



CITY OF SUMAS

Contact Information

Daniel DeBruin
Chief of Police
433 Cherry Street / P.O. Box 9 Sumas, WA 98295
(360) 988-5711

Approving Authority

Mayor Kyle Christensen & City Council Members
433 Cherry Street / P.O. Box 9 Sumas, WA 98295
(360) 988-5711

Planning Process

The City of Sumas process of reviewing, updating, and adopting the 2021 update of the Whatcom County Natural Hazards Mitigation Plan (NHMP or Plan) included review by multiple City departments and formal adoption by the City Council. Review of the prior plan began in early 2021. The City Planner reviewed the previous plan and met with the Public Works Director and Chief of Police to identify details that might need to be updated. From January through April of 2021, City staff attended a series of coordination meetings hosted by the County Division of Emergency Management (DEM). Initial guidance was received from DEM regarding the update schedule and the main areas to focus on as part of the update.

In early March 2021, the City provided public notice in the Lynden Tribune regarding the planned update of the NHMP and posted information regarding the update on the City website. Information regarding opportunities to provide public comment was also posted on the City website. During March and April of 2021, the City Planner prepared draft revisions to the NHMP and met with the Public Works Director and the Chief of Police to review the draft revisions and receive additional input. During the same time period, City staff participated in two virtual public meetings hosted by DEM where the public was invited to receive information and ask questions regarding the 2021 update of the NHMP.

The draft revisions to the NHMP addressing the city of Sumas, incorporating input received from the Public Works Director, Mayor and Chief of Police, were submitted to DEM in late April 2021. In May of 2021, DEM notified the public regarding the availability of draft revisions to the full Plan and hosted a third virtual public meeting to receive comments from the public. Following review by the City Council in May 2021, the City Council passed a motion supporting the updates contained in the Sumas section of draft NHMP. Prior to the Plan being submitted to the Federal Emergency Management Agency for review, the City Council formally adopted the draft Plan on XX, 2021 through Resolution No. XX. It is anticipated that formal adoption by ordinance will follow approval from FEMA.



Key Contributor List

- Rollin Harper, City Planner
- Chief of Police Daniel DeBruin
- Sunny Aulakh, Public Works Director
- Mayor Kyle Christensen

Meeting Dates and Attendees

- February 18, 2021 – Harper, Aulakh and DeBruin
- April 15, 2021 – Harper, Aulakh and DeBruin
- April 29, 2021 – Harper, Aulakh and DeBruin

The information contained in the Natural Hazards Mitigation Plan update regarding hazards, risks, vulnerability, and potential mitigation is based on the best available science and technology currently available. This information and related data on natural hazards potentially impacting the City of Sumas will be used as a tool when the City updates other plans and programs, such as the following:

- Comprehensive plan required by the Growth Management Act (GMA);
- Development regulations required by the GMA;
- Critical areas ordinance;
- Capital improvement program;
- Capital facilities planning; and
- Water Resource Inventory Area planning.

As additional information becomes available from other planning sources that can enhance this Plan, that information will be incorporated through the periodic update process.

Plan Maintenance for the City of Sumas

The City of Sumas will maintain and update the Natural Hazards Mitigation Plan as needed to respond to changed circumstances, to incorporate best available science and to address changing community priorities. The Plan update process will include community engagement through public meetings and opportunities for public comment. Formal updates of the Plan will be reviewed by the City Council prior to adoption.

Public Outreach and Education



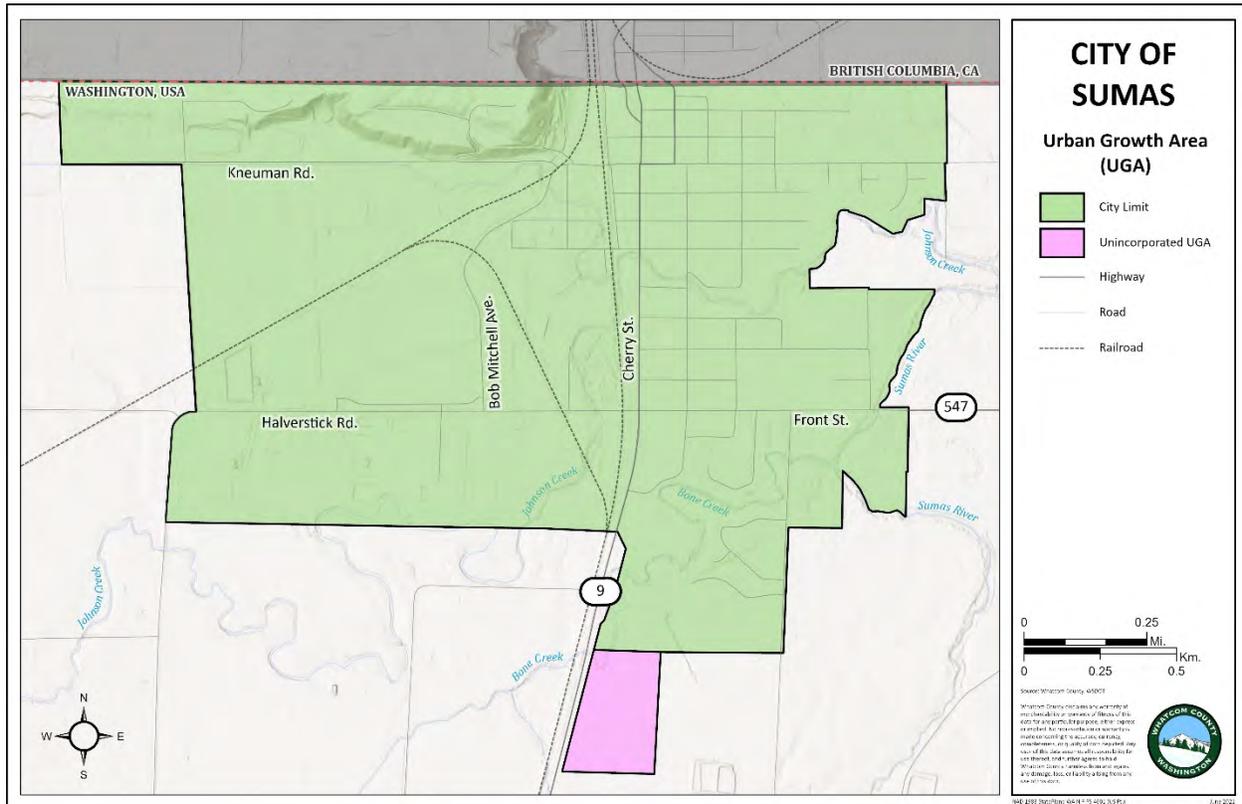
Program	Yes/No, Year Adopted	Description
Nonprofit organizations or local residents groups focused on hazard mitigation, emergency preparedness, vulnerable populations, etc.	No	
Ongoing public education or information programs	Yes 2006-Quarterly newsletters 2008-CRS notifications 2014- City website postings 2018-City Facebook postings	Information regarding water conservation, repetitive loss, winter storm preparedness, flood hazard preparedness.
School-related programs for natural hazard safety	Yes 2010 to present	Semiannual drills in schools regarding disaster preparedness
Public education or information program	Yes 2006-Quarterly newsletters 2008-CRS notifications 2014- City website postings 2018-City Facebook postings	Information regarding water conservation, repetitive loss, winter storm preparedness, flood hazard preparedness.
StormReady certification	No	Whatcom County is a StormReady County.
Firewise Community certification	No	The Paradise Lakes Country Club is a Firewise Site, but is located outside the City.
Public-Private Partnership initiatives addressing disaster-related issues	No	
Other		

Overview of Sumas, Hazards, and Assets



Growth Trends

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



Presence of Hazards and their Impacts in the City of Sumas

Flooding is a major hazard impacting the City of Sumas. Moderate to major flooding events occur approximately every five to ten years, with the most recent event taking place in February 2020. During that event, floodwaters from the Nooksack River flowed north through the Nooksack Overflow Corridor and through Sumas on the way to the Fraser River in Canada. That event saw major flooding through much of the City, with floodwater depths from one to three feet through much of the downtown commercial and residential areas. Numerous travel routes were unavailable and access to local businesses and services was also interrupted.

