

Klickitat and  
Skamania County,  
Washington  
Community Wildfire  
Protection Plan  
(CWPP)  
*DRAFT*

March 28, 2006

This plan was developed by the Klickitat and  
Skamania County CWPP Steering Committee in  
Cooperation with BAF

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# Executive Summary

For nearly a year, The Klickitat and Skamania County Community Wildfire Protection Plan (CWPP) Committee convened to develop a CWPP to identify strategies and priorities for the protection of life, property, and infrastructure in the wildland-urban interface. The CWPP is a shared plan held jointly by the Skamania and Klickitat County Board of Commissioners, the Washington Department of Natural Resources and the Skamania and Klickitat County Fire Districts, and the final contents were mutually agreed upon by all three entities.

**The Vision:** To institutionalize and promote a countywide hazard mitigation ethic through leadership, professionalism, and excellence, leading the way to a safe, sustainable CWPP.

The plan goals help to guide the direction of future activities aimed at reducing risk and preventing losses from wildfire. The goals listed here serve as the guiding principles for agencies and organizations as they begin implementing action items.

**GOAL 1:** Provide countywide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in Klickitat and Skamania Counties.

**GOAL 2:** Improve opportunities for cooperative community strategies for reducing the impacts of wildland-urban interface fires.

**GOAL 3:** Promote wildfire risk reduction activities for private and public lands in Skamania and Klickitat Counties.

Skamania and Klickitat County Economic Development Leaders convened a steering committee to oversee and guide the development of the two-county CWPP. The steering committee was a collaborative group responsible for making decisions and agreeing upon the final contents of the plan. The members of the steering committee included representatives of the following agencies/groups:

- Klickitat and Skamania Government
- Fire District representatives
- Washington State University Extension
- Washington Department of Natural Resources
- US Forest Service
- Columbia Gorge National Scenic Area
- Engaged individuals in Wildfire Issues

A plan was developed, through mapping, internal and public meetings that includes both short and long-term activities. Short-term action items are activities that may be implemented with existing resources

and authorities within one to two years. Long-term action items may require new or additional resources and/or authorities, and may take from one to five years to implement.

The Healthy Forest Restoration Act (HFRA) requires that three entities involved in the two-county planning area mutually agree to the final contents of a CWPP:

- Klickitat County Board of Commissioners
- Skamania Fire Marshal and all Klickitat Fire District President, as authorized by vote.
- Washington Department of Natural Resources (State Agency responsible for Forest Management)

The Skamania and Klickitat County CWPP is a shared plan and was developed and implemented based upon a collaborative process. The plan will be adopted by resolution by the Skamania and Klickitat County Board of Commissioners and acknowledged by the Skamania Fire Marshall and all 13 of Klickitat County Fire Districts, and Washington's DNR in order to meet HFRA and Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation requirements. The effectiveness of the Skamania and Klickitat County non-regulatory CWPP will be contingent upon the implementation of the plan and action item identified therein. The action items provide a framework for building and sustaining partnerships to support wildfire risk reduction projects.

In order to implement this plan, we have recommended that the two-county emergency management coordinators review the action items, to determine if any additional support will be necessary for plan implementation and provide guidance/recommendations. They will co-chair an ongoing CWPP advisory committee and fulfill the chair's responsibilities. These two entities will be responsible for calling meetings to order at scheduled times or when issues arise, (e.g., when funding becomes available or following a major wildfire event).

#### **Emergency Management roles:**

- Coordinate committee meeting dates, times, locations, agendas, and member notification;
- Document outcomes of committee meetings in CWPP Appendix;
- Serve as a communication conduit between the committee and key plan stakeholders, (e.g., monthly meetings of the Fire Defense Board); and
- Identify emergency management related funding sources for wildfire mitigation projects.

#### **County Level Management roles:**

- Serve as gatekeeper to the project prioritization process;
- Incorporate, maintain, and update Klickitat/Skamania County's Wildland-Urban Interface Risk Assessment GIS data elements and provide to communities as needed.
- Utilize the Klickitat County and Skamania Wildland-Urban Interface Risk Assessment as a tool for prioritizing proposed fuel reduction projects

We also recommend as part of the action plan that the Emergency Management Employees within Klickitat and Skamania Counties: oversee the plan's implementation and maintenance. They will also act as chairs to an ongoing steering committee to oversee implementation, identify and coordinate funding opportunities and sustain the CWPP. The Emergency Management Employee within Klickitat and Skamania Counties will act as the coordinating body and serve as a centralized resource for wildfire risk reduction and wildland-urban interface issues in the two-counties. They will also keep a steering/resource committee going for support.

**Additional roles and responsibilities of the committee include:**

- Serving as the local evaluation committee for wildfire funding programs;
- Developing and coordinating ad hoc and/or standing subcommittees as needed;
- Prioritizing and recommending funding of wildfire risk reduction projects;
- Documenting successes and lessons learned; and
- Evaluating and updating the CWPP in accordance with the prescribed maintenance schedule.

# Section 1 Introduction

## ***Plan Purpose***

The Klickitat and Skamania County Community Wildfire Protection Plan (CWPP) identifies strategies and priorities for the protection of life, property, and infrastructure in the wildland-urban interface. The CWPP is a shared plan administered jointly by the Klickitat County and Skamania County Board of Commissioners, the Skamania and Klickitat County Fire Districts and the Washington State Department of Natural Resources. The contents of this plan were mutually agreed upon by all entities.

The goals of this planning process include the integration of the National Fire Plan, the Washington Statewide Implementation Strategy, the Healthy Forests Restoration Act, and the requirements of FEMA for a wildfire plan chapter, a component of the County's All Hazard Mitigation Plan. This effort will utilize the best and most appropriate science from all partners, the integration of local and regional knowledge about wildfire risks and fire behavior, while meeting the needs of local citizens, the regional economy, the significance of this region to the rest of Washington and the Inland West.

The CWPP is an action plan and depends upon people and partnerships to carry it forward. The purpose of the CWPP is to provide the following:

- A foundation for coordination and collaboration among agencies and the public in Skamania and Klickitat Counties to reduce risk to wildfire.
- An assessment and mapping of the wildland-urban interface in Skamania and Klickitat Counties.
- Identification and prioritization of areas for hazardous fuel reduction projects.
- A set of recommendations for actions homeowners and local communities can take to reduce the ignitability of structures.
- Assistance in meeting federal and state planning requirements and qualifying for assistance programs.
- A framework to support the development of local community fire plans within the counties.

## ***Why Develop a Community Wildfire Protection Plan?***

The development of structures in and near forestlands exposes greater numbers of people and property to the wildfire hazard. In 2002, one of the worst fire seasons in recent history, wildfires burned nearly seven million acres and 2,000 buildings across the United States. In 2003, wildfires destroyed 4,090 homes, primarily in California.

According to the State Natural Hazards Risk Assessment, Skamania and Klickitat Counties County has a high probability of and vulnerability to wildland-urban interface fire – in fact they represent the very highest State fire probability.

The destruction caused by fire in recent seasons illustrates that fire response and emergency management efforts alone are not enough to prevent losses. Reducing a community's risk to wildfire is a shared responsibility that requires the participation of federal, state, and local government agencies, the private sector, and citizens. Risk reduction strategies are most effective when organized at the local level. Through community-based fire planning it is possible to address the specific values and needs of a local community and to build citizen awareness of the dangers of living in a fire prone area.

