Assess Vulnerability to Coastal Flooding Tasks: 1. Model various “what-if” scenarios to estimate potential vulnerabilities in order to develop coastal mitigation priorities. 2. Use GIS to map hazard areas, at-risk	1, 2, 5	Whatcom County Sheriff’s Office Division of Emergency Management	M	M	Local, State, FEMA, Private, Other	\$250,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	structures, and associated hazards (e.g., flood and storm surge) to assess high-risk areas. 3. Develop an inventory of public buildings and infrastructure that may be particularly vulnerable to coastal flooding.						
Winter Weather	WW-a. Reduce Impacts to Roadways	1	Whatcom County Public Works.	M	O	Local	
	WW-b. Conduct Winter Weather Risk Awareness Activities	1	Whatcom County Sheriff's Office Division of Emergency Management	M	O	Local	
	WW-1 Conduct Winter Weather Risk Awareness Activities Tasks: 1. Inform the public about severe winter weather impacts. 2. Distribute family and traveler emergency preparedness information	1, 2	Whatcom County Sheriff's Office Division of Emergency Management	M	M	Local, State, FEMA, Private, Other	\$50,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	about severe winter weather hazards. 3. Encourage homeowners to install carbon monoxide monitors and alarms. 4. Educating citizens that all fuel-burning equipment should be vented to the outside.						
	WW-2 Assist Vulnerable Populations Tasks: 1. Identify specific at-risk populations that may be exceptionally vulnerable in the event of long-term power outages. 2. Organize outreach to vulnerable populations, including establishing and promoting accessible heating centers in the community.	1	Task 1: Whatcom County Sheriff's Office Division of Emergency Management Task 2: Whatcom County Health Department	M	M	Local, State, FEMA, Private, Other	\$100,000
Subsidence	SU-1 Map and Assess Vulnerability to Subsidence Tasks: 1. Using GIS to map areas that are susceptible to subsidence. 2. Identify and map old mining areas or		Whatcom County Sheriff's Office Division of Emergency Management	M	M	Local, State, FEMA, Private, Other	\$75,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	geologically unstable terrain so that development can be prevented or eliminated. 3. Improve accuracy of hazard area maps to educate residents about unanticipated risks.						
Tsunami	<i>TSU-a Ongoing -- Map and Assess Vulnerability to Tsunami</i>	1	Lead responsibility lies with the DNR. They have completed all mapping in Whatcom County in 2013.	M	O	State, Other	
	<i>TSU-b Ongoing -- Manage Development in Tsunami Hazard Areas</i>	1, 3	Lead responsibility lies with Whatcom County Planning Department	M	O	Local	
	TSU-1 Map and Assess Vulnerability to		Whatcom	H	S	Local,	\$250,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<p>Tsunami Tasks:</p> <ol style="list-style-type: none"> 1. Using updated tsunami indentation modeling from DNR, develop and maintain a database to track community vulnerability to tsunamis. 2. Offer tsunami hazard mapping online for residents and design professionals. 3. Educate map users on the appropriate uses and limitations of maps. 4. More accurately map problem areas to educate residents about unanticipated risks. 		County Sheriff's Office Division of Emergency Management			State, FEMA, Private, Other	
	<p>TSU-2 Manage Development in Tsunami Hazard Areas Tasks:</p> <ol style="list-style-type: none"> 1. Encourage awareness of and compliance with the IBC's non-mandatory appendix on tsunami-generated flood hazard. 2. Where modeled wave height is low, encourage new development that is configured to minimize tsunami losses 	1,3,5	Whatcom County Planning and Development Services	H	S	Local, State, FEMA, Private, Other	\$25,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	by using site planning strategies that slow water currents, steer water forces, and block water forces.						
	<p>TSU-3 Increase Public Awareness of Tsunami Hazard</p> <p>Tasks:</p> <ol style="list-style-type: none"> 1. Educate citizens regarding the dangers of tsunami and inform them of emergency procedures and routes to use should a tsunami warning be issued. 2. Designate tsunami inundation zones and evacuation routes. 3. Conduct tsunami evacuation drills. 4. Develop maps showing possible tsunami inundation areas. 5. Participating in NOAA's TsunamiReady Community program. 	2	Whatcom County Sherriff's Office Division of Emergency Management	H	S	Local, State, FEMA, Private, Other	\$150,
	<p>WF-a Ongoing -- Incorporate Wildfire Mitigation in the Comprehensive Plan</p> <p>The Whatcom County Sheriff's Office Division of Emergency Management has been</p>	1	Whatcom County Sheriff's Office Division of Emergency	M	O	Local	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
Wildfire	working with the fire community to write a Wildland Fire plan for Whatcom County.		Management				
	<i>WF-b Ongoing -- Participate in Firewise Program.</i> Firewise is managed by the Whatcom Conservation District and is a continual improvement process.	1	Whatcom Conservation District	M	O	State, Local	
	WF-1 Map and Assess Vulnerability to Wildfire Tasks: 1. Use GIS mapping of wildfire hazard areas to facilitate analysis and planning decisions through comparison with zoning, development, infrastructure, etc. 2. Develop and maintain a database to track community vulnerability to wildfire. 3. Create a wildfire scenario to estimate potential loss of life and injuries, the types of potential damage, and existing	1,2	Whatcom County Sheriff's Office Division of Emergency Management	H	S	Local, state, FEMA, Private, Other	\$250,000
Priority: H (High); M (Medium); L (Low)		Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing			Funding Source: Local; State; FEMA; Private; Other		Estimated Cost: Actual; Estimated

Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	vulnerabilities within a community to develop wildfire mitigation priorities.						
	<p>WF-2 Require or Encourage Fire-Resistant Construction Techniques</p> <p>Tasks:</p> <ol style="list-style-type: none"> 1. Encourage the use of non-combustible materials for new construction in wildfire hazard areas. 2. Using fire resistant roofing and building materials in remodels, upgrades, and new construction. 3. Encourage enclosing the foundations of homes and other buildings in wildfire-prone areas, rather than leaving them open and potentially exposing undersides to blown embers or other materials. 		Whatcom County Planning and Development Services	H	S	Local, state, FEMA, Private, Other	\$125,000
	<p>WF-3 Create Defensible Space Around Structures and Infrastructure</p> <p>Tasks:</p> <ol style="list-style-type: none"> 1. Encourage creating buffers around residential and non-residential structures through the removal or reduction of flammable vegetation, 		Whatcom County Sheriff's Office Division of Emergency Management	H	S	Local, state, FEMA, Private, Other	\$125,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	including vertical clearance of tree branches. 2. Encourage replacing flammable vegetation with less flammable species. 3. Encourage creating defensible zones around power lines, oil and gas lines, and other infrastructure systems.						
	WF-4 Participate in Firewise Program Tasks: 1. Expand the “Firewise Communities/USA” recognition program sponsored by the National Wildlife Coordinating Group (firewise.org). 2. Sponsor Firewise workshops for local officials, developers, civic groups, and neighborhood/homeowners’ associations. 3. Publicize Firewise guidance and encourage best practices in Whatcom County.		Whatcom County Conservation District	H	S	Local, state, FEMA, Private, Other	\$125,000
	WF-5 Increase Wildfire Risk Awareness Tasks:		Whatcom County Sheriff’s Office Division of	H	S	Local, state, FEMA,	\$75,000

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Exhibit A



UNINCORPORATED WHATCOM COUNTY IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility for Carrying out Measure	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<ol style="list-style-type: none"> 1. Offer GIS hazard mapping online for residents, developers, and design professionals. 2. Organize Fire District tours to show elected officials and planners the most vulnerable areas of the community's wildland-urban interface and increase their understanding of risks. 3. Develop partnerships with neighborhood groups, homeowners' associations, and others to conduct outreach activities. 4. Conduct education programs in schools. 5. Educate the public about evacuation procedures. 6. Form a citizen plan implementation steering committee to monitor progress of local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government. 		Emergency Management			Private, Other	

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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Unincorporated Whatcom County Annual Review and Progress for Hazard-Specific Mitigation Actions 2021-2025

Progress monitoring means tracking the implementation of the hazard specific mitigation actions over time. Each jurisdiction must identify how, when, and by whom action items will be monitored. The responsible agency assigned to each mitigation action is responsible for tracking and reporting on each of their actions.

