

KITTITAS
COUNTY

HAZARD MITIGATION PLAN

Snoqualmie Pass Utility District
Annex



Kittitas County
Public Works Department

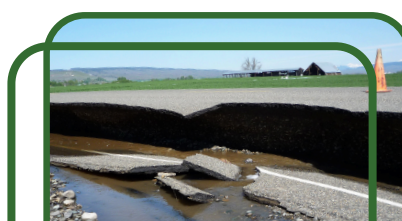




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1. INTRODUCTION

This Annex details the hazard mitigation elements specific to the Kittitas County Public Utility District, a participating jurisdiction to the 2024 Kittitas County Hazard Mitigation Plan update. This Annex is not intended to be a standalone document but supplements the information contained in **Volume 1 (Countywide Planning Elements)**. Therefore, all sections of **Volume 1** including the planning process, hazard identification and risk assessment, mitigation strategy (includes mitigation goals and objectives), and plan maintenance apply to and were met by the Kittitas County Public Utility District. This Annex provides additional information specific to the District, with a focus on providing additional details on the hazard risk assessment and mitigation strategy (i.e., mitigation actions) for this community.

2. LOCAL PLANNING TEAM

Snoqualmie Pass Utility District Local Planning Team was comprised of the members listed on **Table 1**.

Table 1. Snoqualmie Pass Utility District Local Planning Team Members

Name	Title	Department
Tom Hastings	General Manager	Snoqualmie Pass Utility District

3. JURISDICTION PROFILE

The Snoqualmie Pass Utility District is a special purpose district established to provide water and sewer services to residential and commercial customers within the summit of Snoqualmie Pass – approximately 80% of the collection system is located in Kittitas County and the remainder in King County. The District is located near the western summit of Snoqualmie Pass along Interstate 90 at an elevation of approximately 3,000 feet; however, the District services areas at elevations between 2,600 and 3,100 feet.

The District owns and operates the water and wastewater facilities and has a services area of 1,799 acres which is long and narrow due to the mountainous terrain within the Cascade Mountain range. Snoqualmie Pass receives high amounts of precipitation averaging 100 inches annually, and 420 inches of snowfall.

The economy of the Snoqualmie Pass area depends largely on recreational activities, such as skiing. The District is solely funded by the collection of rates for providing water and sewer services.

3.1. Population

The Snoqualmie Pass Utility District had a population of approximately 500 as of July 1, 2022. Between 2010 and 2022 the population increased by approximately 42.9%. **Table 2** shows the District's population distribution between 2010 and 2022. Approximately 25% of the residential homes within the District are full time residents.

Table 2. Population Estimates

Jurisdiction	2010	2020	2022	Population Change (2010 – 2022)
Snoqualmie Pass Utility District	350	Not Available	500	42.9%



3.1.1. Underserved Population

FEMA defines underserved populations as groups that have limited or no access to resources or that are otherwise disenfranchised. These groups may include, but are not limited to, people who are socioeconomically disadvantaged, people with limited English proficiency, geographically isolated or educationally disenfranchised people, people of color as well as those of ethnic and national origin minorities, women and children, individuals with disabilities and others with access and functional needs, and seniors.¹

The CDC's SVI is considered an appropriate and authoritative dataset to identify areas where efforts can be prioritized to ensure equitable outcomes from mitigation planning and actions. Social vulnerability refers to a community's capacity to prepare for and respond to the stress of natural, human-caused, and technological disasters. CDC's SVI combines 16 census-derived social factors, within four (4) themes (i.e., socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation) that summarizes the extent to which an area is socially vulnerable to disasters. The overall SVI combines all variables to provide a comprehensive assessment, and the possible scores range from zero (0) (lowest vulnerability) to one (1) (highest vulnerability).²

The overall SVI score for Kittitas County is 0.3366 which indicates a low to medium level vulnerability. **Table 3** outlines the SVI information for each social factor for the Snoqualmie Pass Utility District.³

Note: ArcGIS mapping analysis was performed utilizing Census Tract data by overlaying Census Tracts with the District planning area boundary. The information outlined in this section includes the best available data from the entire Census Tracts that intersect the jurisdiction.

Table 3. Social Vulnerability Index (2022)

Theme	Social Factors	Percent
Socioeconomic Status	People below 150% poverty estimate	2.0%
	Unemployed (Civilian 16 years old and older)	3.6%
	Housing Cost Burden	8.0%
	No High School Diploma	1.7%
	No Health Insurance	2.8%
Household Characteristics	65 years old and older	33.7%
	17 years and younger	5.9%
	Civilian with a Disability	16.6%
	Single-Parent Household	1.4%
	English Language Proficiency	0.2%

¹ Federal Emergency Management Agency. (n.d.). Glossary: Underserved Population/Communities. Retrieved from <https://www.fema.gov/about/glossary>.

² Centers for Disease Control and Prevention. (2024). CDC/ATSDR SVI 2022 Documentation. Retrieved from <https://www.atsdr.cdc.gov/placeandhealth/svi/documentation/pdf/SVI-2022-Documentation-H.pdf>.

³ Centers for Disease Control and Prevention. (2022). CDC/ATSDR Social Vulnerability Index (SVI). Retrieved from https://www.atsdr.cdc.gov/placeandhealth/svi/interactive_map.html.



Theme	Social Factors	Percent
Racial and Ethnic Minority Status	<ul style="list-style-type: none"> Hispanic or Latino (of any race) Black or African American Asian American Indian or Alaska Native Native Hawaiian or Pacific Islander Two or More Races Other Races 	7.6%
Housing Type and Transportation	Multi-Unit Structures	5.6%
	Mobile Homes	8.0%
	Crowding	0.6%
	No Vehicle	0.0%
	Group Quarters	0.8%

3.2. Brief History

The Snoqualmie Pass Utility District was incorporated in 1984 when the Summit Sewer District and Kittitas County Sewer District #1 were consolidated into a single district operating under Chapter 57 of the Revised Code of Washington. In 2001, the District took ownership of the Alpentel water system.

3.3. Governing Body Format

The Snoqualmie Pass Utility District is administered by a Board of Commissioners consisting of three (3) local citizens elected on a non-partisan basis. The Board establishes policies, set rates, adopt system plans for water and sewer utilities and approves the revenue obligations. Additionally, the Commissioners appoint the General Manager. The General Manager is directly responsible for the Board of Commissioners and is the Chief Executive of the District.

4. DEVELOPMENT TRENDS

The Snoqualmie Pass Utility District estimates that there are approximately 500 full time residents within the planning area, with an additional 1,000 seasonal residents during peak weekends in the winter months. In addition to the residential population, the area has a large transient population, including travelers on Interstate 90 which utilize Pass facilities and winter sports enthusiasts. Based on recent heavy ski years, day use population can reach approximately 30,000. In 2016, the District sold a total of 162 water and sewer connections, but only 60 homes have been built as of 2024. Water and sewer connections are meant for new development. Additionally, 560 residential properties have been built and are in service, but another 100 connections are not in service. As a result, the District anticipates another 15% development growth within the District (based on the water and sewer connections that have been bought) in the next five (5) years.

4.1. Changes in Priority

The overall hazard mitigation priorities have not significantly changed for the Snoqualmie Pass Utility District since the last Plan update. However, mitigation actions from the previous Plan were updated, and a more concerted effort on achieving equitable outcomes for all communities, including underserved communities and socially vulnerable populations, has been implemented.



