

# **Kittitas County Wildfire Protection Plan**



This plan was developed by the Kittitas County Fire Protection Committee in cooperation with affected jurisdiction's staff and community input.

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BOARD OF COUNTY COMMISSIONERS  
COUNTY OF KITTITAS  
STATE OF WASHINGTON  
RESOLUTION  
NO:2009-- 18

TO DECLARE COUNTY SUPPORT AND ADOPTION OF THE KITTITAS COUNTY "COUNTY WILD FIRE PROTECTION PLAN"

WHEREAS: The Board of Kittitas County Commissioners supports the Kittitas County "County Wild Fire Protection Plan," and,

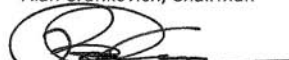
WHEREAS: The Kittitas County "County Wild Fire Protection Plan" will be utilized as a guide for planning as related to FEMA Pre-Disaster Mitigation, The National Fire Plan, The Healthy Forest Restoration Act, and other purposes as deemed appropriate by the Kittitas County Commissioners.

NOW, THEREFORE BE IT HEREBY RESOLVED: That the Kittitas County Board of Commissioners do hereby adopt, support, and will facilitate the Kittitas County "County Wild Fire Protection Plan" implementation.

ADOPTED this 18<sup>th</sup> day of February 2009.

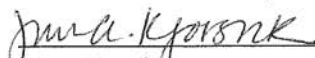
BOARD OF COUNTY COMMISSIONERS  
KITTITAS, COUNTY, WASHINGTON

  
\_\_\_\_\_  
Alan Crankovich, Chairman

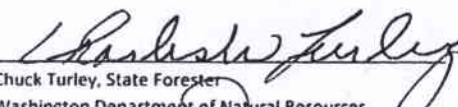
  
\_\_\_\_\_  
Paul Jewell, Vice-Chairman

  
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Mark McClain, Commissioner

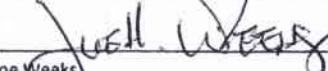


  
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Julie A. Kjorsvik

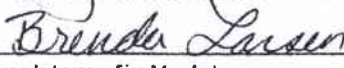
Recommended by the Kittitas County Fire Protection Committee and other cooperating entities

  
\_\_\_\_\_  
Chuck Turley, State Forester  
Washington Department of Natural Resources

9/10/09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Joe Weeks  
Department of Natural Resources


4/9/09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Brenda Larsen, Fire Marshal  
Kittitas County Fire Marshal's Office


04/08/09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Barry Kerth, Deputy Fire Marshal  
Kittitas County Fire Marshal's Office

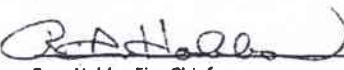
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DJ Evans, Fire Chief  
Fire District 1

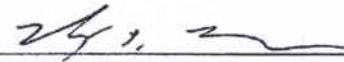
4/06/09  
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\_\_\_\_\_  
Rich Elliott, Deputy Chief  
Fire District 2


9/6/09  
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Date

  
\_\_\_\_\_  
Russ Hobbs, Fire Chief  
Fire District 7

4/7/09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Monty Moore, Fire Chief  
Fire District 8

4/6/09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Susan Wheatley, Citizen

4-7-09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Anna Lael, District Manager  
Kittitas County Conservation District

4-8-09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Suzanne Wade, GIS Specialist  
Kittitas County Conservation District

4-8-09  
\_\_\_\_\_  
Date

## Executive Summary

This Countywide Fire Protection Plan (CWFP) for Kittitas County, Washington, is the result of a collaborative effort by numerous concerned agencies and citizens in Kittitas County assessing wildfire risks, collecting data for those risks, and analyzing the data with the expressed intent to reduce the potential for wildfires that are a threat to people, structures, and infrastructure in Kittitas County, Washington.

***Vision:** Develop and implement a countywide fire protection plan that provides for sustainable development, resident and responder safety, and the protection of both natural and man-made resources of Kittitas County.*

The CWFP identifies wildfire response capability, educates homeowners to reduce the ignitability of structures, and evaluates critical infrastructure throughout the county. This plan will also identify prioritized areas for hazardous fuel reduction treatments on Federal, State, and private land, and builds on existing efforts to restore healthy forest conditions within the county. This plan will clarify our priorities for the protection of life, property, and critical infrastructure as well as identify wildland-urban interface areas.

### Kittitas County Fire Protection Plan Goals

- Reduce the area of wildland-urban interface (WUI) land burned and losses experienced because of wildfires.
- Prioritize the protection of people, structures, infrastructure, and ecosystems contributing to our way of life and the sustainability of the local and regional economy.
- Educate communities in challenges of wildfire in the WUI.
- Establish mitigation priorities and develop mitigation strategies in Kittitas County.
- Strategically locate and plan fuel reduction projects.
- Provide recommendations for alternative treatment methods, such as modifying forest stand density, fuel reduction techniques, and disposal of treated slash.

This CWFP represents the efforts and cooperation of a number of organizations and agencies; through the commitment of people working together to improve the preparedness for fire related hazard events while reducing factors of risk. The following local, state, and federal agencies and organizations participated in developing this plan:

- Kittitas County Commissioners and the employees of Kittitas County
- Washington State Department of Natural Resources
- USDI Bureau of Land Management
- USDA Forest Service
- USDI Fish & Wildlife Service
- Federal Emergency Management Agency

- City of Cle Elum
- City of Easton
- City of Ellensburg
- City of Kittitas
- City of Roslyn
- City of South Cle Elum
- Town of Thorp
- Kittitas County Fire Districts #1, 2, 3, 4, 6, 7, 8 and 51
- City of Cle Elum Fire Department
- City of Kittitas Fire Department
- City of Roslyn Fire Department
- City of South Cle Elum Fire Department
- Kittitas County Sheriff's Office
- Kittitas County Public Utilities District
- Kittitas County Conservation District
- Local Businesses and Citizens of Kittitas County

To obtain copies of this plan contact:

Kittitas County Community Development  
Fire Marshal's Office  
411 N Ruby St  
Ellensburg, Washington 98926  
Phone: 509-962-7000  
Website: <http://www.co.kittitas.wa.us/>

## Introduction

Since 1990, wildland fires have burned more than 900 homes each year in the United States and the number of homes at risk is likely to grow. From 1990 through 2003, property losses from catastrophic wildland fire exceeded \$6.3 billion (Northwest Insurance Council, 2006). The primary responsibility for ensuring that preventative steps are taken to protect homes lies with homeowners and state and local governments.

The two most effective measures for protecting structures from wildland fires are: (1) creating and maintaining a buffer (defensible space) from 30 to 100 feet wide around a structure, where vegetation and other flammable objects are reduced or eliminated; and (2) using fire resistant roofs and vents. In addition to roofs and vents, other technologies – such as fire resistant windows and building materials, chemical agents, sprinklers, and geographic information systems mapping – can help in protecting structures and communities, but they play a secondary role.

Although protective measures are available, many property owners have not adopted these important measures because of the time or expense involved, competing concerns (aesthetics or privacy), misperceptions about wildland fire risks, and the lack of awareness of their shared responsibility for fire protection. Federal, state, and local governments are attempting to increase property owners' use of protective measures through education, direct monetary assistance, and laws requiring such measures. This fire protection plan addresses this need and provides information on how to offer these educational opportunities. In addition, some insurance companies have begun to direct property owners in high risk areas to take protective steps.

### Identifying and Prioritizing Communities at Risk:

This plan will provide the information necessary for elected officials to make informed decisions in order to prioritize projects across the entire county. Priorities will be set by evaluating projects, not by ranking communities.

**Risk:** Using historic fire occurrence records and other factors, assess the anticipated probability of a wildfire ignition.

**Hazard:** Assess the fuel conditions surrounding the community using a methodology such as fire condition class, or other process.

**Values Protected:** Evaluate the human values associated with the community or landscape, such as homes, businesses, and community infrastructure (e.g. water systems, utilities, transportation systems, critical care facilities, schools, manufacturing and industrial sites, and high value commercial timber lands).

**Protection Capabilities:** Assess the wildland fire protection capabilities of the agencies and local fire departments with jurisdiction.

**Considerations:**

- Focus on the zone of highest overall risk considering projects in all zones. Identify a set of projects that will effectively reduce the level of risk within the zone.
- Determine the community’s willingness and readiness to actively participate in a project.
- Determine the willingness and ability of the owner of the surrounding land to undertake, and maintain, a complementary project.
- Set priorities by looking for projects that best meet the three criteria above. It is important to note that projects with the greatest potential to reduce risk to communities and the landscape may not be those in the highest risk zone, particularly if either the community or the surrounding landowner is not willing or able to actively participate.

## **Goals and Guiding Principles**

### **Federal Emergency Management Agency Philosophy**

An All Hazard Mitigation Plan (AHMP) approved by the Federal Emergency Management Agency (FEMA) is required for Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Program (PDM) eligibility. In Kittitas County, the Comprehensive Emergency Management Plan (CEMP) serves as the local AHMP which meets the requirements of the Stafford Act-Section 322. The plan criteria cover the planning process, risk assessment, mitigation strategy, plan maintenance, and adoption requirements. This Countywide Fire Protection Plan will be added as a chapter to the Kittitas County CEMP.

The State Hazard Mitigation Officer is:                    Mark Stewart  
Washington Military Department  
Emergency Management Division  
Building 20, M/S: TA-20  
Camp Murray, WA 98430-5122

### **A FEMA designed plan will be evaluated on its adherence to a variety of criteria:**

- Adoption by the Local Governing Body
- Multi-jurisdictional Plan Adoption
- Multi-jurisdictional Planning Participation
- Documentation of Planning Process
- Identifying Hazards
- Profiling Hazard Events
- Assessing Vulnerability: Identifying Assets

- Assessing Vulnerability: Estimating Potential Losses
- Assessing Vulnerability: Analyzing Development Trends
- Multi-jurisdictional Risk Assessment
- Local Hazard Mitigation Goals
- Identification and Analysis of Mitigation Measures
- Implementation of Mitigation Measures
- Multi-jurisdictional Mitigation Strategy
- Monitoring, Evaluating, and Updating the Plan
- Continued Public Involvement

### **Additional State and Federal Guidelines Adopted**

This CWFPP fulfills the National Fire Plan's 10-Year Comprehensive Strategy and the Washington Statewide Implementation Strategy for the National Fire Plan. The projects and activities recommended under this plan are in addition to other Federal, State, and private/corporate forest and rangeland management activities. The implementation plan does not alter, diminish, or expand the existing jurisdiction, statutory and regulatory responsibilities and authorities or budget processes of participating Federal, State, and tribal agencies. By endorsing this implementation plan, all signed parties agree that reducing the threat of wildland fire to people, communities, and ecosystems will require:

- Firefighter and public safety continuing as the highest priority.
- A sustained, long-term and cost-effective investment of resources by all public and private parties, recognizing budget parameters affecting Federal, State, and local governments.
- A unified effort to implement the collaborative framework called for in the recommendations in a manner that ensures timely decisions at each level.
- Accountability for measuring and monitoring performance and outcomes, and a commitment to factoring findings into future decision making activities.
- The achievement of national goals through action at the local level with particular attention on the unique needs of cross-boundary efforts and the importance of funding on-the-ground activities.
- Communities and individuals in the wildland-urban interface to initiate personal stewardship and volunteer actions that will reduce wildland fire risks.
- Management activities, both in the wildland-urban interface and in at-risk areas across the broader landscape.
- Active management, including thinning, that produces commercial or pre-commercial products, biomass removal and utilization, prescribed fire and other fuels reduction tools to simultaneously meet long-term ecological, economic, and community objectives.

This CWFPP will include compatibility with FEMA requirements for an AHMP, while also adhering to the guidelines proposed in the National Fire Plan, the Washington Statewide Implementation Plan, and the Healthy Forests Restoration Act (2003). This CWFPP has been prepared in compliance with:

### ***National Fire Plan***

A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan, May 2002. The goals of this county wide fire protection plan include:

1. Improve Fire Prevention and Suppression
2. Reduce Hazardous Fuels
3. Restore Fire-Adapted Ecosystems
4. Promote Community Assistance

#### **Its three guiding principles are:**

1. Priority setting that emphasizes protection of communities and watersheds at-risk.
2. Collaboration among governments and broadly representative stakeholders.
3. Accountability through performance measures and monitoring for results.

### ***Washington Statewide Implementation Strategy***

The strategy adopted by the State of Washington is to provide a framework for an organized and coordinated approach to the implementation of the National Fire Plan, specifically the national “10-Year Comprehensive Strategy Implementation Plan”. Emphasis is on a collaborative approach. Within the State of Washington, the counties, with the assistance of State and Federal agencies and local expert advice, will develop a risk assessment and mitigation plan to identify local vulnerabilities to wildland fire. A statewide group will provide oversight and prioritization as needed on a statewide scale. It is recognized that implementation activities such as; hazardous fuel treatment, equipment purchases, training, home owner education, community wildland fire mitigation planning, and other activities, will be occurring concurrently with this countywide planning effort.

### ***Healthy Forests Restoration Act***

The Healthy Forests Restoration Act of 2003 (HFRA) is intended to reduce the threat of destructive wildfires while upholding environmental standards. The CWFPP is developed to adhere to the principles of the HFRA while providing recommendations consistent with the policy document which should assist the federal land management agencies (US Forest Service and Bureau of Land Management) with implementing wildfire mitigation projects in Kittitas County that incorporate public involvement and the input from a wide spectrum of fire and emergency services providers in the region.

## **Integration with Other Local Planning Documents**

Existing programs and policies were reviewed in order to identify those that may weaken or enhance the mitigation objectives outlined in this document.

### ***County Wildland Fire Interagency Group***

Each county within the State has been requested to write a Wildland Fire Mitigation Plan. These plans should contain at least the following five elements:

1. Documentation of the process used to develop the mitigation plan. How the plan was developed, who was involved and how the public was involved.
2. A risk assessment to identify vulnerabilities to wildfire in the wildland-urban interface (WUI).
3. A prioritized mitigation strategy that addresses each of the risks. Examples of these strategies could be: training for fire departments, public education, hazardous fuel treatments, equipment, communications, additional planning, new facilities, infrastructure improvements, code and/or ordinance revision, volunteer efforts, evacuation plans, etc.
4. A process for maintenance of the plan which will include monitoring and evaluation of mitigation activities.
5. Documentation that the plan has been formally adopted by the involved agencies.

### ***Kittitas County Comprehensive Emergency Management Plan***

The Kittitas County Comprehensive Emergency Management Plan (CEMP) provides a framework from which mitigation efforts occur in response to large scale incidents or a combination of incidents in Kittitas County. The CEMP describes functions and activities necessary to implement the four phases of Emergency Management – mitigation, preparedness, response and recovery. The plan utilizes Emergency Support Functions (ESF's), which identify primary and support agencies responsibilities/activities that County and local jurisdictions may need in order to implement all-hazard mitigation. It provides policies, information, recommendations and guidance to assist responsible officials making operational decisions. ESF's = Transportation; Emergency Communications; Public Works & Engineering; Fire Protection; Information Analysis & Planning; Mass Care; Resource Management; Health & Medical Services; Search & Rescue; Hazardous Materials; Food & Water; Energy & Utilities; Military Support; Recovery & Restoration; Law Enforcement; and Damage Assessment. CEMP updates will include support of initiatives and action items outlined in the Kittitas County Countywide Fire Protection Plan.

### ***Kittitas County Hazard Identification and Vulnerability Assessment***

The Hazard Identification and Vulnerability Assessment (HIVA) dated February 2004 describes

natural and technological (human-made) hazards, which can potentially impact the people, economy, environment, and property of Kittitas County. It serves as a basis for County-level emergency management programs. It is the foundation of effective emergency management and identifies the hazards that organizations must mitigate against, prepare for, respond to, and recover from in order to minimize the effects of disasters and emergencies. The HIVA is not a detailed study, but rather a general overview of hazards that can cause emergencies and disasters. The CWFPP is a much more comprehensive approach, is more detailed, and provides specific plans to approach the County's problem areas.

### ***Kittitas County Zoning Ordinance***

This ordinance does not identify hazard areas in great detail although there are a few zoning districts that prohibit new residences within the floodplain.

### ***Critical Areas Ordinance***

This ordinance identifies protected and hazardous areas. Protected areas are fish and wildlife habitat conservation areas, aquifer recharge areas, and wetlands. Hazardous areas are frequently flooded areas, geologically hazardous areas, erosion hazard areas, landslide hazard areas, mine hazard areas, seismic hazard areas, and volcanic hazard areas.

### ***Open Space Timber and Open Space Open/Space Plans***

The Open Space Timber (OST) and Open Space/Open Space (OSOS) Plans could be affected by some fuel reduction practices. The effects are more beneficial than hazardous if handled appropriately. OST requires the sustenance of healthy commercial-grade timber. Fuels reduction has been shown to increase timber health. OSOS requires the sustenance of priority resources, other than timber. Landowners must ensure that fire-safety practices do not damage priority resources that keep them in the program in which they receive a property tax reduction.

### ***Kittitas County Shoreline Management***

Shoreline Management outlines allowed/prohibited uses within specific shoreline zoning designations. Non-forestry related mitigation actions would be looked at individually, anticipating that these actions will either be allowed or allowed by permit. Most identified action items would have no effect on the shoreline areas such as road signs, evacuation plan, public education, fire-safe building materials, etc. The shoreline ordinance is currently being revised and will conform to all existing regulations and plans. Upon approval of the Kittitas County All Hazard Mitigation and Community Wildfire Protection Plans, the revised shoreline plan will acknowledge and support their adoption.

## The Planning Process

Documentation of the planning process, including public involvement, is required to meet FEMA's DMA 2000 (44CFR§201.4(c)(1) and §201.6(c)(1)). This section includes a description of the planning process used to develop this plan, including how it was prepared, who was involved in the process, and how all of the involved agencies participated.

### Description of the Planning Process

The CWFPP utilized a collaborative process involving all of the organizations and agencies described in this document with guidance from the handbook *Preparing a Community Wildfire Protection Plan* (Society of American Foresters, 2004) as well as information from the Owyhee County, Idaho Wildfire Protection Plan (2005) and the Yellowstone County, Montana Community Wildfire Protection Plan (2006). The planning process included five steps:

1. **Collection of Data** about the extent and periodicity of hazards in and around Kittitas County.
2. **Field Observations and Estimations** about risks, structures and infrastructure to risk areas, access, and potential treatments.
3. **Mapping** of data relevant to pre-disaster mitigation control and treatments, structures, resource values, infrastructure, risk assessments, and related data.
4. **Facilitation of Public Involvement** utilizing a public survey, news releases, public meetings, public review of draft documents, and acknowledgement of the final plan by the signatory representatives.
5. **Final Drafting of the report** compiling the first four steps into one final document.

### Multi-Jurisdictional Participation

CFR requirement §201.6(a)(3) calls for multi-jurisdictional planning in the development of Hazard Mitigation Plans which impact multiple jurisdictions. The CWFPP is applicable to all local jurisdictions inside Kittitas County. All jurisdictions were represented or had the opportunity for input in this process.

### Public Meetings

Public meetings were scheduled in communities across Kittitas County during the hazard assessment phase of the planning process. Public meetings were scheduled to share information on the planning process, provide details of the hazard assessments, and discuss potential mitigation treatments. Attendees at the public meetings were asked to give their impressions of the accuracy of the information generated and provide their opinions of potential treatments. Figure 1 displays the meeting notice that was widely distributed and Figure 2 is an article published in the Ellensburg Daily Record about the public meetings.

## **The Kittitas County Conservation District values your input!**

**Please join us to learn about the Community Wildfire Protection Plan and how you can protect yourself and your property from wildfire.**

**The Kittitas County Conservation District and the CWPP Committee are seeking public input and comment on the development of the Community Wildfire Protection Plan. Take this opportunity to review the preliminary findings and draft plan, provide input on historical data and participate in discussions of at risk areas.**

### **Snoqualmie Pass**

Thursday October 2, 2008 7:00 PM  
Summit Lodge—Conference Room  
603 State Route 906



### **Cle Elum**

Monday October 6, 2008 7:00 PM  
Cle Elum Senior Center—Fireside Conference Room  
719 E Third St, Cle Elum

### **Ellensburg**

Wednesday October 8, 2008 7:00 PM  
Hal Holmes Center  
209 N Ruby Street, Ellensburg

For more information, visit <http://kccd.net> or call the KCCD at 925-8585 ext. 4.

The Community Wildfire Protection Plan is funded through a grant from the Washington Department of Natural Resources.

FIGURE 1 FLYER ADVERTISING PUBLIC MEETING

Monday, September 29, 2008 2:09 PM PDT

## Kittitas County community wildfire plan faces scrutiny

By DAILY RECORD STAFF

KITTITAS COUNTY — Those who have worked for more than a year to create a draft Kittitas County Community Wildfire Protection Plan not only want people to read the plan, they want suggestions from the public on what specific concerns they may have overlooked.

That's why the committee that formed the plan wants the public to attend any one of three community meetings/open houses to review aspects of the plan and give its input.

The sessions are set for Oct. 2 at Snoqualmie Pass, Oct. 6 at the Cle Elum Senior Center and Oct. 8 in Ellensburg, according to a news release. Each is at 7 p.m.

The Kittitas County Conservation District has facilitated and coordinated formation of the plan since the committee began meeting in spring 2007. The committee is made up of state, county and federal government agency representatives, fire districts, forest landowners and citizens.

Assisting to form the plan has been the state Department of Natural Resources' Southeast Region office.

The aim of the plan is to identify in each community in the county specific situations that affect that community's risk of wildfire.

This could include assessing several factors, including topography, surrounding wooded lands, development patterns, construction material, roadway conditions, availability of firefighting services and others.

Recommendations are made in the plan how these risks can be reduced and, thus, reduce the risk of property damaging and life threatening wildfires.

Having the countywide plan of action will likely lead to state and federal funding to help pay for a variety of projects: public education on how to "Firewise" or protect homes from wildfires, work to create defensible spaces around homes and businesses by clearing vegetative fuels, forest fuel reduction around communities and housing developments, improving community firefighting capabilities and others.

After the draft plan is reviewed by the public, with possible modifications based on comments, it will go to the Kittitas County commissioners for a formal hearing and consideration for adoption.

It's expected that the draft plan will be on the Kittitas County Conservation District Web site by Oct. 2, with deadline for public comments set for Oct. 31.

Work on the Community Wildfire Protection Plan is funded through a grant from the state Department of Natural Resources.

FIGURE 2 ARTICLE PUBLISHED IN THE ELLENSBURG DAILY RECORD

Attendance (excluding members of the Committee) at all three public meetings totaled only a half dozen. Despite the sparse attendance, the meetings included excellent discussions about the CWPP process in general and the hazards analysis process specifically. A number of detailed suggestions were provided for potential mitigation treatments. These suggestions included the following:

- Target outreach efforts to landowners in the WUI using tax parcel information from the County Assessor to better describe the tremendous losses that could occur due to a wildfire and motivate landowners to take action in their neighborhoods and on their land.
- Absentee landowners or part-time residents should be specifically targeted.
- The requirement to use firewise principles and the International Urban Wildland Interface Code in the building and development of lands is important in both areas covered by fire districts and those not covered by fire districts.
- Forest management and health are tied directly to fuels reduction projects.
- Communication during wildland fire event is important, particularly in areas with no cell phone coverage (e.g. Liberty, Teanaway, Salmon la Sac) and limited radio reception.
- Major fuels reduction projects and the use of shaded fuel breaks could be essential in stopping the spread of a massive wildfire. Highway 97 could be used as a shaded fuel break.
- The County should assist areas not currently within a fire district to join a fire district.
- More home and community assessments must be completed.

## **Public Mail Survey**

In order to broaden the scope on the perceptions about wildland and individual risk factors of homeowners in Kittitas county, a mail survey was conducted. The survey was completed in September and October 2008. Using the Kittitas County Assessor's database, 290 homeowners were randomly selected from wildfire hazard areas to receive mail surveys. One hundred twenty one surveys were returned completed and eight surveys were returned as undeliverable. A calculated return rate of 42.9% was achieved. A summary of the survey's results will be presented in this section and then referred back to during the ensuing discussions on the need for various treatments, education, and other information.

The respondents were asked if they owned a home or cabin in the County and if that home or cabin was a primary residence. Of the 121 respondents in the survey, 100% indicated that they did own a home or cabin in Kittitas and approximately 73% indicated that the home or cabin was not their primary residence. The respondents were asked to identify which community was closest to that home or cabin. Of the 121 respondents, 91% answered the question by specifying their community. Of those, 26.4% indicated Cle Elum/South Cle Elum, 19% indicated Roslyn/Ronald, 11% indicated Kachess Lake/Kachess Ridge, 9% indicated Pine Loch Sun I or II, 12% indicated Snoqualmie Pass/Hyak, 8% indicated Easton, 3.6% indicated Sky Meadows and the remaining 10% of respondents indicated other areas of the County.

Seventy percent of the respondents indicated that they have emergency telephone 911 services in their area, 5% indicated they did not, and 25% did not know. When asked if their home was protected by a local fire department, 86.6% indicated they were, 3.4% indicated they were not and 10% indicated they did not know. Of the 64% of the respondents that specified a fire

department response time to their home, 39.7% thought that time was less than 10 minutes, 46.2% thought the average time was between 10 and 20 minutes, 10.3% thought the average time was between 20 and 30 minutes, and 3.9% thought the average time was greater than 30 minutes.

Respondents were asked to indicate the type of roofing material covering the main structure of their home. Approximately 11% of respondents indicated their homes were covered with a composite material (asphalt shingles). About 83% indicated their homes were covered with metal (e.g., aluminum, tin) roofing material and 2.5% of the respondents indicated they have a wooden roofing material such as shakes or shingles.

When asked how many trees were within 75 feet of their homes 2.5% said none, 36% indicated less than 10, 36.7% said between 10 and 25, and 25% indicated more than 25. Thirty-three percent of respondents replied that they had a lawn and 83% of those that had a lawn keep it green year round.

The average driveway length of respondents to the survey was 640 feet long (0.12 miles). The longest reported was 10,560 feet (2.0). Of those respondents (14%) with a driveway over ¼ mile long, 15% do not have turnouts allowing two vehicles to pass. Driveways with a dirt surface were reported by 15.7% of respondents, while 58.3% had gravel or rock and 23.5% had a paved driveway. Approximately 53% of the respondents indicated an alternate escape route was available if their primary driveway access was not available.

Respondents were asked about items they may have available that could be used to fight a wildfire. Table 1 summarizes these responses.

**TABLE 1 PERCENT OF HOMES WITH INDICATED FIRE FIGHTING TOOLS IN KITTITAS COUNTY.**

<b>% of Respondents</b>	<b>Firefighting Tools</b>
93%	Hand tools (shovel, Pulaski, etc.)
10%	Portable water tank
15%	Stationery water tank
34%	Pond, lake, or stream water supply close
12%	Water pump and fire hose
40%	Well or cistern
16%	Equipment suitable for creating fire breaks (bulldozer, cat, skidder, etc.)

Respondents were asked to complete a fuel hazard rating worksheet to assess their home’s fire risk rating. Table 2 Fuel Hazard Rating Worksheet is an example of the worksheet and a summarization of responses.

**TABLE 2 FUEL HAZARD RATING WORKSHEET**

<b>Fuel Hazard</b> (within 200 feet of structures)	Small, light fuels (grasses, forbs, weeds, shrubs)	1
	Medium size fuels (brush, large shrubs, small trees)	2
	Heavy, large fuels (woodlands, timber, heavy brush)	3
<b>Slope Hazard</b> (within 200 feet of structures)	Mild slope (0-5%)	1
	Moderate slope (6-20%)	2
	Steep slope (21-40%)	3
	Extreme slope (41% and greater)	4
<b>Structure Hazard</b>	Noncombustible roof and noncombustible siding material	1
	Noncombustible roof and combustible siding material	3
	Combustible roof and noncombustible siding material	7
	Combustible roof and combustible siding material	10
<b>Additional Factors</b>	Rough topography that contains several steep canyons or ridges	+2
	Areas having history of higher than average fire occurrence	+3
	Areas exposed to severe fire weather and strong winds	+4
	Areas with existing fuel modifications or usable fire breaks	-3
	Areas with local facilities (water systems, rural fire districts, dozers)	-3

Respondents answers to the fuel hazard rating worksheet summarized placing each respondent in a fire risk category. The categories range from low risk to extreme risk.

Table 3 summarizes the percentage of respondents in each of the categories.

**TABLE 3 PERCENT OF RESPONDENTS IN EACH RISK CATEGORY AS DETERMINED BY THE SURVEY RESPONSES**

<b>% of Respondents</b>	<b>Fire Risk Ratings</b>
0.0%	Extreme Risk = 26 + points
5.8%	High Risk = 16–25 points
30.0%	Moderate Risk = 7–15 points
64.2%	Low Risk = 6 or less points

Respondents were asked a series of questions regarding mitigation activities they had recently completed or currently perform on their property. The first question asked if homeowners

conducted a periodic fuels reduction program near their home; 84% said that they did. Respondents were also asked if livestock was grazed around their home and only 11% indicated that grazing occurred. Respondents were nearly evenly split on whether they would support controlled grazing on their property to reduce wildfire risk with 48.2% in favor and 51.8% against it.

Respondents were asked “If offered in your area, would members of your household attend a free or low cost, one-day training seminar designed to share with homeowners how to reduce the potential for casualty loss surrounding your home?” A strong majority, 71.4% of respondents, indicated a desire to participate in this type of training. When asked if they would participate in a group effort to reduce hazardous fuels in their neighborhood, 64.3% indicated they would.

Homeowners were also asked, “How should Hazard Mitigation projects be funded in the areas surrounding homes, communities, and infrastructure such as power lines and major roads?” Responses are summarized in Table 4.

TABLE 4 PUBLIC OPINION OF HAZARD MITIGATION FUNDING

	<b>100% Public Funding</b>	<b>Cost-share (Public &amp; Private)</b>	<b>Privately Funded (Owner or Company)</b>
<b>Home Defensibility Projects</b>	<i>Preferred by 14.3% of respondents</i>	<i>Preferred by 36.6% of respondents</i>	<i>Preferred by 45.5% of respondents</i>
<b>Community Defensibility Projects</b>	<i>Preferred by 32.1% of respondents</i>	<i>Preferred by 57.1% of respondents</i>	<i>Preferred by 7.1% of respondents</i>
<b>Infrastructure Projects (roads, bridges, power lines, etc.)</b>	<i>Preferred by 77.7% of respondents</i>	<i>Preferred by 14.3% of respondents</i>	<i>Preferred by 3.6% of respondents</i>

One third of respondents offered suggestions for fire prevention projects. A complete list of these comments are included in Appendix B. Nearly 65% of respondents accepted the offer to provide additional information and provided their names and contact information. We wish to thank all Kittitas County landowners who completed and returned these surveys.

### **Continued Public Involvement**

Kittitas County is dedicated to involving the public directly in reviewing and updating the CWFPP. The Kittitas County Commissioners, through the Kittitas County Fire Protection Plan Committee, are responsible for the annual review and update of the plan.

The public will have the opportunity to provide feedback about the Plan annually on or near the anniversary of the adoption of this plan at a meeting of the County Commissioners. Copies of the Plan will be kept at the Kittitas County Community Development Services office and at the Kittitas County Conservation District.

A public meeting will also be held when deemed necessary by the Kittitas County Fire Protection Plan Committee. The meetings will provide the public a forum for which they can express concerns, opinions, or ideas about the Fire protection plan.

# Kittitas County Characteristics

## Background and Area Description

Kittitas County is located on the eastern slopes of the Cascade Range in the geographical center of Washington state. Kittitas County is ideally situated at the crossroads of two of the Northwest's major interstate highways, I-90 and I-82. They connect Kittitas County with Seattle and the Puget Sound area, Spokane and the Inland Empire, the Tri-Cities and the rest of the Pacific Northwest.

Kittitas County comprises 1,481,600 acres. It is bounded to the north by Chelan County and to the south by Yakima County. To the east, the Columbia River forms the boundary with Grant County and to the west, the Pacific Crest Trail, high in the Cascade Range, forms the boundary with King County. Landscapes within the County vary from the forested, mountainous terrain of the Cascades to the dry, shrub-steppe hills of the Columbia Basin. Elevations in the County range from 475 feet on the banks of the Columbia River to 7,959 feet in the Cascade Mountains (Figure 3).

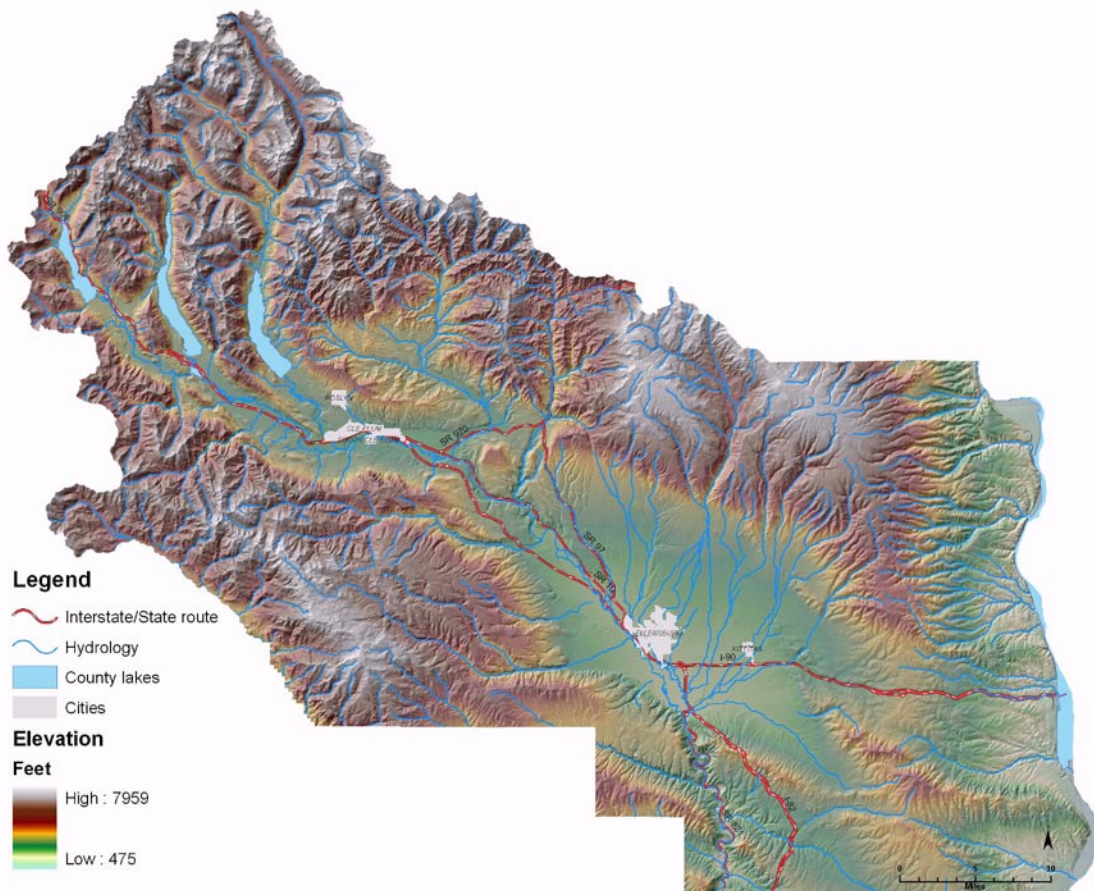
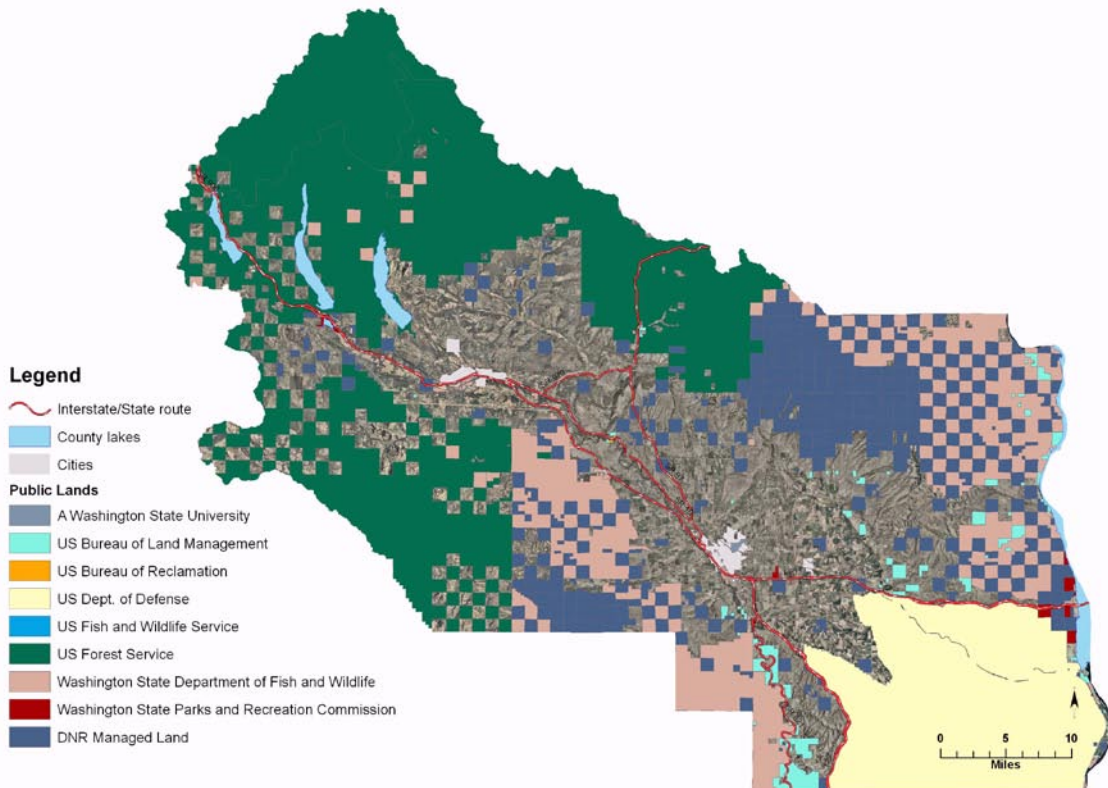


FIGURE 3 DIGITAL ELEVATION MODEL OF KITTITAS COUNTY.

The Yakima River headwaters are located in northwest Kittitas County. The Yakima River flows southeasterly 214 miles to its confluence with the Columbia River. The upper one third of the Yakima River is located in Kittitas County, along with three of the five major irrigation reservoirs in the Yakima watershed. Lake Kachess, Lake Keechelus and Lake Cle Elum are managed by the US Bureau of Reclamation to supply irrigation water to the Kittitas and Yakima valleys.

Over half of Kittitas County is forested. Private timber companies and individuals own and manage approximately 200,000 acres of forestland. The US Forest Service manages 375,000 acres of timberland included in the Wenatchee National Forest. The Washington State Department of Natural Resources manages 126,713 acres, of which 47,745 acres are forested and the remaining is shrub-steppe lands. The Washington Department of Fish & Wildlife also own and manage significant shrub steppe lands in the southern (L.T. Murray Wildlife Area) and eastern (Colockum Wildlife Area) parts of the county. The federally owned Yakima Training Center, covers southeastern Kittitas County to the edge of the irrigated agricultural lands (Figure 4). Figure 5 indicates the County’s landcover.



**FIGURE 4 PUBLIC LANDS IN KITTITAS COUNTY**

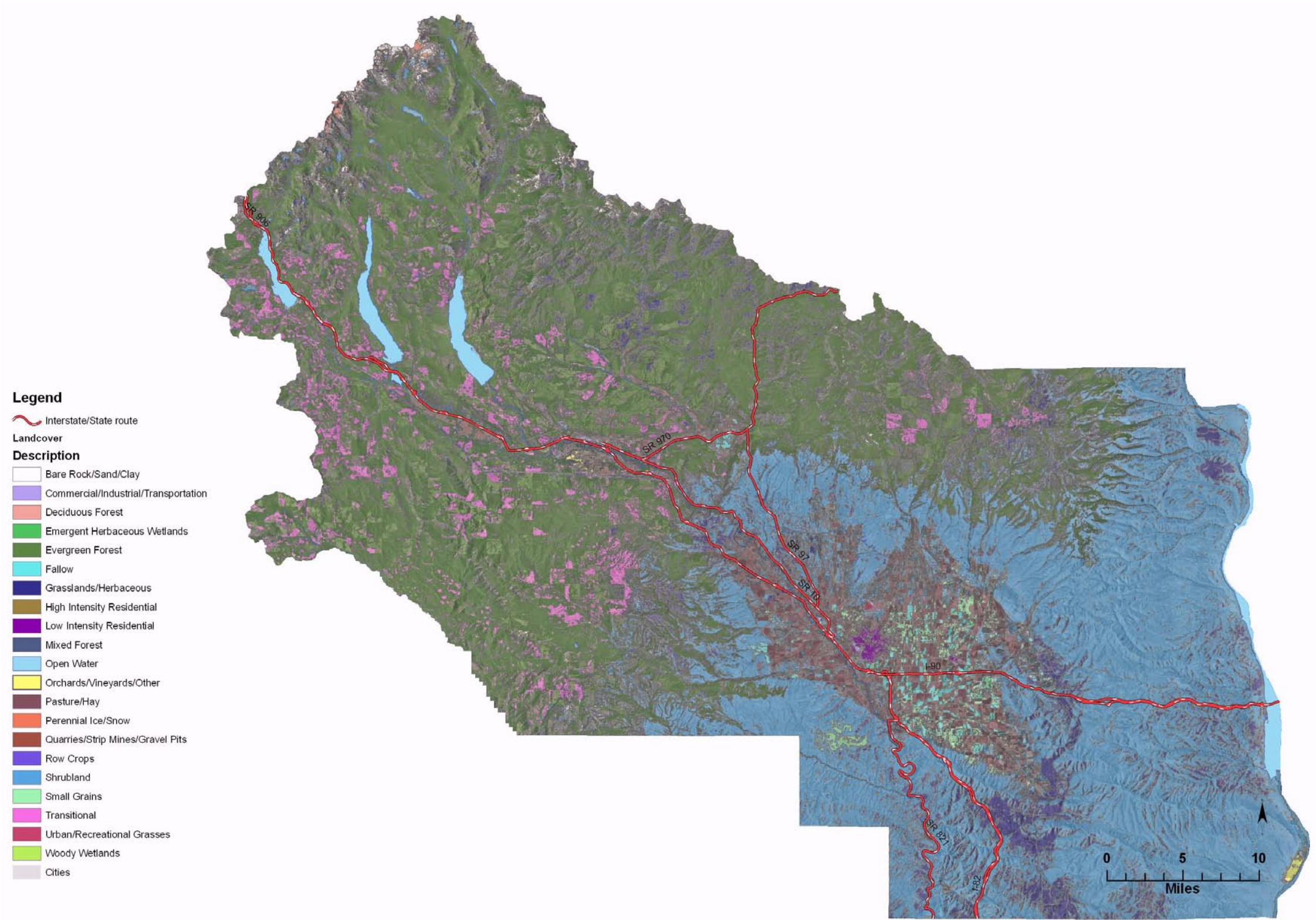


FIGURE 5 LANDCOVER IN KITTITAS COUNTY

The Kittitas Valley, in the center of the County, is home to significant agricultural lands. Approximately 90,000 acres are irrigated and produce crops including timothy hay, alfalfa hay, corn, potatoes, small grains, tree fruit and livestock pasture. Livestock grazing occurs throughout the irrigated and non-irrigated agricultural lands.

Recreational opportunities abound in Kittitas County through all seasons. Camping, hiking, hunting, fishing, snowmobiling, bicycling and all kinds of water sports are available to local residents and tourists. The public lands of the County are used extensively for these activities.

## Demographics

In the last few years, Kittitas County has experienced tremendous growth with approximately 5,000 new residents locating within the county. The total population is estimated at 39,400 for 2008, up from the 2000 Census of 33,362. Additionally, Kittitas County has become a destination county for vacation properties with values up to and often times greater than one million dollars. Kittitas County has five incorporated communities; Ellensburg (est. pop. 17,330), Cle Elum (pop. 1,865), Kittitas (est. pop. 1,145), Roslyn (est. pop. 1,015) and South Cle Elum (est. pop. 580). The remaining population lives within the unincorporated areas of the county (WA OFM, 2008). Table 5 displays selected demographics.

TABLE 5 SELECTED DEMOGRAPHIC STATISTICS FOR KITTITAS COUNTY, WASHINGTON FROM CENSUS 2000.

Subject	Number	Percent
Total population	33,362	100
SEX AND AGE		
Male	16,575	49.7
Female	16,787	50.3
Under 5 years	1,706	5.1
5 to 9 years	1,870	5.6
10 to 14 years	1,990	6
15 to 19 years	3,264	9.8
20 to 24 years	5,249	15.7
25 to 34 years	3,865	11.6
35 to 44 years	4,347	13
45 to 54 years	4,182	12.5
55 to 59 years	1,646	4.9
60 to 64 years	1,372	4.1
65 to 74 years	1,981	5.9
75 to 84 years	1,337	4
85 years and over	553	1.7
Median age (years)	31.4	(X)
18 years and over	26,498	79.4

Male	13,061	39.1
Female	13,437	40.3
21 years and over	23,319	69.9
62 years and over	4,668	14
65 years and over	3,871	11.6
Male	1,738	5.2
Female	2,133	6.4
Total population	33,362	100
In households	31,199	93.5
Householder	13,382	40.1
Spouse	6,400	19.2
Child	7,605	22.8
With own child under 18 years	6,380	19.1
Other relatives	783	2.3
Under 18 years	268	0.8
Nonrelatives	3,029	9.1
Unmarried partner	788	2.4
In group quarters	2,163	6.5
Institutionalized population	205	0.6
Non-institutionalized population	1,958	5.9
HOUSEHOLDS BY TYPE		
Total households	13,382	100
Family households (families)	7,787	58.2
With own children under 18 years	3,506	26.2
Married-couple family	6,400	47.8
With own children under 18 years	2,603	19.5
Female householder, no husband present	963	7.2
With own children under 18 years	678	5.1
Nonfamily households	5,595	41.8
Householder living alone	3,800	28.4
Householder 65 years and over	1,156	8.6
Households with individuals under 18 years	3,738	27.9
Households with individuals 65 years and over	2,759	20.6
Average household size	2.33	(X)
Average family size	2.9	(X)
HOUSING OCCUPANCY		
Total housing units	16,475	100
Occupied housing units	13,382	81.2
Vacant housing units	3,093	18.8

For seasonal, recreational, or occasional use	1,791	10.9
Homeowner vacancy rate (percent)	3.1	(X)
Rental vacancy rate (percent)	6.8	(X)
<b>HOUSING TENURE</b>		
Occupied housing units	13,382	100
Owner-occupied housing units	7,805	58.3
Renter-occupied housing units	5,577	41.7
Average household size of owner-occupied unit	2.48	(X)
Average household size of renter-occupied unit	2.12	(X)

## Socioeconomics

Kittitas County race/ethnicity is distributed in Table 6 as follows:

**TABLE 6 ETHNICITY**

White	91.1%
Black	0.08%
American Indian	0.6%
Asian	2.8%
Pacific Islander	0.1%
Other	2.5%
Multiracial	2.1%
Hispanic	6.1%

In Kittitas County, the specific economic data for individual communities is limited only to incorporated communities. As a whole, the average household income distribution in Kittitas County is as follows in Table 7:

**TABLE 7 ECONOMIC DATA**

Less than 10,000	15.5%
\$10,000 to \$20,000	15.6%
\$20,000 to \$30,000	11.6%
\$30,000 to \$40,000	11.4%
\$40,000 to \$50,000	8.3%
\$50,000 to \$60,000	8.2%
\$60,000 to \$75,000	9.9%
\$75,000 to \$100,000	9.0%
Greater than \$100,000	10.6%

The poverty status in Kittitas County is disproportionately high, with almost 20% of the population living below the poverty level. This is directly influenced by the unemployment rate of Kittitas County, which, in September 2008, was 5.3%.

## County Climate

The County has a mountain type climate that is warm and dry in the summer and cold and moist in the winter. The rise of air over the Cascade Range and its drying flow downward in the valley creates temperatures, moisture and climatic conditions of profound influence. The moisture conditions change considerably across the county with annual precipitation of approximately 100 inches at Snoqualmie Pass in the Cascades, 22 inches at Cle Elum and less than 9 inches at Ellensburg. See Figure 6 and Figure 7. The prevailing wind is from the northwest. The daily wind speed averages 8 to 10 miles per hour in the spring and summer, although wind speeds up to 20 to 30 miles per hour are not uncommon in the Kittitas Valley.