The very rural two Counties also wanted to come together to ensure that they could understand the big picture risk and determine collaborative opportunities to reduce these risks.

One of the frustrating issues for the these two rural Counties is the very real issue of being unable, given the current situation, to prevent losses. Both County districts live daily with the knowledge that not only is catastrophic fire likely to occur but should there be a worst case scenario, the numbers of lives at risk and the future economic opportunity for both Counties could be devastating as well.

Further, one of the biggest messages from this two county CWPP is that not only are these Counties at high risk, but they have had little affect in creating a change on US Forest Service land, which has a great deal to do with wildfire risk.

The dramatic losses during the 2002 and 2003 fire seasons increased public awareness of wildfire risk and contributed to the Federal government's adoption of the National Fire Plan and the Healthy Forests Restoration Act of 2003 (HFRA). This legislation encourages improved intergovernmental collaboration and increased partnerships between public and private entities to implement vegetative fuel reduction projects and improve risk reduction activities in at-risk communities. HFRA also encourages local communities to create their own strategies for wildfire mitigation through development of a community wildfire protection plan.

Skamania and Klickitat Counties recognize that reducing the potential impacts of wildland-urban interface fire requires a proactive approach that reaches across jurisdictional boundaries, public and private lands, and the diverse geographic regions of the Counties. The development of a community wildfire protection plan creates an opportunity to encourage communication between agencies and stakeholders, identify and prioritize community values, assess wildfire risk areas, and increase education and awareness of communities and homeowners.

In early 2005, the Skamania and Klickitat County Board of Commissioners directed County Staff to work collaboratively with fire protection districts and federal and state agencies to develop a community wildfire protection plan, using local funding.

The planning process was designed to meet the funding eligibility requirements of the National Fire Plan, the HFRA of 2003, and the Pre-Disaster Mitigation Program of the Federal Emergency Management Agency.

The Klickitat and Skamania Counties CWPP focuses on achieving the three minimum requirements for community wildfire protection plans described by the HFRA

- (1) Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
- (2) Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
- (3) Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

### ***What area will the CWPP affect?***

Skamania and Klickitat Counties cover literally thousands of square miles, stretching along the Columbia River Gorge, through rural and agricultural land and into DNR and US Forest service land. Nearly 90% of Skamania County is forestlands. Much of Klickitat County is forested, but due to the drier conditions to the east of the Cascades, it has a large area covered by shrubland and grassland. Map1, State Locator, shows the position of the two Counties in the State of Washington.

With two Counties this size, identifying high-risk areas and carrying out public outreach efforts on a meaningful scale is difficult. The Klickitat and Skamania Counties CWPP addresses issues of scale and the County's diverse geography, population, and land management authorities by dividing the Counties into 19 community areas based roughly on watershed boundaries. The plan identifies general areas with high wildfire risk and provides a framework of technical support and guidance to assist local communities in developing and refining their own community wildfire protection plans and risk assessments. The CWPP does not have authority over incorporated communities within the County, but seeks to develop strategies for sharing information and resources between the county and local communities.

### ***How is the CWPP organized?***

The Klickitat and Skamania County CWPP is organized into the following sections:

#### ***Section 1: Introduction***

The Introduction explains the purpose of the CWPP and the process used to develop the plan. This section also describes current fire protection frameworks, and existing plans and policies addressing wildfire in Klickitat County and Skamania County.



***Section 2: Planning Area Description***

This section describes the physical features, the biological features and the human element of the planning area.

***Section 3: CWPP Developed Communities***

This section describes the division of the two-county planning area into delineated communities.

***Section 4: Risk Assessment***

This section shows the result of risk analysis performed using RAMS on the community divisions of the two-county planning area.

***Section 5: Recommendations and Action Plan***

This section describes the framework and methods used to develop the goals, objectives, and action items that make up the Action Plan.

***Section 6: Plan Implementation***

This section makes recommendations on implementing the plan once it is adopted.

***Appendices***

*Appendix A: Maps of the CWPP* – These are maps produced by the CWPP and referenced in this document.

*Appendix B: CWPP Community Characteristics* – Describes each of the communities identified in the CWPP.

*Appendix C: CWPP Risk Analysis*– Presents the final report generated by the RAMS Assessment computer program.

***Planning Process and Methods***

BAF and the Klickitat and Skamania County CWPP Steering Committee designed the CWPP planning process based upon the requirements of the HFRA, the Pre-Disaster Mitigation program, and the guidelines in the *Preparing a Community Wildfire Protection Plan* (Society of American Foresters. *Preparing a Community Wildfire Protection Plan. CWPP Handbook*. From <http://www.safnet.org/policyandpress/cwpp.cfm>) handbook.

The planning process for the Skamania and Klickitat County CWPP reflects the collaborative emphasis required by the Healthy Forests Restoration Act. Collaboration is the process of bringing different stakeholders together to address a problem by identifying common goals and gaining consensus on potential solutions. A collaborative plan recognizes that the implementation process and its outcomes are more successful when support comes from multiple sources throughout the community. Collaboration ensures that the final document reflects the community's highest priorities.

## Steps to Developing the CWPP:

### Step I. Convene Steering Committee and Engage Federal Partners

Skamania and Klickitat County Economic Development convened a steering committee to oversee and guide the development of the two- county CWPP. The steering committee is a collaborative group responsible for guiding and agreeing upon the final contents of the plan. Members of the steering committee included representatives of the signatories of the plan as well as representatives taking a more advisory role in the CWPP. The members of the steering committee included representatives of the following agencies/groups:

- Klickitat County Government
  - Representatives of County Commissioners
  - Economic Development
- Skamania County Government
  - Representatives of County Government
  - Economic Development
- Klickitat County Emergency Management
- Skamania County Emergency Management
- Washington State University Extension
- Washington Department of Natural Resources
  - Fire Prevention Coordinator—Pacific Cascade Region
  - Fire Prevention Coordinator—Southeast Region
- Fire Districts of the Two Counties
- Engaged Individuals in Wildfire Planning
- US Forest Service
  - Gifford Pinchot National Forest
  - Columbia Gorge National Scenic Area

### Step II. Research Existing Wildfire Resources, Plans, and Policies

Background research was conducted prior to beginning the planning process for the two County CWPP. BAF reviewed existing federal, state, and local policies and plans related to wildfire planning, protection, or mitigation, as well as recent community wildfire plans from across the nation. Other background information included recent research by the U.S. Forest Service and other literature on wildland-urban interface fire prevention.

### Step III. Engage Interested Parties and Stakeholders

Because this is a two county plan, with broad scope recommendations, the BAF and Skamania and Klickitat Economic Development, charged with plan development, relied on a three-tiered process to engage stakeholders in the development of the Klickitat and Skamania CWPP:

1. Steering Committee became the defacto stakeholders.
2. Stakeholder Interviews – BAF conducted outreach to all fire districts within the two Counties; survey was developed for fire districts.
3. Two Larger Community Outreach Events: to share information and gain feedback.

#### **Step IV. Develop a Community Base Map and Wildfire Risk Assessment:**

Using GIS technology and information from the Washington DNR, BAF created base maps of the community and adjacent land important to the CWPP. The maps identify inhabited areas containing critical human infrastructure that are at risk from wildfire and preliminarily designates Klickitat and Skamania County's wildland-urban interface zones.