5. CAPABILITY ASSESSMENT

Federal regulations require hazard mitigation plans to identify goals for reducing long-term vulnerabilities to the identified hazards in the planning area (Section 201.6(c)(3)(i)). A critical step in the development of specific hazard mitigation actions and projects is assessing existing authorities, policies, programs, and resources and capabilities to use or modify local tools to reduce losses and vulnerability from profiled hazards.

A capability assessment was conducted for the Snoqualmie Pass Utility District and participating jurisdictions' authorities, policies, programs, and resources. Goals and mitigation actions were developed using input from this assessment. Information regarding the District's jurisdictions' implementation of and continued participation in the National Flood Insurance Program (NFIP) can be found in Section 8 of this Annex.

The Local Planning Team assessed the District's capabilities that can contribute to the reduction of long-term vulnerabilities to hazards. The capabilities include the following categories:

- Planning and Regulatory Capabilities
- Administrative and Technical Capabilities
- Financial Capabilities
- Education and Outreach Capabilities

Additionally, ways to expand on and improve these existing policies and programs to integrate hazard mitigation into the day-to-day activities and programs of the District were considered.

5.1. Planning and Regulatory Capabilities

These include local ordinances, policies, and laws to manage growth and development (e.g., land use plans, capital improvement plans, transportation plans, emergency preparedness and response plans, building codes, and zoning ordinances). The Snoqualmie Pass Utility District relies on Kittitas County to maintain a strong framework of codes, ordinances, and requirements to help mitigate the impacts of the hazards identified in this Plan. **Table 4** contains a list of legal and regulatory capabilities.

Table 4. Planning and Regulatory Capabilities

Capability Category	Local Authority	Other Authority	State Mandated	Comments
Codes, Ordinances, and Requirements				
Public Utility Districts	No	No	Yes	Title 54 of the Revised Code of Washington (RCW) Authorize the establishment of public utility districts to conserve the water and power resources of the State of Washington, including water and electricity for all uses.



Capability Category	Local Authority	Other Authority	State Mandated	Comments
Building Code	Yes	No	Yes	<p>Chapter 19.27 RCW includes provisions for electrical safety and standards that must be adhered to for new construction and major renovations.</p> <p>Chapter 4 of the Washington State Energy Code (part of the State Building Code) includes specific provisions for energy efficiency in new buildings and major renovations.</p> <p>Title 14 of the Kittitas County Code (KCC) contains building codes and standards, including electrical codes that align with state building codes</p>
Energy Independence Act	No	No	Yes	<p>Chapter 19.285 RCW includes requirements for new energy resources. The Act requires large utilities to obtain 15% of their electricity from new renewable resources (e.g., solar and wind) by 2020 and undertake cost-effective energy conservation.</p> <p>Chapter 194-37 WAC implements the requirements of the Energy Independence Act, outlined in Chapter 19.285 RCW.</p>
Washington Clean Energy Transformation Act	No	No	Yes	Chapter 19.405 RCW mandates utilities to transition to 100% clean electricity by 2045, with interim targets along the way.
Electric Companies	No	No	Yes	Chapter 480-100 of the Washington Administrative Code (WAC) includes regulations from the Washington Utilities and Transportation Commission (WUTC) governing the operations, safety standards, and service requirements for electric utilities.
Roads and Bridges Code	Yes	No	No	Title 12.22.100 of the KCC includes regulations on the placement of utility infrastructure within public rights of way.
Zoning Code	Yes	No	No	Title 17 of the KCC includes zoning regulations that impact where electrical infrastructure can be placed, including land use designations and permitting requirement.
Electrical Infrastructure Review	Yes	No	No	
Capability Category	Local Authority	Other Authority	State Mandated	Comments
Planning Documents				
Comprehensive Plan	Yes	No	No	Cities in Washington State must update their Comprehensive Plan every eight (8) years. Washington State's Growth Management Act (GMA) and RCW.36.70A



Capability Category	Local Authority	Other Authority	State Mandated	Comments
Kittitas County Capital Improvement Plan	Yes	No	No	The 2011 Capital Facilities Plan, is adopted as part of the 2016 Comprehensive Plan.
Water System Plan	No	No	Yes	Required by the Washington State Department of Health under Chapter 246-290-100 and Chapter 246-291-140 of the WAC. This is a comprehensive document that outlines the management, operation, and development of a public water system.
Wastewater Comprehensive and Facility Plans	No	No	Yes	Required by the Department of Ecology to ensure that wastewater collection, treatment, and disposal systems are designed, operated, and maintained effectively to protect public health and the environment.

5.2. Administrative and Technical Capabilities

The administrative and technical capabilities include community (i.e., public and private) staff and their skills and tools, which can be used for mitigation planning and implementation. This capability includes engineers, planners, emergency managers, GIS analysts, building inspectors, grant writers, and floodplain managers. Small communities may rely on other government entities, such as counties or special districts, for resources. These capabilities may be used to support mitigation activities. **Table 5** lists administrative and technical capabilities.

Table 5. Administrative and Technical Capabilities

Staff/Personnel Resources	Available	Department/Agency/Position/Description
Planners or engineers with knowledge of land development and land management practices	No	N/A
Engineers or professionals trained in building or infrastructure construction practices	No	N/A
Staff with an understanding of natural hazards	Yes	Local Utility Managers, Snoqualmie Pass Utility District
Staff with training in benefit/cost analysis	No	N/A
Floodplain Manager/Administrator	No	N/A
Surveyors	No	N/A
Personnel skilled or trained in GIS applications	No	N/A
Staff familiar with natural hazards in local area	Yes	General Manager, Snoqualmie Pass Utility District
Emergency Manager	No	N/A
Grant writers	No	N/A

5.3. Financial Resources

Table 6 contains a list of financial capabilities available to the District. These financial resources may be used to support mitigation activities based on procedures for each resource.



Table 6. Financial Resources

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs (e.g., Washington State Department of Health, Washington State Department of Ecology, United States Department of Agriculture)	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Public Works Board Loans	Yes
Congressionally Directed Spending Grants	Yes

5.4. Education and Outreach Capabilities

Table 7 lists the District's financial and public outreach capabilities. These capabilities include fire safety programs, hazard awareness campaigns, public information, and communications offices. Education and outreach capabilities can be used to inform the public about current and potential mitigation activities.

Table 7. Education and Outreach Resources

Resource	Available	Department/Agency/Position/Description
Public Information Officer	Yes	General Manager, Snoqualmie Pass Utility District
Personnel skilled or trained in website development	Yes	General Manager, Snoqualmie Pass Utility District
Hazard mitigation information available on your website	No	N/A
Utilize social media for hazard mitigation education and outreach	Yes	Facebook: facebook.com/groups/1824634617765690/
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Board of Commissioners of Snoqualmie Pass Utility District of King and Kittitas Counties, Snoqualmie Pass Utility District
Other programs already in place that could be used to communicate hazard-related information	No	N/A
An established warning systems for hazard events	Yes	Kittitas County Sheriff's Office, Emergency Management Office

5.5. Needs to Expand/Improve Capabilities

The Snoqualmie Pass Utility District identified existing authorities, policies, programs, funding, and/or resources that need to be expanded and/or improved in order to support the implementation of the hazard mitigation initiatives identified in this Plan (e.g., mitigation actions).



