

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

April 26, 2006

This plan was developed by the Klickitat and  
Skamania County CWPP Steering Committee in  
Cooperation with **Bill Alexander Forestry**  
And creativeTHINK

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## Executive Summary

The Klickitat and Skamania County Community Wildfire Protection Plan (CWPP) Steering Committee convened to develop a CWPP to identify strategies, priorities, and promote fuels reduction for the protection of life, property, and the wildland-urban interface of the two-county planning area. 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 Protection Districts, and the final contents were reviewed and mutually agreed upon by all three

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

The plan goals help guide the actions 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 county-wide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in Klickitat and Skamania Counties.

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

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

Skamania Economic Development Council and Klickitat County Economic Development Department leaders convened a steering committee to oversee and guide the development of the two-county CWPP. The steering committee was 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 Counties
- Fire Protection District representatives
- Washington State University Extension
- Washington Department of Natural Resources
- 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 and Skamania County Board of Commissioners
- Skamania Fire Marshal and Klickitat Fire Protection Districts as represented by the president of the Klickitat County Interagency Fire Association
- Washington Department of Natural Resources (DNR Resource Management/Protection)

The Skamania and Klickitat County CWPP is a shared plan and was developed and implemented based upon a collaborative process. The plan was adopted by resolution by the Skamania and Klickitat County Board of Commissioners and acknowledged by the Skamania and Klickitat County Fire Protection Districts, and Washington 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 its implementation of the plan. The plan provides a framework and sustaining partnerships to support wildfire risk reduction projects.

In order to implement this plan, we have recommended that each county, its communities and fire protection districts review the action items, to determine if any additional support will be necessary for plan implementation and provide guidance and recommendations. Each county should develop a CWPP advisory committee to 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). The CWPP advisory

committee should work closely with the Columbia Gorge Wildfire Local Coordinating Group to insure funding of projects is consistent with local planning efforts.

# 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 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, in each county's All Hazard Mitigation Plan. This effort utilizes the best and most appropriate science from all partners, integrates local and regional knowledge about wildfire risks and fire behavior, and meets the needs of local citizens and the regional economy.

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

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 vulnerability 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

## ***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,

According to the State Natural Hazards Risk Assessment, Skamania and Klickitat Counties have 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 season response and emergency management efforts alone are not enough to prevent losses. Reducing a community's a shared 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.

Klickitat and Skamania Counties wanted to develop a two-county plan to define “big picture” risk and determine collaborative opportunities to reduce these risks.

One of the frustrating issues for these two counties is being unable to take all steps that would reduce risk of losses. Both counties live daily with the knowledge that not only is catastrophic fire likely to occur but in a worst case scenario, the numbers of lives at risk and the related economic losses for both counties would be devastating as well.

The CWPP steering Committee intends this document to encourage collaboration between federal, tribal, state, and local agencies to reduce wildfire risk in the planning area.

The dramatic losses during the 2002 and 2003 fire seasons increased public awareness of wildfire risk and convinced 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 respects jurisdictional boundaries, public lands, and diverse geographic regions. The CWPP 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 local, tribal, and federal and state agencies to develop a community wildfire protection plan, using local resources.

The planning process was designed to meet the funding 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 County CWPP focuses on achieving the three minimum requirements for the HFRA.

- (1) **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, 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 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 covers 3,594 square miles stretching along the north side of 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 of this size, identifying and carrying out public outreach efforts on a meaningful scale is difficult. The Klickitat and Skamania Counties CWPP addresses the issue of scale and the counties diverse geography, population, and land management authorities by dividing the counties into planning areas based on community patterns, geography, and economic influence. The plan identifies general areas 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 assessment. The CWPP does not have authority over incorporated communities within either 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***

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: Action Plan***

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

### ***Appendix A***

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

*Appendix B:* 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.

*Appendix D: CWPP Steering Committee*- Lists the members of the steering committee and provides summaries of the meetings, along with a questionnaire sent to fire protection districts and public meeting press release.

