

KITTITAS  
COUNTY

# HAZARD MITIGATION PLAN

Cle Elum-Roslyn School  
District Annex



Kittitas County  
Public Works Department





## TABLE OF CONTENTS

<b>1. Introduction.....</b>	<b>3</b>
<b>2. Local Planning Team.....</b>	<b>3</b>
<b>3. Jurisdiction Profile .....</b>	<b>3</b>
3.1. Population .....	3
3.1.1. Underserved Population .....	4
3.2. Brief History.....	4
3.3. Governing Body Format .....	4
<b>4. Development Trends .....</b>	<b>5</b>
4.1. Changes in Priority .....	5
<b>5. Capability Assessment.....</b>	<b>5</b>
5.1. Planning and Regulatory Capabilities .....	5
5.2. Administrative and Technical Capabilities.....	6
5.3. Financial Resources .....	7
5.4. Education and Outreach Capabilities.....	7
5.5. Needs to Expand/Improve Capabilities .....	8
<b>6. Hazard Mitigation Plan Integration .....</b>	<b>8</b>
6.1. Existing Plan Integration .....	8
6.2. Potential Future Integration .....	8
<b>7. Significant Hazard Past Events .....</b>	<b>9</b>
<b>8. National Flood Insurance Program.....</b>	<b>9</b>
<b>9. Hazard Vulnerability and Impact Assessment.....</b>	<b>9</b>
<b>10. Hazard Risk Ranking.....</b>	<b>13</b>
<b>11. Mitigation Actions .....</b>	<b>15</b>
<b>Appendix A. Hazard Maps.....</b>	<b>20</b>
<b>Appendix B. Plan Adoption .....</b>	<b>28</b>



## 1. INTRODUCTION

This Annex details the hazard mitigation elements specific to the Cle Elum-Roslyn School 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 Cle Elum-Roslyn School 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

The Cle Elum-Roslyn School District Local Planning Team was comprised of the members listed on **Table 1**.

**Table 1. Cle Elum-Roslyn School District Local Planning Team Members**

Name	Title	Department
John Belcher	Superintendent	Cle Elum-Roslyn School District District Office
Elizabeth Greenhaw	Business Manager	Cle Elum-Roslyn School District District Office
Mark Soderstrom	Facility Director	Cle Elum-Roslyn School District Maintenance Department

## 3. JURISDICTION PROFILE

The Cle Elum-Roslyn School District is located in the foothills of the eastern slopes of the Cascade Mountain Range, and it includes the cities of Cle Elum, Roslyn, the South Cle Elum, and the communities of Ronald, Liberty, and other surrounding areas of upper Kittitas County. The District encompasses approximately 600 square miles, and it is comprised of four (4) schools – Cle Elum-Roslyn Elementary, Walter Strom Middle School, Cle Elum-Roslyn High School, and the Swiftwater Learning Center.

### 3.1. Population

The Cle Elum-Roslyn School District had 986 students enrolled between kindergarten and 12<sup>th</sup> grade during the 2022-2024 school year.<sup>1</sup> Between the 2019-2020 and 2020-2021 school years, there was a 10% decrease in student enrollment, but an increase of 8.7% occurred between the 2020-2021 and 2021-2022 school year. Student enrollment has steadily increased in the last three (3) years. **Table 2** shows the District's student enrollment distribution between 2019 and 2024.

**Table 2. Student Enrollment Estimates**

Jurisdiction	2019-2020 School Year	2020-2021 School Year	2021-2022 School Year	2022-2023 School Year	2023-2024 School Year	Enrollment Change (2019 – 2024)
Cle Elum-Roslyn School District	943	849	923	970	986	4.6%

<sup>1</sup> Washington Office of Superintendent of Public Instruction. (2023). Cle Elum-Roslyn School District Enrollment Report Card. Retrieved from <https://washingtonstatereportcard.ospi.k12.wa.us/ReportCard/ViewSchoolOrDistrict/100046/>.



### 3.1.1. Underserved Population

In the Cle Elum-Roslyn School District, underserved students include, but are not limited to, those of ethnic minority status, migrants, those in foster care, homeless, students with disability, English learners, and socioeconomically disadvantage. The District offers education in an integrated setting. Special programs designed to meet the needs of underserved students include, but are not limited to, special education, remedial reading, early childhood, and English Language Learners. **Table 3** outlines the underserved population within the District's student body.<sup>2</sup>

**Table 3. Underserved Student Population (2023-2024)**

Category		Students	Percent
Ethnic Minority Status	Hispanic or Latino of any race(s)	84	8.6%
	Two or More Races	48	4.9%
	Asian	11	1.1%
	American Indian/Alaskan Native	6	0.6%
	Black/African American	3	0.3%
English Language Learners		28	2.9%
Foster Care		0	0.0%
Low-Income		399	40.7%
Mobile		22	2.2%
Homeless		8	0.8%
Migrant		5	0.5%
Section 504		66	6.7%
Students with Disabilities		158	16.1%

### 3.2. Brief History

The Cle Elum/Roslyn School District was created in the mid-1960s by consolidating the schools within the cities of Cle Elum and Roslyn, and Ronald. The District now includes multiple communities within the upper Kittitas County area.

### 3.3. Governing Body Format

The District School Board, led by a strong superintendent, is responsible for the District's finances and formulating educational and school district policies. Five (5) School Board members are elected to terms of four (4) years and serve without pay. The District operates with local, state, and federal funding, administered by a Board of Directors and Superintendent. The Board will assume responsibility for the adoption and implementation of this Plan.

