

KITTITAS COUNTY

HAZARD MITIGATION PLAN

Snoqualmie Pass Fire and Rescue Annex



Kittitas County
Public Works Department





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1. INTRODUCTION

This Annex details the hazard mitigation elements specific to the Snoqualmie Pass Fire and Rescue, a participating jurisdiction to the 2025 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 Snoqualmie Pass Fire and Rescue. 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

The Snoqualmie Pass Fire and Rescue Local Planning Team was comprised of the members listed on **Table 1**.

Table 1. Snoqualmie Pass Fire and Rescue Local Planning Team Members

Name	Title	Department
Jay Wiseman	Fire Chief	Snoqualmie Pass Fire and Rescue
William Powers	Board Chair	Snoqualmie Pass Fire and Rescue
Morris Hanan	Fire Commissioner	Snoqualmie Pass Fire and Rescue
Charity Catalfomo	Fire Commissioner	Snoqualmie Pass Fire and Rescue
Jim Sammet	Fire Commissioner	Snoqualmie Pass Fire and Rescue
Walter Anderson	Fire Commissioner	Snoqualmie Pass Fire and Rescue

3. JURISDICTION PROFILE

Snoqualmie Pass Fire and Rescue (i.e., Kittitas County Fire District #51) is a fire protection district that provides structural fire, wildland fire, emergency medical response, and rescue operations in the greater Snoqualmie Pass community, Lake Kachees, Stampede Pass, and Cabin Creek Road. Snoqualmie Pass Fire and Rescue is a dual county fire district in both King and Kittitas counties where one third of the District is in King County and the rest is in Kittitas County. The District works closely with Eastside Fire and Rescue, King County Medic One, Upper Kittitas County Medic One, American Medical Response, King County Search and Rescue, Kittitas County Search and Rescue, Washington State Patrol, King County Sheriff Department, Kittitas County Sheriff Department, Washington State Department of Transportation, and Summit at Snoqualmie Ski Patrol to provide emergency services.

Besides the property owners and residents within Snoqualmie Pass Fire and Rescue, the District also provides service to the Interstate 90 corridor from milepost 42 to milepost 68, where up to 40,000 vehicles travel through daily. The District's primary industry is the Summit at Snoqualmie Ski Resort with four (4) separate base area facilities including food and beverage services and maintenance facilities.

3.1. Population

The Snoqualmie Pass Fire and Rescue had a population of 432 as of 2023. Between 2010 and 2022, the population increased by approximately 35.0%; and a population increase of 2.9% occurred between 2022 and 2023. **Table 2** shows the District's population distribution between 2010 and 2023.



Please note that it is difficult to know the exact population within the District because data only represents the Kittitas County portion of the District at Snoqualmie Pass including the communities of Yellowstone Trail Road, Summit Village, Conifer Estates, Gold Creek and Hyak. It does not include Alpentel (King County), Lake Kachess, Stampede Pass, and Cabin Creek Road. Additionally, population within the District can exceed 30,000 (recreational visitors and those traveling through) during peak weekends..

Table 2. Population Estimates

Jurisdiction	2010	2022	2023	Population Change (2010 – 2022)
Snoqualmie Pass Fire and Rescue	311	420	432	38.9%

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 Fire and Rescue.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%

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
	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%
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

King County Fire District #49 and Kittitas County Fire District #5 were formed in the early 1970's. In the early 1980's both districts merged into King and Kittitas Counties Fire District 5 (dba as Snoqualmie Pass Fire and Rescue). In 2018, Kittitas County Fire District #8 (Lake Kachess, Stampede Pass, and the western portion of Cabin Creek Road) merged into Snoqualmie Pass Fire and Rescue.

3.3. Governing Body Format

The governing body is a five (5) member elected Board of Commissioners that will assume the responsibility for adoption and implementation of this Plan. Snoqualmie Pass Fire and Rescue is funded through property taxes and is run by an elected Board of Fire Commissioners who appoint a Chief of the Department for day to day operations. Currently, the District is a combination career and volunteer firefighters – a full-time Fire Chief, and four (4) full-time and 25 volunteer firefighters.

4. DEVELOPMENT TRENDS

Call volume within the District continues to rise. In 2021, the District received 379 calls. In 2022 the District responded to 394 calls and 451 calls in 2023. The vast majority of responses are directly related to incidents on Interstate 90. The population and construction within the District continue to rise, along with traffic volume on Interstate 90. Additionally, wildfires in the County are occurring more frequently and the District is responding to surrounding districts more often through Mutual Aid Agreements.



4.1. Changes in Priority

In the last five (5) years, the risk of wildfire has increased significantly throughout Snoqualmie Pass. Therefore, a priority for the District has been to increase wildfire resilience throughout the community and implementing fuel reduction and forest health projects, and establishing future fire control lines. Additionally, 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 Snoqualmie Pass Fire and Rescue and participating jurisdictions' authorities, policies, programs, and resources. Goals and mitigation actions were developed using input from this assessment. Information regarding the District's 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 Fire and Rescue 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				
Washington State Fire Code	No	No	Yes	The International Fire Code (IFC), Chapter 51-54A of the Washington Administrative Code (WAC), is adopted by the Washington State Building Code Council pursuant to Chapters 19.27 and 70.92 RCW. The Code includes specific amendments to the IFC tailored to the State and it addresses local fire hazards and response capabilities.
Fire Protection Districts	No	No	Yes	Title 52 of the Revised Code of Washington (RCW) Governs the establishment and operation of the fire protection districts.
Building Code	Yes	No	Yes	Title 14 of the KCC (Buildings and Construction) Adopts the 2018 International Building Code (IBC), as adopted and amended by the State of Washington in Chapter 51-50 WAC. Adopts the 2018 IFC, as adopted and amended by the State of Washington in Chapter 51-54A WAC, including those standards of the National Fire Protection Association specifically referenced in the IFC.
Fire and Life Safety Code	Yes	No	Yes	Title 20 of the Kittitas County Code (KCC)
National Fire Protection Association Standards	No	No	No	
Mutual Aid Agreements	Yes	No	No	The District participates in Mutual Aid Agreements with other fire districts within and outside the planning area.
Special Purpose (flood management, critical areas)	Yes	No	No	Flood damage Prevention: Title 15, Chapter 15.24; 2002 Critical Areas: Title 18, CEMC, 2010
Capability Category	Local Authority	Other Authority	State Mandated	Comments
Planning Documents				
Comprehensive Plan	Yes	No	Yes	Washington State Growth Management Act, 36.70A RCW, under authority of the Planning Commission Act, 35.63 RCW. Updated annually.
Comprehensive Emergency Management Plan	Yes	No	Yes	38.52 RCW 118-30-060 WAC Last update of the CEMP was 2012.