- Improve the District's redundancies to simultaneously be able to continue operations in areas that have not been affected by the specific incident or disaster.
- Upsize and add more reservoirs and wells throughout the District to improve the distribution of portable water.
- Increase resiliency by adding backup power to District critical infrastructure.

6. HAZARD MITIGATION PLAN INTEGRATION

The information on hazards, risk, vulnerability, and mitigation contained in this Hazard Mitigation Plan is based on the best available data at the time of the Plan update. Plan integration consists of the incorporation of hazard mitigation into other relevant planning mechanisms (e.g., general planning and capital improvement planning). It includes the integration of natural hazard information and mitigation policies, principles, and actions into local planning mechanisms and vice versa. Additionally, plan integration is achieved through the involvement of key staff and community officials in collaborative hazard mitigation planning.

6.1. Existing Plan Integration

In the performance period since the adoption of the previous Hazard Mitigation Plan, Snoqualmie Pass Utility District made progress on integrating components of the hazard mitigation strategy (e.g., goals, objectives, and actions) into the planning initiatives listed in **Table 8**.

Table 8. Existing Plan Integration

Planning Initiative	Description
Capital Projects	The District has ensured consistency between the Hazard Mitigation Plan and capital improvement projects identified in the Capital Improvement Program (outlined in Chapter 8 of the Water System Plan).
Water System Plan	The Water System Plan (WSP), updated in 2022, has identified deficiencies in the potable water system and potential hazard mitigation projects.

6.2. Potential Future Integration

As the Hazard Mitigation Plan is implemented, Snoqualmie Pass Utility District will use information from the Plan as the best available science and data on hazards. The capability assessment presented in Section 5 of this Annex identifies codes, plans, and programs that provide opportunities for integration. The Districtwide and local action plans developed for this Hazard Mitigation Plan are related to plan integration. The capability assessment identified plans and programs, listed in **Table 9**, that do not currently integrate goals and recommendations of this Plan but provide opportunities to do so in the future.

Table 9. Potential Future Integration

Planning Initiative	Description
Wastewater Comprehensive and Facility Plans	The District will integrate hazard mitigation principles into the next update of the Water and Sewer Comprehensive Plans.
Capital Improvement Program	The District will ensure consistency between this Hazard Mitigation Plan and future updates of the Capital Improvement Program. The Hazard Mitigation Plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.



The District's Local Planning Team will identify all relevant planning initiatives that are scheduled to be updated in the next year and during the annual update process of the Hazard Mitigation Plan. Additionally, opportunities to integrate key elements of the Hazard Mitigation Plan, specifically any relevant strategies, into the planning initiatives will be identified by the Local Planning Team. Mitigation actions were identified to promote plan integration in future revisions of this Plan.

7. SIGNIFICANT HAZARD PAST EVENTS

A complete risk assessment, including past incidents, for each identified hazard of concern can be found in **Volume 1** of this Plan.

8. NATIONAL FLOOD INSURANCE PROGRAM

As a special district, the Snoqualmie Pass Utility District is not eligible to participate in FEMA's National Flood Insurance Program (NFIP). Further information on Kittitas County's NFIP and Community Rating System (CRS) participation is available on **Volume 1** of this Plan.

9. HAZARD VULNERABILITY AND IMPACT ASSESSMENT

Exposure and vulnerability to certain hazards affect the entire County and others are geographically defined. Although the entire County may be vulnerable to these hazards, their impacts may vary based on existing community conditions (e.g., underserved, or functional access needs populations may be more susceptible based on certain conditions, vulnerabilities, or needs).

A complete risk assessment for each identified hazard of concern is in **Volume 1** of this Plan. **Table 10** provides information on a several key vulnerabilities for Snoqualmie Pass Utility District. Hazard mapping can be found in **Appendix A** of this Annex.

Table 10. Hazard Vulnerability and Impact Assessment

Hazards	Vulnerabilities and Impacts
Avalanche	The Alpentel community is vulnerable to avalanches which pose significant risks, as these events can damage homes and block roads, disrupting essential services managed by the District and significantly impacting safety and access to residents and visitors.
Dam and Levee Failure	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to dam and levee failure.
Drought	The District faces vulnerability during drought conditions, as the increased risk of wildfires could have profound impacts to its critical infrastructure and the community it serves.
Earthquake	An earthquake could trigger a landslide, jeopardize the District's water reservoirs, and potentially collapse wells, halting the flow of potable water. Additionally, it could cause water and sewer lines to rupture, particularly at bridge crossings, disrupting essential services in the community.
Flood	The Alpentel community is vulnerable to flooding as a result of the Snoqualmie River. The community's close proximity to the River heightens the vulnerability of wells 4 and 5 and the wastewater lift station, while flooding of Commonwealth Creek could similarly impact wells 2 and 3. Additionally, Hyak Creek and other drainages pose flood risks that could disrupt essential operations within the District.
Landslide	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to landslides.



Hazards	Vulnerabilities and Impacts
Severe Weather (thunderstorms, hail, tornado, strong winds/damaging winds, extreme temperatures)	The District's vulnerability to severe weather (e.g., strong winds/damaging winds and extreme temperatures) can lead to power outages profoundly impacting the District's critical infrastructure which results in service interruptions to the Snoqualmie Pass community.
Volcanic Activity	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to volcanic activity.
Wildfire (wildfire smoke)	The District is located within a forested area. The community and the District's critical infrastructure are vulnerable to wildfire and smoke, which could lead to significant operational disruptions and health risks.
Winter Weather (ice storms, heavy snow, and blizzards)	The District is located at an elevation of approximately 3,000 feet which makes Snoqualmie Pass extremely vulnerable to high amounts of snowfall in a 24-hour period impacting Snoqualmie Pass with road closures and power outages.
Communicable Diseases/Pandemic	The dense population within Snoqualmie Pass heightens residents' vulnerability, especially the vulnerable population, to communicable diseases / pandemics.

The District evaluated whether vulnerability and impact in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this Hazard Mitigation Plan. Climate change, changes in population, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard areas or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics (e.g., underserved population) were taken into consideration.

Table 11 outlines if climate change has increased or decreased the District's vulnerability (i.e., exposure) and impact to each natural hazard over the past five (5) years, and the effect of climate change in the future probability of occurrence and impacts from each natural hazard.

Table 11. Climate Change Current and Future Vulnerability and Impact

Hazard	Vulnerability and Impact
Current Vulnerability and Impact	
Avalanche	Remained the Same
Communicable Diseases/Pandemic	Remained the Same
Dam and Levee Failure	Remained the Same
Drought	Increased
Earthquake	Remained the Same
Extreme Cold/Extreme Heat (<i>Severe Weather</i>)	Remained the Same
Flood	Remained the Same
Landslide	Remained the Same
Severe Weather (<i>thunderstorms, hail, strong winds/damaging winds, and tornado</i>)	Remained the Same
Volcanic Activity	Remained the Same
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	Remained the Same



Hazard	Vulnerability and Impact
Wildfire (<i>Wildfire Smoke</i>)	Increased
<i>Future Vulnerability and Impact</i>	
Avalanche	Increase
Communicable Diseases/Pandemic	No Change Anticipated
Dam and Levee Failure	No Change Anticipated
Drought	Increase
Earthquake	No Change Anticipated
Extreme Cold/Extreme Heat (<i>Severe Weather</i>)	No Change Anticipated
Flood	No Change Anticipated
Landslide	No Change Anticipated
Severe Weather (<i>thunderstorms, hail, strong winds/damaging winds, and tornado</i>)	No Change Anticipated
Volcanic Activity	No Change Anticipated
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	No Change Anticipated
Wildfire (<i>Wildfire Smoke</i>)	Increase

Table 12 outlines if changes in population within the District over the past five (5) years have increased or decreased the vulnerability (i.e., exposure) and impact to these natural hazards, and the anticipated effects changes in population may have on the future probability of occurrence and impacts from these natural hazards.