<sup>2</sup> Ibid.





## 4. DEVELOPMENT TRENDS

The District's population (cities of Cle Elum and Roslyn, Town of South Cle Elum, Ronald, and Liberty) in 2017 was 4,236 and 3,909 in 2022 (the most recent population at the time of this Plan update).<sup>3</sup> Since 2017, the population within the District has decreased by approximately 7.7%. However, student enrollment between 2017 and 2022 has increased by approximately 5.3%. The District has seen a decrease in population without a decrease in student population.

### 4.1. Changes in Priority

The overall hazard mitigation priorities have not significantly changed for the Cle Elum-Roslyn School 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 Cle Elum-Roslyn School 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 Cle Elum-Roslyn School 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.

<sup>3</sup> United States Census Bureau's 2017 and 2022 DP05: ACS Demographics and Housing Estimates, 2022: ACS 5-Year Estimates Data Profiles data.



**Table 4. Planning and Regulatory Capabilities**

Capability Category	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances, and Requirements</b>				
Building Code	Yes	No	Yes	The District applies most current building codes (based on jurisdiction) in place with all new construction.
Post Disaster Recovery	Yes	No	No	
Site Plan Review	Yes	No	No	Site plans are reviewed for compliance with codes and development regulations.
Environmental Protection	Yes	No	Yes	State Board of Health School Rule, Chapter 246-366 Washington Administrative Code (WAC)
Capability Category	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
<b>Planning Documents</b>				
Comprehensive Plan	Yes	No	Yes	Cities in Washington State must update their Comprehensive Plan every eight (8) years, per GMA and RCW.36.70A.
Strategic Plan	Yes	No	No	
Capital Improvement Plan	Yes	No	No	
Standard Operating Procedures	Yes	No	No	Standard Operating Procedures (SOP) include response activities and equipment specific SOPs.
Emergency Operations Plan	Yes	No	No	Various types of plans are in place, which help reduce the impact from the hazards of concern.
Public Health Plan	No	No	No	The District works with Kittitas County Public Health and Kittitas Emergency Management to ensure accurate information is relayed to students, families, and faculty.

## 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
Engineers or professionals trained in building or infrastructure construction practices	Yes	Director, Facilities & Maintenance Department
Staff with an understanding of natural hazards	Yes	Director, Facilities & Maintenance Department



Staff/Personnel Resources	Available	Department/Agency/Position
Staff with training in benefit/cost analysis	Yes	Executive Director of Finance & Operations, Business Services Department
Floodplain Manager/Administrator	No	N/A
Personnel skilled or trained in GIS applications	No	N/A
Emergency Manager	Yes	Director, Facilities & Maintenance Department Superintendent, Superintendent Office
Grant writers	Yes	Executive Director of Finance & Operations, Business Services Department

### 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	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
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
Public Information Officer	Yes	Superintendent, Superintendent Office
Personnel skilled or trained in website development	Yes	Director, Technology Department
Hazard mitigation information available on your website	No	N/A
Utilize social media for hazard mitigation education and outreach	Yes	<b>Facebook:</b> <a href="https://www.facebook.com/CleElumRoslynSchoolDistrict">facebook.com/CleElumRoslynSchoolDistrict</a>
Citizen boards or commissions that address issues related to hazard mitigation	No	N/A



Resource	Available	Department/Agency/Position
Other programs already in place that could be used to communicate hazard-related information	Yes	Director, Facilities & Maintenance Department Superintendent, Superintendent Office
An established warning systems for hazard events	Yes	Director, Facilities & Maintenance Department Superintendent, Superintendent Office

## 5.5. Needs to Expand/Improve Capabilities

The Cle Elum-Roslyn School 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).

- Grant writing capabilities need to expand in order to improve the District's ability to apply for hazard mitigation grants.
- Enhance the District's website and social media to include educational material on hazard mitigation and to provide information on mitigation activities the District is doing (e.g., mitigation projects), and to educate residents about risk reduction.

## 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 adoption of the previous Hazard Mitigation Plan, the Cle Elum-Roslyn School District did not make progress on integrating hazard mitigation goals, objectives, and actions into other planning initiatives. The District is recommitted to integrating hazard mitigation into applicable plans and programs and has identified future opportunities for such integration.

### 6.2. Potential Future Integration

As the Hazard Mitigation Plan is implemented, Cle Elum-Roslyn School 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 8**, that do not currently integrate goals and recommendations of this Plan but provide opportunities to do so in the future.

**Table 8. Potential Future Integration**

Planning Initiative	Description
Capital Improvement Plan	The goals and actions of this Hazard Mitigation Plan will be considered in the next Capital Improvement Plan update and planning process.
District Website	Place this Hazard Mitigation Plan on the District website and provide information on hazard mitigation activities taking place throughout the District.





Planning Initiative	Description
Emergency Operations Plan	Utilize the hazard risk assessment of this Hazard Mitigation Plan to implement/enhance the District's Emergency Operations Plan.

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 Cle Elum-Roslyn School 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 9** provides information on a several key vulnerabilities for Cle Elum-Roslyn School District. Hazard mapping can be found in **Appendix A** of this Annex.

**Table 9. Hazard Vulnerability and Impact Assessment**

Hazards	Vulnerabilities and Impacts
<b>Avalanche</b>	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to avalanches.
<b>Dam and Levee Failure</b>	The District is located downstream of Cle Elum Dam and the Kachess and Keechelus dams.
<b>Drought</b>	Lack of water during a drought makes the District's play fields unsafe for play.
<b>Earthquake</b>	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to earthquakes.
<b>Flood</b>	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to flooding.
<b>Landslide</b>	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to landslides.
<b>Severe Weather</b> (thunderstorms, hail, tornado, strong winds/damaging winds, extreme temperatures)	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to severe weather.
<b>Volcanic Activity</b>	The Local Planning Team determined that the District does not have unique vulnerabilities and impacts to volcanic activity.