## ***Planning Process and Methods***

Bill Alexander Forestry (BAF), creativeThink 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 collaboration and 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 members throughout the community. Collaboration in the final document reflects the community's highest

priorities.

## **Steps to Developing the CWPP:**

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

The Skamania County Economic Development Council and the Klickitat County Economic Development Department 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 groups:

- Klickitat County Government
  - Economic Development
- Skamania 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 Management Coordinator—Southeast Region
- Fire Protection Districts of the Two Counties
- Engaged Individuals in Wildfire Planning

### **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 planning, protection, or mitigation, as well as recent community 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. The CWPP steering committee became the planning area stakeholders.
2. Contact was made to the primary elements of fire response, fire protection districts and county emergency management staff, to solicit concerns and issues for fire response, prevention and fuels treatment.
3. Two community public meetings were held 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 communities and adjacent land important to the CWPP. The maps identify inhabited areas containing preliminary designations of wildland-urban interface zones in Klickitat and Skamania County.

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

**Wildfire History:** Assesses the potential and frequency with which wild ignitions might occur by analyzing ignitions over the past 10 years.

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

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

**Resilience:** 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 implementation strategies in each 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 May 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 Protection Districts in each county.
3. The Washington Department of Natural Resources.

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

**Current Wildfire Protection Framework**

Several agencies share responsibility for fire protection in Klickitat and Skamania County (Table 1). 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 Department of Natural Resources has received funding through 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 message. Table 1 on the next page portrays the wildfire protection framework, including the roles and responsibilities of federal, state, and local agencies.

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




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

### **Regional Planning Efforts**

In 2003 Ole Helgerson, WSU Extension Forester, implemented a National fire Plan (NFP) grant (*Columbia Gorge Wildfire Preparedness Project*) in the four-county area of Skamania and Klickitat Counties in Washington and Wasco and Hood River Counties in Oregon. The project involved beginning the NFPA 299 survey with the goal of building a GIS base to aid wildfire planners and responders; teach FireWise Communities USA ([www.firewise.org](http://www.firewise.org)) principles to WUI dwellers and assist local fire protection districts with Title III assistance. WUI homes were surveyed in the four counties and the National Fire Plan Columbia Gorge Wildfire Local Coordinating Group (CGLCG) was formed. The CGLCG is responsible for ranking NFP grants for the planning area.

Work has progressed through to the present in developing the GIS base and has resulted in maps being provided to local fire districts in Skamania, Hood River, and Wasco Counties. Continued support through Title III funding has led to work with FVS, FFE and FLAMMAP fire simulation models.

### **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.

#### **Bingen-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 central portion of the Washington State. 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 lies 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 is the eastern lee slope of the Cascades where air masses moving over the mountains increase in temperature and dry as they descend. 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 fronts 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. Annual rainfall drops to from 40 inches to less than 10 inches annually from the west to the eastern portion of Klickitat County.

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 the greatest along the southern portions 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.

Of particular concern are regional climatic events that can occur in the summer months. These conditions can drive temperatures over 100 degrees in the planning area and create east or west winds over 40 miles per hour. This flow of warm air has a significant drying effect over the planning area.

### **Historical Fire Patterns**

Wildland 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 be incomplete.

Perhaps the fire with the largest historical influence on the planning area was the Yacolt burn of 1902. This 238,000 acre fire burned in the Southwestern portion of the planning area in Skamania County and did most of its damage in a 38 hour period. The fires speed and intensity was directly related to strong east winds typical of this area. 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 have 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 effect fire would have on a landscape in a natural (absence of human influence) condition. Fire regime defines fire frequency and intensity across 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, and
- 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 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 a primary data source from the Washington Department of Natural Resources. This consisted of data for public lands and a data set for private lands in 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 ortho-rectified 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 Skamania County can lead to catastrophic fires with high spread rates. These are different fires than the “flashy” fuel fires of east Klickitat 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 characterizes the landscape’s 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 planning 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 complex of wildland 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 wildland were seen, these areas were given a 3 for condition class.