Table 12. Changes in Population Current and Future Vulnerability and Impact

Hazard	Vulnerability and Impact
<i>Current Vulnerability and Impact</i>	
Avalanche	Remained the Same
Communicable Diseases/Pandemic	Increased
Dam and Levee Failure	Remained the Same
Drought	Remained the Same
Earthquake	Remained the Same
Extreme Cold/Extreme Heat (<i>Severe Weather</i>)	Remained the Same
Flood	Remained the Same
Landslide	Remained the Same
Severe Weather (<i>thunderstorms, hail, strong winds/damaging winds, and tornado</i>)	Remained the Same
Volcanic Activity	Remained the Same
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	Remained the Same
Wildfire (<i>Wildfire Smoke</i>)	Remained the Same



Hazard	Vulnerability and Impact
<i>Future Vulnerability and Impact</i>	
Avalanche	No Change is Anticipated
Communicable Diseases/Pandemic	No Change is Anticipated
Dam and Levee Failure	No Change is Anticipated
Drought	No Change is Anticipated
Earthquake	No Change is Anticipated
Extreme Cold/Extreme Heat (<i>Severe Weather</i>)	No Change is Anticipated
Flood	No Change is Anticipated
Landslide	No Change is Anticipated
Severe Weather (<i>thunderstorms, hail, strong winds/damaging winds, and tornado</i>)	No Change is Anticipated
Volcanic Activity	No Change is Anticipated
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	No Change is Anticipated
Wildfire (<i>Wildfire Smoke</i>)	No Change is Anticipated

Table 13 outlines if development over the past five (5) years has increased or decreased the jurisdiction's vulnerability (i.e., exposure) and impact to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts from these natural hazards.

Table 13. Changes in Development Current and Future Vulnerability and Impact

Hazard	Vulnerability and Impact
<i>Current Vulnerability and Impact</i>	
Avalanche	Remained the Same
Communicable Diseases/Pandemic	Increased
Dam and Levee Failure	Remained the Same
Drought	Remained the Same
Earthquake	Remained the Same
Extreme Cold/Extreme Heat (<i>Severe Weather</i>)	Remained the Same
Flood	Remained the Same
Landslide	Remained the Same
Severe Weather (<i>thunderstorms, hail, strong winds/damaging winds, and tornado</i>)	Remained the Same
Volcanic Activity	Remained the Same
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	Remained the Same
Wildfire (<i>Wildfire Smoke</i>)	Remained the Same
<i>Future Vulnerability and Impact</i>	
Avalanche	No Change Anticipated



Hazard	Vulnerability and Impact
Communicable Diseases/Pandemic	No Change Anticipated
Dam and Levee Failure	No Change Anticipated
Drought	No Change Anticipated
Earthquake	No Change Anticipated
Extreme Cold/Extreme Heat (<i>Severe Weather</i>)	No Change Anticipated
Flood	No Change Anticipated
Landslide	No Change Anticipated
Severe Weather (<i>thunderstorms, hail, strong winds/damaging winds, and tornado</i>)	No Change Anticipated
Volcanic Activity	No Change Anticipated
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	No Change Anticipated
Wildfire (<i>Wildfire Smoke</i>)	No Change Anticipated

The District does not anticipate future major assets to be exposed or vulnerable to any of the hazards identified in this Plan. However, any new assets (e.g., new construction in hazard prone areas) will be constructed to adhere to the latest building codes and standards, and mitigation to protect them from identified and anticipated hazards, especially those that are expected to increase due to climate change.

10. HAZARD RISK RANKING

Table 14 presents the local hazard ranking for Snoqualmie Pass Utility District of all hazards of concern listed in **Volume 1** of this Plan. This ranking summarizes how hazards vary for this jurisdiction. As described in detail in **Volume 1**, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy.

Table 14. Hazard Risk Ranking

Hazard Event	Probability Factor	Sum of Weighted Extent Factors	Sum of Weighted Vulnerability Factors	Sum of Weighted Impact Factors	Consequence Score	Total Risk Score (Probability x Consequence)
Winter Weather (<i>Blizzard/Heavy Snow, Ice Storm</i>)	3	15	16	24	55	77
Wildfire	3	15	11	27	53	74
Earthquake	2	12	16	33	61	59
Flood	2	18	11	31	60	59
Strong Wind / Damaging Winds (<i>Severe Weather</i>)	3	9	16	15	40	59
Wildfire Smoke (<i>Wildfire</i>)	3	9	10	20	39	57
Avalanche	3	9	11	13	33	50



Hazard Event	Probability Factor	Sum of Weighted Extent Factors	Sum of Weighted Vulnerability Factors	Sum of Weighted Impact Factors	Consequence Score	Total Risk Score (Probability x Consequence)
Thunderstorms (Severe Weather)	2	6	16	26	48	48
Communicable Diseases / Pandemic	2	18	10	20	48	48
Cold Wave / Extreme Cold (Severe Weather)	2	12	12	20	44	45
Heat Wave / Extreme Heat (Severe Weather)	2	12	12	17	41	42
Drought	2	9	6	16	31	33
Landslide	2	9	6	13	28	31
Hail (Severe Weather)	1	6	16	16	38	22
Tornado (Severe Weather)	1	6	16	16	38	22
Dam and Levee Failure	1	6	11	16	33	20
Volcanic Activity	1	12	6	15	33	20
<p>Consequence: Sum of <u>all</u> weighted factors. Extent: Sum of the weighted <u>Extent</u> factors. Vulnerability: Sum of the weighted <u>Vulnerability</u> factors.</p> <p>Impact: Sum of the weighted <u>Impact</u> factors. Total Risk Score* = Probability x Consequence * Normalized to 100</p>						
Total Risk Score Legend						
Classification	Probability Factor	Extent	Vulnerability	Impact	Consequence Score	Total Risk Score
Low (L)	1	0 – 6	0 – 6	0 – 12	0 – 24	0 – 24
Medium (M)	2	7 – 12	7 – 12	13 – 26	25 – 50	25 – 52
High (H)	3	13 – 18	13 – 18	27 – 39	51 – 75	53 and above
<p>The legend—specifically the assignment of low, medium, and high—provides an additional means to qualitatively assess the probability factor, sum of weighted factors, and the total risk scores for each hazard. The Consequence Score represents the sum of the Extent, Vulnerability, and Impact Factors. The Total Risk Score is a measure of Probability and Consequence.</p>						



11. MITIGATION ACTIONS

This section includes the mitigation actions that were developed to address identified risks and vulnerabilities to hazards identified in this Plan. This Plan serves only to recommend mitigation measures based on the potential for risk reduction and available funding. Implementation of mitigation actions is dependent on risk reduction priorities, feasibility, and available funding. It is also dependent on the cooperation and support of the jurisdiction and/or department responsible for each action item.

Snoqualmie Pass Utility District agreed upon **15** mitigation actions that apply to the jurisdiction's properties where they have jurisdictional responsibility and authority. A summary of the District's mitigation actions status is listed in **Table 15**.