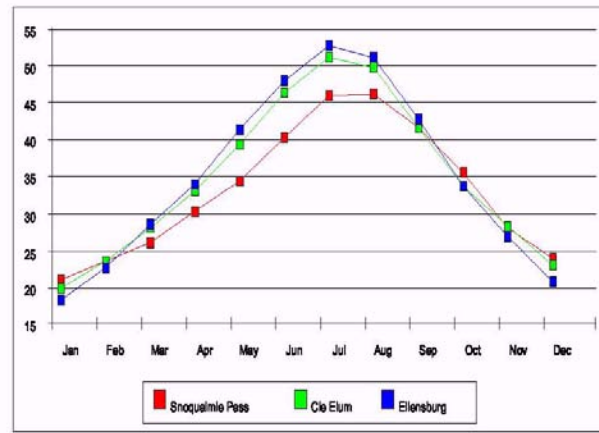
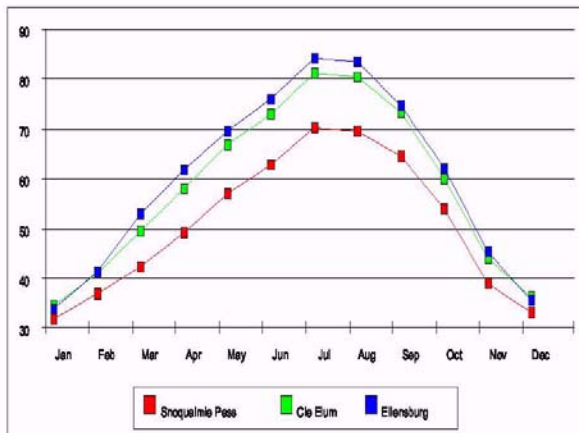


FIGURE 6 AVERAGE MAXIMUM AND MINIMUM TEMPERATURES (F)

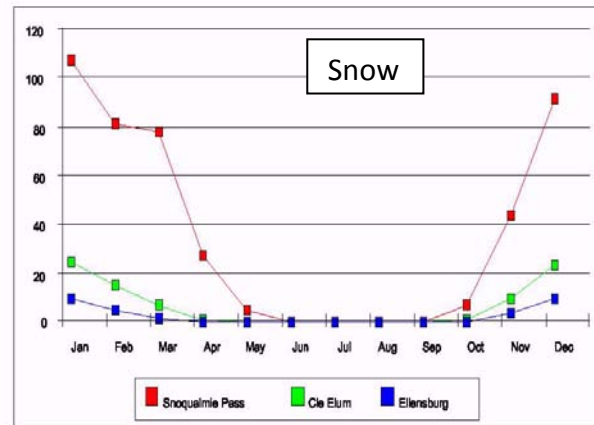
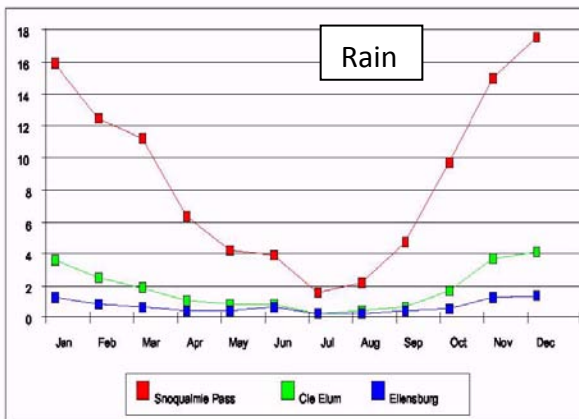


FIGURE 7 AVERAGE PRECIPITATION (IN)

## Cultural History

Prior to the influx of white settlers in the middle of the 19th century, the Kittitas Valley was home to the Kittitas and Upper Yakama Indians, both being part of the larger Yakama Nation. During the spring, the Kittitas Valley was one of only a handful of valleys in the state where tribes could dig for roots, such as camas and kouse, both of which were staples in their diet. For

this reason, the Kittitas Valley was a traditional gathering place for tribes east of the Cascades. Kittitas County was also a crossroads of trails south to the Yakima Valley, north to Wenatchee and Icicle Rivers, east to the Columbia and west to coastal areas. The word “Kittitas” has been said to mean everything from white chalk to shale rock to shoal people to land of plenty. Most anthropologists and historians concede that each interpretation has some validity, depending upon the particular dialect spoken.

By the early 1860s, the first settlers began arriving in the Kittitas Valley. They brought with them the seeds of many fledgling industries. These included livestock raising, crop farming, dairying, logging, lumber processing and mining. Kittitas County was organized in 1883 by the Washington Territorial Legislature and signed into law by Territorial Governor, W.A. Newell.

By the late 1860s, cattle ranchers established land claims in the Kittitas Valley. Over the next ten years, new ranches flourished and large herds of cattle (not all local) grazed everywhere.

Notable growth in the farm sector came in the wake of railroad expansion and the Homestead Act of 1862, both of which prompted heavy migration into the county.

The Kittitas Valley is known for its hay production. Early settlers harvested hay to sustain domestic livestock through the winter. As cities and industries employed horses as the principle source of draft work, the demand for hay soared. Many Puget Sound cities needed thousands of tons of hay to feed work-horses, as did the state’s lumber and mining companies. By the 1920s, however, most industries had changed to combustion engines. The return of horse racing in the 1930s and pleasure riding in the 1950s have helped to sustain the county’s hay industry. Today, Kittitas County hay is marketed to numerous states across the country, as well as the Pacific Rim and European nations.

The Olmstead State Park is the location of one of the first homesteads in the Kittitas Valley. The Olmstead family arrived in 1875 and lived on the farm for nearly 100 years before donating it to Washington State Parks in 1968. Today, it continues to be a working farm with some of the land still worked with old fashioned equipment. The original log cabin, built in 1875, and the farmhouse (built in 1908) as well as most of the out buildings, are still standing. The farm house has the family’s furnishings intact.

During the 1870’s and 1880’s, a combination sawmill and grist mill were established at what would become the small town of Thorp, on the upper end of the Kittitas Valley. The reservoir for this system also served as a log pond for the saw mill. Added to these was a second reservoir to serve as an ice pond. Later, in 1906, the same wheels that turned the mills would be used to generate electricity. The Thorp Grist Mill is one of the few mills left in the state and the oldest industrial artifact in Kittitas County.

The county's logging and lumber industries were established in the early 1870s, fueled primarily by the in-migration of settlers who needed lumber to build homes and railroads that needed wooden ties to expand spurs. Most of the logging was in the western end of the county.

In the early 1880s, coal and mineral activities were underway in the Cle Elum River Valley and the surrounding mountains. Coal was first discovered by homesteaders in 1883. Even before the discovery of coal, prospectors flocked to the region searching for precious metals and ores. Efforts centered on gold, which local prospectors first discovered near Swauk Creek in 1867. More gold was found in 1873 precipitating a gold rush into the county. New and rediscovered finds in the late 1870s initiated another rush. Mining activity continued at this pace until peaking in the 1930s.

The Kittitas County Fair, an exhibition of agricultural products and activities, was established in 1885. This annual event occurs during Labor Day weekend. In 1923, the famous Ellensburg Rodeo was added. These events are steeped in traditions that draw together much of our cultural history. The men and women who founded the Ellensburg Rodeo in 1923 were ranchers, farmers, Native Americans and community minded citizens working in a group effort. They were motivated not only by a desire to celebrate a vanishing frontier way of life, but also a desire to promote their community and generate commerce.

These groups combined with local ranchers to create the Ellensburg Rodeo. The Kittitas County Fair Board, townspeople, farmers, and businesses helped organize the rodeo. Local Native Americans were a vital group involved in the rodeo formation. The Kittitas Indians had traditionally hosted an annual fall pilgrimage to what was called "the meeting grounds." They saw a fall rodeo as an opportunity to continue their traditions into the modern age. The Ellensburg Rodeo and Kittitas County Fair continue to be a place to experience and better understand the history of Kittitas County.

### National Register of Historic Places in Kittitas County

The National Park Service maintains the National Register of Historical Places as a repository of information on significant cultural locale. These may be buildings, roads or trails, places where historical events took place, or other noteworthy sites. The NPS has recorded sites in its database. These sites are summarized in Table 8.

TABLE 8 NATIONAL REGISTER OF HISTORICAL PLACES IN KITTITAS COUNTY

Item #	Resource Name	Address	City	Listed	Architect, builder, engineer
1	Beverly Railroad Bridge	Spans Columbia River	Beverly	1982	Chi.,Milwkee, St.Pl. & Pacific RR
2	Cabin Creek Historic District	W of Easton	Easton	1979	

3	<b>Chicago, Milwaukee, St. Paul &amp; Pacific Railroad--Kittitas Depot</b>	Jct. of Railroad Ave. and Main St	Kittitas	1992	
4	<b>Chicago, Milwaukee, St. Paul and Pacific Railroad: South Cle Elum Yard</b>	Near Milwaukee Rd. and Reservoir Canyon Rd	South Cle Elum	2003	
5	<b>Cle Elum-Roslyn Beneficial Association Hospital</b>	505 Power St	Cle Elum	1980	
6	<b>Downtown Ellensburg Historic District</b>	Roughly bounded by 3 <sup>rd</sup> & 6th Aves., & Main & Ruby Sts	Ellensburg	1977	Unknown
7	<b>First Railroad Addition Historic District</b>	Roughly bounded by Tenth Ave., D St., Ninth Ave., and A St	Ellensburg	1987	Unknown
8	<b>Gray, Dr. Paschal and Agnes, House</b>	606 N. Main St	Ellensburg	1997	Ames. William O
9	<b>Kinkade, John W., Farmstead</b>	Off U.S. 7B	Ellensburg	2001	Unknown
10	<b>Kittitas County Fairgrounds</b>	512 N. Poplar St	Ellensburg	1999	
11	<b>Lake Keechelus Snowshed Bridge</b>	I-90 near Snoqualmie Pass	Hyak	1995	State Dept of Hwys
12	<b>Liberty Historic District</b>	Williams Creek Wagon Rd	Liberty	1974	Unknown
13	<b>Milwaukee Road Bunkhouse</b>	526 Marie	South Cle Elum	1989	
14	<b>Nelson, Albert, Farmstead</b>	Manastash Rd	Ellensburg	1982	Nelson, Albert, Jones, Ike
15	<b>Northern Pacific Railway Passenger Depot</b>	606 W. Third St	Ellensburg	1991	
16	<b>Northwestern Improvement Company Store</b>	1st St. and Pennsylvania Ave	Roslyn	1973	
17	<b>Olmstead Place State Park</b>	E of Ellensburg near the Kittitas Hwy	Ellensburg	1971	
18	<b>Ramsay House</b>	215 E. Ninth	Ellensburg	1986	Maclure, Samuel
19	<b>Roslyn Historic District</b>	WA 2E	Roslyn	1978	Unknown
20	<b>Salmon la Sac Guard Station</b>	N of Cle Elum in Wenatchee National Forest	Cle Elum	1974	
21	<b>Shoudy House</b>	309 W. Fifth Ave	Ellensburg	1992	Unknown
22	<b>Springfield Farm</b>	9 mi. N of Ellensburg	Ellensburg	1977	Unknown
23	<b>Tekison Cave</b>	Address Restricted	Wenatchee	1978	

24	Thorp Mill	Thorp Highway		1977	
25	Washington State Normal School Building	8th Ave	Ellensburg	1976	Nash, John, Price, C.E.

## Emergency Service Providers

### Kittitas County Fire District One (KCFD #1)

Serves 43 square miles in central Kittitas County in the communities of Thorp, Clark Flats and Sunlight Waters. There are approximately 2500 residents. Total assessed valuation \$146,088,368.00 taxed for emergency services at \$1.00 per thousand.

Contact - Chief DJ Evans - (509) 964-2435

#### Members :

Career = 0 ( Chief is partially compensated )

Volunteer = 32

#### Stations - 2

11 - 10700 Thorp Hwy

#### Apparatus

E-111 – 1000 gallons, 1000 gpm

R-111 - Rescue

E-112 – 500 gallons, 130 gpm

S-111 – Rescue/Command

T-111 – 4500 gallons, 450 gpm

A-111 – BLS Aid Vehicle

S-113 – Mass Casualty Unit

T-131 – 2200 gallons, 750 gpm

R-112 - Rescue

12 - Clark Flats – 10941 SR 10

#### Apparatus

E-131 – 750 gallons, 750 gpm

B-121 – 600 gallons, 130 gpm

E-121 – 750 gallons, 750 gpm

T-121 – 3000 gallons, 750 gpm

Call Volume – 2005 – 119, 2006 – 146, 2007 – 178

**Minimum staffing** - not applicable - agency is staffed by volunteers who respond from home to the station on a per call basis.

**Services** - Fire suppression, basic life support on a mutual aid basis, and rescue.

**Kittitas County Fire District Two (KCFD #2)** - Serves 275 square miles in the Kittitas Valley including the City of Ellensburg. There are approximately 25,000 residents. Total assessed valuation is taxed for emergency services at a rate of \$1.50 per thousand.

Contact - Chief John Sinclair (509) 933-7235

Command – 2 x Type 6 brush truck – 2101 and 2102

#### Members

Career = 24 shift, 3 staff officers + 4 office

Resident = 6 Reserve = 16 Volunteer = 80

#### Stations-2

21 - 2020 Vantage Highway –

**Central Main** – Staffing 3 minimum

**Apparatus**

Brush 211 – Type 6 – 150 gallon tank

Brush 212 – Type 3 Brush – 600 gallon tank – 4 wheel drive

Engine 211 - 1000 gallon tank, 1250 gpm – Triple Combination Pumper

Engine 212 - 1000 gallon tank, 750 gpm – Triple Combination Pumper

Tender 211 – 3200 gallon tender

22 - 2671 Tjossem Road - **Broadview**

Apparatus – Engine 221 - 100 gallon tank, 1250 gpm – Triple Combination Pumper

23 - 3301 Denmark Rd – **Denmark**

Apparatus – Engine 231 - 500 gallon tank, 1500 gpm – Triple Combination Pumper

Tender 231 – 3000 gallons

24 - 4481 Fourth Parallel Rd - **Badger Pocket**

Apparatus – Brush 241 – Type 6 Brush Truck – 250 gallon tank

Engine 241 - 1000 gallon tank, 1250 gpm – Triple Combination Pumper

Tender 241 – 2500 gallons

25 - 207 Main St - **Eastside**

Apparatus – Engine 251 - 1000 gallon tank, 750 gpm – Triple Combination Pumper

26 - 6651 Brick Mill Rd - **Fairview**

Apparatus – Engine 261 - 1000 gallon tank, 1000 gpm – Triple Combination Pumper

26 - Satellite 2380 **Game Farm Rd**

Apparatus – Engine 262 - 1000 gallon tank, 750 gpm – Triple Combination Pumper

27 - 8800 Reecer Creek Rd - **Reecer Creek**

Apparatus – Engine 271 - 1000 gallon tank, 750 gpm – Triple Combination Pumper

28 - 5640 Cove Rd **Westside**

Apparatus: Brush 281 – Type 6 Brush Truck

Engine 281 - 1000 gallon tank, 750 gpm – Triple Combination Pumper

Tender 281 - 3000 gallons

28 - 51 Barnes Rd - **Westside Satellite**

Apparatus : Engine 282 - 1000 gallon tank, 750 gpm – Triple Combination Pumper

29 – 102 N Pearl St – Staffing 3 minimum

Apparatus – Brush 291 – Type 3 Brush truck – 750 gallon tank, 4 wheel drive

Engine 292 – 500 gallon tank, 1500 gpm – Triple Combination Pumper

Engine 291 - 500 gallon tank, 1500 gpm – Triple Combination Pumper

Ladder 291 – 105' Quint, 500 gallon tank, 2000 gpm

Medic 291 – Type 3 ALS

Medic 292 - Type 3 ALS

Medic 293 - Type 3 ALS

Rescue 291 – 4 wheel drive medium duty rescue, 100 gallon comp air foam

**Services** - Fire suppression, hazardous materials response, advanced life support and transport and rescue.

**Kittitas County Fire District Three (KCFD #3)** - Serves the greater Easton area of approximately 12 square miles and a population of 250. Total assessed valuation is \$105,713,381.00 taxed for emergency services at a rate of \$.8482 per thousand.

Contact - Chief Craig McKee (425)766-4246

**Members**

Career = 0

Volunteer = 16

**Stations - 1**

31 - Cabin Creek Road in Easton

Apparatus –

E-311 – 800 gallons, 1250gpm

B-311 – 750 gallons, 90gpm

T-311 – 4000 gallons, 750gpm

A-311 – BLS Aid Car

T-312 – 2700 gallons, 750gpm

**Minimum staffing** - Not applicable - staffed by home response volunteer personnel.

**Services** - Fire suppression, basic life support on an automatic aid basis, and rescue.

**Kittitas County Fire District Four (KCFD #4)** - Serves the greater Vantage area of approximately Total assessed valuation is \$12,516,568.00 and is taxed for emergency services at a rate of \$0.7126 per thousand.

Contact - Chief Bryan Stockdale (509) 856-2333

**Members**

Career = 0

Volunteer = 14

**Stations - 1**

41 - #1 Joyce St – Vantage

**Minimum staffing** - not applicable - agency is staffed by volunteers who respond from home to the station on a per call basis.

**Services** - Fire suppression, basic life support and hazardous materials response on a mutual aid basis.

**Kittitas County Fire District Six (KCFD #6)** - Serves the Lake Cle Elum and Ronald areas of 7 square miles and 1000 residents. Total assessed valuation is \$227,709,001.00 and the tax rate for emergency services is \$0.4784 per thousand.

Contact - Chief Tim Milbert (509) 260-1220

**Members**

Career = 0

Volunteer = 16

**Stations - 1**

71 - 1<sup>st</sup> & Atlantic - Ronald

Apparatus

E-611 – 1000 gallons, 1000 gpm

B-612 – 100 gallons, 50 gpm

T-611 – 3000 gallons, 1000 gpm

B-611 – 100 gallons, 50 gpm

**Station – 2**

21 Sunset Lane

Apparatus –

B-621 – 500 gallons, 750 gpm

B-622 – 100 gallons, 50 gpm

**Minimum staffing** - not applicable - agency is staffed by volunteers who respond from home to the station on a per call basis.

**Services** - Fire suppression and hazardous materials response on a mutual aid basis.

**Kittitas County Fire District Seven (KCFD #7)** - Serves the greater Cle Elum and Peoh Point areas of 85 square miles and 1500 residents. Total assessed valuation is \$370,912,003.00 and the tax rate for emergency services is \$0.7749 per thousand.

Contact – Chief Russ Hobbs

**Members**

Career = 0 ( Some positions compensated but no career positions )

Volunteer = 60

**Stations - 5**

71 - 921 Upper Peoh Point Road - Peoh Point

72 - Teanaway

73 - Nelson Siding

74 - Ballard

75 - Middle Fork

**Minimum staffing** - not applicable - agency is staffed by volunteers who respond from home to the station on a per call basis.

**Services** - Fire suppression, basic life support and hazardous materials response on a mutual aid basis.

**Kittitas County Fire District Eight (KCFD #8)** - Serves the Lake Kachess area of 12 square miles and approximately 450 residents. Total assessed valuation is \$106,000,000 and is taxed for emergency services at a rate of \$1.00 per thousand.

Contact - Chief Monty Moore (206) 617-4521

**Members**

Career = 0

Volunteer = 20

**Stations -**

81 - 3012 Via Kachess Rd

Apparatus –

E-811 – 750 gallons, 1250 gpm 4x4

A-811 – BLS Aid Car 4x4

B-811 – 300 gallons, 90 gpm – Type 64x4

S-811 – 4 WD Pickup

82 - 4711 Kachess Lake Rd

Apparatus –

T-821 – 2200 gallons, 750gpm4x4

B-821 – 250 gallons, 75 gpm

83 – 90 Lost Lake Rd

Apparatus –

S-831 – 150 gallons, 45 gpm 4x4

E-831 – 3000 gallons, 1250gpm

A-831 – BLS – 4WD

R831 – 500 gallon, 500 gpm 4X4

**Minimum staffing** - not applicable - agency is staffed by volunteers who respond from home to the station on a per call basis.

**Services** - Fire suppression and basic life support response on an automatic aid basis.

**Snoqualmie Pass Fire & Rescue (KCFD #51)** – A multi-county Fire District that serves the greater Snoqualmie Pass area of approximately 30 square miles, including Interstate-90 from MP 42 to MP 60.5. Full time population of 400 grows to approximately 2,000 during the winter. Total assessed valuation is \$242,490,627.00 taxed for Fire and Emergency Medical services at a rate of \$.9000 per thousand. Snoqualmie Pass Fire & Rescue also has a Fire Benefit Charge that is applied to all commercial and some condominium properties.

Contact - Chief Matt Cowan (206)396-6287

**Members**

Career = 0

Volunteer = 22

**Stations - 1**

291 – Snoqualmie Pass Summit

Apparatus –

E-291 – 750 gallons, 1500 gpm

Aid-291 – BLS Ambulance, 4x4

E-292 – 750 gallons, 1,250 gpm

Aid-292 – BLS Ambulance

Brush-291 350 gallons, 100 gpm

Batallion-291 – Command Vehicle

SNOW-291 - Snowmobile Aid/Rescue

SNOW-292 – Snowmobile Aid/Rescue

**Minimum staffing** – Volunteers perform E-shifts during peak times on the weekends. During non-peak times, volunteers respond from home or work.

**Services** - Fire suppression, Emergency Medical Services by BLS Aid/Ambulance, and Specialized Rescue

**Kittitas County Hospital District One (KCHD #1)** – Response from Hospital District #1 And District #2 provided through 911

**Kittitas County Hospital District Two (KCHD #2)** - KCHD #2 serves upwards of 11,000 residents in upper Kittitas County, an area of 800 square miles. KCHD #2 is the only advanced life support provider and the primary basic life support provider.

Contact – Mark Raaka

**Members**

Career = 6 (Equivalent - full-time staff of 4 personnel supplemented by per diem employees)

Volunteer = N/A - 0

**Stations - 1**

Cle Elum

**Minimum staffing** - 1 paramedic and 1 emergency medical technician. Additionally, on selected weekends a second response crew is added comprising two emergency medical technicians.

**Services** - Advanced and basic life support.

**Cle Elum Fire Department (CEFD)** - Cle Elum Fire Department serves the City of Cle Elum which approximately 4 square miles and 1800 residents. Additionally, CEFD serves as the primary backup to KCHD #2 when not available for emergency medical responses in upper county. Total assessed valuation is \$180,771,821.00 and the tax rate for emergency services based on budget for fire department as a percentage of property value is \$0.7318 per thousand.

Contact - Chief Dave Campbell

**Members**

Career = 0 ( Chief Officers receive partial compensation but are not career personnel)

Volunteer = 47

**Stations - 2**

51 - 301 Pennsylvania - Cle Elum

Apparatus –

E-511 – 750 gallons, 1000gpm

A-511 – BLS Aid Car

T-511 – 4000 gallons, 500gpm

B-511 – 200 gallons, 90gpm

52 – 2<sup>nd</sup> St and Columbia - Cle Elum

Apparatus –

E-521 – 750 gallons, 750gpm

A-521 – BLS Aid Car

S-511 – Command Vehicle

**Minimum staffing** - not applicable - agency is staffed by volunteers who respond from home to the station on a per call basis.

**Services** - Fire suppression, hazardous materials response and basic life support and occasionally advanced life support response on an automatic aid basis.

**Kittitas Fire Department (KFD)** - Serves 1120 city residents in Kittitas in an area of approximately 0.6 square miles. Total assessed valuation is \$33,873,064.00 and the tax rate for emergency services based on budget for fire department as a percentage of property value is \$0.4876 per thousand.

Contact - Chief Roy Carbajal

**Members**

Career - 0 ( Chief receives some compensation but is not a career position. )

Volunteer - 14

**Stations - 1**

95 - 207 Main St - Kittitas

**Minimum staffing** - Not applicable - staffed by volunteer personnel who respond from home on a per call basis.

**Services** - Fire suppression, fire prevention, hazardous materials response, rescue, public education, and basic life support.

**Roslyn Fire Department (RFD)** - Serves 1.5 square miles and approximately 1015 residents in Roslyn. Total assessed valuation is \$82,288,038.00.

Contact – Chief Gerald Tritt

**Members**

Career - 0

Volunteer -

**Stations - 1**

57 - Roslyn

**Minimum staffing** - Not applicable - staffed by volunteer personnel who respond from home on a per call basis.

**Services** - Fire suppression, hazardous materials response, rescue, and basic life support.

**South Cle Elum Fire Department (SCEFD)** - Serves 1.0 square miles and approximately 542 residents in South Cle Elum. Total assessed valuation is \$26,437,775.00 and the tax rate for emergency services based on budget for fire department as a percentage of property value is \$0.4862 per thousand.

Contact - Chief Les Hadden (509) 260-0085

**Members**

Career - 0

Volunteer - 10

**Stations - 1**

53 - 6<sup>th</sup> and Lincoln - South Cle Elum

**Minimum staffing** - Not applicable - staffed by volunteer personnel who respond from home on a per call basis.

**Services** - Fire suppression, hazardous materials response, rescue, and basic life support

**WA Department of Natural Resources  
Southeast Region- Alpine District Fire Management**

District Manager – Rex Reed  
FMO- Dave Brown  
AFMO- Bob Marshall

Engines-  
Engine 421- 3 fire fighters  
Engine 422- 3 fire Fighters  
Engine 423- 3 fire fighters  
Engine 461- 3 fire fighters  
Engine 463- 3 fire fighters

Dozer available 60% of the time.

Helicopter(s)  
Normally a minimum of one type 2 helicopter stationed at Ellensburg for initial attack.

Additional fire personnel available if needed.

**Yakima Training Center** – Serves that Yakima training Center located partially in Kittitas County.

**Contact** Chief Melcher – (509) 577-3250

2 structural Engines-- 1000 gpm  
3 Brush trucks – Type 6  
1 Fire bucket on contract for installation fires only.

**Minimum Staffing** – 5 personnel on duty.

**Services-** Fire Suppression, basic life support and technical rescue.

## **Hazard Identification, Location, Risk Assessment**

### **Wildfire Hazard Profiles**

Kittitas County was analyzed using a variety of techniques, managed on a GIS system (ArcGIS 9x). Physical features of the region were represented by data layers including roads, streams, soils, elevation, and remotely sensed satellite images. Field visits were conducted by DNR personnel and Fire District officials. Discussions with area residents and fire control specialists augmented field visits and provided insights to forest health issues and treatment options. This information was analyzed and combined to develop an assessment of wildfire risk in the region.

### **Wildfire Fuels in Kittitas County**

Fuels that contribute to wildfires in Kittitas County range from sagebrush/grass to various types of conifers in the upper county. Fire exclusion and lack of thinning have resulted in dense stands of vegetation that act as ladder fuels. In the lower elevations, sagebrush, grass and weed areas provide available fuel for wildfire spread and increased intensity. Drought, combined with these vegetation types, provides additional dead vegetation to fuel future wildfires. Additionally, slash from logging, clearing for development and fire hazard reduction activities are fuel. Homes in the WUI are also fuel.

### **Kittitas County Weather**

Three main elements of weather (temperature, wind and moisture) affect wildfire behavior. High temperatures in Kittitas County during wildfire season dry out fuel sources and allows for fuels to ignite and burn faster. Low humidity and lack of precipitation also increases the chance of wildfire ignition. Most sources agree that wind can have the biggest impact on wildfire's behavior (Mullens, 1999). The dry windy weather of Kittitas County can cause wildfires to grow quickly and also carry firebrands as far as a mile or more. Drought conditions must also be taken into consideration given that drying vegetation can ignite and burn more easily.

### **Kittitas County Topography**

Along with fuel loads and weather, topography is the other major influence on wildfire behavior. Although it remains virtually unchanged, unlike fuel and weather, topography can either aid or hinder wildfire progression. Slope is the most important factor in topography as it relates to wildfire. Fire usually travels uphill much faster than downhill. The steeper the slope, the faster the fire travels. Fires travel in the direction of the ambient wind, which usually flows uphill. A wildfire is also able to preheat the fuel further up the hill because the smoke and heat are rising in that direction which, in turn, increases the fire's speed.

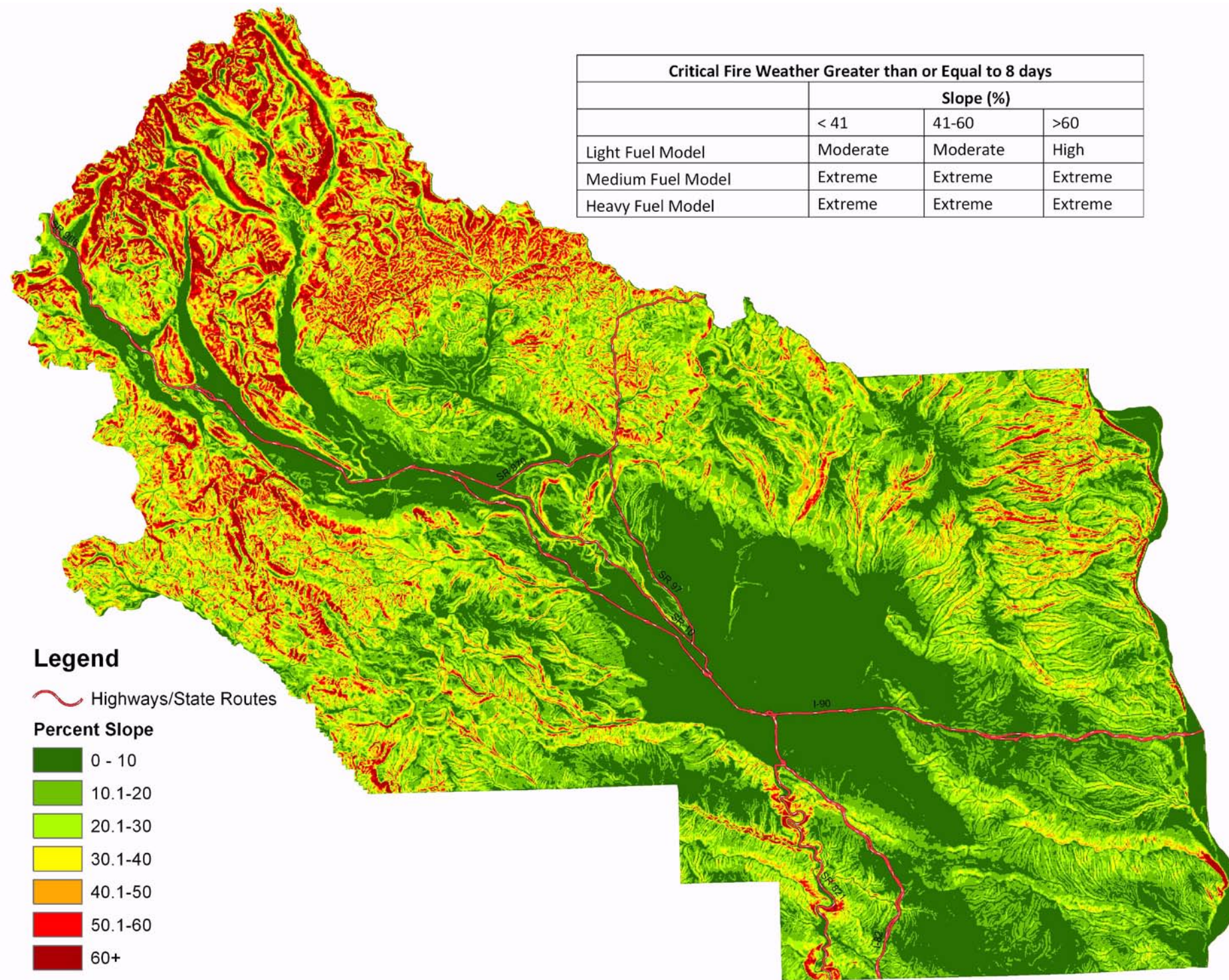


FIGURE 8 SLOPE IN KITTITAS COUNTY (%)

## **Insect Damage**

Surveys are indicating mortality (caused by the western pine beetle) may be increasing over historical levels. With more small Ponderosa pine present, moisture competition is high which results in small stands that are of poor vigor. This can cause an increase of beetle infestation. Once the infestation begins in the small trees, they often attack large healthy Ponderosa pine still present in the stand. Western pine beetle is now the most common tree-killing beetle in second growth Ponderosa pine stands on the Wenatchee National Forest. Pole and small saw timber-sized trees, especially those in dense stands, are also affected. These trees are important for future replacement of the older Ponderosa pine removed by past harvesting. Douglas fir beetle attacks have also become more frequent. Trees defoliated by the western spruce budworm are especially susceptible to attack by this insect. Some of the most serious damage occurs in riparian areas, putting these sensitive ecosystems at increased risk to future fires because an attack by certain insects can leave large patches of dead trees which dry out and will more easily ignite (Mason Community CWFPP, 2005).

Figure 9 displays a map of yearly aerial surveys with results from 2005-2007. These surveys are part of a cooperative effort between the U.S. Forest Service and the WADNR with two different flight observers each sketching a two mile swath out their side of the plane. The primary mission of the survey is to record recently killed and defoliated groups of trees throughout the state, and to continually build a historical record of these trends. The vast majority of damage found is caused by insect and disease damage agents. Current defoliation can be detected as soon as the affected foliage changes color. However, whole tree mortality is not current since only flagged trees (i.e., trees which have a bright red, orange, or yellow foliage color) are recorded. This means that trees killed the year of the survey will not have changed color yet and so a one year lag time results. Since only this distinctive color or "signature" of the tree can be seen. It is an educated guess as to the causal agent. Therefore, ground surveys are used to reinforce the estimates as much as possible (DNR website, Sep 2008).

## **Kittitas County Wildland/Urban Interface (WUI)**

Currently, the urban wild-land interface areas consist of any area which cannot demonstrate adequate fire flow and any area outside a fire district. Also, in heavily timbered, mountainous regions or areas sparsely populated, each jurisdiction adds additional areas to incorporate into the urban wild-land interface. As more development extends deeper into these regions, the associated hazards of wildfire interacting with these residences increases. In addition, a WUI analysis conducted by the National Fire Protection Association for the Kittitas County suggested that 33% of the region is classified as 'high risk' areas regarding wildfire hazard. Recent parcel delineation activity from 2001-2006 has shown that approximately 60% of these new parcels fall within the 'high risk' WUI areas (McColl, 2007). Figure 10 displays the Wildland Urban Interface (WUI) High Risk Communities based on data from the current National Fire Protection Association (NFPA 299) risk assessment, and includes communities with similar wildfire risks.

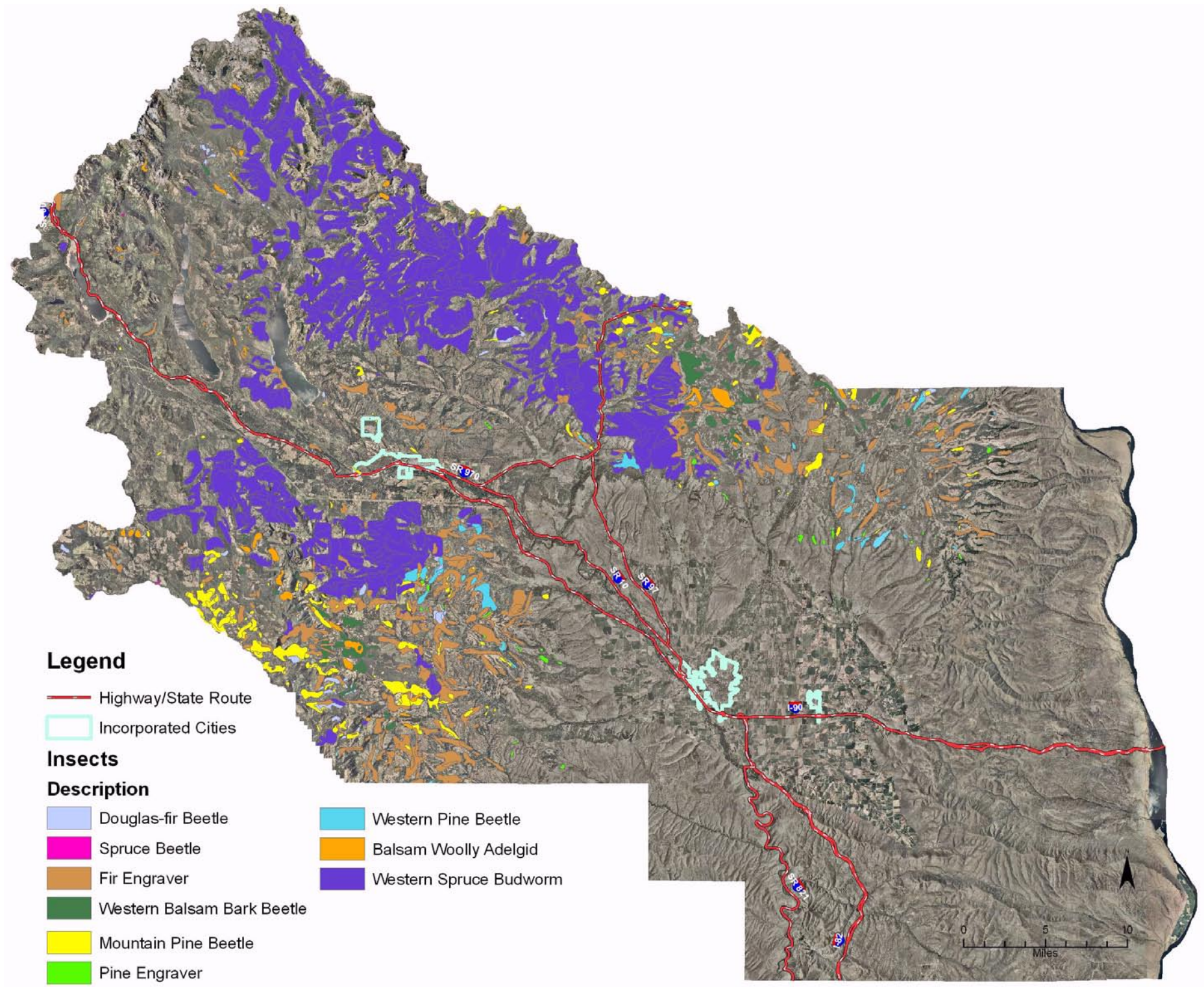


FIGURE 9 INSECT DAMAGE IN FORESTED AREAS (DNR)

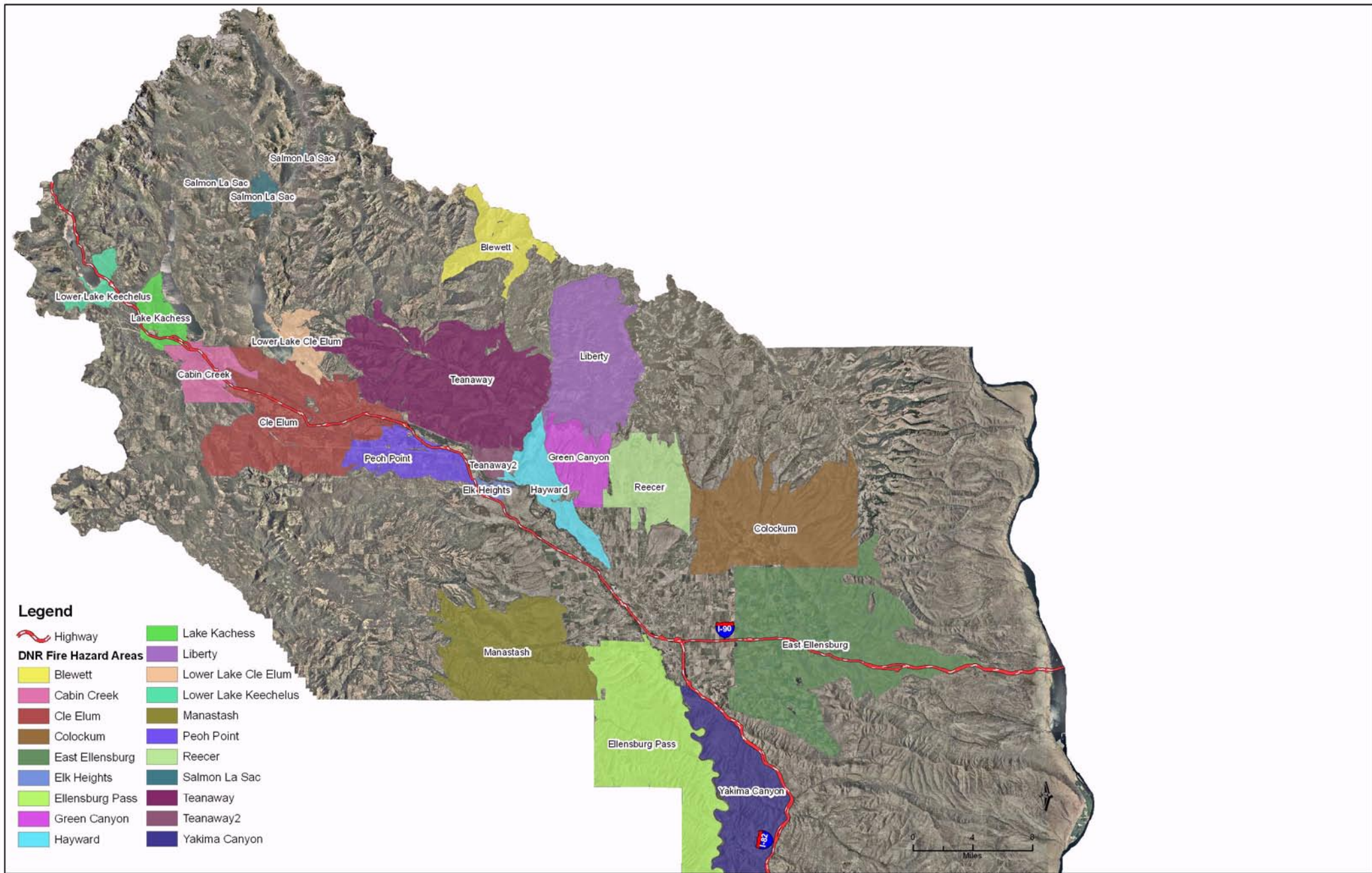


FIGURE 10 DNR ASSESSED FIRE HAZARD AREAS

## **Other Hazard Issues**

The interface areas within Kittitas County are characterized by a diverse mixture of varying housing structures, development patterns, ornamental and natural vegetation and natural fuels. In the event of a wildfire, vegetation, structures and other flammables can merge with unpredictable results. The following additional issues were identified by the CWFPP members:

**Limited Road Access** is a major issue for emergency service providers within the County. As population trends and demands for housing increase, some developments exhibit less than adequate turn-around space for emergency vehicles. Many communities are challenged by steep narrow roadways, while others have only one way in or out.

**Communications** Once a wildland fire starts, various parties can be mobilized to fight it including federal, state, local, and, in some cases, the military. The ability to communicate among all parties - known as interoperability - is essential but, as Government Accountability Office (GAO) reported, is hampered because different public safety agencies operate on different radio frequencies or use incompatible communications equipment (GAO 2005). GAO was asked to assess, among other issues, (1) measures that can help protect structures from wildland fires, (2) factors affecting use of protective measures, and (3) the role technology plays in improving firefighting agencies' ability to communicate during wildland fires.

## **Past Fire Statistics**

Figure 11, Figure 12, and Figure 13 include information about wildfires that have occurred on lands protected by the Washington State Department of Natural Resources, from 1972 through 2008. Figure 15 depicts the causes and location of the fires. This dataset is used to track wildfire information, assess wildfire risks, and to plan wildfire prevention activities in conjunction with Fire District information in the County.

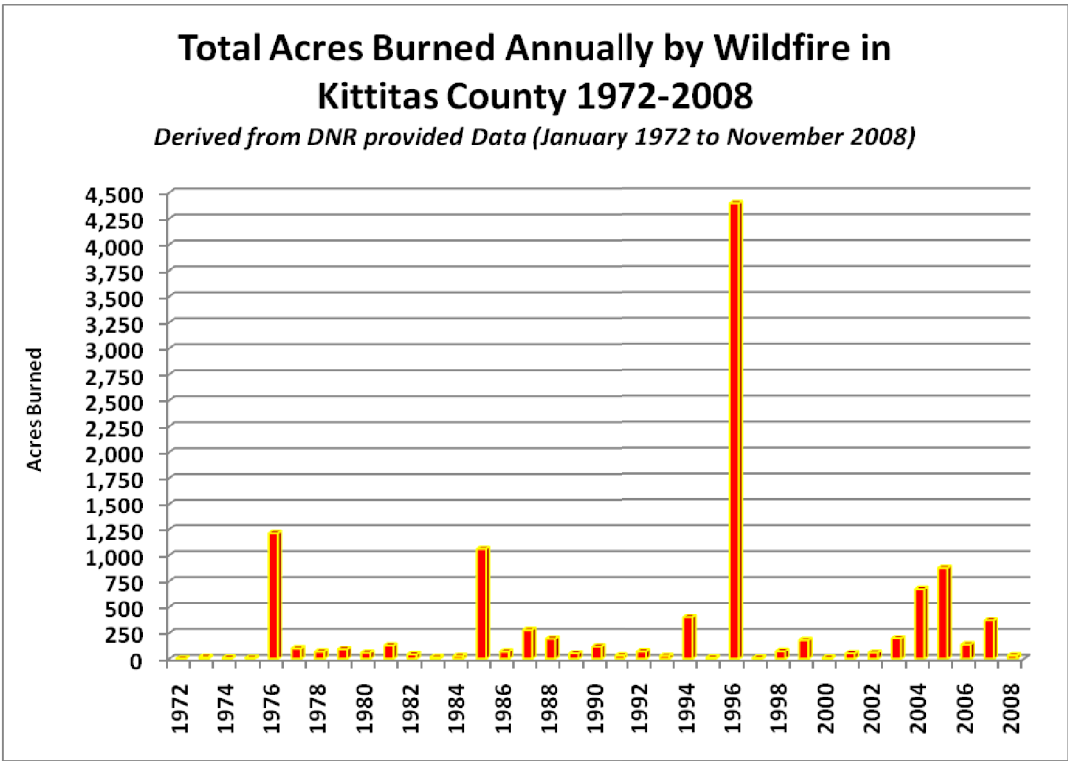


FIGURE 11 TOTAL ACRES BURNED ANNUALLY BY WILDFIRE IN KITTITAS COUNTY

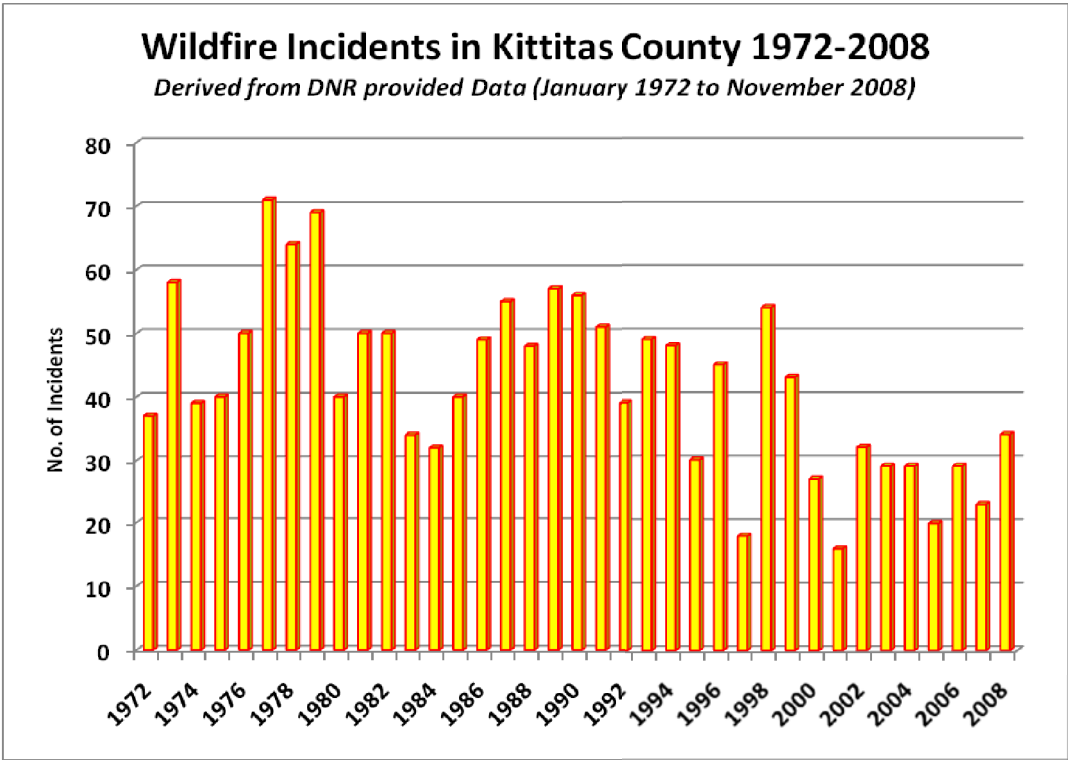


FIGURE 12 WILDFIRE INCIDENTS IN KITTITAS COUNTY 1972-2008

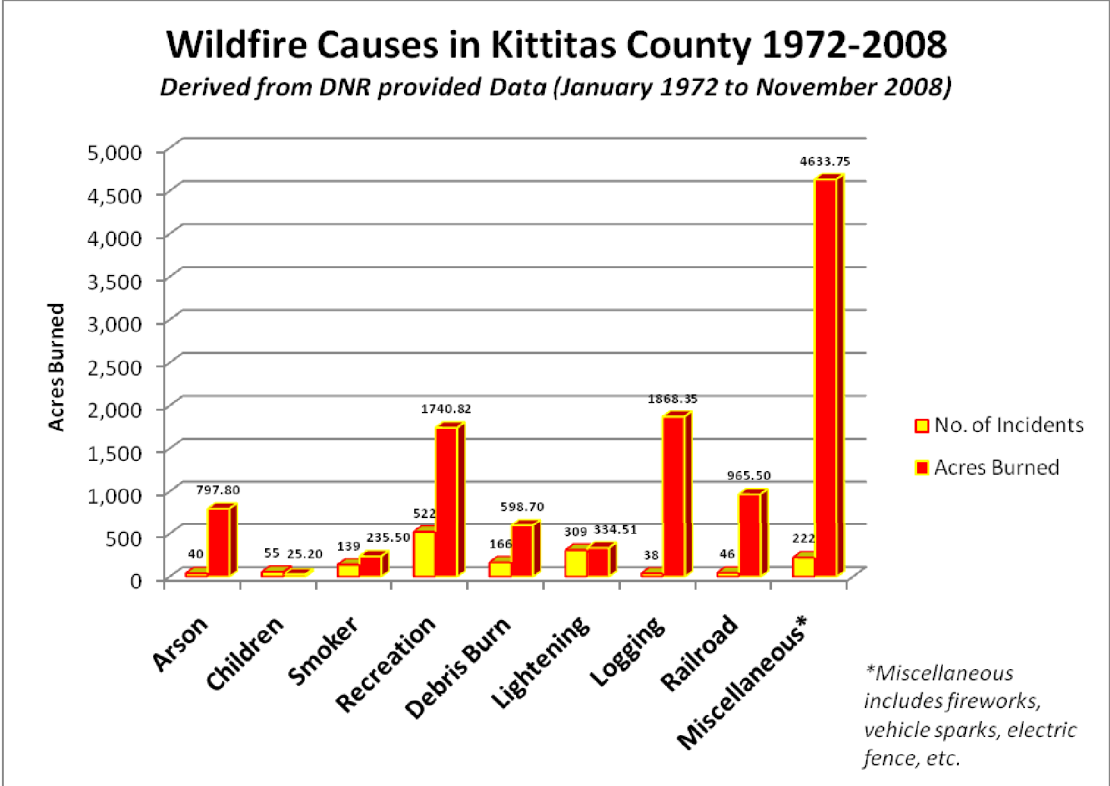


FIGURE 13 WILDFIRE CAUSES IN KITTITAS COUNTY 1972-2008.



