### Chelan County, Washington Community Fire Plan

November 2008

Prepared by Cascadia Conservation District in cooperation with concerned citizens of Chelan County, Chelan County Fire Districts, Washington Department of Natural Resources and United States Forest Service, Washington State Parks, Bureau of Land Management, National Park Service

Vicki Christiansen Executive Director of Regulatory Programs Washington State Forester

Ron Walter, Chelan County Commissioner

TOEkner

Keith Goehner, Chelan County Commissioner

Buell Hawkins, Chelan County Commissioner

#### Acknowledgements

This Community Fire Plan represents the efforts and cooperation of a number of organizations, private citizens and agencies working together to improve the preparedness for hazard from wildfire while reducing factors of risk.

This report was produced in cooperation with the USDA Forest Service, Washington State Department of Natural Resources, Bureau of Land Management, and Washington State Parks and North Cascades National Park. Chelan County Fire District Chiefs, County Commissioners all provided valuable support and information. Members of the various landowner steering committees also provided valuable time and effort in support of the planning efforts during the development of the CWPPs.

To obtain copies of this plan contact: Cascadia Conservation District 301 Yakima Street, Room 307 Wenatchee, WA 98801

Phone: 509.664.0275 Fax: 509.664.0255 Website: <u>www.cascadiacd.org</u>

### **Table of Contents**

1. PLAN OVERVIEW	1
Introduction	1
Plan Purpose and Goals	1
2. PLANNING PROCESS	2
Initiation	2
Description	2
Public Involvement	
Public Meetings	
Steering Committee Meetings	
Direct Mailings, News Releases, and Radio Spots	4
3. PLAN DEVELOPMENT	4
Plan Origin	4
Federal and State Government Guidelines	5
National Fire Plan	5
Health Forest Restoration Act	5
Washington Statewide Implementation Strategy	6
Integrating the Plan with Local Guidelines and Plans	7
Chelan County Multi-Jurisdictional Natural Hazard Mitigation Plan	7
Chelan County Comprehensive Plan	7
4. PLANNING AREA DESCRIPTION	8
Chelan County	8
Incorporated Cities in Chelan County	9
5. ASSESSMENT OF EXISTING WILDFIRE INFORMATION	
Vegetation	
Fire Ecology	
General Fire Behavior	
Fire History	
Wildfire Fuels and Hazards	
Protection Capabilities	
6. WILDFIRE RISK EVALUATION	
Structural Vulnerability	
Access	
Evacuation	
Tactical Resource Staging Areas	
Command Post Locations	
Water Supplies	
Livestock and Pets	14
7. RECENT, CURRENT, AND FUTURE WILDFIRE MITIGATION PROJE	<b>CTS</b> 15
Past Projects and Public Education	
Current and Future Mitigation Project Proposals	16

Coordination of Private Lands Mitigation Projects with USFS Activities	
Prioritization of Mitigation Projects for Funding Purposes	17
8. POSSIBLE MITIGATION PROJECT ACTIONS	
Wildfire Mitigation Projects	
Fuels Reduction	
Public Education and Outreach	
Improving Protection Capabilities/Human Safety in the WUI area	
9. PLAN ADMINSTATION AND IMPLEMENTATION	
Administration	
Implementation	
10. REFERENCES	

#### Maps

Overview of Chelan County CWPP Areas	24
Simulated Historical Fire Regime Groups	25
Fuel Models	26
2005-2007 Insect and Disease Assessment	27
Reported Fire Starts and Causes 1970-2007	28
	29
Major Fires 1980 – 1989	30
Major Fires 1990 – 1999	31
Major Fires 2000 – 2007	32

#### Appendices

- A. Union Valley Community Wildfire Protection Plan
- B. Squilchuck Valley Community Wildfire Protection Plan
- C. Peshastin Creek Drainage Community Wildfire Protection Plan
- D. Manson Community Wildfire Protection Plan
- E. Leavenworth Area Community Wildfire Protection Plan
- F. South Shore Lake Chelan Community Wildfire Protection Plan
- G. Lake Wenatchee/Plain Area Community Wildfire Protection Plan
- H. Monitor, Cashmere, Dryden and Peshastin Area Community Wildfire Protection Plan
- I. Ponderosa Area Community Wildfire Protection Plan (Draft)
- J. Stehekin Valley Community Wildfire Protection Plan
- K. Entiat Valley Community Wildfire Protection Plan
- L. Key Contacts
- M. Pre-designated Resource Staging Areas
- N. Potential Command Post Locations
- O. Fire Mitigation Project Prioritization Framework

Note: The Wenatchee Area Community Wildfire Protection Plan is anticipated to be completed in 2009. The completed plan will be incorporated into the Chelan County Community Fire Plan at that time.

#### **1. PLAN OVERVIEW**

#### Introduction

Wildland fires have burned an average of more than 850 homes each year in the United States since 1984. The number of homes burned each year continues to grow because more people are moving into fire-prone areas bordering wildlands (National Interagency Fire Center, 2003). The primary responsibility for ensuring preventive steps are taken to protect homes against wildfires lies with homeowners and state and local governments, not the federal government. Wildfires can result in billions of dollars in damages although fire damage made up only 2 percent of all insured catastrophic losses from 1983 to 2002.

Chelan County businesses and community members have been dramatically impacted by largescale wildland fires over the last twenty years. And the frequency of fires occurring near Chelan County communities has increased in the last 20 years. Nearly every year fires of some scale impacts Chelan County communities. The towns of Leavenworth, Cashmere, Peshastin, Dryden, Entiat, Chelan, Manson, Stehekin and Wenatchee have especially been impacted.

Recent large wildfires impacting Chelan County communities include the "Chelan County" fires (Rat, Hatchery, Tyee, and Round Mountain) of 1994 burned 200,000+ acres. These and other recent wildfires sometimes require the evacuation of citizens from their homes. The citizens of Chelan County value their homes, the environment, business from tourism, and want to improve the safety of their community. Consequently, The Chelan County Commissioners obtained funds in 2004 to help local landowners and government representatives proactively plan and implement actions to protect lives, the community and reduce the risk of future wildfire related disasters. These plans are known as Community Wildfire Protection Plans (CWPP). To date, many local citizens have implemented wildfire fuel reduction projects around their homes and have participated in efforts to develop local CWPP.