BAF adapted a statewide risk assessment methodology (RAMS) to evaluate wildfire risk and prioritize CWPP delineated communities for each of the two counties. The following risk factors were assessed in order to determine the risk components:

**Risk:** Assesses the potential and frequency with which wildfire ignitions might occur by analyzing historical ignitions over the past 10 years.

**Hazard:** Natural conditions, including vegetative fuels, weather, and topographic features, that may contribute to and affect the behavior of wildfire.

**Values:** The people, property, and essential infrastructure that may suffer losses in a wildfire event.

**Protection Capability:** The ability to both plan and prepare for, as well as respond to and suppress, structural and wildland fires.

The risk assessment also provides a process for the prioritization of areas for hazardous fuel reduction treatments to protect at-risk communities and essential infrastructure as required by HFRA.

#### **Step V. Develop an Action Plan and Project Prioritization Method**

The findings from the wildfire risk assessment and the input from interested parties and stakeholders were used to create an action plan for the Skamania and Klickitat County CWPP. The action plan identifies the goals, objectives, and action items for carrying out wildfire risk reduction strategies in the county. The action plan also establishes roles and responsibilities for implementing action items.

#### **Step VI. Finalize Community Wildfire Protection Plan**

BAF presented a draft CWPP to the steering committee in March 2006 for review and comment. The steering committee-approved document was presented to the Klickitat and Skamania Board of County Commissioners in March 2006 and was adopted by resolution. The following entities approved the final document, pursuant to the HFRA

1. The Skamania and Klickitat County Board of Commissioners.
2. The Representatives of the Fire Districts in the two Counties.
3. The Washington Department Natural Resources.

## ***Existing Plans and Policies Addressing Wildfire***

### **Current Wildfire Protection Framework**

Several agencies share responsibility for fire protection in Klickitat and Skamania County. These roles are described in the Klickitat County and Skamania County Emergency Operations Plan. Resources related to these agencies are listed under Fire Infrastructure discussion of Section 2: Planning Area Description.

In addition to response capabilities, many fire agencies in the two Counties play a role in education and outreach. The Washington State Fire Marshal provides technical assistance to rural fire protection districts and unprotected areas in the wildland-urban interface. The Washington Department of Natural Resources has received funding through National Fire Plan grants for fuel reduction projects and community-level fire protection plans. The Washington DNR through Fire Prevention Coordinators facilitates interagency cooperation for the local delivery of fire prevention education messages. Table 1 on the next page portrays the current wildfire protection framework in Klickitat and Skamania Counties, including the roles and responsibilities of federal, state, and local fire protection agencies.

Table 2 shows the established policies and plans, requirements and how the CWPP will address these policies.

Table 1: Current Wildfire Protection Framework

Federal	State	County	Municipal
<p>US Forest Service (USFS), Bureau of Land Management (BLM), Columbia Gorge National Scenic Area (CGNSA), Bureau of Indian Affairs (BIA), and US Fish and Wildlife (USFW)</p> <ul style="list-style-type: none"> <li>■ Agencies responsible for first response on Federal lands within the two county planning area</li> <li>■ USFS, BLM, CGNSA, BIA, and USFW participate in first response and co-op agreements with Washington Department of Natural Resources.</li> <li>■ Implements the Columbia Gorge Scenic Area Emergency Development Plan</li> <li>■ Manages the majority of Skamania County and portions of Klickitat County; 976,251 acres or 1,526 square miles.</li> </ul>	<p>Washington State Department of Natural Resources (DNR)</p> <ul style="list-style-type: none"> <li>■ Provides wildland protection on 225,103 acres or 352 square miles in Skamania and Klickitat County on state owned and state protected lands within district boundaries</li> <li>■ Contracts with county fire departments to provide wildland fire protection outside of district boundaries</li> <li>■ Participates in first-response agreements with all adjoining counties and in co-op agreements with USFS.</li> <li>■ Fire response agreements with county fire districts; 10 in Klickitat County and 5 in Skamania County.</li> <li>■ Participates in Master Cooperator plan which includes: BIA, USFS, BLM, NPS, DNR, Oregon Department of Forestry (ODF), and US Fish and Wildlife (USFW). This is part of the Central Cascade Wildland Operating Plan</li> </ul>	<p>Rural Fire Districts (RFD)</p> <ul style="list-style-type: none"> <li>■ Provide structural fire protection within district boundaries throughout Counties.</li> <li>■ Participates in first response agreements with DNR</li> <li>■ There are 13 RFDs in Klickitat County and 6 RFDs on Skamania County</li> </ul> <p>Emergency Management Services</p> <ul style="list-style-type: none"> <li>■ Implements county Comprehensive Emergency Management Plan (CEMP)</li> <li>■ Coordinates FEMA involvement in extreme situations</li> </ul>	<p>City Fire Departments</p> <ul style="list-style-type: none"> <li>■ Provide structural fire protection within city limits.</li> <li>■ Cities without fire departments contract with rural fire districts for emergency protection.</li> </ul>

Table 2 : Policy Framework for Wildland-Urban Interface Fire in Washington

Policy/Plans	Requirements	How the CWPP Addresses Policy
<p><b>Healthy Forests Restoration Act (HFRA):</b> Congress adopted HFRA in 2003 to assist community, state, and federal land managers in the prevention of catastrophic wildfire on public lands through fuels reduction activities. The Act requires that 50% of appropriated fuel treatment funding through HFRA be used in the wildland-urban interface protection zone and give priority funding to communities with a community wildfire protection plan in place.</p>	<p>(1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, ion consultation with federal agencies and other interested parties.</p> <p>(2) Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.</p> <p>(3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.</p> <p>(4) Three entities must mutually agree to the final contents of a CWPP: the applicable local government; the local fire departments; and the state entity responsible for forest management.</p>	<p>(1) The CWPP was collaboratively developed by a steering committee representing local, state, and federal agencies. The plan conducted outreach activities to gain input from public and private stakeholders.</p> <p>(2) The CWPP includes an assessment of wildfire risk in Skamanaia and Klickitat County and a process for prioritizing fuel reduction projects.</p> <p>(3) The CWPP recommends actions for promoting risk reduction activities on private and public lands in Klickitat and Skamanaia County.</p> <p>(4) The Klickitat and Skamania County Board of Commissioners, The Skamanaia Fire Marshall, the Klickitat County RFD fire marshals, and the Washington Department of Natural Resources approved the Klickitat and Skamania County CWPP</p>
<p><b>National Fire Plan 10-Year Comprehensive Strategy:</b> The National Fire Plan was developed in 2000 to actively respond to severe wildfires and their impacts on communities, while ensuring sufficient firefighting capacity for the future</p>	<p>The National Fire Plan addresses five key points:</p> <ul style="list-style-type: none"> <li>■ Firefighting,</li> <li>■ Rehabilitation,</li> <li>■ Hazardous Fuels Reduction,</li> <li>■ Community Assistance, and</li> <li>■ Accountability.</li> </ul>	<p>The CWPP will aid in effectively implementing National Fire Plan goals by providing a collaborative framework for reducing wildfire risk to communities in Klickitat and Skamania County.</p> <p>Klickitat &amp; Skamania County will develop a CWPP Advisory Committee to oversee implementation, identify and coordinate funding opportunities, and sustain the Klickitat &amp; Skamania County Community Wildfire Protection Plan</p>
<p><b>Disaster Mitigation Act of 2000:</b> The Act emphasizes mitigation planning and establishes a pre-disaster hazard mitigation program</p>	<p>Requires state and local governments to have an approved natural hazard mitigation plan in place to qualify for post-disaster Hazard Mitigation Grant Program funds.</p>	<p>The CWPP will serve as the Wildfire Appendix for the County Natural Mitigation Plan currently under development.</p>

