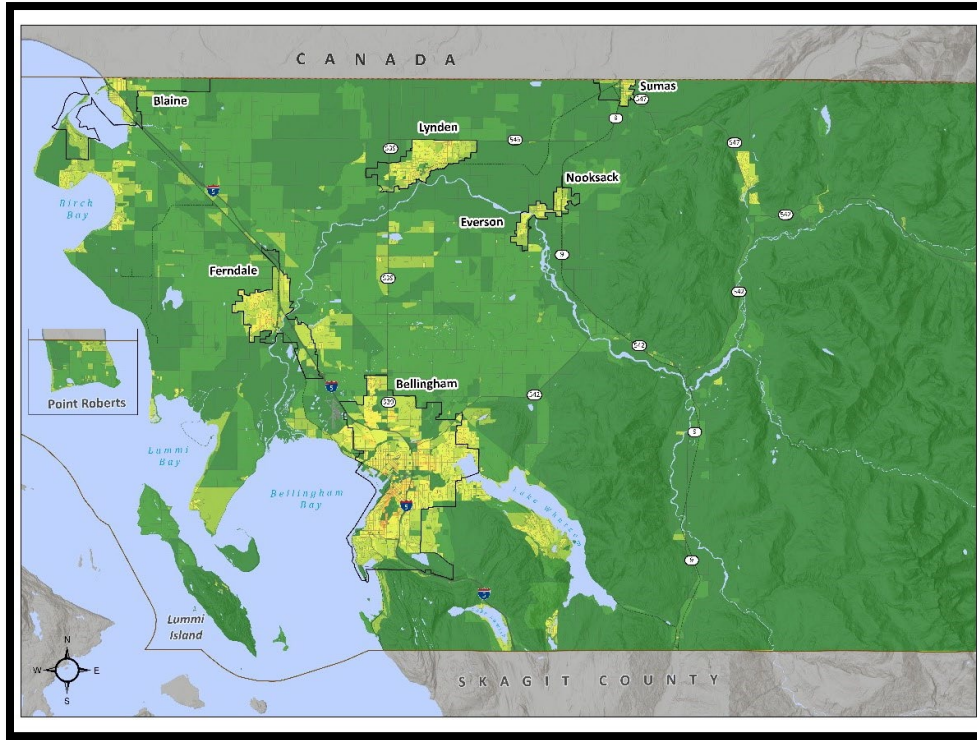




Whatcom County

Natural Hazards Mitigation Plan



**A MULTI-HAZARD, MULTI-JURISDICTIONAL PLAN DEVELOPED FOR
THE BENEFIT OF ALL CITIZENS AND GOVERNMENTAL
JURISDICTIONS WITHIN WHATCOM COUNTY**

**Prepared by:
Whatcom County Sheriff's Office Division of Emergency Management**

Initial Submission: June 15, 2021

This page intentionally left blank.



ACKNOWLEDGMENTS v

AUTHORITY..... vi

INTRODUCTION vii

WHATCOM COUNTY BACKGROUND ix

 WHATCOM COUNTY MAJOR DISASTER DECLARATIONS xvi

SECTION 1. PLAN MISSION, GOALS, AND UPDATE PROCESS 20

 PLAN MISSION..... 20

 PLAN GOALS..... 20

 INTEGRATION OF FEMA GUIDANCE..... 22

 PLAN UPDATE PARTICIPANTS 26

 PLAN UPDATE PROCESS 28

 PUBLIC INVOLVEMENT..... 32

 WEB-BASED OUTREACH..... 34

 ELEMENTS NEW TO THE 2015 PLAN 35

 PLAN ORGANIZATION 39

 STATE AND FEMA PLAN REVIEW PROCESS 41

SECTION 2.1. HAZARD SUMMARIES..... 45

 EARTHQUAKES 47

 FLOODING 58

 COSTAL FLOODING (Including Storm Surge)..... 86

 GEOLOGIC HAZARDS 93

 SEVERE STORMS..... 120

 TSUNAMIS 126

 VOLCANOES 135

 WILDLAND FIRES 145

SECTION 2.2 OTHER HAZARDS OF CONCERN 158

 AVALANCHES..... 158



DAM FAILURE 161

DROUGHT..... 163

SECTION 2.3 WHATCOM COUNTY STORM EVENTS DATABASE 166

SECTION 3. JURISDICTION PROFILES AND MITIGATION ACTION PLANS..... Error!
Bookmark not defined.

CITY OF BELLINGHAM **BEL-Error! Bookmark not defined.**

CITY OF BLAINE **BLA-Error! Bookmark not defined.**

CITY OF EVERSON..... **EVE-Error! Bookmark not defined.**

CITY OF FERNDALE **FER-Error! Bookmark not defined.**

WHATCOM COUNTY FLOOD CONTROL ZONE DISTRICT ... **FCZ-Error! Bookmark not defined.**

LAKE WHATCOM WATER AND SEWER DISTRICT **LWWSD-Error! Bookmark not defined.**

LYNDEN **LYN-Error! Bookmark not defined.**

MERIDIAN SCHOOL DISTRICT **MER-Error! Bookmark not defined.**

CITY OF NOOKSACK..... **NOO-Error! Bookmark not defined.**

PORT OF BELLINGHAM..... **BEL-Error! Bookmark not defined.**

CITY OF SUMAS **SUM-Error! Bookmark not defined.**

WHATCOM COUNTY **WHA-Error! Bookmark not defined.**

SECTION 4. PLAN MAINTENANCE Error! Bookmark not defined.

SECTION 5: APPENDICES..... Error! Bookmark not defined.

APPENDIX A: CAPABILITIES IDENTIFICATION **Error! Bookmark not defined.**

APPENDIX B: LIST OF ACRONYMS AND ABBREVIATIONS..... **Error! Bookmark not defined.**

APPENDIX C: WHATCOM COUNTY RISK ASSESSMENT & MITIGATION STRATEGIES FOR WILDLAND FIRE **Error! Bookmark not defined.**

APPENDIX D: NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION (NFIP) **Error! Bookmark not defined.**

APPENDIX E: WHATCOM COUNTY MITIGATION IDEAS **Error! Bookmark not defined.**



APPENDIX F: MITIGATION ACTION PROGRESS REPORT FORM**Error! Bookmark not defined.**

APPENDIX G: WHATCOM COUNTY CONTACT LIST .. **Error! Bookmark not defined.**



ACKNOWLEDGMENTS

Funding Acknowledgements

Whatcom County Sheriff's Office Division of Emergency Management contracted with Western Washington University's Resilience Institute to develop the 2021 Whatcom County Natural Hazards Mitigation Plan Update. Funding for this project was made possible through funding provided by the U.S. Department of Homeland Security.

Geographic Information Systems Maps

The maps for the 2021 update of the Plan were created by Western Washington University's Resilience Institute, with support from the university's Spatial Institute, unless indicated otherwise.