Capability Category	Local Authority	Other Authority	State Mandated	Comments
Community Wildfire Protection Plan	Yes	No	No	Kittitas County Community Wildfire Protection Plan was updated in 2018. An update is planned for 2023/2024 with Community Wildfire Defense Grant (CWDG) Program grant through the Kittitas Fire Adapted Communities Coalition.
Capital Improvement Plan	Yes	No	No	The 2011 Capital Facilities Plan, is adopted as part of the 2016 Comprehensive Plan.
Emergency Response Plans	Yes	No	Yes	
Community Risk Reduction Programs	Yes	No	Yes	
Post-Disaster Recovery Plan	Yes	No	No	

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
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	Fire Chief, Snoqualmie Pass Fire and Rescue
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	Fire Chief, Snoqualmie Pass Fire and Rescue
Emergency Manager	Yes	Kittitas County Sheriff's Office (Emergency Management)
Grant writers	Yes	Fire Chief and Deputy Fire Chief, Snoqualmie Pass Fire and Rescue

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)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
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	Yes
Development Impact Fees for Homebuyers or Developers	No

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	Fire Chief, Snoqualmie Pass Fire and Rescue
Personnel skilled or trained in website development	Yes	IT Support Staff, Snoqualmie Pass Fire and Rescue
Hazard mitigation information available on your website	No	The District's website is currently under development and will include hazard mitigation information when completed.
Utilize social media for hazard mitigation education and outreach	Yes	Facebook: facebook.com/p/Snoqualmie-Pass-Fire-Rescue-100064533738723/ Fire Chief actively uses social media to communicate hazard mitigation and public outreach.
Citizen boards or commissions that address issues related to hazard mitigation	No	N/A
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	Emergency Management, Kittitas County Sheriff's Office

5.5. Needs to Expand/Improve Capabilities

The Snoqualmie Pass Fire and Rescue 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).



- In order to increase the District’s capability to apply for hazard mitigation grants and ability to fund the local match for hazard mitigation grants, the District needs to expand its grant writing capabilities by potentially hiring more grant writers.

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 Fire and Rescue 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
Fire Adapted Communities	Utilized the wildfire risk data included in the Hazard Mitigation Plan to identify communities highly vulnerable to wildfires and collaborated with local homeowners association (HOA) to conduct public outreach to educate and help communities become fire adapted.
Emergency Response Plan	This Hazard Mitigation Plan is integrated with the District’s Emergency Response Plan for a comprehensive approach to reduce wildfire risks and ensure coordinated response to the hazard.
Community Wildfire Protection Plan	The Community Wildfire Protection Plan (CWPP) references the Hazard Mitigation Plan and components of wildfire hazard mitigation have been implemented into the CWPP.
General Operating Budget	The District uses the hazard risk assessment in the Hazard Mitigation Plan and information outlined in this Annex to direct the District’s budget and five (5) year plans.
Capital Improvement Plan	The Capital Improvement Plan (CIP) should continue to utilize flexibility in the CIP to incorporate mitigation measures in planned projects and the project evaluation criteria which includes public health and safety, regulatory compliance, and grant funding requirements.

6.2. Potential Future Integration

As the Hazard Mitigation Plan is implemented, Snoqualmie Pass Fire and Rescue 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
Community Wildfire Protection Plan	This Hazard Mitigation Plan and County’s Community Wildfire Protection Plan (CWPP) should be aligned where mitigation actions support the goals of the CWPP. The wildfire analysis in this Hazard Mitigation Plan can inform updates and revisions to the CWPP.
Emergency Response Plan	Updates to the Emergency Response Plan will include information from this Hazard Mitigation Plan to continue a comprehensive approach to wildfire mitigation and response.
Community Risk Reduction Programs	The District will integrate the risk assessment of this Hazard Mitigation Plan with the Community Risk Reduction Programs to enhance the community’s resilience by addressing vulnerabilities and reducing risks through comprehensive strategies.
Capital Improvement Plan	The District will continue to ensure consistency between this Hazard Mitigation Plan and future updates of the CIP. 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 Fire and Rescue 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).

Table 10 outlines the *unique vulnerabilities and impacts* for the Snoqualmie Pass Fire and Rescue and only addresses the hazards that are relevant and unique to the jurisdiction. A complete risk assessment for each identified hazard of concern is in **Volume 1** of this Plan. Hazard mapping can be found in **Appendix A** of this Annex.