The Chelan County Community Fire Plan (hereafter identified as the "Plan") is a comprehensive wildfire mitigation plan that incorporates Chelan County area-specific CWPPs under one document The Plan was created based on interactions with the State of Washington and serves as guidance for projects that reduce wildfire risk and increase public safety during a wildfire. The Plan and related CWPPs were developed concurrently. The Plan provides resources to landowners to implement projects that reduce the risk of wildfire on their property, to enhance related public safety, and also provides input on land management decisions for Federal and State lands.

#### Plan Purpose and Goals

The purpose of the Plan is to protect life and property of Chelan County, its members, and essential infrastructure from fire through outreach, strategic planning, and wildfire mitigation projects. The primary Plan goal is to identify and implement projects that protect people in the CWPP areas and firefighters and emergency personnel from injury or loss of life during a wildfire. A secondary goal of this Plan is to minimize or eliminate damage or loss of property and essential infrastructure due to wildfire.

The CWPP are foundational documents to the Plan. Eleven CWPPs have been completed to date while a twelfth CWPP is underway and anticipated to be completed in 2009. These CWPPs include:

- Entiat Valley
- Lake Wenatchee and Plan Area
- Leavenworth Area
- Manson
- Monitor, Cashmere, Dryden, and Peshastin Area
- Peshastin Creek Drainage
- Ponderosa Area
- South Shore Lake Chelan
- Squilchuck Valley
- Stehekin Valley
- Union Valley
- Wenatchee Area (anticipated to be completed in 2009)

CWPPs are attached as Appendices A to K in this report. The boundaries of each CWPP are identified in Overview of Chelan County CWPP Areas Map on page 24. Each CWPP can be accessed on our website (<u>http://www.cascadiacd.org/</u>) under the 'Programs' and then 'Wildfire Preparedness' tabs.

#### 2. PLANNING PROCESS

#### Initiation

The Plan and related CWPP's were developed through a collaborative process involving representatives from the United States Forest Service (USFS), the Bureau of Land Management (BLM), the National Park Service (NPS), the United States Fish and Wildlife Service (USFWS), Washington State Department of Natural Resources (DNR), Washington State Parks (WSP), Chelan County Commissioners, Chelan County Fire Districts, and citizens of Chelan County. The planning process began in 2004 with the development of individual CWPP for Chelan County areas serviced by Fire Districts. These areas included Fire District protection areas and surrounding areas that are subject to wildfires.

#### Description

The CWPP process included the following phases:

- 1. Collection of Data about the extent and periodicity of wildfires in Chelan County.
- 2. Field Observations and ratings about risks, access, and potential mitigation projects.
- 3. Mapping of data relevant to wildfire mitigation control and mitigation projects.
- 4. Facilitation of public involvement from the formation of steering committees to news releases, direct mailings, public review of draft documents, and acknowledgments of the final plan.

5. Drafting of a final report to integrate the results of the planning process, provide review and integration of committee and public input, and signature of the final document by Steering Committee members and the Chelan County Commissioner(s) representing the specific CWPP areas.

These planning phases were sometimes implemented in sequential order and in other cases were implemented in an intermixed order. The Plan also provides a means to prioritize projects proposed or identified in the CWPP's. Funding of fire mitigation related projects is very competitive and in order to position projects from Chelan County to be as viable as possible a ranking criteria was developed to ensure that projects submitted for funding address the highest priority for the county. Plan objectives and recommended mitigation projects were developed by and remain specific to each Chelan County community (see Mitigation Action Plans section in each individual CWPP).

#### Public Involvement

The Cascadia Conservation District (CCD) sought and facilitated public involvement in the Plan through several pathways. Public involvement was a priority during the development of each CWPPs. In some cases CCD public involvement resulted in citizens providing information and seeking an active role in protecting their own homes and businesses from wildfire. In other cases CCD public involvement made the public more aware of the planning process without becoming directly involved in the planning efforts.

#### Public Meetings

Public meetings were held in a number of communities in Chelan County during the development of individual CWPP. Public meetings shared information on the planning process, provided details of existing wildfire information, and discussed potential wildfire mitigation projects. Public meetings were advertised through direct and bulk mailings to landowners within and adjacent to the specific Fire District boundaries and/or planning area boundaries (See Map on page 24). These meetings also served as an opportunity for the public to learn more about making homes FireWise and how to get involved in local wildfire planning effort.

A total of eleven public meetings that were broadly advertised through radio, newspaper, and direct mailings were held in CWPP planning areas. Public meetings were held at Chelan, Manson, Leavenworth, Valley Hi, and Squilchuck Valley (Beehive Grange). The CCD used public meetings as the official "kick-off" of the CWPP process. Public meetings were often followed up with FireWise workshops. Numerous FireWise workshops were held as separate public meetings. FireWise workshops occurred between 2004 and 2008. Lastly, steering committees were created from interested persons that attended public meetings to help develop individual CWPPs.

#### Steering Committee Meetings

Multiple steering committees were established during the development of CWPPs to provide plan feedback. Steering committee members were most often community leaders. Each steering committee helped develop CWPPs specific to their local community. Steering committee members were interested and knowledgeable about wildfire and local conditions. Some steering committee groups included people involved with past local area fuel reduction and fire education efforts. Steering committee members provided the bulk of landowner feedback obtained during CWPP development. Steering committees also helped create the initial list of wildfire mitigation project actions. Fourteen total steering committee meetings took place during CWPP development efforts.

Steering committee members decided that the focus of the CWPPs and the Plan was to help ensure human safety and protect structures on private land. Committee members subsequently decided to have CWPP Mitigation Action Plan (MAP) projects (identified as wildfire mitigation projects or mitigation projects in the Plan) concentrate on following safety issues:

- Education and Outreach
- Fuels Reduction
- Evacuation
- Improved Protection Capabilities

#### Direct Mailings, News Releases, and Radio Spots

The CCD used direct mailings, news releases and radio spots as other means of informing the public regarding the development of CWPPs. Direct mailings invited landowners in each of the CWPP areas to review the draft plan at the CCD website. News releases and articles in local papers (Leavenworth Echo, Chelan Mirror, and Wenatchee World) and radio spots (on KOHO, KPQ, KOZI) informed the public regarding about CWPP development efforts and encouraged citizens to participate.