Table 15. Snoqualmie Pass Utility District Mitigation Actions Summary

Status		Mitigation Action Total	
Ongoing		4	
In Progress/In Work		3	
Not Started		0	
Delayed/Deferred		0	
New		8	
TOTAL		15	
Completed		0	
Deleted/No Longer Needed		0	
Mitigation Actions per Hazard			
Avalanche	7	Landslide	8
Dam and Levee Failure	5	Severe Weather	6
Drought	5	Volcanic Activity	5
Earthquake	13	Wildfire	8
Flood	12	Winter Weather	6

These shared actions, some of which address all hazards, help to meet the following requirements:

- Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure?
- Does the Plan include one (1) or more action(s) per jurisdiction for each hazard identified within the risk assessment?

A detailed explanation of the Mitigation Strategy can be found in Chapter 5 of **Volume 1**.



Mitigation Action	Actively support and participate in the implementation, monitoring, maintenance, and updating of the Kittitas County Hazard Mitigation Plan, as outlined and defined in Volume 1.				
Action Number	SPUD-1	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	39/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcanic Activity, Wildfire, Winter Weather	
Project Status		Ongoing	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits <i>(Loss Avoided)</i>		Medium			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization <i>(If applicable)</i>	n/a	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Ongoing		Estimated Cost	Low	
Potential Funding Source	Local Budgeted Funds		If Other, you must identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Continue to support countywide initiatives related to hazard mitigation efforts identified in Volume 1 of the Kittitas County Hazard Mitigation Plan.				
Action Number	SPUD-2	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	39/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcanic Activity, Wildfire, Winter Weather	
Project Status		Ongoing	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits <i>(Loss Avoided)</i>		Medium			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization <i>(If applicable)</i>	n/a	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Ongoing		Estimated Cost	Low	
Potential Funding Source	Local Budgeted Funds		If Other, you must identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Develop and implement a Continuity of Operations Plan (COOP) to ensure critical District functions remain operational after an incident or disaster.				
Action Number	SPUD-3	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	32/40
Goal(s) Addressed		1, 4	Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcanic Activity, Wildfire, Winter Weather	
Project Status		In Progress/In Work	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	Low	
Potential Funding Source	Local Budgeted Funds		If Other, you must identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Utilize and enhance existing public outreach programs by partnering with local governments and the County to raise public awareness about natural hazards, the risk they pose, and ways to mitigate those risks.				
Action Number	SPUD-4	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	32/40
Goal(s) Addressed		1, 2, 5	Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcanic Activity, Wildfire, Winter Weather	
Project Status		Ongoing	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits <i>(Loss Avoided)</i>		Low			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization <i>(If applicable)</i>	n/a	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Ongoing		Estimated Cost	Low	
Potential Funding Source	Local Budgeted Funds		If Other, you must identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Consider hazard mitigation and resiliency during the implementation of projects listed in the Snoqualmie Pass Utility District Water Comprehensive Plan and the Snoqualmie Pass Utility District Sewer Comprehensive Plan.				
Action Number	SPUD-5	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	32/40
Goal(s) Addressed		1, 2	Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcanic Activity, Wildfire, Winter Weather	
Project Status		Ongoing	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits <i>(Loss Avoided)</i>		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization <i>(If applicable)</i>	n/a	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Long Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, Other		If Other, you must identify a funding source.	United States Department of Agriculture, Washington State Department of Health, Washington State Department of Ecology, and Public Works Board funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Increase fire flow storage across the Snoqualmie Pass Utility District. <i>Two (2) expansions are outlined in the Snoqualmie Pass Utility District Water Comprehensive Plan.</i>				
Action Number	SPUD-6	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	39/40
Goal(s) Addressed		1, 5	Hazard(s) Mitigated	Earthquake, Flood, Wildfire	
Project Status		In Progress/In Work	<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits <i>(Loss Avoided)</i>		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization <i>(If applicable)</i>	n/a	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Long Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, Other		<i>If Other, you must identify a funding source.</i>	Washington State Department of Health and Public Works Board funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Implement wastewater treatment facility improvements, with the goal of improving the resiliency of the wastewater treatment system to the impacts of natural hazards. Improvement can include, but are not limited to, seismic retrofit, elevation of critical infrastructure, and undergrounding utilities.				
Action Number	SPUD-7	Year Initiated / Anticipated Year of Initiation	2019	Prioritization Score	39/40
Goal(s) Addressed		1, 5	Hazard(s) Mitigated	Earthquake, Flood, Landslide, Severe Weather, Wildfire, Winter Weather	
Project Status		In Progress/In Work	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Long Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, Other		If Other, you must identify a funding source.	United States Department of Agriculture and Washington State Department of Ecology loans, and Congressionally Directed Spending (CDS) from United States Senator Patty Murray.	
			Please provide further detail on Potential Funding Source.	Capital Improvement Funds	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Improve the well casing for Well 2 and 3 to prevent the well's drill hole from collapsing during an earthquake. The current wells do not have a full length casing and are subject to collapse in the event of an earthquake. If the wells were to collapse, the community would not have access to potable water. New wells need to be drilled and have full length casings installed to withstand earthquakes.				
Action Number	SPUD-8	Year Initiated / Anticipated Year of Initiation	2025	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Earthquake	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	Medium	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, Other		If Other, you must identify a funding source.	Washington Public Works Board and Washington State Department of Health funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Replace Wells 4 and 5 with new wells that have full length casings to protect from an earthquake. The current wells do not have a full length casing and are subject to collapse in the event of an earthquake. If the wells were to collapse, the community would not have access to potable water.				
Action Number	SPUD-9	Year Initiated / Anticipated Year of Initiation	2026	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Earthquake, Wildfire	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, Other		If Other, you must identify a funding source.	Washington Public Works Board and Washington State Department of Health funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Relocate the Alpentel Wastewater Lift Station out of the Snoqualmie River flood zone. Currently, the lift station is built within 30 feet of the River, and it is vulnerable to fall into the river during a large flood.				
Action Number	SPUD-10	Year Initiated / Anticipated Year of Initiation	2035	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Earthquake, Flood	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Long Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, FMA, Other		If Other, you must identify a funding source.	Washington State Department of Ecology funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Upgrade the wastewater collection system by installing lines in the current 2.5 miles of pipe in the Alpentel community as the concrete pipe is past its extended life expectancy of 50 years. The sewer collection system is located in critical waterways of the Snoqualmie River, and it conveys sewerage to the Alpentel Lift station. Reduction of ground water infiltration would be a benefit because there is a risk of the lift station overflowing into the River during high flow events.				
Action Number	SPUD-11	Year Initiated / Anticipated Year of Initiation	2025	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Earthquake, Flood	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Ongoing		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, FMA, Other		If Other, you <u>must</u> identify a funding source.	Washington State Department of Ecology and Washington Public Works Board funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Install a barb in Coal Creek to protect the sewer system. Coal Creek waterway has relocated and washed out 50 feet of terrain and it now runs right up to a sewer manhole. As a result, during a flood, there is potential that the manhole could be washed out and sewer could spill into the Creek. A significant barb structure needs to be built upstream of the manhole to push the Creek’s flow out and away from shore to protect the manhole.				
Action Number	SPUD-12	Year Initiated / Anticipated Year of Initiation	2026	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Flood	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, FMA, Other		If Other, you must identify a funding source.	Washington Public Works Board funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Seismically retrofit Summit West Reservoir 1 and 2 (potable water reservoirs). The two (2) reservoirs were built in 1987 and do not meet current seismic design standards. The community would not have access to potable water if the reservoirs were damaged.				
Action Number	SPUD-13	Year Initiated / Anticipated Year of Initiation	2030	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Avalanche, Earthquake, Landslide	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, Other		If Other, you must identify a funding source.	Washington State Department of Health funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Install utility crossings at three (3) bridges located on Erste Strasse in Alpental Community – Crossings at the Commonwealth Creek (Ski Club owned), Snoqualmie River bridge 1 (HOA owned), and Snoqualmie River bridge 2 (Ski Area owned). The District has water and sewer lines installed on the small privately owned bridges which are old and not properly maintained. In the event that these bridges collapse, sewer would flow into the Snoqualmie River contaminating the community's potable water supply.				
Action Number	SPUD-14	Year Initiated / Anticipated Year of Initiation	2030	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Avalanche, Earthquake, Flood, Landslide	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, Other		If Other, you must identify a funding source.	Washington State Department of Ecology funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Improve the Lower Hyak Wastewater Collection System by installing a sewer liner in the two (2) miles of pipe to prevent an overflow. There are approximately two (2) miles of sewer pipe that are subject to groundwater infiltration. This infiltration can cause overflows in the collection system and/or at the lift station. This additional flow can lead to an overflow of sewerage into Coal Creek and out into Lake Keechelus.				
Action Number	SPUD-15	Year Initiated / Anticipated Year of Initiation	2025	Prioritization Score	40/40
Goal(s) Addressed		1, 2, 3, 4, 5	Hazard(s) Mitigated	Flood	
Project Status		New	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)		High			
Lead Agency / Organization	Snoqualmie Pass Utility District		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Short Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, HMGP, BRIC, FMA, Other		If Other, you must identify a funding source.	Washington State Department of Ecology and Washington Public Works Board funds	
			Please provide further detail on Potential Funding Source.	District General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			