The datasets used in the maps in this Plan were from the following sources:

- Washington Department of Natural Resources – Wildland-Urban Interface (2019), Boulder Creek Fault Zone Seismic Scenario (2017), and Liquefaction Susceptibility (2010)
- Washington Geological Survey – Landslide Inventory (2020)
- Federal Emergency Management Agency – National Flood Hazard Layer (2019)
- Whatcom County – Tsunami Inundation (contour polygons, 2020)
- U.S. Geological Society – Mount Baker Volcano Lahar and Blast Zone Boundaries (1995)
- Whatcom County Planning and Development Services – City Limits, County Boundaries, Urban Growth Area
- Washington State Department of Transportation – Railroads, Roads, Highway



AUTHORITY

This Plan is adopted by:

Entity	Approving Authority	Date Adopted	Ordinance
City of Bellingham	Mayor Seth Fleetwood & City Council Members		
Port of Bellingham	Executive Director Rob Fix & Port Commission		
City of Blaine	Blaine City Council		
City of Everson	Mayor John Perry & City Council Members		
City of Ferndale	Mayor Greg Hansen & City Council Members		
Meridian School District	Dr. James Everett, Superintendent		
City of Lynden	Mayor Scott Korthuis & City Council Members		
City of Nooksack	Mayor Jim Ackerman & City Council Members		
City of Sumas	Chamber President Ron Fadden & City Chamber Members		
Whatcom County	County Executive Satpal Sidhu & Whatcom County Council Members		
Whatcom County Flood Control Zone District	County Executive Satpal Sidhu & Whatcom County Council Members		
Lake Whatcom Water & Sewer District	Justin Clary, General Manager		



INTRODUCTION

In 2021, Whatcom County Sheriff's Office, Division of Emergency Management (DEM) undertook the process of updating the *Whatcom County Natural Hazards Mitigation Plan* (cited herein as "Plan"). Natural hazards mitigation process was instigated by the Code of Federal Regulation (CFR) 201.6 (see Appendix A), enacted in October 2002 and amended in September 2004. The purpose of the Plan is to facilitate a net reduction in the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during immediate recovery from a disaster.

Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5165, as amended by the Disaster Mitigation Act of 2000 (DMA) (P.L. 106-390), provides for States, Tribes, and local governments to undertake a risk-based approach to reducing risks to natural hazards through mitigation planning. The National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 *et seq*, reinforced the need and requirement for mitigation plans, linking flood mitigation assistance programs to State, Tribal and Local Mitigation Plans.

After a presidential major disaster declaration, mitigation funding becomes available. The amount is based on a percentage of the total federal grants awarded under the Public Assistance and Individuals and Households Programs for the entire disaster. Projects are funded with a combination of federal, state, and local funds. Information on this program and application process is disseminated at public briefings and by other means.

Section 322 of the amended Stafford Act essentially states that as a condition of receiving a disaster loan or grant:

"The state and local government(s) shall agree that natural hazards in the areas affected shall be evaluated and appropriate action taken to mitigate such hazards, including safe land-use and construction practices. For disasters declared after November 1, 2004, all potential applicants (sub-grantees) must have either their own, or be included in a regional, locally adopted and FEMA approved all hazard mitigation plan in order to be eligible to apply for mitigation grant funds."

The regulations governing the mitigation planning requirements for local mitigation plans are published under 44 CFR §201.6. Under 44 CFR §201.6, local governments must have a FEMA-approved Local Mitigation Plan in order to apply for and/or receive project grants under the following hazard mitigation assistance programs:

- **Hazard Mitigation Grant Program (HMGP).**

The Hazard Mitigation Grant Program (HMGP) provides funds to States, Territories,



Indian Tribal governments, local governments, and eligible private non-profits (PNPs) following a Presidential major disaster declaration.

- **Pre-Disaster Mitigation (PDM)**
- **Flood Mitigation Assistance (FMA)**

The Pre-Disaster Mitigation (PDM) Program and Flood Mitigation Assistance (FMA) programs provide funds annually to States, Territories, Indian Tribal governments, and local governments. Although the statutory origins of the programs differ, both share the common goal of reducing the risk of loss of life and property due to natural hazards.

Mitigation is the cornerstone of emergency management. It is an integral part of the ongoing effort to lessen the impacts disasters can have on people's lives and property through damage prevention and flood insurance. The impact on human lives and communities is lessened through measures such as building safely within the floodplain or removing homes from the floodplain altogether; engineering buildings and infrastructures to withstand earthquakes; and creating and enforcing effective building codes to protect properties from floods, hurricanes, and other natural hazards.

The mitigation plan contains a five-year action plan matrix, background on the purpose and methodology used to develop the mitigation plan, profiles of Whatcom County and participating jurisdictions, sections on the natural and technological that occur within the county, and multiple appendices.





WHATCOM COUNTY BACKGROUND

Whatcom County, the northwestern most county of Washington State, comprises an area of 2,120 square miles. It is bordered to the north by Canada and to the west by the Strait of Georgia, a deep-water ship transit, and another waterway called the Rosario Strait. The eastern half of Whatcom County is composed of the North Cascades Mountain range, which occupies roughly two-thirds of the entire County. No Whatcom County roads that originate in the western half of the County connect to the eastern half; towns in eastern Whatcom County can only be accessed by driving more than 60 miles through Skagit County to the south. An unusual characteristic of Whatcom County is that not all of its populated areas are contiguous with the mainland part of the County; these areas include Point Roberts and Lummi Island. Only 4.5% of the land area is incorporated, while the majority is unincorporated. According to the U.S. Census Bureau, the population of Whatcom County grew from an estimated 209,790 in 2015, to an estimated 228,000 in 2020, an 8% increase. Most of this growth, 70%, occurred within the incorporated areas of Whatcom County. Development has followed a similar pattern.

The Washington State Growth Management Act (GMA) was adopted by State Legislature in 1990 (Revised Code of Washington Chapter 36.70A) to address the threat that uncoordinated and unplanned growth posed to the environment, sustainable economic development, and the quality of life in Washington, including the minimizing the risks natural hazards pose to local communities. The GMA requires state and local governments to manage Washington's growth by identifying and protecting critical areas and natural resource lands, designating urban growth areas, preparing comprehensive plans and implementing them through capital investments and development regulations. According to the code, critical areas include frequently flooded areas and geologically hazardous areas, natural hazards specifically addressed in the Whatcom County Natural Hazard Mitigation Plan. The GMA regulates development in these areas and has the potential to affect hazard vulnerability and exposure at the local level. Whatcom County and its planning partners are in compliance with the provisions of the GMA and other regulations (e.g., Endangered Species Act, Clean Water Act, Shoreline Management Act, and the Washington State Building Code) that limit development in frequently flooded and geologically hazardous areas.

The Natural Hazard Mitigation Plan is constantly under review and efforts are made to reflect changes in priority. For example, in 2017 the Whatcom County Council added to its Critical Areas Chapter paragraph "16.16.350 Volcanic Hazard Areas-Standards." While not denying the construction of structures in a lahar zone, this paragraph requires deliberate evaluation of the possible lahar path and development of an emergency evacuation plan with life-saving action as the primary consideration.