#### 3. PLAN DEVELOPMENT

#### Plan Origin

Chelan County obtained funds in 2004 to develop CWPPs based on local landowner and government representative interest in protecting lives and communities and also for reducing the risk of future wildfire related disasters. Chelan County used these funds to contract with the CCD beginning in 2004 to create area specific CWPP throughout the county. The State of Washington's interest in creating one comprehensive Chelan County wildfire plan from multiple individual CWPP is the origin of this Plan. The state's interest in developing one "plan" resulted in a 2007 contract with the CCD that incorporated all Chelan County CWWPs into one plan (the Plan). The completed CWPPs correspond to Chelan County Fire District boundaries. In some cases, multiple CWPP were completed within a fire district. Chelan County has nine Fire Districts. All of the completed CWPP are located in Appendix A - K.

The Plan is the result of analyses, professional cooperation and collaboration, assessments of wildfire risks, and other factors considered with the intent to reduce wildfire potential that threatens people, structures, infrastructure, and unique ecosystems. Based maps developed in support of the Plan are located on pages 24 - 32) The CCD involved public citizens and private landowners in the development of the Plan Agencies and organizations involved in the planning process and Plan development included:

• Chelan County Fire Districts

- DNR
- USFS
- BLM
- Washington State Parks
- National Park Service
- USFWS

#### Federal and State Government Guidelines

The Plan is intended to adhere to the guidelines proposed in the National Fire Plan, the Healthy Forests Restoration Act (2003), Department of Homeland Security requirements, and the Washington Statewide Implementation Plan.

#### National Fire Plan

The National Fire Plan: A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan ([NFP] May 2002) identifies a three-tiered organization structure for addressing wildfires including 1) the local level, 2) state/regional and tribal level, and 3) the national level.

The NFP adheres to collaboration and outcomes consistent with a local level wildfire plan. Local level collaboration involves participants with direct responsibility for management decisions affecting public and/or private land and resources. Participants in the NFP planning process include local representatives from Federal and State agencies, local governments, landowners and other stakeholders, and community-based groups with a demonstrated commitment to achieving the strategy's four goals: 1) Improve Fire Prevention, 2) Reduce Hazardous Fuels, 3) Restore Fire-Adapted Ecosystems, and 4) Promote Community Assistance. Existing resource advisory committees, watershed councils, or other collaborative entities may lead these efforts. Broad-based local involvement is a primary source of planning, project prioritization, and resource allocation and coordination at the local level. The role of the private citizen is not to be under-estimated, as their input and contribution to all phases of risk assessments, mitigation activities, and project implementation is greatly facilitated by their involvement.

#### Healthy Forest Restoration Act

The enactment of the Healthy Forest Restoration Act (HFRA) in 2003 created opportunities for Counties to participate in community-based forest planning and vegetation treatment project prioritization. This landmark legislation includes the first meaningful statutory incentives for the USFS and the BLM to give consideration to the priorities of local communities when they develop and implement forest management and fuels reduction projects.

The HFRA builds on existing efforts to restore healthy forest conditions near communities and essential community infrastructure by authorizing expedited environmental reviews, administrative appeals, and legal review for hazardous fuels projects on federal land. The HFRA emphasizes the need for federal agencies to work collaboratively with communities in developing risk of wildfire and public safety projects and it places priority on mitigation projects identified by local communities in CWPPs.

The HFRA provides communities with a tremendous opportunity to influence where and how federal agencies implement projects that reduce wildfire risk and promote public safety on federal lands and how additional federal funds may be distributed for projects on nonfederal lands. A CWPP must first be prepared by groups of local, state, federal representatives and private landowners in order for local communities to take full advantage of the HFRA. The CWPP and the Plan is meant to conform to the HFRA and be consistent for Chelan County plans and guidelines that address the risk of catastrophic wildfire.

The language of the HFRA provides maximum flexibility for a community to determine the substance and detail of CWPPs and also the procedures used to develop them. The process of developing a CWPP is intended to help communities clarify and refine priorities for the protection of life, property, and critical infrastructure in the wildland-urban interface (WUI). The WUI is commonly considered the zone where structures and other human development meet and intermingle with undeveloped wildlands or vegetative fuels. The WUI zone poses tremendous risk to firefighters, life, property, and infrastructure in associated communities during a wildfire. The NFP places a priority on working collaboratively within communities in the WUI to reduce risk from large-scale wildfire.

When communities have not completed a CWPP, the HFRA limits the WUI to within one-half mile of a community's boundary or within 1½ miles where mitigating circumstances exist, such as steep slopes or the presence of a critical evacuation route. At least 50 percent of all funds appropriated for HFRA projects must be used within the WUI as defined by either a CWPP or by the limited definition provided in the HFRA where no CWPP exists.

The HFRA requires that three entities must mutually agree to the final contents of a CWPP:

- The applicable local government (County or Cities)
- The local fire departments; and
- The state entity responsible for forest management (DNR)

Additionally, these entities are directed to consult with and involve local representatives of the USFS, USFWS, Washington State Parks, NPS and BLM and other interested parties or persons during CWPP development.

#### Washington Statewide Implementation Strategy

The Washington Statewide Implementation Strategy (WSIS) provides a framework for an organized and coordinated approach to the implementation of the National Fire Plan.

WSIS emphasis is on a collaborative approach at the following levels:

- County
- State

Within the State of Washington, counties, with the assistance of State and Federal agencies and local expert advice, may develop assessments and plans to identify local vulnerabilities to wildland fire. A Statewide group will provide oversight and project proposal prioritization as needed on a statewide scale.