This data should be considered large scale level data, intended to be applied to larger geographical areas. 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 1,686 square miles in the Cascade Mountains and includes much of the Gifford Pinchot National Forest, Mt. St. Helens National Volcanic Monument, Trapper Creek Wilderness, Indian Heaven Wilderness, portions of the Mt. Adams Wilderness, and large expanses of Washington DNR lands. Skamania County's southern border is defined by the Columbia River, and the Columbia River Gorge National Scenic Area. There are an estimated 10,459 residents, the majority of whom live in the southern portions of the county. 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' extinct volcano core, 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 19,855 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, mountain climbing, 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 Tribes 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.

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 economic roots related to timber harvest. 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 salvageable timber that attracted mills and resulted in a local infrastructure for the timber industry.

There was a need for seedlings to reforest the large area that was burned. The Wind River Nursery was established by Forest Service Chief, Gifford Pinchot, in 1909. 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 endeavors to attract new businesses 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 culturally significant areas including Mt. St. Helens, Mt. Adams and very important native American sites, as well as American history, including important Lewis and Clark sites.

### **Culturally Significant Components**

Beacon Rock State Park  
Cascade Mountain Range  
Columbia Hills State Park (formally Horsetheif Lake State Park),  
Mt. St. Helens  
Mt. Adams  
Gifford Pinchot National Forest  
Pacific Crest Trail  
Columbia River Gorge National 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  
Yakama Indian Nation  
Dams: The Bonneville Dam, the Dalles Dam, the John Day Dam, the Condit Dam and Northwestern Lake.

Wild Species: The area is home to several threatened and endangered species including: bald eagle, bull trout, Chinook salmon, coho salmon, steelhead, northern spotted owl, Peregrine Falcon, Larch Mnt. Salamander, and Howell's fleabane (*Erigeron howellii*). Any treatments related to fuel reduction 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 Counties 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 wood manufacturing has been.

In 2005, close to 1.3 million people visited the Gifford Pinchot National Forest in Skamania County and the broad array of attraction have helped make this area 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, (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 was approximated at \$50.5 million, with a total direct impact of 870 jobs county-wide.

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 Yakama 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, Yakama Indian Nation resources, and local Fire Protection Districts 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 Randle, WA 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, WA 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, OR and one in Cascade Locks, OR.

#### **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 seven 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 Rains.

#### **Yakama Indian Nation**

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

#### **Fire Protection Districts**

Map 8, Fire Protection Districts, shows the geographical extent of the fire protection 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 mitigate fire issues. Subdivision 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 established identity. Some were directly related to incorporated cities and towns, while others were simply communities where people were already organized on a community level.

The extent of the community boundaries were drawn around those area upon which they exert a direct economic influence on the nucleus community. In many cases this involved economic benefit drawn from recreation destinations some distance from the 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. Fire effects do not 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 protection 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 was developed titled *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment*. Goal four of this plan is to promote community assistance. An 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.

Bickelton, Klickitat County  
 Bingen, Klickitat County  
 Carson, Skamania County  
 Stevenson, Skamania County  
 Underwood, Skamania County

### **Fire Protection Districts and Municipal Fire Departments in the CWPP Communities**

Fire protection districts and municipal fire departments can and should play an important role in implementing fuels reduction projects within the communities delineated in the CWPP. Community level CWPPs will likely have fire protection districts at their core of development. Table 2 shows the correlation between fire protection districts and municipal fire departments and the CWPP communities. Fire protection districts are listed in alphabetical order as to their occurrence within each of the communities. Several communities are covered by more than one fire protection district. In these communities it is likely that fire protection districts will combine resources in building community level CWPPs

Table 2: Correlation between CWPP Communities, fire protection districts and municipal fire departments.