<p><b>Chapter 76.04 of the Revised Code of Washington (RCW) :</b> Directs DNR in its fire protection role</p>	<p>Defines the primary fire protection mission of DNR as the protection of forest resources and suppressing forest fires, second only to saving lives.</p>	<p>The CWPP recommends fuels and vegetation modification consistent with DNR's mission.</p>
<p><b>Forest Fire Advisory Board (RCW 76.04.520):</b> 1971 legislature establishes Board</p>	<p>Board is charged with overseeing the DNR fire program and making recommendations to DNR management</p>	<p>The CWPP is reviewed by DNR management.</p>

## **Additional County and Community Planning Efforts**

### **County Wide Planning Efforts**

In 2002 Ole Helgerson, WSU Extension Forester received a National fire Plan grant (*Columbia Gorge Wildfire Preparedness Project*) to coordinate efforts of US Forest service, Columbia Gorge National Scenic Area, US Fish and Wildlife, Washington DNR, Oregon Department of Forestry, along with close coordination with Skamania County Department of Emergency Management to develop a cohesive approach to wildfire planning in Skamania County. Subsequent years have seen a GIS data base developed and the NFPA 299 survey began with Title III funding (Skamania County Firewise Project).

### **Existing Community Wildfire Protection Plans**

Several communities in the two county planning area have completed or are in the process of completing the CWPP process. These are listed below with status and contact information.

#### **White Salmon CWPP**

Status: Completed

Date: January, 2005

Reference: The document can be viewed at

<http://www.dnr.wa.gov/htdocs/rp/mitigation/>

#### **Trout Lake CWPP**

Status: Completed

Date: December, 2005

Reference: The document can be viewed at

<http://www.dnr.wa.gov/htdocs/rp/mitigation/>

#### **Glenwood CWPP**

Status: In Progress

Contact: Jay McLaughlin, Mt. Adams Resource Stewards

509-364-4110



## Section 2 Planning Area Description

### ***Physical Features***

Klickitat and Skamania Counties are located in the South portion of the State of Washington. Skamania County is largely covered by the Cascade Mountain range, with Mt. St. Helens and portions of Mt. Adams present inside the county boundaries. Klickitat County occurs on the eastern slopes of the Cascade Mountains extending into the Columbia Basin to the east. Both counties are bordered by the Columbia River to the south.

Map 1, State Locator, shows the location of the two counties relative to Washington State features.

There are three distinct components of topography that affects the fire conditions of the two county planning area. Map 2, Topographic Regions, shows that the Cascade Mountain range is a prominent feature in Skamania County. To the east of the mountains are the eastern lee slopes of the Cascades where air patterns moving over the mountains increase in temperature and dry as it descends. Bordering the south edge of the two counties is the Columbia River, which can be thought of as a conduit between the two weather regimes; east of the Cascades and west of the Cascades.

### **Climatic Features**

To the west of the planning area is a marine type climate dominated by frontal flows from the west off the Pacific Ocean. These are typically wet climate patterns that carry moisture that is precipitated as the frontal patterns rise over the Cascade Mountain Slopes. This creates a very wet pattern that results in rainfall ranging from 80 inches to greater than 120 inches per year. Once the Pacific front moves over the Cascade Mountains it is much drier and tends to precipitate less moisture the further east it proceeds. By the time the eastern section of Klickitat County is reached annual rainfall drops to from 40 inches to less than 10 inches annually.

The eastern portions of Klickitat County are greatly influenced by a more continental pattern of climate than the Cascade Mountains. Most of Klickitat County falls in a transition zone between these two climate patterns.

The Columbia Gorge acts a conduit between these two distinct weather patterns. Its affect is along the southern slopes of both counties. There are distinct and strong winds associated with this topographic feature, which can cause wind direction flowing in either a westerly or easterly direction. While there are distinct flow patterns associated with

any wind event in the Gorge, there may be strong unpredictable wind flow patterns along the lateral drainages and slopes of the Gorge.

## **Historical Fire Patterns**

Wild land fire has played a critical role both in the natural condition of the planning area and in the human response to this area. Map 3, Historical Fire Patterns, shows the occurrence of fires over the planning area for the last 100 years plus. This information reflects the data available and is known to not be complete.

Perhaps the fire with the largest historical influence on the planning area was the Yacolt burn of 1902. This fire complex burned in the Southwestern portion of the planning area in Skamania County and did most of its damage in a 3 day period. This fire is typically used as the example of a catastrophic fire event that has the potential to happen again in the planning area. Map 3 shows that the year 1902 was particularly bad in that two other large fires occurred in the planning area; the Cispus and the Lewis River fires.

## ***Biological Elements of Planning Area***

### **Ecological Regions**

Ecological regions found in the two county planning area are diverse and reflect the broad geographic area covered. Map 4, Ecological Regions, show the level IV ecoregions as defined by an interagency effort by the Environmental Protection Agency (EPA), the Natural Resource Conservation Service (NRCS), and the United States Forest Service (USFS). This map confirms the affect the Cascade Mountain Range and the Eastern slopes has on the vegetation of the two county planning area.

### **Fire Regime**

The definition of fire regime for this CWPP follows that of the Fire Regime Condition Class Interagency website (Interagency. FRCC Guidebook. *Fire Regime Condition Class*. Retrieved March 3, 2006. From <http://www.frcc.gov/>). Fire Regime is the affect fire would have on a landscape in a natural (absence of human influence) condition. Fire regime defines a fires frequency and intensity over a landscape.

Descriptions of fire regime fall into five classes:

- I – 0-35 year frequency and low severity
- II – 0-35 year frequency and high severity
- III – 35-200+ year frequency and mixed severity
- IV – 35-200+ year frequency and high severity
- V – 200+ year frequency and high severity

Map 5, Fire Regimes, shows the distribution of the fire regimes over the two counties of this CWPP. From this map it can be seen that there are major differences between the two counties related to fire regime.

The predominance of low frequency high severity forests in Skamania County is directly related to the geography of the county made up of the Cascade Mountain Range. High productivity combined with a wetter climate regime results in fuel buildup and vegetation patterns that result in potentials for large high intensity fires. Conditions are not always optimum for fire development, but when they are, the vegetation condition can result in potentially catastrophic fires.

Klickitat County is considered an “East side” county, with fuels that reflect a drier climate as geographically you move from west to east. Fuels and vegetation structure reflects this drier climate regime. Mixed conifer forests in the west transition through forests mainly composed of ponderosa pine to shrub/grassland communities. There is a decided shift in fire regime from low to higher frequency. Severity tends to reflect the mix of vegetation, grassland mixed with shrub land mixed with forested draws, common in the eastern portions of the county.

### **Protocol for Data**

The fire regime data reflects two primary sources of information. The US Forest Service provided a fire regime layer for the Gifford Pinchot National Forest. The Washington Department of Natural Resources provided data for the bulk of Klickitat County. The two data sources were combined to produce the data layer developed for this document. Portions of Klickitat County not covered by the DNR data were derived by photo interpretation using an orthorectified photo base provided by DNR. Similar vegetation types on the photos to the existing data were given the same fire regime classification.