The NHMP both informs and is informed by Whatcom County Planning and Development policies and regulations and other planning documents, including the Whatcom County Comprehensive Plan (November 2020; specifically, Chapter 2 Land Use and Chapter 10 Environment). While development has continued to occur within Whatcom County, the Natural Hazards Mitigation Plan has been used as one of the documents to determine the impacts that the hazard(s) may have in areas that are being developed.

An understanding of the geography, weather, industries, and characteristics of Whatcom County is critical to an ability to mitigate the natural hazards identified in this Plan. Some of these characteristics are discussed below.

A. CLIMATE

Annual precipitation varies greatly, depending on elevation, as follows:

1. Lowlands: rainfall varies from 30 to 40 inches
2. East toward the Cascade Mountains: precipitation increases
3. Near Mount Baker (elevation 10,778 feet): 140 inches, snow is possible year round

B. GEOGRAPHY

Major geographic features of Whatcom County are grouped as follows:

1. **Lowlands (West of Cascade Foothills):** These lowlands are part of the Fraser/Nooksack river-deltas system. This system runs north from the Chuckanut Mountains to the mouth of the Fraser River, where Vancouver, British Columbia (B.C.) is sited. To the south (beyond the Chuckanut Mountains, in Skagit County) is the delta of another great river, the Skagit River. These river deltas are important to Whatcom County because of their related flood, earthquake, and volcano hazards.
2. **Mount Baker Foothill Communities:** Scattered through the rural area along the Valley Highway (Highway 9) and up through the foothills along the Mount Baker Highway (State Route [SR] 542), crossing all three forks of the Nooksack River, are the Mount Baker Foothill communities of Van Zandt, Acme, Wickersham, Welcome, Kendall, Maple Falls, and Glacier.
3. **Nooksack River:** There are more than 1,325 miles of stream in the Nooksack River, its tributaries, and associated independent streams. The river originates in the mountains as three forks (North, Middle, and South) that converge near Deming. Its watershed



basin comprises most of the County's eastern lands. The river corridor links the various landscapes of Whatcom County.

4. **Coast and Islands:** There are 134 miles of seacoast in Whatcom County: 51% is steep, eroding sea bluff (such as the mountain view coast at Birch Point); 16% is rocky shoreline, which includes parts of Lummi Island; 17% is accreting (building up or extending shoreline); and 5% is estuarine shore.
5. **Lakes:** There are 245 lakes in Whatcom County: four large reservoirs inside the Federal Lands (Ross, Diablo, Gorge, and Baker Lakes) and two large natural lakes in the Chuckanut region (Lake Whatcom and Lake Samish). Seven lakes are more than 100 acres in size:
 - Whatcom (5,000 acres)
 - Samish (825 acres)
 - Terrell (440 acres)
 - Silver (185 acres)
 - Padden (150 acres)
 - Wiser (125 acres)
 - Judson (112 acres)
6. **The North Cascades Mountains:** Roughly two-thirds of eastern Whatcom County is federally managed land contained in the North Cascades Mountains, which is controlled by the U.S. Forest Service and the U.S. National Park Service. The Cascades extend from Canada's Fraser River south beyond Oregon. They shape the climate and vegetation over much of the Pacific Northwest.
 - The Mount Baker-Snoqualmie National Forest lies east of the foothills and west of the "North Unit" of North Cascades National Park.
 - The North Cascades National Park is located adjacent to the east portion of the Mount Baker-Snoqualmie National Forest.
 - East of the North Cascades National Park is the Pasayten Wilderness, administered through the Okanogan National Forest. This is a road-less area.
7. **National Forest and Parks.** There are about 460,000 acres of National Forest Lands and about 400,000 acres of National Park Lands within Whatcom County. Three roads



connect western Whatcom County with the federal lands:

- The Mount Baker Highway (SR 542) provides access to the Mount Baker Recreation Area.
- The Middle Fork Road (a secondary, more primitive entrance) leads to the hiking and camping region on the south and west sides of Mount Baker, including the Twin Sisters area.
- Highway 20 (through Skagit County) is the principal access to Baker Lake, as well as to North Cascades National Park.

Two parts of the North Cascades National Park Complex are located in Whatcom County:

- The North Unit (Picket Range) – roadless, primitive, high country .
- Ross Lake National Recreation Area – Seattle City Light with three dams on the Skagit River.

C. TRANSPORTATION

1. Major Roads

- Interstate 5 (I-5), which connects Mexico to Canada, runs north and south through Whatcom County.
- SR 9 traverses north and south, crossing the South and North Forks of the Nooksack River.
- Mount Baker Highway (SR 542), from Bellingham, intersects SR 9 and winds east to Mount Baker.
- Chuckanut Drive (SR 11), from Bellingham, south along the coast to Skagit County

2. Marinas

- In Bellingham, Squalicum Harbor is the second largest marina in Puget Sound. More than 1,800 pleasure craft, commercial boats, and fishing vessels are moored here.
- In Blaine, Drayton Harbor includes pleasure craft and a fishing fleet.



- Point Roberts is accessed by water from the Strait of Georgia or by land through Canada.
- Semiahmoo Marina contains approximately 300 slips and is located near the Canadian border.
- Private marinas are located along Bellingham Bay (including Fairhaven), Lummi Island, Gooseberry Point, Sandy Point, Birch Bay, and Eliza Island.

3. Rail

- Bellingham is on Amtrak routes from Seattle and Vancouver, B.C.
- Rail freight corridors along SR 9 and the Puget Sound shoreline (i.e., along Chuckanut Bay to Bellingham) connect freight from the south into Canada, with additional sidings that connect these two routes.
- There is rail along the I-5 corridor to Blaine and northwest to the Cherry Point vicinity.
- Rail from Cherry Point to Custer links with the I-5 rail corridor.

4. Vessel Traffic Lanes

- Deep Draft Commercial Vessels
- Barges
- Tug boats
- Commercial fishing vessels
- Recreation boats
- Federal Vessels
- Vessels accessing shipyards in Fairhaven and Bellingham Bay

5. Ferry Crossings

- The Alaska Marine Highway System Ferry departs from Bellingham to Alaska.
- The Whatcom County Ferry crosses Hales Pass from Gooseberry Point to Lummi Island (an approximately 8-minute transit time).
- Plover Passenger Ferry crosses from Blaine to Semiahmoo Spit; this ferry is open seasonally on the weekends from Memorial Day to Labor Day.
- Commercial sight-seeing ferries to the San Juan Islands and Victoria, Canada,



depart from the Bellingham Ferry Terminal.

- Canadian Ferries cross northwestern Whatcom County waterways: Tsawwassen through Strait of Georgia, to Channel Islands, and to Sidney on Vancouver Island, B.C.

6. Rivers

- The Nooksack River and many tributaries and independent streams are used by canoes, kayaks, small fishing boats, and for rafting float trips.