Table 10. Hazard Vulnerability and Impact Assessment

Hazards	Vulnerabilities and Impacts
Avalanche	Snoqualmie Pass has avalanche paths that affect Interstate 90 and could isolate the community from essential services (e.g., health care, groceries, supplies). Additionally, the Pass has communities that are near and within the avalanche paths. The Washington State Department of Transportation (WDOT) has invested in avalanche mitigation which affect Interstate 90 at the East Snow Shed and Slide Curve (located between mile posts 57 to 59). There are avalanches that commonly deposit on Interstate 90 from Denny Mountain (between mile posts 50 and 52, westbound) and Granite Mountain (between mile post 47 and 49, westbound). There are slopes of concern during heavy snow years that affect the Lake Kachess and Gold Creek communities within Kittitas County. Additionally, the community of Alpentel, which is in King County, has multiple avalanche paths.
Dam and Levee Failure	In the event the Lake Keechelus Dam fails, the Saw Mill Flats, Stampede Pass, and Cabin Creek Road communities are within the inundation area.
Drought	<p>Snoqualmie Pass communities are surrounded by the Mt. Baker-Snoqualmie National Forest on the west slope and by the Okanogan-Wenatchee National Forest on the east slope. Drought makes Snoqualmie Pass uniquely vulnerable due to heavy fire fuel loading and the dying off of mountain hemlock trees. Snoqualmie Pass was heavily logged in the 1970's and 1980's, and many of those clear cuts have very dense new growth that is between 40 and 50 years old. The combination of fuel loading and drought could support large wildfire incidents that could isolate the Snoqualmie Pass communities from essential services (e.g., health care, groceries, supplies).</p> <p>Snoqualmie Pass is also one of heaviest travelled mountain passes in the United States. The trucking industry estimates billions of dollars of freight move through the ports of Seattle and Tacoma and most of the freight travels through Interstate 90 over Snoqualmie Pass. If large wildfires, which are exacerbated by drought conditions, get established in this transportation corridor, the implications to the economy in the State and region is in the billions of dollars.</p>
Earthquake	In the event of a significant earthquake, Snoqualmie Pass is vulnerable because bridge failures and landslides can cause the area to become isolated from essential services (e.g., health care, groceries, supplies).
Flood	Most of the Snoqualmie Pass flooding issues occur when heavy snow accumulation turns into rain during atmospheric river weather events. Sometimes ice dams build in upper portions of mountain drainages and can cause flash flooding. The flooding occurs on local roads from swollen creeks. Additionally, snowbanks on the side of roads can cause the water to drain down local streets and in some areas (i.e., Yellowstone Trail Road and East Hyak Drive) homes sit below the road grade so water from the street runs into these homes.
Landslide	Snoqualmie Pass is surrounded by many mountain valleys due to its location within the Cascade Mountains. As a result, the Pass is uniquely vulnerable to landslides and rock falls. One of the biggest impacts would be if a landslide or rock fall blocks Interstate 90 which could isolate the community from essential services. Specific areas that are vulnerable include Alpentel, Gold Creek, and the Lake Kachess communities.
Severe Weather <i>(thunderstorms, hail, tornado, strong winds/damaging winds, extreme temperatures)</i>	The community is very resilient to severe weather due to its location in the mountains; however, severe weather events could isolate citizens of Snoqualmie Pass from essential services.



Hazards	Vulnerabilities and Impacts
Volcanic Activity	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to volcanic activity. However, Snoqualmie Pass can become isolated from essential services in the event of volcanic activity from Mt. Rainer (located approximately 50 south from the Pass).
Wildfire <i>(wildfire smoke)</i>	The area is surrounded by two (2) national forests managed by the United States Forest Service. These forest were heavily logged between 40 and 50 years ago, and the old clear cuts are now very dense 40 and 50 year old stands of timber that need to be thinned. These old clear cuts have a heavy fire fuel load and are starting to see some die off from drought. These conditions make the Snoqualmie Pass area uniquely vulnerable to wildfire and wildfire smoke. However, the area is vulnerable to the impacts of wildfires outside of Kittitas County (e.g., smoke).
Winter Weather <i>(ice storms, heavy snow, and blizzards)</i>	Snoqualmie Pass experiences significant winter weather due to its location and elevation in the Cascade Mountains with an annual average snowfall of 433 inches. The community is often isolated from essential services due to heavy amounts of snow, wind, and ice storms. Power failures occur often, and it affects local residents and business ability to operate and provide what little essentials residents of Snoqualmie Pass have access to. Heavy snow can isolate Snoqualmie Pass due to avalanches and often travelers in passenger vehicles and commercial trucks are unprepared for winter travel. These drivers force WDOT to close Snoqualmie Pass, isolating the community from essential services.
Communicable Diseases/Pandemic	Snoqualmie Pass is a community located in the mountains and the area does not have local health care facilities. Residents have to travel east to Ellensburg or west to the Seattle area for health care services.

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
<i>Current Vulnerability and Impact</i>	
Avalanche	Decreased
Communicable Diseases/Pandemic	Remained the Same
Dam and Levee Failure	Remained the Same
Drought	Increased
Earthquake	Remained the Same



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



Hazard	Vulnerability and Impact
Volcanic Activity	Remained the Same
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	Increased
Wildfire (<i>Wildfire Smoke</i>)	Increased
<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
Flood	Increase
Landslide	No Change is Anticipated
Severe Weather (<i>thunderstorms, hail, tornado, strong winds/damaging winds, extreme temperatures</i>)	Increase
Volcanic Activity	No Change is Anticipated
Winter Weather (<i>ice storms, heavy snow, blizzards</i>)	Increase
Wildfire (<i>Wildfire Smoke</i>)	Increase

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



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

The community is experiencing significant growth, and its only transportation corridor is Interstate 90. More homes are being built, which exposes more people, community lifelines, critical facilities, and structures 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 Fire and Rescue 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.

It is important to note that the sub hazards for severe weather (i.e., strong wind/damaging winds, thunderstorms, cold wave/extreme cold, heat wave/extreme heat, hail and tornado) and wildfire (i.e., wildfire smoke) were individually ranked in the hazard risk ranking; however, severe weather and wildfire are each considered as the main hazard throughout this Annex and **Volume 1**.

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	2	18	11	34	63	61
Earthquake	2	12	16	33	61	59



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)
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	19	39	57
Flood	2	12	11	31	54	54
Thunderstorms <i>(Severe Weather)</i>	2	6	16	26	48	48
Communicable Diseases / Pandemic	2	18	10	20	48	48
Cold Wave / Extreme Cold <i>(Severe Weather)</i>	2	12	12	20	44	45
Heat Wave / Extreme Heat <i>(Severe Weather)</i>	2	12	12	17	41	42
Drought	2	9	6	26	41	42
Landslide	2	9	11	13	33	35
Dam and Levee Failure	1	12	11	26	49	27
Hail <i>(Severe Weather)</i>	1	6	16	16	38	22
Tornado <i>(Severe Weather)</i>	1	6	16	16	38	22
Volcanic Activity	1	12	6	15	33	20
<p>Consequence: Sum of <u>all</u> weighted factors. Impact: Sum of the weighted <u>Impact</u> factors. Extent: Sum of the weighted <u>Extent</u> factors. Total Risk Score* = Probability x Consequence Vulnerability: Sum of the weighted <u>Vulnerability</u> factors. * 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 Fire and Rescue agreed upon **11** 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 Fire and Rescue Mitigation Actions Summary

Status		Mitigation Action Total	
Ongoing		3	
In Progress/In Work		0	
Not Started		3	
Delayed/Deferred		0	
New		5	
TOTAL		11	
Completed		0	
Deleted/No Longer Needed		0	
Mitigation Actions per Hazard			
Avalanche	4	Landslide	5
Dam and Levee Failure	4	Severe Weather	3
Drought	3	Volcanic Activity	3
Earthquake	6	Wildfire	7
Flood	4	Winter Weather	3