### **Implications for CWPP**

Clearly, planning for fires is directly related to the kind of fire that is likely to be encountered.. The low frequency-high severity fire regimes of Skammania County can lead to catastrophic fires with high spread rates. These are different fires than the “flashy” fuel fires of east Klicitat County. There is a greater likelihood of fire starts in eastern Klickitat County in any given year as shown by frequency data.

### **Condition Class**

Condition class is the landscapes deviation from natural fire regime conditions. Condition class is largely an assessment of the vegetation component of the landscape and how it deviates from a natural condition. It can be thought of as the human influence on the vegetation and how far from natural the condition this vegetation has been moved. There are three ratings for condition class:

- 1- Vegetation is within the normal condition for fuel development.
- 2- Vegetation has been moderately altered.
- 3- Vegetation has been highly altered.

Map 6, Condition Class, shows the condition class for large landscapes for the two counties. The vast majority of the two county areas are either in a condition class 2 or 3. This indicates that the fire fuel condition is something other than in natural condition. In many locations this is a result of fire suppression creating higher fuel loading and in other locations forest structure has been altered, removing older fire resistant trees. Grassland areas rate a condition class 3 related to increased abundance of annual grasses coupled with fire suppression history. These areas are often a complexity of wild land and agricultural use areas.

### **Protocol for Data**

The condition class data presented here reflects a mix of published condition class for public lands made available on the DNR website (Washington State Department of Natural Resources. Fire Prevention and Fuel Management Mapping System. *Condition Class*. Accessed 10/15/05 From: <http://www3.wadnr.gov/dnrapp5/website/fmanfire/viewer.htm> ) and extrapolated data for private lands compiled by BAF. The DNR orthorectified photos were used as a visual reference to infer condition class. If signs of management were seen a value of at least 2 for condition class was applied. Intermix zones of houses and the wild land were seen, these areas were given a 3 for condition class.

This data should be considered course level data. Individual stands of timber or grassland sites may vary from this analysis under site specific assessment. This data is presented as a “first cut” effort and is intended to be used at the landscape level for County wide planning. It is expected that as individual communities develop their CWPPs this data will become more refined.

### **Implications for CWPP**

Condition class measures the departure from natural fire regime behavior that landscapes have made. Essentially, a condition class of three would indicate a high risk of fire changing ecosystem components. This would include a higher risk of affecting the human elements of these ecosystems as well. A higher value for condition class warrants concern for fire suppression professionals in that a catastrophic fire is more likely.

## ***Human Elements of Planning Area***

### **Historical Description**

Skamania County covers over 1,000,000 acres of diverse country. Home to the Gifford Pinchot National Forest, Trapper Creek, Indian Heaven Wilderness, waterfalls and mountain rivers, Skamania's southern border is defined by the Columbia River, and the Columbia River Gorge National Scenic Area. Its Northern territory holds the peak of Mount Saint Helens in the west and the base of Mt. Adams to the east. In 1805 Lewis and Clark named Beacon Rock, a 848' core to an extinct volcano, on their journey to the Pacific Ocean.

Located in south central Washington state, Klickitat County lies at the junction where the Columbia River Gorge cuts through the eastern slopes of the Cascade Mountains. It encompasses 1,908 square miles (about the same size as the state of Delaware), has miles of whitewater streams, numerous lakes, the Columbia River, the Gifford Pinchot National Forest and is home to the Klickitat Wildlife Management Area and Conboy Lake National Wildlife Refuge. The county is 84 miles wide and averages 23 miles north to south. Its 18,000 residents reside in cultural and historic communities which provide various cultural and business accommodations and world-class attractions.

Both counties offer fishing, hunting, whitewater rafting, windsurfing, hiking, biking, horseback riding, cross country skiing, snowmobiling, berry and mushroom picking, and scenic tours provide outdoor recreation opportunities to thousands of travelers and business visitors to the Columbia River Gorge and surrounding areas. Visitors find canyons and vistas, evergreen forests, scenic waterfalls, wildflowers, berry fields, ranchlands, sage-covered hillsides, river rapids, hiking and biking trails, deer, turkey, elk, salmon, steelhead, rodeos, festivals, Visitors may even follow in the footsteps of Lewis and Clark, who, on their 1805 Corp of Discovery expedition to the Pacific Ocean, camped at the mouth of the White Salmon River.

Native American Indians were the first inhabitants of the Gorge arriving approximately 10,000 years ago. Over the centuries they developed a culture rich in tradition and art as they made a home in the Columbia River Gorge.

The Cascade Chinook Indians settled where the Columbia River cut a path through the Cascade Mountains. West of the Cascades were large dense stands of forest. This is where the Coastal Indians lived. East of the Cascade mountains the climate changes, becoming much drier and desert-like. This was home to the Plateau Indians. The Cascade Indians lived in the middle of these two different environments. As a result, they have some characteristics of both tribes.

As the area was settled, the river offered a booming Salmon industry, and ports to ship other natural resources, from agriculture to timber. Changes in the river system, dams, declining salmon runs, etc., have resulted in the decline of the salmon industry. Salmon still plays an important role in the culture of the Columbia Gorge area. Subsistence fishing, tribal fish sales, and recreational salmon fishing add to the economic structure of the communities along the river.

Logging and the timber industry played a large role in the economic development of this region over the last century. Most of the communities in the two county planning area have roots back to development related to timber harvest activities. Prior to the technological revolution of high tech mills and the ability to move large quantities of logs over great distances, mills were much more dispersed over the two counties. The area relied heavily on logging and timber, until the early 1990s, until a decrease in available federal timber and the decline of available old growth timber changed the log supply dramatically.

Fires also played a role in shaping the cultural and economic nature of these two counties. The Yacolt burn(s) of 1902 (see historical fires above) and beyond created a plethora of salvageable timber that attracted mills and resulted in a local infrastructure for the timber industry. There was a need as well for seedlings to replant and establish reforestation efforts on the large area that was burned. The Wind River Nursery was established by Forest Service Chief, Gifford Pinchot, in 1909 to reforest thousands of acres of forest devastated by the large fires. The Nursery has produced more than 847 million seedlings for reforestation of 1,695,400 acres of national forest lands in the Pacific Northwest following forest fires, timber harvest, and the 1980 eruption of Mount St. Helens.

Today the area struggles to attract new kinds of business relying on agriculture and tourism. Economic development projects include diversity including wind power development in Klickitat County and vineyard development in the region.

## **Cultural Description**

Skamania and Klickitat Counties offer a wide array of cultural significance including Mt. St. Helens, Mt. Adams and very important native American sites and American history, including important Lewis and Clark sites.

## **Culturally Significant Components**

Beacon Rock State Park

Cascade Mountain Range

Horsethief Lake State Park, with the oldest petroglyphs in the U.S.

Mt. St. Helens

Mt. Adams

Gifford Pinchot National Forest

Beacon Rock State Park

Wind River Canopy Crane which offers scientists the opportunity to study temperate forests.

Pacific Crest Trail cuts through this area.