APPENDIX A. HAZARD MAPS

Figure 1	Snoqualmie Pass Utility District Planning Area (within Kittitas County)
Figure 2	Liquefaction Susceptibility (Earthquake) <i>Helps assess potential damage from earthquakes in the District.</i>
Figure 3	Special Flood Hazard Area (SFHA) <i>Includes each Flood Zone, and the 500-year floodplain. Flood Insurance Rate Maps (FIRMs) show the flood zones, floodplain boundaries, and Base Floor Elevation (BFE) and are used for floodplain management, flood insurance ratings, and to determine flood insurance requirements. FIRMs show areas with a 1% chance of flooding each year, commonly known as the 100-year floodplains, and are illustrated as the SFHA. The 500-year floodplains show areas with a 0.2% chance of flooding each year.</i>
Figure 4	Wildland Fire Hazard Area
Figure 5	Wildland Urban Interface Map



Figure 1. Snoqualmie Pass Utility District Planning Area (within Kittitas County)

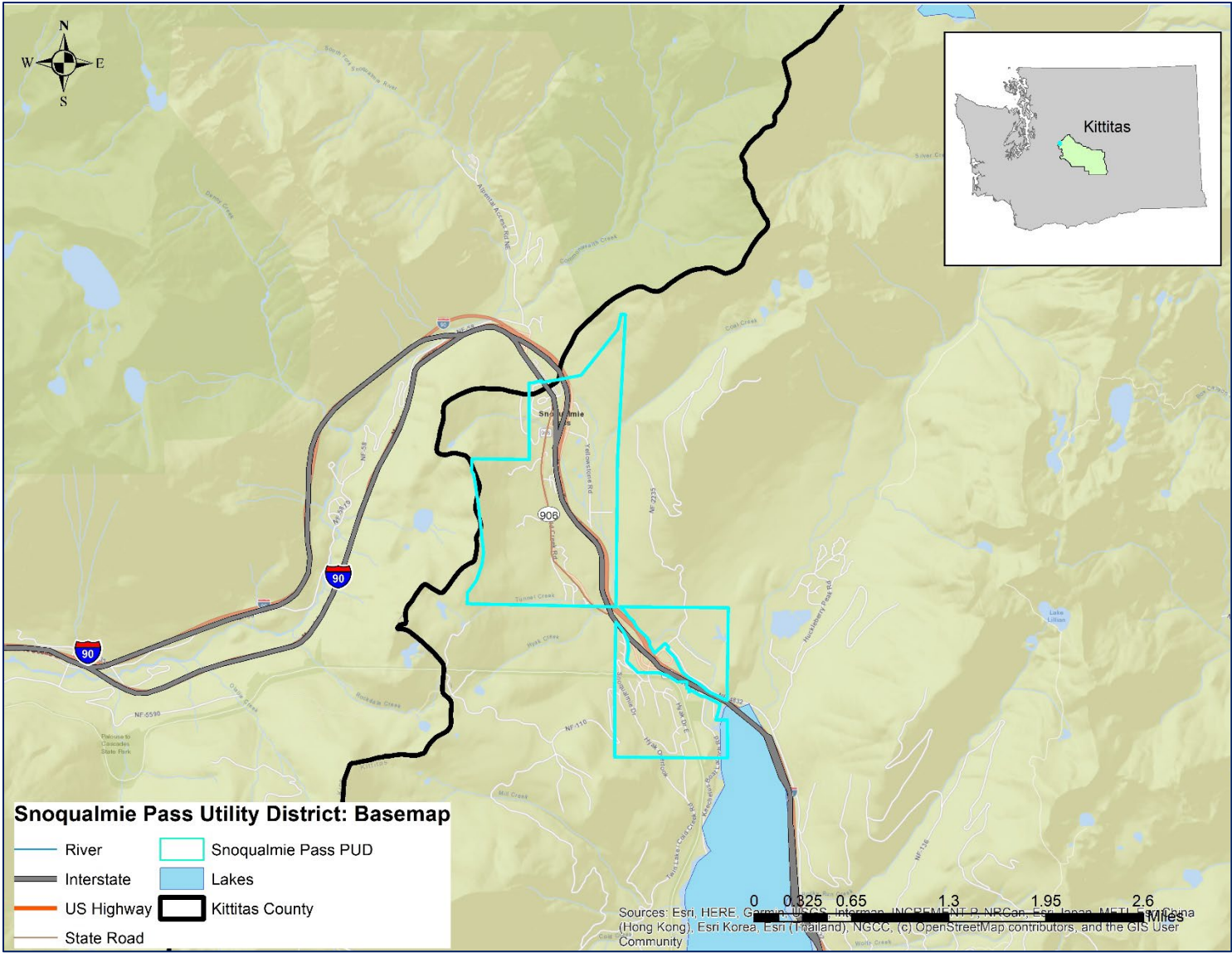




Figure 2. Liquefaction Susceptibility (Earthquake)