Hazards	Vulnerabilities and Impacts
<b>Wildfire</b> (wildfire smoke)	The District is located within the Wenatchee National Forest. Wildfire smoke caused by wildfire activity within and outside of Kittitas Valley significantly impact the air quality throughout the District which can affect outdoor activities for students.
<b>Winter Weather</b> (ice storms, heavy snow, and blizzards)	The District is at a higher elevation resulting in higher snow and ice accumulations during winter weather events.
<b>Communicable Diseases/Pandemic</b>	Due to close proximities in schools, a school has the potential to become a super spreader site.

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 10** 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 10. Climate Change Current and Future Vulnerability and Impact**

Hazard	Vulnerability and Impact
<b>Current Vulnerability and Impact</b>	
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> )	Increased
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> )	Increased
Wildfire ( <i>Wildfire Smoke</i> )	Increased
<b>Future Vulnerability and Impact</b>	
Avalanche	No Change is Anticipated
Communicable Diseases/Pandemic	No Change is Anticipated



Hazard	Vulnerability and Impact
Dam and Levee Failure	Increase
Drought	Increase
Earthquake	No Change is Anticipated
Extreme Cold/Extreme Heat ( <i>Severe Weather</i> )	Increase
Flood	No Change is Anticipated
Landslide	No Change is Anticipated
Severe Weather ( <i>thunderstorms, hail, strong winds/damaging winds, and tornado</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 11** 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 11. Changes in Population Current and Future Vulnerability and Impact**

Hazard	Vulnerability and Impact
<b><i>Current Vulnerability and Impact</i></b>	
Avalanche	Remained the Same
Communicable Diseases/Pandemic	Increased
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
Wildfire ( <i>Wildfire Smoke</i> )	Increased
<b><i>Future Vulnerability and Impact</i></b>	
Avalanche	No Change is Anticipated
Communicable Diseases/Pandemic	Increase
Dam and Levee Failure	No Change is Anticipated



Hazard	Vulnerability and Impact
Drought	Increase
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> )	Increase

**Table 12** 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 12. Changes in Development Current and Future Vulnerability and Impact**

Hazard	Vulnerability and Impact
<b>Current Vulnerability and Impact</b>	
Avalanche	Remained the Same
Communicable Diseases/Pandemic	Increased
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
Wildfire ( <i>Wildfire Smoke</i> )	Increased
<b>Future Vulnerability and Impact</b>	
Avalanche	No Change is Anticipated
Communicable Diseases/Pandemic	Increase
Dam and Levee Failure	No Change is Anticipated
Drought	Increase
Earthquake	No Change is Anticipated



Hazard	Vulnerability and Impact
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> )	Increase

The District anticipates future major assets may be exposed or vulnerable to any of the natural hazards identified in this Hazard Mitigation Plan. In particular, new and existing structures may be exposed and vulnerable to dam and levee failure incidents because the District is located within the inundation area for the Cle Elum, Kachess, and Keechelus dams; and wildfire as the District is located within the Wenatchee National Forest. 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 13** presents the local hazard ranking for Cle Elum-Roslyn School 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 13. 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
Flood	2	18	16	31	65	63
Earthquake	2	12	16	33	61	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
Wildfire	2	15	11	27	53	53
Thunderstorms ( <i>Severe Weather</i> )	2	6	16	26	48	48
Communicable Diseases / Pandemic	2	18	10	20	48	48





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)
Cold Wave / Extreme Cold (Severe Weather)	2	12	12	20	44	45
Drought	2	9	6	29	44	45
Heat Wave / Extreme Heat (Severe Weather)	2	12	12	17	41	42
Dam and Levee Failure	1	18	16	29	63	34
Hail (Severe Weather)	1	6	16	16	38	22
Tornado (Severe Weather)	1	6	16	16	38	22
Volcanic Activity	1	12	6	15	33	20
Avalanche	1	6	6	13	25	15
Landslide	1	6	6	13	25	15
<b>Consequence:</b> Sum of <u>all</u> weighted factors. <b>Extent:</b> Sum of the weighted <u>Extent</u> factors. <b>Vulnerability:</b> Sum of the weighted <u>Vulnerability</u> factors. <b>Impact:</b> Sum of the weighted <u>Impact</u> factors. <b>Total Risk Score*</b> = Probability x Consequence * Normalized to 100						
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 – 54
High (H)	3	13 – 18	13 – 18	27 – 39	51 – 75	53 and above
The <b>legend</b> —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 <b>Consequence Score</b> represents the sum of the Extent, Vulnerability, and Impact Factors. The <b>Total Risk Score</b> is a measure of Probability and Consequence.						



## 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.

Cle Elum-Roslyn School District agreed upon **three (3)** mitigation actions that apply to the jurisdiction's properties where they have jurisdictional responsibility and authority. One (1) mitigation action was completed. A summary of the District's mitigation actions status is listed in **Table 14**.