<b>CWPP Community</b>	<b>Fire Protection District</b>	<b>Municipal Fire Departments</b>
Alder Ridge	Alderdale, Bickleton, Roosevelt, Goldendale	
BZ Corner	Husum/Cherry Lane	
Glenwood	Glenwood	
High Prairie	Centerville, Dallesport, High Prairie, Klickitat, Lyle, Wishram	
Klickitat East	Bickleton, Goldendale, Roosevelt	
Klickitat Heights	Appleton, Klickitat	
Klickitat Valley	Centerville, Goldendale, High Prairie, Wishram	Goldendale
Little White Salmon	Underwood, Mill A	
McCoy Flats	Appleton, Husum/Cherry Lane	
NW Goldendale	Goldendale, Klickitat	Goldendale
Skamania	Skamania, Washougal	North Bonneville
Stevenson	Carson/Home Valley/Stabler/Cook, Skamania, Stevenson	Stevenson
Swift Reservoir	Cougar	
Trout Lake	Trout Lake	

Table 2: Continued

CWPP Community	Fire Protection District	Municipal Fire Departments
Washougal	Skamania, Washougal	
White Salmon	Husum/Cherry Lane, Lyle, White Salmon	Bingen, White Salmon
White Salmon East	Appleton, Klickitat, Lyle	
Wind River	Carson/Home Valley/Stabler/Cook	

**Wildland Urban Interface**

Within each of the community boundaries, the wildland urban interface (WUI) was delineated. The WUI represents those areas within a community where fire is regarded by the community as having a negative affect on community components. 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 include potential 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 with 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, usually 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 the Interface WUIs. Intermix WUIs can also 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, very few, if any, buildings are present. This includes area with high recreation or 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 the 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 moderate catastrophic fire advance. Catastrophic fires are stopped or slowed by changes in weather patterns and modification of the fuels related to the fire. 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***

Within the delineated community boundaries safety routes can be identified for the evacuation of people in the event of wildland fire. Map 12, Designated Escape Routes, identifies roads and arterials critical to the movement of evacuees in the event of an emergency. These escape routes need evaluation for 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 DNR periodically assesses regions of Washington State for wildfire risk and hazard. 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 identifies high risk areas to aid users in planning prevention and fuels treatment activities

The RAMS analysis shows that Klickitat and Skamania Counties are both rated as high risk counties. Within the larger context of state-wide regions, both counties rate a higher priority for wildland 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 politically, but on a landscape level as well. Fire regimes and related ecological units differ for each of these counties. For this reason, risk assessments were run for each county.

The RAMS computer model allows the user to assess components of the larger planning area. Planning areas are the largest geographical extent for a specific model run. A fire management zone (FMZ) divides the planning area into meaningful units, often related to fire regimes for the planning area. The FMZs are then divided into compartments, usually reflecting a meaningful political boundary. Compartments are further divided into communities, the smallest unit of the computer run. 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. The compartments were not divided any finer for this project.

Inputs to the RAMS computer model allow the user to describe the fire components of each of the communities using the data on hand. Several of the inputs were derived from a GIS analysis of 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
Washougal	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 within compartments, (here CWPP Communities) being compared to one another in developing this ranking. This results in some communities ranked lower than others even when initial state-wide analysis ranks the entire county as high in risk. Note that all communities rank high to extreme and “high” ranking communities in this analysis have many critical risk factors that need mitigation.

## **Limitations of Assessment**

The RAMS assessment, applied to this CWPP, is an initial coarse-scale assessment. Inputs into the model were from public sources and limited to available information. 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 vegetation structure information is used.

The RAMS assessment is best applied to large landscape level analysis, and was the best tool available for this project.

## **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 Forest Vegetation Simulator (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.

## **Wildland 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. When this

set of dangerous weather conditions and fuel loading coincide with the inability to respond to an overwhelming number of fire starts, catastrophic fire events will occur.