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	Continue to support countywide initiatives related to hazard mitigation efforts identified in Volume 1 of the Kittitas County Hazard Mitigation Plan.				
Action Number	KCFD51-1	Year Initiated / Anticipated Year of Initiation	2019 or before	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 (Loss Avoided)	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue	Supporting Agency / Organization (If applicable)	n/a		
Additional Participating Jurisdictions (If applicable)	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.		General District Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



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	KCFD51-2	Year Initiated / Anticipated Year of Initiation	2019 or before	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, Volcano Activity, Wildfire, Winter Weather	
Project Status	Ongoing	If Deleted/No Longer Needed, provide reason.		n/a	
Benefits (Loss Avoided)	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue	Supporting Agency / Organization (If applicable)	n/a		
Additional Participating Jurisdictions (If applicable)	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.		General District Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Participate in the “Firewise” Program by identifying project site locations and promoting Firewise techniques as a defensible space initiative throughout the District.				
Action Number	KCFD51-3	Year Initiated / Anticipated Year of Initiation	2019 or before	Prioritization Score	31/40
Goal(s) Addressed		1, 3, 4	Hazard(s) Mitigated	Wildfire	
Project Status	Ongoing		<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits (Loss Avoided)	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue	Supporting Agency / Organization (If applicable)	n/a		
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Ongoing	Estimated Cost	Low		
Potential Funding Source	Local Budgeted Funds, BRIC, HMGP, HMGP Post Fire	<i>If Other, you must identify a funding source.</i>	n/a		
		Please provide further detail on Potential Funding Source.	General Operating Budget (Staff Time)		
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Comply with all applicable building and fire codes, as well as other regulations for new construction or significant remodeling of infrastructure facilities.				
Action Number	KCFD51-4	Year Initiated / Anticipated Year of Initiation	2019 or before	Prioritization Score	31/40
Goal(s) Addressed	1, 2, 5		Hazard(s) Mitigated	Earthquake, Wildfire	
Project Status	Not Started		If Deleted/No Longer Needed, provide reason.		
Benefits (Loss Avoided)	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue		Supporting Agency / Organization (If applicable)	n/a	
Additional Participating Jurisdictions (If applicable)	n/a				
Project Duration	Long 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.		General Operating Budget (Staff Time)
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Require, through codes and/or ordinances, that development in high fire hazard areas provide adequate access to roads, onsite fire protection systems, evacuation signage, and fire breaks.				
Action Number	KCFD51-5	Year Initiated / Anticipated Year of Initiation	2019 or before	Prioritization Score	29/40
Goal(s) Addressed	1, 2, 5		Hazard(s) Mitigated	Wildfire	
Project Status	Not Started		<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits (Loss Avoided)	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue		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		<i>If Other, you must identify a funding source.</i>	n/a	
			Please provide further detail on Potential Funding Source.	General Operating Budget (Staff Time)	
Implementation Priority	Medium	Changes in Priority (If applicable)			



Mitigation Action	Enhance communication capabilities between agencies, coordination of radio types, and use of existing and new systems.				
Action Number	KCFD51-6	Year Initiated / Anticipated Year of Initiation	2019 or before	Prioritization Score	27/40
Goal(s) Addressed	1		Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcano Activity, Wildfire, Winter Weather	
Project Status	Not Started		If Deleted/No Longer Needed, provide reason.	n/a	
Benefits (Loss Avoided)	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue		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, BRIC, HMGP, HMGP Post Fire		If Other, you must identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	General Operating Budget (Staff Time)	
Implementation Priority	Medium	Changes in Priority (If applicable)			



Mitigation Action	Implement a fuel management program to reduce hazardous vegetative fuels on public lands, near essential infrastructure, or on private lands by collaborating with landowners. The program can include, but is not limited to, thinning forests, reduce fuel loading, shaded fuel breaks, and establish control lines.				
Action Number	KCFD51-7	Year Initiated / Anticipated Year of Initiation	2028	Prioritization Score	34/40
Goal(s) Addressed	1, 2, 3, 4, 5		Hazard(s) Mitigated	Wildfire	
Project Status	New		<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits <i>(Loss Avoided)</i>	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue, United States Forest Service		Supporting Agency / Organization <i>(If applicable)</i>	Washington State Department of Natural Resources	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Ongoing		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, BRIC, HMGP, HMGP Post Fire, Other		<i>If Other, you must identify a funding source.</i>	Community Wildfire Defense Grant	
			<i>Please provide further detail on Potential Funding Source.</i>	General Operating Budget (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Install avalanche snow fences on slopes that produce avalanches that affect residential communities and critical transportation corridors.				
Action Number	KCFD51-8	Year Initiated / Anticipated Year of Initiation	2028	Prioritization Score	28/40
Goal(s) Addressed	1, 2, 3, 4, 5		Hazard(s) Mitigated	Avalanche	
Project Status	New		<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits <i>(Loss Avoided)</i>	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue, United States Forest Service		Supporting Agency / Organization <i>(If applicable)</i>	Washington State Department of Natural Resources	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Ongoing		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, State Special Funds, BRIC, HMGP		<i>If Other, you must identify a funding source.</i>	Washington State Department of Transportation grants, Washington State Department of Natural Resources grants	
			<i>Please provide further detail on Potential Funding Source.</i>	General Operating Budget (Staff Time)	
Implementation Priority	Medium	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Retrofit roads and bridges to reduce potential damage from future seismic events.				
Action Number	KCFD51-9	Year Initiated / Anticipated Year of Initiation	2028	Prioritization Score	32/40
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 Fire and Rescue, Washington State Department of Transportation		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, State Special Funds, BRIC, HMGP		If Other, you must identify a funding source.	Washington State Department of Transportation Seismic Retrofit Program funds	
			Please provide further detail on Potential Funding Source.	General Operating Budget (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Stabilize slopes prone to landslides near residential communities and critical facilities.				
Action Number	KCFD51-10	Year Initiated / Anticipated Year of Initiation	2025	Prioritization Score	29/40
Goal(s) Addressed		1	Hazard(s) Mitigated	Landslide	
Project Status		New	<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits <i>(Loss Avoided)</i>	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue, Washington State Department of Transportation		Supporting Agency / Organization <i>(If applicable)</i>	United States Forest Service	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Short Term		Estimated Cost	High	
Potential Funding Source	Local Budgeted Funds, , State Special Funds, BRIC, HMGP, HMGP Post Fire, FMA		<i>If Other, you must identify a funding source.</i>	Washington State Department of Natural Resources grants, Washington State Department of Transportation	
			<i>Please provide further detail on Potential Funding Source.</i>	General Operating Budget (Staff Time)	
Implementation Priority	Medium	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Coordinate with the United States Bureau of Reclamation to ensure the Lake Keechelus and Lake Kachess dams are seismically hardened and that they are not at risk of failure when the two (2) reservoirs are full.				
Action Number	KCFD51-11	Year Initiated / Anticipated Year of Initiation	2025	Prioritization Score	29/40
Goal(s) Addressed	1, 2, 3, 4, 5		Hazard(s) Mitigated	Dam and Levee Failure, Earthquake, Flood, and Landslide	
Project Status	New		<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits <i>(Loss Avoided)</i>	High				
Lead Agency / Organization	Snoqualmie Pass Fire and Rescue, United States Bureau of Reclamation		Supporting Agency / Organization <i>(If applicable)</i>	United States Forest Service	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	Ongoing		Estimated Cost	Medium	
Potential Funding Source	Local Budgeted Funds, BRIC, HMGP, HMGP Post Fire, FMA		<i>If Other, you must identify a funding source.</i>	n/a	
			Please provide further detail on Potential Funding Source.	General Operating Budget (Staff Time)	
Implementation Priority	Medium	Changes in Priority <i>(If applicable)</i>			