Since the 2016 NHMP was adopted, the City of Sumas has grown by roughly 150 people. While some of this growth has occurred on Moe Hill (the high ground outside the floodplain located adjacent to the Canadian border), the majority of new growth has occurred within the 100-year floodplain because nearly all of the remaining undeveloped land is in the floodplain. The presence of the floodplain throughout much of Sumas has resulted in the local school district



moving forward with construction of a new elementary school on the site of the existing school, which is in the floodplain. However, based on requirements set forth in the City’s Flood Damage Prevention Ordinance, the new school will be constructed to have the lowest floor elevated three feet above the base elevation of the 100-year flood event.

In the table below is a list of the major hazards that effect Whatcom County. The second column provides the percentage of Sumas’ 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 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.



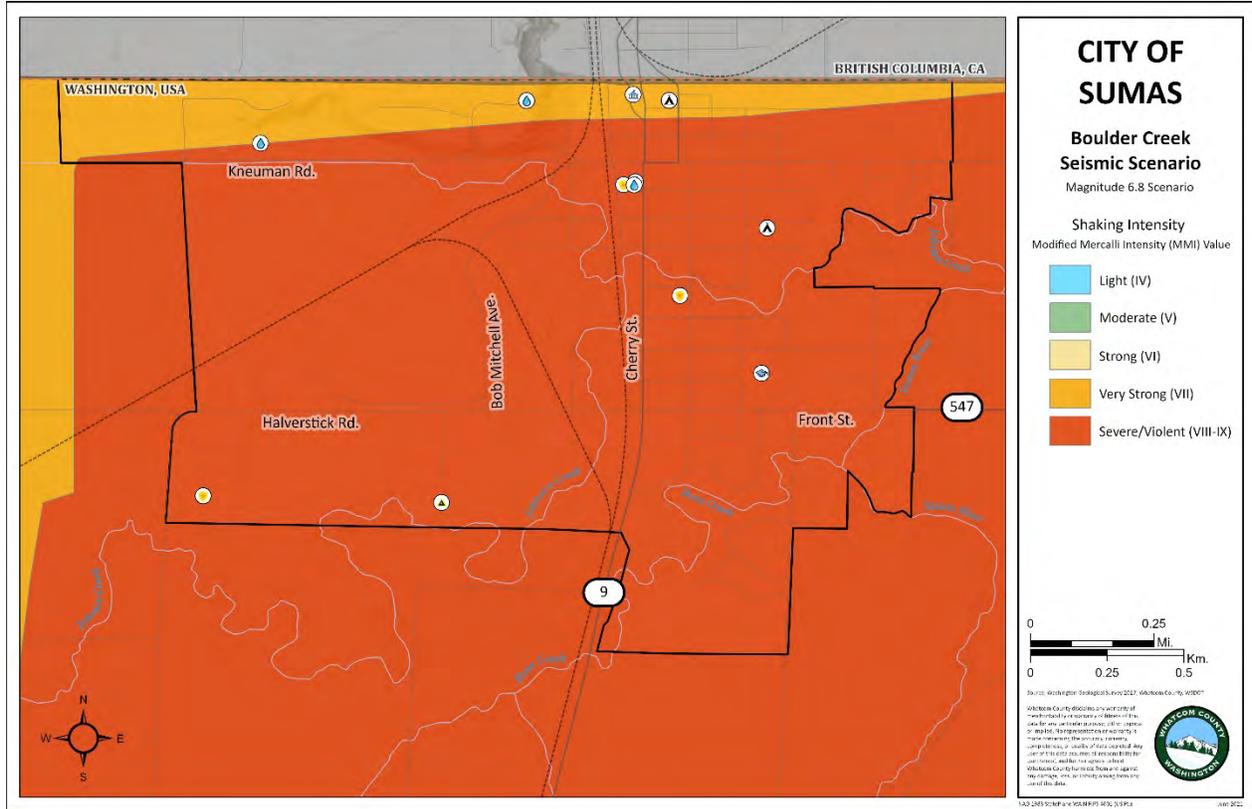
	Hazard	% area Exposed	Severity of Anticipated Impacts	Hazard Descriptions
Geological	Earthquake	99.9%	Mod	Subject to seismic activity. Significant risk due to Sumas' highest concentration of older homes in the county.
	Liquefaction	91.5%	Low	Seismically-sensitive soils.
	Landslide	0%	Low	The steep slopes along the southern margin of Moe Hill present a low severity risk of landslide.
	Volcano	88.9%	Low	The City is at risk of a Mount Baker lahar.
	Tsunami	0%	None	N/A
	Mine Hazards	0%	None	N/A
Hydrological	Flooding	88.5%	High	During a flooding event, the majority of the City floods from the Nooksack River, from west to east, in a northeasterly flow.
Meteorological	Wildfire	17.5%	None	N/A