D. AIR TRANSPORTATION

- Bellingham International Airport: Commercial jets use a 6,700 X 150-foot asphalt runway
- Lynden Municipal Airport: 2425 X 40-foot asphalt runway
- Point Roberts Airport: 2400 X 150 turf runway
- Vancouver International Airport, an "air hub" with worldwide nonstop flights, is 45 miles north in Vancouver B.C.
- Sea-Tac International Airport is 90 miles south in Seattle, Washington

E. LAND TRANSPORTATION

- Whatcom Transportation Authority (WTA)
- Greyhound bus
- Private charters/shuttles
- Taxis
- Car rentals

F. SERVICES

1. Hospital

- Peace Health St. Joseph Medical Center, including its Outpatient Center, is the only hospital in Whatcom County.
- Several health clinics are found in Whatcom County, primarily in Bellingham.



2. Local Media

- Two television stations with out-of-state production: KVOS on Channel 12 is produced in Chicago with its primary market being lower BC and Vancouver Island. KBCB is an Illinois based Christian Television station, running only Christian programming, again mainly focused on lower mainland.
- Several companies provide television cable services
- Telephone companies:
 - Century Link Communications in Bellingham
 - Whidbey Telephone Company in Point Roberts
 - Frontier in the remainder of Whatcom County
 - Comcast (IP Service)
- Ten radio stations: AM/FM
- Emergency Alert System Station: KGMI (790 AM)
- One daily newspaper
- Seven weekly newspapers
- Two monthly publications

3. School Districts: Public Education, Kindergarten through 12th grade

- 35 elementary schools
- 11 middle schools
- Nine high schools
- Numerous private schools

4. Colleges/Universities

- Bellingham Technical College
- Northwest Indian College
- Western Washington University



- Whatcom Community College
- Washington State University Cooperative Extension – Whatcom County

5. Utilities

- Electricity: Puget Sound Energy, Public Utility District (PUD) #1, Blaine PUD, Sumas PUD, and Bonneville Power (to direct-service customers)
- Gas: Cascade Natural Gas supplies gas directly to customers; Williams Natural Gas Pipeline, Arco Natural Gas Pipeline, and Olympic Pipeline supply retailers.
- Water: approximately 350 public water systems in Whatcom County; Bellingham, Lynden, Blaine, Glacier, Nooksack, and Sumas have their own water districts; and some smaller communities rely on private wells and lakes
- Cogeneration plants: three natural gas-fired cogeneration plants are located in Whatcom County: Sumas Cogeneration Company LP in Sumas; - PSE Ferndale Generating Station in Ferndale; and Encogen Cogeneration Plant in Bellingham.

WHATCOM COUNTY PRESIDENTIAL DISASTER DECLARATIONS

When natural hazard event impacts are large, the state may request a Presidential Disaster Declaration. The table below lists the Presidential Disaster Declarations for Whatcom County from 2009 until the publication of this plan update in June 2021. Where available, dollar value represents the estimate Whatcom County public assistance per capita impacts, as established in the Preliminary Damage Assessment Report for the event. Complete data is available through <https://www.fema.gov/disasters/disaster-declarations> database.

Year	Level of Community Impact (Estimated*)	Date	Disaster Types	Federal Disaster #
2009	No federal individual or public assistance granted	30-Jan-2009	Severe Winter Storm, Landslides, Mudslides, and Flooding	1817
2009	\$4.12 per capita impact	2-Mar-2009	Severe Winter Storm and Record and Near Record	1825



			Snow	
2010-2014	No Major Disaster Declarations			
2015	Below \$3.57 per capita threshold	15-Oct-2015	Severe Windstorm	4242
2015	\$10.50 per capita impact	20-Oct-2015	Wildfires and Mudslides	4243
2017	\$10.05 per capita impact	21-Apr-2017	Severe Winter Storms, Flooding, Landslides, and Mudslides	4309
2019	\$25.71 per capita impact		Straight-Line Winds, Flooding, Landslides, and Tornado	4418
2020	\$10.26 per capita impact	23-Apr-2020	Severe Storms, Flooding, Landslides, and Mudslides	4539
2020	No per capita impact assessed	22-Mar-2020	Covid-19 Pandemic	4481



WHATCOM COUNTY STATE DECLARATIONS AND OTHER DISASTERS

Not all events that occur reach a Presidential Declaration. Whatcom County experiences many events that do not reach the threshold of even a gubernatorial declaration. This does not mean the events are not impactful or costly. It just means the threshold levels for the State have not been reached (\$780,000 for Whatcom County, \$10,750,000 for the State). In addition, Whatcom County, and Whatcom County response agencies, do not have a standardized cost and impact documentation methodology which makes it difficult to adequately track the full scope of an event. Understanding the actual costs and impacts of all natural hazard events is a goal of Whatcom County in the 2021-2025 timeframe. However, the following list of natural hazard events did occur between 2012 and 2020:

Year	Designation	Title	Estimated COSTS
2016	2016	Winter Storm	\$250,000
2016	3207	Reese Hill Wildfire	\$350,000
2016	3764	Wind and Rain	\$200,000
2017	0971	2500 Rock Slide	\$150,000
2017	1905	June Ferndale Suspicious Oder	\$75,000
2017	4928	December Ice Storm	\$600,000 (includes utility damages)
2017		June Mudslide	\$50,000
2017	0347&0448 / FEMA 4309	Feb 2017 Storms	\$1,500,000
2017	3957	Winter Storms 2016/2017	\$750,000
2018	0439	20 Shetland Court Landslide	\$25,000



2018	4434	Flooding and Windstorm	\$575,000
2018	4615 / FEMA 4418	December Storms	\$4,750,000
2018	05	Fire and Dry Fuel Proclamation	\$25,000
2019	0410	February Severe Storms	\$675,000 (includes utility damages)
2020	0256 / FEMA 4539	Super Bowl Flood	\$3,500,000
2020	0256	January Kind Tide Event	\$150,000
2020	0265	COVID-19	\$50,000,000 (not calculated in total, on-going)
2021	1379	Mt Baker/Kelly Road Wildland Fire	\$25,000
			(Total excluding COVID-19) \$13,650,000 or \$2,730,000 per year



This page left intentionally blank.



SECTION 1. PLAN MISSION, GOALS, AND UPDATE PROCESS

PLAN MISSION

The mission of the *Whatcom County Natural Hazards Mitigation Plan* is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting resources for risk reduction and loss-prevention, and identifying activities to guide the county towards building a safer, more sustainable/resilient community.

PLAN GOALS

The plan goals describe the overall direction Whatcom County jurisdictions, organizations, and citizens can take to work toward mitigating risk from natural hazards.

The goals represent stepping-stones between the broad direction of the mission statement and the specific recommendations outlined in the action items. Key Contributors reviewed the Plan Goals from the 2011 Whatcom County Natural Hazard Mitigation Plan and determined them to be still valid. In the current plan, however, the plan goals were expanded, providing additional detail to more clearly define and clarify those goals. The Plan goal topics are:

1. Protect Life, Property and Public Welfare.

- a. Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural hazards.
- b. Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards. Improve hazard assessment information to make recommendations for discouraging new development and encouraging preventive measures for existing development in areas vulnerable to natural and technological hazards.

2. Increase Public Awareness.

- a. Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.
- b. Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.



3. Preserve and Enhance Natural Systems.

- a. Encourage development of acquisition and management strategies to preserve open space.