APPENDIX A. HAZARD MAPS

Figure 1	Snoqualmie Pass Fire and Rescue Planning Area
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	Keechelus and Kachees Dam Inundation Area
Figure 5	Wildfire Likelihood Map <i>Wildfire likelihood is the annual probability of wildfire burning in a specific location.</i>
Figure 6	Wildfire Risk to Homes Map <i>Wildfire risk to homes measures the relative consequence of wildfire to residential structures everywhere on the landscape, whether a home actually exists there or not.</i>



Figure 1. Snoqualmie Pass Fire and Rescue Planning Area

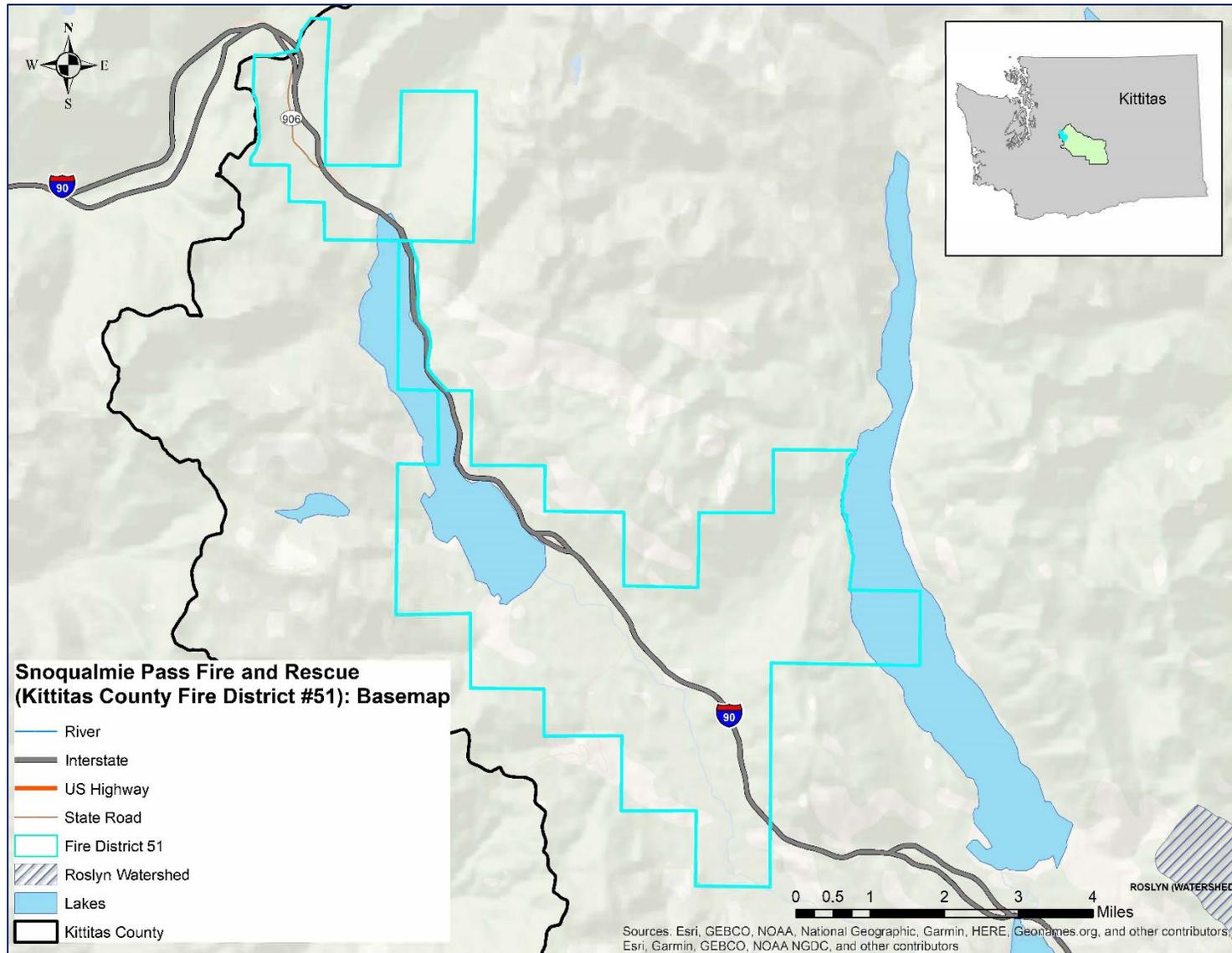




Figure 2. Liquefaction Susceptibility (Earthquake)