Columbia River Gorge Scenic Area (Federally designated scenic area)  
Conboy Lake National Wildlife Refuge  
Columbia Gorge Interpretive Center  
Maryhill Museum of Art  
Goldendale Observatory State Park  
Whoop-N-Holler Museum  
The Gorge Heritage Museum  
Yakima Indian Reservation  
Dams

Bonneville Dam, The Dalles Dam and the John Day Dam

Wild Species: The area is home to several threatened and endangered species including: bald eagle, bull trout, Chinook, Coho and steelhead and northern spotted owl. Any recommended treatments are expected to take into account the presence of these species and follow all laws and regulations associated with species disturbance.

### **Economics**

Over the last two decades, Skamania and Klickitat County have transitioned from being timber-dependent to a more tourism-oriented employment base. There is widespread recognition that recreation and tourism dollars are as important to the economic well being of the two counties as manufacturing has been.

In 2005, close to 1.3 million people visited Skamania County's Gifford Pinchot forested areas and the broad array of attraction have helped drive this area as the most tourist dependent in Washington State; with 18.5% of total earnings in the county derived from travel-related activities. By comparison, approximately 2.2% of earnings statewide are travel-generated, according to ED Hove & Company Economic Impact Assessment.

As of 2003, tourism accounted for \$14.5 million in total earnings for Skamania County, including payroll, earned benefits and proprietors income. Total visitor spending approximated at \$50.5 million, with a total direct impact of 870 jobs countywide.

As of 2004, Travel spending was \$ 24.7 Million for Klickitat County,

Klickitat County has recently stepped up its wine growing and wine making as a major economic baseline; the County grows approximately 25% of the grapes in Washington State. With the tremendous growth of independent wineries in the area, there has also been an increase in tourism and spending.

### **Ownership Patterns**

Map 7, Ownership Patterns, shows the distribution of public and private land ownership over the two-county planning area. In Skamania County the Gifford Pinchot National Forest is the largest public land component. In Klickitat County Washington Department of Natural Resources and The Yakima Indian Nation are the two largest public land managers

## **Fire Related Infrastructure**

There are several resources related to responding and fighting wildfire in the two county planning area. Resources are centered around specific agencies resource areas and include: USFS resources, BLM resources, DNR resources, Yakima Indian Nation resources, and local Rural Fire Departments along with city fire departments. These different agencies can mobilize together to fight larger fires under the State mobilization authority and most agencies have interagency agreements detailing common response.

### **USFS Resources**

The Gifford Pinchot National Forest does not have resources directly stationed in Skamania County, however, resources in adjoining counties have a coverage area into the planning area.

At Randal, Washington the US Forest Service has 1 engine (type 4) with crew and 2 prevention units stationed at the Cowlitz Valley Ranger District. In Clark County near Cougar, Washington the US Forest Service has 1 engine (type 6) with crew and 2 prevention units stationed at Chelatchie Prairie.

In Klickitat County the US Forest Service has 2 engines (type 6) with crews and 2 prevention units stationed at Trout Lake.

The Columbia River Gorge National Scenic Area has stationed two crews with engines, one at Hood River and one in Cascade Locks.

### **BLM Resources**

The BLM does not have resources stationed in either county of the planning area and relies on response agreements with other agencies to cover ownership.

### **DNR Resources**

Washington Department of Natural Resources maintains three engine crews in Klickitat County. These crews are located in the cities of Husum, Goldendale, and Glenwood. DNR also maintains 1 engine crew in Skamania County at Fort Range.

### **Yakima Indian Nation**

The Yakima Indian Nation has one engine (type 6) with crew stationed at Glenwood in Klickitat County. When conditions warrant it additional crews and engines may be moved south from Toppenish to near the southern Yakima Nation line.

### **Rural fire Departments**

Map 8, Rural Fire Districts, shows the geographical extent of the rural fire districts in both Klickitat and Skamania Counties. Also layered on the map are the locations of fire halls. This data is good for Skamania County, but field verification is needed for the Klickitat County sites.



## Section 3 CWPP Developed Communities

### ***CWPP Community Development***

A key goal of this CWPP is to provide structure for communities to go forward in developing site specific plans and actions to address fire mitigation issues. Some division of the two county planning area is needed in order to make this process manageable. It is the community level developed here that is intended to leverage future monies in the form of grants to move treatment activities forward.

Boundaries were drawn around geographical extents that represent community boundaries for the CWPP. Community boundaries are a product of consultation with core group members involving the recognition of established nucleus communities. These nucleus communities are areas with an already established identity. Some were directly related to incorporated cities and towns, while others were simply communities where people were already organized into communicating units.

The extent of the community boundaries were drawn based on the surrounding area that has direct economic influence on the nucleus community. In many cases this involved economic benefit drawn from recreation destinations some distance from nucleus community. This outward boundary most often followed watershed boundaries, to include the importance of watershed features to a community's water supply.

Several of the communities have boundaries that extend beyond the two county boundary covered by this CWPP. This is a result of relevant landscapes that extend beyond the political boundary. It is recognized that the affects of fire do no respect political boundaries. Several of these areas represent locations where there are agreements in place for response to fire across these political lines by fire districts and other agencies.

Map 9, CWPP Communities, shows the extent and geographical coverage of each of the recognized communities. Appendix B, Characteristics of the CWPP Communities, describe data for each of the communities.

### **Past Efforts at Identifying Communities at Risk**

As part of the Fiscal Year 2001 Interior and related Agencies Appropriations Act (Public Law 106-291) a 10-year Comprehensive Strategy Implementation Plan titled A collaborative Approach for reducing Wildland Fire Risks to Communities and the Environment, a goal to Promote Community Assistance (goal four) was developed. A implementation task to develop and maintain an accurate prioritized list of all communities designated by states as being at-risk of wildland fire was identified. The lead collaborator was the State of Washington and the list was published in the Federal

Register (Vol. 66 No. 160, August 17, 2001). Below is a list of communities at risk listed in the federal register for Klickitat and Skamania Counties.

Bickleton  
Bingen  
Carson  
Stevenson  
Underwood

## ***Wild-Land Urban Interface***

Within each of the community boundaries, the wild-land urban interface (WUI) were delineated. The WUI represents those areas within a community where fire has a negative affect on the components that make up a community. Map 10, WUI Delineations, show the identified WUIs of the communities of the two county planning area.

### **Defining the WUI**

This CWPP uses five classes of WUI. It is important that the definition of WUI involve economic loss to a community and not just structural loss. This follows the concept of defining a community as all the landscape that has direct economic influence on the well being of the community structure.

Map 10, Klickitat County Wildland Urban Interface, shows the delineated WUIs for the county planning area. Map 11, Skamania County Wildland Urban Interface, shows the delineated WUIs for this county planning area.

#### Wildland Urban Interface (WUI) Classes

**Interface:** These are areas with a high density of dwellings. Generally, there will be at least three buildings per acre. These WUIs can most often be found inside city limits. There is a clear line of demarcation between wildland fuels and residential, business, and public structures. Wildland fuels do not generally continue into the developed area.

**Intermix:** These are areas with a lower density, something less than 3 dwellings per acre. Dwelling density in these areas would still be considered “grouped dwellings” creating a difficult wildland fire fighting position. There is no clear line of demarcation; wildland fuels are continuous outside of and within the developed area. These areas can often be found adjacent to city limits and are the expansion of the Interface WUIs. Intermix WUIs can occur independent of the Interface in more remote areas of the county.