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

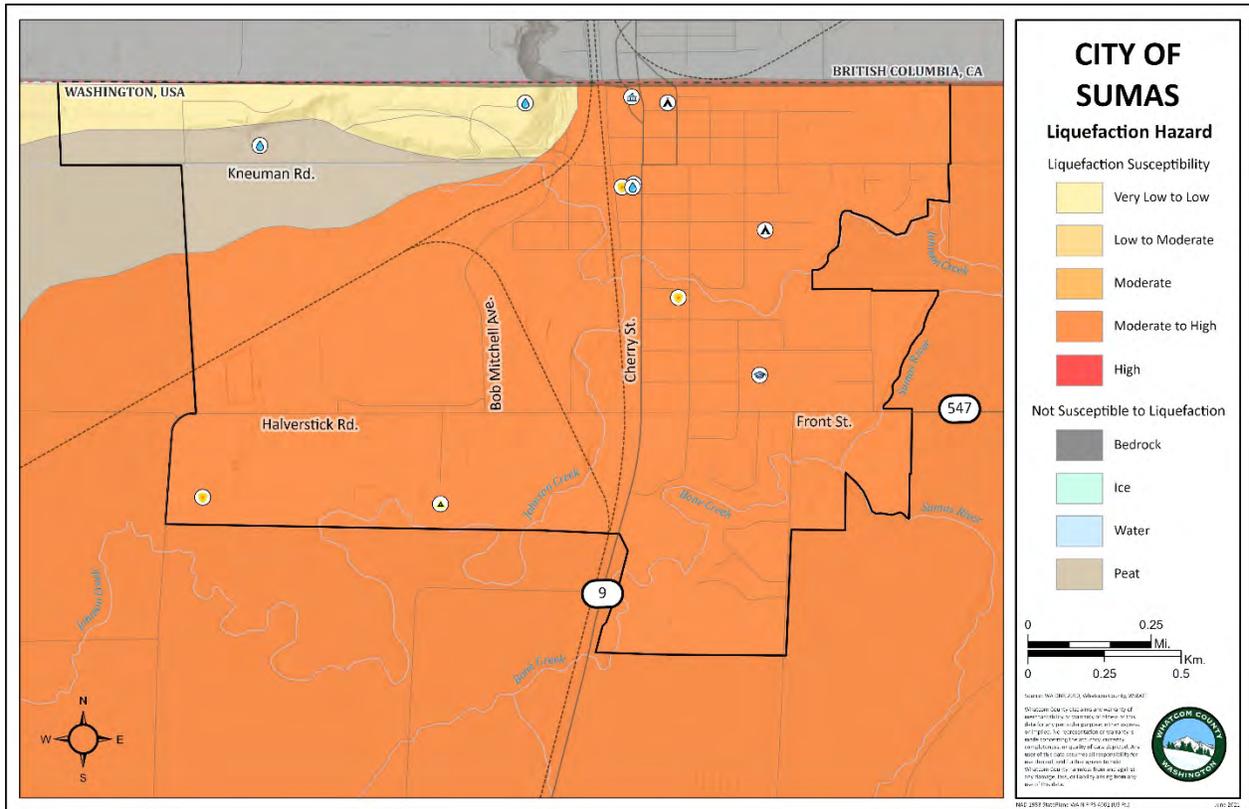


Natural Hazard Maps

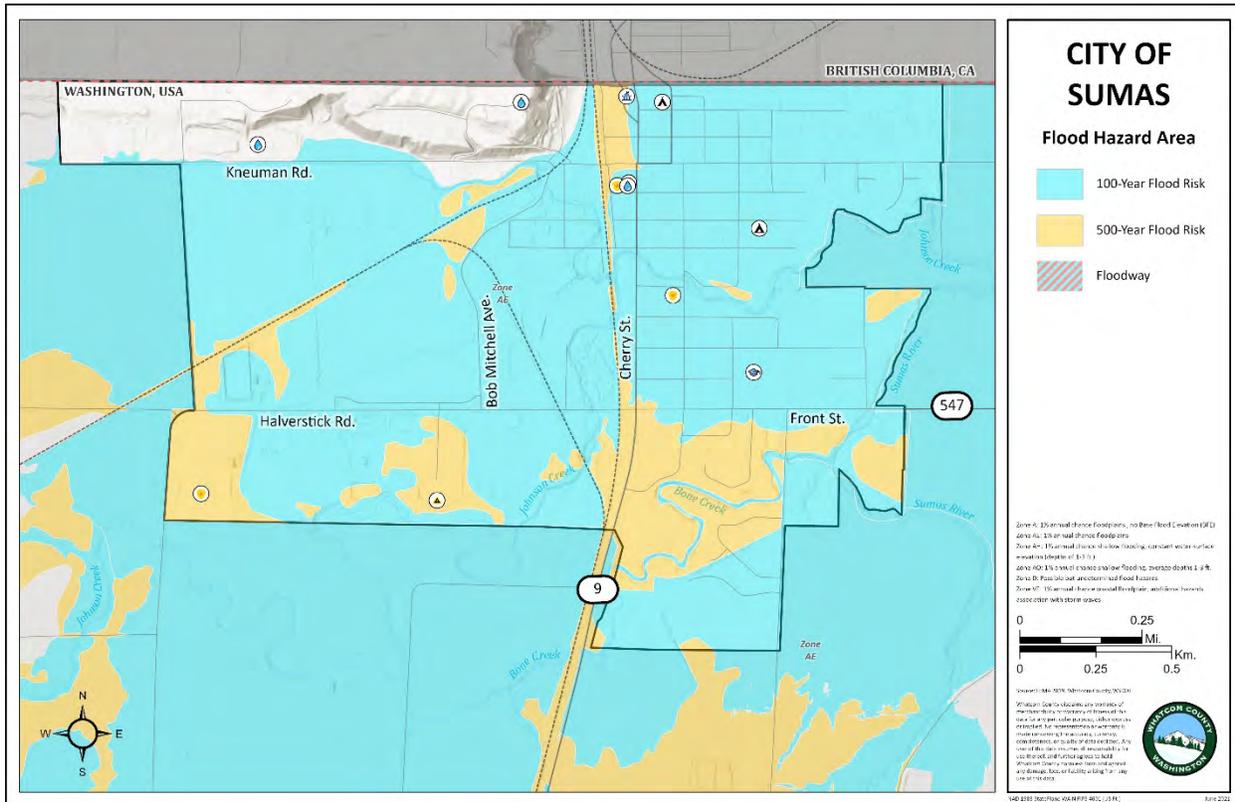
The following figures depict the natural hazards present within the jurisdiction.



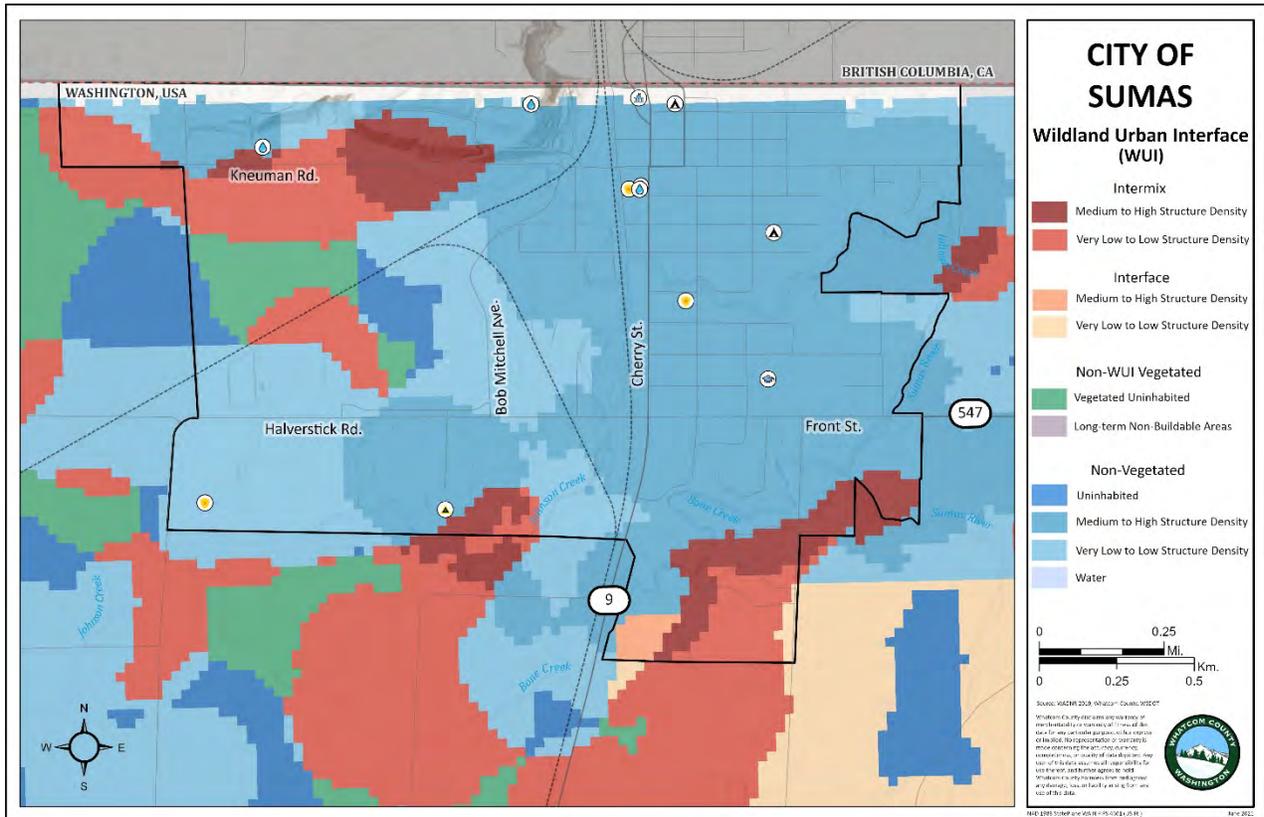
Washington Department of Natural Resources (WA DNR) 2017 Boulder Creek Fault Zone seismic scenario of magnitude 6.8 data. Displays extent and severity of the modeled earthquake in the Modified Mercalli Intensity (MMI) scale.