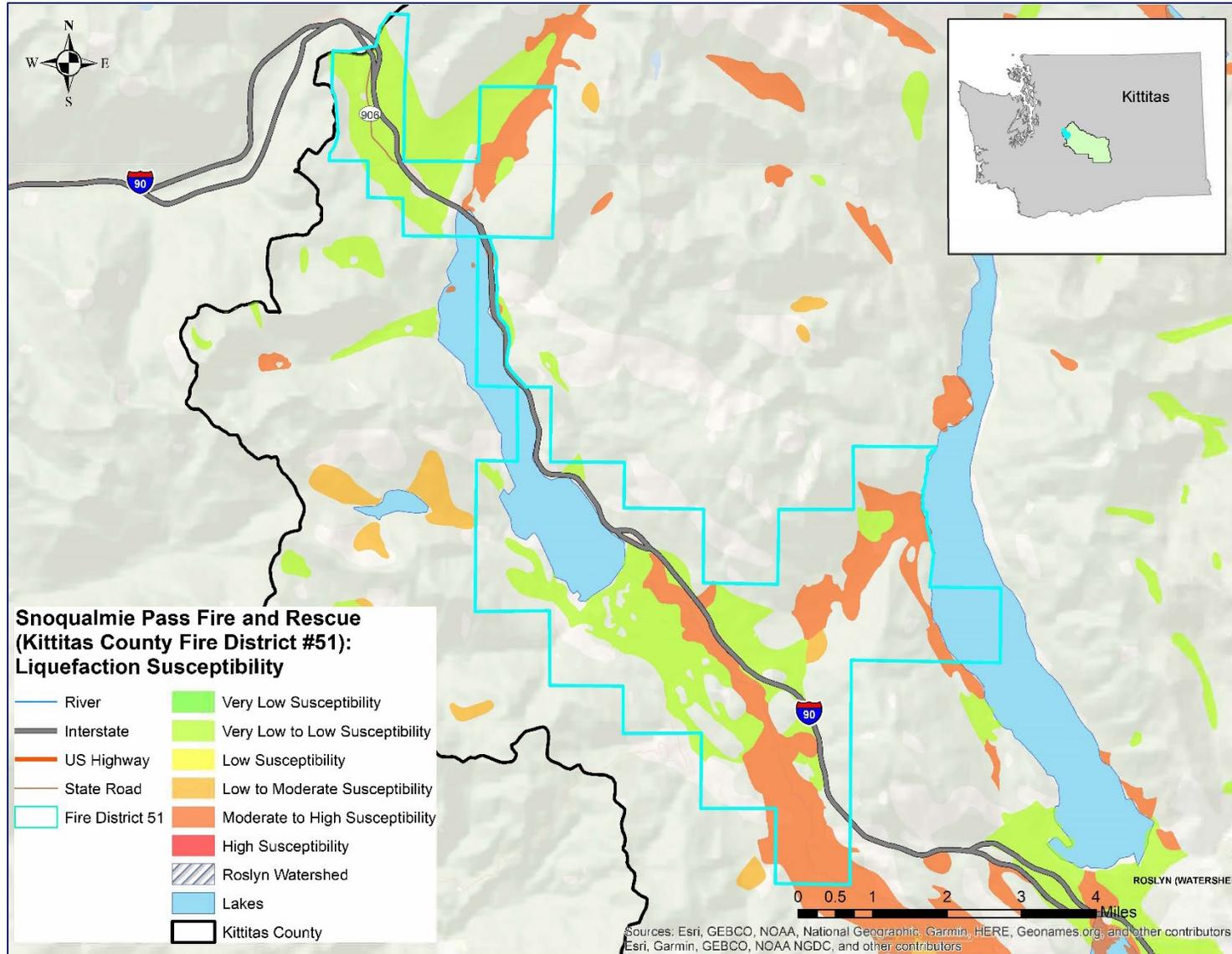




Figure 3. Special Flood Hazard Area

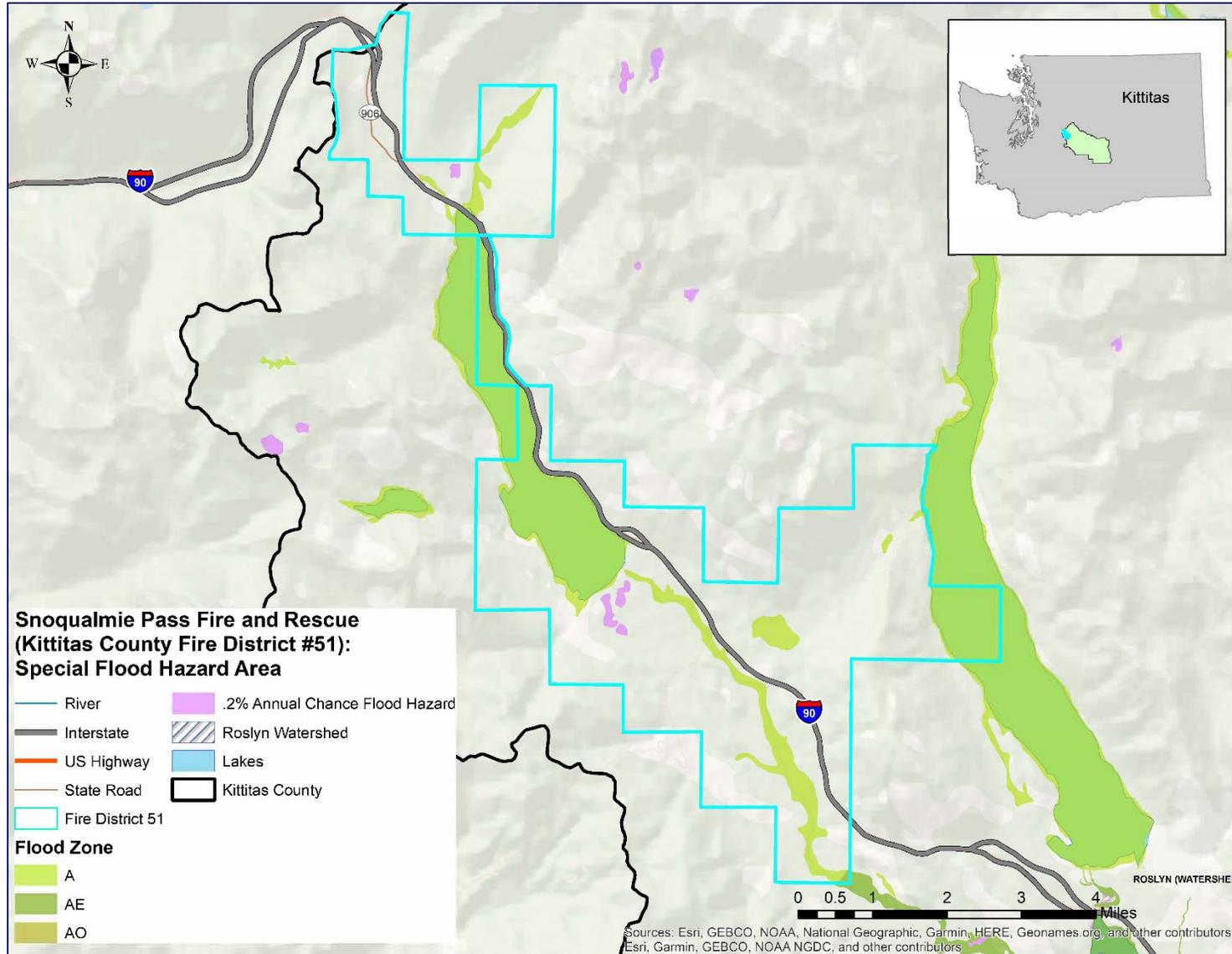




Figure 4. Keechelus and Kachees Dam Inundation Area