4. Encourage Partnerships and Implementation.

- a. Strengthen communication and coordinate participation among and within public agencies, citizens.
- b. Engage with non-profit organizations, business, and industry to gain a vested interest in implementation.
- c. Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

5. Ensure Emergency Services.

- a. Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.
- b. Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.
- c. Coordinate and integrate natural and technological mitigation activities, where appropriate, with emergency operations plans and procedures.



INTEGRATION OF FEMA GUIDANCE

The mitigation plan belongs to the local community. While FEMA has the authority to approve plans in order for local governments to apply for mitigation project funding, there is no required format for the plan's organization. When developing the mitigation plan, keep the following guiding principles in mind:

- Focus on The Mitigation Strategy. The mitigation strategy is the plan's primary purpose. All other sections contribute to and inform the mitigation strategy and specific hazard mitigation actions.
- Process Is As Important As The Plan Itself. In mitigation planning, as with most other planning efforts, the plan is only as good as the process and people involved in its development. The plan should also serve as the written record, or documentation, of the planning process.
- This Is Your Community's Plan. To have value, the plan must represent the current needs and values of the community and be useful for local officials and stakeholders. Develop the mitigation plan in a way that best serves your community's purpose and people.

The suggested mitigation actions are summarized into four types: (1) Local Planning and Regulations, (2) Structure and Infrastructure Projects, (3) Natural Systems Protection, and (4) Education and Awareness Programs. Examples of activities that can be used to accomplish each mitigation goal are identified, as well as the relevant FEMA publications or resources, if applicable.

FEMA recognizes that local governance structures vary, and that the authority to implement mitigation strategies (e.g., land use planning and zoning, building code enforcement, infrastructure improvements, floodplain management, etc.) may not reside within a single governmental entity. In addition, certain FEMA hazard mitigation assistance programs accept applications from private, nonprofit organizations and other quasi-governmental entities that do not necessarily align with traditional geopolitical boundaries. To ensure these potential sub-applicants to FEMA mitigation assistance programs meet the eligibility requirements for mitigation plans under 44 CFR §201.6, FEMA has identified procedures for several of these entities.

Reference: FEMA's Local Mitigation Planning Handbook, March 2013



Federal Regulations

Federal regulations regarding the planning process and updating of multi-jurisdictional hazard mitigation plans can be found in 44 CFR 201.6. The “Planning Process” subsection (b) of 44 CFR 201.6 requires an open public involvement process to be developed and documented as part of the Plan. According to this section, the public involvement process shall include:

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

FEMA’s Local Mitigation Planning Handbook, March 2013

“A community must review and revise an existing plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities and resubmit for approval within 5 years to continue to be eligible for FEMA mitigation project grant funding.”

REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(c)(2))
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))



A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))

A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))

A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4) (i))

B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))

B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(ii))

B3. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

C1. Does the Plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))



REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)
C2. Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3))
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3) (i))
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects foreach jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3) (ii))
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (includingcost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3) (iv)); (Requirement §201.6(c)(3) (iii))
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans,when appropriate? (Requirement §201.6(c)(4) (ii))
D1. Was the Plan revised to reflect changes in development? (Requirement §201.6(d)(3))
D2. Was the Plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))
D3. Was the Plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))

The “Plan Content” subsection (c) of 44 CFR 201.6 requires the Plan to include documentation



of the planning process including how it was prepared, who was involved, and how the public was involved. The “Plan Review” subsection (d)(3) of 44 CFR 201.6 states that jurisdictions with adopted plans are required to review, revise if appropriate, and resubmit plans for approval within 5 years to continue to be eligible for Hazard Mitigation Grant Program funding.

PLAN UPDATE PARTICIPANTS

Plan Update Participants

The Plan is intended to be multi-jurisdictional; therefore, all of the jurisdictions included in the 2021 Plan dedicated time and effort to provide jurisdiction-specific information contained throughout the 2021 Plan update.

The following jurisdictions assisted in the development of this Plan Update:

- Bellingham Water & Sewer District
- Blaine
- Everson
- Ferndale
- Lake Whatcom
- Lynden
- Meridian School District
- Nooksack
- Port of Bellingham
- Sumas
- Whatcom County
- Whatcom County Flood Control Zone District

Key Contributors That Provided Jurisdiction-Specific Information

- City of Everson Rollin Harper (Planning Contractor)
- City of Bellingham Liz Coogan, Emergency Management
- Claire Foglesong, Natural Resources Policy Manager
- Chris Behee, Sr GIS Analyst-Planning & Community Development



City of Blaine	Stacie Pratschner, Community Development Director
City of Nooksack	Rollin Harper (Planning Contractor)
City of Ferndale	Jori Burnett, City Administrator
City of Lynden	Mike Martin, City Administrator
City of Sumas	Dan DeBruin, Chief of Police Rollin Harper (Planning Contractor)
Lake Whatcom Water and Sewer District	Justin Clary, General Manager Rich Munson, Safety Officer
Meridian School District	Dr. James Everett, Superintendent
Port of Bellingham	Scott McCreery, Emergency Management/Safety Officer
Whatcom County	John Gargett, Whatcom County Sheriff's Office- Division of Emergency Management, Deputy Director Wally Kost, Sheriff's Office Division of Emergency Management Paula Harris, River and Flood Manager Andy Wiser, Geohazards Specialist, Planning and Development Services Roland Middleton, Special Programs Manager, Public Works
Whatcom County FCZD	Paula Harris, River and Flood Manager

In addition to the participating jurisdictions mentioned above, smaller agencies throughout the County were invited to participate in the development and adoption of the Hazard Mitigation



Plan.

The Whatcom County Information Technology, GIS Group was responsible for locating and collecting all natural hazard-related GIS data updates from local and state sources.

In order to involve the public in the 2021 Plan update, the Whatcom County Sheriff’s Office Division of Emergency Management advertised and conducted, three virtual Community disaster preparedness workshops, and maintained a 24/7 online virtual town hall meeting on their website concerning the plan update process -

(<https://www.whatcomcounty.us/3569/2021-Natural-Hazards-Mitigation-Plan>). These meetings provided opportunities for participation in the 2021 Plan update and, just as importantly, provided opportunities to solicit information and comments from the citizens of Whatcom County and to better involve them in the Plan.

In addition to the Whatcom County Sheriff’s Officer Division of Emergency Management, Western Washington University’s Resiliency Institute was contracted to support the 2021 Plan update.