FIGURE 14 WILDFIRE IN KITTITAS COUNTY

# Kittitas Fire Statistics 1972- Nov. 2008

DNR Protected Land

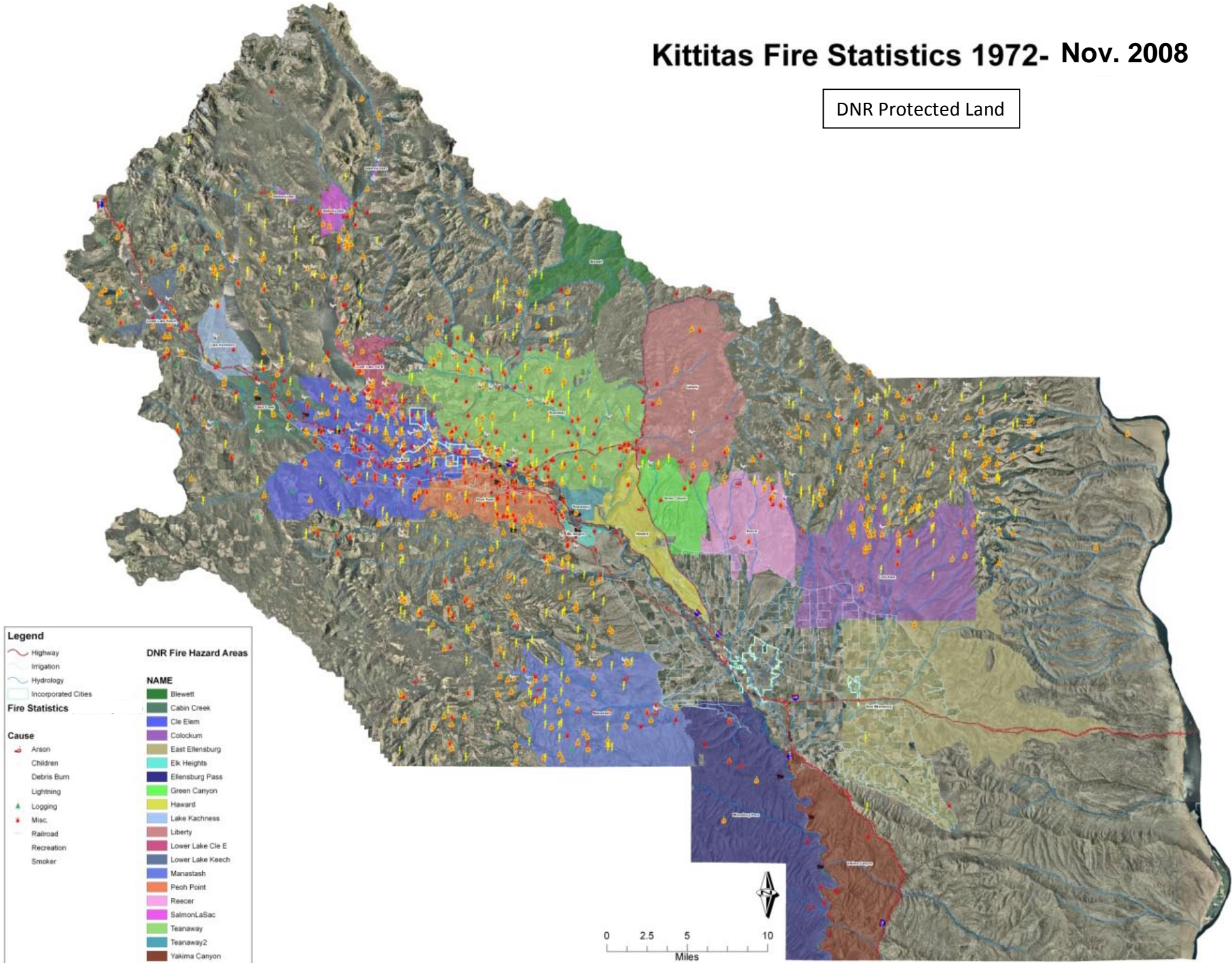


FIGURE 15 FIRE STATISTICS BY CAUSE (DNR DATA)

## Wildfire Hazard Location and Assessment

Table 9 depicts each area’s wildfire hazard based on assessments completed by WA DNR and local fire districts. Each area’s assessment sheets are located in Appendix A. Figure 15 displays the communities on a county map where less than 49 points indicated a low hazard area (green dot), 49-68 points denoted a moderate hazard (yellow dot), 69-83 points signified a high hazard (orange dot) and over 84 points designated an area of extreme hazard (red dot). These areas were further broken down into location based on proximity to fire districts.

TABLE 9 RANKED AREAS OF CONCERN

Name	Rating	Points
Cricklewood	Extreme	94
Cabin Creek Area	Extreme	94
Lower Clockum Pass	Extreme	91
Sun East	Extreme	90
Pine Loch Sun	Extreme	87
Sky Meadows	Extreme	86
Reecer Creek	Extreme	86
Sunlight Waters	Extreme	85
Salmon La Sac	Extreme	85
Cooper Lake	Extreme	85
Hidden Valley	Extreme	84
West Middle Fork Teanaway	High	83
South Wenas	High	83
Burbank Creek	High	83
Lower Lake Kacheelus	High	81
Mineral Springs_Liberty Rd	High	80
Lauderdale to Liberty Springs	High	80
Manastash Canyon Area	High	78
Lanigan Springs	High	77
Ellensburg Ranches	High	77
Cabin Lakes	High	77
Sun Island	High	76
Pine Glenn	High	76
Exit 78	High	76
Roaring Creek	High	75
Liberty Mountain Development	High	75
Summerside	High	72
Lake Forest	High	69

Name	Rating	Points
Bakers Camp Community	Moderate	68
Snoqualmie	Moderate	67
Yakima Canyon	Moderate	66
West Side Road	Moderate	66
Easton Village	Moderate	66
Teanaway Heights	Moderate	65
Sunshine Estates	Moderate	64
Monahan Rd	Moderate	64
Liberty	Moderate	64
Sun Country Estates	Moderate	63
Zrebiec Rd	Moderate	62
Swauk Prairie	Moderate	62
Pine Gulch	Moderate	62
Wildwood	Moderate	61
Driftwood	Moderate	61
West Nelson Siding Rd	Moderate	59
Via Kachess	Moderate	59
Upper Kachess	Moderate	59
Leisure Land Lane	Moderate	58
Timber Mt Loop	Moderate	56
Dromerie Bay	Moderate	55
Peoh Point	Moderate	53
Evergreen Valley	Moderate	50
Easton Ranchettes	Moderate	50
East Ellensburg2	Low	47
East Ellensburg	Low	47

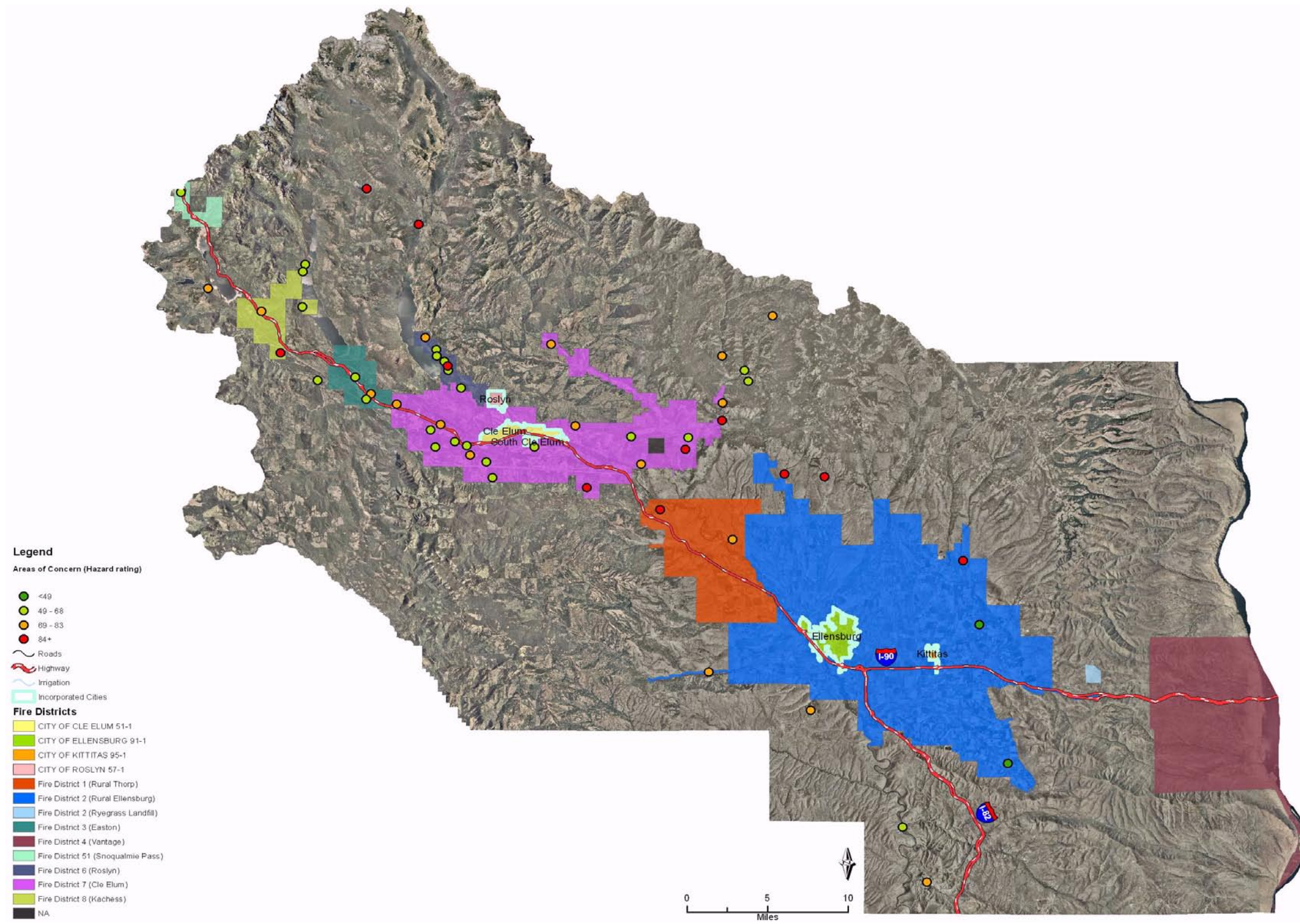


FIGURE 16 AREAS OF CONCERN LOCATED IN OR NEAR FIRE DISTRICTS

# Fire District 1 (and Vicinity) Areas of Concern

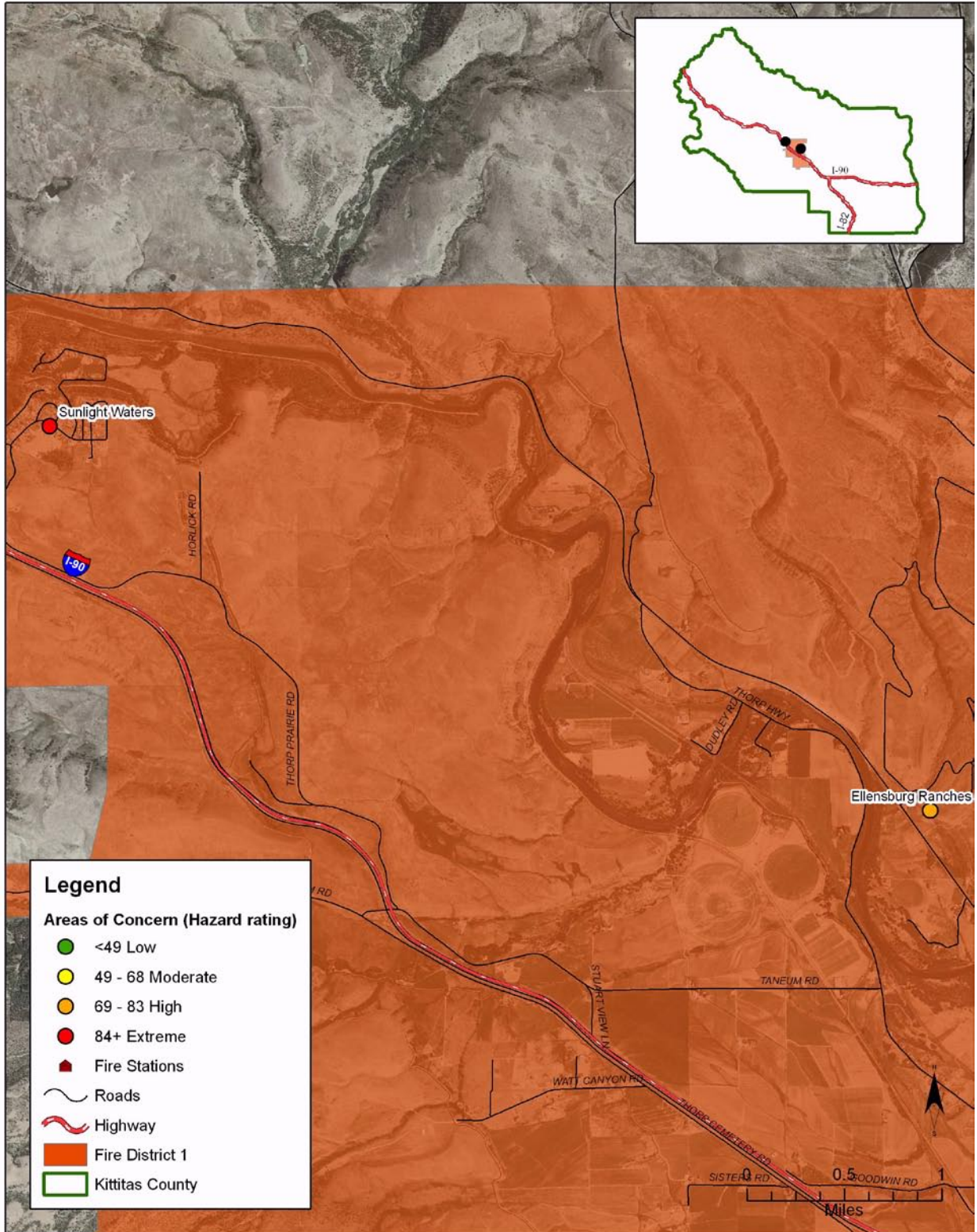
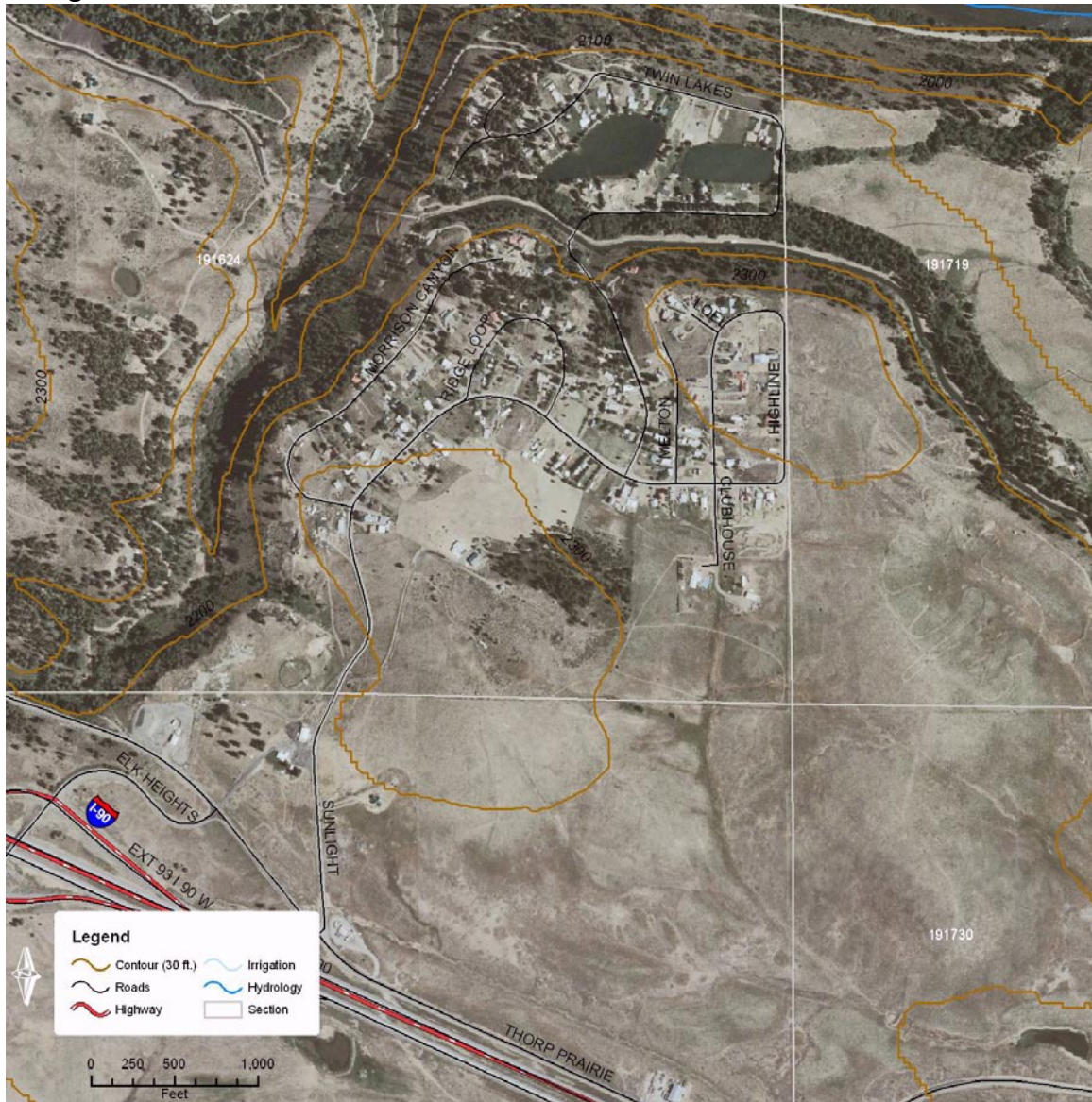


FIGURE 17 FIRE DISTRICT 1 AREAS OF CONCERN WITH HAZARD RATING

## Sunlight Waters



**Roads** - Some of the roads are paved in the development. The main road in is sufficiently wide, however, toward the bottom end of the development, the roads narrow. There is also a one-lane bridge in the middle of the development that is wood and rated for 18 tons.

**Topographic features** - This development sits at the top of steep 40% slopes on two sides, but the development itself is on rolling 10% slopes.

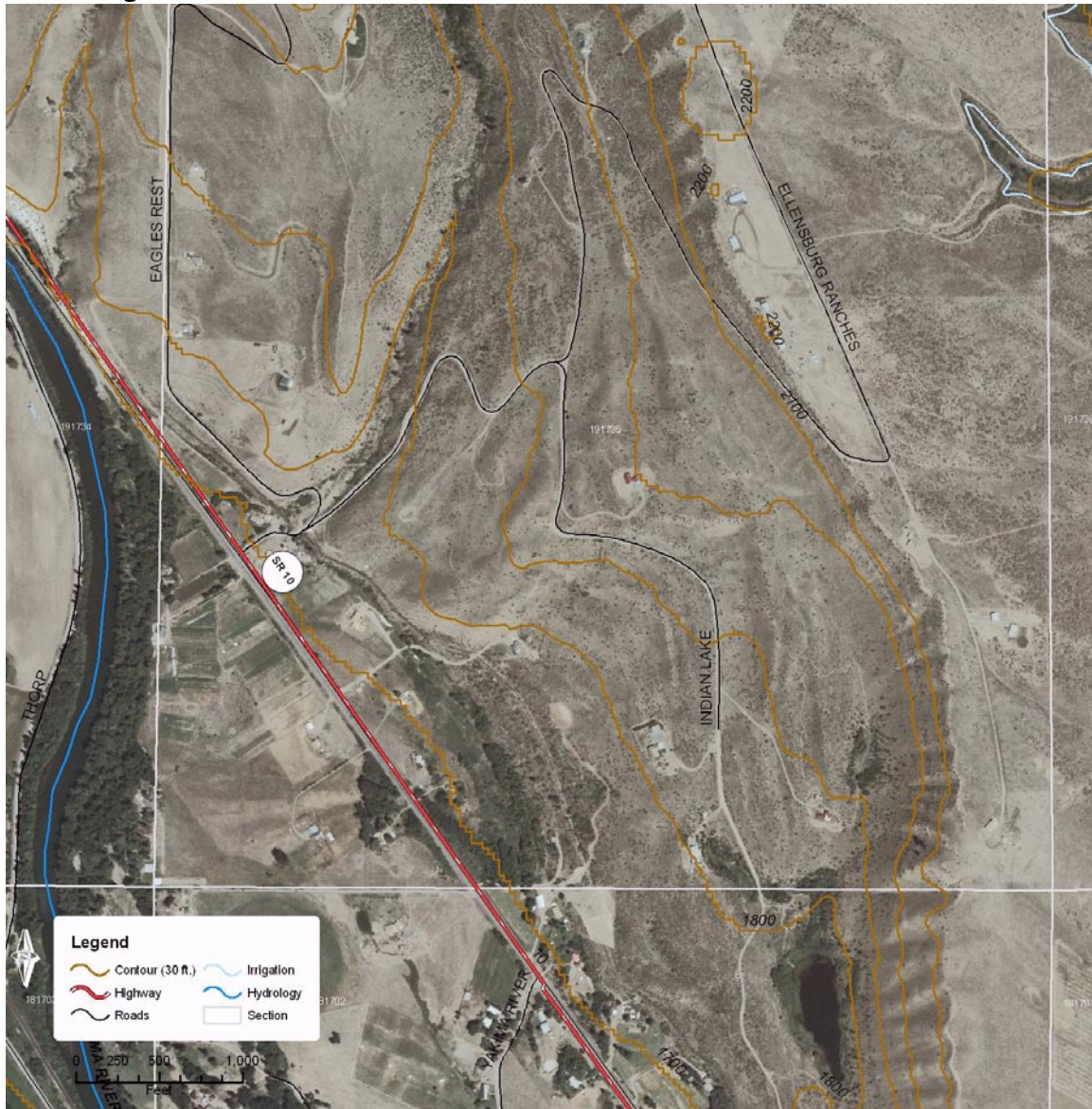
**Fuels** - Light brush and grass. The canyons have timber and brush from top to bottom.

**Houses** - Generally good defensible space is found with green lawns. There are a few homes built on the edge of this development that have no defensible space or set back from the slope.

**Other Factors** - There are two good size ponds and a canal for water sources. The ponds have homes near them and would not make a good bucket source for helicopters.

**Recommendations** - Informational mailings. Offer a roving chipper and promote cleanup days.

## Ellensburg Ranches



**Roads** - The access into the area is limited to one primary road on each end. There is a gate located in the middle of this area with multiple locks. One lock is a DNR Hurd lock, the chain can be cut. About ¼ mile from the gate on the south side the road gets steep with no turnouts and is narrow. Road conditions are not bad, approximately 20' wide and graveled.

**Topographic features** - Terrain is hilly with draws that wind throughout the housing area.

**Fuels** - This area has a history of fast moving grass/brush fires.

**Houses** - This is a year round living area with a few recreation cabins. Homes are built in all of the different types of terrain. The defensible space varies from none to 30'+ feet.

**Other Factors** - The area is located in the grasslands west of Ellensburg & within Fire District #1.

**Recommendations** – Firewise workshops and educational mailings to the landowners.

# Fire District 2 (and Vicinity) Areas of Concern

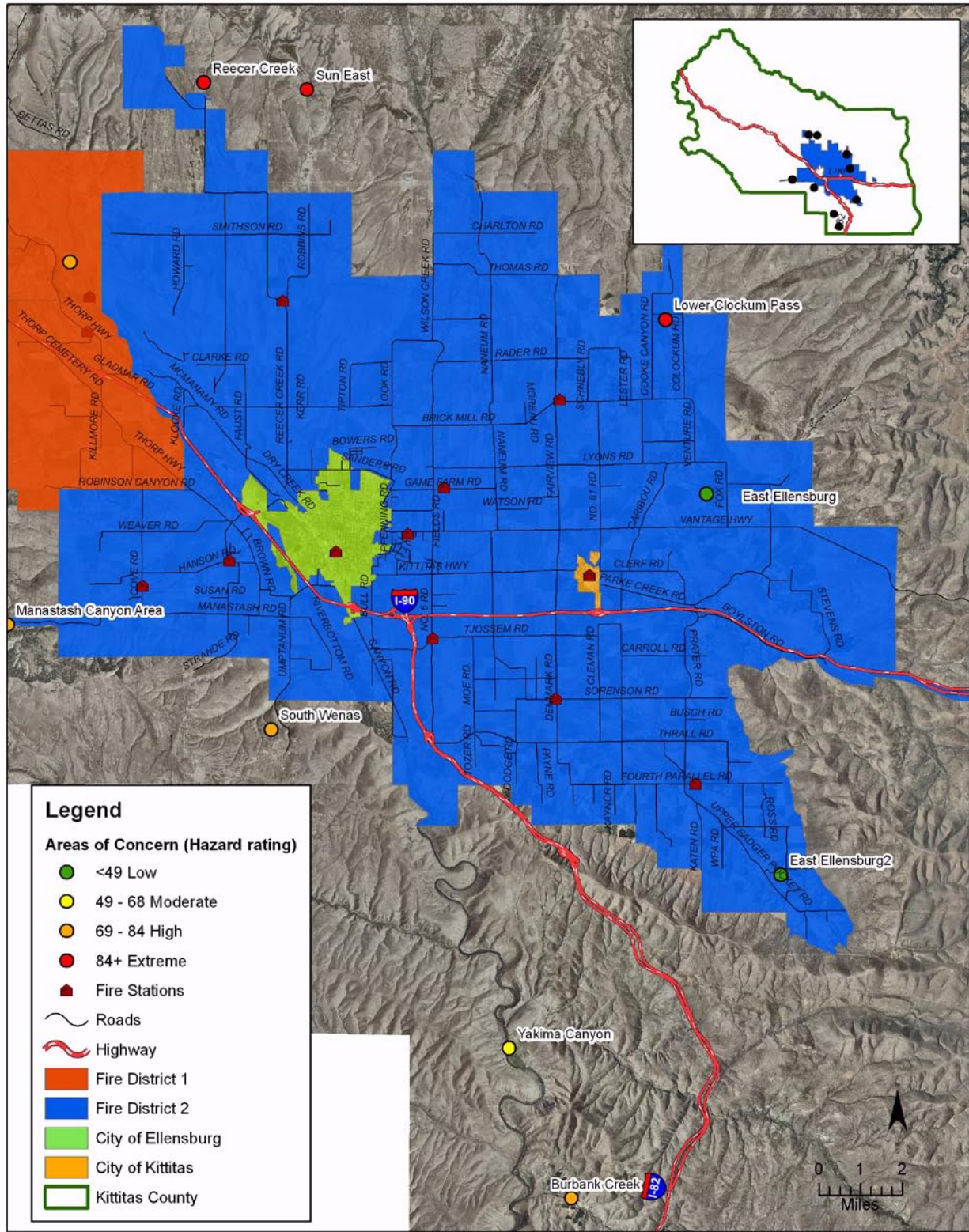
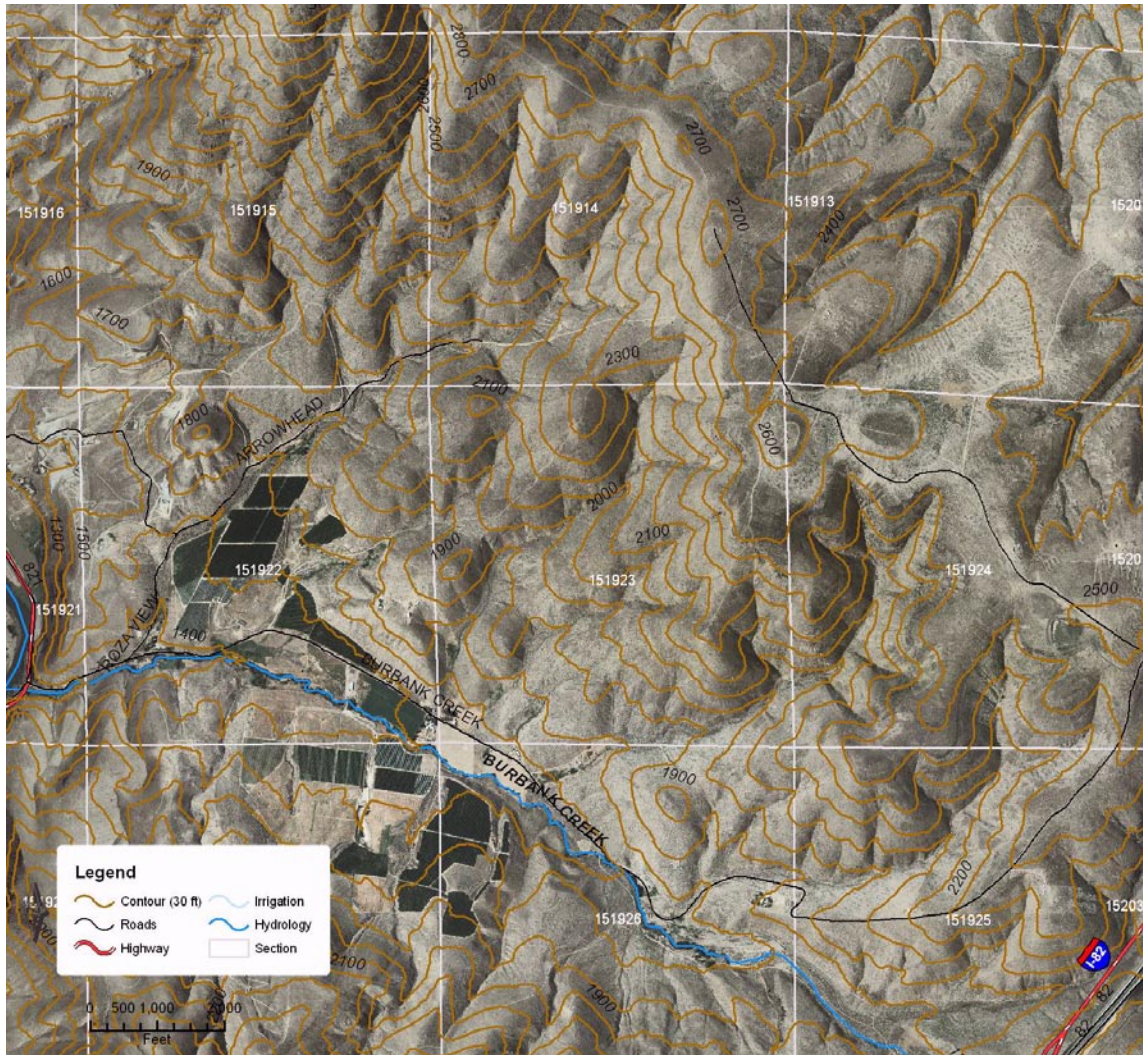


FIGURE 18 FIRE DISTRICT 2 AREAS OF CONCERN WITH HAZARD RATING

## Burbank Creek



**Roads** – One lane dirt road that is narrow, rough, and very dusty. There are inclines up to 15% and one loop road at the bottom.

**Topographic features** - Steep hills and many draws make up the area.

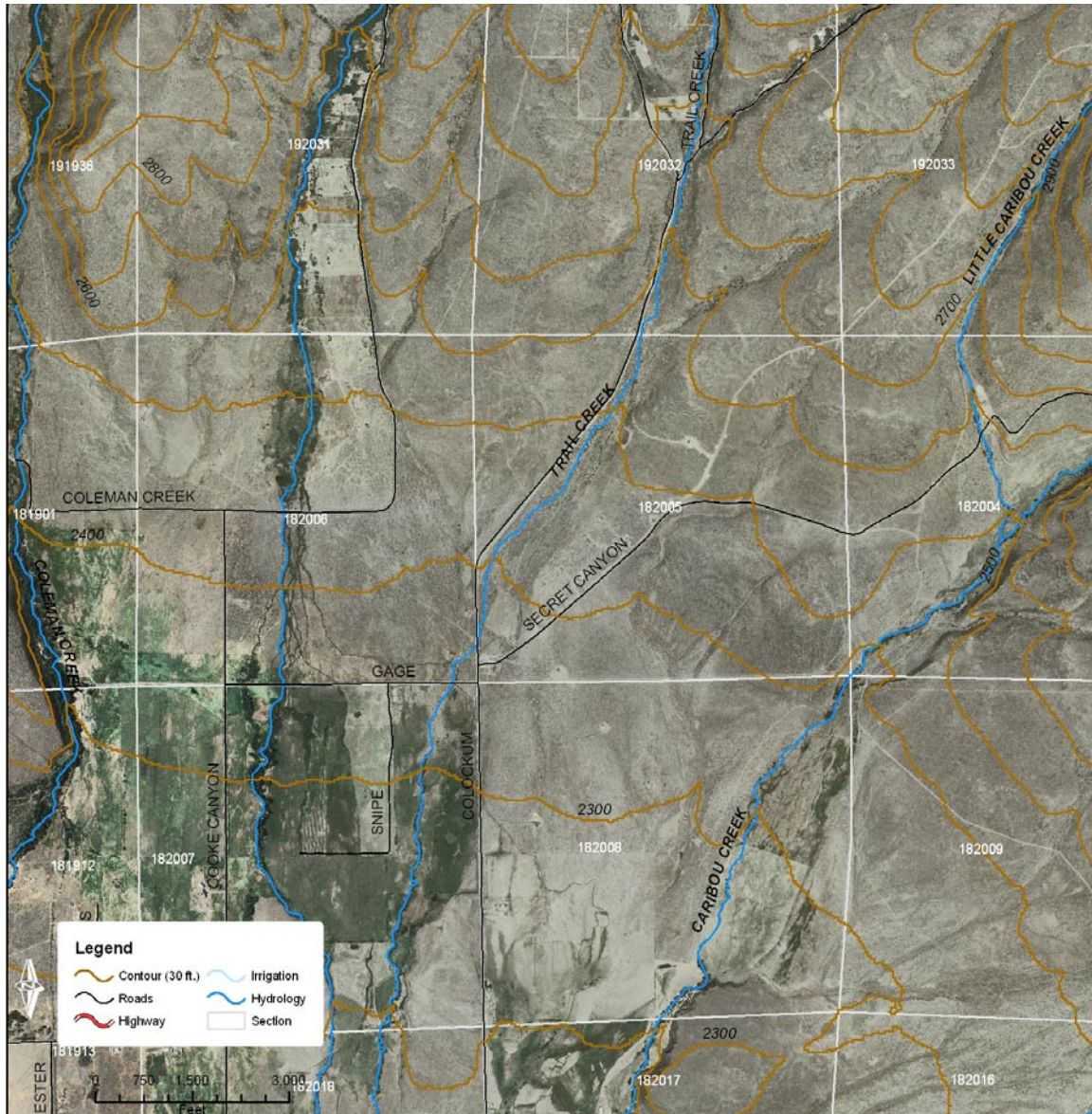
**Fuels** - Grass and sage with a few trees in the draws. In the bottom of Burbank Creek there are many irrigated orchards and fields which could act as good safety zones.

**Houses** - Along the valley bottom, the homes have good defensible space and there are buildings near the irrigated fields and orchards. As you gain elevation on the ridge, the homes are built on the hillsides and ridge tops. Some of these homes have plowed 50+ feet around the structures, creating some defensible space. Others have not, with sagebrush and dry grass surrounding the homes. Most of the homes in the valley bottom are wood homes, but higher in Burbank Creek, they are mostly mobile or travel trailers.

**Other Factors** - Slow and limited response time. Many rattlesnakes and poor access.

**Recommendations** - Mail Firewise information for recommended defensible space for the grass and sagebrush fuels. Construct more turnouts on Burbank Creek Road.

## Lower Colockum Pass



**Roads** - The roads are rough dirt roads that are rutted in the spring and stay that way for most of the year. There is more than one way out, but this leads you out higher into the Colockum. Roads are built in draws and ridges with heavy fuel loadings.

**Topographic features** - Slopes are steep, south facing, and multiple draws.

**Fuels** - Fuels range from light grasses to heavy brush, timber, and slash.

**Houses** - Combustible siding and decks. No defensible space. Heavy fuel loadings around some of the homes.

**Other Factors** - Outside of fire district boundaries. Draft sites are far and few between.

**Recommendations** - Mailings to landowners for education about defensible space. Improve secondary routes in and out.

## Manastash Canyon Area



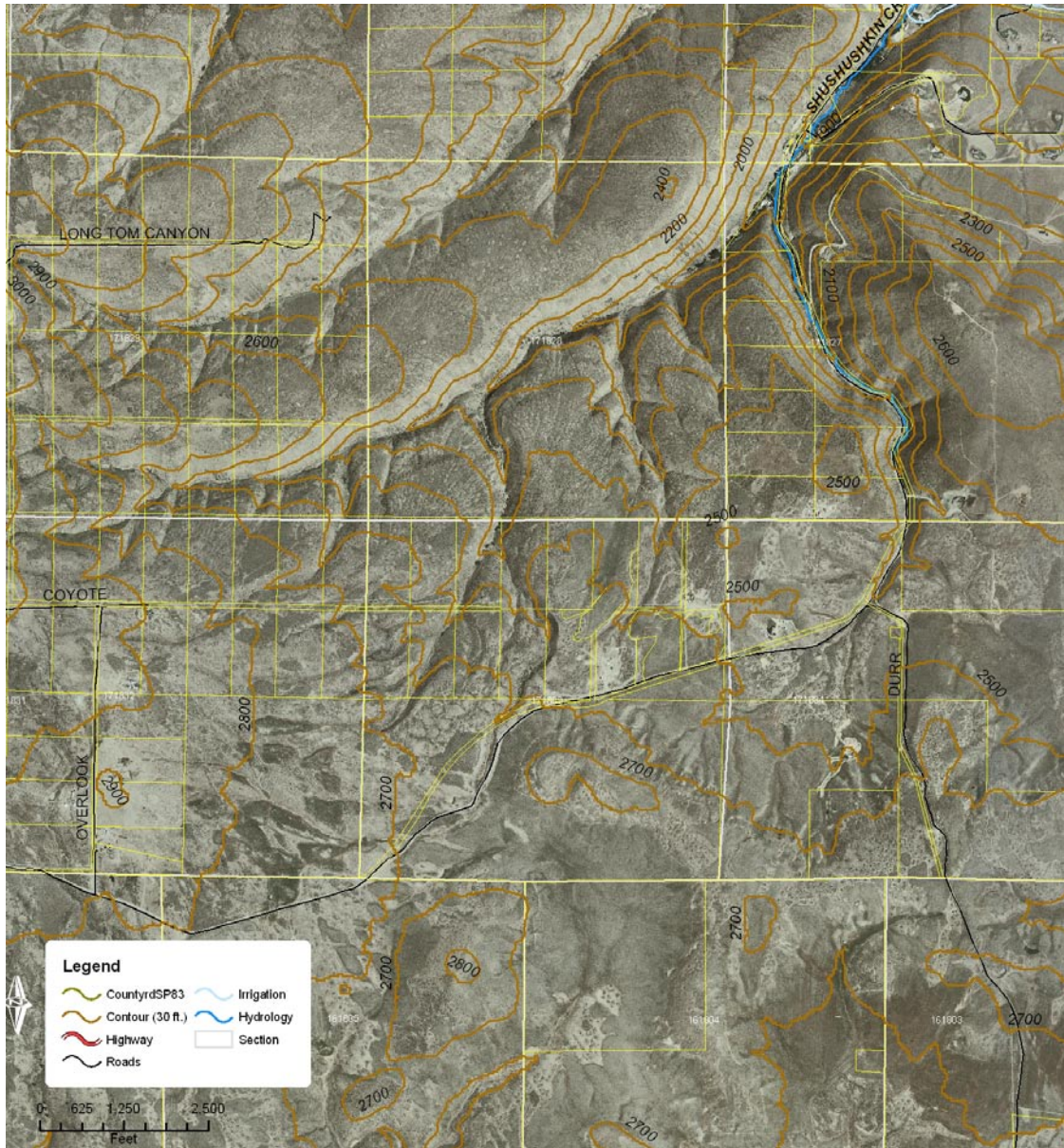
**Roads** - Driveways are narrow and brushy with little area for turnouts or turn around.

**Fuels** - Fuels are from the brush model to heavy slash models varying up through the canyon.

**Houses** – Homes are built in a narrow canyon with one main road out.

**Recommendations** - Education, Firewise workshops, prescriptions. Find funding for fuels reduction programs, and offer a roving chipper.

## South Wenas



**Roads** - Access to the homes are limited to narrow dirt roads that are steep and often rutted.

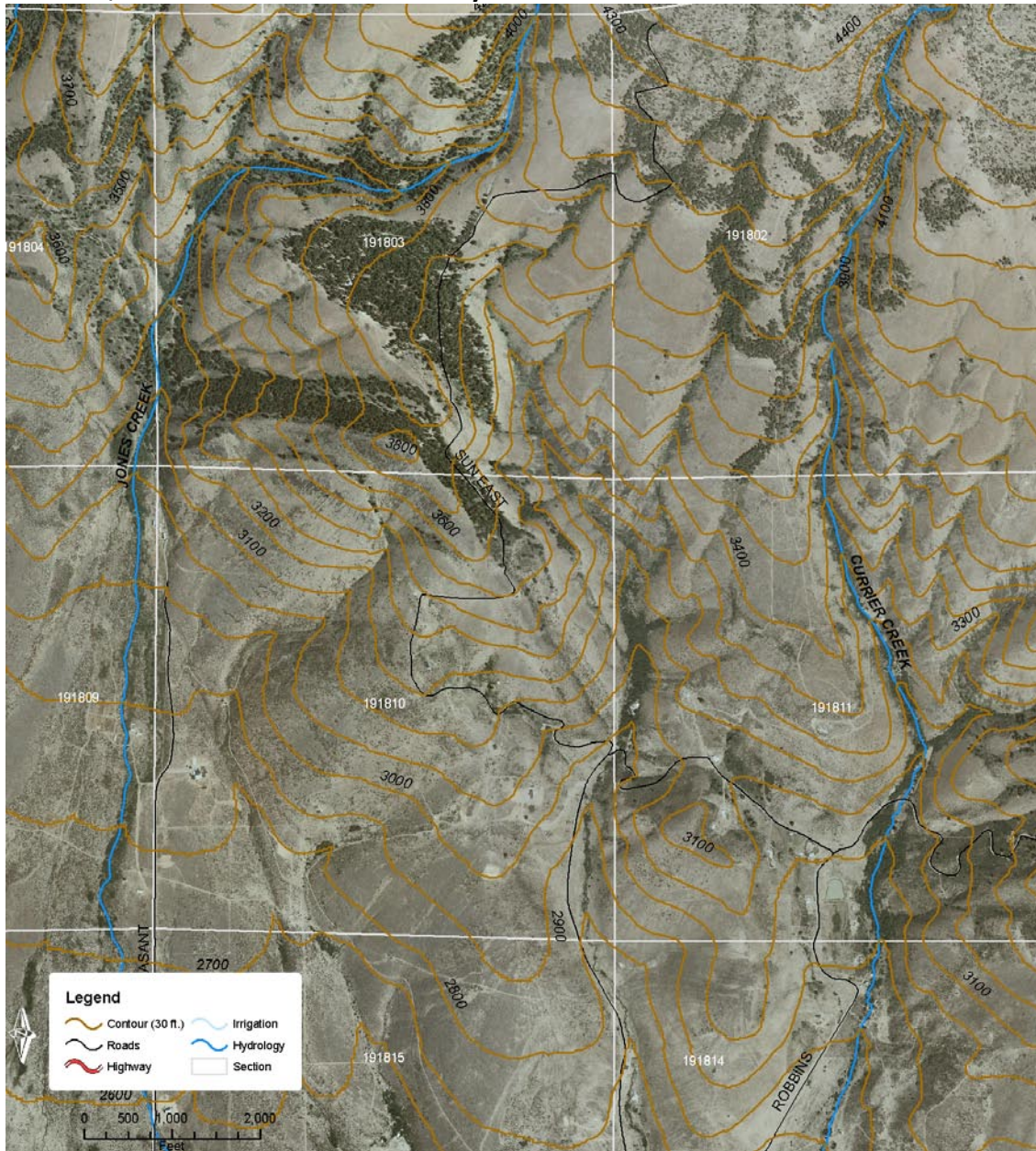
**Fuels** - Surrounded by heavy grass and sage. At Ellensburg Pass, the fuels get heavier going from brush to timber.