The WSIS is not intended to circumvent any work done to date and individual counties should not delay implementation of any NFP projects while developing county plans (the Plan). Rather, counties are encouraged to identify priority mitigation projects to address wildfire risk quickly and implement projects that reduce wildfire vulnerabilities. Thus, the DNR recognizes that CWPP implementation activities (like fuel reduction, equipment purchase, training, homeowner education, community wildland fire mitigation planning, and prevention) will be implemented concurrently with the development of this Plan.

#### Integrating the Plan with Local Government Guidelines and Plans

It is the intent of the Plan to integrate the NFP, the HFRA, and the WSIS requirements with local government emergency management efforts and plans.

#### Chelan County Multi-Jurisdictional Natural Hazard Mitigation Plan

The Chelan County Multi-Jurisdictional Natural Hazard Mitigation Plan was developed to meet the requirements of the federal Disaster Mitigation Act of 2000 (DMA). The DMA requires local governments to develop and submit mitigation plans as a condition of receiving future Hazard Mitigation Grant Program and Pre-Disaster Mitigation Program Funds. Multi-Jurisdictional Natural Hazard Mitigation Plan mitigation planning is a dynamic process that can be adjusted to account for community changes and to further refine the information, judgments, and proposals documented in local mitigation plans. The Chelan County Multi-Jurisdictional Natural Hazard Mitigation Plan included comprehensive, detailed evaluations of community vulnerabilities to all types of future incidents involving natural hazards like wildfires. These evaluations help Chelan County identify ways to make communities in the planning area more resistant to natural hazard impacts. The Plan will serve as the wildfire chapter of the Chelan County Multi-Jurisdictional Natural Hazard Mitigation Plan.

#### Chelan County Comprehensive Plan

The Chelan County Comprehensive Plan (CCCP) directs county development and public investments over the next 20 years. The CCCP analyzes land use, natural resources, public facilities, local services, population, economics, and housing to identify local issues and devise appropriate policies consistent with this vision. The CCCP provides the long-range focus to help decision-makers set priorities and evaluate whether development proposals are consistent with this vision. The CCCP is a tool to coordinate with other government agencies and to communicate to citizens and developers the vision of the community. The CCCP provides the framework for regulatory updates, land-use decisions, and the public investments and will be an invaluable resource for the County. The CCCP is a dynamic document that represents a continuous process of setting goals and establishing priorities on actions to achieve those goals. The CCCP provides for periodic updates and review. These updates will allow the Chelan County to reflect on changing conditions and take advantage of new opportunities like those discussed in this Plan.

#### 4. PLANNING AREA DESCRIPTION

The Plan covers areas found in incorporated and unincorporated areas of Chelan County as identified in specific CWPPs.

#### Chelan County

Chelan County is located in the north-central part of Washington State (see map on page 24), between the crest of the Cascade Mountains to the west and the Columbia River to the east. Chelan County is the third largest county in Washington at about 2,996 square miles (1,917,440 acres). The county is drained by three primary watersheds (Chelan, Entiat and Wenatchee) and several small drainages that flow directly into the Columbia River. Several unincorporated communities are located in the county usually along streams and lake areas. Unincorporated Chelan County communities include including Dryden, Peshastin, Monitor, Malaga and Chelan Falls. About 71,034 people lived in incorporated and unincorporated areas of Chelan County (US Census Bureau 2006).

A mixture of overhead and underground power service exists throughout the county. Main power line corridors that carry power from local hydroelectric projects on the Columbia River to the western Washington traverse the county. State and County highways provide access into and through out the county. The Burlington Northern-Santa Fe Railroad crosses Chelan County. This railroad follows the Wenatchee River westward from Wenatchee, then turns northward up Chumstick Creek, and then again westward along Nason Creek where the railroad crosses the western county border.

Chelan County topography, climate, and hydrology are varied. Elevations range from 653 feet MSL near Wenatchee to 9,511 feet MSL at Bonaza Peak in the Lake Chelan watershed. Chelan County experiences all four seasons, with summer temperatures reaching maximums of over 100°F and winter temperatures falling below 15°F for short periods of time. The higher elevations of the Cascade Mountains located in the western part of the county receive over 160 inches of precipitation annually while the eastern part of the county at the Columbia River (600 feet elevation) is semi-arid receiving about 10 inches of precipitation annually. Much of this precipitation falls as snow between the months of November and March. The snowfall creates a snowpack that generates peak stream flows between April and June with subsequent low flow conditions.

Vegetation also varies greatly throughout the county. The high western portion of the county abounds in dense pine, fir, and cedar forests and sometimes larch, whereas the arid eastern portion is covered primarily by sagebrush and native grasses. Areas located in between western and eastern portions of the county are comprised of varying amounts coniferous forests, sagebrush, and native grasses. Deciduous tree species such as cottonwood, willow, red osier dogwood, and aspen are mostly concentrated in stream valleys or along lakes. Additionally, fruit tree orchards are located on irrigable lands along the rivers and stream valley bottoms.

The large majority of Chelan County is comprised of federal lands with a lesser amount of state owned lands, private industrial timber lands, and privately owned lands. New residential

development on private lands within the county is predominately rural in nature. In fact many orchards are being converted to housing. Residential development is concentrated along the valley bottoms, but is increasingly pushing deeper into the forest environment. Very few home located outside of existing city limits or developed communities have adequate defensible space in the event of a wildfire. Fuel types are generally grass and trees in the lower slopes grading to open pine stands and then to mixed conifer types, with mature Douglas fir/Ponderosa pine on the ridges and upper slopes.

#### Incorporated Cities in Chelan County

Incorporated cities in Chelan County include:

**Cashmere** – Cashmere is located along the Wenatchee River about 9 miles west of Wenatchee. Approximately 2,975 people live in the city limits and the fruit industry is the primary employer.

**Chelan** - The city of Chelan sits at the south end of Lake Chelan, a 51 mile long glacier fed lake. The communities of Manson and Stehekin are also located along the lake (Stehekin at the north end of the lake and Manson about 11 miles north of Chelan also along the lake). The population of the valley consists of 10,000 year round residents and several hundred more part-time residents. The population of the city of Chelan is approximately 3,600. The principle economic base is from recreation, tourism, and agriculture.