Annual review and progress reporting includes the following:

- Step One:** Identify mitigation actions that your planning team has identified for the annual review. The planning team has the option to address ALL action items, or only those that should be acted on during each review cycle.
- Step Two:** Use the table below to track annual progress. For each action item selected for annual review insert the appropriate letter that indicates the status of that action item.
- Step Three:** Complete a progress report form as illustrated in Appendix G for each mitigation action item selected for annual review
- Step Four:** Submit the completed form(s) to the Whatcom County DEM.

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					Notes on yearly progress
	2021	2022	2023	2024	2025	
MULTIPLE HAZARDS						
MU-a Ongoing -- Adopt and Enforce Building Codes						
MU-b Ongoing -- Improve Household Disaster Preparedness						
MU-1 Assess Community Risk - Obtain local data including tax parcels, building footprints, critical facility locations, and other information for use in risk analysis						
MU-1 Assess Community Risk - Develop and maintain a database to track community vulnerability (i.e., exposure in known hazard areas)						
MU-1 Assess Community Risk - Establish a process to coordinate with state and Federal agencies to maintain up-to-date hazard data, maps, and assessments						
MU-1 Assess Community Risk - Update aerial photography current, especially in rapidly developing areas						
MU-1 Assess Community Risk - Identify the most at-risk critical facilities and evaluating potential mitigation techniques						
MU-2 Integrate Mitigation into Local Planning - Incorporate risk assessment and hazard mitigation principles into comprehensive planning efforts						
MU-2 Integrate Mitigation into Local Planning - Incorporate a stand-alone element for hazard mitigation into the local comprehensive (land use) plan						
MU-2 Integrate Mitigation into Local Planning - Incorporate hazard mitigation into broader growth management (i.e.,						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & <i>Enter Letter</i>): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled					
	2021	2022	2023	2024	2025	Notes on yearly progress
Smart Growth) initiatives.						
MU-2 Integrate Mitigation into Local Planning - Incorporate a hazard risk assessment into the local development and subdivision review process.						
MU-3 Monitor Mitigation Plan Implementation - Form a plan implementation steering committee to monitor progress on local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government						
MU-3 Monitor Mitigation Plan Implementation - Prepare a plan implementation monitoring schedule and outlining roles for those responsible for monitoring (i.e., local departments, agencies, and committees)						
MU-3 Monitor Mitigation Plan Implementation - Prepare and submit an annual plan implementation progress report to the local elected body						
MU-4 Protect Structures - Acquire or relocating structures located in hazard areas						
MU-4 Protect Structures - Assess the need to retrofit fire and police stations to become hazard resistant						
MU-5 Increase Hazard Education and Risk Awareness - Develop and implement a multi-hazard public awareness program						
MU-5 Increase Hazard Education and Risk Awareness - Establish a “hazard awareness week” in coordination with the media to promote hazard awareness (seasonal)						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & <i>Enter Letter</i>): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled					
	2021	2022	2023	2024	2025	Notes on yearly progress
MU-5 Increase Hazard Education and Risk Awareness - Create a speaker's bureau for disaster-related topics that focus on mitigation and preparedness measures						
<i>Add New Action Items if Applicable</i>						
DROUGHTS/HEAT WAVES						
D-1 Assess Vulnerability to Drought Risk - Gather and analyze water and climate data to gain a better understanding of local climate and drought history						
D-1 Assess Vulnerability to Drought Risk - Identify factors that affect the severity of a drought						
D-1 Assess Vulnerability to Drought Risk - Identify available water supplies						