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.



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.



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.

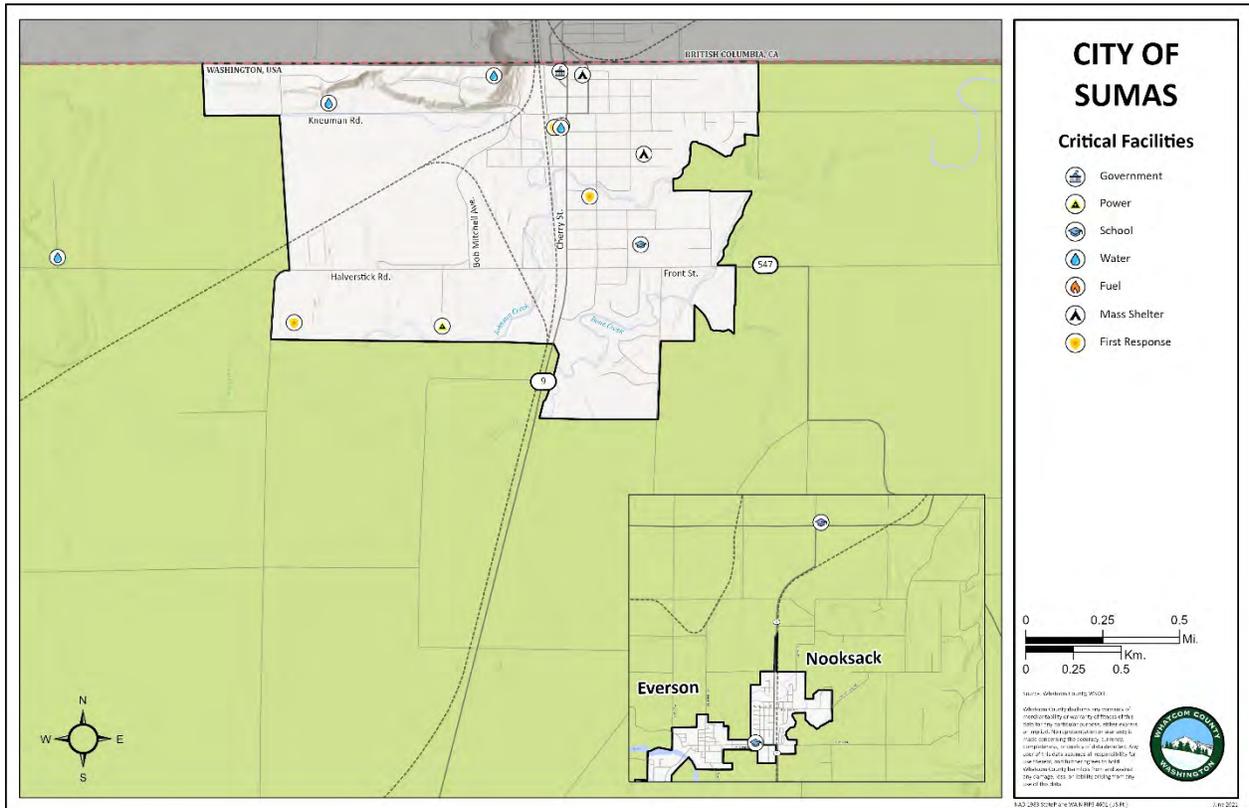


Sumas’ Critical Facility List

Facility Name	Facility Type	Significance	Location	Assessed Dollar Value	Notes
American Legion Hall	EF	1	134 Harrison Avenue		Emergency Services
Elementary School - Dist. 506	EF	2	1024 Lawson Street		Evacuation Center
High School - District 506	EF	2	3326 E. Badger Road (County)		Evacuation Center
May Road Wellfield	LUS	3	9700 May Road		Utility: Water
Middle School - District 506	EF	1	404 W. Columbia Street, Nooksack		Evacuation Center
Sumas City Hall	EF	3	433 Cherry Street		Government
Sumas City Reservoir	LUS	3	205 Washington Street		Utility: Water
Sumas City Wellfield	LUS	3	3670 Kneuman Road		Utility: Water
Puget Sound Energy	LUS	1	601-B W. Front Street		Utility: Power
Sumas Fire Station	EF	3	143 Columbia Street		
Sumas Police Dept.	EF	3	433 Cherry Street		Law Enforcement
Sumas Senior Center	EF	2	451 Second Street		Evacuation Center
Sumas Water & Lights	EF	3	433 Cherry Street		Government
Sumas – Customs and Border Patrol	EF	2	109 Cherry Street		Law Enforcement
Williams Gas Pipeline	HMF	2	4378 Jones Road		Fuel
U.S. Border Patrol	EF	3	9648 Garrison Road		Law Enforcement

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



Map of critical facilities identified by the City of Sumas. 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 City of Sumas

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.



Critical Facilities Ranking Table

Facility Name	Facility Type	Significance	EQ	LQ	LS	TSU	VOL	FL	COA	WF	Rank Assessment
American Legion Hall	EF	1	1	1	0	0	1	1	0	0	0.33
Elementary School - Dist. 506	EF	2	1	1	0	0	1	1	0	0	0.66
High School - District 506	EF	2	1	1	0	0	1	1	0	0	0.66
May Road Wellfield	LUS	3	1	1	0	0	1	1	0	0	1
Middle School - District 506	EF	1	1	1	0	0	1	1	0	0	0.33
Sumas City Hall	EF	3	1	1	0	0	1	1	0	0	1
Sumas City Reservoir	LUS	3	1	1	0	0	1	0	0	0	0.86
Sumas City Wellfield	LUS	3	1	0	0	0	1	0	0	1	0.86
Puget Sound Energy	LUS	1	1	1	0	0	1	1	0	0	0.33
Sumas Fire Station	EF	3	1	1	0	0	1	1	0	0	1
Sumas Police Dept.	EF	3	1	1	0	0	1	1	0	0	1
Sumas Senior Center	EF	2	1	1	0	0	1	1	0	0	0.66
Sumas Water & Lights	EF	3	1	1	0	0	1	1	0	0	1
Sumas – CBP	EF	2	1	1	0	0	1	1	0	0	0.66
Williams Gas Pipeline	HMF	2	1	1	0	0	1	1	0	0	0.66
U.S. Border Patrol	EF	3	1	1	0	0	1	1	0	0	1