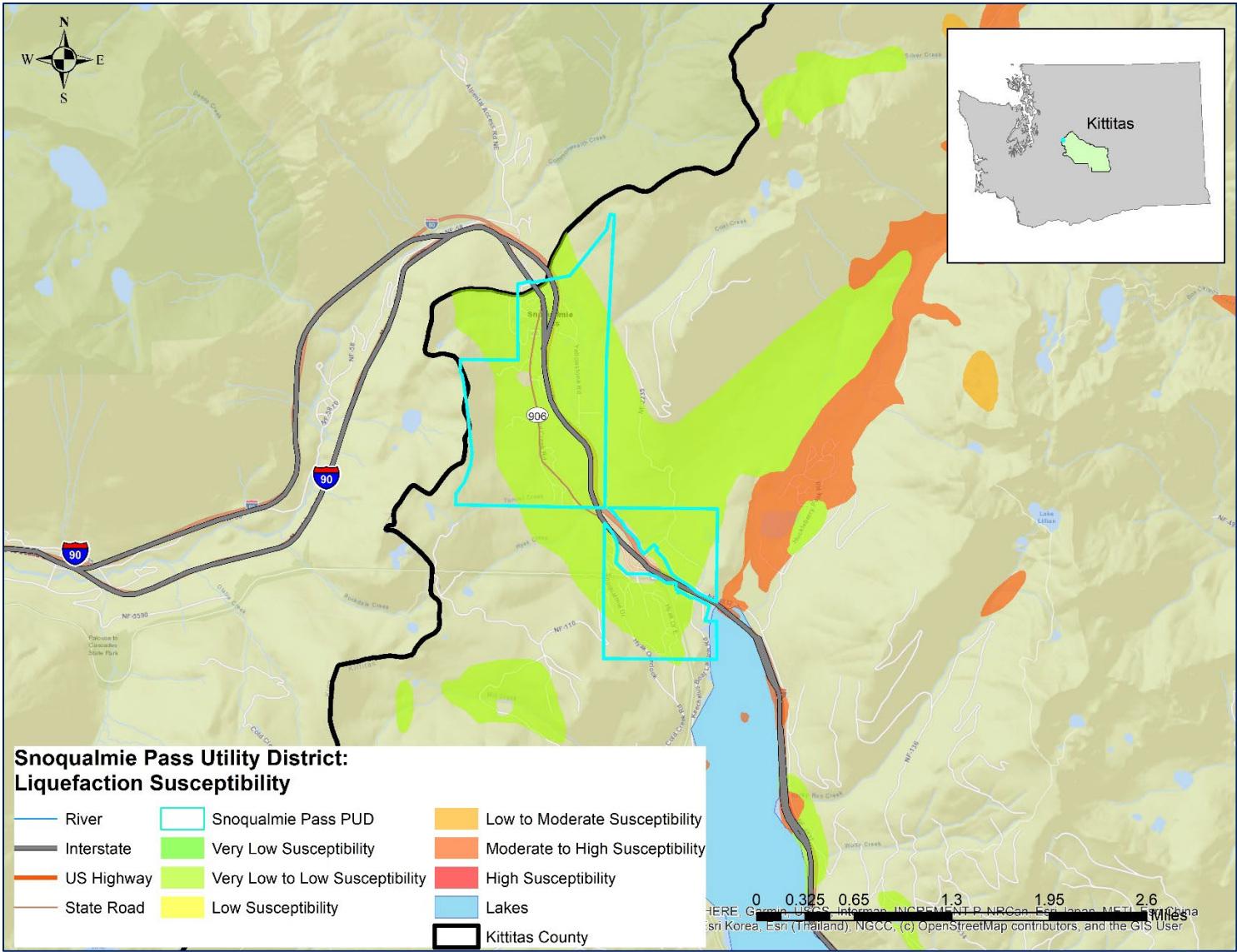


Figure 3. Special Flood Hazard Area

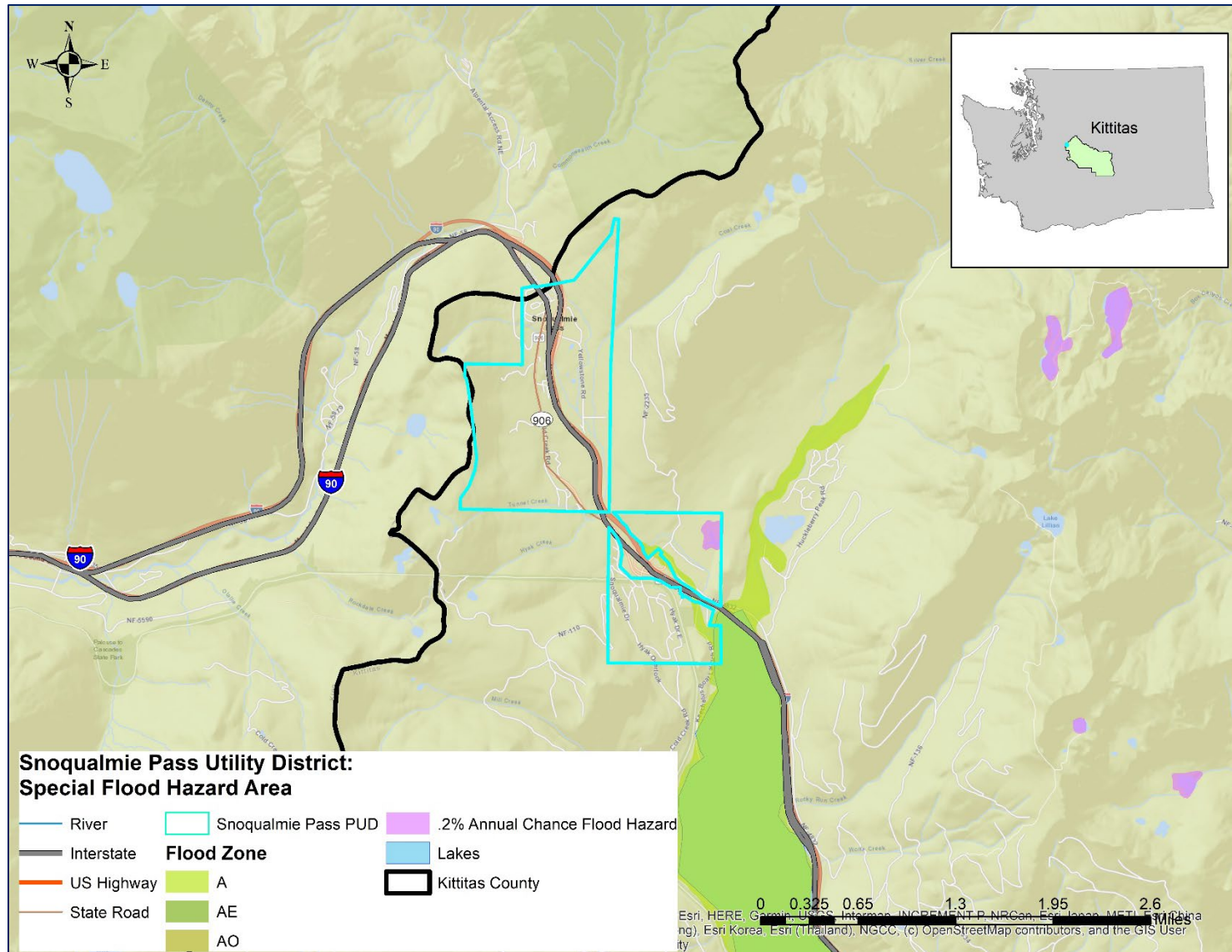


Figure 4. Wildland Fire Hazard Area

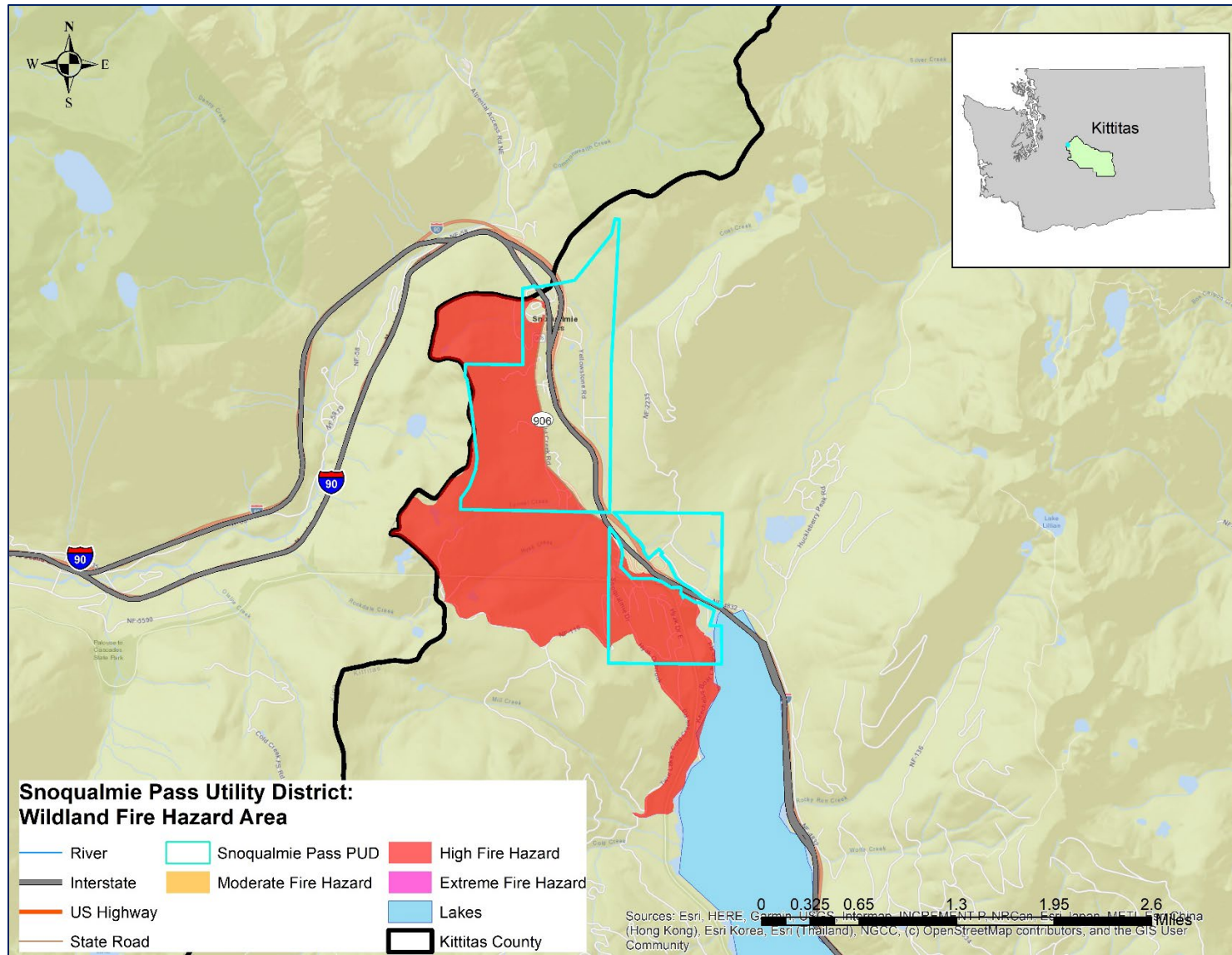