D-1 Assess Vulnerability to Drought Risk - Determine how the community and its water sources have been impacted by droughts in the past						
EARTHQUAKES						
<i>EQ-a Ongoing -- Incorporate Earthquake Mitigation into Local Planning.</i> Whatcom County has incorporated building mitigation strategies for earthquakes into the Comprehensive Plan.						
<i>EQ-b Ongoing -- Conduct Inspections of Building Safety</i> Building safety inspections are carried out on a continual and regular basis.						
<i>EQ-c Ongoing -- Increase Earthquake Risk Awareness.</i> The Whatcom County Sheriff's Office Division of Emergency Management promotes earthquake awareness on a continual and ongoing basis.						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					
	2021	2022	2023	2024	2025	Notes on yearly progress
EQ-1 Increase Earthquake Risk Awareness - Develop an outreach program about earthquake risk and mitigation activities in homes, schools, and businesses						
EQ-2 Conduct Outreach to Builders, Architects, Engineers, and Inspectors - Training building department staff and officials on Form ATC-20 for post-earthquake building evaluation. The ATC-20 report and addendum, prepared by the Applied Technology Council, provide procedures and guidelines for making on-the-spot evaluations and decisions regarding continued use and occupancy of earthquake-damaged buildings						
<i>Add New Action Items if Applicable</i>						
EROSION						
ER-1 Map and Assess Vulnerability to Erosion - Use GIS to identify and map erosion hazard areas						
ER-1 Map and Assess Vulnerability to Erosion - Develop and maintain a database to track community vulnerability to erosion						
ER-1 Map and Assess Vulnerability to Erosion - Use GIS to identify concentrations of at-risk structures						
<i>Add New Action Items if Applicable</i>						
LANDSLIDES						
LS-a Ongoing -- Manage Development in Landslide Hazard Areas. Whatcom County Planning and Development Services does manage development in Landslide Hazard Areas on a continual and ongoing basis.						
LS-1 Map and Assess Vulnerability to Landslides – Study areas where						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled					
	2021	2022	2023	2024	2025	Notes on yearly progress
riparian landslides may occur						
LS-1 Map and Assess Vulnerability to Landslides - Complete an inventory of locations where critical facilities, other buildings, and infrastructure are vulnerable to landslides						
LS-1 Map and Assess Vulnerability to Landslides - Use GIS to identify and map landslide hazard areas						
LS-1 Map and Assess Vulnerability to Landslides - Develop and maintaining a database to track community vulnerability to landslides						
<i>Add New Action Items if Applicable</i>						
FLOODING						
FL-a. Comprehensive Flood Hazard Management Plan						
FL-b. Adopt and Enforce Building Codes and Development Standards						
FL-c. Improve Flood Risk Assessment						
FL-d. Join or Improve Compliance with NFIP						
FL-e. Manage the Floodplain Beyond Minimum Requirements						
FL-f. Participate in the CRS						
FL-g. Remove Existing Structures from Flood Hazard Areas						
FL-h. Improve Stormwater Drainage System Capacity						
FL-i. Conduct Regular Maintenance for Drainage Systems and Flood Control Structures						
FL-j. Protect Infrastructure						
FL-k. Protect Critical Facilities						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					
	2021	2022	2023	2024	2025	Notes on yearly progress
<i>FL-l. Construct Flood Control Measures</i>						
<i>FL-m. Protect and Restore Natural Flood Mitigation Features</i>						
<i>FL-1 Incorporate Flood Mitigation in Local Planning</i>						
<i>FL-2 Form Partnerships to Support Floodplain Management</i>						
<i>FL-3 Limit or Restrict Development in Floodplain Areas</i>						
<i>FL-4 Improve Stormwater Management Planning</i>						
<i>FL-5 Adopt Polices to Reduce Stormwater Runoff</i>						
<i>FL-6 Establish Local Funding Mechanisms for Flood Mitigation</i>						
<i>FL-7 Elevate or Retrofit Structures and Utilities</i>						
<i>FL-8 Flood proof Residential and Non-Residential Structures</i>						
<i>FL-9 Preserve Floodplains as Open Space</i>						
<i>FL-10 Increase Awareness of Flood Risk and Safety</i>						
<i>FL-11 Educate Property Owners about Flood Mitigation Techniques</i>						
<i>Add New Action Items if Applicable</i>						