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



Areas and Assets Exposed, Per Hazard

City of Sumas Exposure to Natural Hazards						
	Hazard Susceptibility	Asset County (% of Total)				Critical Facilities Appraised Value (Million)
		Area (sq.mi.)	Population	Parcels	Critical Facilities	
Geological	Earthquake, Shaking Intensity					
	<i>MMI IV</i>	-	-	-	-	-
	<i>MMI V</i>	-	-	-	-	-
	<i>MMI VI</i>	-	-	-	-	-
	<i>MMI VII</i>	11.9%	6.4%	10.6%	43.7%	\$18
	<i>MMI VIII - IX</i>	88%	93.1%	89.4%	56.3%	\$36
	TOTAL	99.9%	99.5%	100%	100%	\$54
	Liquefaction					
	<i>Very Low to Low</i>	7.9%	4.1%	6.8%	12.5%	\$0.3
	<i>Low to Moderate</i>	-	-	-	-	-
	<i>Moderate</i>	-	-	-	81.3%	\$53
	<i>Moderate to High</i>	83.6%	93.5%	91.2%	-	-
	<i>High</i>	-	-	-	-	-
	TOTAL	91.5%	97.6%	98%	93.8%	\$53.3
	Volcanic Eruption					
	<i>Case 1 Debris Flows</i>	88.9%	93.6%	91.4%	75% ¹	\$49 ¹
	<i>Case 2 Debris Flows</i>	-	-	-	-	-
	<i>Case M Flows</i>	-	-	-	6.3% ¹	\$5 ¹



	<i>Pyroclastic Flows, Lava Flows, and Ballistic Debris</i>	-	-	-	-	-
	<i>Lateral Blast Hazard Zone</i>	-	-	-	-	-
	TOTAL	88.9%	93.6%	91.4%	81.3%	\$54
	Tsunami, Inundation Zone					
	<i>Low to Moderate Inundation Potential</i>	-	-	-	-	-
	<i>Moderate to High Inundation Potential</i>	-	-	-	-	-
	<i>High Inundation Potential</i>	-	-	-	-	-
	TOTAL	-	-	-	-	-
	Flooding					
	<i>100-year Flood</i>	72.2%	82.8%	73.9%	56.2%	\$11
	<i>500-year Flood</i>	16.3%	11%	19%	18.8%	\$33
	<i>Floodway</i>	-	-	-	-	-
	<i>Undetermined (Zone D)</i>	-	-	-	-	-
	TOTAL	88.5%	93.8%	92.9%	75%	\$44
	Wildfire Zones					
	<i>Interface Very Low-Low Structure Density</i>	0.3%	0.3%	0.1%	-	-
	<i>Interface Medium-High Structure Density</i>	0.6%	0.9%	0.2%	-	-
	<i>Intermix Very Low-Low Structure Density</i>	9.5%	3.7%	2.5%	6.3%	-
	<i>Intermix Medium-High Structure Density</i>	7.1%	4.8%	5.9%	-	-
	TOTAL	17.5%	9.7%	8.7%	6.3%	-

¹Some critical facilities located in multiple hazard zones.



Status of Sumas’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.

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

General: All Hazards

G-a. Adopt and Enforce Building Codes. This applies to earthquakes, flooding, winter storms/freezes, and severe wind. The City Building Department continues to adopt and enforce local building codes to reduce risks from natural hazards.

Lead Agency	City Building Department
Funding Source	Local; City General Fund
Current Status	Ongoing

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 District
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 District
Funding Source	Local; Annual budget / Member dues
Current Status	Ongoing

EO-c. 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-d. Newsletters and utility bill inserts. The City Public Works Department continues provide hazard information to citizens, including through quarterly newsletters and information included with monthly utility bills.

Lead Agency	City Public Works Department
Funding Source	Local; City General Fund
Current Status	Ongoing

Drought/heat wave

D-a. Assess Vulnerability to Drought Risk. The City Planning Department continues to assess risks related to drought, including as part of the 2016 update to the City’s critical areas ordinance.

Lead Agency	City Planning Department
Funding Source	Local; City Water Fund
Current Status	Ongoing

D-b. Monitor Drought Conditions. The City Public Works Department continues to monitor drought conditions on annual basis and implements water-related mitigation strategies as appropriate.

Lead Agency	City Public Works Department
Funding Source	Local; City Water Fund
Current Status	Ongoing



D-c. Monitor Water Supply. The City Public Works Department continues to monitor the public water supply and implement water conservation strategies as appropriate.

Lead Agency	City Public Works Department
Funding Source	Local; City Water Fund
Current Status	Ongoing

D-e. Plan for Drought. The City Planning Department continues to plan for droughts, including as part of the 2016 update of the city comprehensive land use plan.

Lead Agency	City Planning Department
Funding Source	Local; City Water Fund
Current Status	Ongoing

D-f. Require Water Conservation During Drought Conditions. The City Public Works Department continues to monitor drought conditions and implement water conservation measures as appropriate.

Lead Agency	City Public Works Department
Funding Source	Local; City Water Fund
Current Status	Ongoing

D-g. Educate Residents on Water Saving Techniques. The City Administration continues to support education of residents regarding water conservation efforts, including through information provided with quarterly newsletters and monthly utility bulls.

Lead Agency	City Administration
Funding Source	Local; City Water Fund
Current Status	Ongoing

Earthquake

EQ-a. Incorporate Earthquake Mitigation into Local Planning. The City Planning Department continues to incorporate planning related to earthquakes, including as part of the 2016 update to the city comprehensive plan.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

EQ-b. Map and Assess Community Vulnerability to Seismic Hazards. The City Planning



Department continues to map and assess vulnerability to seismic hazards, including as part of the 2016 update of the city critical areas ordinance.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

EQ-c. Conduct Inspections of Building Safety. The City Building Department continues to conduct inspections related to building safety as required by City building codes.

Lead Agency	City Building Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

EQ-d. Protect Critical Facilities and Infrastructure. The City Building, Planning and Public Works Departments continue to protect critical facilities and infrastructure, including requiring critical facilities to be elevated three feet above the FEMA base flood elevation.

Lead Agency	City Building, Planning and Public Works Depts.
Funding Source	Local; City General Fund
Current Status	Ongoing

EQ-e- Protect Wellfield Backup Power.

Lead Agency	City Public Works Dept.
Funding Source	Local
Current Status	Discontinued

Volcano

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

Extreme Temp

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

Flooding

FL-a. Incorporate Flood Mitigation in Local Planning. The City Planning Department continues to incorporate flood mitigation into local planning, including as part of the 2016 update of the city critical areas ordinance, the 2019 adoption of new FEMA flood insurance rate maps, and updates to the County comprehensive flood hazard management plan currently underway.



Lead Agency	City Planning Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-b. Form Partnerships to Support Floodplain Management. The City Planning and Public Works Departments continue to work to form partnerships that support floodplain management, including working closely with County long-range and current planning divisions and the County Public Works River and Flood Division.

Lead Agency	City Planning and Public Works Depts.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-c. Limit or Restrict Development in Floodplain Areas. The City Planning, Building and Public Works Departments continue to limit development in floodplain areas through amendment and enforcement of City critical areas ordinance regulations, flood damage prevention regulations, and city building codes.

Lead Agency	City Planning, Building and Public Works Depts.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-d. Improve Stormwater Management Planning. The City Planning Department continues to improve planning, regulation and enforcement related to stormwater management, including through 2016 updates to the City comprehensive plan and the 2016 adoption of the state stormwater management manual for Western Washington.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-e. Improve Flood Risk Assessment. The City Public Works Department continues to assess risks related to flooding, including through participation in the federal CRS Program and RISK Map assessment efforts.



Lead Agency	City Public Works Dept
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-f. Join or Improve Compliance with NFIP. The City continues to participate in the National Flood Insurance Program (NFIP). The City Planning, Building and Public Works Departments continue to work to improve compliance with the NFIP, including through adoption of 2019 amendments to the City’s flood damage prevention ordinance that included updated flood insurance rate maps.