**Entiat** – The city of Entiat sits along the Columbia River approximately 20 miles north of Wenatchee near the confluence with the Entiat River. Approximately 1,000 people live in the city, but population growth is increasing rapidly. The principle economic base is from agriculture, recreation, and tourism.

**Wenatchee** – The city of Wenatchee is located at the confluence of the Wenatchee River with and the Columbia River. Approximately 28,000 people live in Wenatchee and that number is slightly increasing. The principle economic base is commercial/retail and residential and industrial activities.

**Leavenworth** – The city of Leavenworth is located along the Wenatchee River about 22 miles west of Wenatchee. Approximately 2,100 people live in the city and population is growing slightly. The principle economic base is from recreation and tourism.

Several communities exist in the county that are not incorporated cities. The largest of these communities include Manson, Peshastin, Dryden, Monitor, Malaga and Chelan Falls.

Home sites located on the outskirts of incorporated communities often have inadequate defensible space in the event of a wildfire. Fuel types in incorporated areas are generally grass and trees in the lower slopes grading to open pine stands and then to mixed conifer types, with mature Douglas fir and Ponderosa pine on the ridges and upper slopes.

#### 5. ASSESSMENT OF EXISTING WILDFIRE INFORMATION

A substantial amount of wildland fire information is available from several sources. Primary fire planning information/GIS data used in the Plan came from Chelan County Fire Districts (structure protection plan and evacuation plan, etc.), USFS-Okanogan-Wenatchee National Forest (large fire history, some vegetation information), and DNR (historic/potential vegetation, topography, fire cause statistics).

#### Vegetation

The majority of the planning area (80%) is dominated by Ponderosa pine stands and mesic sites of Douglas-fir and Grand fir within the Dry Forest Vegetation Group (Ponderosa pine, Douglas-fir and the drier associations within the Grand fir series). More moist vegetation groups such as moist Grand fir and more moist montane meadows exist in higher reaches of side drainages with general elevation gain. Areas not vegetated with trees are vegetated by Threetip sagebrush and related grasses and/or have bedrock at the land surface.

Historically, the planning area supported both pure stands of open canopy Ponderosa pine and some mixed conifer (Ponderosa pine, Douglas-fir, and dry grand fir) dominated stands of age classes ranging from seedling to many feet in diameter. The Douglas-fir and Grand fir stands were primarily located on higher north slopes and directly in the creek bottoms. Currently, the primary planning area vegetation type is dense Ponderosa pine forest with large amounts of Douglas-fir regeneration and intrusions of Grand fir. Ponderosa pine is a shade intolerant species naturally adapted to survive in areas that experience fire on a regular basis. A frequent fire regime (fire interval every 2-20 years) was standard for the entire lower Wenatchee River valley. The Fuel Models map on page 26 illustrates the vegetation of Chelan County.

#### Fire Ecology

Fire plays a major role in how ponderosa pine is established and sustained on the landscape. Regular burning allows pine stands to flourish by removing underbrush and smaller competing trees. As the pines mature their bark thickens and their lower branches are self-pruned, which also makes them better adapted in a fire environment. Older, pure ponderosa pine stands subjected to frequent fire often have a wide, open, park-like feel with scattered large trees (12-25/acre) with a grass and scattered brush species understory. Fire also provides benefit by providing a mosaic of microhabitats across the landscape by creating openings, snag patches, and opportunities for a variety of plant species. In addition, these naturally occurring low intensity frequent fires would keep insects and plant diseases in check. The resulting increase in vegetative diversity benefits wildlife, as well as forest health/disease resistance. Conversely, the exclusion of fire over the last 60-90 years has allowed for the continuous horizontal and vertical fuel profiles of ponderosa pine and Douglas-fir to develop and increase the susceptibility for high intensity, stand replacement fires. Ponderosa pine stands become denser when the natural fire regime is altered (primarily through fire exclusion (primarily by human actions that exclude wildfire). Shading and competition will inhibit the growth of pine and allow more shade tolerant species, such as Douglas fir and Grand fir, to become established along with other understory brush species. This overstocked condition will produce vertical and horizontal fuel profile continuities which often result in high intensity stand replacement fires. Additionally, denser stands are often more susceptible to the spread of insects and disease which provide more dead standing and down fuels.

Forest Condition Class I is considered a normally functioning and structured forest community. Most Chelan County forested areas, however, have been determined to be in Condition Class II and III. Vegetated areas that experience frequent fire regimes (fires every 0-35 years) become unstable as fire frequency is disrupted by human activities (fire suppression or fire exclusion). Forest types with frequent fire regimes rely on the dynamics of fire to reduce competition amongst species, keep areas of disease and insects in check, and to clean up the dead and downed materials (fuel). Forest vegetation is considered to be a Condition Class II when no fires occur in a 0-70 year period that manipulates the dry forest. When no fires occur within 70 years, forested areas typically produce a densely stocked stand of pines and shade tolerant species resulting in a Condition Class III situation. Condition Class III forests are susceptible to high intensity wildfires. Condition Class III forests eventually result in the loss of forest cover, damage to watersheds, altered wildlife habitat, and potential soil damage when the inevitable high intensity wildfire occurs.

Forest thinning may be warranted in Condition Class II and III forests. Thinning would consume and break up the pattern of available wildland fire fuels. Consequently, thinning would emulate fire as a process by increasing the area of Chelan County that experiences lower intensity fires less damaging wildfires while simultaneously allowing access to fire suppression forces. Thinning and prescribed burning activities can take place within or adjacent to the planning area to lower the trend of increasing fuels (See The Simulated Historical Fire Regime groups of Chelan County map is located on page 25).