ALLUEVIAL FANS						
<i>AF-a. Map and Assess Alluvial Fans Hazards</i>						
<i>AF-b. Manage Development in Alluvial Fan Hazard Areas</i>						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled					
	2021	2022	2023	2024	2025	Notes on yearly progress
<i>AF-c. Promote or Require Site and Building Design Standards to Minimize Risk on Alluvial Fans</i>						
<i>AF-d. Remove Existing Buildings and Infrastructure from Erosion/Alluvial Fan Hazard Areas</i>						
<i>AF-e. Develop Basin-Specific Plans for Alluvial Fan Hazard Areas</i>						
<i>AF-f. Construct Mitigation Measures on Alluvial Fan Hazard Areas</i>						
<i>AF-g. Increase Awareness of Alluvial Fan Hazards</i>						
<i>Add New Action Items if Applicable</i>						
COASTAL FLOODING (including STORM SURGE)						
CF-1 Map and Assess Vulnerability to Coastal Flooding - Model various “what-if” scenarios to estimate potential vulnerabilities in order to develop coastal mitigation priorities						
CF-1 Map and Assess Vulnerability to Coastal Flooding - Use GIS to map hazard areas, at-risk structures, and associated hazards (e.g., flood and storm surge) to assess high-risk areas						
CF-1 Map and Assess Vulnerability to Coastal Flooding - Develop an inventory of public buildings and infrastructure that may be particularly vulnerable to coastal flooding						
<i>Add New Action Items if Applicable</i>						
WINTER WEATHER						
WW-1 Conduct Winter Weather Risk Awareness Activities - Inform the public about severe winter weather impacts						
WW-1 Conduct Winter Weather Risk						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					
	2021	2022	2023	2024	2025	Notes on yearly progress
Awareness Activities - Distribute family and traveler emergency preparedness information about severe winter weather hazards						
WW-1 Conduct Winter Weather Risk Awareness Activities - Encourage homeowners to install carbon monoxide monitors and alarms						
WW-1 Conduct Winter Weather Risk Awareness Activities - Educating citizens that all fuel-burning equipment should be vented to the outside						
WW-2 Assist Vulnerable Populations - Organize outreach to vulnerable populations, including establishing and promoting accessible heating centers in the community						
<i>Add New Action Items if Applicable</i>						
SUBSIDENCE						
SU-1 Map and Assess Vulnerability to Subsidence - Use GIS to map areas that are susceptible to subsidence						
SU-1 Map and Assess Vulnerability to Subsidence - Identify and map old mining areas or geologically unstable terrain so that development can be prevented or eliminated						
SU-1 Map and Assess Vulnerability to Subsidence - Improve accuracy of hazard area maps to educate residents about unanticipated risks						
<i>Add New Action Items if Applicable</i>						
TSUNAMI						
TSU-1 Map and Assess Vulnerability to Tsunami - Using GIS to map areas that are vulnerable to inundation by tsunamis						
TSU-1 Map and Assess Vulnerability to						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled					
	2021	2022	2023	2024	2025	Notes on yearly progress
Tsunami - Develop and maintain a database to track community vulnerability to tsunamis						
TSU-1 Map and Assess Vulnerability to Tsunami - Offer GIS hazard mapping online for residents and design professionals						
TSU-1 Map and Assess Vulnerability to Tsunami - Educate map users on the appropriate uses and limitations of maps						
TSU-1 Map and Assess Vulnerability to Tsunami - More accurately map problem areas to educate residents about unanticipated risks						
TSU-2 Manage Development in Tsunami Hazard Areas - Adopt and enforce building codes and design standards that contain requirements for tsunami-resistant design						
TSU-2 Manage Development in Tsunami Hazard Areas - Encourage new development that is configured to minimize tsunami losses by using site planning strategies that slow water currents, steer water forces, and block water forces						
TSU-3 Increase Public Awareness of Tsunami Hazard - Educate citizens regarding the dangers of tsunami and inform them of emergency procedures and routes to use should a tsunami warning be issued						
TSU-3 Increase Public Awareness of Tsunami Hazard - Conduct tsunami drills						
TSU-3 Increase Public Awareness of Tsunami Hazard - Designate tsunami inundation zones and evacuation routes						