Lead Agency	City Planning, Building and Public Works Depts.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-g. Manage the Floodplain Beyond Minimum Requirements. The City Planning and Building Departments continue to manage floodplains beyond minimum requirements, including through amendment of critical areas and floodplain management regulations that require extra elevation of critical facilities and prohibit the placement of fill within floodplains except under certain conditions

Lead Agency	City Planning and Building Depts.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-h. Establish Local Funding Mechanisms for Flood Mitigation. The County Flood Control Zone District continues to make locally generated district funds available for local projects, including the buyout of property in high hazard areas.

Lead Agency	County Flood Control Zone District
Funding Source	Local; County Flood Fund
Current Status	Ongoing

FL-i. Improve Stormwater Drainage System Capacity. The City Public Works Department continues to work to improve stormwater drainage system capacity through annual system upgrades and maintenance projects.



Lead Agency	City Public Works Dept
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-j. Conduct Regular Maintenance for Drainage Systems and Flood Control Structures. The City Public Works Department continues to work to improve stormwater drainage system capacity through annual maintenance projects, such as inspection and clearing of stormwater conveyance systems.

Lead Agency	City Public Works Dept
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-k. Preserve Floodplains as Open Space. The City Planning Department continues to work to preserve floodplains as open space, including through the recording of restrictive covenants required in conjunction with approved subdivisions.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

FL-l. FL-5 Sumas Avenue Replacement.

Lead Agency	WSDOT
Funding Source	State and Federal
Current Status	Discontinued

Landslide/erosion

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

Landslide Subsidence

SU-a. Map and Assess Vulnerability to Subsidence. The City Planning Department continues to map and assess vulnerability to subsidence, including through 2016 updates to the City critical areas ordinance.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing



SU-b. Manage Development in High-Risk Areas. The City Building Department continues to manage development in high risk areas, including through required geologically hazardous area site assessment reports.

Lead Agency	City Building Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing

Lightning

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

Winter Storms/Freezes

WW-a. Protect Buildings and Infrastructure. The City Public Works Department continues to work to protect public buildings and infrastructure from severe winter storms, including through annual maintenance and upgrades to increase system resiliency.

Lead Agency	City Public Works Dept
Funding Source	Local; City General, Water and Sewer Funds
Current Status	Ongoing

WW-b. Protect Power Lines. The City Public Works Department continues to work to protect power lines through as-needed inspections and repairs following major winter storm events.

Lead Agency	City Public Works Dept
Funding Source	Local; City General Funds
Current Status	Ongoing

WW-c. Reduce Impacts to Roadways. The City Public Works Department continues to work to reduce impacts to roadways, including through implementation of road closures during major freeze/thaw events.

Lead Agency	City Public Works Dept
Funding Source	Local; City Street Funds
Current Status	Ongoing

Severe Storm

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



Severe Wind

SW-a. Protect Power Lines and Infrastructure. The City Public Works Department continues to work to protect power lines and infrastructure through as-needed inspections and repairs following major wind events.

Lead Agency	City Public Works Dept
Funding Source	Local; City General Funds
Current Status	Ongoing

SW-b. Retrofit Public Buildings and Critical Facilities. The City Public Works Department continues to work to protect public buildings and infrastructure, including through undergrounding of power lines and provision of back-up power generation at critical facilities.

Lead Agency	City Public Works Dept
Funding Source	Local; City General Funds
Current Status	Ongoing

Tornadoes

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

Tsunami

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

Wildfire

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

Winter storms/Freezes

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

Multiple Hazards

MU-a. Assess Community Risk. The City Planning and Public Works Departments continue to assess risks to the public from natural hazards, including through review of repetitive loss properties and review and adoption of updated hazard maps.



Lead Agency	City Planning and Public Works Depts.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-b. Map Community Risk. The City Planning Department continues to work to map natural hazard areas and assess the risks associated with such areas, including through the 2016 update of the City’s critical areas ordinance.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-c. Prevent Development in Hazard Areas. The City Building and Planning Departments continue to prevent development in hazard areas, including through enforcement of floodplain, steep slopes and other critical areas regulations,

Lead Agency	City Building and Planning Depts.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-d. Adopt Development Regulations in Hazard Areas. The City Building and Planning Departments continue to work to adopt regulations addressing hazard areas, including through the 2016 update to the City’s critical areas ordinance and the 2019 adoption of updated FEMA flood insurance rate maps and Flood Damage Prevention ordinance.

Lead Agency	City Building and Planning Depts.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-e. Limit Density in Hazard Areas. The City Planning Department continues to work to limit density in hazard areas, including through adoption of flood corridor regulations and establishment of low-density zones in hazard areas, such as Agriculture and Residential, Low-Density.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-f. Integrate Mitigation into Local Planning. The City Planning Department continues to



integrate mitigation into local planning, including through establishment and enforcement of mitigation requirements under the City’s critical areas regulations.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-g. Strengthen Land Use Regulations. The City Planning Department continues to work to strengthen local land use regulations, including through the 2016 update of the City’s critical areas ordinance and 2019 updates to the City’s Flood Damage Prevention ordinance.

Lead Agency	City Planning Dept.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-h. Monitor Mitigation Plan Implementation. The City Planning and Public Works Departments continue to monitor implementation of the Natural Hazards Mitigation Plan through the required annual review process.

Lead Agency	City Planning and Public Works Depts.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-i. Protect Structures. The City Building and Public Works Departments continue to work to protect structures within the City through enforcement of local building codes and critical areas regulations.

Lead Agency	City Building and Public Works Depts.
Funding Source	Local; City General Funds
Current Status	Ongoing

MU-j. Protect Infrastructure and Critical Facilities. The City Public Works Department continues to work to protect infrastructure and critical facilities, including through regular inspections, annual maintenance projects and capital improvement projects, such as elevating critical facilities above minimum standards.

Lead Agency	City Public Works Dept.
Funding Source	Local; City General, Water and Sewer Funds
Current Status	Ongoing



MU-k. Increase Hazard Education and Risk Awareness. The City Public Works Department continues to work to increase hazard education and risk awareness, including through informational materials included in quarterly newsletters and posted on the City website.

Lead Agency	City Public Works Dept.
Funding Source	Local; City General Fund
Current Status	Ongoing



Sumas 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.

Sumas-Specific Hazard Mitigation Goals

Sumas supports the above county-wide goals. No additional community-specific mitigation planning goals have been identified at this time.

Mitigation Action Options

Appendix E of the Whatcom County Natural Hazard Mitigation Plan provides a list of mitigation options. Sumas considered mitigation options related to earthquakes, droughts, land subsidence, winter storms, severe winds, severe storms, and especially those related to flooding, 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 Sumas. Some options have already been implemented or are ongoing in Sumas, 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 Sumas 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. Sumas is working in cooperation with the County and 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.