**Table 14. Cle Elum-Roslyn School District Mitigation Actions Summary**

Status		Mitigation Action Total	
Ongoing		3	
In Progress/In Work		0	
Not Started		0	
Delayed/Deferred		0	
New		0	
TOTAL		3	
Completed		1	
Deleted/No Longer Needed		0	
Mitigation Actions per Hazard			
Avalanche	2	Landslide	2
Dam and Levee Failure	2	Severe Weather	2
Drought	2	Volcanic Activity	2
Earthquake	2	Wildfire	2
Flood	2	Winter Weather	2

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	Partner with Kittitas County, City of Cle Elum, and City of Roslyn on emergency exercises to better prepare for the impacts of all hazards on the District.				
Action Number	CESD-1	Year Initiated / Anticipated Year of Initiation	2013	Prioritization Score	34/40
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 (Loss Avoided)	High				
Lead Agency / Organization	Cle Elum-Roslyn School District		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 <u>must</u> identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority (If applicable)			



Mitigation Action	Participate in the Firewise Program by deploying Firewise techniques throughout school properties susceptible to wildfire.				
Action Number	CESD-2	Year Initiated / Anticipated Year of Initiation	n/a	Prioritization Score	n/a
Goal(s) Addressed		1, 5	Hazard(s) Mitigated	Wildfire	
Project Status		Completed	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits <i>(Loss Avoided)</i>		n/a			
Lead Agency / Organization	Cle Elum-Roslyn School District		Supporting Agency / Organization <i>(If applicable)</i>	n/a	
Additional Participating Jurisdictions <i>(If applicable)</i>	n/a				
Project Duration	n/a		Estimated Cost	n/a	
Potential Funding Source	n/a		If Other, you <b>must</b> identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	n/a	
Implementation Priority	n/a	Changes in Priority <i>(If applicable)</i>			



Mitigation Action	Seek Hazard Mitigation Assistance Grant support from reliable sources, such as Washington Emergency Management Division, the Federal Emergency Management Agency, or a contractor.				
Action Number	CESD-3	Year Initiated / Anticipated Year of Initiation	2013	Prioritization Score	n/a
Goal(s) Addressed		1, 3, 4, 5	Hazard(s) Mitigated	Avalanche, Dam and Levee Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Volcanic Activity, Wildfire	
Project Status		Ongoing	If Deleted/No Longer Needed, provide reason.	n/a	
Benefits <i>(Loss Avoided)</i>		Medium			
Lead Agency / Organization	Cle Elum-Roslyn School 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	Medium	
Potential Funding Source	Local Budgeted Funds		If Other, you <u>must</u> identify a funding source.	n/a	
			Please provide further detail on Potential Funding Source.	General Fund (Staff Time)	
Implementation Priority	n/a	Changes in Priority <i>(If applicable)</i>			





Mitigation Action	Support, through active participation, the Countywide initiatives identified in Volume 1 (Countywide Planning Elements) of the Kittitas County Hazard Mitigation Plan.				
Action Number	CESD-4	Year Initiated / Anticipated Year of Initiation	2013	Prioritization Score	33/40
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	<i>If Deleted/No Longer Needed, provide reason.</i>	n/a	
Benefits <i>(Loss Avoided)</i>		Medium			
Lead Agency / Organization	Cle Elum-Roslyn School 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		<i>If Other, you <b>must</b> identify a funding source.</i>	n/a	
			Please provide further detail on Potential Funding Source.	General Fund (Staff Time)	
Implementation Priority	High	Changes in Priority <i>(If applicable)</i>			



## APPENDIX A. HAZARD MAPS

<b>Figure 1</b>	Cle Elum-Roslyn School District Planning Area
<b>Figure 2</b>	Liquefaction Susceptibility (Earthquake) <i>Helps assess potential damage from earthquakes in the District.</i>
<b>Figure 3</b>	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>
<b>Figure 4</b>	Cle Elum Dam Inundation Area Map
<b>Figure 5</b>	Keechelus and Kachees Dam Inundation Area Map
<b>Figure 6</b>	Wildland Fire Hazard Area
<b>Figure 7</b>	Wildland Urban Interface Map