**Houses** - Homes are built in drainages, or on top of ridges with very little defensible space

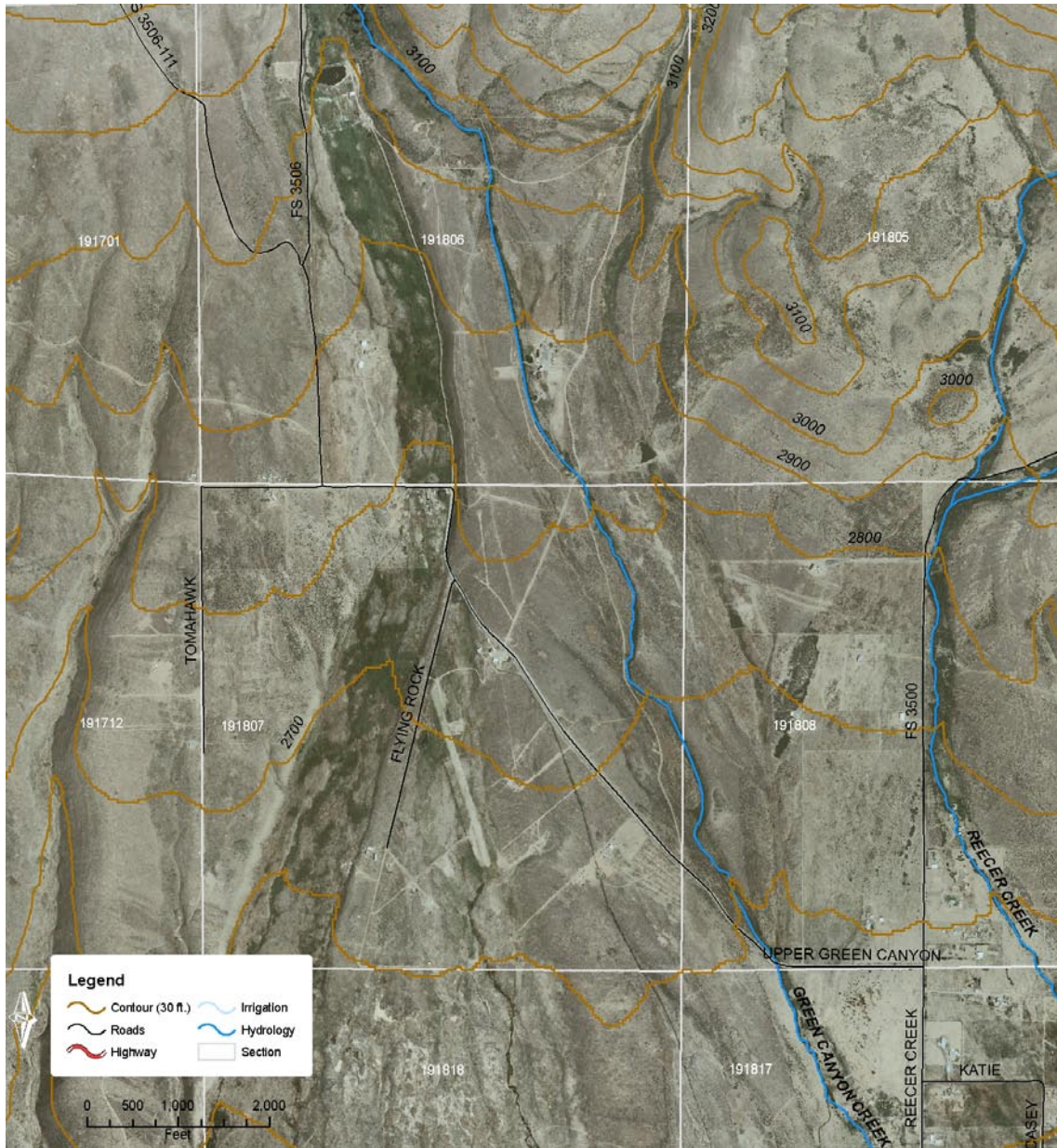
**Other Factors** - Identification of the homes is also limited, i.e., road signs, house numbering.

**Recommendations** - Funding for education, prescriptions, signage, and fuels reduction should be at the top of the priority list. Shaded breaks located at key locations along the forest edges creating an anchor point for fire suppression. Encourage Landowners to improve access to their homes creating more room for emergency vehicles. Fuels reduction projects.

## Sun East, Reecer Creek and Green Canyon



**SunEast** - This development is outside any fire district. Roads are steep and narrow with multiple switchbacks. Some of the roads are rutted out and impassable in the early times of the year. Larger vehicles would have a hard time getting in and turned around--turnouts are few. This development needs better signage, more turnouts, and continuous road maintenance. Roads within the development have gates, with no way to get by without a key or cutting the locks. Homes are built on ridges, in draws, heavy wooded areas, and steep grassy slopes. Homes have little to no defensible space. Some of the lower homes are occupied year round with the upper homes as recreation.

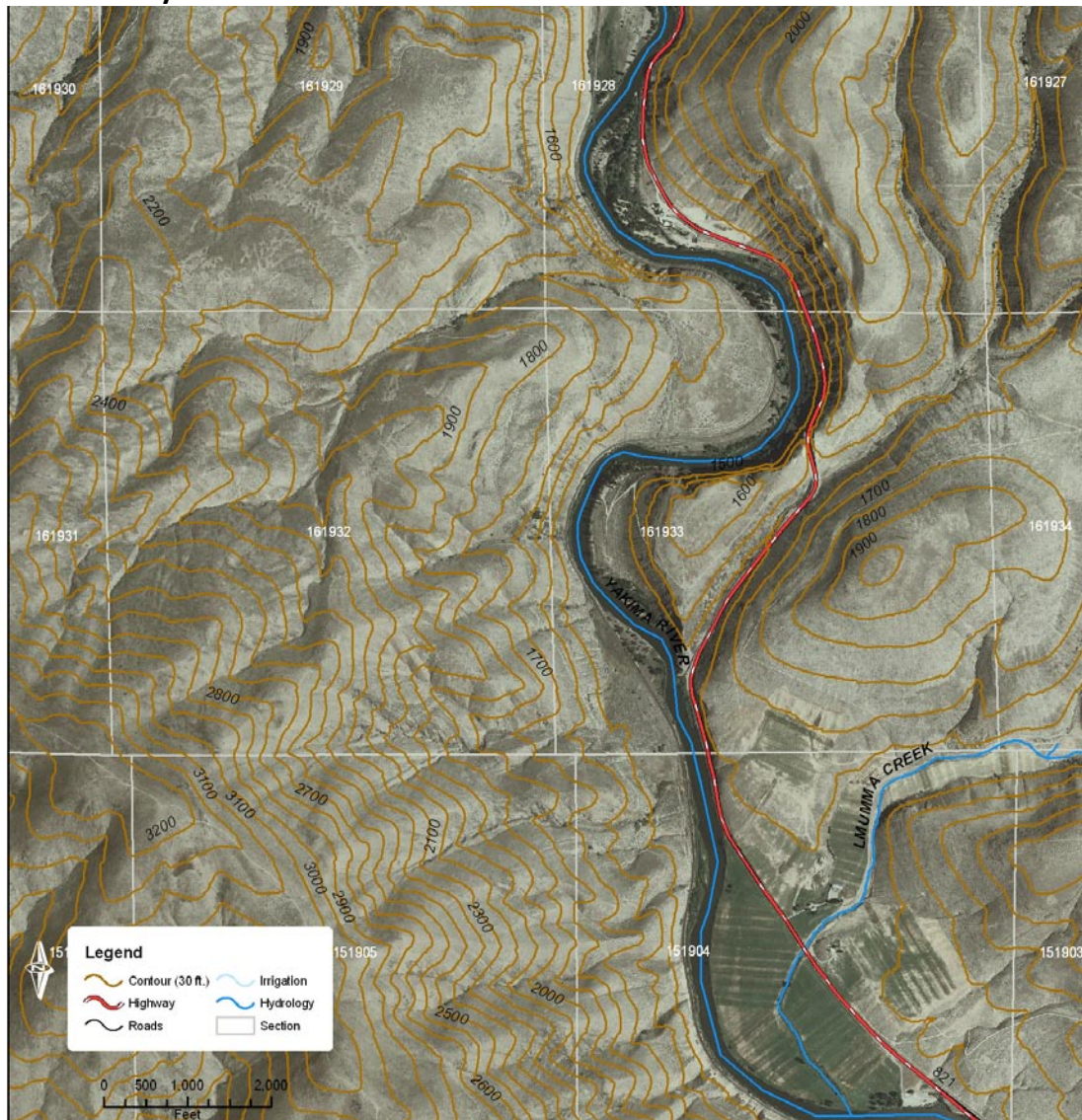


**Reecer Creek** - Most of the listed problems above exist in Reecer Ck. The homes that are of concern sit higher in the head of a steep canyon with the main exit going back down the canyon. The alternate exit takes you farther into the forest following narrow windy roads. These homes are recreation homes and are not occupied year round.

**Green Canyon** - The road that you enter is a dirt road with no gravel or surface material. Ruts exist year round with wet areas. There is only one road going into the canyon that is located along the bottom and very brushed in. Dead end roads exist--some are longer than 2 miles.

**Recommendations** - Because these homes are primarily recreation cabins, provide education about defensible space. The road going into Green Canyon needs brushing out.

## Yakima Canyon



**Roads** - The road through the canyon is Hwy 821, a 2 lane paved road. The canyon is approximately 25 miles to the Selah exit. Dirt roads that leave the canyon homes are the typical narrow driveways with little area for turning and pull offs. Some of these driveways lead up narrow canyons and onto ridges.

**Topographic features** - The Yakima canyon is steep with a typical depth of 2000 feet. Many steep draws and other small canyons are scattered throughout the area.

**Fuels** - Sage and grass. There are a few spots with some timber in the draws but very few.

**Houses** - The houses in the main canyon itself have pretty good defensible space and some type of irrigation around them. Most of these homes are fairly new and well built.

**Recommendations** - Mailings about defensible space. Construct more turn-outs and offer ideas on increasing turning radius at homes.

### Fire District 3 (and Vicinity) Areas of Concern

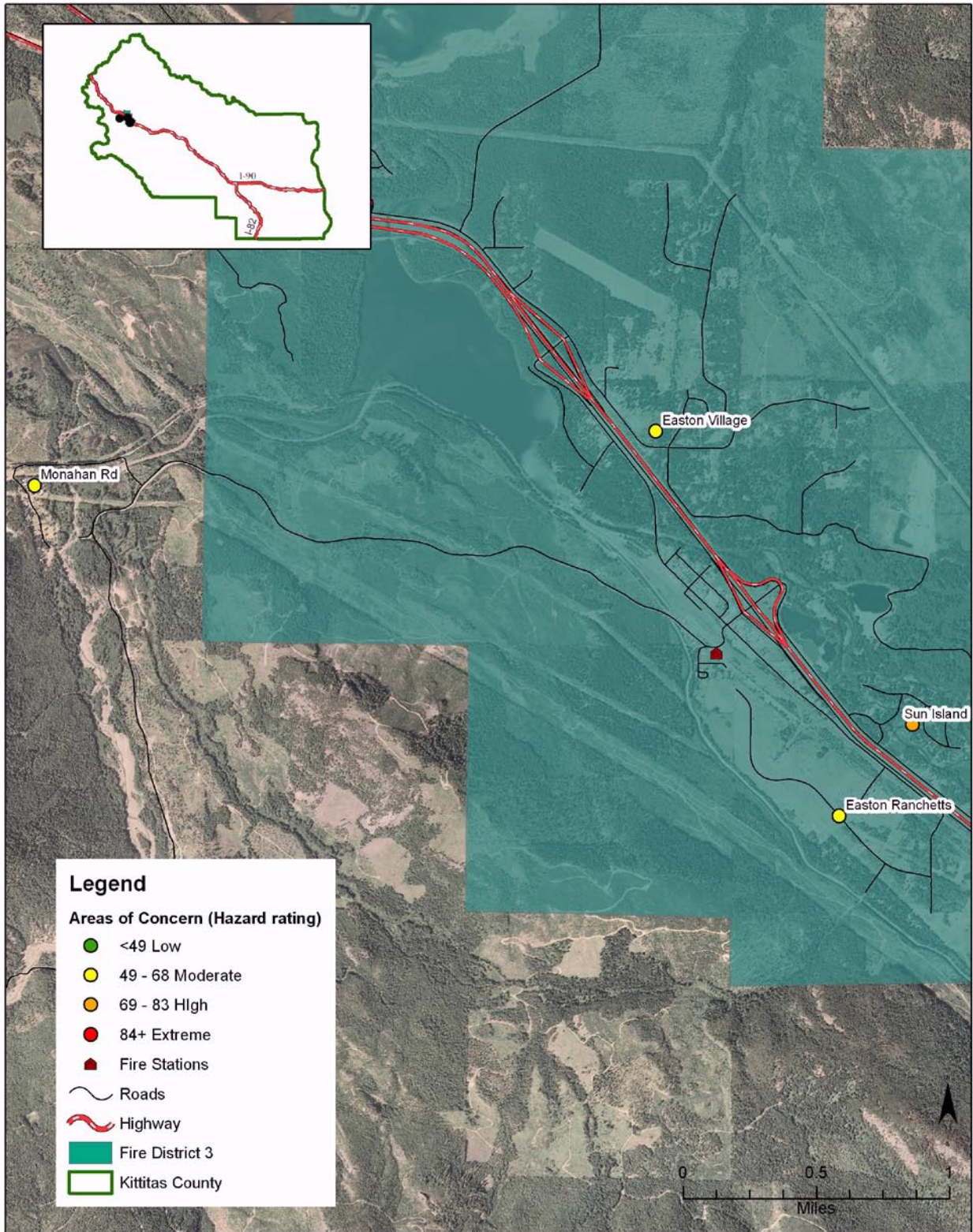
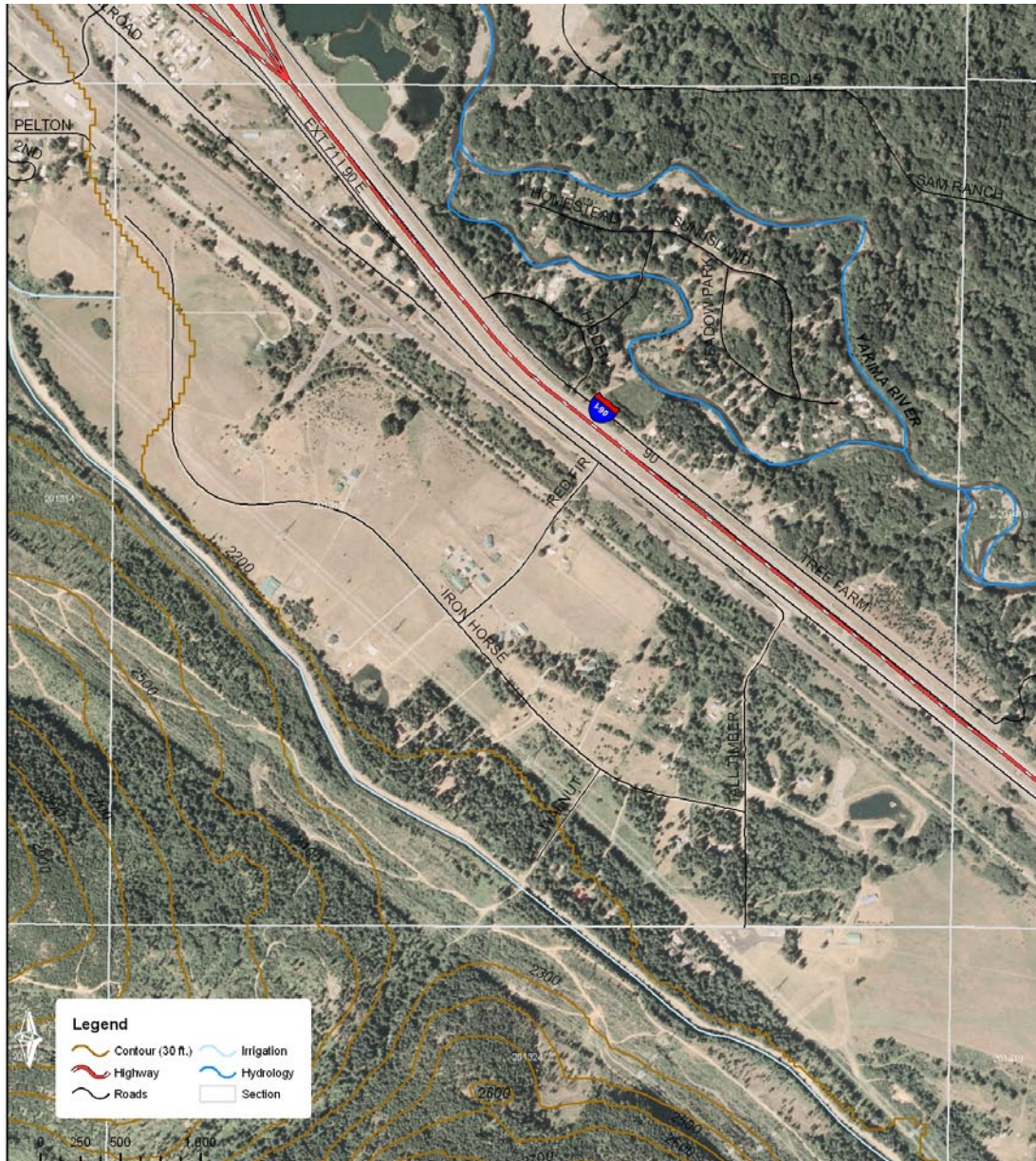


FIGURE 19 FIRE DISTRICT 3 AREAS OF CONCERN WITH HAZARD RATING

## Easton Ranchettes



**Roads** - Smooth gravel with good turnouts and turning radius.

**Topographic features** - The developed area is flat, with a steep surrounding area.

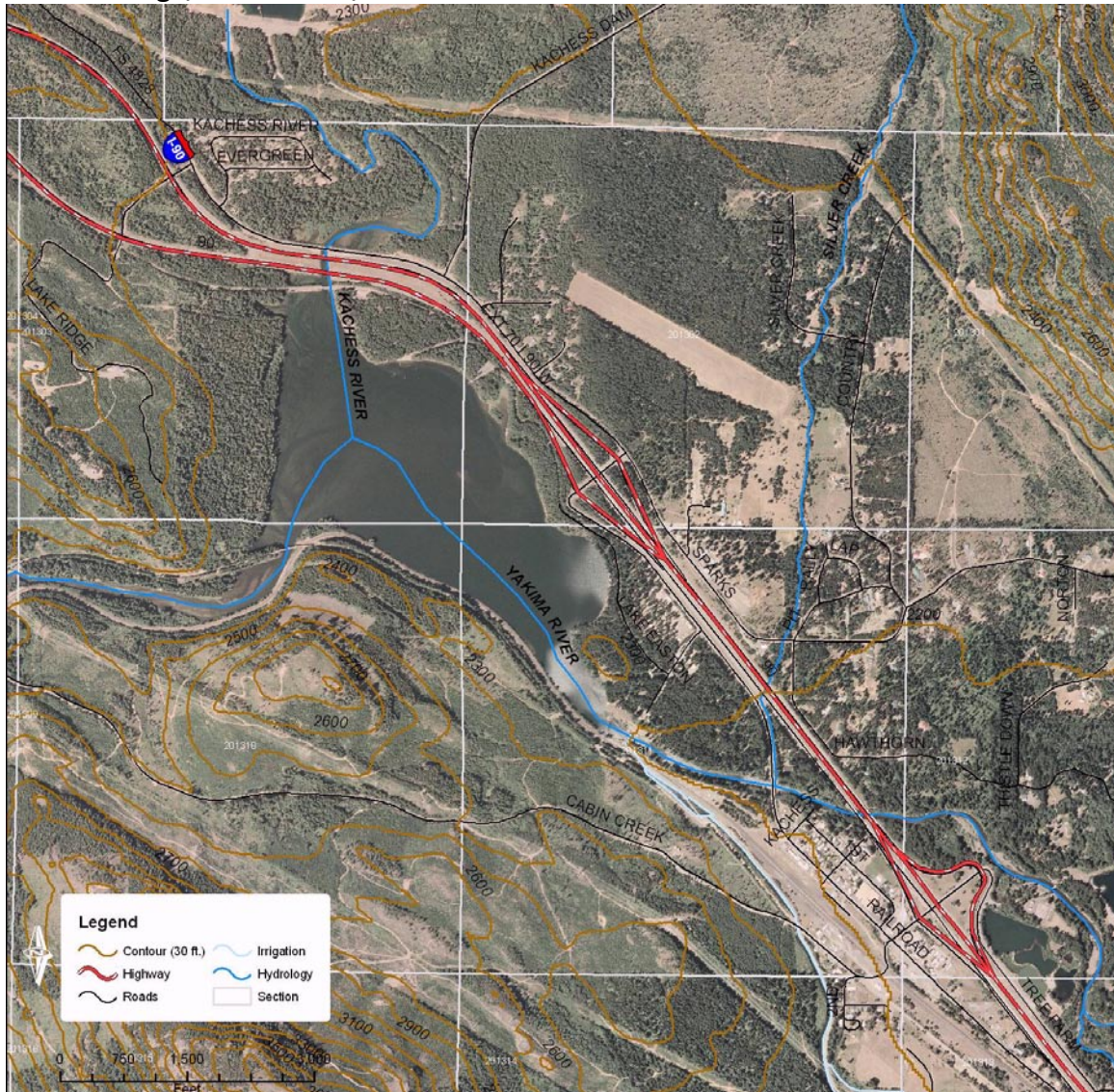
**Fuels** - Light timber with pockets of dense brush and timber, but with good defensible space around homes. Most of the heavy timber is on the south side.

**Houses** - Metal roofs with combustible siding and decks and good defensible space.

**Other Factors** - Inside Fire District 3. Power lines, heavy railroad traffic, church camp with high use in this area. They do have a 300 gal portable tank and pump.

**Recommendations** - Good posting of general fire information, shut downs, and burn bans.

## Easton Village, Silver Creek, Kachess River



**Roads** - Gravel, flat, 18 to 20 feet wide

**Topographic features** - Flat river bottomland. Easton ridge sits to the north of this area

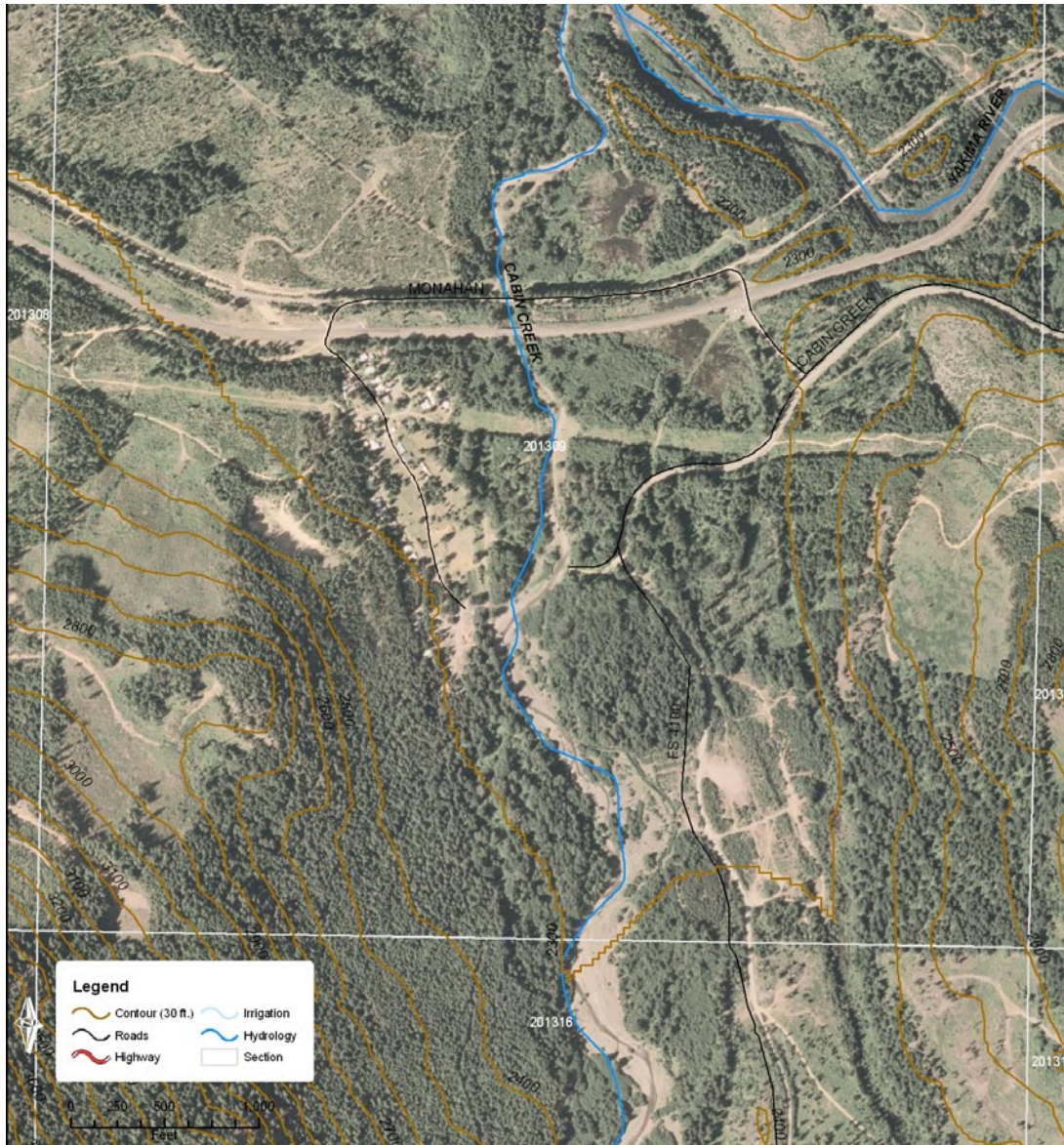
**Fuels** - Heavy timber and brush. Higher humidity due to the valley bottom and nearby river and lakes.

**Houses** - Homes are built close together on smaller lots. Nice homes with many log homes in this area. Mostly metal roofs with nearby woodpiles and wooden decks

**Other Factors** - Hydrants exist in the developments but are spaced 1000' + apart. Good draft sites nearby. Shorter burn season

**Recommendations** – Firewise informational mailings.

## Monahan Road



**Roads** - There are 2 gates to get into the community one key and one code. Once inside the community the roads are tight but smooth and graveled.

**Topographic features** - Steep terrain surrounds the area and the development sits in the valley.

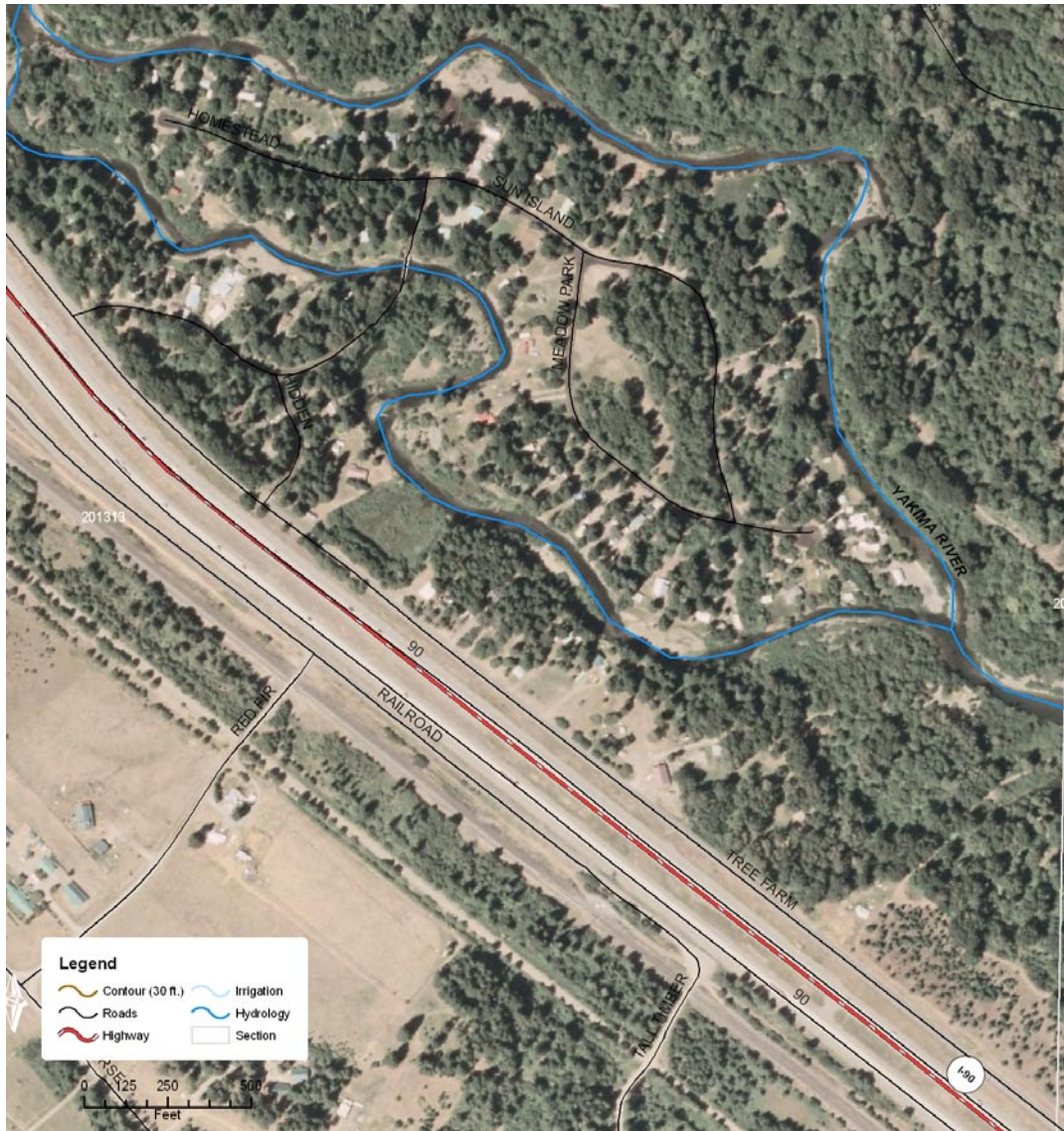
**Fuels** - Inside the community, it is park like, but the surrounding area is heavy timber and brush. The railroad creates a fuel break on the north side with many roads that break the fuels.

**Houses** - 29 cabins with metal roofs. There is some defensible space from 10 - 50 feet.

**Other Factors** - Heavy railroad traffic. This is just on the outside of Fire Dist. 3. Power lines in the area with an operating sawmill. A historical site with antique railroad and logging equipment.

**Recommendations** - Make sure there is access through gates Knox box. Shaded fuel break around area. Informational Firewise mailings.

## Sun Island



**Roads** - Gravel roads with 0 to 5% grades. 18' feet wide on the average and one way in/ out.

**Topographic features** – The development is built on the flat river bottomland. Easton ridge is just to the north of the developments, comprised of steep slopes that are south facing.

**Fuels** - Heavy brush and timber are dominant in the developments. Because this area is in the river bottom, it has higher humidity and stays wetter and greener most of the time. Easton ridge dries out more quickly, and there are slash accumulations. Heavy fuels along most roads.

**Houses** - Houses are built on small lots and are close together. Most of the homes don't have defensible space. Structures mostly have metal roofs but there are a few that have shakes. Wood decks and wood piles are found on most lots.

**Other Factors** - Few to no hydrants

**Recommendations** – Firewise educational material and a roving chipper for interested people.

# Fire District 6 (and Vicinity) Areas of Concern

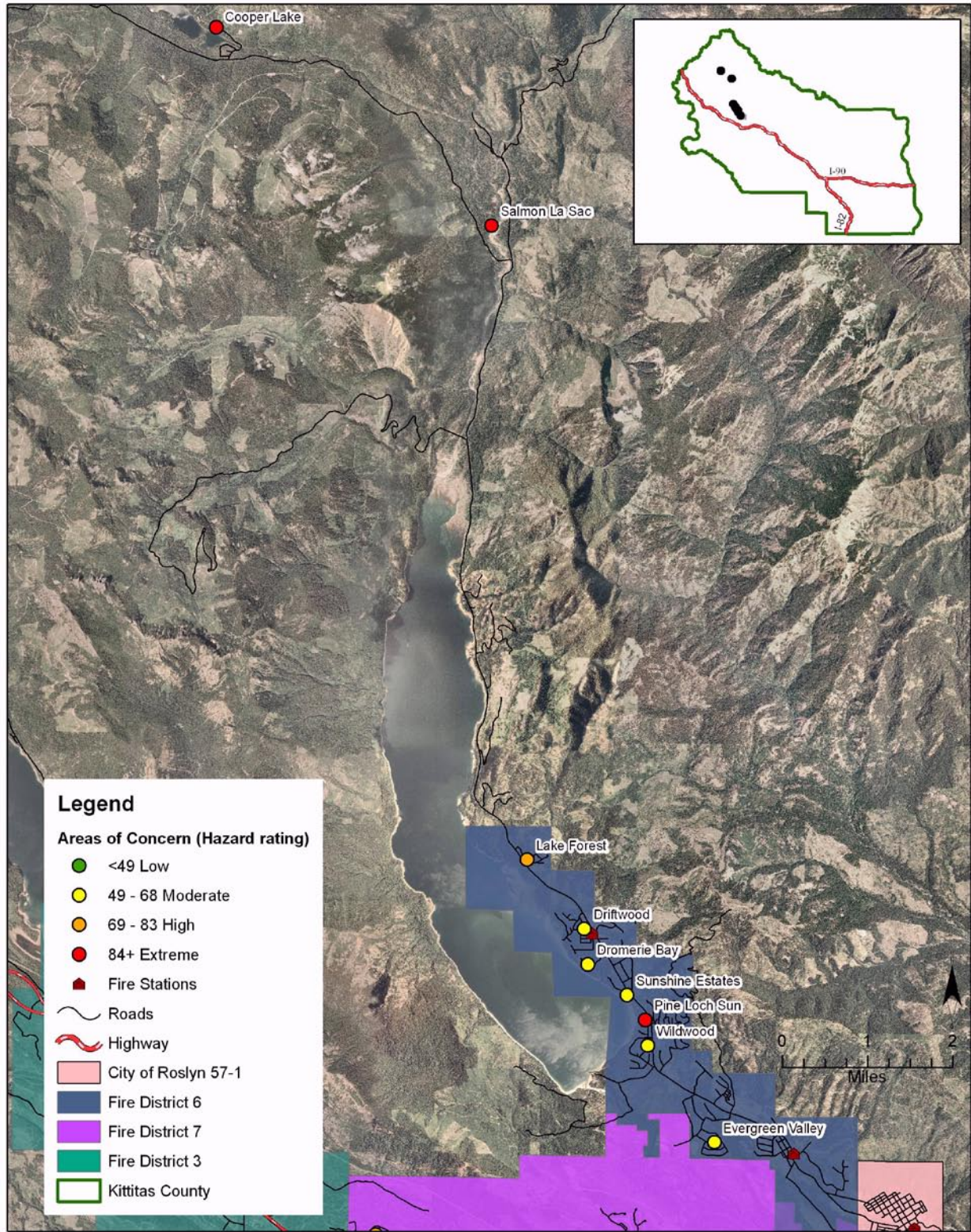
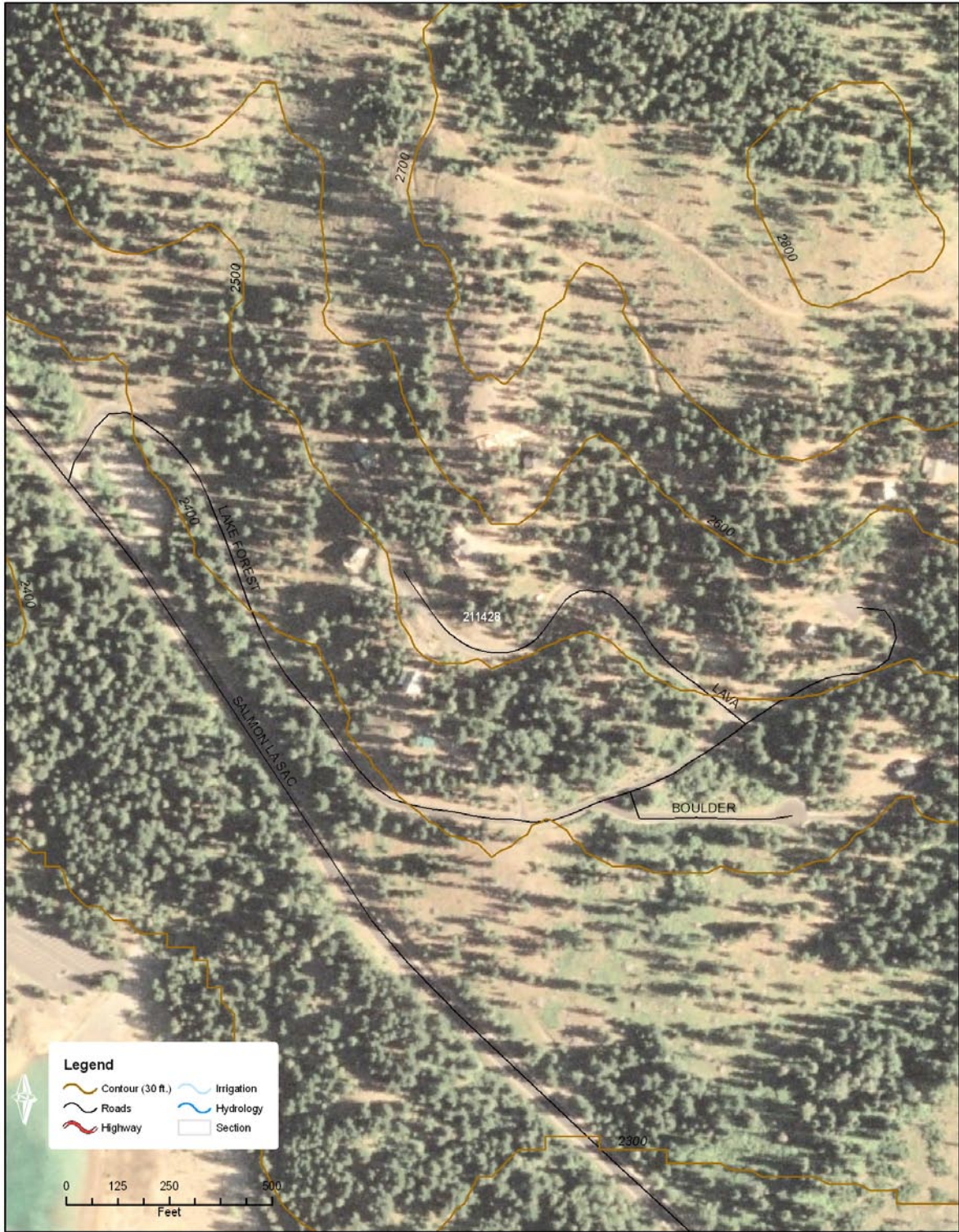


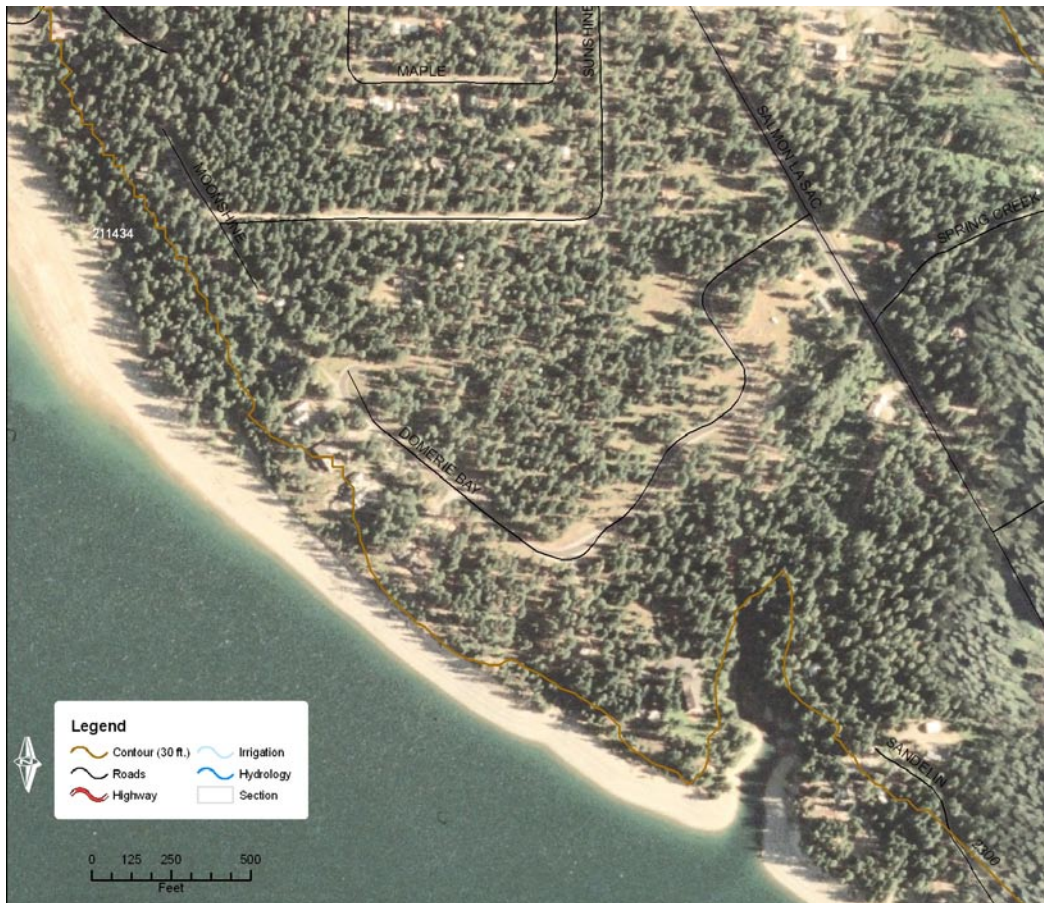
FIGURE 20 FIRE DISTRICT 6 AREAS OF CONCERN WITH HAZARD RATING

# Driftwood, Lake Forest, Wildwood and Dromerie Bay









**Roads** - Roads are gravel and oil coated. Dead ends have cul-de-sacs, but the radius is no larger than 30 feet. Developments border the lake, except for Lake Forest Dr. The roads are on the north side of the highway and have a gentle slope; good fire truck access. Brecken Ridge and Telluride are paved, but Breckenridge becomes very steep and the Engine has difficulty making the grade.

**Topographic features** - Most of these developments are flat except for Lake Forest Dr. In this development, homes are built on about a 20% slope and overlook the highway. The rest of the terrain goes from 10 to 40% slopes. There are a couple of larger drainages that could influence fire behavior, but would pull the fire more away from the homes that currently exist.

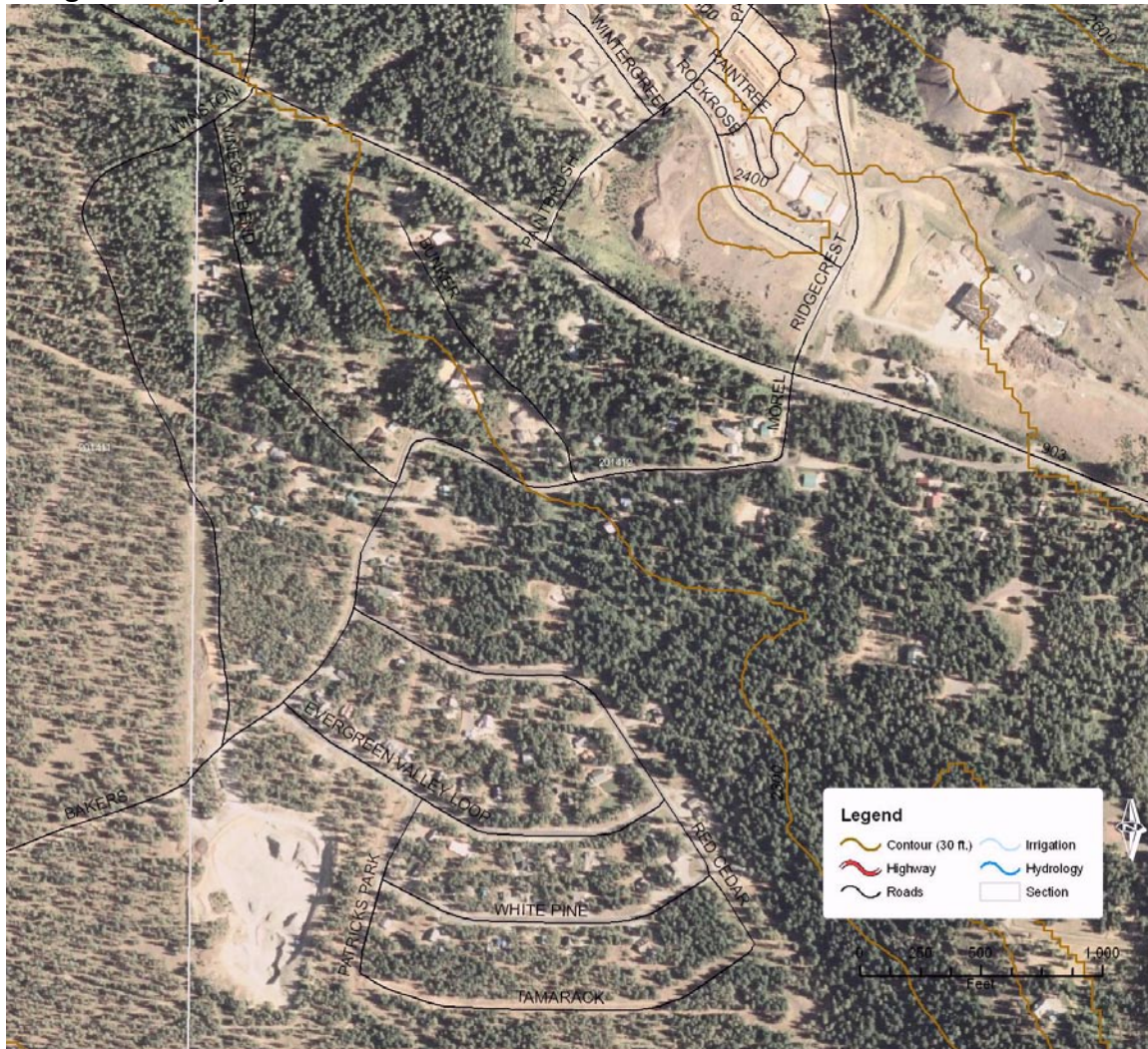
**Fuels** - Fuel loadings are heavier around the developments that border the lake, with conifer trees and brush that come right up to the houses. On Lake Forest Drive, the fuels consist more of conifers and better defensible spacing around the homes. There is more slash around Lake Forest out in the logged areas, but the development has space between it and the slash.

**Houses** - Along the lake, the housing congestion is tighter and more homes in a small area. Defensible space is from 0 to 30 feet. On Lake Forest, the homes have good defensible spacing but are built on the slopes. The downhill side has better clearing than the back.

**Other Factors** – Hydrants are in all of the developments made up of 2" stand pipes. High winds are common in the area and the lake influences the weather. No water supply in Crest development

**Recommendations** - Roving chipper offers for these developments. Educational classes. Have board members be involved in helping and distributing educational materials.

## Evergreen Valley



**Roads** - Roads are paved and 22' wide with loops and good radius. Hydrants under 1000' apart. Vinegar Bend and Bakers Acres are dirt roads. Baker Rd is a one way in out and the road is not quite as good as the rest. Overall the area has good access. There are other roads that lead out to the east through Suncadia for an emergency access.

**Topographic features** - The lay of the land is rolling hills with most of the development built on a pine flat that is just above the Yakima River. There are some draws in the area, but few homes built in them. Easy access for most vehicles to get around.

**Fuels** - Most of the fuels consist of Ponderosa Pine. Suncadia has done a good job of slash clean up on their property, and the rest of the development has had trees removed where the house sites would be. Good roads create fuel breaks and have 2 gravel pits for large open areas.

**Houses**-Homes have defensible space with good roofs. Most have combustible siding & decks. Extremely tight cluster of town homes with narrow streets on North end of 903. Any fire would be difficult to keep from spreading.

**Recommendations** - Further education and a roving chipper.

## Pine Loch Sun



**Roads** - Pine Loch has very narrow roads with some junctions that have very tight corners. Roads are graveled and steep. Heavy brush and trees create blind corners. One steep primary road loops through the development but it is easily confused with other roads.

**Topographic features** - Most of the development is built on slopes that exceed 30% and are south facing. There are draws that have heavy fuels that are out of view.