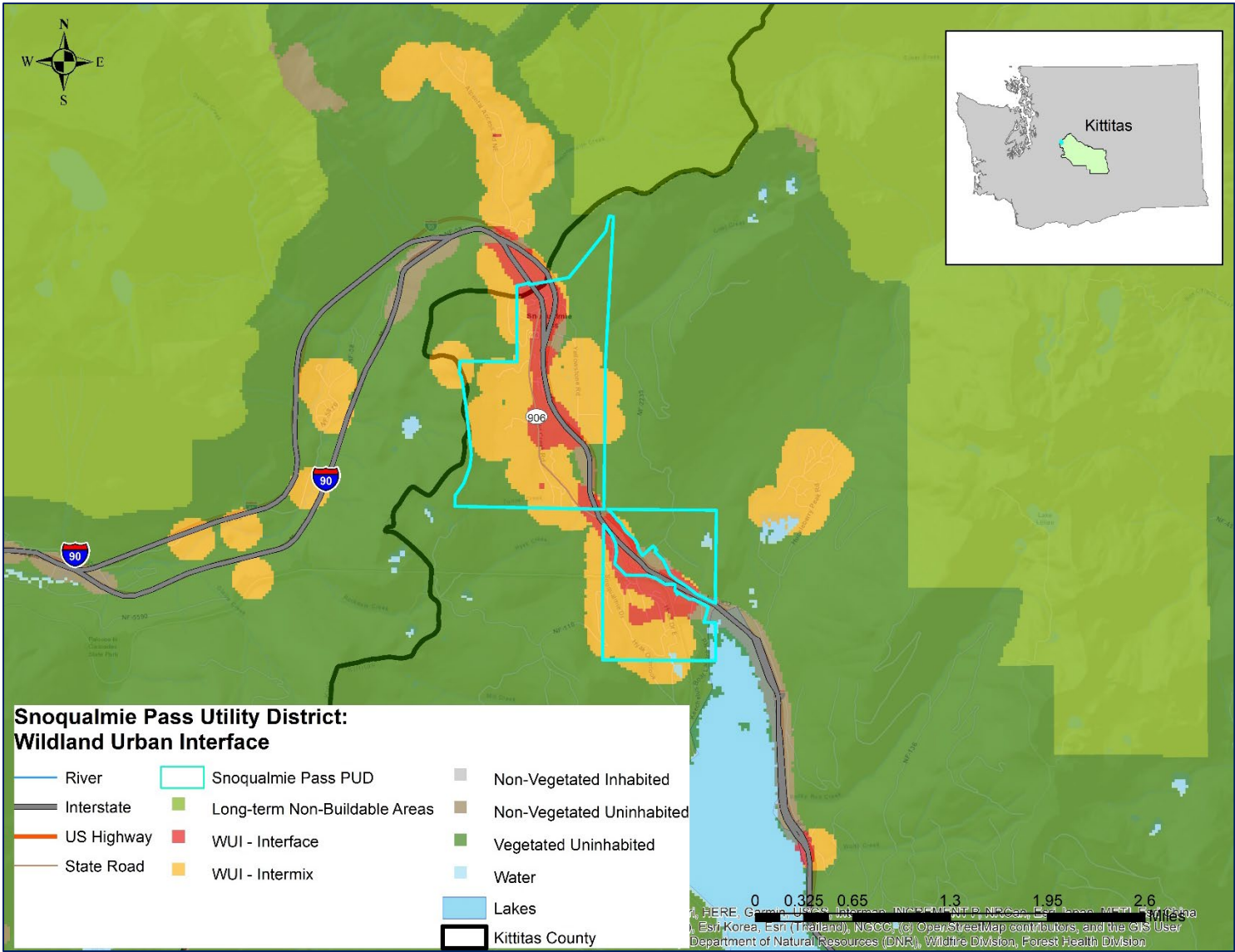




Figure 5. Wildland Urban Interface





APPENDIX B. PLAN ADOPTION

[Placeholder for adoption documentation after State and FEMA Approval]