Figure 1. Cle Elum-Roslyn School District Planning Area

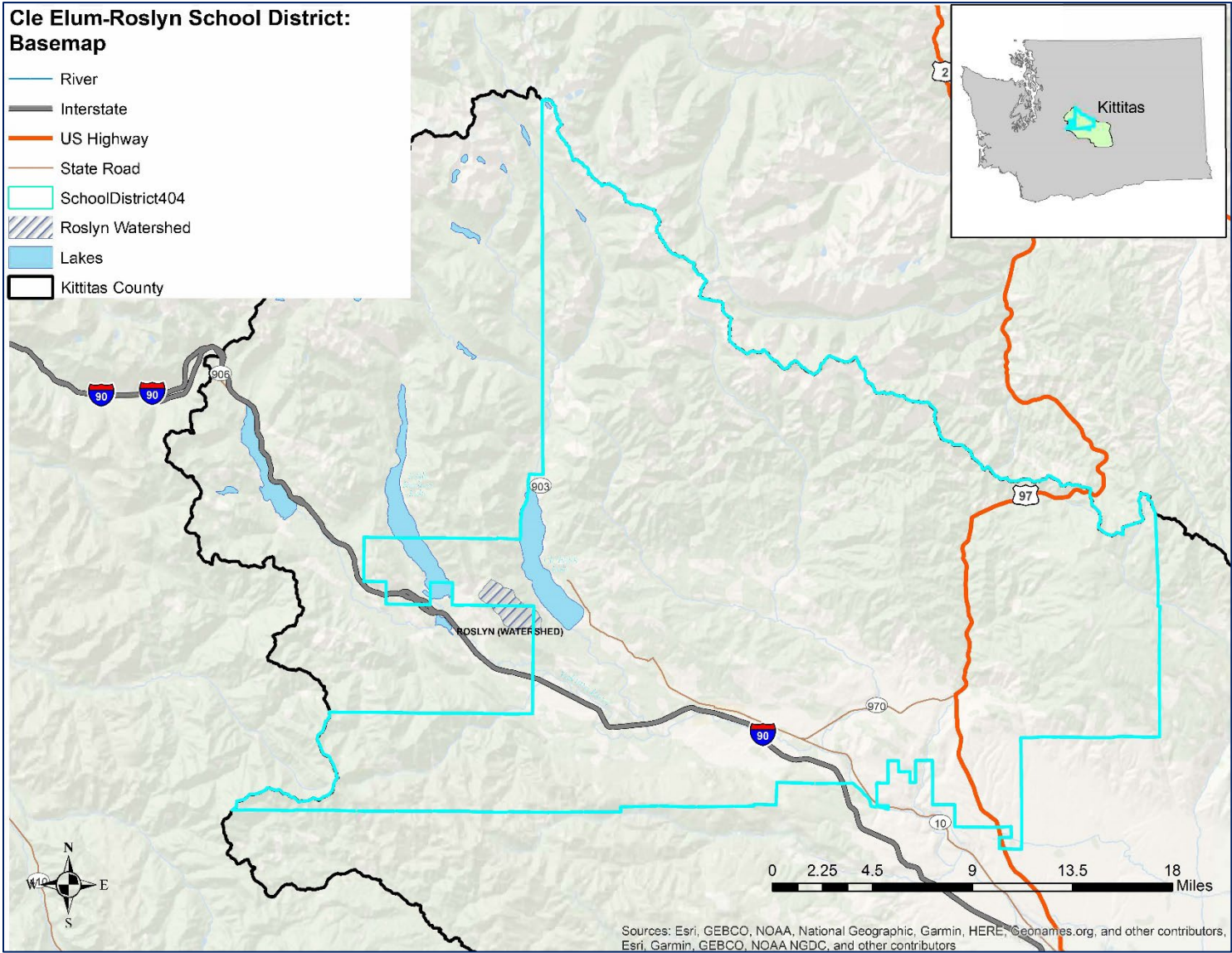






Figure 2. Liquefaction Susceptibility (Earthquake)