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 created continuous flashy fuels over broad landscapes.

Washington DNR 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 wildland WUI in affective patterning in order to decrease the danger from this trend towards larger and more catastrophic fires. Current modeling programs can optimally locate areas of fire break treatment.

## 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 the progression of logic behind the recommendation. 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 is 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 two counties should adopt the community boundaries presented in this plan as an organizing unit in the CWPP process

The two county governments 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 advisory committee should be established to implement plan action items in each of the two counties.

The CWPP advisory committee should aid and advise local level efforts to develop community CWPPs in coordination with local fire protection districts. The CWPP steering committee should work together with the Columbia Gorge Wildfire Local Coordinating Group to insure mitigation projects reflect the community process.

Interagency coordination should move beyond fire response efforts and work to implement fuels reduction and vegetation modification based on community CWPP plans and county-wide fire prevention planning.

#### **Reducing the Impacts of Wildland-Urban Interface Fires**

Each of the counties should adopt policies and land use regulations related to safely building in the interface and intermix WUIs.

Each of the counties should review and adopt building codes for new structures in the interface WUI that reflect safe building principles.

Each community identified in this plan should develop treatment plans for the modification of fuels and vegetation in the interface and intermix WUIs.

The two counties should address structural ignitability through the adoption of an aggressive marketing campaign directed at improving defensible space around structures.

The two counties should target homeowners directly in promoting responsibility for treatment of fuels around structures.

Each of the two counties should promote existing wildfire outreach campaigns and initiatives, such as Wildfire Awareness Week, FireWise Communities USA ([www.firewise.org](http://www.firewise.org)), and fund county-wide cleanup efforts including defensible space clearing.

Each of the counties should continue and increase communication between intra-agency fire planning and suppression activities.

Each of the community level CWPP projects need to reflect involvement in current federal and state fuel mitigation projects. Coordination with the Columbia Gorge Wildfire Local Coordinating Group is important in prioritizing site-specific projects.

### **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 wildfire.

Treatment of the interface and intermix WUI is important in modifying fire behavior when it reaches the WUI, but, 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.

Each of the counties should work with federal and state land managers in designing and implementing patterned fuels mitigation treatments that result in changing the fuel loading within the wildland WUI.

## **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. The two counties should 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:** Each of the two counties will review action items and establish needs for additional support needed to oversee a CWPP Advisory Committee and to implement plan action items.

**Action 1.1.2.** Each of the two counties should create and formalize Klickitat County and Skamania County CWPP Advisory Committees to oversee implementation of this plan, identify and coordinate funding opportunities, and sustain the Klickitat and Skamania County CWPP.

**Including:** The adoption of community units and boundaries and coordinating with appropriate parties to address site-specific CWPP recommendations.

**Including:** Working closely with the Columbia Gorge Wildfire Local Coordinating Group in insuring that fuel reduction methods reflect appropriate resource management principals.

**Action 1.1.3.** The two counties should 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. The two counties should strengthen communication and coordination among local fire protection districts, county, state, and federal agencies to effectively deliver wildland-urban interface risk reduction programs and messages to the public.**

**Action 1.2.1.** Each of the two counties should review formal agreements with municipalities and special districts and identify outstanding issues.

**Including:** Identifying those service areas where response is slowed due to difficult access.

**Including:** Review and identify problems related to communication issues between fire districts and cooperating agencies.

**Including:** Prioritizing problem areas that need fuels treatment through development of local community level CWPPs.

**Action 1.2.2.** Appropriate agencies within the two county governments should review interagency coordination and establish a consistent communication strategy and coordination issues among intergovernmental partners using appropriate conduits and delivery mechanisms.

**Including:** Working directly with the Columbia Gorge Wildfire Local Coordinating Group to coordinate efforts of fire education, response, and prevention activities.