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)
5	Funding Source	Local; State; FEMA; Private; Other
6	Estimated Cost	Actual; Estimated



Sumas Identified Mitigation Actions 2021-2025

CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
GENERAL: ALL HAZARDS	These are actions that inform and educate citizens, elected officials, and property owners about hazards and ways to mitigate them.						
Education and Awareness Actions	<i>G-a. Ongoing -- Adopt and Enforce Building Codes.</i>	1,2	City Building Dept		O		
Education and Outreach	<i>EO-a. Ongoing -- Emergency preparedness education programs for schools.</i>	2	School District		O		
	<i>EO-b. Ongoing -- Drills, exercises in homes, workplaces, classrooms, etc.</i>	2	School District		O		
	<i>EO-c. Ongoing -- Distribution of severe weather guides, preparedness handbooks, brochures homeowner's retrofit guide, etc.</i>	2	WCDEM		O		
	<i>EO-d. Ongoing -- Newsletters and utility bill inserts.</i>	2	City Public Works Dept		O		
Hazard Specific (Reference: Whatcom County Mitigation Ideas)	Actions communities should consider to identify and evaluate a range of potential mitigation actions for reducing risk to natural hazards and disasters.						
Dam/Levee							

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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CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1)	(2)	(3)	(4)	(5)	(6)
Hazard	Action Items	Goals	Lead Responsibility	Priority	Timeline	Funding Source	Estimated Cost
Failures (See: Flooding)							
Droughts/Heat Waves	<i>D-a. Ongoing -- Assess Vulnerability to Drought Risk.</i>	1,2	City Planning Department		0		
	<i>D-b. Ongoing -- Monitor Drought Conditions.</i>	1,2	City Public Works Department		0		
	<i>D-c. Ongoing -- Monitor Water Supply.</i>	1,2,5	City Public Works Department		0		
	<i>D-e. Ongoing -- Plan for Drought.</i>	1			0		
	<i>D-f. Ongoing -- Require Water Conservation During Drought Conditions</i>	1	City Public Works Department		0		
	<i>D-g. Ongoing -- Educate Residents on Water Saving Techniques.</i>	2	City Administration		0		
Earthquakes	<i>EQ-a. Ongoing -- Incorporate Earthquake Mitigation into Local Planning.</i>	1.4	City Planning Dept		0		
	<i>EQ-b. Ongoing -- Map and Assess Community Vulnerability to Seismic</i>	1,2	City Planning Dept		0		

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



CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1)	(2)	(3)	(4)	(5)	(6)
Hazard	Action Items	Goals	Lead Responsibility	Priority	Timeline	Funding Source	Estimated Cost
	<i>Hazards.</i>						
	<i>EQ-c. Ongoing -- Conduct Inspections of Building Safety.</i>	1	City Building Dept		O		
	<i>EQ-d. Ongoing -- Protect Critical Facilities and Infrastructure</i>	1,5	City Building, Planning and Public Works		O		
Volcano	VOL-1 Lahar Early Warning Trigger System The US Geological Survey has designed a number of systems that automatically detect lahars as they descend neighboring valleys. These systems automatically trigger various types of early warning systems, such as sirens or telephone-based warning systems.	1, 2, 5	Lynden Fire Department	L	M	Local sources, and state and federal grants	UNKNOWN
Extreme Temperatures	No actions are currently being considered/All mitigation actions are discontinued, or complete.						
Flooding	<i>FL-a. Ongoing -- Incorporate Flood Mitigation in Local Planning.</i>	1, 5	City Planning Dept.	M	O	Local	
	<i>FL-b. Ongoing -- Form Partnerships to Support Floodplain Management.</i>	1	City Planning and Public Works Depts.	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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CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<i>FL-c. Ongoing -- Limit or Restrict Development in Floodplain Areas.</i>	1, 3	City Planning, Building and Public Works Depts.	M	O	Local	
	<i>FL-d. Ongoing -- Improve Stormwater Management Planning.</i>	1, 3	City Planning Dept	M	O	Local	
	<i>FL-e. Ongoing -- Improve Flood Risk Assessment.</i>	1	City Public Works Dept	M	O	Local	
	<i>FL-f. Ongoing -- Join or Improve Compliance with NFIP.</i>	1	City Planning, Building and Public Works Depts.	M	O	Local	
	<i>FL-g. Ongoing -- Manage the Floodplain Beyond Minimum Requirements.</i>	1, 3	City Planning and Building Depts.	M	O	Local	
	<i>FL-h. Ongoing -- Establish Local Funding Mechanisms for Flood Mitigation.</i>	1, 3	County Flood Control Zone District	M	O	Local, County Flood Fund	

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



CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<i>FL-i. Ongoing -- Improve Stormwater Drainage System Capacity.</i>	1	City Public Works Dept	M	O	Local	
	<i>FL-j. Ongoing -- Conduct Regular Maintenance for Drainage Systems and Flood Control Structures</i>	1	City Public Works Dept	M	O	Local	
	<i>FL-k. Ongoing -- Preserve Floodplains as Open Space.</i>	1, 3	City Planning Dept	M	O	Local	
	FL-1 Protect City Hall/Police Station This building is subject to flooding and is also prone to major damage in an earthquake, given that the building pre-dates modern building codes. A new facility should be constructed outside the floodplain.	1, 5	Sumas Public Works Department	M	M	State or Federal grants	\$4.5 Million
	FL-2 Protect the Fire Station This building is subject to flooding. A new facility should be constructed outside the floodplain.	1, 5	Whatcom County Fire District # 14	M	M	State or federal grants	2.5 Million
	FL-3 Flood Corridor Residential Buy-Out In a large flood, the Cherry Street bridge over Johnson Creek is a major impediment to flow. Water is forced out of the Johnson	1, 2, 3	City of Sumas	M	L	State or federal grants	\$1 Million

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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CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	Creek channel, leading to worse inundation in the commercial and residential areas to the north and northeast. The bridge should be replaced at a higher elevation and with less supporting pilings.						
	FL-4 Cherry Street Bridge Replacement In a large flood, the Cherry Street bridge over Johnson Creek is a major impediment to flow. Water is forced out of the Johnson Creek channel, leading to worse inundation in the commercial and residential areas to the north and northeast. The bridge should be replaced at a higher elevation and with less supporting pilings.	1, 2, 3	WA State Department of Transportation	M	L	State or federal grants	\$10 Million
Landslide/ Erosion	No actions are currently being considered/All mitigation actions are discontinued, or complete.						
Land Subsidence	<i>SU-a. Ongoing -- Map and Assess Vulnerability to Subsidence.</i>	1,2	City Planning Dept.		O		
	<i>SU-b. Ongoing -- Manage Development in High-Risk Areas.</i>	1	City Building Dept.		O		

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



CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
Lightning	No actions are currently being considered/All mitigation actions are discontinued, or complete.						
Severe Storms	No actions are currently being considered/All mitigation actions are discontinued, or complete.						
Severe Wind	<i>SW-a. Ongoing -- Protect Power Lines and Infrastructure.</i>	1,5	City Public Works		0		
	<i>SW-b. Ongoing -- Retrofit Public Buildings and Critical Facilities.</i>	1,5	City Public Works		0		
Tornadoes	No actions are currently being considered/All mitigation actions are ongoing, discontinued, or complete.						
Tsunami	No actions are currently being considered/All mitigation actions are ongoing, discontinued, or complete.						
Wildfires	No actions are currently being considered/All mitigation actions are ongoing, discontinued, or complete.						
Winter Storms/	<i>WW-a. Ongoing -- Protect Buildings and Infrastructure.</i>	1	City Public Works Dept		0		

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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CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1)	(2)	(3)	(4)	(5)	(6)
Hazard	Action Items	Goals	Lead Responsibility	Priority	Timeline	Funding Source	Estimated Cost
Freezes (Severe Winter Weather)	<i>WW-b. Ongoing -- Protect Power Lines.</i>	1,5	City Public Works Dept		0		
	<i>WW-c. Ongoing -- Reduce Impacts to Roadways</i>	1,5	City Public Works Dept		0		
Multiple Hazards	<i>MU-a. Ongoing -- Assess Community Risk.</i>	1,2	City Planning and Public Works Depts		0		
	<i>MU-b. Ongoing -- Map Community Risk.</i>	2	City Planning Dept.		0		
	<i>MU-c. Ongoing -- Prevent Development in Hazard Areas.</i>	1	City Building and Planning Depts		0		
	<i>MU-d. Ongoing -- Adopt Development Regulations in Hazard Areas.</i>	1	City Building and Planning Depts.		0		
	<i>MU-e. Ongoing -- Limit Density in Hazard Areas.</i>	1	City Planning Dept.		0		
	<i>MU-f. Ongoing -- Integrate Mitigation into Local Planning.</i>	1,4	City Planning Dept.		0		
	<i>MU-g. Ongoing -- Strengthen Land Use Regulations.</i>	1	City Planning Dept.		0		