PLAN UPDATE PROCESS

2021 Plan Update Timeline and Milestones

COVID -19 negatively impacted normal plan update processes. Aside from most emergency services focused on responding to urgent medical requirements; other government agencies were closed and directed to work from home. This in turn hindered group interaction, which is an essential part of updating the Natural Hazard Mitigation Plan. Nevertheless, Whatcom County and participating communities undertook an aggressive planning schedule to update this plan once restrictions began to be relaxed. The following timeline along with associated actions reflect the update process used by Whatcom County and participating communities:

Date	Activity
1/20/2021	Initial communication with participating communities
1/27/2021	Virtual kickoff meeting with NHMP communities
1/29/2021	Created 2021 Natural Hazard Mitigation Plan webpage for public use https://www.whatcomcounty.us/3569/2021-Natural-Hazards-Mitigation-Plan



1/29/2021	Created Natural Hazard Mitigation Plan Group SharePoint site for posting reference and planning materials and planning member interaction
2/09/2021	Conducted second NHMP planning team meeting focused on planning timeline and update responsibilities
2/11/2021	Virtual meeting with Dr. Rebekah Paci-Green from Western Washington University (WWU) Resilience Institute on NHMP criteria, and contract scope-of-work
2/24/2021	Conducted third NHMP planning team meeting; clarified timeline, responsibilities, individual community meeting with WWU contract personnel
3/01/2021	Virtual meeting between Whatcom County Planning and Development Services Geohazard Specialist Andy Wisner and WWU to update responsibilities.
3/02/2021	Virtual meeting between River and Flood Manager Paula Harris and WWU to update responsibilities.
3/4/2021	WWU email communication with Stefan Freelan from Western Washington University discussing asset geospatial analysis process.
3/05/2021	Virtual meeting between WCSO DEM and WWU regarding mapping/GIS updates
3/09/2021	Conducted fourth NHMP planning team meeting; Dr. Paci-Green updated planning team on tables to be introduced
3/09/2021	WCSO DEM and WWU coordinated with Kevin Zerbe (WA State Hazard Mitigation Officer) concerning HHMP tables (quantitative vs qualitative information)
3/15/2021	Lake Whatcom Water and Sewer District met with WWU to discuss updating their sub-section in Section 3.
3/15/2021	WCSO-Public Information Officer began publicizing MNHMP public meeting through traditional and social media sources; local communities dovetailed



	publicity on their community websites
3/17/2021	The City of Bellingham points of contact met with WWU to discuss updating their sub-section in Section 3.
3/19/2021	The City of Ferndale points of contact met with WWU to discuss updating their sub-section in Section 3.
3/22/2021	The Port of Bellingham point of contact met with WWU to discuss updating their sub-section in Section 3.
3/23/2021	Conducted first public County-Wide GoToWebinar concerning Whatcom County's Natural Hazard Mitigation Plan. Addressed all hazards, Community-POCs introduced selves, and answered questions. Meeting time 1830-2000
3/24/2021	Conducted fifth NHMP planning team meeting; Dr. Paci-Green updated planning team on community progress, Jasmine Ro provided update on mapping/GIS products which were loaded into GroupShare site for all planners to review and comment on
3/25/2021	Virtual meeting between Special Programs Manager for Public Works Roland Middleton and WWU to update responsibilities.
3/26/2021	Lynden point of contacts met with WWU to discuss updating their sub-section in Section 3.
4/5/2021	Email communication with Chris Behee discussing natural hazard map comments and updating jurisdiction and urban growth area data.
4/05/2021	WCSO-DEM put out press release concerning NHMP public workshop meeting #2 scheduled for April 13, 2021
4/06/2021	Email communication with Stefan Freelan from Western Washington University reviewing population data.
4/06/2021	Conducted sixth NHMP planning team meeting
4/06/2021	WWU shares critical facilities and wildfire map examples for critique; shares updated annual review and progress table for critique.



4/10/2021	The City of Blaine points of contact met with WWU to discuss updating their sub-section in Section 3.
4/13/2021	Coordinated with WA DNR on status of new wildland fire modeling which is slated to be released in the near future.
4/13/2021	State NFIP Coordinator David Radabaugh meet with WWU to update NFIP figures in Appendix D.
4/13/2021	Conducted second public County-Wide GoToWebinar concerning Whatcom County's Natural Hazard Mitigation Plan. Addressed all hazards, Community-POCs introduced selves, and answered questions. Meeting time 1830-2000
4/15/2021	WCSO-DEM forwarded updated Section 3 to WWU
4/16/2021	WCSO-DEM sent updated Severe Storm Section to WWU
4/16/2021	WCSO DEM sent updated Wildland Fire Section to WWU
4/19/2021	WWU sends Lynden a finalized community profile for review
4/19/2021	Point of contact for Everson, Nooksack and Suman sent updated Section 3 community profiles to WWU
4/19/2021	Email communication with Stefan Freelan from Western Washington University reviewing geospatial analysis tools.
4/20/2021	Paula Harris sends updated flood hazard section and updated NFIP material for Appendix 5 to WWU
4/20/2021	Conducted seventh NHMP planning team meeting; WWU shares updated UGA, community boundary, critical facilities, wildfire, flood, seismic and tsunami map examples for review and critique
4/20/2021	Ferndale sends updated critical facilities list to WWU
4/20/2021	Lake Whatcom Water and Sewer District sends updated Section 3 community profile to WWU



4/20/2021	Port of Bellingham District sends updated Section 3 community profile to WWU
4/21/2021	Meridian School District sends updated Section 3 community profile to WWU
4/22/2021	Andy Wiser sends updated geological hazards section to WWU
4/22/2021	Ferndale sends updated Section 3 community profile to WWU
4/23/2021	Meeting with John Gargett from Whatcom County discussing tsunami hazard data and coastal erosion data.
4/27/2021	City of Bellingham sends updated Section 3 community profile to WWU
4/27/2021	Roland Middleton sends updated Swift Creek Alluvial Fan hazard description to WWU
4/28/2021	WSDOT Avalanche Forecaster Harlan Sheppard met with WWU to update the Avalanche sub-section in Section 2.2.
4/30/2021	Email communication with Stefan Freelan from Western Washington University discussing geospatial analysis steps for percent of population in hazard area calculations.
5/11/2021	Conducted third public County-Wide GoToWebinar concerning Whatcom County's Natural Hazard Mitigation Plan. This workshop focused on aggregate updates and new GIS features to be included in the plan. Meeting time 1830-2000

PUBLIC INVOLVEMENT



Despite the high level of effort required to develop and implement mitigation strategies, it is ultimately up to the people that comprise each community and jurisdiction to determine the success of the Plan in the event of a natural hazard. Therefore, public involvement is essential in each step of the planning process. Whatcom County uses a variety of methods to provide public outreach and involvement during and following Plan development including public meetings and web-based outreach.

Public Meetings

Whatcom County Sheriff's Office Division of Emergency Management used social media, public meeting announcements, website and presentations at association meetings to jurisdictional representatives (i.e., Cities, Fire Districts, and School Districts) to advertise the meetings. The purposes of the meetings were to review the 2015 Plan, advise the public regarding the update process, and receive public feedback. Each representative in attendance was provided a checklist to complete that included specific jurisdictional and natural hazard information to be updated for the 2015 Plan. The same checklists were delivered to representatives not in attendance to ensure that similar updates were completed.