#### General Fire Behavior

Weather, topography, and fuels affect wildfire behavior. Chelan County is prone to severe weather conditions (low humidity, high temperature, wind, and lightening) in the summer and early fall that can support extreme fire behavior resulting in high intensity wildfires. The topographic terrain is mountainous, steep, rocky, and dissected with elevations ranging from 653 feet to 9,511 feet. Drainages with varied topographic conditions and side canyons often funnel winds causing wind velocity to increase as air is forced into confined areas. Wildfire fuels are generated by vegetation from forest trees, brush, and grasses. Landscape forest stands are dominated by Ponderosa pine and thickets of Douglas-fir with the largest trees primarily less than 18 inches in diameter. Continuous, tall underbrush also predominates. Insect infestations of western pine beetle and/or fir engraver beetle are becoming more prevalent, providing higher fuel loading of dead trees. Many stands have closed canopies and abundant ladder (tree limbs) fuels. In sum, forested stands are dense and continuous, a perfect setting for large, lethal wildfire.

#### Fire History

Over two hundred fires have occurred within Chelan County since 1970 (See Reported Fire Starts and Causes 1970-2007 on page 28). Many fires are started naturally each year by lightning strikes along ridge tops although random strikes may ignite wildfires anywhere. Humans are causing an increasing number of fire starts as a result of various activities like recreational campfires and debris burning. The Burlington Northern-Santa Fe Railroad tracks were a frequent source of past wildfire starts that has diminished over recent time as a result of new maintenance practices

The size of the wildland fires varies. Small fires ranging from a few to several acres occur every year in Chelan County. Large fires (those greater than 1,000 acres) occur on a 5-10 year interval in Chelan County. Several recent large fires have occurred, including the 1994 Rat-Hatchery Creek Fire (43,000 acres), the 2001 Icicle Complex Fire (6,400 acres), and the 2004 (Fischer Fire (16,400 acres). Other recent large Chelan County fires include: the Tyee, Union Valley, Deer Point, Deer Mountain, Rex Creek, Pot Peak, Deep Harbor, Domke, Rex Creek, Flick Creek, and Easy Street. Present Chelan County conditions are conducive for large, intense, high severity wildfires (See Major Fire maps on pages 29-32).

#### Wildfire Fuels and Hazards

The DNR has classified many areas of Chelan County as a high risk Wildland Urban Interface (WUI) community. Past activities such as logging and fire suppression have altered the normal fire regime, stand species composition, and forest health. Dense, overstocked stands of trees are increasing wildfire hazard. Many stands of Ponderosa pine are dominated by trees less than 18 inches in diameter. Pockets of trees are being affected by low level (~0.3 to 4.5 trees/acre) infestation by mountain pine beetle and/or fir engraver (DNR GIS; see previous Vegetation map). Trees often have contiguous crowns, adjacent ladder fuels, and continuous tall underbrush intermixed on the landscape. All of these variables provide a continuous fuel profile which can create conditions for an intense, fast moving wildfire.

Many residences in Chelan County are adjacent to areas of grass, brush and thick pine fuels on the lower slopes while the mid to upper slopes are more heavily forested. Wildfire may move rapidly through these areas with the potential for spotting highest in forested areas. Wildfire in these areas could be difficult to manage if high winds are a factor. These forest fuel types could produce fast moving fires especially in areas of steep slopes or with sustained winds. Wildfires in these fuel types threaten communities with fire potential to involve all adjacent structures. Areas less susceptible to rapid rate of spread wildfires have been consumed by recent fires. Agricultural lands converted to homes are also anticipated to be conducive to wildfire because of unregulated vegetation growth.

#### Protection Capabilities

Chelan County Fire Districts are responsible for protection of private property in the each fire protection district area. Incorporated cities are sometimes located within fire protection districts.

The vast majority of Chelan County Fire District staff is comprised of volunteers. Chelan County Fire District employs approximately 10 career employees and is supported by an estimated 300 volunteers. Chelan County fire district stations are located throughout the County.

The DNR is the primary agency for fire protection on forested private and state lands while the USFS is the primary agency responsible for management of fires on federal lands. Most Chelan County Fire Districts maintain mutual aid agreements with DNR, and all other Fire Districts within Chelan and Douglas Counties. Federal, State, and local emergency organization contacts are summarized in Appendice L.

Most of the Chelan County Fire Districts have a structure protection plan for the purpose of safely and efficiently managing resources to protect life, property and resources in the event of an approaching wildfire. Chelan County fire district wildfire strategy decision for firefighting and evacuation takes into account the following tactical considerations:

- 1. Bottomlands are commonly grasslands with some scattering of timber and creek beds. Slopes are steep and heavily timbered. Fire may move rapidly through bottomlands igniting slopes where spotting, torching, and crowning can occur. Slopes and bottomlands are both heavily populated with structures.
- 2. Most homes will require maximum effort to defend, requiring prompt implementation of the Plan and the need to triage structures.
- 3. Access to areas differs in locations. Valley bottomlands are commonly accessed by county road or state highway. Hillslopes are accessed by long private drives in varying conditions. Access to localized structures is critical in completing structure triage.
- 4. Homes range from small trailer homes to very large stick frame dwellings in the district to multistory commercial.
- 5. Water access is not consistent through out the various fire protection districts.
- 6. Chelan County Fire Districts and its cooperators cannot assemble enough structure protection capabilities to protect all the resources within a given District. Successful defense from wildfire will depend upon structural triage, and time for pre-treatment with mobile tactics. Resources from state and federal agencies will be necessary to implement the strategies described.

#### 6. WILDFIRE RISK EVALUATION

#### Structural Vulnerability

Residences within Chelan County Fire Protection Districts are highly dispersed and are somewhat embedded into the forest landscape. Access, topography, slope, and fuels all play a role in structure fire risk. The primary risk to structures located within residential areas and bottomlands along the streams are primarily widespread spotting.

The DNR completed a wildfire risk assessment in Chelan County (NFP-299 area risk assessment) that grouped the area rather than analyzing risk to individual structures. The DNR fire risk assessment ranges from moderate to extreme with most Chelan County areas being

designated as high. More refined risk evaluations of individual structure wildfire risk was performed during individual CWPP development and by other fuels reduction and education projects implemented since 2003.

#### Access

Several main state and county highways provide access through Chelan County when a wildfire incident occurs. The main State Highways are 2, 97, and 97A. Main county access routes include 371 (Entiat Valley), 150 (Manson), Chumstick/Beaver, Valley and Lake Wenatchee highways serve as designated emergency evacuation routes. Most all of these roads access side canyons or valleys that then have dead end roads. Some roads in the County are not paved or in suitable condition for fire equipment (especially in the winter). These limitations make road access a concern.