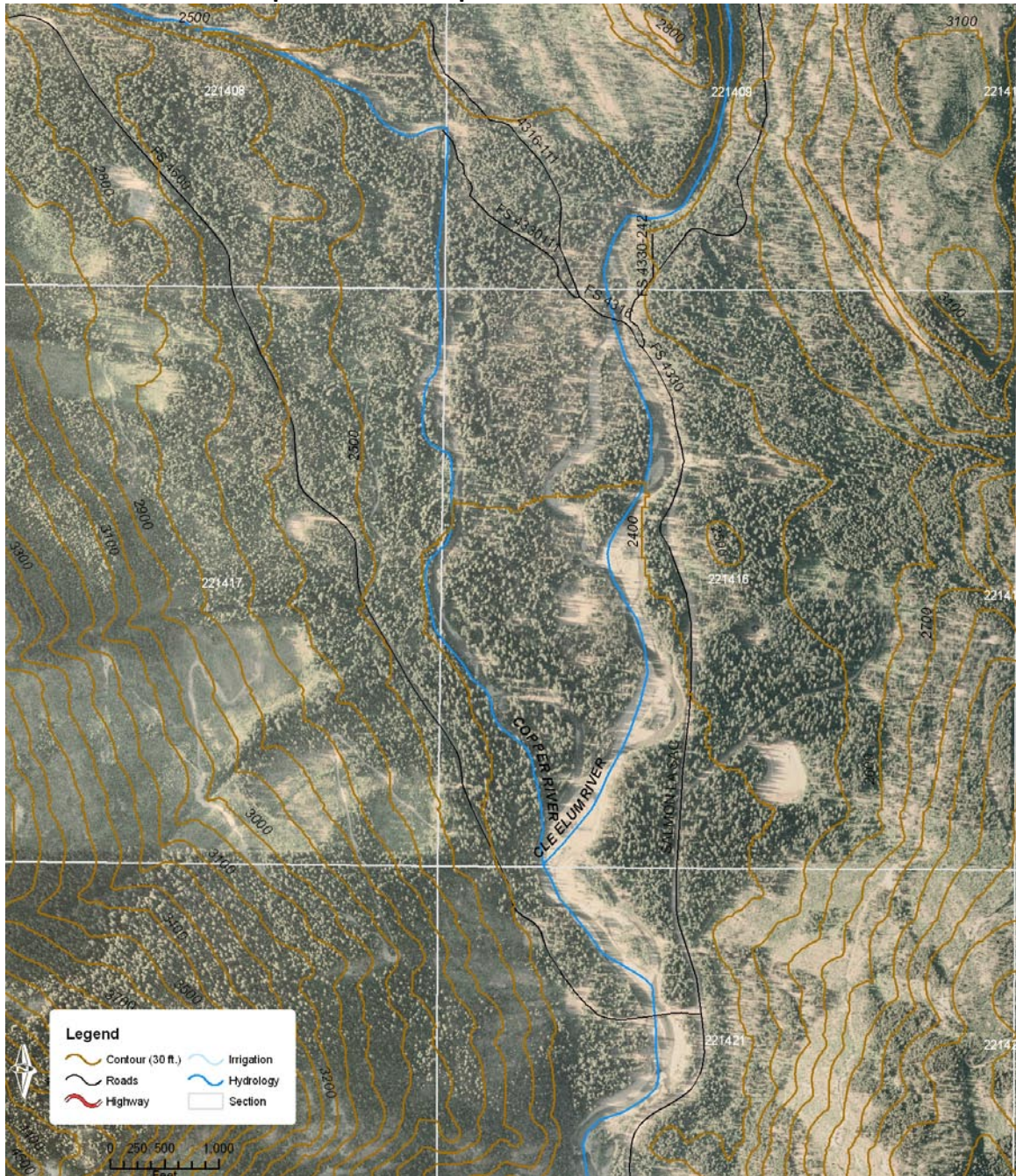
**Fuels** - Timber and heavy brush make up the fuel loading. Many homeowners took part in a defensible space project and received work around their homes

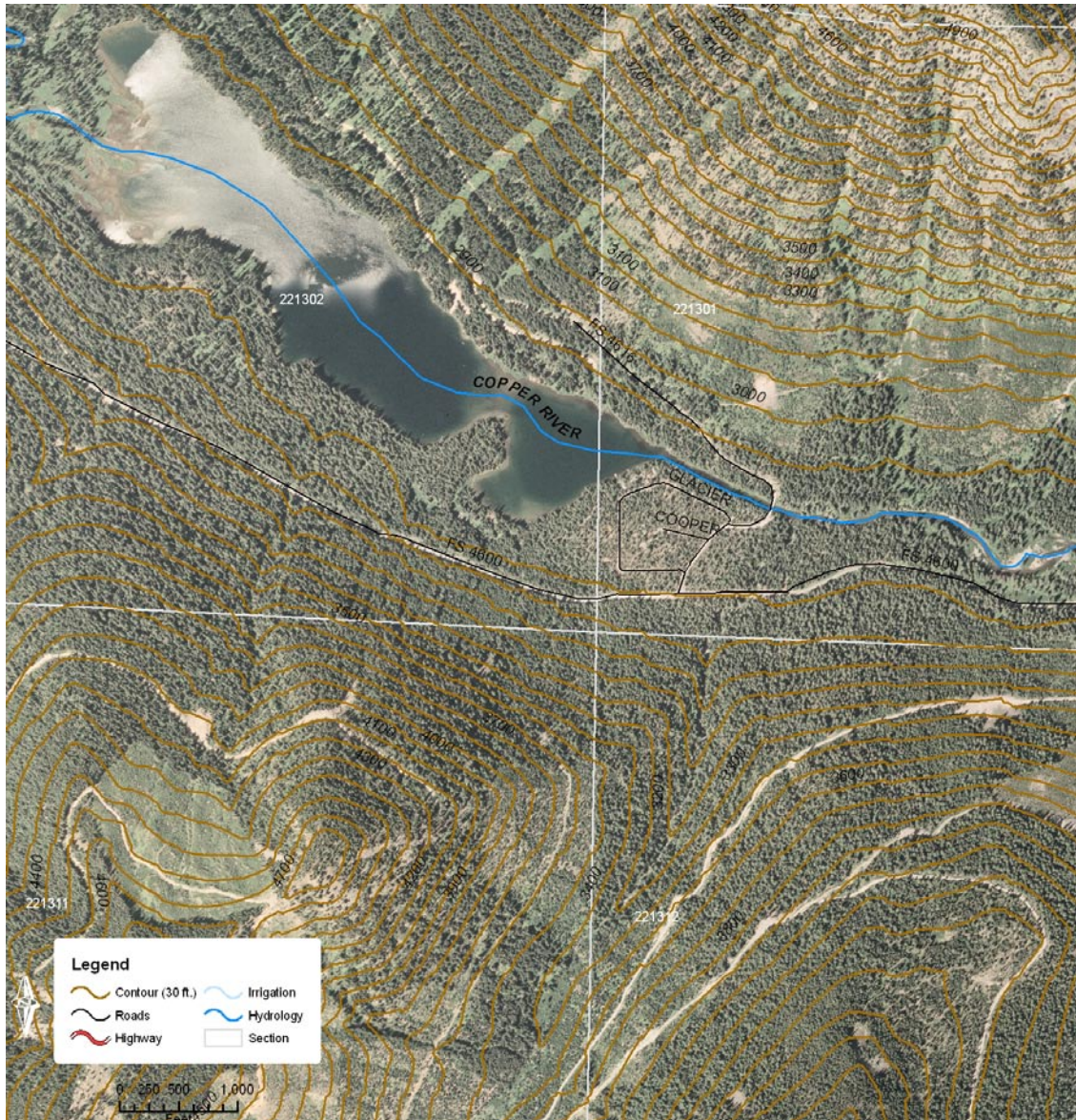
**Houses** - Most of the houses have less than 30 feet of defensible space. Heavy fuels come right up to the homes. Most of the information received from the landowners implies that they want privacy from neighbors and the “like the wild look”. No concern for fire hazards.

**Other Factors** - Most homeowners are there only on weekends which makes it a challenging place to work because it is difficult to convince landowners they have a fire problem.

**Recommendations** – Educational classes and materials. Create a fuel reduction demonstration site on community owned property.

# Salmon La Sac and Cooper Lake Developments





**Roads** - Gravel roads with long driveways- some steep with no turn around. All of the driveways are gated and locked.

**Topographic features** - Steep draws and canyons with high mountains that influence weather.

**Fuels** - Fuels are heavy with dense brush and timber.

**Houses** - Most of the cabins are old and are located in areas not recommended for a fire safe situation. Roofing materials on a number of homes are shake with large needle accumulation. Not much defensible space. There is no electricity, but most of these cabins have generators and propane bottles stored in out buildings, along with other fuels.

**Other Factors** -No hydrants. Outside any fire district with long response for emergency vehicles.

**Recommendations** - Continuing education for owners. Continue to reinforce defensible space and educate where needed to revise existing restrictions.

# Sunshine Estates



There are several areas of concern within the development, road width- both surface and encroaching vegetation, fuel loading within the private properties, and lack of hydrants for firefighting efforts.

**Roads** - Heavier concentrations of flammable vegetation were found on the north side of Hwy 903 along Wadsworth Loop, Crawford St., and Cricket Lane. Road widths are reduced by the encroachment of vegetation, which could be improved by brushing out to the edges of the right of way. Road surfaces are narrow with few turnouts and deep ditches along the shoulders of the roads. Reducing the vegetation along the right of ways will allow for more turnouts and wider roads. At the current width, of some of the roads are not sufficient to allow two vehicles to pass each other which can create a very dangerous situation. The deep ditches along Wadsworth loop not only reduce the width of the road, but also create a hazard by making it possible for vehicles to fall off into the ditch and blocking the roadway. Putting a culvert in the ditch and filling in those areas where the ditch is deep and roads are narrow could be one type of solution. Sandelin Lane is better in width, but the same type of recommendations would apply for it also.

**Recommendations** - On the north side of Hwy 903 fuels are heavier. Private lots could be improved by pruning, spacing trees, removing brush out for under other trees, and removing dead and down material. All of this should take place around any structures to create a 30-foot radius of lean, clean, and green (if possible) defensible space. Once that has been accomplished, continue that process across the rest of the area. One suggestion is to clean up a portion of community property for a demonstration site. This will allow members to actually see what needs to be on their property and increase any defensible space work that has been done on any bordering properties.

**Other Factors** – Hydrants - this is a costly process to have adequate water supply installed for fire protection, but is a good insurance measure. With the heavy fuel loadings and increasing population in the surrounding areas, it is just a matter of time before a fire threatens developments. A fire that threatens the development does not have to be in the close proximity, it can be a fire that starts as far away as Salmon La Sac. A standard spacing for hydrants is 500 to 1000 feet. On Sandelin Lane hydrant spacing starts out ok, but then hydrants stop about half way through to no hydrants. No hydrants were found on the north side of the development, Wadsworth Loop area.

# Fire District 7 (and Vicinity) Areas of Concern

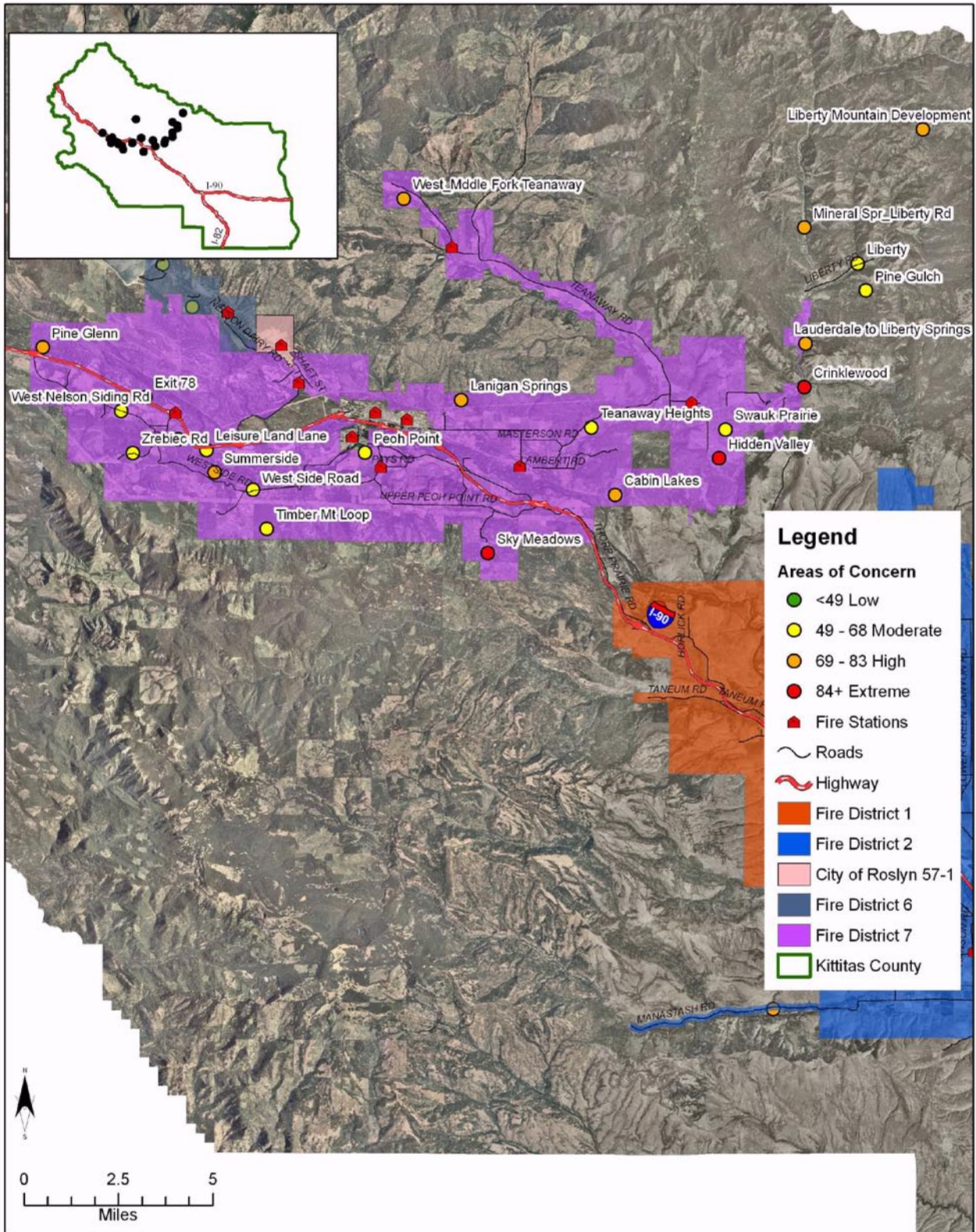
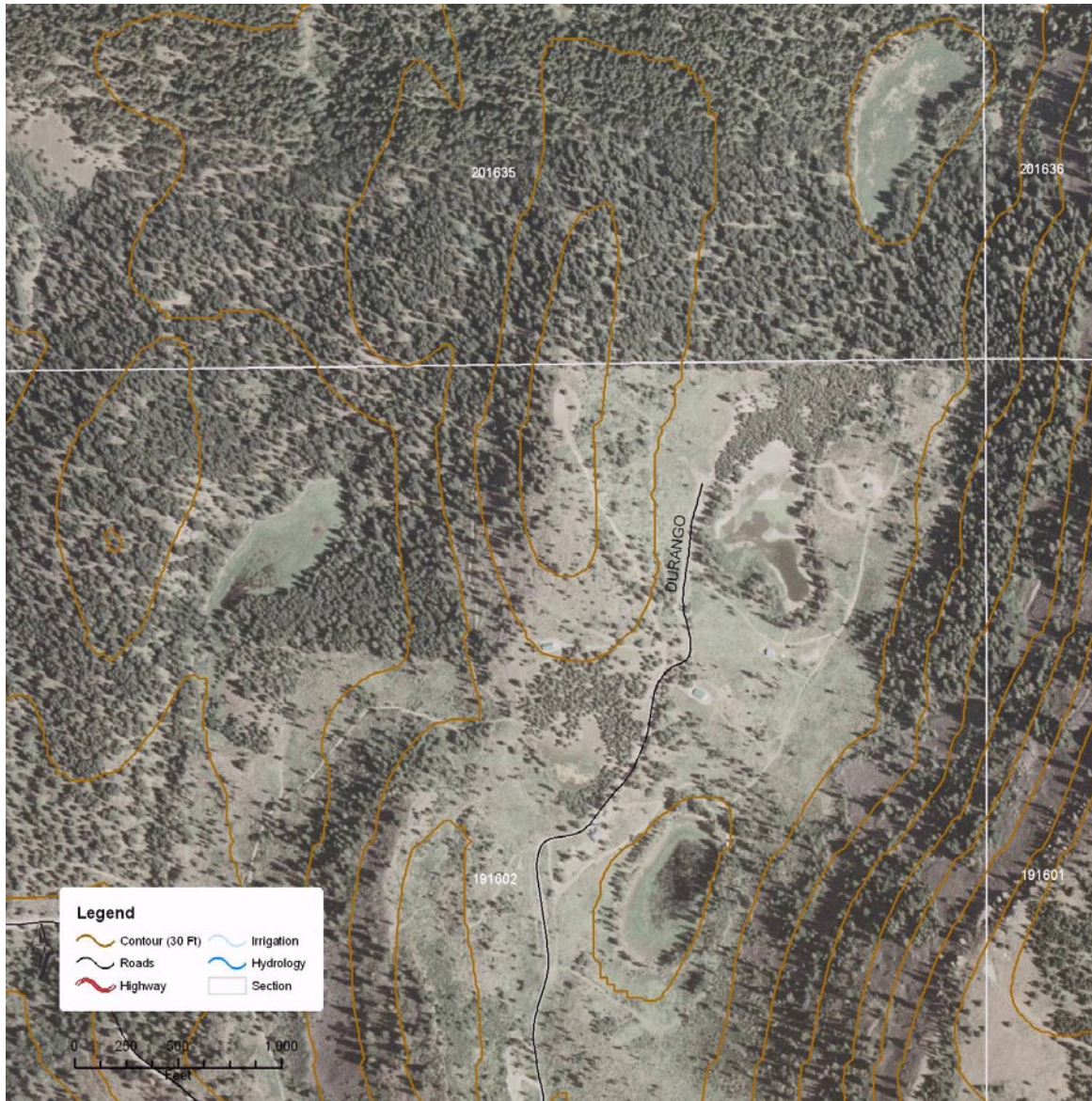


FIGURE 21 FIRE DISTRICT 7 AREAS OF CONCERN WITH HAZARD RATING

## Cabin Lakes



**Roads** - Gravel roads that are steep with long driveways with narrow turn a rounds.

**Topographic features** - Steep rocky ground. Mostly south and west facing slopes

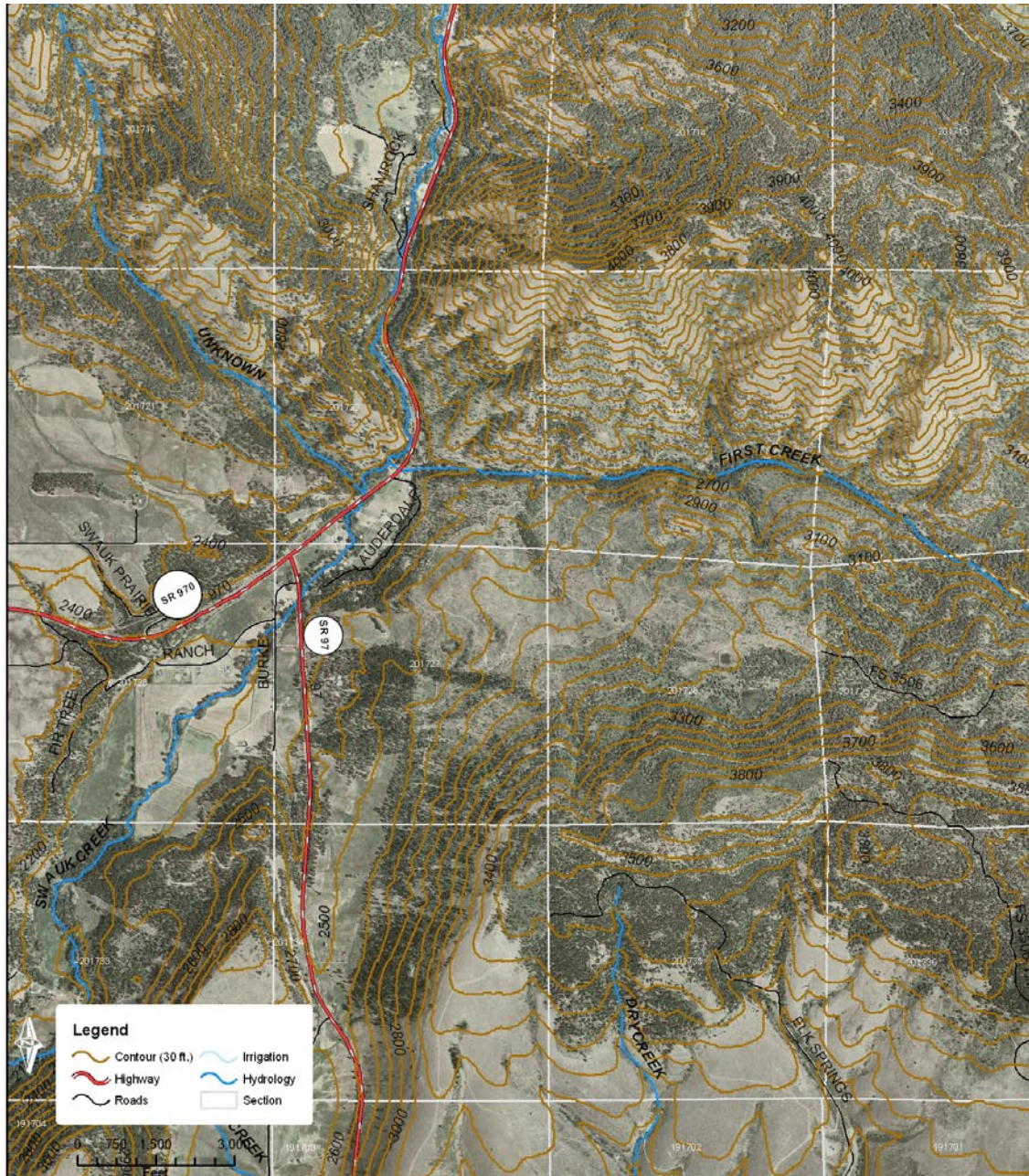
**Fuels** - Flashy fuels on the lower ends with timber stringers that lead to heavier fuels on the top where there is some slash on the State land and Nature Preserve.

**Houses** - Built on the ridges for the view. 30 to 70% defensible space with no setback for the ones on the ridges. Others are built in saddles and draws.

**Other Factors** - Outside of fire district boundaries

**Recommendations** - Slash reduction on top of mountain and better education for the landowners that have not yet built. Firewise mailings.

## Cricklewood



**Roads** - Roads are rough, narrow, and few turnouts. There are many roads leading different directions and no signage. Locked gates, with no way to get through without a key or cutting.

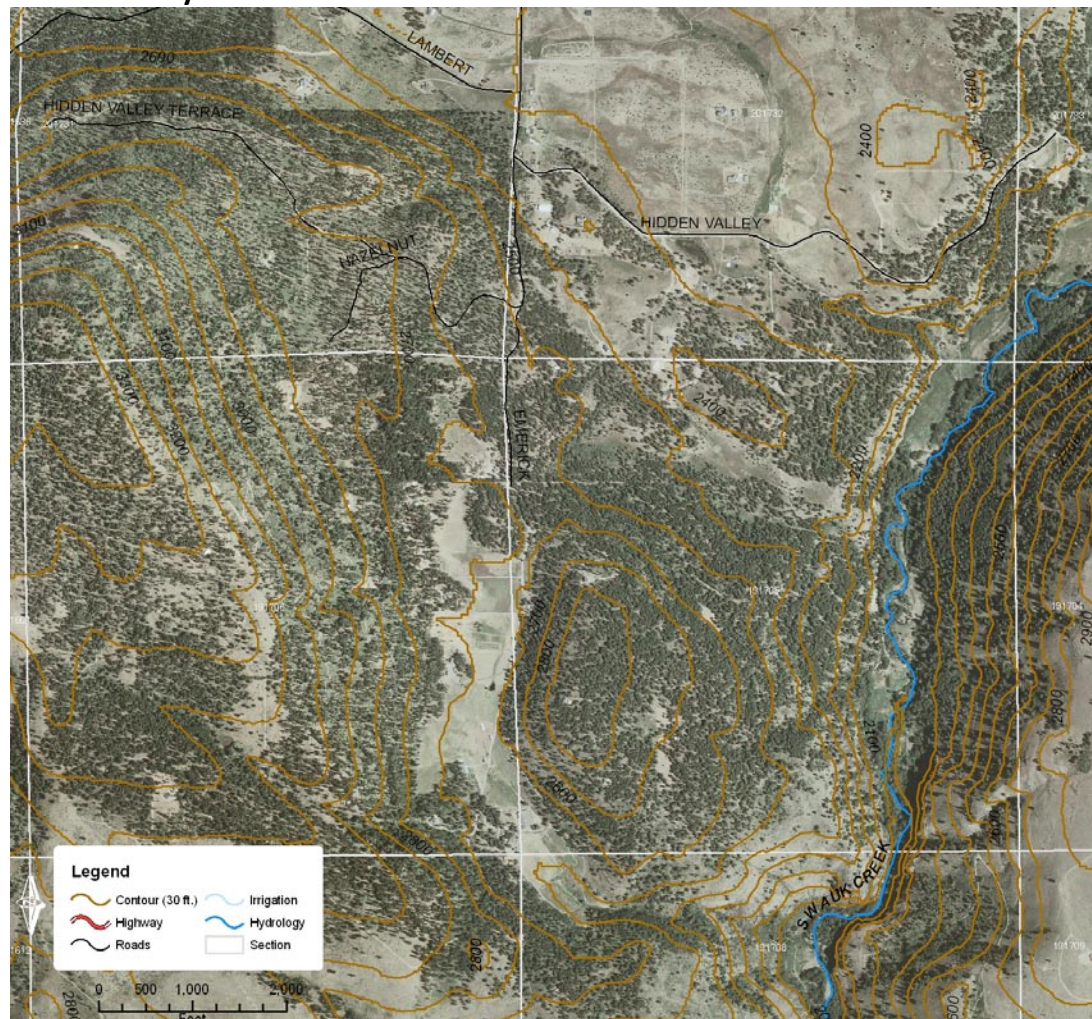
**Fuels** - Fuel types go from grass and brush to heavy timber and slash.

**Houses** - There is a mix of recreation homes and year round homes. Homes are tucked away on many of the roads and some are hard to locate.

**Recommendations** -Good signage for prevention messages and other information. Educational mailings, FireWise workshops. Develop and improve secondary routes in and out.



## Hidden Valley



**Roads** - The main road is a paved 2-lane road, but turns into rough gravel roads within a mile and gets progressively worse.

**Topographic features** - Steep slopes and canyons surround the housing area. There is a large meadow on Emerick road about 1.5 miles from the pavement. This area has a number of homes and creates a good safe area.

**Fuels** - Heavy timber and slash are present around the area. Homeowners have shown concern about the slash on the state land on the top and north side of Lookout Mountain. Other areas on the nature preserve on top also contain larger amounts of dry slash.

**Houses** - Most of the homes have some defensible space around them 30 to 70 feet. As you near the top east side of Emerick Road, homes are present and some are very hard to see from the road. These homes have very little defensible space.

**Other Factors** - Most of the Hidden Valley area is outside of fire district boundaries.

**Recommendations** - Fuel reduction on the state and nature preserve lands, under burns, fuel breaks. Mailings to all home and landowners

## Lanigan Springs



**Roads** - Gravel, rough with one way in and out. Windy roads that are signed

**Topographic features** - Multiple draws throughout the development

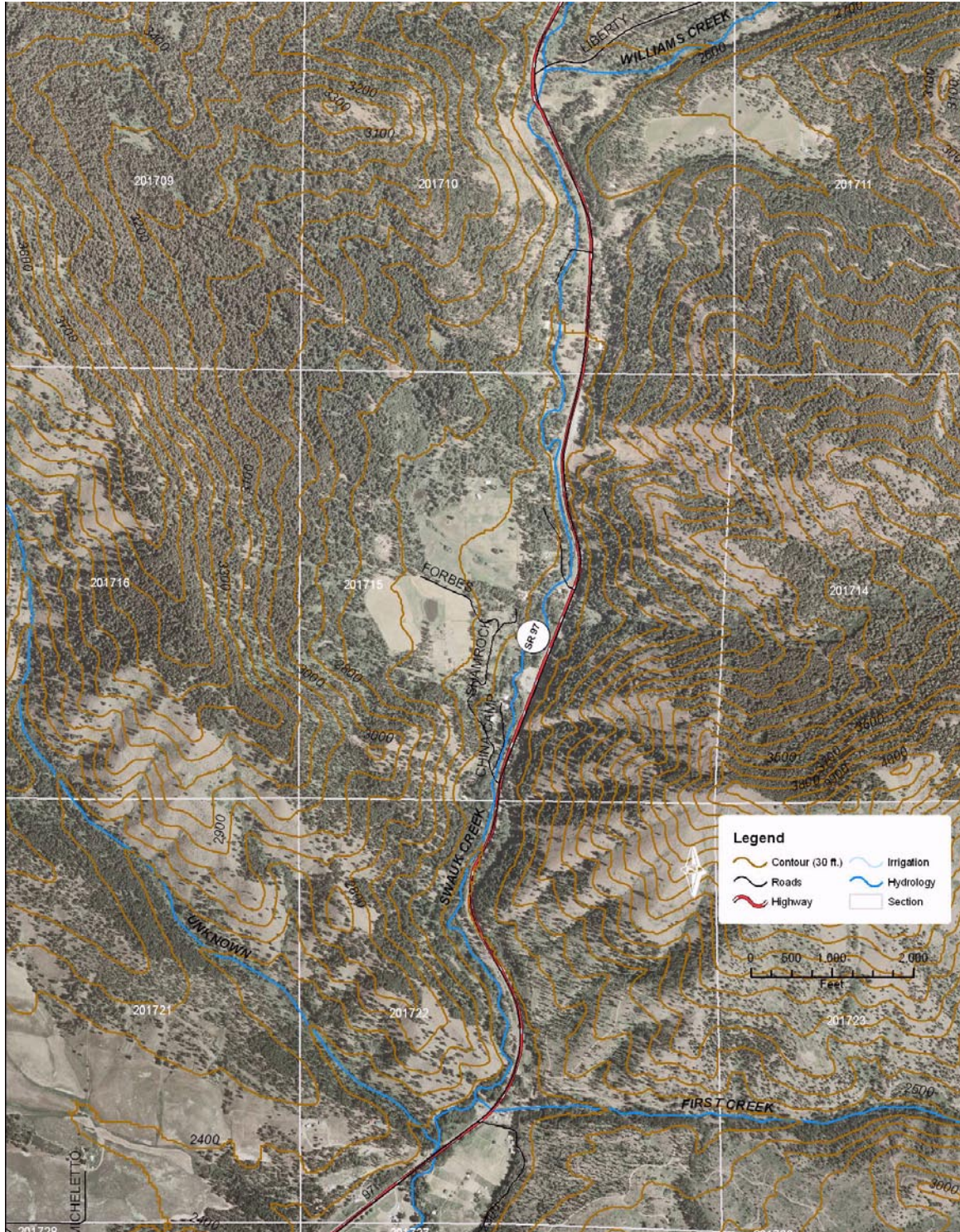
**Fuels** - Heavy timber and brush

**Houses** - Few have defensible space

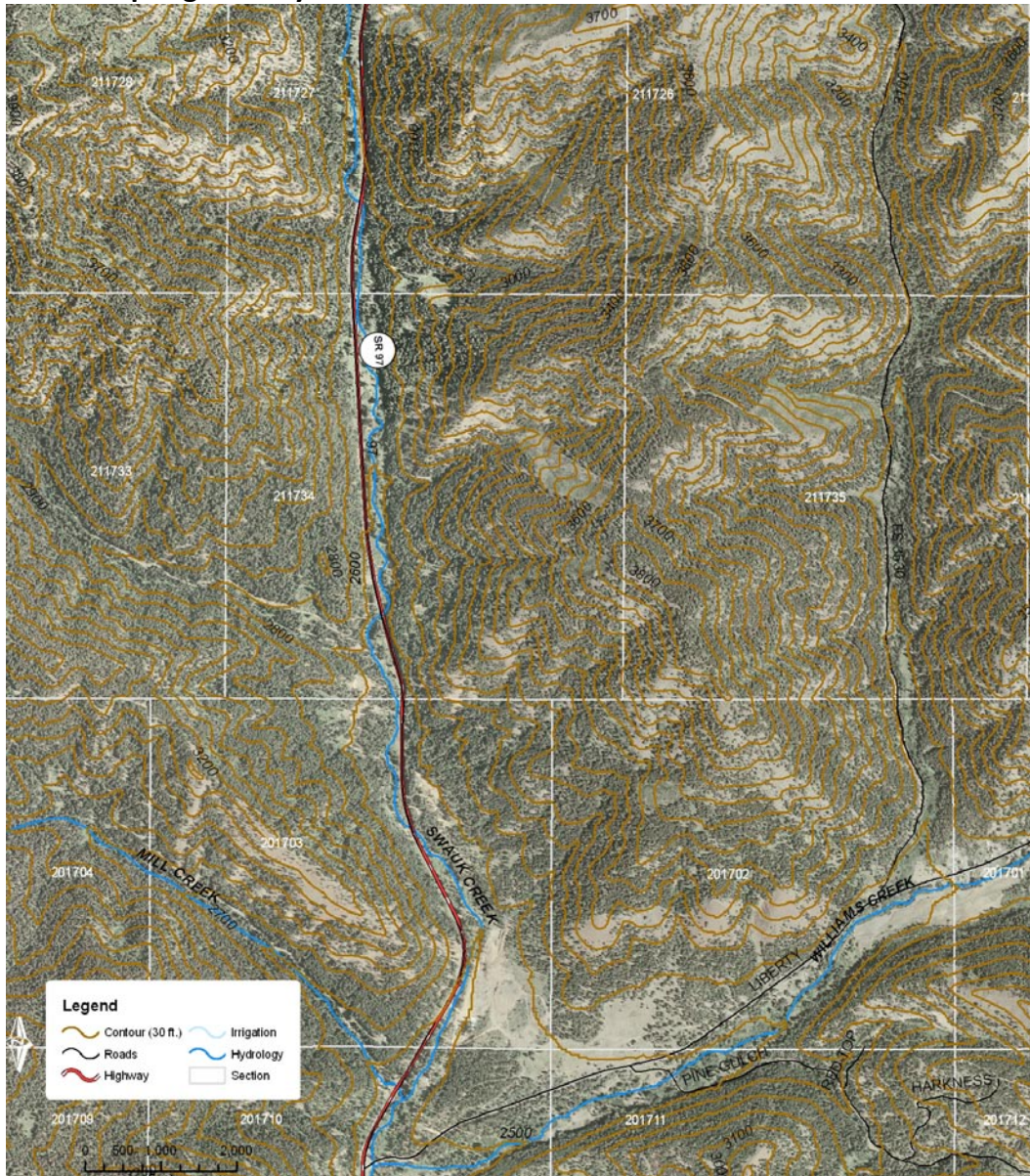
**Other Factors** - All on south facing slope. Heavy logging activity bordering development

**Recommendations** - Roving chipper for the development. Education for homeowners in the form of Firewise mailings and workshops.

# Lauderdale to Liberty Springs



## Mineral Springs Liberty Rd



**Roads** - Hwy 97 is the main corridor. Swauk, Bittersweet, Forbes, and Lauderdale Lanes and other roads associated with these lanes are low maintenance roads with 1 way in and out.

**Topographic features** - Steep slopes and canyons make up this valley.

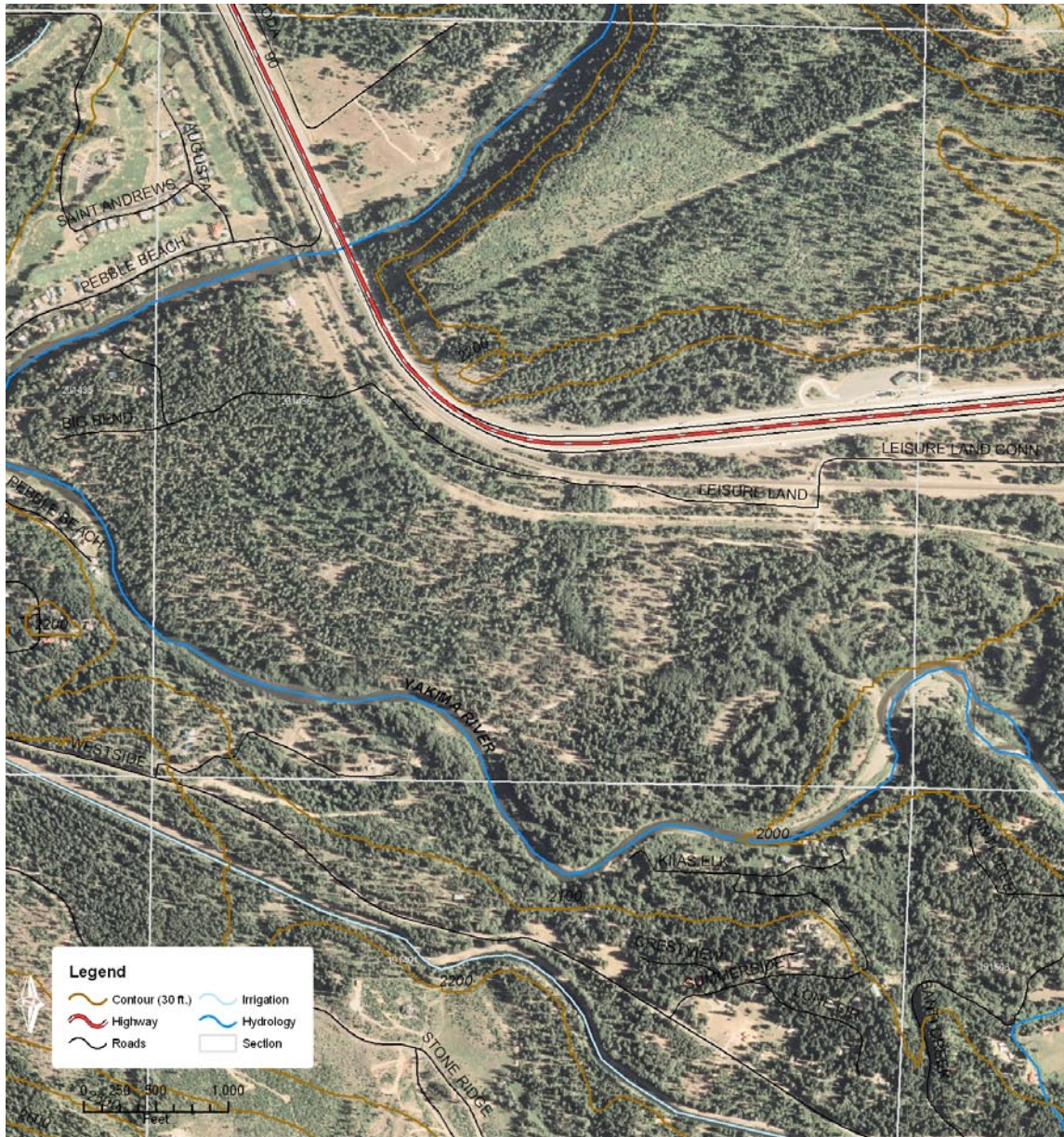
**Fuels** - Heavy timber and slash surround the housing area.

**Houses** - Most of the homes in this area have very little defensible space. Most of the homes have metal roofs and combustible siding and decks.

**Other Factors** - Heavy traffic from 97. Recreational area. Lack of escape routes, safety zones.

**Recommendations** - Roving chipper. Mailings and education. Right of way fuel reduction along the secondary roads

## Leisure Land Lane



**Roads** - Flat, gravel with tight areas for turning. One way in out and there is a locked gate to the east that could be another way out but roads are not in great shape

**Topographic features** - Flat river bottom

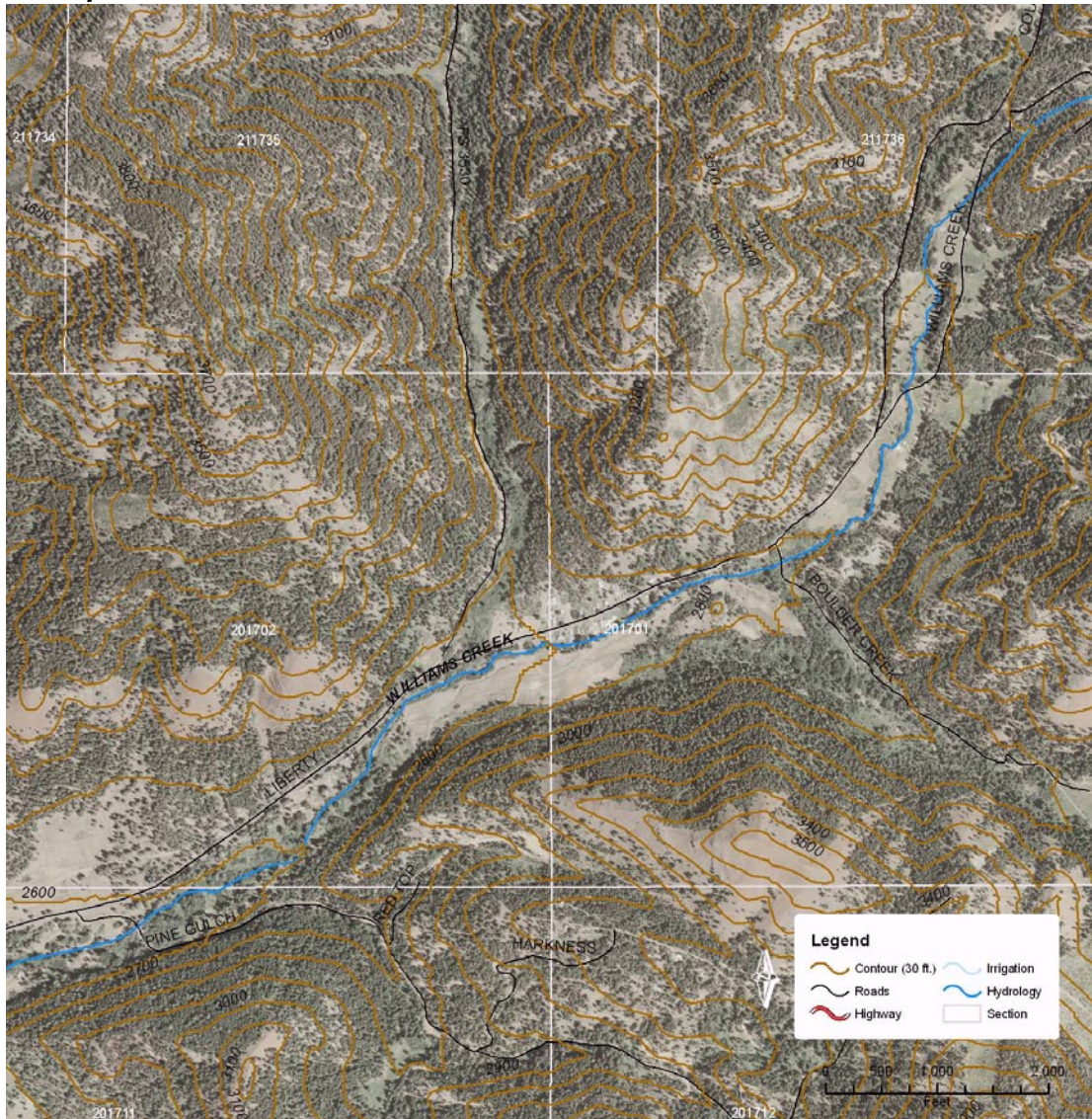
**Fuels** - Medium to heavy timber and brush

**Houses** - Most of the homes have less than adequate defensible space.

**Other Factors** - Within Fire Dist 7 and has had history of debris burning.

**Recommendations** - Roving chipper offer and Firewise informational mailings.

## Liberty



**Roads** - The road meets county standards. It is a 2 lane paved road. This is the main way in and out, but you can get in and out by following other FS roads that take you through the forest

**Topographic features** - The town sits in the bottom of the valley with slopes that are 20 to 40%. Rocky outcrops also show.

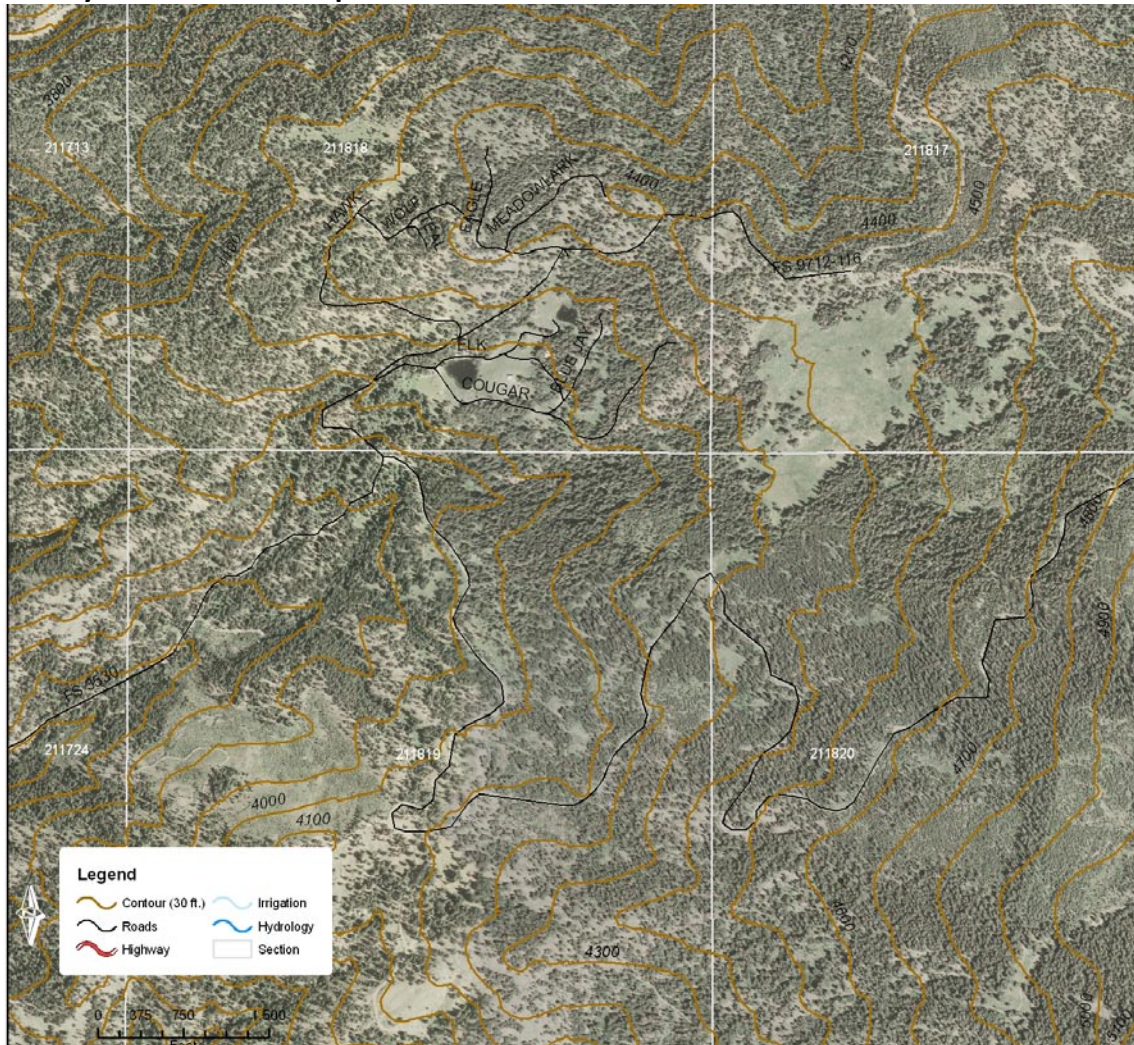
**Fuels** - Heavy fuels and timber come right down to the edges of the town in places. Other areas are strip mined next to town.

**Houses** - Most of the houses have defensible space, metal roofs, combustible siding and decks.

**Other Factors** - Mine shafts in the area, out of any fire district and local residents man an old engine when needed

**Recommendations** - Work with FS to create fuels reduction around town. Roving chipper. More education for towns people- workshops, mailings.

## Liberty Mountain Development



**Roads** - Multiple Forest Service roads will take you into the Liberty Mountain Development –FS 9711 off of Swauk Pass, 9712, 9712 out of Liberty, and 9718 up Cougar Gulch out of Liberty. All of these roads are forested roads and have limited maintenance.