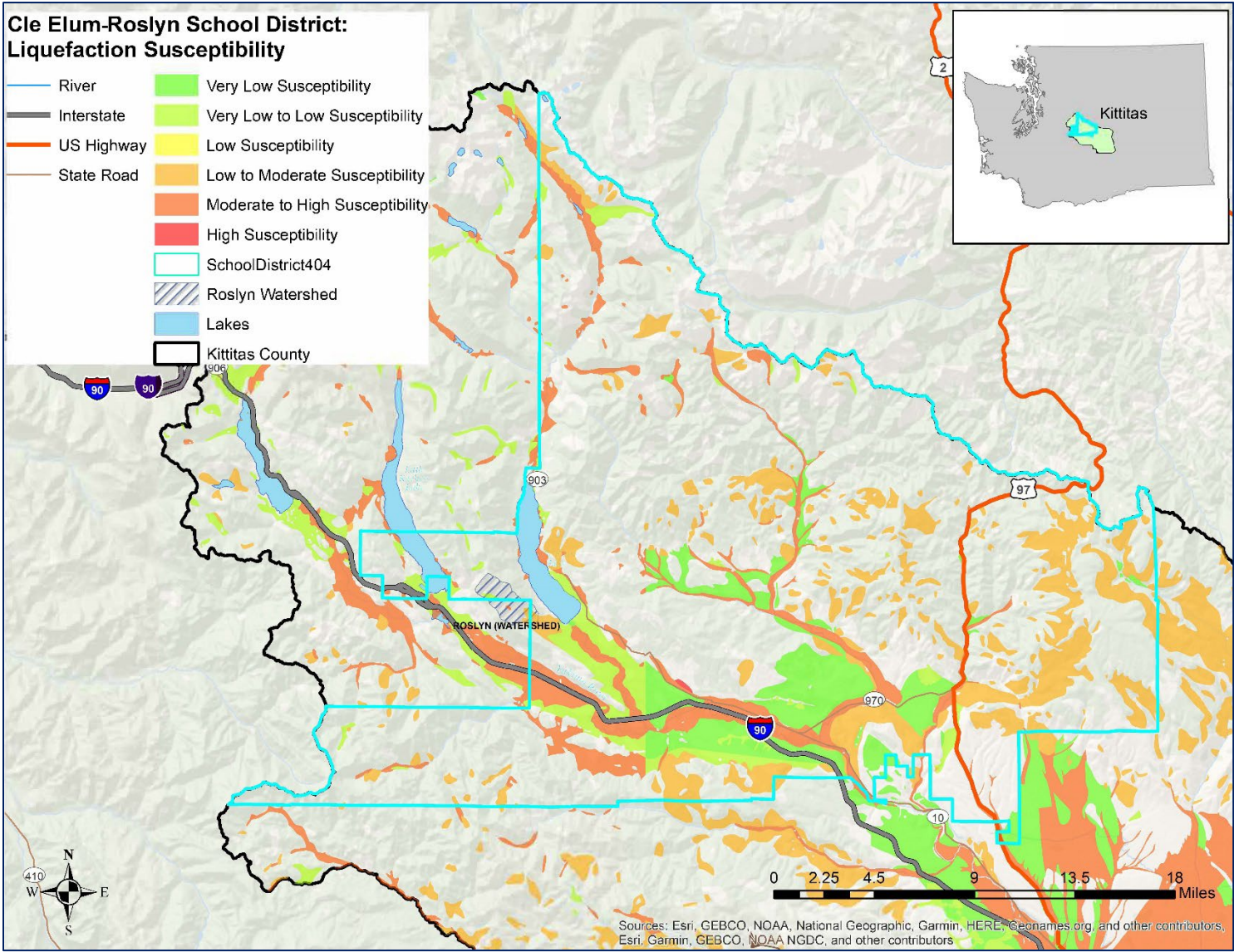




Figure 3. Special Flood Hazard Area