#### **Evacuation**

The Chelan County Emergency Management Program administers the evacuation for all areas of Chelan County (outside of Wenatchee) in the event of a wildfire. Any potential evacuations for areas located within Wenatchee city limits are administered by the city and Chelan County.

#### Tactical Resource Staging Areas

Local fire districts will respond with mutual aid resources throughout the Chelan and Douglas County if a wildfire incident threatens any fire district service area in Chelan County. These resources may use any one of the a pre-designated staging area. Chelan County Fire Districts provide first response to a wildfire with mutual aid resources available from the DNR and USFS throughout the county. These resources may respond to a pre-designated staging area. See Appendice M for a list of pre-designated resource staging areas.

#### Command Post Locations

Several potential command county Fire District post locations exist in the county. Command post locations are listed in Appendice N.

#### Water Supplies

The location of water sources available for fire fighting efforts has been identified as limiting in some areas of Chelan County. Water sources to fight wildfires are primarily surface water withdrawal sites located on private land and right-of-ways at stream crossings. Efforts to improve existing draft sites, establish new drafting sites, and to construct water tanks will be pursued by the fire districts.

#### Livestock and Pets

The Wenatchee Valley Humane Society will work with landowners to find a safe location for livestock as well as domestic animals for homeowners who cannot evacuate their animals during

a wildfire incident. Additionally, the Chelan County Fairgrounds in Cashmere has been identified as a location that can accommodate livestock during a wildfire incident.

#### 7. RECENT, CURRENT, AND FUTURE WILDFIRE MITIGATION PROJECTS

Chelan County landowners have organized themselves to address wildfire risk issues by working with either the DNR, the CCD, and/or Chelan County Fire Districts to obtain state and federal funds for mitigation projects and education and outreach efforts.

#### Past Projects and Public Education

Numerous projects and some public education efforts have occurred in the past several years that have reduced Chelan County wildfire risk. These include:

- A group of landowners from the Union Valley area outside Chelan obtained state funds to implement fuels reduction efforts in their community in coordination with DNR.
- The USFWS, under the National Fire Plan Community Assistance and Wildlife Urban Interface Projects, funded a fuels reduction and fire education project for the Mountain Home area outside Leavenworth.
- A group of 15 neighbors working with the CCD, Chelan County Fire District #3, the USFS, and the USFWS drafted a grant project proposal for \$72,000 to assess fuels loading in an area southeast of the town of Leavenworth. An additional \$100,000 was awarded to this project in July 2003 and yet another \$125,000 was awarded for more work in September 2005. About 100 acres were treated around 64 homes in the Mountain Home Road, Dempsey Road, and Copper Notch Road areas to date. Fifteen acres of "demonstration sites" have been completed that reflect the three levels of fuels reduction finished around area homes in the Chumstick Creek watershed at Red Tail Canyon Farm. This effort also involved landowner education through radio interviews, public meetings, direct mailings, and one-on-one contacts.
- Education has also taken place as a result of CWPP efforts to date in Chelan County. FireWise workshops that described the benefits of defensible space and videos of the philosophy were shared with property owners. Plans to create defensible space around homes was initiated by individuals and through grant applications. Specifically, homeowners were provided with FireWise information on how to create defensible space around their homes and adjacent forest lands.
- The BLM awarded a group of Chumstick Creek landowners \$38,000 for assessment and planning for fuel reduction and fire education efforts in 2005. Working with the CCD, Chelan County Fire District #3 (CCFD#3), the USFS, and the DNR this landowner group completed assessing the fire risk to structures in the Chumstick Creek watershed and sent out recommendations to reduce the fuel loads around approximately 600 homes.

• The CCD submitted and received a project proposal on behalf of a Leavenworth Neighborhoods group for implementing larger scale forest fuels reduction. Other fuels reduction work has included efforts in the following areas: Union Valley, Valley Hi, South Shore, Squilchuck Valley, and the Entiat Valley.

#### Current and Future Mitigation Project Proposals

The Plan and completed CWPPs promote mitigation project proposals that reduce wildfire risk. The best approach to minimize wildfire risk to people and potential property losses is to modify and reduce fuels surrounding homes and also at the landscape level because weather and topography of a community cannot be changed. Fuel reduction projects within and adjacent to a community can improve safety for fire fighters, help overall fire suppression efforts be successful, and reduce the risk/damage to individual structures/property. Wildlife habitat benefits can also gained through fuels reduction and natural vegetation restoration projects.

Steering committees determined that wildfire fuels reduction around homes and across the landscape was a CWPP priority. Mitigation projects that implement defensible space around private homes was the first fuels reduction priority and the second fuels reduction priority was projects that reduce fuels across the general landscape. Defensible space projects were determined to provide immediate benefits. Projects that create shaded fuel breaks, however, were determined to not result in immediate benefits as compared to defensible space projects although these projects are still recommended for implementation. Steering committees determined that defensible space projects that protect structures provide firefighting efforts a type of "back-up" if a future fire escapes shaded fuel breaks. When implemented, steering committees recommended that shaded fuel breaks should be located based on geographic features (terrain), vegetation type (fuel conditions), and do not stop and start due to public/private ownership patterns (implemented where needed based on hazard and risk). Steering committees supported providing landowners financial assistance to implement defensible space projects.

Steering committees also identified building materials and landscaping as important areas that contribute to reducing wildfire risk. The steering committees decided that the County planning and/or building departments should address this issue with landowners and/or update ordinances in a manner that upgrades building material or landscape standards.

CWPP steering committees also identified education and outreach as one of the most important wildfire management options to be included each mitigation project. Steering committees felt that the focus of the education and outreach projects should ensure human safety (like escape routes) and protect homes and structures on private land. Projects that address human safety issues were determined to be of higher priority than projects that benefit homes and structures. The steering committees also recognized that landowners need to be informed of the means of how to "FireWise" their property. Further, steering committees recognized that education and outreach efforts have the potential of reaching people who recreate in the planning area but do not live in the planning area. Items were identified in CWPP Mitigation Action Plans to get

landowners, developers, new residents, and visitors wildfire-related information by hosting "FireWise" presentations/workshops and to support the volunteer firefighter program.