**Topographic features** - Steep terrain makes up most of the country, canyons, and box canyons. Slopes range from 20 to 40+ %. Rocky rough ground.

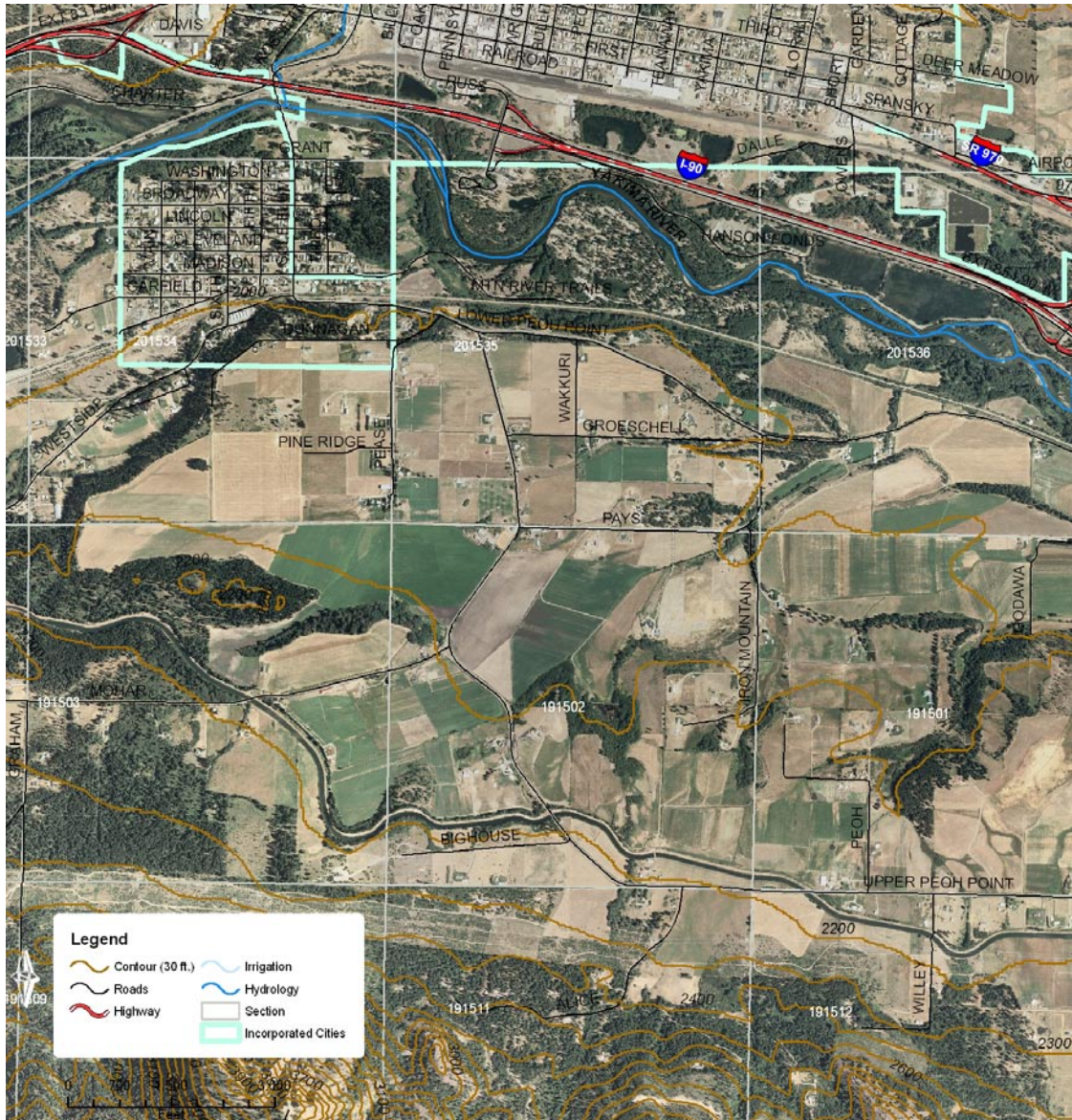
**Fuels** - Logging slash is present in the area, but mostly heavy conifer fuels make up the loading.

**Houses** - These are recreational cabins, used frequently during the spring, summer, and fall months. Some of the homeowners have started doing defensible space work and the group is showing interest in the FireWise program.

**Other Factors** - Outside of any fire district boundaries and old mine shafts in the area.

**Recommendations** - Some FireWise work has taken place in the area by meeting with landowners, writing prescriptions, education, and FireWise workshops. Offer roving chipper and fuels reduction around the area. Continue to work with Forest Service.

## Peoh Point



**Roads** - Main road is a 2 lane paved. There are good accesses to Cle Elum and I-90 and other areas. Most laterals are gravel 20' wide.

**Topographic features** - Steep ridge that runs parallel to the south. Mild in slopes.

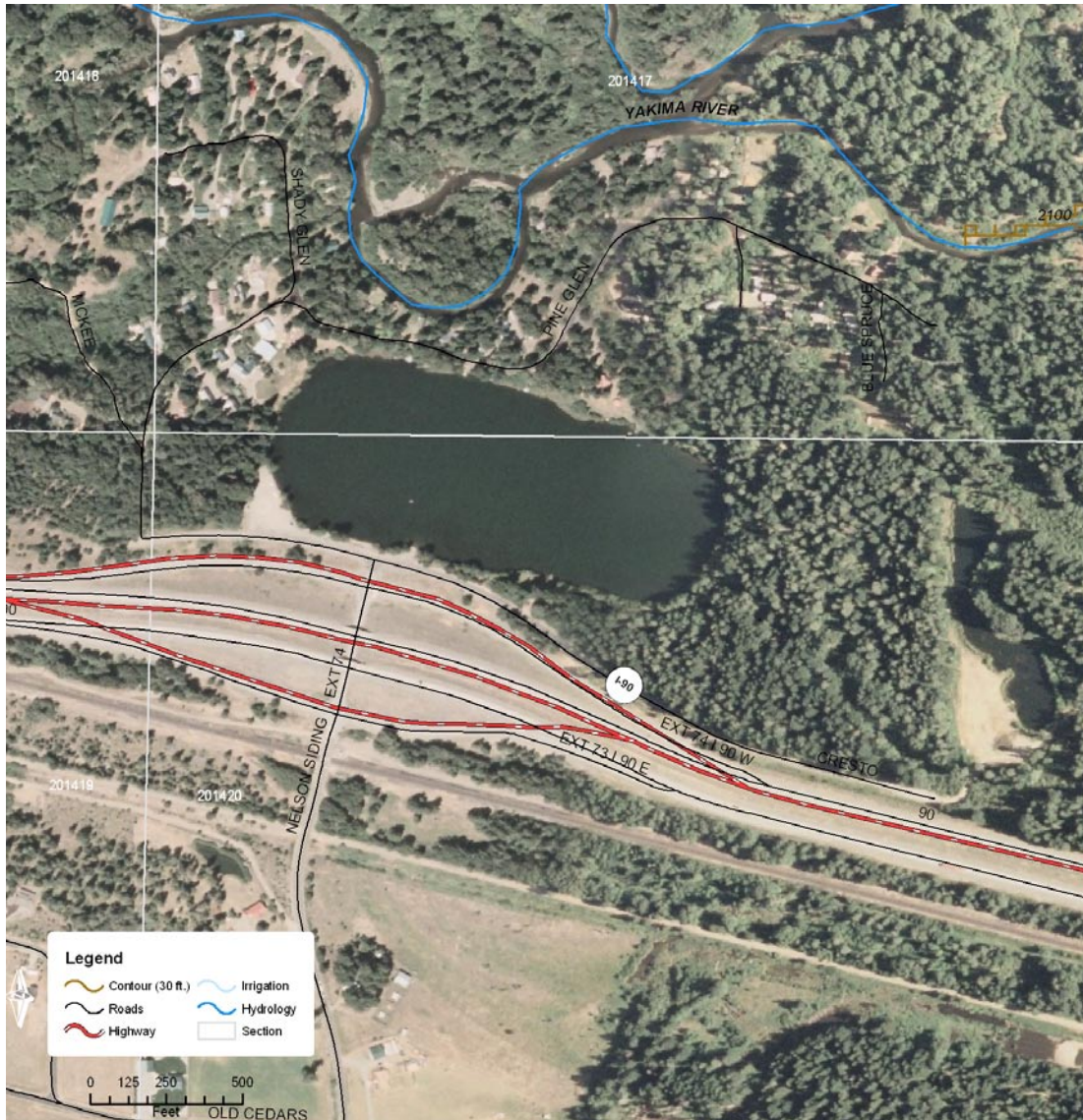
**Fuels** - Heavy timber and brush to the south. In the hills are farms and pastures.

**Houses** - Most of the homes have good defensible space except for the home on Alice Rd, and homes off Markovich Road.

**Other Factors** - Within Fire Dist 7. Canal runs through the area for water source. Debris burning, some logging and a lot of new construction.

**Recommendations** - Continue working with fire district on tactics and burning information.

## Pine Glenn



**Roads** - Gravel roads with 0 to 5% grades. 18' feet wide on the average and one way in/ out.

**Topographic features** - This is flat river bottomland where the developments are built. Easton ridge is just to the north of the developments and has steep slopes that are south facing.

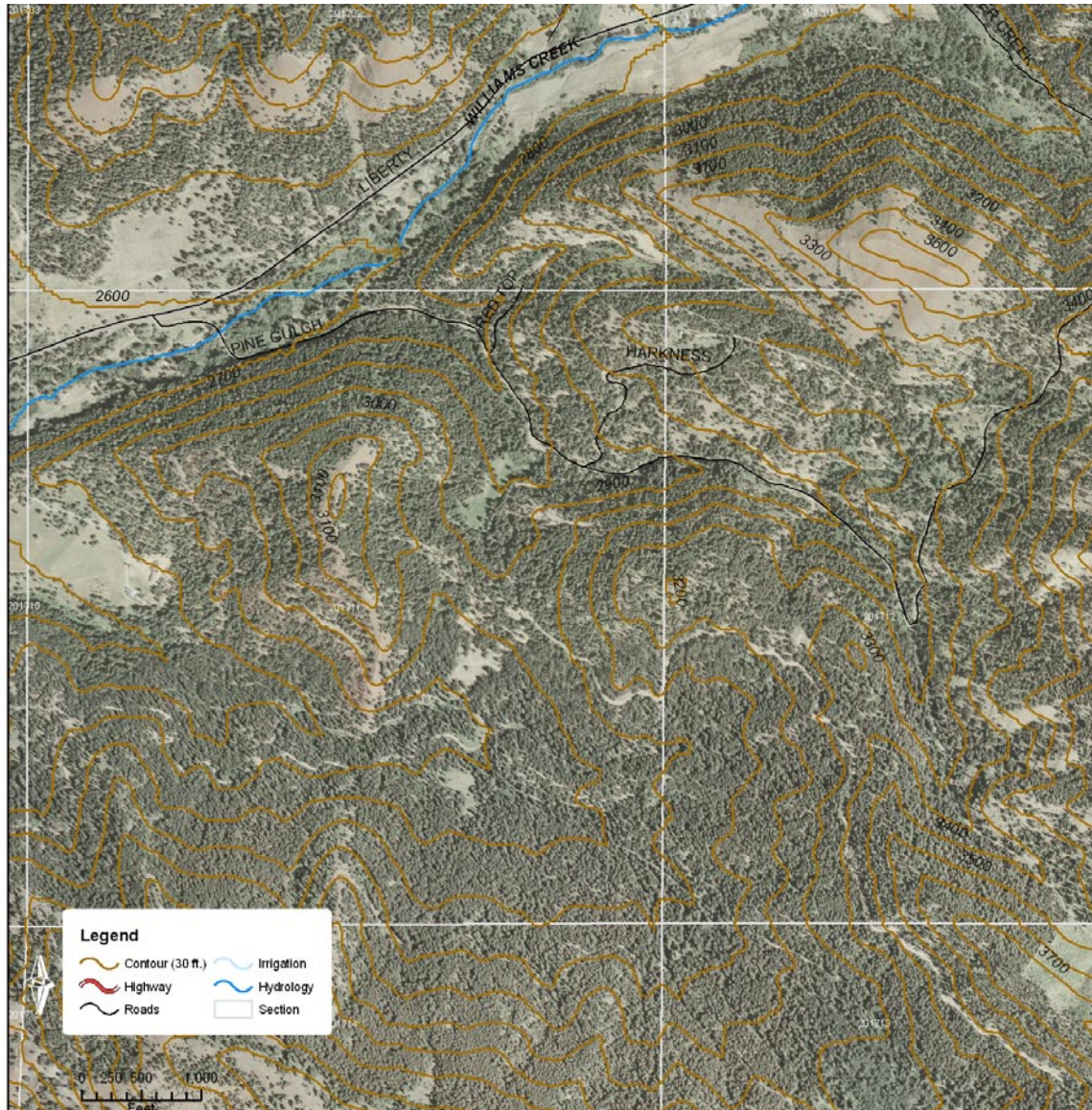
**Fuels** - Heavy brush and timber are dominant in the developments. This area has higher humidity and stays wetter and greener most of the time. Heavy fuels are along most roads.

**Houses** - Houses are built on small lots and are close together. Most of the homes don't have defensible space and have brush and trees growing right up to the homes. Structures mainly have metal roofs but there are a few that have shakes. Open decks wood, piles, and other accumulations of things are found on most lots.

**Other Factors** - Few to no hydrants

**Recommendations** – Education and offer a roving chipper for interested people.

## Pine Gulch



**Roads** - The roads have limited maintenance most of which are maintained by the residents and some by the Forest Service. Road conditions are rough and steep in parts with switchbacks.

**Topographic features** - Topographical features include 20 to 40% slopes with rocky outcrops, many canyons and draws.

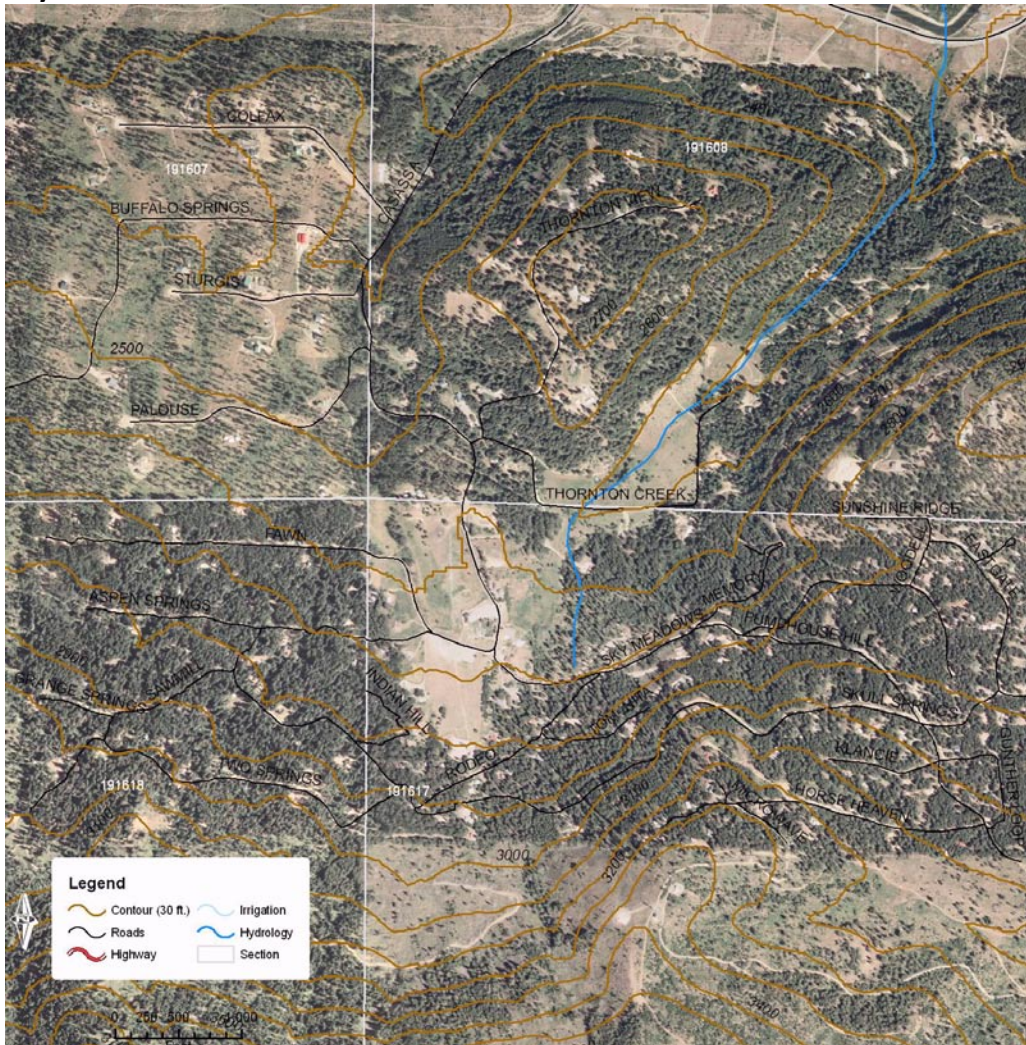
**Fuels** - Heavy timber, logging slash, brush

**Houses** - Little to no defensible space, lack of signage and some houses are hard to find. Steep narrow driveways with combustible siding and decks. Firewood near structures

**Other Factors** - Mining area safety issues. Outside any fire district. Hard access for fire equipment with 1 primary way in and out.

**Recommendations** – Mailings, roving chipper and Forest Service input on fuels reduction.

## Sky Meadows



**Roads** - Narrow brushy roads wind throughout the development. Roads are signed through the development but without local knowledge or maps it is hard to find your way through easily.

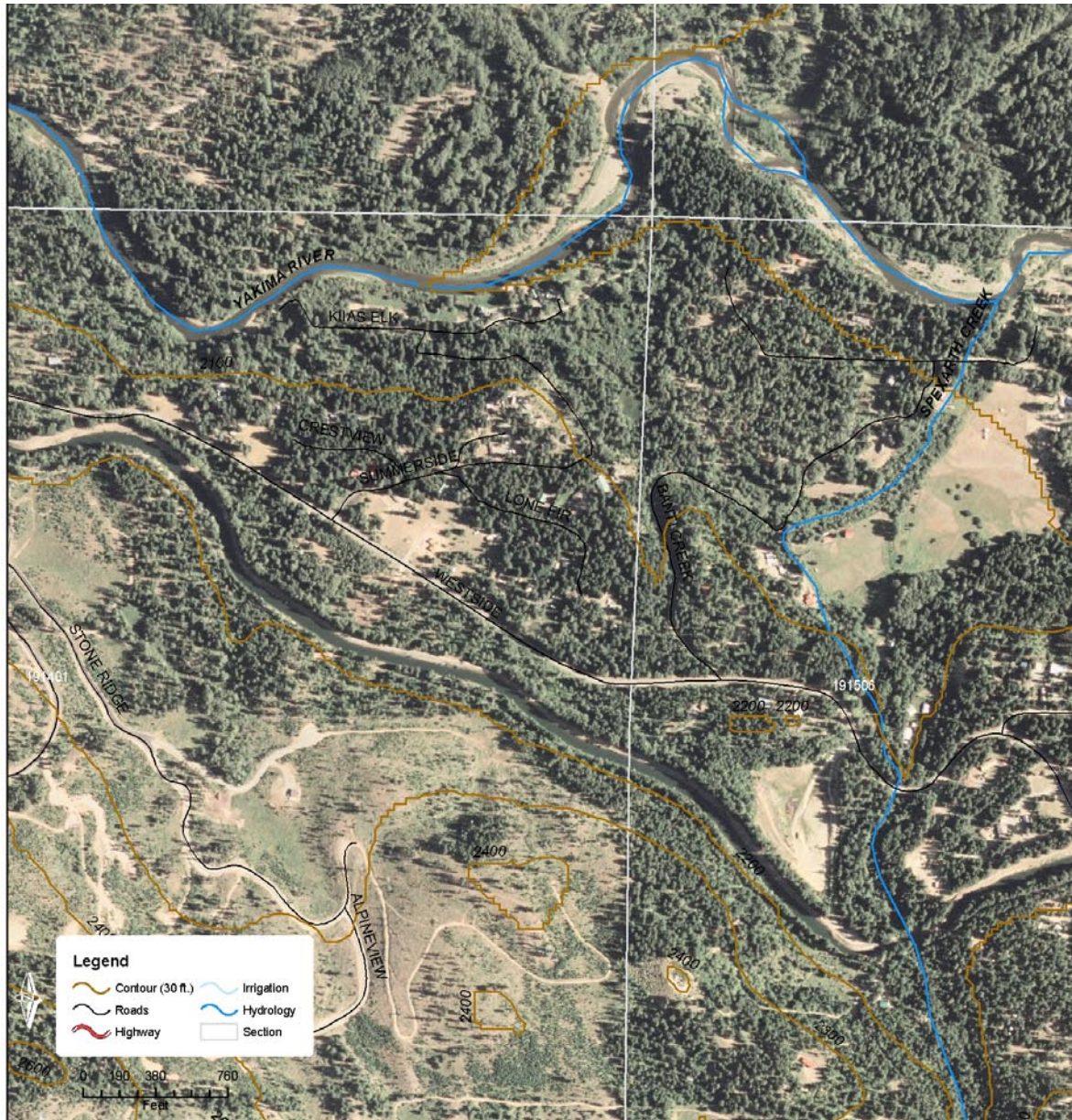
**Topographic features** - Approximately 1000 ft of elevation gain from the bottom of the development to the top within a ½ mile. Slopes, 40+% with homes mixed throughout this area.

**Fuels** - Heavy timber and brush with abundant dead and down all throughout area. A clear cut was done on the topside recently with slash piles still present. The logging came right up to the edges of the development. This a large fuel break but has increased the amount of slash.

**Houses** - Very little defensible space, homes built right on the steep slope. Woodpiles near homes and flammable fuels stored in and near home.

**Other Factors** - Mostly recreational property. There are approx 400 lots and 180 homes (30 are year round). The water supply comes through 2" pipe to holding tanks and then throughout without adequate flow defensible space around some of the homes, 2 roving chipper contracts, they are going to log the right of ways. Cooperative development.

## Summerside



**Roads** - Narrow gravel roads with few turnarounds that are narrow and tight. Banti creek road drops down into the river bottom with a steep grade. Roads have pot holes for less traction.

**Topographic features** - River bottom and slopes up to 20 to 30 %.

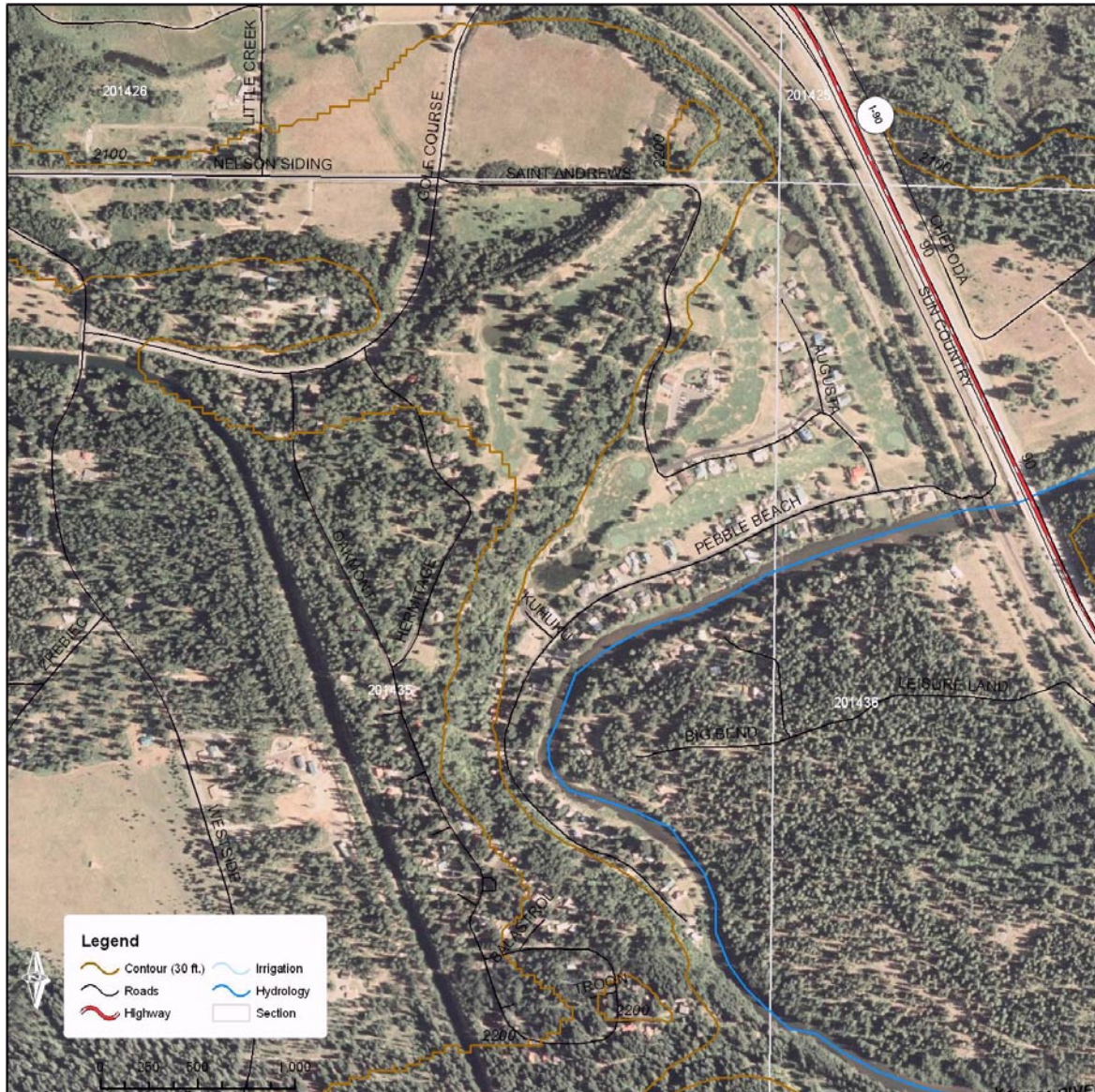
**Fuels** - Heavy timber and brush

**Houses** - There are quite a few homes in this area, most have a little defensible space from 10 to 30 feet. Combustible siding and decks

**Other Factors** - Inside Fire District 7. Common debris burning.

**Recommendations** - Mailings of educational information, burning and fuel reduction.

## Sun Country Estates



**Roads** - Paved 1 ½ lane road. At the entrance there is a low clearance bridge (approx 10 feet). There is another entrance through the golf course. Tight turns and narrow driveways.

**Topographic features** - Rolling hills, river bottom

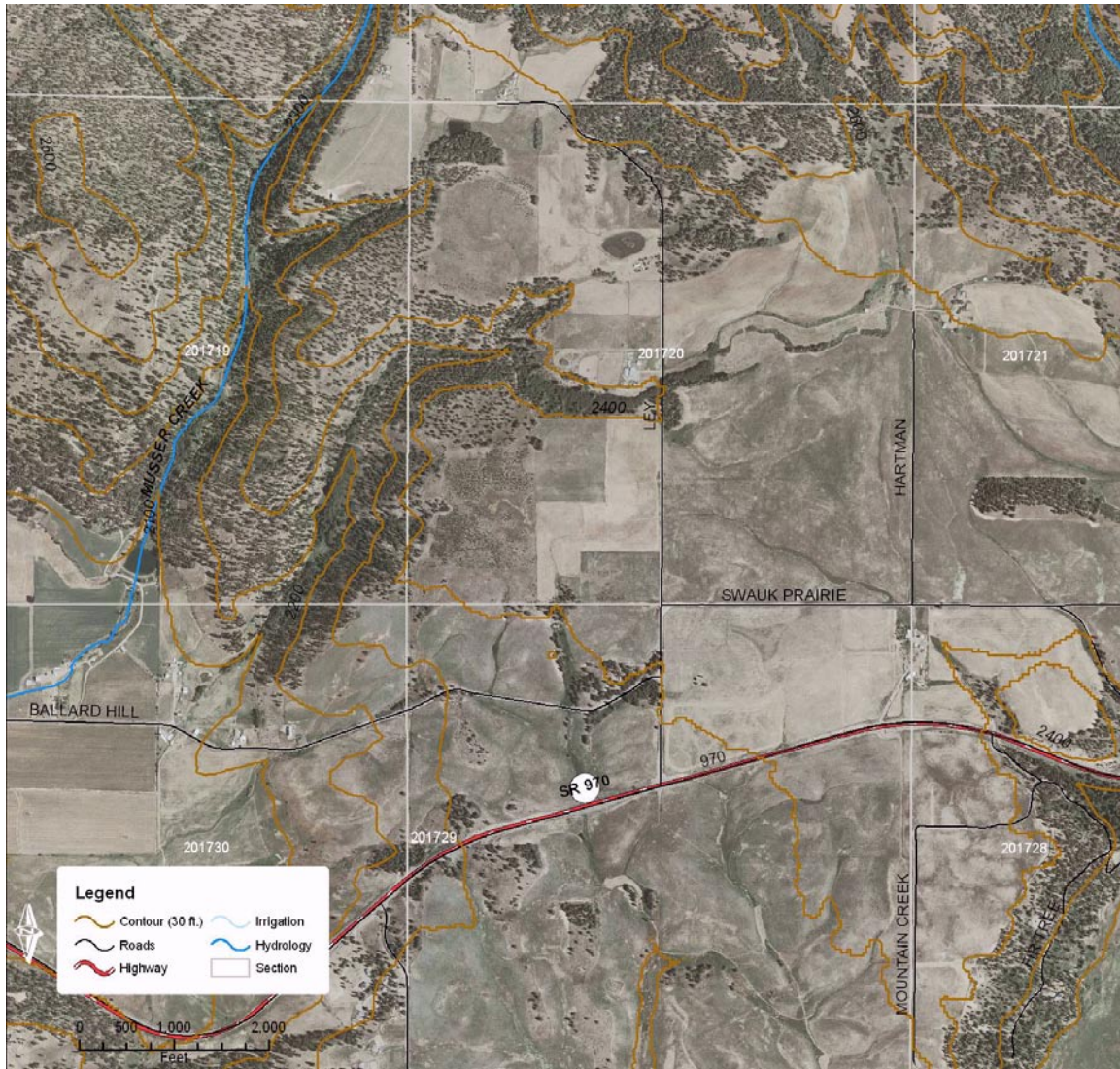
**Fuels** - Heavy pockets of brush and timber, much ground fuels and ladder. This is in a riparian zone (Yakima River). This development is next to the golf course

**Houses** - Homes do not have adequate defensible spacing 10 o 30 feet except for the homes next to the golf course.

**Other Factors** - Inside Fire Dist 7

**Recommendations** - Roving chipper and informational mailings.

## Swauk Prairie



### Roads - Good

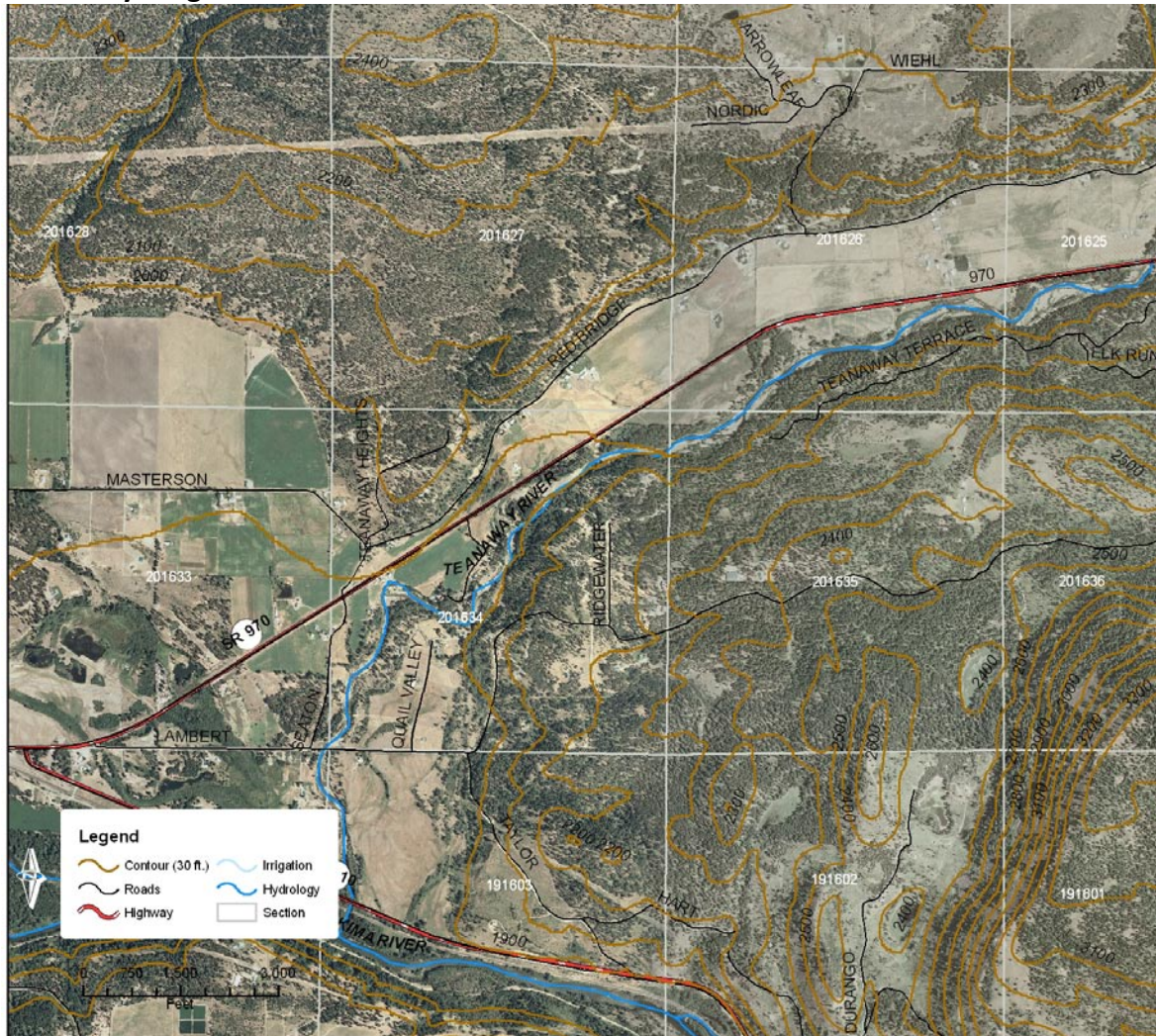
**Topographic features** - Rolling hills that lead to steeper ones farther from the housing area. The farther you follow Ley road the steeper the canyons.

**Fuels** - Slash is somewhat heavy on the farther ends of Ley road. The rest of the area is grass and timber patches. Farmed areas make up the southern portion to Hwy 97 and the Teanaway.

**Houses**-Houses near end of road are at higher risk. Less defensible space & built along canyons.

**Recommendations** – Educational mailings. This is a moderate risk area.

## Teanaway Heights



**Roads** - The road that leads into the development is steep at the beginning but levels out about 500' feet in. The road is signed at the beginning Dead End. Oiled dirt roads have good width.

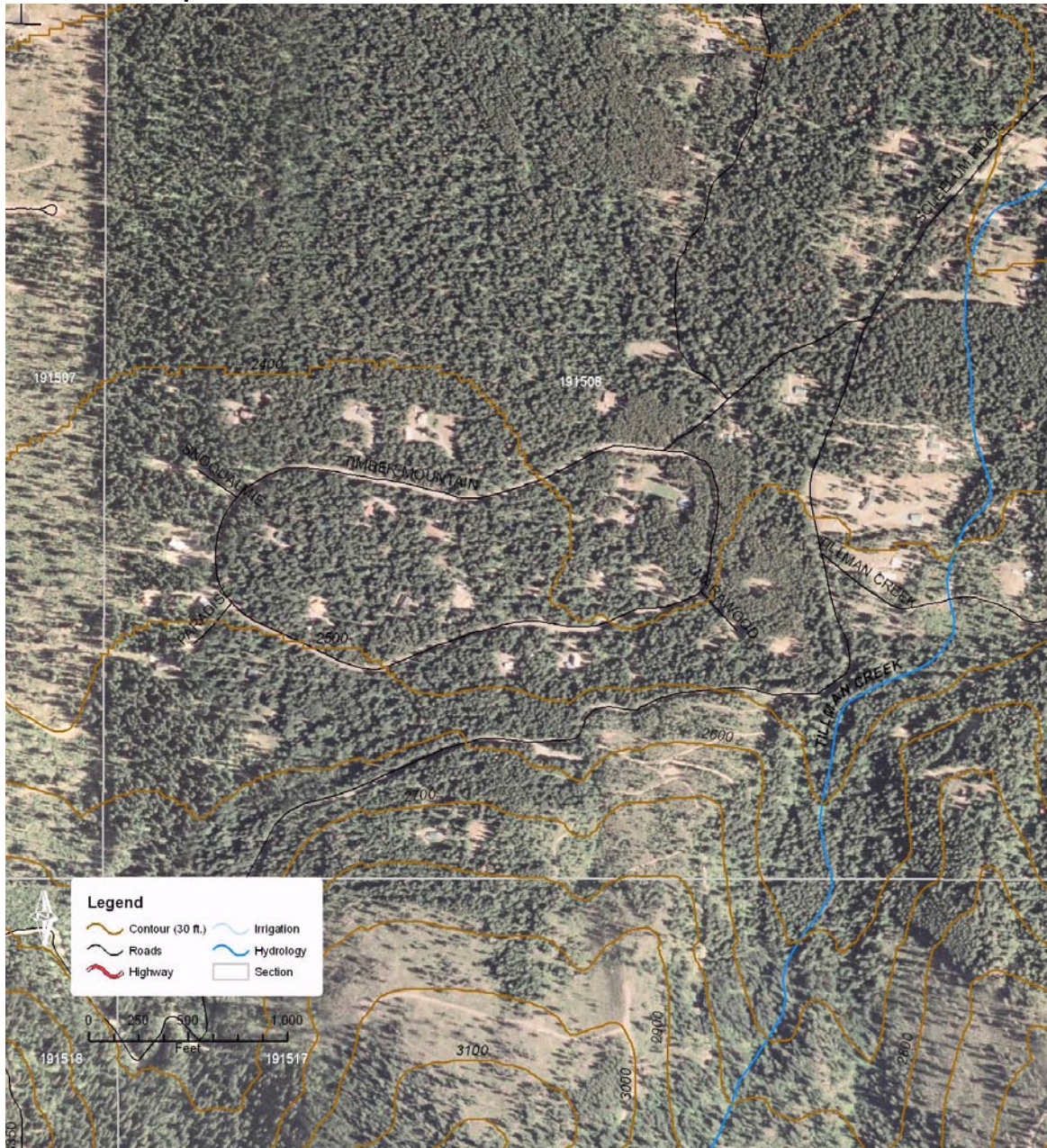
**Topographic features** - Rolling ground with few small draws. Steep hill on south side that leads down to Red Bridge road.

**Fuels** - Pine trees, grease wood and brush with grasses make up most of the fuels under the pines. This area is a good example of fuels reduction around the perimeter with most of the ground fuels just consisting of grass and few ladder fuels on the trees. This is a good shaded fuel break that just needs an under burn now.

**Houses** - 30 to 70 feet of defensible space around most homes typical building materials

**Recommendations** – Educational mailings and praise the community for all the great effort they have expended so far.

## Timber Mt Loop



**Roads** - Smooth gravel. Mostly flat.

**Topographic features** - Mostly flat. Steeper slopes to the south.

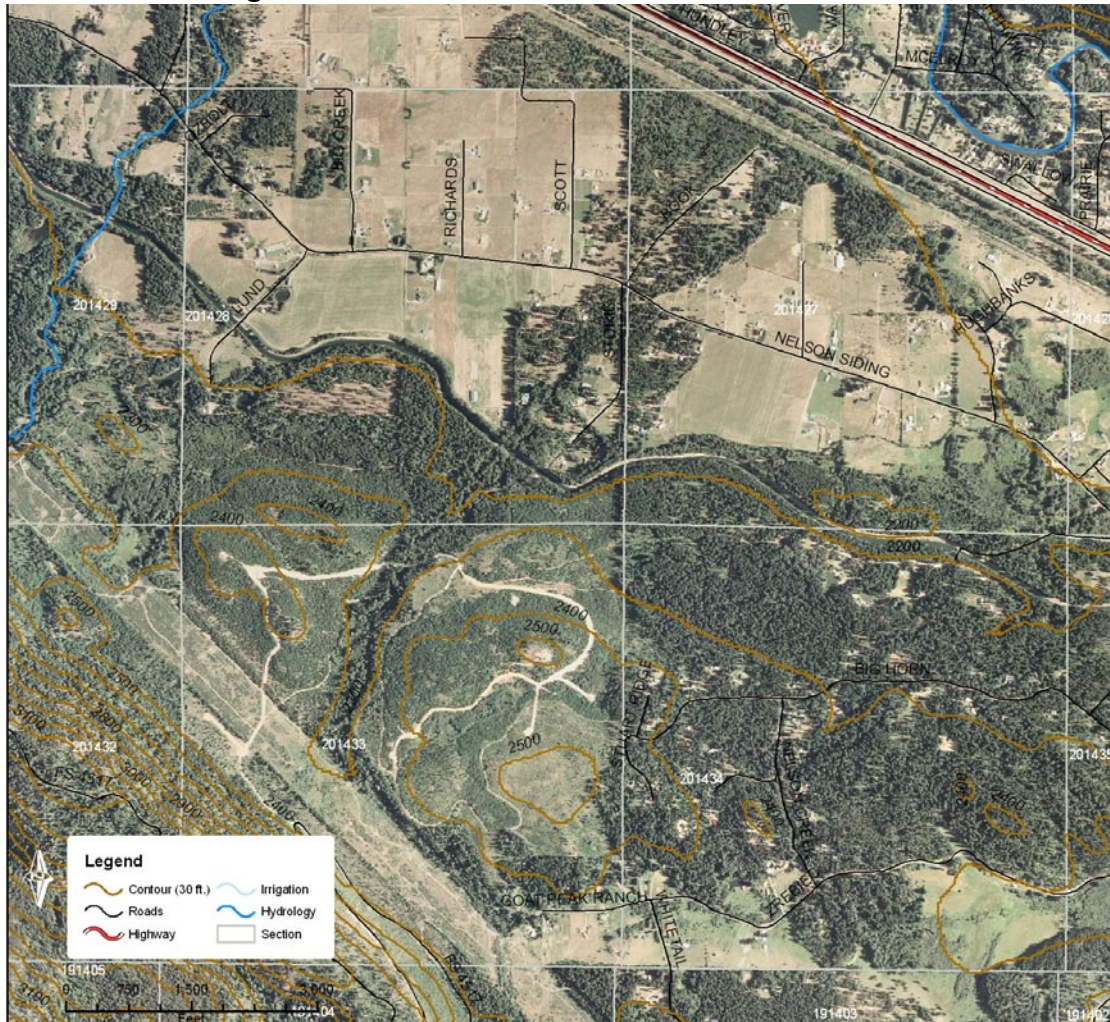
**Fuels** - Some heavier timber and brush throughout the development. Heavier timber to the south.

**Houses** - New construction. Fair defensible space.

**Other Factors** - Within Fire Dist 7. Debris burning and new construction.

**Recommendations** - Defensible space mailings and burning information. Offer a roving chipper.

## West Nelson Siding Rd



**Roads** - 2 lane paved road goes through this area with 2 different direct ways to access I 90.

There are a number of gravelled driveways that leave the main road these drives are typical drives with limited turning, with brush and timber enclosing them.

**Topographic features** - Mostly rolling hills with a large ridge to the south running parallel. There are draws that wind throughout the area and could influence fire behavior.

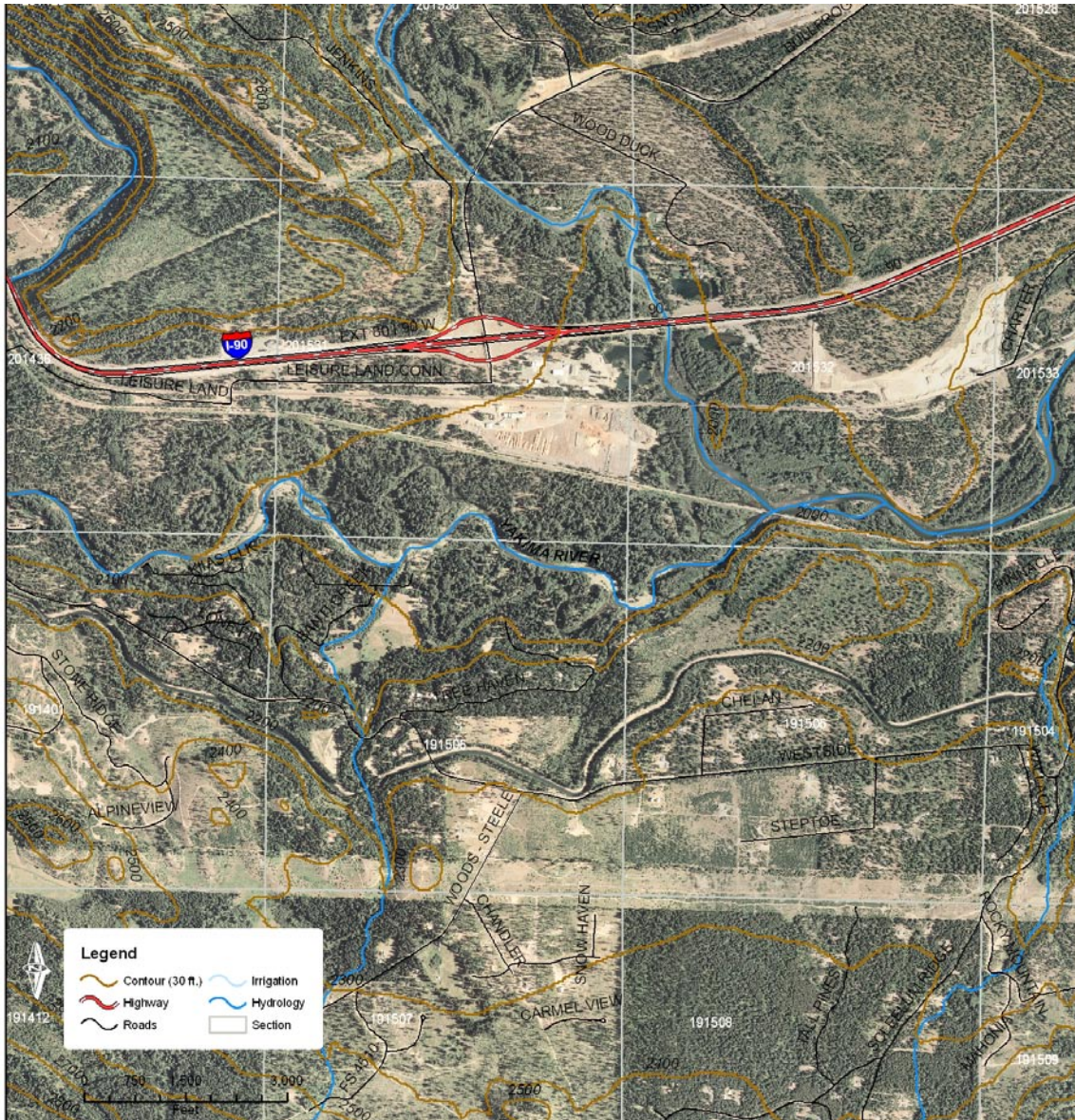
**Fuels** - The fuels are heavy brush and timber with pastures that break the fuels in places. There are many roads that also break the fuels.

**Houses** - Most of the homes in this area have minimum defensible spacing. This area is a primary year-round living with many uses, from farming to logging to recreational. Homes have good roofing with combustible siding and decks. Most of the homes are built back from the road with Ave. Driveways are over 100 feet.