TSU-3 Increase Public Awareness of Tsunami Hazard - Develop maps showing possible tsunami inundation areas						
TSU-3 Increase Public Awareness of						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					
	A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled					
	2021	2022	2023	2024	2025	Notes on yearly progress
Tsunami Hazard - Participating in NOAA's TsunamiReady Community program						
<i>Add New Action Items if Applicable</i>						
WILDFIRE						
WF-1 Map and Assess Vulnerability to Wildfire - Use GIS mapping of wildfire hazard areas to facilitate analysis and planning decisions through comparison with zoning, development, infrastructure, etc						
WF-1 Map and Assess Vulnerability to Wildfire - Develop and maintain a database to track community vulnerability to wildfire						
WF-1 Map and Assess Vulnerability to Wildfire - Create a wildfire scenario to estimate potential loss of life and injuries, the types of potential damage, and existing vulnerabilities within a community to develop wildfire mitigation priorities						
WF-2 Require or Encourage Fire-Resistant Construction Techniques - Encourage the use of non-combustible materials for new construction in wildfire hazard areas						
WF-2 Require or Encourage Fire-Resistant Construction Techniques - Using fire resistant roofing and building materials in remodels, upgrades, and new construction						
WF-2 Require or Encourage Fire-Resistant Construction Techniques - Encourage enclosing the foundations of homes and other buildings in wildfire-prone areas, rather than leaving them open and potentially exposing undersides to blown embers or other materials						
WF-3 Create Defensible Space Around Structures and Infrastructure - Encourage creating buffers around residential and						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					
	2021	2022	2023	2024	2025	Notes on yearly progress
non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches						
WF-3 Create Defensible Space Around Structures and Infrastructure - Encourage replacing flammable vegetation with less flammable species						
WF-3 Create Defensible Space Around Structures and Infrastructure - Encourage creating defensible zones around power lines, oil and gas lines, and other infrastructure systems						
WF-4 Participate in Firewise Program - Expand the “Firewise Communities/USA” recognition program sponsored by the National Wildlife Coordinating Group (firewise.org)						
WF-4 Participate in Firewise Program - Sponsor Firewise workshops for local officials, developers, civic groups, and neighborhood/homeowners’ associations						
WF-4 Participate in Firewise Program - Publicize Firewise guidance and encourage best practices in Whatcom County						
WF-5 Increase Wildfire Risk Awareness - Offer GIS hazard mapping online for residents, developers, and design professionals						
WF-5 Increase Wildfire Risk Awareness - Organize Fire District tours to show elected officials and planners the most vulnerable areas of the community’s wildland-urban interface and increase their understanding of risks						
WF-5 Increase Wildfire Risk Awareness - Develop partnerships with neighborhood groups, homeowners’ associations, and others to conduct outreach activities						

Exhibit A



Unincorporated Whatcom County Hazard-Specific Action Items 2021-2025 – Annual Review and Progress						
Action Items	Status (Choose One & Enter Letter):					Notes on yearly progress
	2021	2022	2023	2024	2025	
WF-5 Increase Wildfire Risk Awareness - Conduct education programs in schools						
WF-5 Increase Wildfire Risk Awareness - Educate the public about evacuation procedures						
WF-5 Increase Wildfire Risk Awareness - Form a citizen plan implementation steering committee to monitor progress of local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government						
<i>Add New Action Items if Applicable</i>						
VOLCANIC						
VOL-1 – Update the 2019 Mount Baker Action Plan						
VOL-2 – Update the latest USGS geologic risks related to Mount Baker and publish in Whatcom County GIS						
VOL-3 – Conduct Whatcom County table top exercise on updated plans and risks.						
<i>Add New Action Items if Applicable</i>						



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