Every October, the DEM hosts an annual flood meeting to bring all of the agencies involved in responding to flood events together to review response procedures. Agencies involved in emergency response include:

- U.S. Army Corps of Engineers (USACE) impacted by flooding
- National Weather Service
- Red Cross
- Whatcom County Sheriff's Office
- Police departments within cities impacted by flooding
- Fire departments within cities impacted by flooding
- Fire departments within unincorporated Whatcom County
- Whatcom County Maintenance and Operations Division
- British Columbia Ministry of Environment
- Washington State Department of Transportation (WSDOT)
- Local media
- Water Districts
- Tribal Jurisdictions
- Parks Management



Additional annual meetings facilitated by the DEM include a winter storm meeting, a Local Emergency Planning Committee meeting, and an Emergency Planning Council meeting. The Local Emergency Planning Committee is composed of various representatives from around the County and the annual meeting is open to the public. The Emergency Planning Council is composed of elected officials and holds annual private meetings.

WEB-BASED OUTREACH

The Whatcom County Sheriff's Office Division of Emergency Management utilizes an extensive website that is frequently updated with the most recent hazard preparation materials, hazard updates, and emergency event press releases. Hazard preparation materials published on the website include disaster planning documents, a disaster preparedness handbook,¹ and other hazard-specific information (e.g., earthquakes, fires, floods, and winter storms). Hazard updates on the site include the latest weather and road conditions and emergency road closures and restrictions. Emergency event press releases are also published on the website that follows incidents in progress or weather events of alert level concern. The website also includes links to the Washington State Emergency Management Division (EMD), the City of Bellingham Office of Emergency Management, the American Red Cross Mount Baker Chapter, and the FEMA websites. The site was used capture input on the Natural Hazard Mitigation Plan with a page that was dedicated as a "virtual town hall" on the Mitigation Plan update efforts.

¹ Available on the Whatcom County DEM website at:
http://www.co.whatcom.wa.us/dem/pdf/emergency_resources-guide.pdf



ELEMENTS NEW TO THE 2015 PLAN

Note: This *Table of Changes* documents pertinent changes made from the 2016 Whatcom County Natural Hazards Mitigation Plan (WCNHMP) to the 2021 WCNHMP Plan update.

Plan Section	Changes in the 2021 Whatcom County Natural Hazard Mitigation Plan (WCNHMP) Update
Introduction	<p>The 2021 WCNHMP retains the same integrity in the Introduction, as the 2016 WCNHMP.</p> <p>The list of natural hazard impacts was more fully described. The list of federally declared disasters was updated for 2016-2020 and the county per capita impacts, as given in the Preliminary Damage Assessment Reports, were added for all declarations from 2009 to present. Further, a list of state-level emergency declarations related to natural hazards was also added to more fully encompass natural hazard impacts to the county.</p>
Section 1: Plan Process and Development	<p>The 2021 WCNHMP retains the same integrity in Section 1, as the 2021 WCNHMP.</p> <p>The stakeholders list was updated, as was the description of public outreach and plan preparation. County planning goals for natural hazard mitigation were edited to increase clarity.</p>
Section 2: Hazard Summaries	<p>The 2021 WCNHMP retains the same integrity in Section 2, as the 2016 WC HMP.</p> <p>Other Hazards of Concern for epidemic/disease, Hazardous Materials Release, Supply Chain Disruption, and Terrorist Attack were removed as these hazards are not classified as natural hazards and the county is not currently submitting an enhanced plan.</p>
Section 3: Community and Special District	<p>The 2021 WCNHMP retains the same integrity in Section 3, as the 2016 WCNHMP, but with improved format and significant additions to content. These changes include:</p> <ul style="list-style-type: none"> Consistent maps were created for all communities and special districts, including population density, urban growth area (where



<p>Profiles and Mitigation Strategies</p>	<p>appropriate), critical facilities, and hazard exposure maps for earthquake, tsunami, landslide, lahar, flood, and fire. A list of other planning documents the WCHMP will inform or shape.</p> <ul style="list-style-type: none">• Three former sections -- hazard description, presence of hazards, and the hazard impacts on community – were merged into a single Presence of Hazards and their Impacts section. Furthermore, the severity of each hazard’s impacts was qualitatively assessed and the percentage of area in a community exposed to the hazard was quantitatively assessed and provided to give better context to how the hazard may impact the community or special district.• The Critical Facilities List was updated to include a qualitative assessment of the significance of each facility to community function, using a 3-point scale of moderate, high and very high.• In the 2016 plan, Critical Facilities were ranked qualitatively, based upon practitioner and expert opinion. In the 2021 update, ranking was consistently calculated across all communities and special districts by considering the significance of the facility, its exposure to eight hazards, and a 3-point scale of frequent, rare, and very rare to account for the frequency of each of these hazards.• Based upon the consistent hazard maps created for all communities, geospatial analysis was used to populate a detailed table of area and assets exposed, by hazard.• A new public outreach and education section was added to highlight the important of public awareness in natural hazard mitigation and to spur further outreach and education in the future.• In the 2016 plan, a section on Mitigation Strategies and Projects for the previous planning period (2010-2014) combined ongoing project updates and potential mitigation actions, often without distinguishing between the two. In the 2021 plan, the section has been retitled• Status of Ongoing and 2015-2020 Hazard Mitigation Actions. In
---	--



	<p>this section ongoing, completed, and discontinued actions are listed. To increase transparency, each action includes a short description of activities during the 2015-2020 planning period, even if the action will continue as an ongoing action into the future.</p> <ul style="list-style-type: none"> • In the Hazard Mitigation Strategy 2021-2025 section, the country-wide hazard mitigation goals are reiterated to orient the reader to the focus and goals of the strategy. Readers are directed to Appendix E to see a list of potential mitigation actions options. • The Mitigation Action Prioritization section better clarifies that actions are being prioritized based upon overall feasibility and criticality of action. The county plans to move towards a more systematic identification of evaluation criteria in the next plan update. • The table of mitigation actions for 2021-2025 now includes a column for identifying which planning goal(s) each action addresses. The table also now distinguishes between ongoing actions that are continuing from the 2016-2020 planning period (italic, alpha-numeric label, and ongoing in title) and those that are new actions for 2021-2025 (numeric label). • Communities were further encouraged to provide a more detailed description of the action as it pertains to their community or special district in this 2021-2025 mitigation actions table. • The Annual Review and Progress table to be used each year has also been updated. A column for each year was added so that readers can better see how actions progress over 2021-2025. A notes column was also added to provide the updater a place to explain progress. Both ongoing and new actions are included in the table.
<p>Section 4: Plan Maintenance</p>	<p>The 2021 WCNHMP retains the same integrity in Section 4, as the 2016 WCNHMP.</p>



Appendices	<p>The 2021 WCNHMP retains the same integrity in Appendices, as the 2016 WCNHMP.</p> <p>In Appendix D: NFIP Participation, claims, policies, and repetitive loss structure numbers were updated for every community. The Progress Report Form (Appendix F) Contact List (Appendix G) were also updated.</p>
------------	---



PLAN ORGANIZATION

This Plan Is Organized into Four Sections and Multiple Appendices.