**Other Factors** - Consistent west wind. This area is within Fire Dist 7. This is a high use area, lots of debris burning takes place and escaped burns

**Recommendations**-Post signs listing bun bans, shut downs. Offer a chipping program.

## West Side Road



**Roads** - Primary route is a 2 lane paved road with laterals graveled, the average driveway is narrow. Access to this area is through South Cle Elum, or off I-90

**Topographic features** - Rolling hills and river bottom. Large ridge runs parallel to the south side

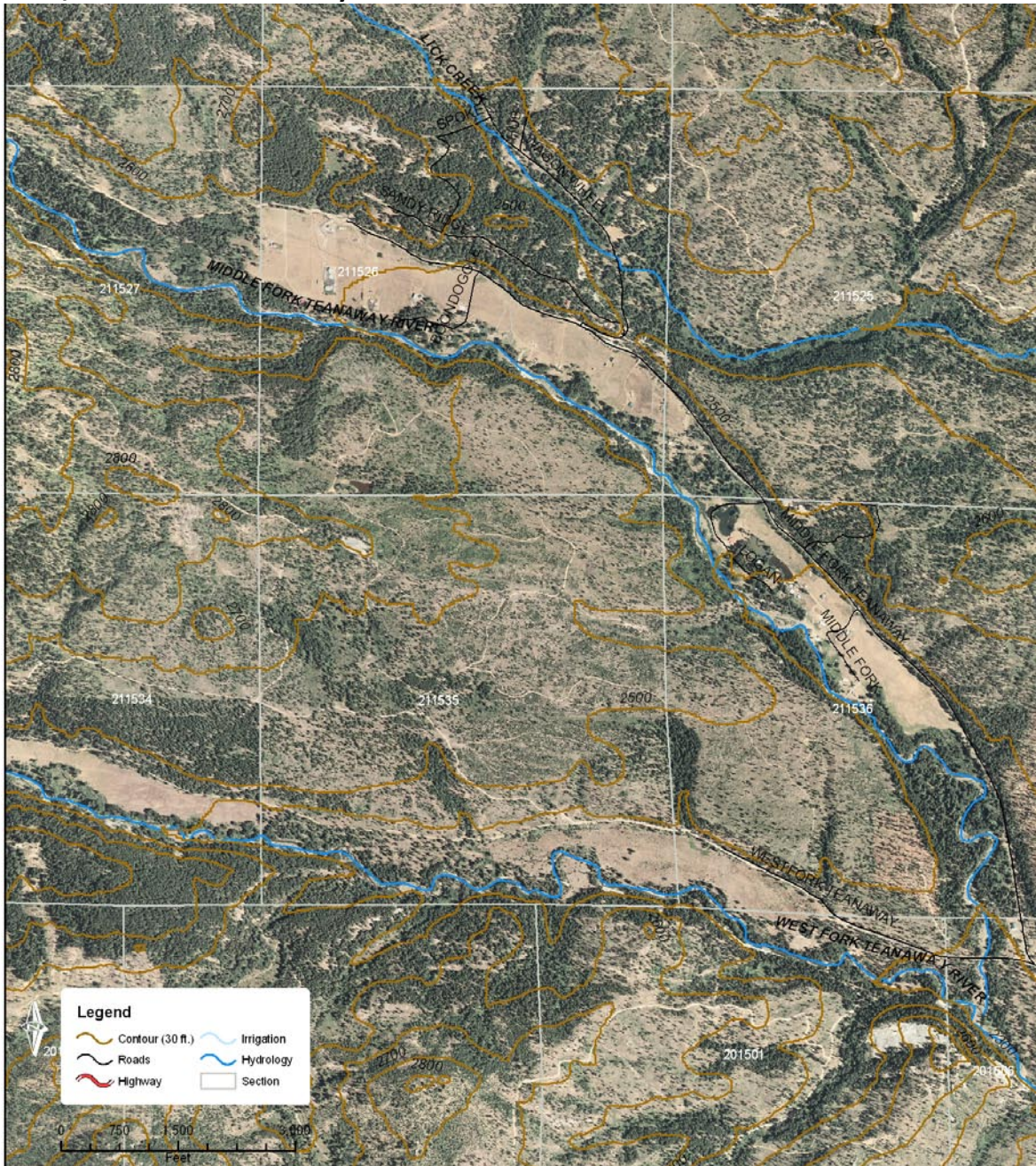
**Fuels** - Heavy timber and brush with broken areas of pasture and roads mixed in clear cuts.

**Houses** - Mostly metal roofs with combustibile siding and decks. Defensible space goes from excellent to none. Most homes have a clean look to them, but still have fuels that could be considered too close.

**Other Factors** - Within Fire Dist 7. A lot of new construction throughout the area. Most homeowners do some type of debris burning.

**Recommendations** – Offer a roving chipper. Mailings on defensible space, and burning.

## West/ Middle Fork Teanaway



**Roads** – Narrow. Wagon Wheel Rd has a bridge that may have low load limits. 1 way in / out

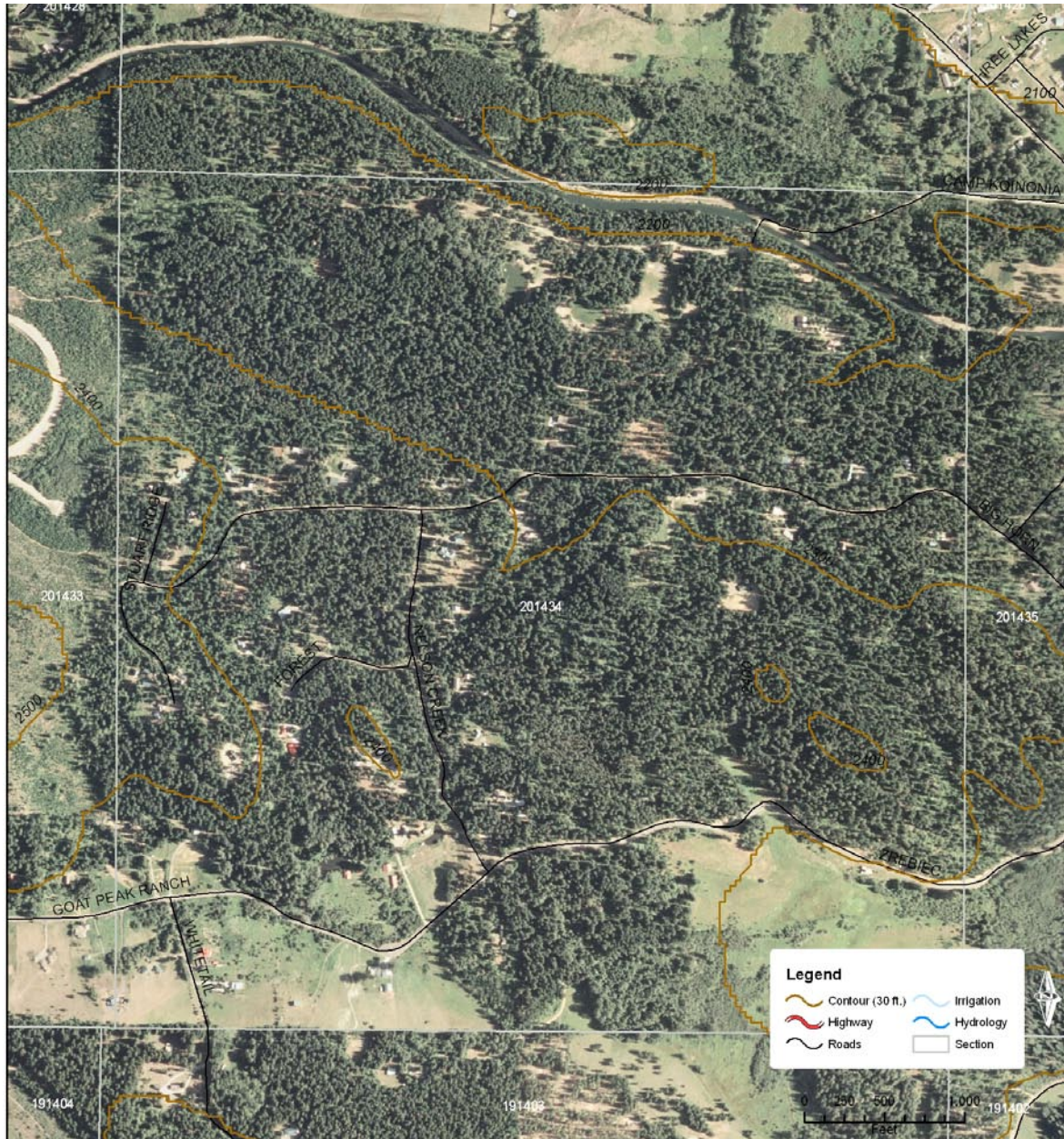
**Topographic features** - Rolling hills with wet draws in some areas.

**Fuels** - Heavy timber and slash in the West and Middle Fork.

**Houses** - Combustible siding and decks. Houses are built on ridges and in draws.

**Recommendations** – Educational mailings. Roving chipper for the Wagon Wheel and Teanaway Triangle area.

## Zrebiec Rd



**Roads** - Smooth gravel roads wind through the developed area. There are some dead ends with smaller cul de sacs. Driveways are tight and up to 150' long

**Topographic features** - Rolling hills

**Fuels** - Heavy timber and brush all through the area. Clear-cuts in some of the outside areas

**Houses** - Not large amounts of defensible space, though most of the homeowners have cleaned up there lots around the houses nicely---still there is close fuels.

**Other Factors** - Inside Fire Dist 7. Consistent new construction

**Recommendations** - Information mailings for homeowners and information boards.

## Fire District 8 (and Vicinity) Areas of Concern

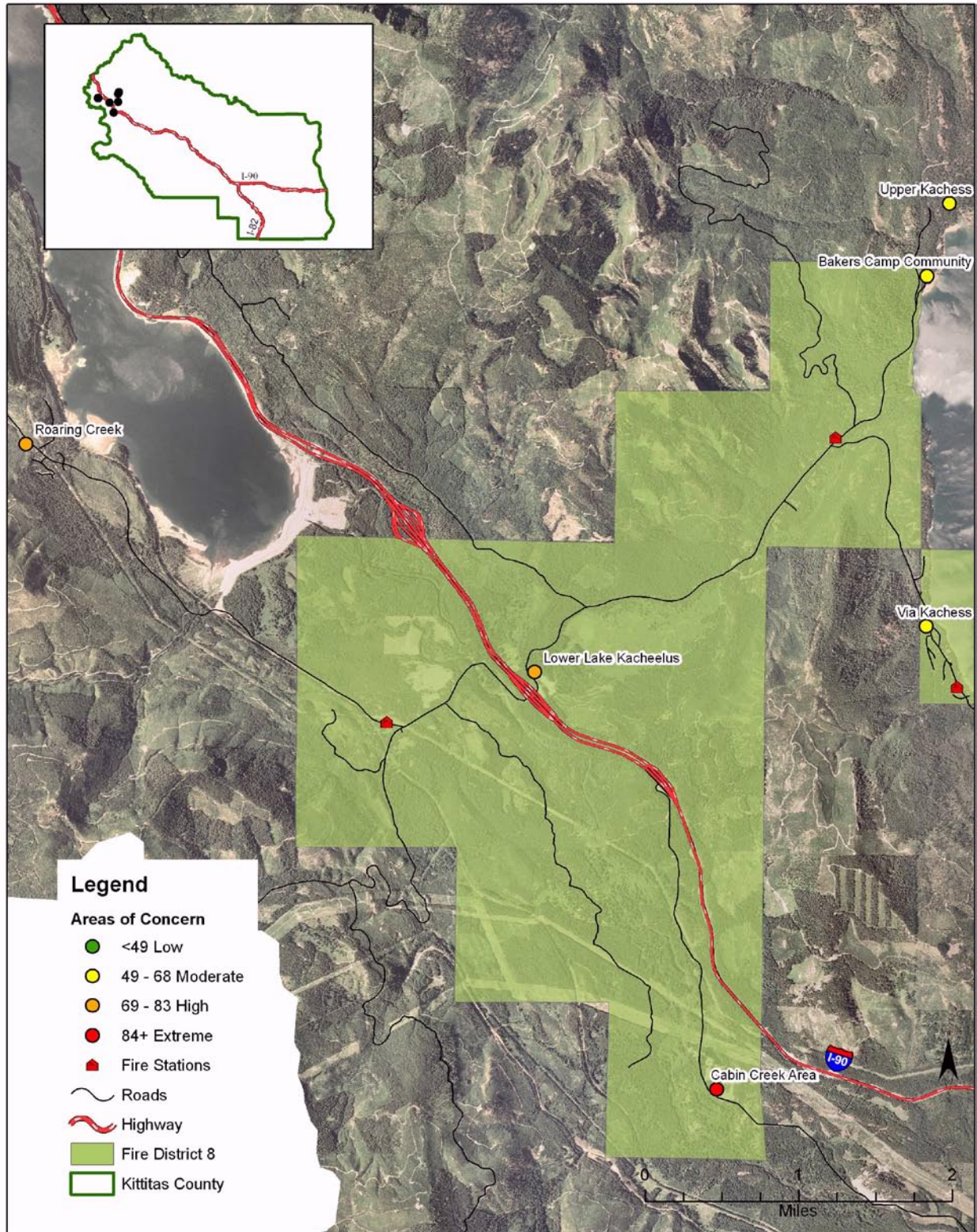
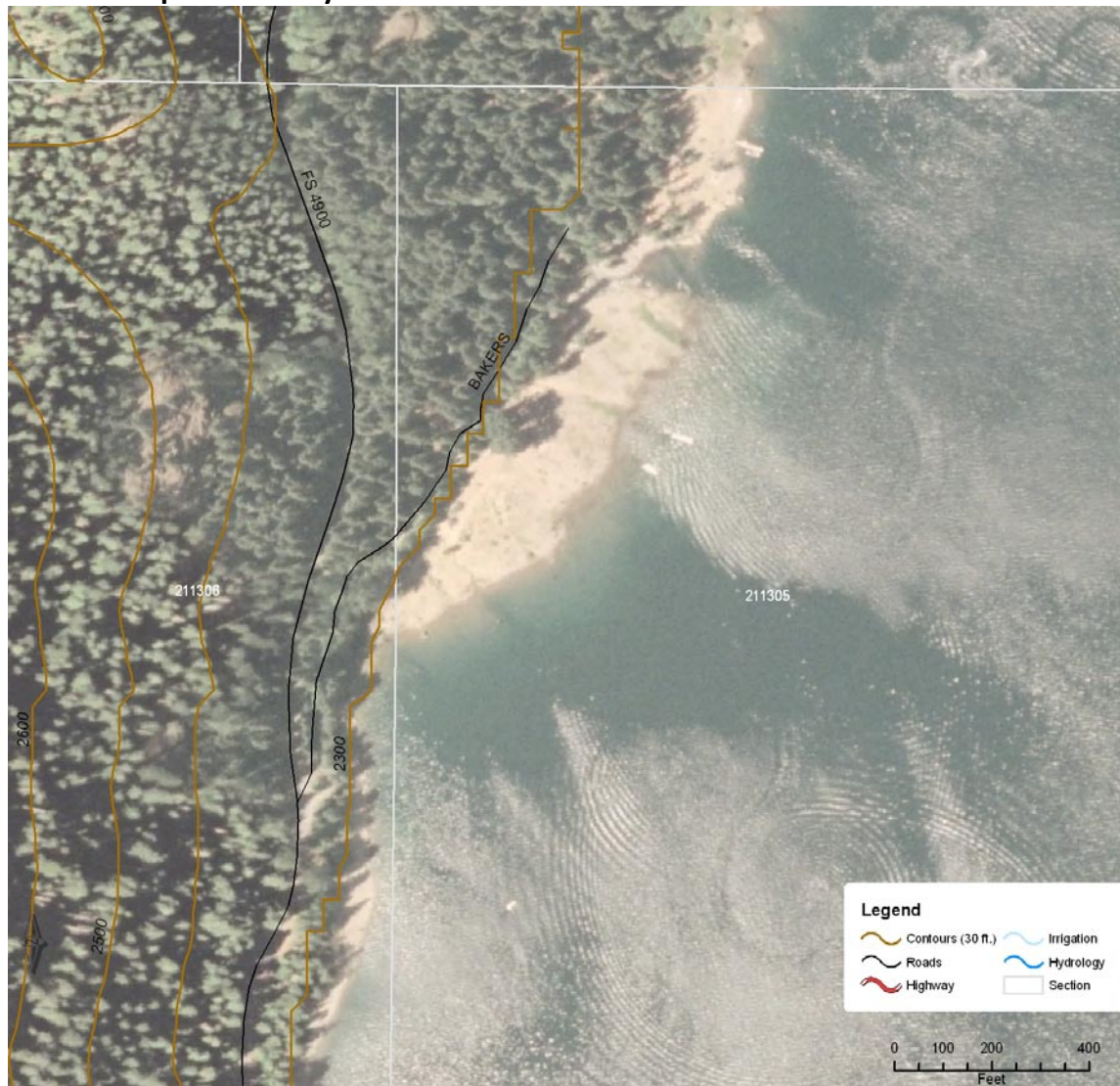


FIGURE 22 FIRE DISTRICT 8 AREAS OF CONCERN WITH HAZARD RATING

## Bakers Camp Community



**Roads** - One road in and out greater than 5% slope with no street signs.

**Topographic features** – Most of the terrain has a slope of less than 9%

**Fuels** - Heavy brush with many ladder fuels.

**Houses** – Wood shingle roofs are in the areas with structures having combustible siding and decks.

**Other Factors** - High use camping area.

**Recommendations** - Make sure that all shut-downs and burn bans are posted.

## Cabin Creek Area



**Roads** - One road in and out made of smooth gravel, not much slope.

**Topographic features** - Valley bottom with rolling hills going to steeper slopes within a mile.

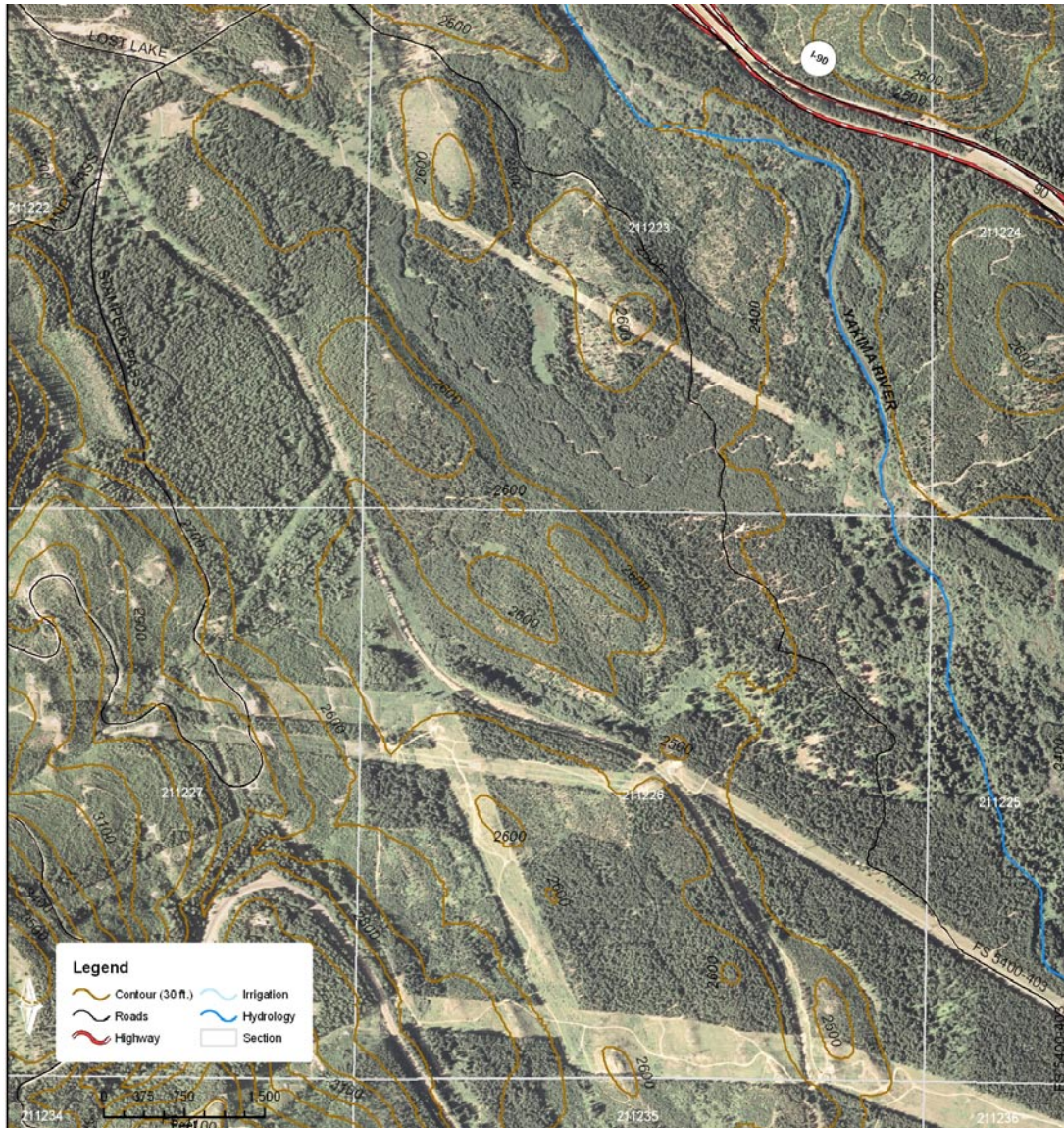
**Fuels** - Heavy timber and brush with many ladder fuels.

**Houses** - Approximately 10 to 15 homes in the valley bottom and most have 10 to 50 feet of defensible space next to the home but heavy fuels surround the area. All have metal roofs.

**Other Factors** - High use camping area. This area stays fairly green and wet most of the year. Not within any fire district.

**Recommendations** - Good signage for prevention messages and basic information. Make sure that all shut-downs and burn bans are posted.

## Lower Lake Kacheelus



**Roads** – Rough, brushy, narrow and rutted

**Topographic features** - Rolling with some steep slopes that the roads travel through. This area is mostly in the valley bottom.

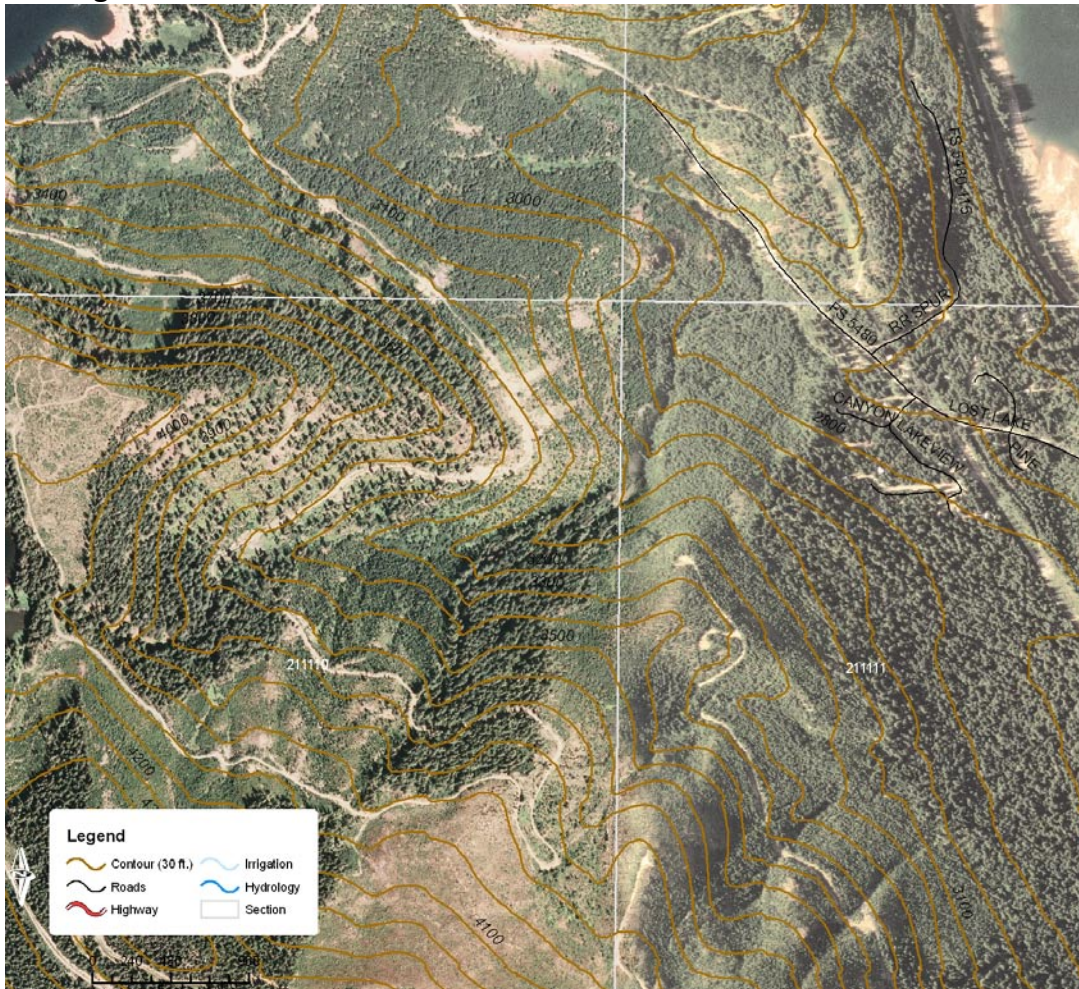
**Fuels** - Heavy brush and conifer cover. The area has been logged over the years so there is slash residue throughout. The area is over stocked with both conifer and deciduous trees and brush.

**Houses** - Homes are not labeled with any type of signage nor are the roads. From the main FS road 54 you have no idea there are any homes in that area. Homes are recreational use cabins.

**Other Factors** - Outside any Fire Dist

**Recommendations** - Road signage and home labeling and better road maintenance. Create access to water sources in the area. Education about the hazards that exist.

## Roaring Creek



**Roads** -The road is gravel that is in good shape to the development. In the development, all of the roads have gates on them to keep the general public out. Driveways into the homes are narrow with limited turning room.

**Topographic features** -Steep hills surround the housing area. Up the road are steep canyons that would increase fire behavior.

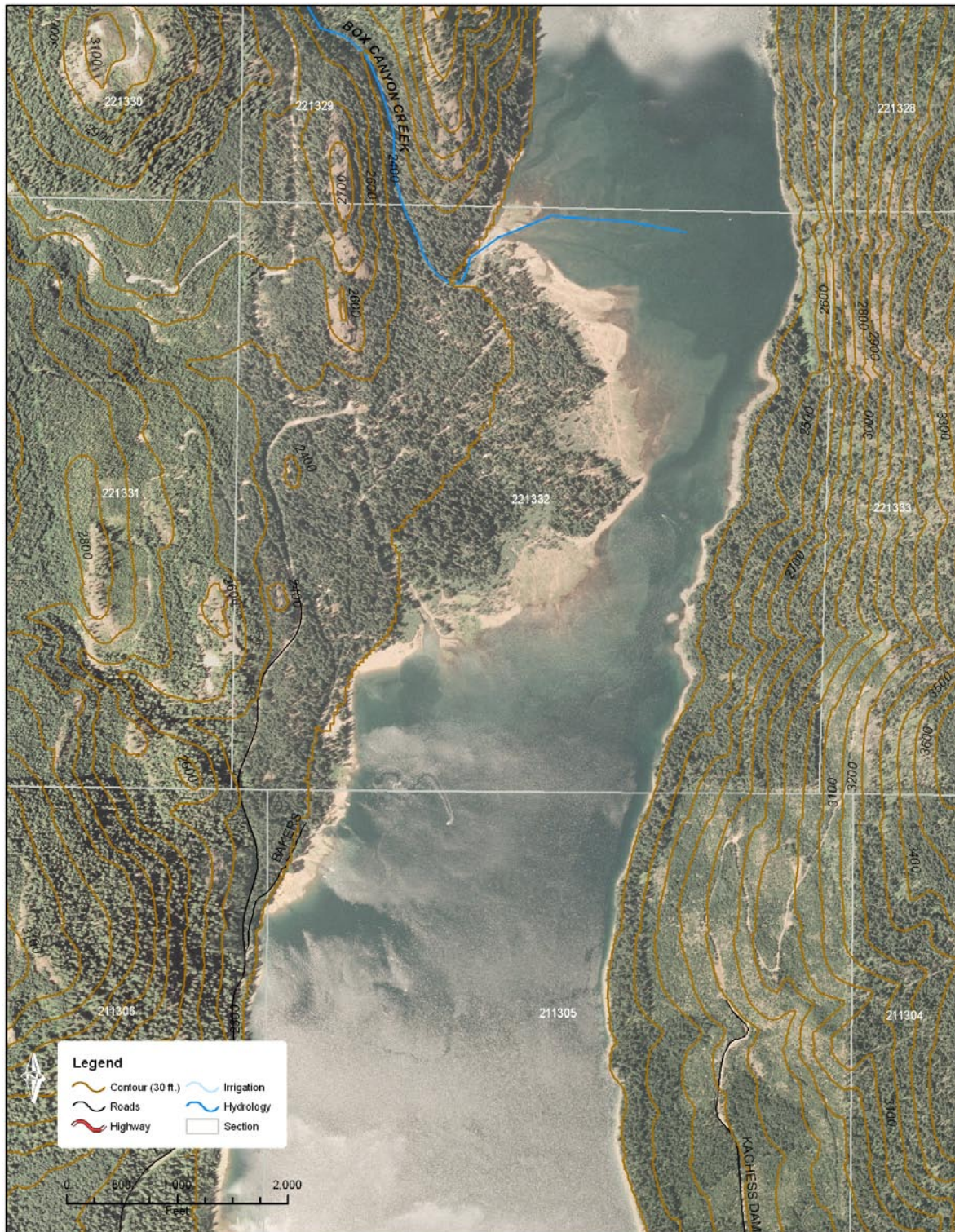
**Fuels** -Heavy brush and timber present in the area, with down and dead material throughout. Some logging residue in the canyons above, and small slash piles below the development.

**Houses** -Houses have metal roofs with wood decks on some. Woodpiles are present throughout the area. These homes do not have outside power; generators make the power for these homes. Out buildings have gas and propane for power sources. Defensible space is limited.

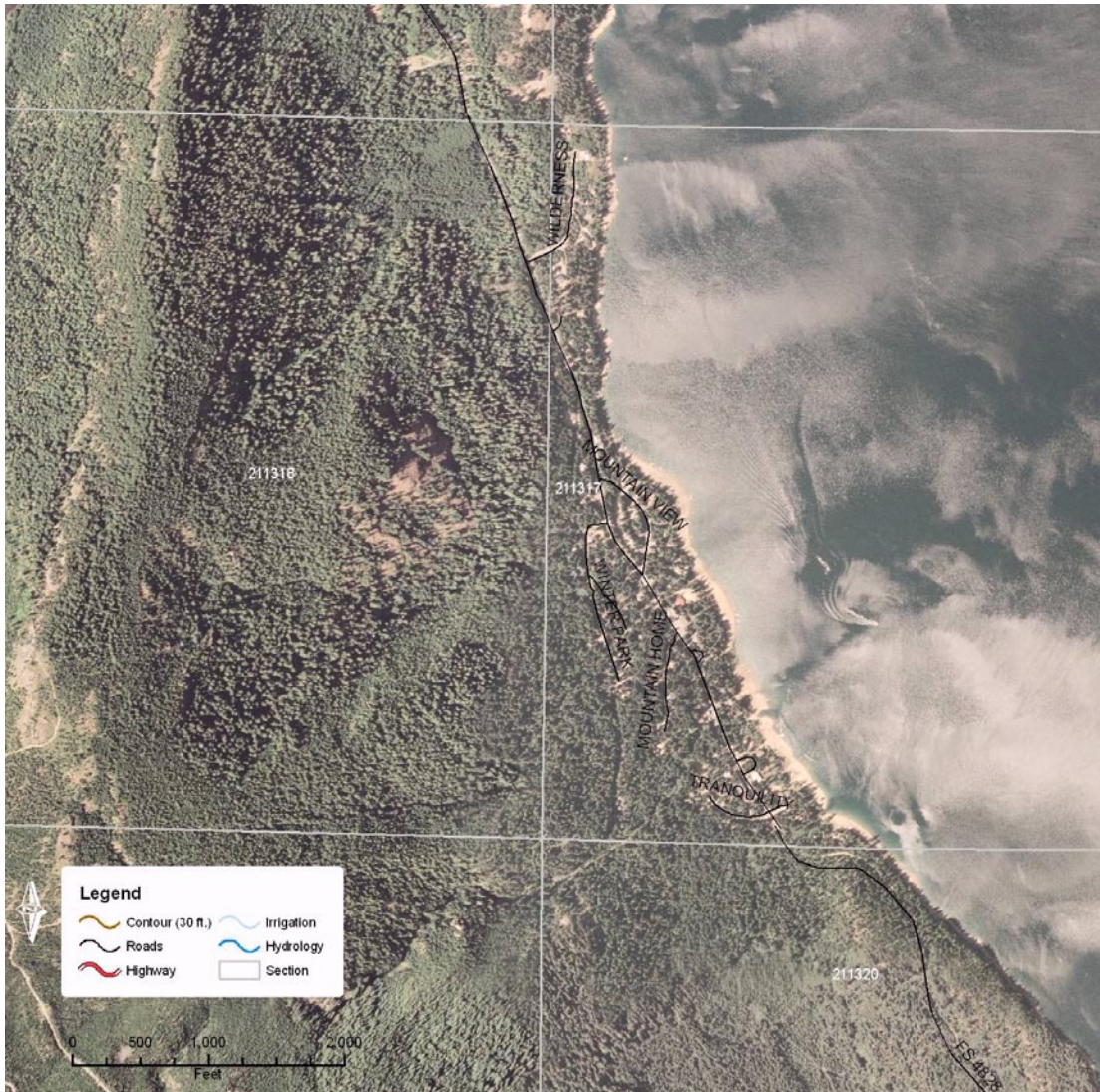
**Other Factors** - This is outside any fire district. This area has a low occurrence of fire history. No permanent residents.

**Recommendations** - Mailings to homeowners about what they can do to protect their homes from wildfire. Signs in the area for information about burning regulations.

# Upper Kachess and Via Kachess



## Via Kachess



**Roads** - Good paved road, most have loops or cul-de-sacs. Driveways have locked gates, narrow, brushed in, and most are longer than 200'

**Topographic features** - Steep canyons at the head of the paved road. Steep hills around the homes in this area.

**Fuels** - Heavy brush fuels and conifers make up the loading. This is a wetter area and fire occurrence is lower. A lot of dead and down material

**Houses** - Not much for defensible space

**Other Factors** - Good fire protection near most of the developed area.

**Recommendations** - This area is low in fire occurrence and receives more rainfall. With the lack of good defensible space and a strong fire it will be difficult to save homes. Without a teachable moment in the area it may be hard to get people attention to do more to protect their homes. Continuing education. Mailings and working with the local fire district to spread the word.

# Fire District 51 (and Vicinity) Areas of Concern

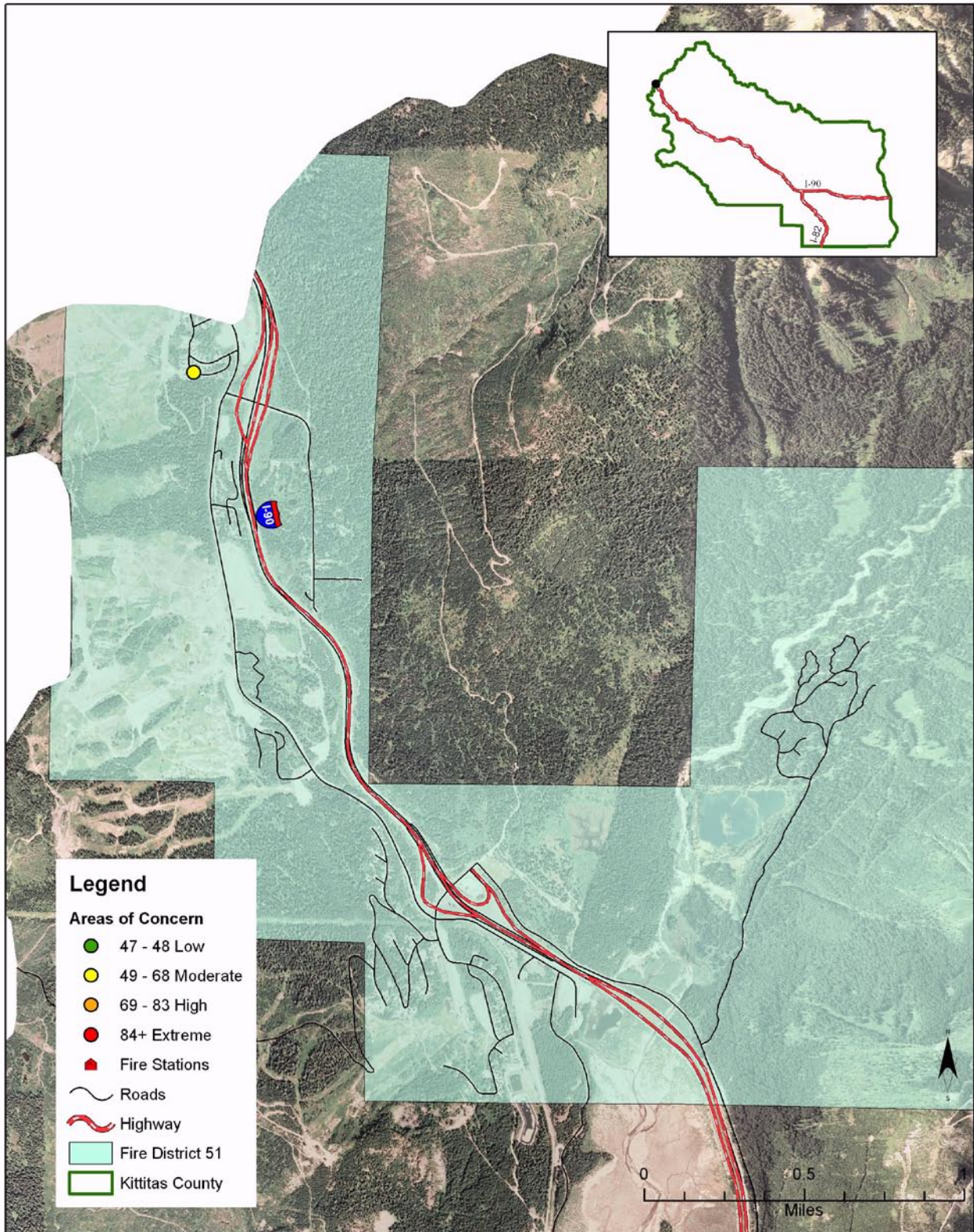
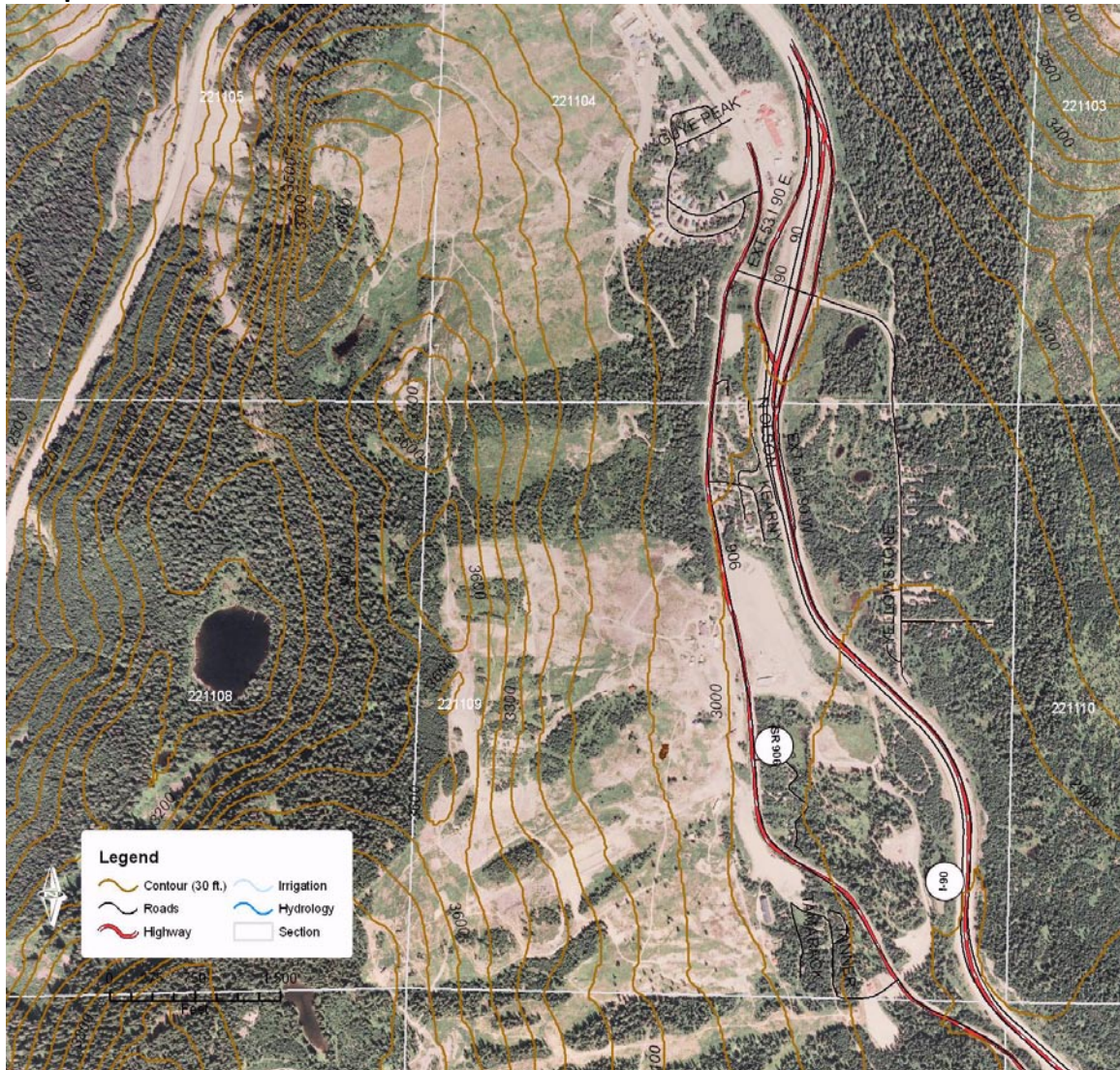


FIGURE 23 FIRE DISTRICT 51 AREAS OF CONCERN WITH HAZARD RATING

## Snoqualmie



**Roads** - Main roads are paved around the general public open areas, but roads that lead into the smaller developments are gravel and 20' or less in width.

**Topographic features** -Most of this developed area is in the valley and lower slopes, but surrounding terrain is steep.

**Fuels** -Heavy brush and timber surrounds the area with dead and down trees scattered throughout it. This fuel loading occurs right up to the edge of the private property.

**Houses** -Defensible space is minimal and adequate space does not exist. Houses have steep metal roofs and most have wood decks. Woodpiles are frequently on decks and near homes.

**Other Factors** -This area has low fire occurrence and the burn season is shorter the rest of the county. This area is within a fire district supported by King County.

**Recommendations** - Mailings for homeowners recommending defensible space. Work with Fire Districts to get the word out.

## **Overall Treatment Recommendations**

As part of the implementation of wildfire mitigation activities in Kittitas County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Policy changes for structures and infrastructure in the Wildland Urban Interface
- Home site defensible zone through fuels modification
- Community defensible zone through fuels alteration
- Access improvements
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts)
- Communication enhancements (reverse 911, Fire Hotline, increased cell phone coverage)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Another guiding principle is to encourage practices that are compatible with forest health and forest related values including wildlife habitat and soil conservation. Treatment recommendations may also be considered through the lens of carbon emissions; encourage effective treatments that minimize carbon emissions (e.g. chipping slash on-site may be more desirable than end-hauling or piling and burning slash). In addition, implementing treatments should minimize the risk of spreading invasive species.

Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

## **Fuels Reduction Recommendations**

- Implement "Firewise" recommendations within 200 feet of all private homes and essential infrastructure. Actions include the establishment of "defensible" space, adequate turn-around space for emergency equipment, and clear consistent address signage.
- Create shaded canopy fuel breaks in the planning area on strategically identified areas that will have the greatest benefit for the entire project area. The objective of the shaded fuel break strategy is to help reduce the potential of a wildfire moving from public to private lands and vice versa across the landscape. Particular attention will be paid to neighborhood and more densely populated areas adjacent to heavy fuels, and areas adjacent to critical community infrastructure.
- Encourage the U.S. Forest Service to continue coordinating fuels reduction and forest health projects on lands adjacent to private ownership within the County as the risk assessment and prioritization process continues.

- Treat vegetation within 50 - 100 feet of roads and driveways. This can include shaded canopy defensible space on both sides of the road, road signs, and clearly marked evacuation routes.
- Encourage adjacent landowners and agencies to perform complementary treatments on their land by increasing involvement in the public planning process and inviting neighboring private landowners to participate in “Fire Wise” workshops and other educational opportunities.
- Improve funding opportunities to assist landowners in meeting their responsibilities for risk mitigation and forest stewardship by exploring cost-sharing agreements and partnerships.

### **Prevention Education and Outreach Recommendations**

- Provide opportunities for “hands-on” stewardship and risk reduction training for homeowners and local contractors.
- Assist community members to access funding and resources needed to complete fuels reduction and defensible space creation on their properties.
- Continue conducting risk assessments of individual structures and essential infrastructure, ensuring data is used to implement identified recommendations, inform planning efforts and educate landowners. Utilize qualified personnel in the county, (fire district personnel, conservation district, foresters) who are willing to evaluate infrastructure.
- Use GPS equipment to ensure risk assessment data can be mapped accurately.
- Compile essential “Fire Wise” information and distribute to landowners in the CWPP planning area. Information presented should cover landowner responsibilities and individual preparedness that are specific to the fire risk in each WUI
- Assist DNR to improve landowner understanding, interest and compliance with NFPA299 on-site assessments.

### **Fire Response Capacity Recommendations**

- Complete Evacuation Plans for all at-risk sub-drainages with sufficient population density.
- Update physical addressing and acquire an integrated dispatch on-board or laptop computer with GPS mapping system for response efficiency
- Create a locator map of year round water supplies
- Work with landowners and Kittitas County Community Development Services to address access issues including road conditions for ingress and egress requirements, possible local fire zoning ordinances and/or variances with communities
- Investigate the use of reverse 911—the ability to have an automated systems that can call homes in areas where a wildfire is occurring to inform occupants.
- Consider creating a Fire Hotline that would provide information regarding fire risk, recommended treatment, cost-share programs, and resources available.

## **Bio-Mass Utilization Recommendations**

Woody biomass utilization opportunities may help improve forest restoration activities by using and creating markets for small-diameter material and low-valued trees removed from forest restoration activities, such as reducing hazardous fuels, handling insect and disease conditions, or treating forestlands impacted by catastrophic weather events. To address the amount of biomass left on-site, wildlife and biodiversity and soil productivity the following is excerpted from several States' Biomass Guidelines: Retain all pre-existing coarse woody material and snags. Retain and scatter tops and limbs from 20 to 30 percent of the trees harvested. Also, prescribed fire can be important to maintain the fuel reduction benefits provided by biomass removals.

Currently, the Tapash Sustainable Forest Collaborative is working to address impaired forests on the east slopes of the Cascades, including lands in Kittitas County. The Collaborative envisions stimulating new, innovative markets to turn the products of restoration into alternative energy and local wood-based products. Biofuel from wood is an exciting prospect, and may help finance forest restoration, while generating a whole new economic sector for the region. New product lines, like pellet manufacturing, can spring up alongside biofuels production, creating opportunities for a whole spectrum of sustainable forestry. Opportunities associated with the results of these efforts should be incorporated into future planning and implementation efforts.

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Photographs courtesy of DJ Evans, Kittitas County Fire District #1.

GIS data obtained from Kittitas County, Kittitas County Conservation District, WA Department of Natural Resources, USDA Farm Service Agency and USDA Natural Resources Conservation Service.