**Rural:** This WUI covers those regions most closely related to agricultural activities. Buildings are spaced far apart and are grouped only as part of an operation's out building complex. This WUI includes the area that is involved in farming and ranching operations. It includes the infrastructure, crops, and equipment used or produced in ranching and farming.

**Wildland:** This WUI does not have significant groups of buildings or dwellings. Generally, there are very few if any buildings present. This includes area with high recreation/economic impact to the community.

**Water:** This WUI is characterized by significant bodies of water. Rivers are not delineated in this WUI unless there is significant impoundment of water.

The inclusion of areas of the community beyond those defined by the interface and intermix WUI stems from an understanding that catastrophic fires do not always begin in the intermix or interface. While vegetation modification around structures in the interface or intermix is important to fire behavior near these structures, it will not do anything to moderate the catastrophic fire advance. In reality catastrophic fires are stopped or slowed by changes in weather patterns. The longer the time it takes a catastrophic fire to reach the interface or intermix WUI, the higher the probability that favorable weather conditions will arrive. Therefore, vegetation modification in areas outside the interface and intermix WUIs can provide critical protection from the advance of catastrophic fire. (Finney, Mark A., 2005, *The challenge of quantitative risk analysis for wildland fire*. Forest Ecology and Management 211 (2005) 97-108)

## ***Community Escape Routes***

Using the CWPP developed communities safety routes can be identified for the evacuation of people in the event of wild land fire. Map 12, Designated Escape Routes, identifies roads and arterials critical to the movement of evacuees in the event of emergency. These escape routes need evaluation as to maintenance needs and the treatment of vegetation adjacent to the route to decrease fire hazard and risk.

## Section 4 Risk Assessment

### ***State wide Assessment***

Washington State Department of Natural Resources (DNR) periodically assesses regions of Washington State for the risk and hazard of wild fire. In 2005 DNR published the results of this assessment using RAMS (**R**isk **A**ssessment and **M**itigation **S**trategies), a computer based model that allows users to prioritize planning areas, consider prevention and treatment activities, and plan for mitigation.

The results of this analysis shows that Klickitat and Skamania are both rated as high risk counties. Within the larger context of state wide regions, both counties rate a higher priority for wild land fire mitigation activities. Given this ranking, this CWPP uses further classifications of the community level within the planning area that rank no community lower than a high risk rating.

### ***County Level Risk Assessment***

Within the two county planning area it is recognized that Klickitat and Skamania Counties are two distinct entities, not only in political boundaries, but in a landscape level as well. Fire regimes and ecological units both are very different for each of these counties. For this reason it is felt that risk assessments should be run separately for each of the Counties.

The RAMS computer model allows the user to assess components of the larger planning area. For the purposes of this CWPP the county boundaries were used as the planning area and the fire management zones (FMZ) of the model. Compartments of the model were based on the community boundaries established in this CWPP.

Inputs to the RAMS computer model allows the user to describe the fire components of each of the communities using the data on hand. Several of the inputs are based on a GIS analysis of the individual community attributes. Other inputs require an estimate based on ranges which are based on local knowledge of the communities. These inputs can be seen in both Appendix B and Appendix C.

## Results of Risk Analysis

Map 13, Hazard and Risk Composite Ranking for Skamania County, shows the ranking of the communities found in the county. Detailed results can be found in Appendix C, Results of RAMS Assessment and are itemized below:

<b>Community</b>	<b>Ranking</b>
Wind River	Extreme
Washhoughal	Extreme
Little White Salmon	Extreme
Trout Lake	Very High
Swift Reservoir	Very High
Stevenson	Very High
Skamania	High

Map 14, Hazard and Risk Composite Ranking for Klickitat County, shows the ranking of communities found in the county. Detailed results can be found in Appendix C, Results of RAMS Assessment and are itemized below:

<b>Community</b>	<b>Ranking</b>
Trout Lake	Extreme
White Salmon	Extreme
NW Goldendale	Extreme
Glenwood	Extreme
McCoy Flats	Very High
Klickitat Heights	Very High
Alder Ridge	Very High
White Salmon East	Very High
Klickitat Valley	Very High
High Prairie	Very High
BZ Corner	Very High
Klickitat East	High

In both computer runs Trout Lake community was included in each Planning Area. Nearly half of this community lies in Klickitat County and half in Skamania County, hence, it was added to both analysis.

RAMS is a comparative ranking program in that compartments (CWPP Communities) were compare to one another in developing this ranking. This will result in some communities ranked lower than others even when initial State wide analysis ranks the

entire county as high in risk. The lowest ranking community in this analysis will still have many critical risk factors that need mitigation.

### **Limitations of Assessment**

The RAMS assessment as it was applied to this CWPP can be thought of as a coarse scale assessment. Inputs into the model were strictly what was available. Many of the inputs are broad scaled in nature. For instance, many input questions are answered with “yes” or “no” answers, such as “Are Transmission lines present. Little or no information is inputted directly related to vegetation structure.

This assessment should be applied in a broad scale manner. It is best applied to large landscape level analysis.

### **Future Assessments**

Fire modeling is a growing specialty in the science of fire behavior. Refinements are being made to models that allow users to input more pertinent information related to vegetation structure. Soon it won't be the modeling that is the limitation, but rather the ability to collect refined data to go into the model.

One such model in development is FlamMap, a fire behavior mapping and analysis program that computes potential fire behavior characteristics (spread rate, flame length, fireline intensity, etc.). This program together with landscape modeling software and vegetation simulators, such as FVS, can predict, given a fire start position, where and how fast a fire will spread over a given landscape. This is critical information when planning for fuels treatment in the WUI of the two county communities.

It is a strong recommendation of this plan that a project be designed that will both develop data for these kinds of models and then applied to community analysis within this planning area.

### **Wild Land Fire Outlook for 2006 and Beyond**

While it is hard to predict any one fire season, certain statements can be made with a high degree of probability. Of all factors related to the intensity of fire season weather is the most difficult to predict. Recent trends in weather patterns indicate that the West is in a drying trend with water storage patterns (snowpack) changing in a negative manner. However, it is not trends or means that create conditions for a catastrophic fire. The

combination of humidity, wind, temperature occurring in dangerous proportions is what creates conditions where dangerous fuel loading patterns create catastrophes.

Certainly, as fire suppression continues as it has in the past and vegetation is not treated in areas where it deviates dramatically from safe levels, the potential for catastrophic fire increases. This seems to be the trend in many of the forests in the two county planning area. The same can be said for grasslands where invasive annual grasses have resulted in continuous flashy fuels over broad landscapes.

Washington Department of Natural Resources publishes a fire outlook for the fire season to come in May of each year.

It is the strong recommendation of this CWPP that fuels and vegetation patterns be treated over those areas in the community wild land WUI in affective patterning in order to decrease the danger from this trend towards larger and more catastrophic fires.

## Section 5 Recommendations and Action Plan

Conclusions, recommendations and action items for this CWPP are presented in two formats for this section. The first is a bulleted itemization of recommendations and conclusions developed from the CWPP. This list is built in a hierarchal manner representing a potential logic train of ideas. The second is an outline format of goals/objectives from the plan and subsequent action items.