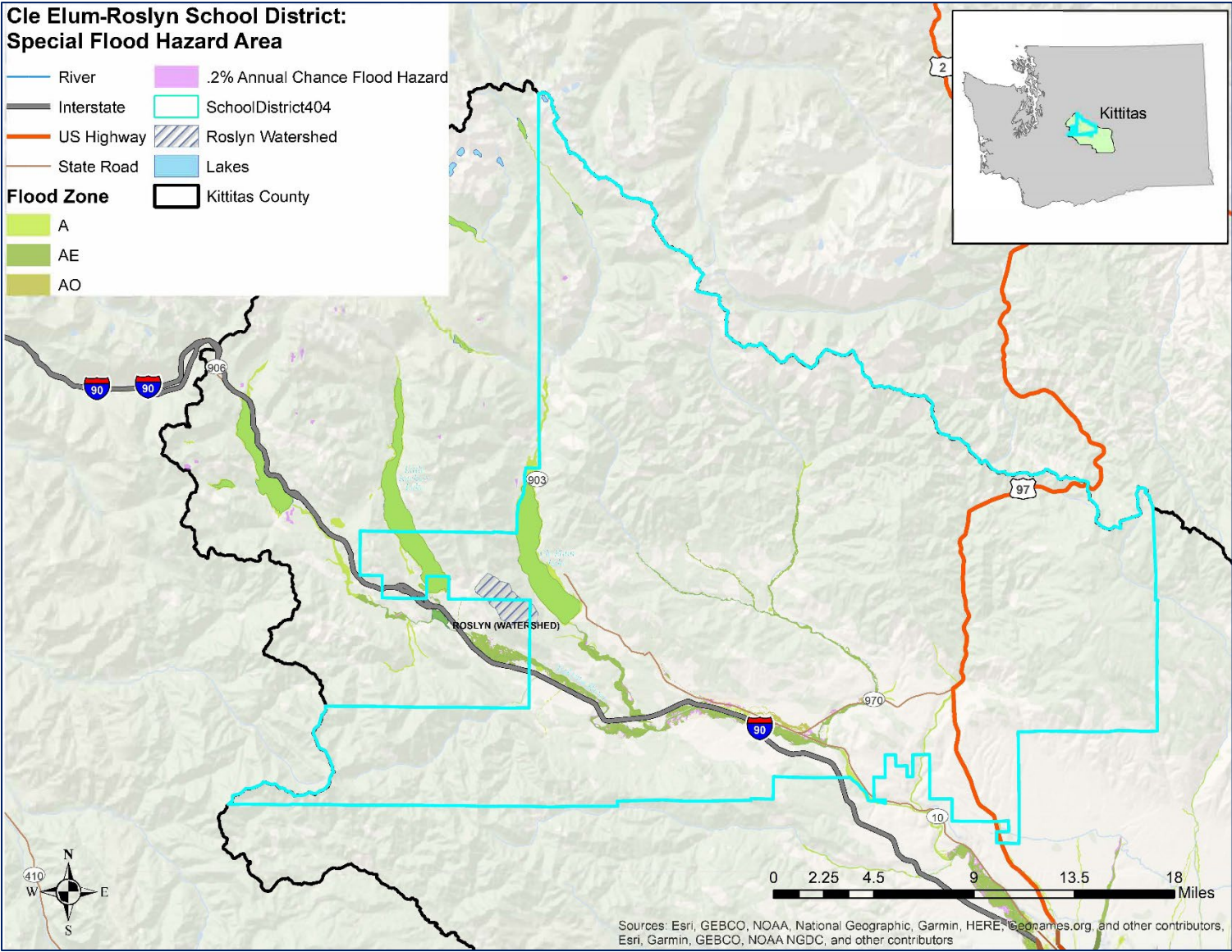
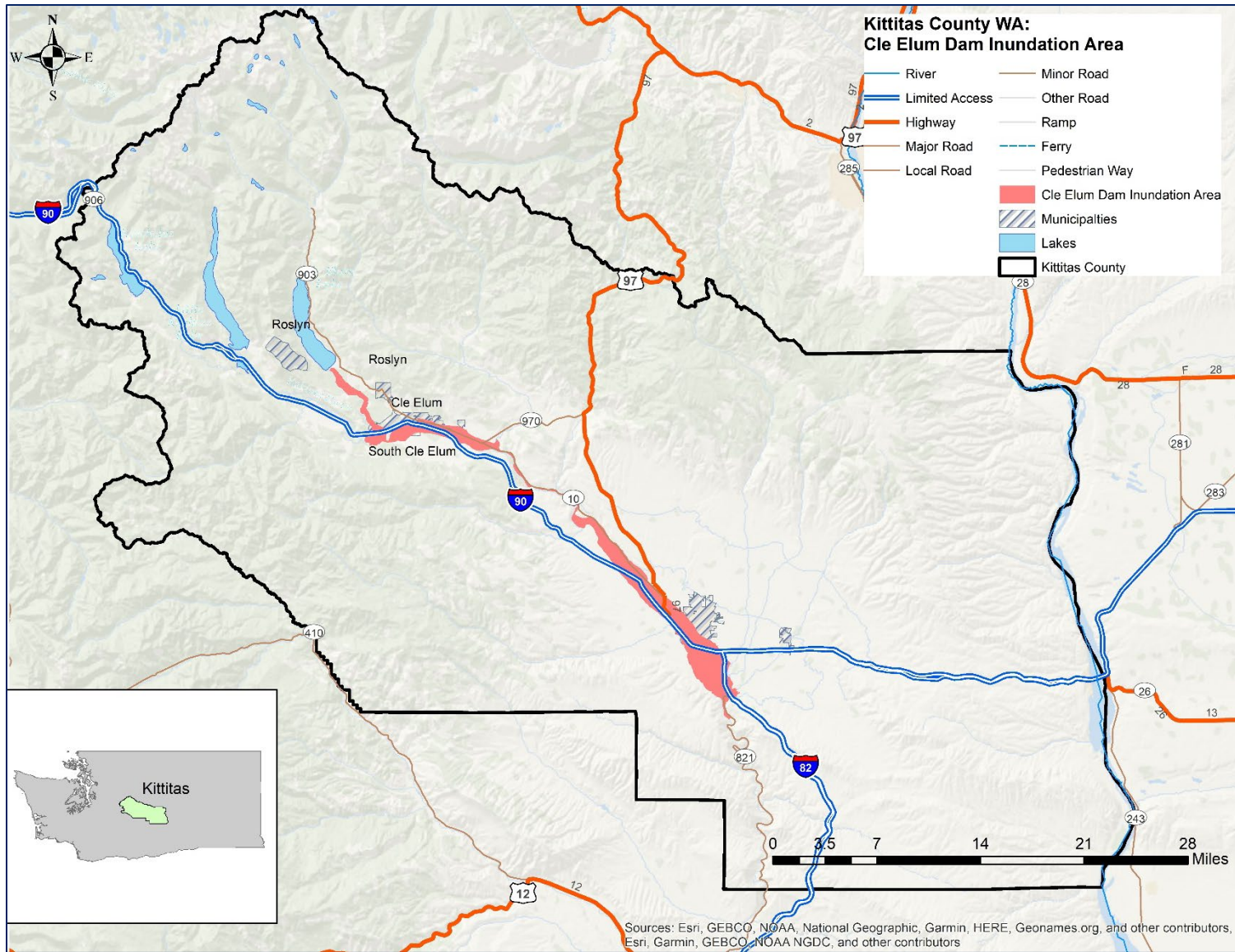