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



CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	<i>MU-h. Ongoing -- Monitor Mitigation Plan Implementation.</i>	1	City Planning and Public Works Depts		0		
	<i>MU-i. Ongoing -- Protect Structures.</i>	1	City Planning and Public Works Depts		0		
	<i>MU-j. Ongoing -- Protect Infrastructure and Critical Facilities.</i>	1,5	City Public Works Dept.		0		
	<i>MU-k. Ongoing --Increase Hazard Education and Risk Awareness.</i>	2	City Public Works Dept.		0		
Advanced Mitigation Projects (Dream List)	Natural Hazard Early Warning Systems	1,5					
	Cell Phone-Based Early Warning System. A computerized early warning system that automatically dials each landline telephone number within a specified area, and play a recorded message when the phone is answered is currently provided to the City by the Whatcom County Sheriff's Office Division of Emergency Management. A larger capacity system that can also contact cell phones through the use of a federally	2, 5	WCDEM/LFD				Local sources, and state and federal grants

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



CITY OF SUMAS IDENTIFIED MITIGATION ACTIONS 2021-2025							
MITIGATION ACTIONS		(1) Goals	(2) Lead Responsibility	(3) Priority	(4) Timeline	(5) Funding Source	(6) Estimated Cost
Hazard	Action Items						
	licensed COG would help to address a variety of natural and manmade problems.						

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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Sumas 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.



City of Sumas 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					Notes on yearly progress
	2021	2022	2023	2024	2025	
GENERAL: ALL HAZARDS						
<i>G-a. Ongoing -- Emergency preparedness education programs for schools.</i>						
<i>G-b. Ongoing -- Drills, exercises in homes, workplaces, classrooms, etc.</i>						
<i>G-c. Ongoing -- Distribution of severe weather guides, preparedness handbooks, brochures homeowner's retrofit guide, etc.</i>						
<i>G-d. Ongoing -- Newsletters and utility bill inserts. .</i>						
<i>G-e. Ongoing -- Adopt and Enforce Building Codes.</i>						
<i>Add New Action Items if Applicable</i>						
DAM/LEEVE FAILURES						
<i>Add New Action Items if Applicable</i>						
DROUGHTS/HEAT WAVES						
<i>D-a. Ongoing -- Assess Vulnerability to Drought Risk.</i>						
<i>D-b. Ongoing -- Monitor Drought Conditions.</i>						
<i>D-c. Ongoing -- Monitor Water Supply.</i>						
<i>D-e. Ongoing -- Plan for Drought.</i>						
<i>D-f. Ongoing -- Require Water Conservation During Drought Conditions.</i>						
<i>D-g. Ongoing -- Educate Residents on Water Saving Techniques.</i>						
EARTHQUAKES						



City of Sumas 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>EQ-a. Ongoing -- Incorporate Earthquake Mitigation into Local Planning.</i>						
<i>EQ-b. Ongoing -- Map and Assess Community Vulnerability to Seismic Hazards.</i>						
<i>EQ-c. Ongoing -- Conduct Inspections of Building Safety.</i>						
<i>EQ-d. Ongoing -- Protect Critical Facilities and Infrastructure.</i>						
<i>EQ-e Ongoing -- Protect Wellfield Backup Power</i>						Discontinued
<i>Add New Action Items if Applicable</i>						
VOLCANO						
<i>VOL-a. Ongoing -- Lahar Early Warning System.</i>						
VOL-1 Lahar Early Warning Trigger System						
<i>Add New Action Items if Applicable</i>						
FLOODING						
<i>FL-a. Ongoing -- Incorporate Flood Mitigation in Local Planning.</i>						
<i>FL-b. Ongoing -- Form Partnerships to Support Floodplain Management.</i>						
<i>FL-c. Ongoing -- Limit or Restrict Development in Floodplain Areas.</i>						
<i>FL-d. Ongoing -- Improve Stormwater Management Planning.</i>						
<i>FL-e. Ongoing -- Improve Flood Risk Assessment.</i>						
<i>FL-f. Ongoing -- Join or Improve Compliance with NFIP.</i>						



City of Sumas 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>FL-g. Ongoing -- Manage the Floodplain Beyond Minimum Requirements.</i>						
<i>FL-h. Ongoing -- Establish Local Funding Mechanisms for Flood Mitigation.</i>						
<i>FL-i Ongoing --. Improve Stormwater Drainage System Capacity.</i>						
<i>FL-j. Ongoing -- Conduct Regular Maintenance for Drainage Systems and Flood Control Structures.</i>						
<i>FL-k. Ongoing -- Preserve Floodplains as Open Space.</i>						
FL-1 Protect City Hall/Police Station						
FL-2 Protect the Fire Station						
FL-3 Flood Corridor Residential Buy-Out						
FL-4 Cherry Street Bridge Replacement						
<i>Add New Action Items if Applicable</i>						
LANDSLIDES/EROSION						
<i>Add New Action Items if Applicable</i>						
LAND SUBSIDENCE						
<i>SU-a. Ongoing -- Map and Assess Vulnerability to Subsidence.</i>						
<i>SU-b. Ongoing -- Manage Development in High-Risk Areas.</i>						
<i>Add New Action Items if Applicable</i>						
TORNADOES						
<i>Add New Action Items if Applicable</i>						
TSUNAMI						



City of Sumas 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
Add New Action Items if Applicable						
WILDFIRES						
Add New Action Items if Applicable						
WINTER STORMS/FREEZES (SEVERE WINTER WEATHER)						
<i>WW-a. Ongoing -- Protect Buildings and Infrastructure.</i>						
<i>WW-b. Ongoing -- Protect Power Lines.</i>						
<i>WW-c. Ongoing -- Reduce Impacts to Roadways.</i>						
Add New Action Items if Applicable						
EXTREME TEMPERATURES						
Add New Action Items if Applicable						
LANDSLIDE						
Add New Action Items if Applicable						
LIGHTNING						
Add New Action Items if Applicable						
SEVERE WIND						
<i>SW-a. Ongoing -- Protect Power Lines and Infrastructure.</i>						
<i>SW-b. Ongoing -- Retrofit Public Buildings and Critical Facilities.</i>						
Add New Action Items if Applicable						
MULTIPLE HAZARDS						



City of Sumas 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>MU-a. Ongoing -- Assess Community Risk.</i>						
<i>MU-b. Ongoing -- Map Community Risk.</i>						
<i>MU-c. Ongoing -- Prevent Development in Hazard Areas.</i>						
<i>MU-d. Ongoing -- Adopt Development Regulations in Hazard Areas.</i>						
<i>MU-e. Ongoing -- Limit Density in Hazard Areas.</i>						
<i>MU-f. Ongoing -- Integrate Mitigation into Local Planning.</i>						
<i>MU-g. Ongoing -- Strengthen Land Use Regulations.</i>						
<i>MU-h. Ongoing -- Monitor Mitigation Plan Implementation</i>						
<i>MU-i. Ongoing -- Protect Structures.</i>						
<i>MU-j. Ongoing -- Protect Infrastructure and Critical Facilities.</i>						
<i>MU-k. Ongoing -- Increase Hazard Education and Risk Awareness.</i>						
<i>Add New Action Items if Applicable</i>						



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