### ***Recommendations and Conclusions***

#### **Two County Leadership in Implementing Wildland-urban Interface mitigation Strategies**

- Planning in the form of community level CWPPs are critical to identifying site specific treatments for fuels mitigation
- The two counties should be the lead in coordinating and moving the planning process forward.
- The Counties should adopt the community boundaries presented in this plan as an organizing unit in the CWPP process
- The two-county emergency management coordinators should review the action items of the plan to determine if any additional support will be needed for plan implementation and provide guidance and recommendations.
- A CWPP steering committee will be established to implement plan action items.
- Interagency coordination should move beyond fire response efforts and work to implement fuels reduction and vegetation modification based on community CWPP plans.

#### **Improve Community Strategies for Reducing the Impacts of Wildland-Urban Interface Fires**

- Review policies and land use regulations related to building in the interface and intermix WUIs.
- Develop treatment plans for the modification of fuels and vegetation in the interface and intermix WUIs.
- Increase defensible space in the interface and intermix WUIs.
- Continue education and outreach services for the two counties related to treatment in the WUI.
- Continue and increase communication between intra-agency fire planning and suppression activities.



## **Decreasing the Risk of Catastrophic Fires**

- Historical fire and fire regime data show that Klickitat and Skamania Counties are at high risk of catastrophic fires.
- The growing trend in development in both counties indicate that more people will build within a interface or intermix WUI.
- Communities recognized by the CWPP process are economically dependent on large landscapes susceptible to wild fire.
- Treatment of the interface and intermix WUI is important to modifying fire behavior once it reaches the WUI. However, this treatment will not decrease the probability of a catastrophic fire reaching these two WUI classes.
- Large catastrophic fires are primarily controlled by changes in the severe weather patterns causing them in the first place. The probability of positive weather changes increases with time. The more time , the slower the fire moves, between initial start and reaching the intermix and interface WUI, increases this probability.
- Patterned treatments of vegetation in the wildland WUI of the recognized communities can slow the advance of wildfire, increasing time it takes to reach the intermix and interface WUIs.

## **Goals and Action Items**

***GOAL 1: Provide Two Countywide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in both Counties by adopting plan.***

### **Objective 1.1. Establish and maintain a structure and methods for coordinating the implementation of the Klickitat and Skamania County Community Wildfire Protection Plan**

**Action 1.1.1:** Emergency management coordinators will review action items an establish needs for additional support needed to oversee CWPP Advisory Committee an to implement plan action items.

**Action 1.1.2.** Create and formalize Klickitat & Skamania County CWPP Advisory Committee to oversee implementation, identify and coordinate funding opportunities, and sustain the Klickitat & Skamania County Community Wildfire Protection Plan.

**Including:** Adopting Community Units and Boundaries and coordinating with appropriate parties to address site specific CWPP recommendations.

**Including:** Establish and support a sub-committee to address fuel reduction methods and resource management practices.

**Action 1.1.3.** Provide guidance to local communities as defined in this plan to organize and construct community wildfire protection plans of their own.

**Action 1.1.4.** The two counties should continue to refine this CWPP effort through further community group organizing. This plan should become more inclusive, involving identified groups interested in improving conditions related to wildfire potential.

**Objective 1.2. Strengthen communication and coordination among Local Districts, County, State, and Federal agencies to effectively deliver wildland-urban interface risk reduction programs and messages.**

**Action 1.2.1.** Review formal agreements with municipalities and special districts and identify outstanding issues.

**Action 1.2.2.** Review interagency coordination and establish a consistent communication strategy and coordination issues among intergovernmental partners using appropriate conduits and delivery mechanisms (Skamania and Klickitat Counties Emergency Management Coordinator, DNR, USFS, etc.)

**Action 1.2.3** Review Priority Communication Equipment Needs and Develop Funding Mechanism to Achieve; For example: one recommendation was for \$3 Million Dollar Radio Communication, this should be part of a two-county-wide review.

***GOAL 2: Improve community strategies for reducing the impacts of wildland-urban interface fires.***

**Objective 2.1. Review existing policies and regulations to reduce the impact of wildland-urban interface fires.**

**Action 2.1.1.** Review and develop recommendations to the Skamania and Klickitat County Board of Commissioners for revisions to land use regulations, such as: Implementation of fire safety standards within rural residential zoning districts; Distribution of educational materials at the outset of the building permit review process; Outreach services with neighborhood organizations and special interest groups; Development/Density Regulations for new buildings and developments that take into account fire safety management issues.

**Action 2.1.2** Review and enhance the Skamania and Klickitat building permit process within the wildland-urban interface to ensure as new development takes place additional issues and hazards are mitigated.

**Action 2.2.1** Review: Forest and vegetation policy and regulations and develop treatment plan, guided by prioritization of CWPP High-Risk areas should occur within these community boundaries that reflect local community needs.

**Objective 2.2. Increase Defensible space in the interface WUI.**

**Action 2.2.1** Implementation of fire safety communication within rural residential zoning districts; Distribution of educational materials for communities; Outreach services with neighborhood organizations and special interest groups; Incentives for fire safety hazard reduction in interface WUI as part of communication effort.

**Objective 2.3. Increase Needed Intra-agency Equipment and Necessary Intra-agency Buildings.**

**Action 2.3.1.** Develop interagency prioritized, shared equipment list (and storage/centers to house these) and funding mechanisms.

***Goal 3: Decrease Risk of Catastrophic Fire in the Wild land Urban Interface (WUI).***

**Objective 3.1. Treat Vegetation in the Wild Land WUI of CWPP Communities to Decrease Fuel Loading and Fuel Ladders.**

**Action 3.1.1** Emergency Management Shall Support Treatment of vegetation in the WUI on Public lands, National Forest Service, Washington Department of Natural Resources, and private lands to create conditions that would decrease the hazard of large wildfires.

**Action 3.1.2.** Two County Emergency Management Shall Work with U.S. Forest Service; Forest management techniques should be employed that treat stand structure to decrease fuel ladders and promote fire resistant canopy structure.

**Action 3.1.3.** Second growth forest stands should be managed early in stand development to avoid compounding structure and fuel issues as stands mature.

**Action 3.1.4.** Review road access issues in the Wild Land WUI to insure risk of fire starts from human causes is decreased.

**Action 3.1.5** Emergency Management Shall Develop a Two County Emergency Plan.

**INCLUDING** Evacuation routes, water supply access, mobilization plan and staging area. They shall share recommendations and develop outreach, communications Strategy.

## Section 6 Plan Implementation

The County Leadership will adopt and begin implementing the Wildland-urban Interface mitigation strategies.

One of the most critical components of this plan is the recognition that this large area can not be protected against catastrophic fire until both Counties begin the disciplined approach of addressing outstanding plan recommendations including: working with the US Forest Service and DNR on mitigating high risk wildland fires to the community; developing an Emergency Management/Evacuation Plan; Collaborative communications and equipment needs are funded; Ongoing Community education and collaboration to prevent ensure fire mitigation and safety.

In addition, there are multiple levels of Federal and State policies that need to be monitored and managed to ensure that this plan can be funded and effective.

Once the plan is adopted, we recommend that the two-county emergency management coordinators review the action items, to determine if any additional support will be necessary for plan implementation and provide guidance/recommendations.

Once this is determined, they will lead a CWPP steering committee, which consists of those will be communicating and implementing plan and that they determine an overall timeline and schedule.

# **Appendix**

## **Appendix A: Maps of the CWPP**

# **Appendix B: CWPP Community Characteristics**

## **Appendix C: CWPP Risk Analysis**