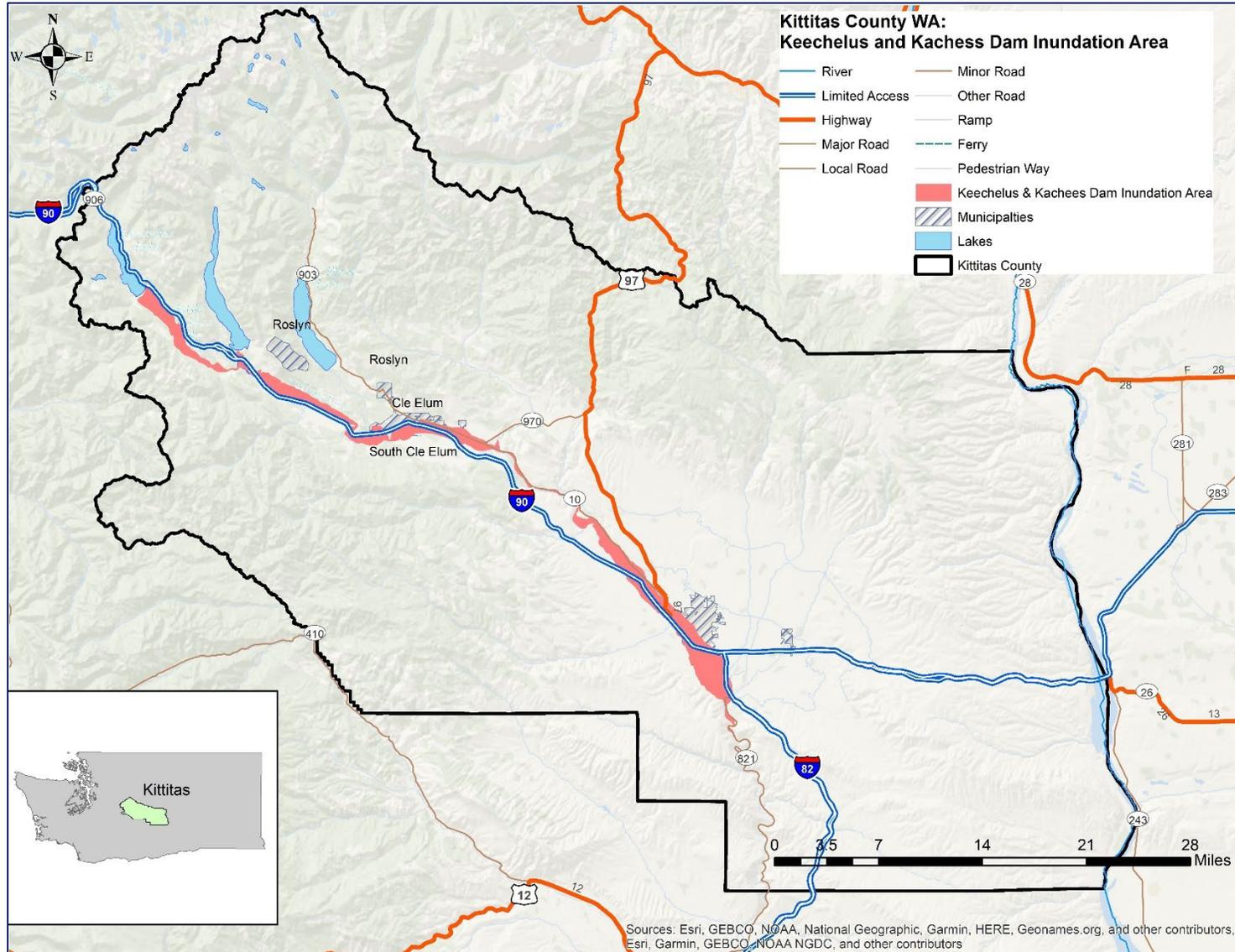




Figure 5. Wildfire Likelihood

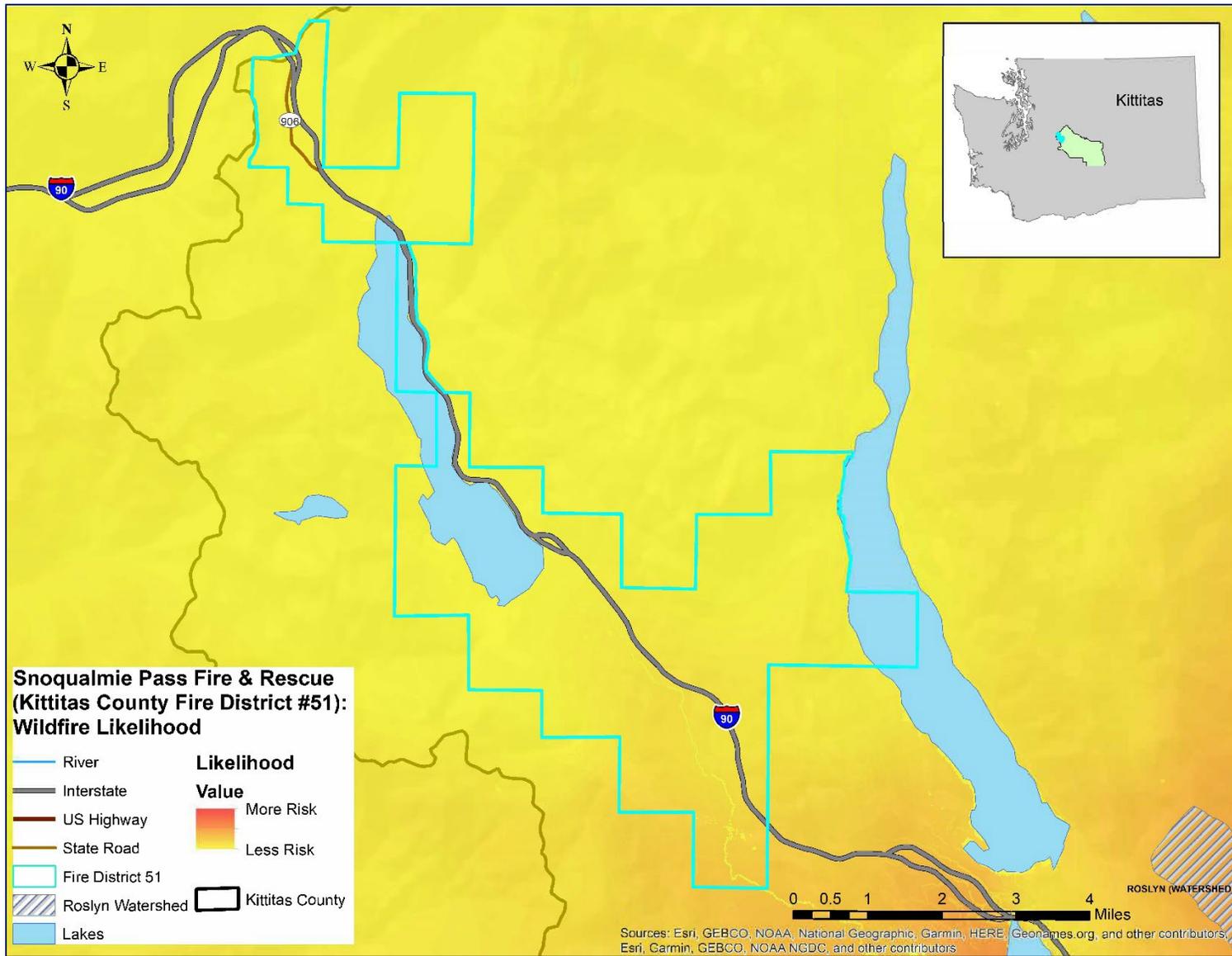