# Appendix A

## Community Assessment Sheets

### Burbank Creek Area

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3		
Other	5	5	goes from ok to rutted
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1	1	
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	8	few have D space
No defensible space	10		
<b>Totals for this page</b>		38	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	

Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10	10	
<b>H. Utilities ( Gas and Electric )</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
<b>Totals for this page</b>		45	
<b>I. Totals for Risk Assessments</b>			
<b>Totals for page 1 and 2</b>		83	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**Cabin Creek Area**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		1 primary road
One road, primary route	3	3	smooth & gravel

One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	2	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3	3	
Dead-end roads 200ft or greater	5		
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		no signs except for home
Not present	5	5	address
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10	10	Heavy ladder fuels
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	6	10' to 20' ave. up to 50'
No defensible space	10		
Totals for this page		34	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1	1	all homes in valley bottom
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	within a mile slopes pick up
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		Powerlines east to west across Sec.
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	Heavy camping area

<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	U fish ponds available for drafting
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		26	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		60	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			XXX
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Cabin Lakes Area**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			

Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1	1	
Between 1-10 acres	3		
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	timber and slash
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		40	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8	8	
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		

Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
<b>1. Water source availability ( on site)</b>			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	hard to get to draft site at
<b>2. Water source availability ( off site)</b>			lake
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
<b>1. Placement</b>			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		37	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		77	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

#### Crinklewood Area

Element	Points	House #1	Notes
<b>A. Subdivision Design</b>		Task 1 / 2	
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
<b>2. Primary road width</b>			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3		
Other	5	5	no gravel
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			

Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	with slash and brush
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		
No defensible space	10	10	
Totals for this page		49	0
<b>C. Topography</b>		House #0	House #1
		Task 1 / 1	Task 1 / 1
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons			
	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.			
	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.			
	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5		

Sources 46 min. + round-trip	10	10	
<b>H. Utilities ( Gas and Electric</b>			
<b>1. Placement</b>			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		45	0
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		94	0
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points		<b>XXX</b>	

**Cle Elum Lake Developments ( Wildwood, Domerie Bay, Driftwood, Lake Forest Dr)**

Element	Points	Driftwood Wildwood	Domerie bay Task 1 / 1	Lake Forest Task 1 / 0
<b>A. Subdivision Design</b>				
<b>1. Ingress and egress</b>				
Two or more, primary roads	1	1		
One road, primary route	3			
One way in/out	5		5	5
<b>2. Primary road width</b>				
Minimum of 20 ft	1	1	1	1
Less than 20 ft	3			
<b>3. Road accessibility</b>				
Smooth road, grade 5% or less	1	1	1	
Rough road, grade 5% or greater	3			3
Other	5			
<b>4. Secondary road terminus</b>				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1		1	1
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5	5	5
<b>5. Average lot size</b>				
More than 10 acres	1			
Between 1-10 acres	3		3	3
Less than 1 acre	5	5		
<b>6. Street signs</b>				
Present (4 in. in size and reflectorized)	1	1	1	1
Not present	5			
<b>B. Vegetation ( Fuel Models)</b>				
<b>1. NFDRS fuel models</b>				
Light ( grasses, forbs	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	10	10	10

Slash ( timber harvest residue)	10			
<b>2. Defensible space</b>				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5	5	5	5
No defensible space	10			
Totals for this page		32	32	34
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
<b>1. Slope</b>				
Less than 9%	1	1	1	
Between 10-20%	4			
Between 21-30%	7			7
Between 31-40%	8			
Greater than 41%	10			
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2			2
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	3	3
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	4	4
<b>E. Roofing Materials</b>				
<b>1. Construction material</b>				
Class A roof ( metal, tile)	1		1	1
Class B roof ( composite)	3	3		
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
<b>1. Materials ( predominant)</b>				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10	10	10
<b>G. Available Fire Protection</b>				
<b>1. Water source availability ( on site)</b>				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2	2	2	2
No hydrants or draft sites available	3			
<b>2. Water source availability ( off site)</b>				
Sources within 20 min. round-trip	1	1	1	
Sources within 21-45 min. round-trip	5			5
Sources 46 min. + round-trip	10			
<b>H. Utilities ( Gas and Electric)</b>				
<b>1. Placement</b>				
All underground utilities	1		1	1
One underground, one aboveground	3			
All aboveground	5	5		
Totals for this page		29	23	35

I. Totals for Risk Assessments				
Totals for page 1 and 2		61	55	69
1. Low Hazard:	<49 points			
2. Moderate Hazard:	49-68 points	XXX	XXX	
3. High Hazard:	69-83 points			XXX
4. Extreme Hazard:	84+ points			

### Easton Ranchettes

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1	1	Also has the John Wayne
One road, primary route	3		Trail for emergencies
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	2	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	5 acre lots
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	6	some stands of timber
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1	3	good D space
30-70 ft of treatment from buildings	5		
No defensible space	10		
Totals for this page		23	
<b>C. Topography</b>			
1. Slope			

Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	1	some fires, mainly debris burning
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	canal on S side of development
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		27	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		50	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Section 27,28,29, Town 15, Range 18. North of Huntzinger Rd between Sheep Company and Boyd Rd. and S Wenas and Longmire Rd.**

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
<b>2. Primary road width</b>			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs	1		
Medium ( light brush and small trees)	5	5	
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		37	0
Element	Points	House #0 Task 1 / 1	House #1 Task 1 / 1
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8	8	
Greater than 41%	10		

<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10	10	
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		46	0
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		83	0
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**Ellensburg Ranches**

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1	House #1 Task 1 / 0
<b>A. Subdivision Design</b>				
1. Ingress and egress				
Two or more, primary roads	1			
One road, primary route	3	3		
One way in/out	5			
2. Primary road width				
Minimum of 20 ft	1			

Less than 20 ft	3	3		
3. Road accessibility				
Smooth road, grade 5% or less	1			
Rough road, grade 5% or greater	3	3		
Other	5			
4. Secondary road terminus				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5		
5. Average lot size				
More than 10 acres	1			
Between 1-10 acres	3	3		
Less than 1 acre	5			
6. Street signs				
Present (4 in. in size and reflectorized)	1	1		
Not present	5			
<b>B. Vegetation ( Fuel Models)</b>				
1. NFDRS fuel models				
Light ( grasses, forbs)	1	1		
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10			
Slash ( timber harvest residue)	10			
2. Defensible space				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5	8		
No defensible space	10			
Totals for this page		30	0	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
1. Slope				
Less than 9%	1			
Between 10-20%	4			
Between 21-30%	7	7		
Between 31-40%	8			
Greater than 41%	10			
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4		
<b>E. Roofing Materials</b>				
1. Construction material				
Class A roof ( metal, tile)	1			

Class B roof ( composite)	3	3		
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
1. Materials ( predominant)				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10		
<b>G. Available Fire Protection</b>				
1. Water source availability ( on site)				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2			
No hydrants or draft sites available	3	3		
2. Water source availability ( off site)				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5			
Sources 46 min. + round-trip	10	10		
<b>H. Utilities ( Gas and Electric</b>				
1. Placement				
All underground utilities	1			
One underground, one aboveground	3			
All aboveground	5	5		
Totals for this page		47	0	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		77	0	0
1. Low Hazard: <49 points				
2. Moderate Hazard: 49-68 points				
3. High Hazard: 69-83 points			XXX	
4. Extreme Hazard: 84+ points				

**Evergreen Valley / Vinegar Bend Rd areas**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	Except for Bakers and
Rough road, grade 5% or greater	3		Vinegar Bend roads (3)
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	1	
Outside radius 50ft or less	3		

Cul-de-sac turnaround			
Dead-end roads 200ft or less	3	3	
Dead-end roads 200ft or greater	5		
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3		
Less than 1 acre	5	5	
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs	1		
Medium ( light brush and small trees)	5	5	
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		25	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			

500 gpm hydrants, 1000ft and less apart	1	1	
Hydrants above or draft sites	2		
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		25	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		50	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Easton Village, Silver Creek, Kachess River**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1	2	Flat Gravel
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		

<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	8	Very few have D Space
No defensible space	10		
Totals for this page		40	
<b>C. Topography</b>			
		or area	
1. Slope			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons			
	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.			
	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.			
	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			

All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		26	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		66	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Exit 78 N side of I-90 Pine Valley, Elk Meadows 1 & 2**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1	2	Gravel
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3		
Less than 1 acre	5	5	
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	8	Some have D space

No defensible space	10		
Totals for this page		42	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	1	Nearby steep slope
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	Draft sites no hydrants
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		34	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		76	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

### Hidden Valley Area

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
<b>2. Primary road width</b>			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		42	
<b>C. Topography</b>		or area	
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			

1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	Very limited water
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	7	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		42	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		84	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points		XXX	

### Lanigan Springs

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		

Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	4	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		
No defensible space	10	8	many homes have none
Totals for this page		44	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		

Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
<b>1. Materials ( predominant)</b>			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
<b>1. Water source availability ( on site)</b>			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
<b>2. Water source availability ( off site)</b>			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
<b>1. Placement</b>			
All underground utilities	1	1	
One underground, one above ground	3		
All aboveground	5		
Totals for this page		33	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		77	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			XXX
4. Extreme Hazard: 84+ points			

**Leisure Land Lane**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
<b>2. Primary road width</b>			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			

Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	7	
No defensible space	10		
Totals for this page		38	
<b>Element</b>	<b>Points</b>	<b>House or area</b>	<b>Notes</b>
<b>C. Topography</b>			
1. Slope			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			

500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	river
No hydrants or draft sites available	3		
<b>2. Water source availability ( off site)</b>			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
<b>1. Placement</b>			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		20	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		58	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Pine Gulch, Harkness Rd, Boulder Cr, Williams Cr, Cougar Gulch –**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		These areas are very similar and are in the same general area
One road, primary route	3		
One way in/out	5	5	
<b>2. Primary road width</b>			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3		very rough, impassible at times of the year
Other	5	5	
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1		

Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	some slash in areas
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		
No defensible space	10		
Totals for this page		39	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8	8	
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	creeks in area but hard to get
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			

All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		41	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		80	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**Liberty Mountain Development**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	Forest Service roads
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	Varies in areas

No defensible space	10		
Totals for this page		40	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8	8	
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	creeks, and pond at
No hydrants or draft sites available	3		development
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		no utilities
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		35	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		75	
1. Low Hazard:	<49 points		
2. Moderate Hazard:	49-68 points		
3. High Hazard:	69-83 points		XXX
4. Extreme Hazard:	84+ points		

**Town of Liberty**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		There are other ways in and out but take you into the forest
One road, primary route	3	3	
One way in/out	5		
<b>2. Primary road width</b>			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	1	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3	3	
Dead-end roads 200ft or greater	5		
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		28	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8	8	
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			

1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	draft sites in creeks,
No hydrants or draft sites available	3		water spigots at houses
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		36	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		64	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Lower Lake Keechelus**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		

Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3		
Other	5	5	rutted, brushy, narrow
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	no evidence of homes until you get out there
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		
No defensible space	10	10	
Totals for this page		49	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lightning, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	

Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		no utilities
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		32	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		81	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			XXX

**Lower Colockum Pass Area –**

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1	House #1 Task 1 / 0
<b>A. Subdivision Design</b>				
1. Ingress and egress				
Two or more, primary roads	1			
One road, primary route	3	3		
One way in/out	5			
2. Primary road width				
Minimum of 20 ft	1			
Less than 20 ft	3	3		
3. Road accessibility				
Smooth road, grade 5% or less	1			
Rough road, grade 5% or greater	3			
Other	5	5		
4. Secondary road terminus				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				

Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5		
5. Average lot size				
More than 10 acres	1			
Between 1-10 acres	3	3		
Less than 1 acre	5			
6. Street signs				
Present (4 in. in size and reflectorized)	1			
Not present	5	5		
<b>B. Vegetation ( Fuel Models)</b>				
1. NFDRS fuel models				
Light ( grasses, forbs)	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	10		
Slash ( timber harvest residue)	10			
2. Defensible space				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5			
No defensible space	10	10		
Totals for this page		47	0	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
1. Slope				
Less than 9%	1			
Between 10-20%	4			
Between 21-30%	7			
Between 31-40%	8	8		
Greater than 41%	10			
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4		
<b>E. Roofing Materials</b>				
1. Construction material				
Class A roof ( metal, tile)	1			
Class B roof ( composite)	3	3		
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
1. Materials ( predominant)				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10		
<b>G. Available Fire Protection</b>				

1. Water source availability ( on site)				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2			
No hydrants or draft sites available	3	3		
2. Water source availability ( off site)				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5			
Sources 46 min. + round-trip	10	10		
<b>H. Utilities ( Gas and Electric</b>				
1. Placement				
All underground utilities	1	1		
One underground, one aboveground	3			
All aboveground	5			
Totals for this page		44	0	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		91	0	0
1. Low Hazard: <49 points				
2. Moderate Hazard: 49-68 points				
3. High Hazard: 69-83 points				
4. Extreme Hazard: 84+ points		XXX		

**Lauderdale to Liberty Road to Mineral springs**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		

Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	7	10 to 20
No defensible space	10		
Totals for this page		44	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons			
	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.			
	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.			
	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	ponds and creeks
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			

1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		36	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		80	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**Manastash Canyon Area**

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1	House #1 Task 1 / 0
<b>A. Subdivision Design</b>				
1. Ingress and egress				
Two or more, primary roads	1			
One road, primary route	3			
One way in/out	5	5		
2. Primary road width				
Minimum of 20 ft	1	1		
Less than 20 ft	3			
3. Road accessibility				
Smooth road, grade 5% or less	1	1		
Rough road, grade 5% or greater	3			
Other	5			
4. Secondary road terminus				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5		
5. Average lot size				
More than 10 acres	1			
Between 1-10 acres	3	3		
Less than 1 acre	5			
6. Street signs				
Present (4 in. in size and reflectorized)	1			
Not present	5	3		
<b>B. Vegetation ( Fuel Models)</b>				
1. NFDRS fuel models				
Light ( grasses, forbs	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	10		
Slash ( timber harvest residue)	10			
2. Defensible space				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5	5		

No defensible space	10			
Totals for this page		36	0	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
1. Slope				
Less than 9%	1			
Between 10-20%	4			
Between 21-30%	7			
Between 31-40%	8			
Greater than 41%	10	10		
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc	3	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4		
<b>E. Roofing Materials</b>				
1. Construction material				
Class A roof ( metal, tile)	1			
Class B roof ( composite)	3	3		
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
1. Materials ( predominant)				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10		
<b>G. Available Fire Protection</b>				
1. Water source availability ( on site)				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2	2		
No hydrants or draft sites available	3			
2. Water source availability ( off site)				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5	5		
Sources 46 min. + round-trip	10			
<b>H. Utilities ( Gas and Electric</b>				
1. Placement				
All underground utilities	1			
One underground, one aboveground	3	3		
All aboveground	5			
Totals for this page		42	0	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		78	0	0
1. Low Hazard: <49 points				
2. Moderate Hazard: 49-68 points				
3. High Hazard: 69-83 points		XXX		

4. Extreme Hazard:	84+ points				
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**Monahan Road Old Cabin Creek Reload**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		Two gates to get in -1 key -
One road, primary route	3		1 code
One way in/out	5	5	
<b>2. Primary road width</b>			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		loop roads, & tight turns
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3	3	
Dead-end roads 200ft or greater	5		
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3		houses tightly spaced
Less than 1 acre	5	5	Historical area
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	7	
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		Some defensible space
30-70 ft of treatment from buildings	5	6	around homes 10' to 30'
No defensible space	10		
Totals for this page		38	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		

Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1	1	30000 gal water supply
Hydrants above or draft sites	2		
No hydrants or draft sites available	3		24 hydrants & pond w/ connected hose
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		pond and reservoir
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		26	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		64	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Pine Glen and Sun Island –**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	

2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3.Road accessibility			
Smooth road, grade 5% or less	1	2	Gravel
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3		
Less than 1 acre	5	5	
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	8	Some have D space
No defensible space	10		
Totals for this page		42	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1.Rough topography that contains steep canyons	2	1	Nearby steep slope
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			

Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	Draft sites no hydrants
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		34	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		76	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			XXX
4. Extreme Hazard: 84+ points			

**Pine Loch Sun**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		

Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3		
Less than 1 acre	5	5	
6. Street signs			
Present (4 in. in size and reflectorized)	1		Need dead end signs
Not present	5	4	narrow, steep roads
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		Majority, less than 30 ft
No defensible space	10	10	
Totals for this page		46	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8	8	
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	2	some shake-not much,
Class C roof ( wood shingle)	5		mainly metal
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			

1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	this is a limited water supply
No hydrants or draft sites available	3		2" hydrants
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		41	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		87	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points		XXX	

**Roaring Creek –**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1	2	Gravel Road
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		

Not present	5	3	Some signs
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		
No defensible space	10	10	
Totals for this page		42	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons			
	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.			
	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.			
	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			

All underground utilities	1	1	No Power
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		33	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		75	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**Salmon La Sac and Cooper Lake Developments**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		

No defensible space	10	10	
Totals for this page		47	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	7	50/50 mix of shake and
Class C roof ( wood shingle)	5		good roofing
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		Utilities are generators and propane located
One underground, one aboveground	3		in out buildings
All aboveground	5		
Totals for this page		38	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		85	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points		XXX	

**Sky Meadows –**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		There are other routes out through the top side using not very good roads
One road, primary route	3		
One way in/out	5	5	
<b>2. Primary road width</b>			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3		
Other	5	5	10%
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3		
Less than 1 acre	5	5	
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1		
Not present	5	3	wood road signs
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	with some slash
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		most homes don't have
No defensible space	10	9	enough
Totals for this page		48	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10	10	

<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		38	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		86	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			XXX

**Snoqualmie Summit and Area (Gold Cr, Hyak, and Snoqualmie developments)**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
2. Primary road width			

Minimum of 20 ft	1		
Less than 20 ft	3	3	
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	2	Dirt roads into developments
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	4	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1	3	some signs out
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	7	some -very little
No defensible space	10		
Totals for this page		38	
<b>C. Topography</b>			
		or area	
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
<b>1. Construction material</b>			
Class A roof ( metal, tile)	1	1	

Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		29	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		67	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			XXX
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

### Summer Side And Banti Creek Developments

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		

Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	4	some road signs
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	8	mix between heavy and medium
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	6	10' to 30'
No defensible space	10		
Totals for this page		40	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	metal & comp
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			

1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	creek or canal
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		32	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		72	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**Sun Country Estates**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	paved
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	tight turns
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3	3	
Dead-end roads 200ft or greater	5		
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3		
Less than 1 acre	5	5	homes tightly spaced
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	

Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	6	some pockets of heavy brush
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		few homes have adequate
No defensible space	10	8	space
Totals for this page		31	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	1	small steep slopes and draws
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
<b>1. Construction material</b>			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
<b>1. Materials ( predominant)</b>			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
<b>1. Water source availability ( on site)</b>			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	river, canal, ponds
No hydrants or draft sites available	3		
<b>2. Water source availability ( off site)</b>			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		

<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	power up
All aboveground	5		
Totals for this page		32	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		63	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**SunEast, Reecer Creek, Green Canyon –  
Green Canyon**

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1	House #1 Task 1 / 0
<b>A. Subdivision Design</b>				
1. Ingress and egress				
Two or more, primary roads	1			
One road, primary route	3			
One way in/out	5	5		
2. Primary road width				
Minimum of 20 ft	1			
Less than 20 ft	3	3		
3. Road accessibility				
Smooth road, grade 5% or less	1			
Rough road, grade 5% or greater	3			
Other	5	5		
4. Secondary road terminus				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5		
5. Average lot size				
More than 10 acres	1	1		
Between 1-10 acres	3			
Less than 1 acre	5			
6. Street signs				
Present (4 in. in size and reflectorized)	1			
Not present	5	5		
<b>B. Vegetation ( Fuel Models)</b>				
1. NFDRS fuel models				
Light ( grasses, forbs)	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	10	with slash	
Slash ( timber harvest residue)	10			

2. Defensible space				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5			
No defensible space	10	10		
Totals for this page		47	0	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
1. Slope				
Less than 9%	1			
Between 10-20%	4			
Between 21-30%	7			
Between 31-40%	8			
Greater than 41%	10	10		
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4		
<b>E. Roofing Materials</b>				
1. Construction material				
Class A roof ( metal, tile)	1	1		
Class B roof ( composite)	3			
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
1. Materials ( predominant)				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10		
<b>G. Available Fire Protection</b>				
1. Water source availability ( on site)				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2	2	draft sites	
No hydrants or draft sites available	3			
2. Water source availability ( off site)				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5	5		
Sources 46 min. + round-trip	10			
<b>H. Utilities ( Gas and Electric)</b>				
1. Placement				
All underground utilities	1	1	no utilities	
One underground, one aboveground	3			
All aboveground	5			
Totals for this page		38	0	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		85	0	0

1. Low Hazard:	<49 points			
2. Moderate Hazard:	49-68 points			
3. High Hazard:	69-83 points			
4. Extreme Hazard:	84+ points		XXX	

**Reecer Creek Area**

Element	Points	House #1	House #2	House #1
<b>A. Subdivision Design</b>		Task 1 / 2	Task 1 / 1	Task 1 / 0
1. Ingress and egress				
Two or more, primary roads	1			
One road, primary route	3			
One way in/out	5	5	Limited	
2. Primary road width				
Minimum of 20 ft	1			
Less than 20 ft	3	3		
3. Road accessibility				
Smooth road, grade 5% or less	1			
Rough road, grade 5% or greater	3	3		
Other	5			
4. Secondary road terminus				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5		
5. Average lot size				
More than 10 acres	1			
Between 1-10 acres	3	3		
Less than 1 acre	5			
6. Street signs				
Present (4 in. in size and reflectorized)	1	2	limited	
Not present	5			
<b>B. Vegetation ( Fuel Models)</b>				
1. NFDRS fuel models				
Light ( grasses, forbs)	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	10		
Slash ( timber harvest residue)	10			
2. Defensible space				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5			
No defensible space	10	10		
Totals for this page		44	0	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		Task 1 / 1	Task 1 / 1	Task 1 / 0
1. Slope				
Less than 9%	1			

Between 10-20%	4			
Between 21-30%	7			
Between 31-40%	8	8		
Greater than 41%	10			
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc	3	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4		
<b>E. Roofing Materials</b>				
1. Construction material				
Class A roof ( metal, tile)	1	1		
Class B roof ( composite)	3			
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
1. Materials ( predominant)				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10		
<b>G. Available Fire Protection</b>				
1. Water source availability ( on site)				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2			
No hydrants or draft sites available	3	3	limited draft	
2. Water source availability ( off site)				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5			
Sources 46 min. + round-trip	10	10		
<b>H. Utilities ( Gas and Electric)</b>				
1. Placement				
All underground utilities	1	1	None	
One underground, one aboveground	3			
All aboveground	5			
Totals for this page		42	0	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		86	0	0
1. Low Hazard: <49 points				
2. Moderate Hazard: 49-68 points				
3. High Hazard: 69-83 points				
4. Extreme Hazard: 84+ points		XXX		

### Sun East Development

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1	House #1 Task 1 / 0
<b>A. Subdivision Design</b>				
<b>1. Ingress and egress</b>				
Two or more, primary roads	1			
One road, primary route	3			

One way in/out	5	5		
2. Primary road width				
Minimum of 20 ft	1			
Less than 20 ft	3	3		
3. Road accessibility				
Smooth road, grade 5% or less	1			
Rough road, grade 5% or greater	3			
Other	5	5		
4. Secondary road terminus				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3		
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5	5		
5. Average lot size				
More than 10 acres	1			
Between 1-10 acres	3	3		
Less than 1 acre	5			
6. Street signs				
Present (4 in. in size and reflectorized)	1			
Not present	5	3		
<b>B. Vegetation ( Fuel Models)</b>				
1. NFDRS fuel models				
Light ( grasses, forbs)	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	7		
Slash ( timber harvest residue)	10			
2. Defensible space				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5			
No defensible space	10	10		
Totals for this page		44	0	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
1. Slope				
Less than 9%	1			
Between 10-20%	4			
Between 21-30%	7			
Between 31-40%	8			
Greater than 41%	10	10		
<b>D. Additional Rating Factors</b>				
1. Rough topography that contains steep canyons	2	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3		
3. Areas that are periodically exposed to unusually severe				

fire weather and strong winds.	4	4		
<b>E. Roofing Materials</b>				
1. Construction material				
Class A roof ( metal, tile)	1	1		
Class B roof ( composite)	3			
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
1. Materials ( predominant)				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10		
<b>G. Available Fire Protection</b>				
1. Water source availability ( on site)				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2			
No hydrants or draft sites available	3	3		
2. Water source availability ( off site)				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5			
Sources 46 min. + round-trip	10	10		
<b>H. Utilities ( Gas and Electric</b>				
1. Placement				
All underground utilities	1			
One underground, one aboveground	3	3		
All aboveground	5			
Totals for this page		46	0	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		90	0	0
1. Low Hazard: <49 points				
2. Moderate Hazard: 49-68 points				
3. High Hazard: 69-83 points				
4. Extreme Hazard: 84+ points		XXX		

**Sunlight Waters –**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		

4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	5	
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		33	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		this development sits at the top of a 40+ % slope
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		

Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
<b>1. Water source availability ( on site)</b>			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	
No hydrants or draft sites available	3		
<b>2. Water source availability ( off site)</b>			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
<b>1. Placement</b>			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		28	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		61	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Sunshine Estates -**

Element	Points	House #1 Task 1 / 2	House #2 Task 1 / 1	House #1 Task 1 / 0
<b>A. Subdivision Design</b>				
<b>1. Ingress and egress</b>				
Two or more, primary roads	1	1		
One road, primary route	3			
One way in/out	5		5	
<b>2. Primary road width</b>				
Minimum of 20 ft	1			
Less than 20 ft	3	3	2	
<b>3. Road accessibility</b>				
Smooth road, grade 5% or less	1	1	1	
Rough road, grade 5% or greater	3			
Other	5			
<b>4. Secondary road terminus</b>				
Loop roads, cul-de-sacs				
Outside radius 50ft or greater	1			
Outside radius 50ft or less	3	3	3	
Cul-de-sac turnaround				
Dead-end roads 200ft or less	3			
Dead-end roads 200ft or greater	5		5	
<b>5. Average lot size</b>				
More than 10 acres	1			

Between 1-10 acres	3	3	3	
Less than 1 acre	5			
<b>6. Street signs</b>				
Present (4 in. in size and reflectorized)	1	1	1	
Not present	5			
<b>B. Vegetation ( Fuel Models)</b>				
<b>1. NFDRS fuel models</b>				
Light ( grasses, forbs	1			
Medium ( light brush and small trees)	5			
Heavy ( dense brush, timber, and hardwoods)	10	10	10	
Slash ( timber harvest residue)	10			
<b>2. Defensible space</b>				
More than 100 ft of treatment from buildings	1			
30-70 ft of treatment from buildings	5		8	
No defensible space	10	10		
Totals for this page		32	38	0
<b>Element</b>	<b>Points</b>	<b>House #0</b>	<b>House #1</b>	<b>House #1</b>
<b>C. Topography</b>		<b>Task 1 / 1</b>	<b>Task 1 / 1</b>	<b>Task 1 / 0</b>
<b>1. Slope</b>				
Less than 9%	1	1	1	
Between 10-20%	4			
Between 21-30%	7			
Between 31-40%	8			
Greater than 41%	10			
<b>D. Additional Rating Factors</b>				
<b>1. Rough topography that contains steep canyons</b>	2	2	2	
<b>2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.</b>	3	3	3	
<b>3. Areas that are periodically exposed to unusually severe fire weather and strong winds.</b>	4	4	4	
<b>E. Roofing Materials</b>				
<b>1. Construction material</b>				
Class A roof ( metal, tile)	1	1		
Class B roof ( composite)	3		2	
Class C roof ( wood shingle)	5			
Non-rated	10			
<b>F. Existing Building Construction</b>				
<b>1. Materials ( predominant)</b>				
Noncombustible siding/ deck	1			
Noncombustible siding/ wood deck	5			
Combustible siding and deck	10	10	10	
<b>G. Available Fire Protection</b>				
<b>1. Water source availability ( on site)</b>				
500 gpm hydrants, 1000ft and less apart	1			
Hydrants above or draft sites	2		2	

No hydrants or draft sites available	3	3		
<b>2. Water source availability ( off site)</b>				
Sources within 20 min. round-trip	1			
Sources within 21-45 min. round-trip	5	5	5	
Sources 46 min. + round-trip	10			
<b>H. Utilities ( Gas and Electric)</b>				
<b>1. Placement</b>				
All underground utilities	1			
One underground, one aboveground	3	3	3	
All aboveground	5			
Totals for this page		32	32	0
<b>I. Totals for Risk Assessments</b>				
Totals for page 1 and 2		64	70	0
1. Low Hazard: <49 points				
2. Moderate Hazard: 49-68 points		XXX		
3. High Hazard: 69-83 points			XXX	
4. Extreme Hazard: 84+ points				

**Swauk Prairie**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1	1	
One road, primary route	3		
One way in/out	5		
<b>2. Primary road width</b>			
Minimum of 20 ft	1	2	gravel
Less than 20 ft	3		
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	2	gravel less than 5%
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1	1	
Between 1-10 acres	3		
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			

1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	5	
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		25	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lightning, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	limited
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		

All aboveground	5	5	
Totals for this page		37	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		62	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

### Teaway Heights

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1	2	not paved. Oiled road steep at beginning, but
Rough road, grade 5% or greater	3		in good shape
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	4	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	5	good fuels reduction
Heavy ( dense brush, timber, and hardwoods)	10		done around perimeter
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	

No defensible space	10		
Totals for this page		31	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	hydrants on site, unknown if they work
No hydrants or draft sites available	3		2" stand pipes
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		34	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		65	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Timber Mountain Loop**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
<b>2. Primary road width</b>			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	gravel
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	1	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	7	Some heavy timber
Heavy ( dense brush, timber, and hardwoods)	10		throughout development
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		31	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			

1. Rough topography that contains steep canyons	2		outside area to the south
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		25	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		56	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Upper Peoh Point Area**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	1 main road through area
One way in/out	5		main laterals
2. Primary road width			
Minimum of 20 ft	1	1	

Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	2	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	5	
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	3	some have more than 70'
No defensible space	10		
Totals for this page		24	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1	1	mild slopes in area
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2		more to the south
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	

Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	canal
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		29	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		53	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

### Upper Kachess Lake

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	3	
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	2	

Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		
No defensible space	10	10	
Totals for this page		36	
<b>C. Topography</b>		or area	
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3		
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4		
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			

500 gpm hydrants, 1000ft and less apart	1	1	
Hydrants above or draft sites	2		
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1	1	
Sources within 21-45 min. round-trip	5		
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		23	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		59	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**West and Middle Fork Teanaway-Wagon Wheel Rd, Teanaway Triangle Rd, Dingbat Cr.**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3		
One way in/out	5	5	
2. Primary road width			
Minimum of 20 ft	1		
Less than 20 ft	3	3	
3. Road accessibility			
Smooth road, grade 5% or less	1		
Rough road, grade 5% or greater	3	3	
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1		
Not present	5	5	

<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	7	limited
No defensible space	10		
Totals for this page		44	
<b>Element</b>	<b>Points</b>	<b>House or area</b>	<b>Notes</b>
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	creeks
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			

All underground utilities	1		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		39	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		83	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			
3. High Hazard: 69-83 points		XXX	
4. Extreme Hazard: 84+ points			

**West Nelson Siding Road**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1	1	
One road, primary route	3		
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	2- lane paved
Less than 20 ft	3		
3. Road accessibility			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
4. Secondary road terminus			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	1	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	7	Some stands of heavy
Slash ( timber harvest residue)	10		Dense timber and brush
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5		Most homes are built

No defensible space	10	8	amongst the brush
Totals for this page		28	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2		
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	3	
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	canal
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		The canal runs along
Sources within 21-45 min. round-trip	5	5	most of this area
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		31	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		59	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**West Side Road Area**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1		
One road, primary route	3	3	paved
One way in/out	5		
<b>2. Primary road width</b>			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	Ave. number of have
No defensible space	10		
Totals for this page		32	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4	4	
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			

1. Rough topography that contains steep canyons	2	1	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1		
Class B roof ( composite)	3	2	mix of roofs
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	creeks and canal
No hydrants or draft sites available	3		
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		34	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		66	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Yakima Canyon**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
1. Ingress and egress			
Two or more, primary roads	1		
One road, primary route	3	4	main canyon rd
One way in/out	5		
2. Primary road width			
Minimum of 20 ft	1	1	

Less than 20 ft	3		3 for driveways
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	for canyon road
Rough road, grade 5% or greater	3		5 for driveways
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1	1	
Outside radius 50ft or less	3		
Cul-de-sac turnaround			
Dead-end roads 200ft or less	3		
Dead-end roads 200ft or greater	5	5	
<b>5. Average lot size</b>			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
<b>6. Street signs</b>			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
<b>1. NFDRS fuel models</b>			
Light ( grasses, forbs)	1		
Medium ( light brush and small trees)	5	5	
Heavy ( dense brush, timber, and hardwoods)	10		
Slash ( timber harvest residue)	10		
<b>2. Defensible space</b>			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	5	
No defensible space	10		
Totals for this page		26	
<b>C. Topography</b>			
<b>1. Slope</b>			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10	10	
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	2	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	3	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
<b>1. Construction material</b>			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		

Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
<b>1. Materials ( predominant)</b>			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
<b>1. Water source availability ( on site)</b>			
500 gpm hydrants, 1000ft and less apart	1		
Hydrants above or draft sites	2	2	
No hydrants or draft sites available	3		
<b>2. Water source availability ( off site)</b>			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric)</b>			
<b>1. Placement</b>			
All underground utilities	1		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		40	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		66	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points			XXX
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

**Zeribic Road , Goat Peak Ranch**

Element	Points	House or area	Notes
<b>A. Subdivision Design</b>			
<b>1. Ingress and egress</b>			
Two or more, primary roads	1	1	2 exits, 1 primary
One road, primary route	3		
One way in/out	5		
<b>2. Primary road width</b>			
Minimum of 20 ft	1	1	
Less than 20 ft	3		
<b>3. Road accessibility</b>			
Smooth road, grade 5% or less	1	1	smooth gravel
Rough road, grade 5% or greater	3		
Other	5		
<b>4. Secondary road terminus</b>			
Loop roads, cul-de-sacs			
Outside radius 50ft or greater	1		
Outside radius 50ft or less	3	3	dead ends tight turn arounds
Cul-de-sac turnaround			

Dead-end roads 200ft or less	3	3	
Dead-end roads 200ft or greater	5		
5. Average lot size			
More than 10 acres	1		
Between 1-10 acres	3	3	
Less than 1 acre	5		
6. Street signs			
Present (4 in. in size and reflectorized)	1	1	
Not present	5		
<b>B. Vegetation ( Fuel Models)</b>			
1. NFDRS fuel models			
Light ( grasses, forbs	1		
Medium ( light brush and small trees)	5		
Heavy ( dense brush, timber, and hardwoods)	10	10	heavy timber
Slash ( timber harvest residue)	10		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
30-70 ft of treatment from buildings	5	6	
No defensible space	10		
Totals for this page		29	
<b>C. Topography</b>			
1. Slope			
Less than 9%	1		
Between 10-20%	4		
Between 21-30%	7	7	1/2 of community built on
Between 31-40%	8		south facing slope
Greater than 41%	10		
<b>D. Additional Rating Factors</b>			
1. Rough topography that contains steep canyons	2	1	
2. Areas with a history of higher fire occurrence than surrounding areas due or special situations such as heavy lighting, railroads, escaped debris buns, arson, etc.	3	1	
3. Areas that are periodically exposed to unusually severe fire weather and strong winds.	4	4	
<b>E. Roofing Materials</b>			
1. Construction material			
Class A roof ( metal, tile)	1	1	
Class B roof ( composite)	3		
Class C roof ( wood shingle)	5		
Non-rated	10		
<b>F. Existing Building Construction</b>			
1. Materials ( predominant)			
Noncombustible siding/ deck	1		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	10	
<b>G. Available Fire Protection</b>			
1. Water source availability ( on site)			
500 gpm hydrants, 1000ft and less apart	1		

Hydrants above or draft sites	2		
No hydrants or draft sites available	3	3	not within development
2. Water source availability ( off site)			
Sources within 20 min. round-trip	1		
Sources within 21-45 min. round-trip	5	5	
Sources 46 min. + round-trip	10		
<b>H. Utilities ( Gas and Electric</b>			
1. Placement			
All underground utilities	1	1	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		33	
<b>I. Totals for Risk Assessments</b>			
Totals for page 1 and 2		62	
1. Low Hazard: <49 points			
2. Moderate Hazard: 49-68 points		XXX	
3. High Hazard: 69-83 points			
4. Extreme Hazard: 84+ points			

## Appendix B

### Community Wildfire Protection Plan Survey Results

1) **Do you have a home or cabin in Kittitas County? 121 Responses**

Yes **121 Responses (100%)**

No **0 Responses (0%)**

2) **Is this your primary residence? 118 Responses**

Yes **23 Responses (25.3%)**

No **68 Responses (74.7%)**

3) **Which community do you live closest to? 110 Responses**

Cle Elum/S. Cle Elum	29	26.4%
Ronald/Roslyn	21	19.1%
Snoqualmie Pass/Hyak	13	11.8%
Kachess Lake/Kachess Ridge	12	10.9%
Pine Loch Sun	10	9.1%
Easton	9	8.2%
Sky Meadows	4	3.6%
Teaway	3	2.7%
Sun Country	3	2.7%
Little Naches/Cliffdell	3	2.7%
Yakima	1	0.9%
Hidden Valley	1	0.9%
Ellensburg	1	0.9%

4) **Does your area have 911 emergency telephone service? 119 Responses**

Yes **83 Responses (69.7%)**

No **6 Responses (5.0%)**

Don't know **30 Responses (25.2%)**

5) **Is your home protected by a rural fire department? 119 Responses**

Yes (circle response time if known) **103 Responses (86.6%)**

**78 Of 103 Responses Indicated Times**

Under 10 minutes **31 Responses (39.7%)**

10-20 minutes **36 Responses (46.2%)**

20-30 minutes **8 Responses (10.3%)**

30-45 minutes **1 Responses (1.3%)**

More than 45 minutes **2 Responses (2.6%)**

No **4 Responses (3.4%)**

Don't know **12 Responses (10.1%)**

6) **What type of roof does your home have? (please mark one) 120 Responses**

Composite **13 Responses (10.8%)**

Wooden shake (shingles) **3 Responses (2.5%)**

Ceramic tiles **1 Responses (0.8%)**

Aluminum, tin or other metal **100 Responses (83.3%)**

Other \_\_\_\_\_ **1 Responses (0.8%)**

7) **How many trees are within 75 feet of your home? 120 Responses**

None **3 Responses (2.5%)**

Less than 10 **43 Responses (35.8%)**

Between 10 and 25 **44 Responses (36.7%)**

More than 25 **30 Responses (25.0%)**

8) **Do you have lawn surrounding your home? 115 Responses**

Yes **38 Responses (33.0%)**

Kept green and trimmed all summer **30 Responses (83.3%)**

Not kept green and trimmed all summer **6 Responses (16.7%)**

No **77 Responses (67.0%)**

9) **How long is your driveway—from the main road to your home parking area? 109 Responses**

\_\_\_\_\_  Feet  Miles

100' or less **53 Responses (48.6%)**

100-300' **18 Responses (16.5%)**

301' to 1320' (¼ mile) **25 Responses (22.9%)**

¼ mile to ½ mile **6 Responses (5.5%)**

Greater than ½ mile **7 Responses (6.4%)**

**Average length 640 feet. Maximum length reported 2 miles.**

10) **If your driveway is over ¼ mile long, does it have turnouts that would allow two large trucks to pass each other 92 Responses**

Yes **21 Responses (22.8%)**

No **14 Responses (15.2%)**

N/A **56 Responses (60.9%)**

- 11) **What type of surfacing does your driveway have? 115 Responses**
- Dirt **18 Responses (15.7%)**
  - Gravel/Rock **67 Responses (58.3%)**
  - Paved **27 Responses (23.5%)**
- 12) **If the primary access to your home were cut off because of a wildfire, would you have an alternate route to escape through? 113 Responses**
- Yes **60 Responses (53.1%)**
  - No **52 Responses (46.0%)**
- 13) **Please indicate which of the following items you have available at or near your home that could be used in fighting a wildland fire that threatens your home (mark all that apply).**
- Hand tools (shovel, axe, etc) **113 Responses**
  - Portable water tank) **12 Responses**
  - Stationary water tank **18 Responses**
  - Pond, Lake or stream water supply close by **41 Responses**
  - Water pump and fire hose **14 Responses**
  - Well or cistern **48 Responses**
  - Equipment suitable for creating fire breaks (bulldozer, farm tractor) **19 Responses**
- 14) **Do you have firefighting equipment you would be willing to certify and make available during a fire season? 110 Responses**
- Yes **10 Responses (9.1%)**
  - No **100 Responses (90.9%)**
- 15) **Do you conduct a periodic fuels reduction program near your home site such as clearing and removing brush or trimming trees? 119 Responses**
- Yes **100 Responses (84.0%)**
  - No **19 Responses (16.0%)**
- 16) **Do livestock graze the grasses and shrubs around your home? 119 Responses**
- Yes **13 Responses (10.9%)**
  - No **106 Responses (89.1%)**
- 17) **Would you support controlled grazing on your property and/or public property in an effort to reduce wildfire risk? 114 Responses**
- Yes **55 Responses (48.2%)**
  - No **59 Responses (51.8%)**

18) Use the exercise below to assess your home's fire risk rating: circle the ratings in each category that best describes your home

<b>Fuel Hazard</b> (within 200 feet of structures)	Small, light fuels (grasses, forbs, weeds, shrubs)	1 <u>30 Responses (25.0%)</u>
	Medium size fuels (brush, large shrubs, small trees) <u>120 Responses</u>	2 <u>23 Responses (19.2%)</u>
	Heavy, large fuels (woodlands, timber, heavy brush)	3 <u>67 Responses (55.8%)</u>
<b>Slope Hazard</b> (within 200 feet of structures)	Mild slope (0-5%)	1 <u>58 Responses (48.3%)</u>
	Moderate slope (6-20%) <u>120 Responses</u>	2 <u>39 Responses (32.5%)</u>
	Steep slope (21-40%)	3 <u>19 Responses (15.8%)</u>
	Extreme slope (41% and greater)	4 <u>4 Responses (3.3%)</u>
<b>Structure Hazard</b>	Noncombustible roof and noncombustible siding material	1 <u>18 Responses (15.3%)</u>
	Noncombustible roof and combustible siding material <u>118 Responses</u>	3 <u>92 Responses (78.0%)</u>
	Combustible roof and noncombustible siding material	7 <u>2 Responses (1.7%)</u>
	Combustible roof and combustible siding material	10 <u>6 Responses (5.1%)</u>
<b>Additional Factors</b>	Rough topography that contains several steep canyons or ridges	+2 <u>19 Responses (13.2%)</u>
	Areas having history of higher than average fire occurrence	+3 <u>6 Responses (4.2%)</u>
	Areas exposed to severe fire weather and strong winds <u>144 Responses</u>	+4 <u>21 Responses (14.6%)</u>
	Areas with existing fuel modifications or usable fire breaks	-3 <u>21 Responses (14.6%)</u>
	Areas with local facilities (water systems, rural fire districts, dozers)	-3 <u>77 Responses (53.5%)</u>

Fuel Hazard \_\_\_\_\_ X Slope Hazard \_\_\_\_\_ = \_\_\_\_\_

Extreme Risk = 26+ points 0 Responses  
 High Risk = 16-25 points 7 Responses (5.8%)  
 Moderate Risk = 6-15 points 36 Responses (30.0%)  
 Low Risk = 6 or less points 77 Responses (64.2%)

Structural hazard + \_\_\_\_\_  
 Additional Factors +/- \_\_\_\_\_  
 Total Hazard Points \_\_\_\_\_

19) If offered in your area, would members of your household attend a free, or low cost, one-day training seminar designed to teach homeowners in the rural-urban interface how to improve the defensible space surrounding their home and adjacent outbuildings 112 Responses

Yes 80 Responses (71.4%)

No 33 Responses (29.5%)

20) Would you or your family be interested in participating in a group effort to reduce hazardous fuels in your neighborhood or community? 110 Responses

Yes 72 Responses (64.3%)

No 39 Responses (34.8%)

21) **How do you feel Fire Mitigation projects should be funded in the areas surrounding homes, communities, and infrastructure such as power lines and major roads?**

	<b>Mark the box that best applies to your preference</b>		
	100% Public Funding	Cost-share (Public & Private)	Privately Funded (Owner or Company)
Home Defensibility Projects <b><u>107 Responses</u></b>	<b><u>16 Responses (14.3%)</u></b>	<b><u>41 Responses (36.6%)</u></b>	<b><u>51 Responses (45.5%)</u></b>
Community Defensibility Projects <b><u>107 Responses</u></b>	<b><u>36 Responses (32.1%)</u></b>	<b><u>64 Responses (57.1%)</u></b>	<b><u>8 Responses (7.1%)</u></b>
Infrastructure Projects (roads, bridges, power lines, etc.) <b><u>106 Responses</u></b>	<b><u>87 Responses (77.7%)</u></b>	<b><u>16 Responses (14.3%)</u></b>	<b><u>4 Responses (3.6%)</u></b>

22) **Do you have any suggestions for fire prevention projects or endeavors that would benefit your neighborhood, community or Kittitas County?**

**40 Responses (33.1% of total returned surveys)**

- *Improve via Kachess where it becomes a Forest Service Road so that it could an alternative emergency route into Easton*
- *Send information about defensible space to land owners with no house or structures. These properties sit with down trees and heavy dead brush and weeds. Send information to all property owners.*
- *I have attended 'Firewise' training through Master Gardeners - excellent program.*
- *Allow prescriptive burns. Get DNR to help with burns*
- *Fire Hydrants in Pine Loch Sun - connected to the Community main water lines*
- *Brush Clearing - Tree Limbing/ Thinning*
- *It would be helpful to know about fire fighting departments available in the area.*
- *Make sure local Fire Dept has current gate key.*
- *Not at this time.*
- *Don't lift the burn ban too soon. Lifted this weekend - Fire danger is still high*
- *Fire-wise the whole community - Fire chief has already stated he would not fight a fire in Pine Loch Sun - Very dense stand of trees and brush.*
- *We live on Lake Cle Elum. If there was a fire between us and Bull Frog rd. - We would not have a way out!!*
- *More public awareness programs of the clear and present danger of forest fires, i.e. clean up PLS ASAP*
- *The fire road between Lake Cle Elum and Driftwood Acres was purposefully blocked 2 years ago by an unauthorized person. We were then told by an agency we couldn't remove them, partially because there seems to be a dispute over which agency "owns" that area. We have offered to clear and maintain it for fire control access but can't get the agencies to decide which has authority. The area is quite overgrown. If a fire started there it would come right up the slope through the development because of prevalent winds and slope.*

- *Change Home Owners Assoc. rules to allow removal of trees*
- *no*
- *Power to our homes would allow us the ability to fight fire and call for assistance. Are there funds available to assist in bring power/ phone to our home? There are 11 homes In our area w/out power.*
- *Improved grant writing to secure more wildland equipment & training.*
- *Better communicating w/ camp hosts in Salmon La Sac C. G. - They are clueless.*
- *I try & keep a minimum of a 30' to 50' buffer cleared out around my structures & I always add to this every yr. I live on six acres & have 3 cleared now.*
- *fire mitigation requirements for any future permits for residence construction.*
- *I live on the far/Southern of Kittitas County. I'm not sure anything would be cost effective.*
- *We own a cabin on forest service land. Their rules apply to our ability to clear trees, etc. We are not even allowed to clear fallen trees because of our proximity to a river & fish protection rules. Makes fire protection a real issue.*
- *We need trees thinned better, I think.*
- *Your question RE #14 whether I have a pump & fire hose was interesting --> I'll look into such a purchase for a backup if power/well fails.*
- *Government subsidies water tanks with pumps*
- *County, state and federal rules striking down CC&R's that restrict home and community wild fire defense.*
- *Hire more people to regulate illegal camp fires and burning, during no burn bans. Close more of the off road camping areas that are not regulated.*
- *Private Responsibility to cut back brush and trees as needed.*
- *Provide college students that would work for \$10/hr to help homeowners mitigate the problems. Homeowners would pay the \$10 and the county would pay the "overhead such as L&I, benefits, insurance, etc.*
- *Common Sense*
- *Not sure the hazard points reflect the true hazard. I think it should be higher, more in the moderate area. Minimal fire protection available.*
- *The upper gates in Sky meadows need to be removed. If there is a fire in the lower part of sky meadows, the only point of egress for the upper residents is the East Gate road.*
- *Alarm/alert system, telephone tree or something so that we can evacuate.*
- *We are so remote where our cabin is located at Lake Kachess campground, and can't see where any additional efforts to reduce fire hazard would be helpful for us.*
- *At Snoqualmie Pass the wild fire threat is nearly zero*
- *I would be willing to donate garage to get help on house payment big enough for truck & equipment*

Thank you very much for completing this survey! This information will be combined with other data to assess the greatest threats to defending homes and adjacent buildings where hazards are common. If you'd like some more information, please contact us at (509) 925-8585 Ext 4 or fill out the optional box below and we will contact you!

**78 Responses (64.5% of total returned surveys)**

Name: _____ _____
Address: _____ _____
City, State
Zip: _____