**Action 1.2.3** Appropriate agencies within the two county governments should review priority communication equipment needs and develop funding mechanism to achieve; for example: one recommendation was for \$3 million 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. The two counties should review existing policies and regulations to reduce the impact of wildland-urban interface fires.**

**Action 2.1.1.** A CWPP advisory committee should review and develop recommendations to the Skamania and Klickitat County Board of Commissioners for revisions to land use regulations.

**Including:** Implementation of fire safety standards within rural residential zoning districts

**Including:** Developing a strategy for the distribution of educational materials at the outset of the building permit review process including the brochure “living with Fire” and video “Preventing Home Ignitions”

**Including:** Addressing structural ignitability through the adoption of an aggressive marketing campaign directed at improving defensible space around structures.

**Including:** The development of density regulations for new buildings and developments that take into account fire safety management issues.

**Action 2.1.2** The CWPP advisory committee should review and enhance the Skamania and Klickitat Counties’ building permit process within the wildland-urban interface to ensure, as new development takes place, additional issues of wildfire hazard are

mitigated.

**Action 2.2.1** The CWPP advisory committee should review forest and vegetation policy and regulations and develop a treatment plan, guided by prioritization of CWPP high-risk areas that occur within these community boundaries reflecting local community CWPP development.

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

**Action 2.2.1** The two counties should promote existing wildfire outreach campaigns and initiatives, such as Wildfire Awareness Week, FireWise Communities USA ([www.firewise.org](http://www.firewise.org)), and fund county-wide cleanup efforts including defensible space clearing.

**Including:** The distribution of marketing materials for communities.

**Including:** The development of outreach services with neighborhood organizations and special interest groups.

**Including:** The development of incentives for fire safety hazard reduction in interface WUI as part of marketing effort.

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

**Action 2.3.1.** The two counties should develop an interagency prioritized, shared equipment list (and storage/centers to house these) and funding mechanisms for equipment acquisition.

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

**Objective 3.1. Treat vegetation in the wildland WUI of CWPP communities to decrease fuel loading and fuel ladders.**

**Action 3.1.1** The two county governments shall support treatment of vegetation in the WUI on public lands, National Forest Service, Washington DNR lands, and private lands to create conditions that would decrease the hazard of large wildfires.

**Action 3.1.2.** Each of the counties shall work with U.S. Forest Service in supporting the use of proper forest management techniques that treat stand structure to decrease fuel ladders and promote fire resistant canopy structure.

**Action 3.1.3.** Each of the counties should support the management of second growth forest stands early in stand development to reduce wildfire risk as stands mature.

**Action 3.1.4.** Appropriate county government agencies should review road access issues in the Wildland WUI to insure risk of fire starts from human causes is decreased.

**Action 3.1.5** Planning from this and future CWPPs should be included in the Comprehensive Emergency Management Plan (CEMP) developed for each of the counties.

**Including:** Reviewing evacuation routes, water supply access, mobilization plans and emergency staging area development. They shall share recommendations and develop an outreach and communication 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 implementing 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.

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 the review has been completed a CWPP advisory committee will be organized and begin the review of current and planned activities for fuel treatments and how these projects fit into the prioritization of communities in this plan.

Future activities that the committee needs to address include:

1. Helping communities as defined in this plan to develop community level CWPPs.
2. Target specific areas in each of the two counties for fuels treatment in direct consultation with the managers of these areas.
3. Review current building codes and land use plans to evaluate their appropriateness to wildfire mitigation efforts.
4. Work with the Columbia Gorge Wildfire Local Coordinating Group to insure that these priority areas can receive the funding needed for fuels treatment work.
5. Begin the orderly collection of data on past, present, and future fuels mitigation projects to document and review progress in fuels reduction in each of the counties. A GIS data collection should facilitate this process.

# Appendices

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

*Appendix B:* 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.

*Appendix D: CWPP Steering Committee*- Lists the members of the steering committee and provides minutes of the meetings.