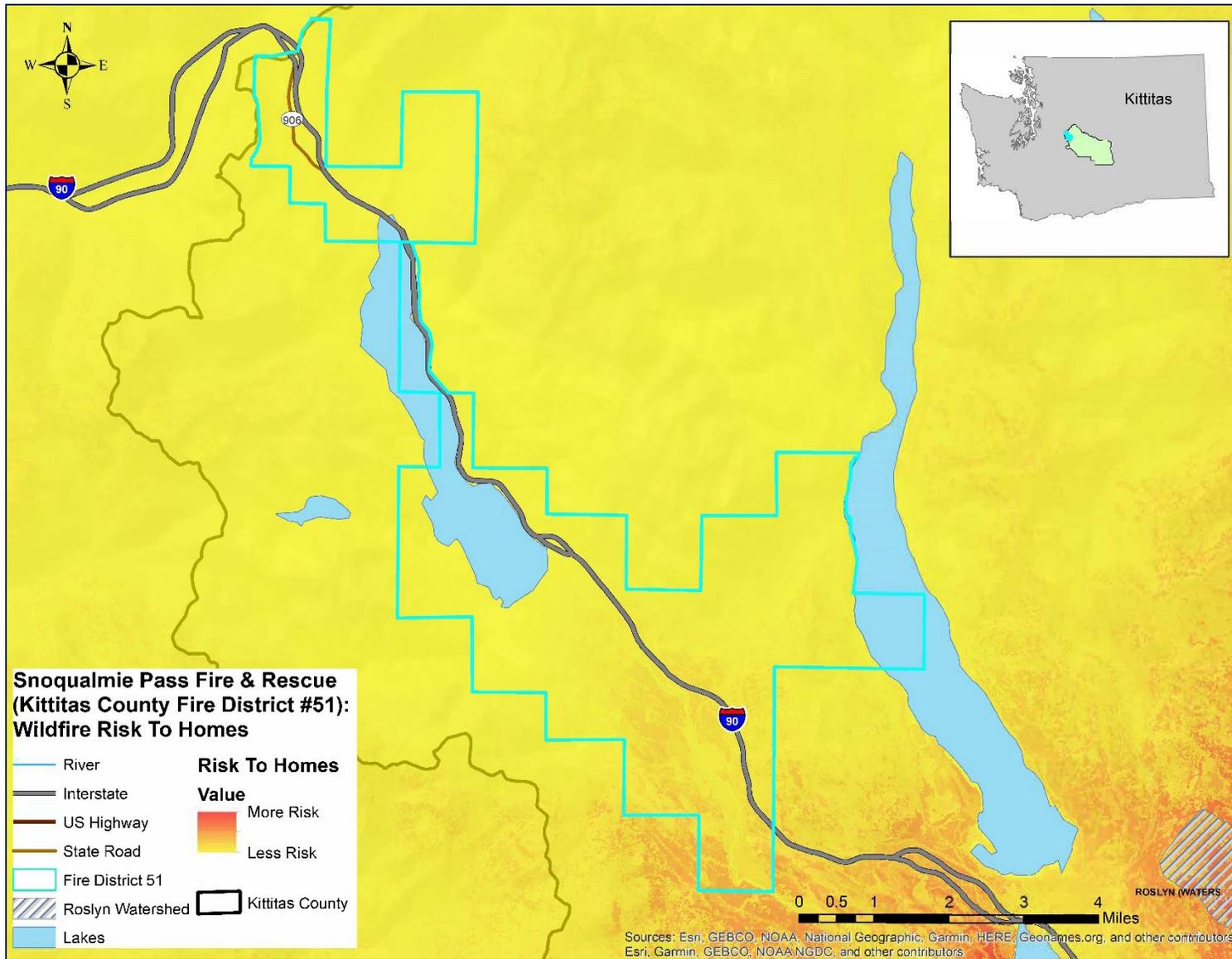




Figure 6. Wildfire Risk to Homes





APPENDIX B. PLAN ADOPTION

[Placeholder for adoption documentation after State and FEMA Approval]