Section 1: Plan Process and Development

The first section contains information pertaining to the Plan development process, including:

1. Natural Hazards Mitigation Planning
 - a. Federal Regulations
 - b. Plan Update Participants
 - c. Public Involvement
2. Plan Revisions

Section 2: Hazard-Summaries

The second section contains information specific to the natural hazards present in Whatcom County. This section is broken down into:

1. Hazard-Related Definitions
2. Background Information
3. History
4. Vulnerability Assessment
5. Mitigation Strategies

Section 3: Community and Special District Profiles and Mitigation Action Plans

The third section contains jurisdiction-specific chapters, with the following information for each:

1. Contact Information
2. Approving Authority
3. Planning Process
 - a. Key Contributor List
 - b. Plan Maintenance
 - c. Public Outreach and Education
4. Overview of Hazards and Assets



- a. Geography
 - b. Growth Trends
 - c. Presence of Hazards and their Impacts
 - d. Natural Hazards Maps
 - e. Critical Facilities List and Assessment Ranking
5. Areas and Assets Exposed, Per Hazard
 6. Status of 2015-2021 and Ongoing Hazard Mitigation Actions
 7. Hazard Mitigation Strategy for 2021-2025
 - a. Whatcom County Hazard Mitigation Goals
 - b. Jurisdiction-Specific Mitigation Goals (Optional)
 - c. Mitigation Action Options
 - d. Mitigation Action Prioritization
 - e. Identified Mitigation Actions 2021-2025
 - f. Annual Review Process

Section 4: Plan Maintenance

This section ends with a description of how the Plan will be maintained in the future.

Appendices

- A. Capabilities Listing (documents, processes, and resources reviewed and added by the team)
- B. List of Acronyms and Abbreviations
- C. Whatcom County Risk Assessment and Mitigation Strategies (RAMS) Assessment (wildland-fire related)
- D. 2015 Plan Development Process
- E. National Flood Insurance Program (NFIP) Status
- F. Whatcom County Mitigation Ideas
- G. Whatcom County 2021 Contact List

This Plan is an evolving document that will eventually include additional information and discussions of additional natural hazard studies, man-made hazards such as terrorism, and



general updates as they become available.

STATE AND FEMA PLAN REVIEW PROCESS

1. Submitting the Plan.

- a. Once the planning team is confident the plan meets the required elements and includes all supporting documentation, forward the plan to your State Hazard Mitigation Officer (SHMO) or State Mitigation Planner. It is critical that all supporting documentation related to the planning process and other components of the plan are included in the initial submittal. Incomplete plan submittals can delay plan approval. The State will review the plan and work with you on any required revisions for approval.
- b. Once the State is satisfied that the plan meets the requirements, the SHMO will forward the plan to the FEMA Regional Office for review and approval. FEMA will conduct its review within 45 days, if possible, and provide a completed Local Mitigation Plan Review Tool to the State. The FEMA Regional Office and the State may contact you to discuss additional revisions to the plan to ensure that it meets the Federal regulation. Once FEMA determines the plan meets the regulation, FEMA will notify the SHMO that the plan is approvable pending adoption (APA), or approved if the community has already adopted the mitigation plan.

2. Approval Pending Adoption.

- To avoid repeated attempts to adopt the plan prior to FEMA approval, many communities obtain a notice from FEMA that the plan is APA before adopting the plan. As a time-saving measure, communities are encouraged to submit the final draft of the mitigation plan to the State and FEMA for review prior to formal adoption by the elected officials or other authorized governing body. If FEMA determines the plan is not approvable and requires revisions, the community will be able to make revisions before initiating the plan adoption process, therefore avoiding unnecessary delays in plan approval.

3. Plan Approval.

- Upon receiving the record of adoption from the State, FEMA will issue an official approval letter stating which jurisdictions have adopted and are approved and eligible for FEMA Hazard Mitigation Assistance programs. The approval letter will include the expiration date 5 years from the date of the letter. Attached to the



approval letter will be a final Local Mitigation Plan Review Tool that provides feedback on the strengths of the plan, recommendations for plan improvements during future plan updates, and suggestions for implementing the mitigation strategy.

4. Local Adoption of the Plan.

- Adoption by the local governing body demonstrates the community's commitment to implementing the mitigation strategy and authorizes responsible agencies to execute their actions. The final plan is not approved until the community adopts the plan and FEMA receives documentation of formal adoption by the governing body of the jurisdiction(s) requesting approval. The governing bodies are typically the Town Board, City Council, County Commissioners, and/ or Board of Selectmen. While plan adoption usually occurs through a formal resolution, council minutes, consent agendas, or other forms of adoption are acceptable if allowed by local law.

5. Multi-Jurisdictional Adoption.

- Each jurisdiction seeking plan approval must adopt the plan. If you choose to use the APA process, it is important to coordinate the adoptions of all the jurisdictions as soon as the plan receives APA status. The governing bodies may have different meeting schedules, which prevent all the jurisdictions from adopting at the same time. If possible, coordinate the adoptions and submit documentation to the State at the same time.
- At least one of the participating jurisdictions must adopt the plan within 1 year of FEMA's APA notice. FEMA will issue an official approval letter stating which jurisdictions have adopted the plan and are eligible for FEMA hazard mitigation assistance programs. The plan will expire 5 years from the date of FEMA's approval letter for the mitigation plan. The approval letter and date are generated with the first jurisdiction adopting the plan. The plan approval date remains the same regardless of when other participating jurisdictions adopt the plan. It is important to coordinate the adoption process to ensure that all participants are covered by the plan for the full 5 years. Plan updates follow the same adoption process.

6. Procedures for Adding Additional Jurisdictions to the HMP.

This procedure was developed by the Whatcom County Sheriff's Office Division of Emergency Management in cooperation with the Washington State Emergency



Management Division. This procedure has been incorporated into the plan as part of the 2021 plan update.

- a. A jurisdiction not included in this update and wishing to join the plan contacts the Whatcom County Sheriff's Office Division of Emergency Management with the request to become a participant of the plan.
- b. The Whatcom County Sheriff's Office Division of Emergency Management provides the jurisdiction with a copy of the planning requirements and any other pertinent data.
- c. The jurisdiction reviews the plan and develops the portions of the plan that are specific to the jurisdiction as directed by the Whatcom County Sheriff's Office Division of Emergency Management staff. The portion of the plan must meet the requirements of the current FEMA's Local Mitigation Planning Handbook, March 2013.
- d. The new jurisdiction submits its portions of the plan to the Whatcom County Sheriff's Office Division of Emergency Management and the new jurisdiction plan is forwarded to the State Hazard Mitigation Program Manager for review and compliance with current Local Multi-Hazard Mitigation Planning Guidance.
- e. The State Hazard Mitigation Program Manager reviews the new jurisdiction plan for compliance with current Local Multi-Hazard Mitigation Planning Guidance in conjunction with the Whatcom County Multi-Jurisdictional Hazard Mitigation Plan. If the new jurisdiction does not meet the required standard, the State Hazard Mitigation Program Manager will work with the jurisdiction to resolve issues until it does.
- f. The State Hazard Mitigation Program Manager forwards the new jurisdiction plan to FEMA Region X for review and comment.
- g. Upon approval from FEMA Region X, the new jurisdiction is considered part of the Whatcom County Multi-Jurisdictional Hazard Mitigation Plan and will comply with the update schedule of the plan.



This page left intentionally blank.