Figure 4. Cle Elum Dam Inundation Area



**Kittitas County WA:  
Keechelus and Kachess Dam Inundation Area**

Legend:

- River
- Limited Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Ramp
- Ferry
- Pedestrian Way
- Keechelus & Kachees Dam Inundation Area
- Municipalities
- Lakes
- Kittitas County

Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors.  
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors





Figure 6. Wildland Fire Hazard Area

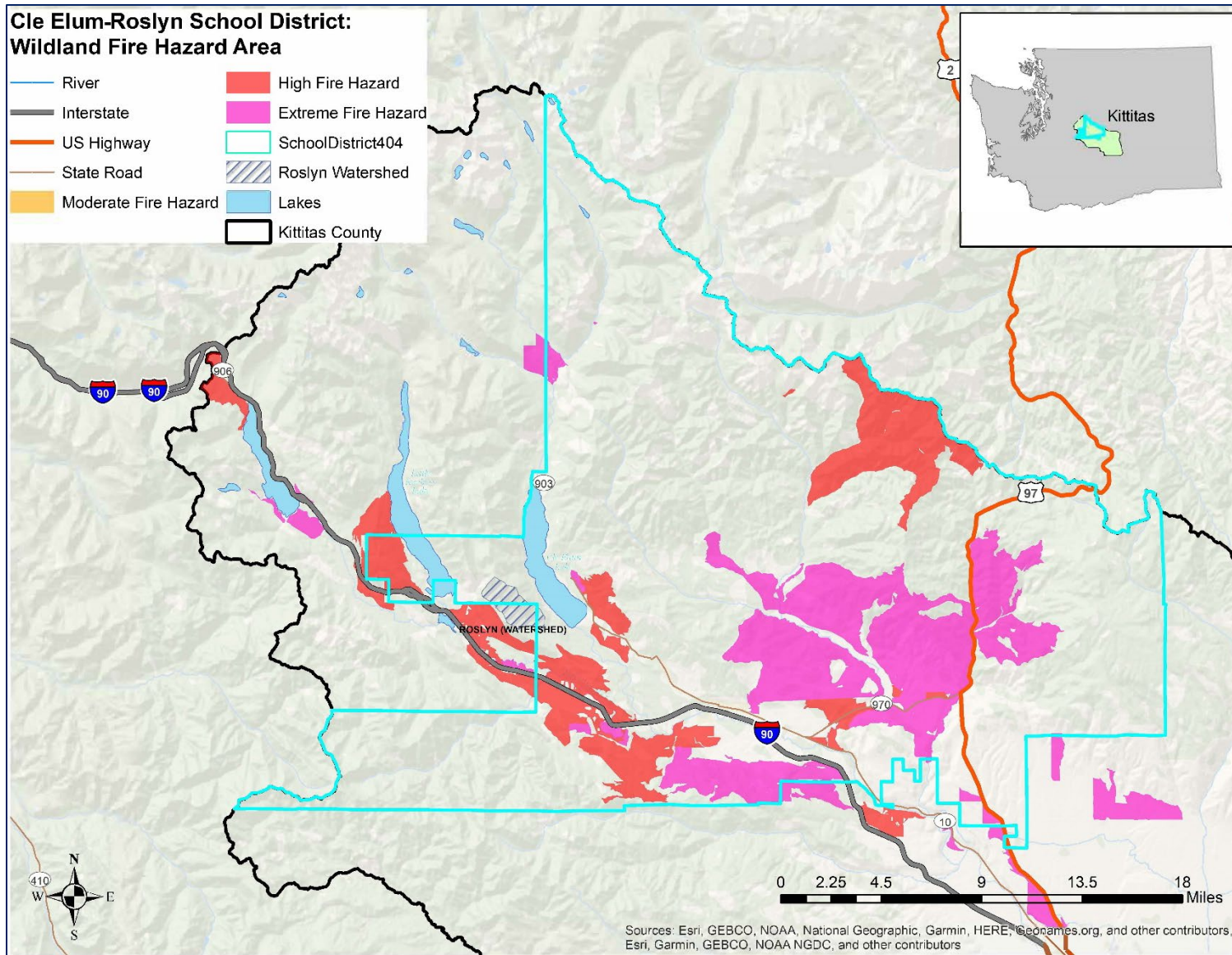
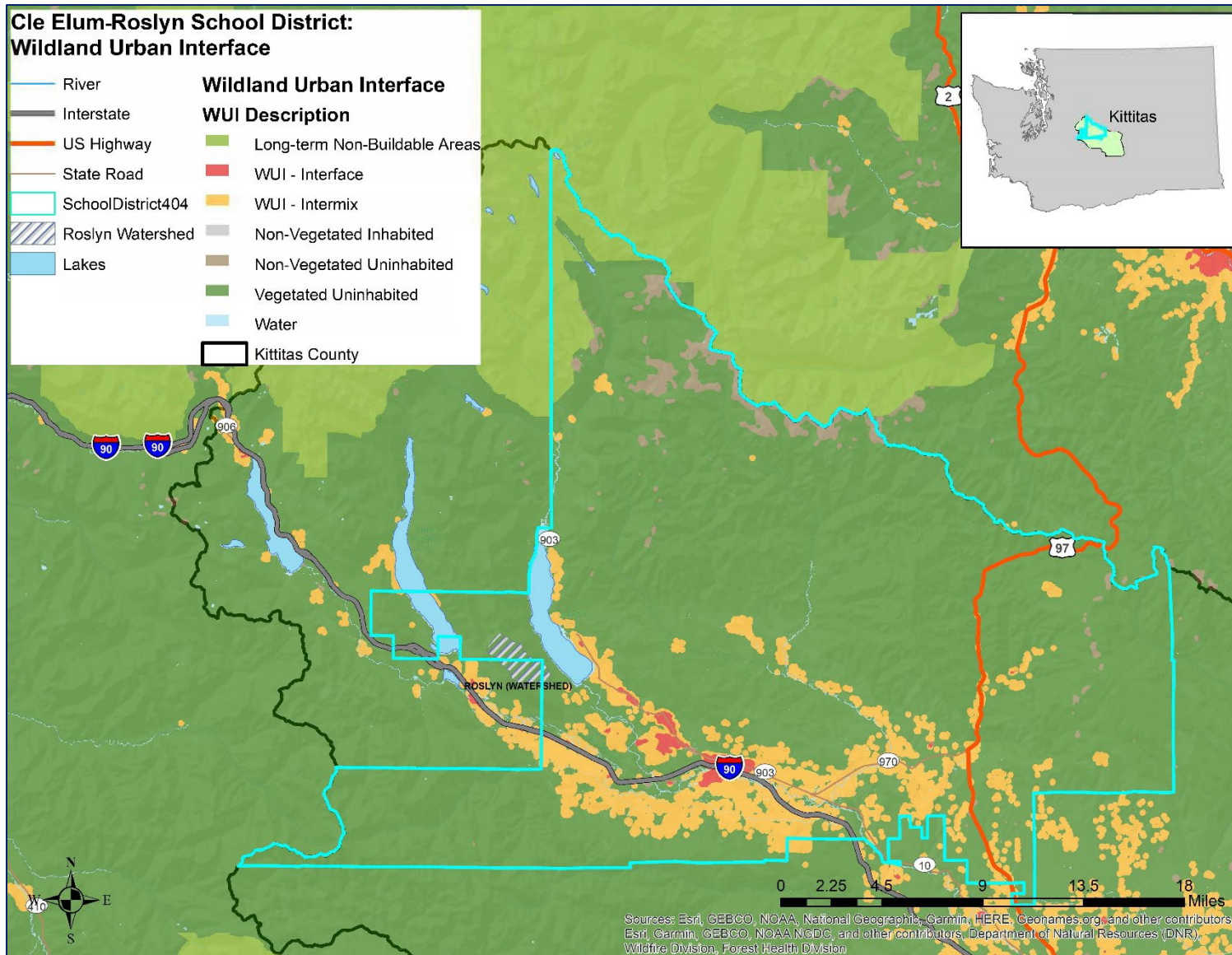




Figure 7. Wildland Urban Interface





## APPENDIX B. PLAN ADOPTION

*[Placeholder for adoption documentation after State and FEMA Approval]*