Topography represented another steering committee wildfire risk concern. Topography limits wildfire evacuation routes and precludes communications by cell phone or radio in certain areas. The rugged topography and steep valley walls common to Chelan County limits most roads to valley bottoms and ridge tops. Limited roads, particularly secondary access roads into populated areas of the planning area, were identified as a substantial concern to safety. Steering committees supported pursuing mitigation projects with landowners that improve and/or upgrade existing roads that provide secondary access during emergency evacuation conditions.

Steering committees identified communication as another CWPP item that would benefit a coordinated emergency response. Specifically, communication of accurate and immediate information to landowners and appropriate emergency personnel in the event of a fire related emergency is very important. Through this planning effort, the best means of developing a defined method of communication between landowners will be pursued.

#### Coordination of Private Lands Mitigation Projects with USFS Activities

Where possible, it is highly desirable for the USFS to implement complementary projects adjacent to private lands wildfire mitigation projects. Such an approach maximizes the benefits of land fuels reduction work. The USFS considers local needs when they evaluate where to locate federal land wildfire fuel reduction projects. The USFS recognizes the Plan and specific CWPPs as instruments used to identify and locate areas and projects that are of highest local priority.

Currently, a 30,000 acre Chumstick drainage project area has been identified for treatment through the HFRA directed collaboration involving the public and land management agencies. Opportunities to participate in USFS planning efforts will be continued to be pursued. The Wenatchee Forest Coalition led by a representative from the North Central Washington Resource, Conservation and Development (RCD) is currently focusing on the Chumstick Creek watershed to develop a fuels reduction project in coordination with the USFS. It is expected that this effort will expand county-wide resulting in fuels reduction projects on USFS managed lands in the WUI that compliment private land mitigation projects.

#### Prioritization of Mitigation Projects for Funding Purposes

The steering committees recognized that a formalized County-wide prioritization process was needed. The prioritization of county-wide wildfire mitigation projects will be performed by the Local Coordinating Group (includes the County Commissioners Office, Fire District Chiefs, and agency representatives [USFS, DNR, BLM, etc.]) when funding entities require a local project prioritization process. Project prioritization will create a balanced approach to fire mitigation that recognizes the following ranking considerations:

- 1. Critical Infrastructure protected
- 2. Does the project address a annual Funding item
- 3. Proximity to adjacent federal/state projects

- 4. Community Support
- 5. Risk and Hazard

When project funding sources require a prioritized list of competing projects be submitted from a county, project priorities will be prioritized by the Fire Mitigation Project Prioritization Framework (See Appendix O). The local wildfire mitigation project prioritization process may be less formal when the funding entity does not require a local project prioritization process.

#### 8. POSSIBLE WILDFIRE MITIGATION PROJECT ACTIONS

A variety of management tools may be used as part of the implementation of CWPP MAP. Potential wildfire management options include but are not limited to the following:

- Homeowner and landowner education.
- Policy changes for structures and infrastructure in the WUI.
- Home site defensible zones achieved through fuels modifications.
- Community defensible zone fuels reduction.
- Road access improvements.
- Road access creation.
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts) and infrastructure improvements (such as water availability/hydrants).
- Regional land management recommendations for private, state, and federal landowners.

#### Wildfire Mitigation Projects

Three main categories of wildfire mitigation projects were identified through steering committee community outreach. Categories of projects include fuels reduction, education and outreach, and <u>improving protection capabilities/human safety</u> in the WUI area. Natural vegetation and habitat restoration activities are incorporated into fuels reduction projects. Recommendations are organized into categories and listed in the following order of priority:

#### Fuels Reduction

- 1. Implement "FireWise" recommendations and create defensible space (usually 30 to 200 feet, depending on slope) around all private homes and essential infrastructure. Actions include the establishment of defensible space, adequate turn-around space for emergency equipment, and clear consistent address signs.
- 2. Create appropriate width shaded canopy fuel breaks in the planning area on strategically located areas that have the greatest benefit for the entire project area where feasible and in coordination with complementary treatments across all ownership boundaries. The objective of proposed projects is to help reduce the potential of a wildfire moving from public to private lands and vice versa across the landscape. Encourage complementary private land and Federal lands projects where feasible that strategically ties landscape projects together to reduce the chance of the larger fires from occurring.

- 3. Encourage the USFS to continue current fuels reduction activities at the landscape scale with an emphasis of creating strategic fuel breaks that will enhance local fire suppression efforts. Projects should utilize "natural" fuel breaks where feasible (such as orchards, ridge tops, highways, rock outcrops and irrigated pastures). Encourage similar activities on other USFS lands adjacent to private ownership within the CWPP area as risk assessment and prioritization process continues.
- 4. Encourage the USFS to continue permitting sheep grazing allotments in Chelan County and align grazing routes with strategic fuel breaks (such as ridge tops) where and when it does not conflict with resource protection.
- 5. Treat vegetation within 100 feet of roads and driveways. This can include shaded canopy defensible space on both sides of the road, road signs, and clearly marked evacuation routes.
- 6. Develop and maintain preplanned safe areas, shelters, and staging location as a base for fire fighting operations.
- 7. Encourage adjacent landowners and agencies to perform complementary treatments on their land by being more involved in the public planning process and inviting neighboring private landowners to participate in annual local "FireWise" workshops.
- 8. Current county regulations on riparian management and set back along streams are problematic for implementing effective fire orientated vegetation management projects. Many homeowners along streams may not be able to perform the needed vegetative work to reduce wildfire risk and still comply with county rules. Thus, for the short term, the landowner could request a waiver or special standard could be established for this type of work. Alternatively, a more comprehensive solution for County management consideration that accommodates ecological and social values may be a better long term solution for all interests. Accurately mapping specific high value riparian areas for streamside protection rather than a one size fits all riparian buffer management.
- 9. Acquire chipper(s) that can be used by citizens in the CWPP area to dispose of brush generated by fuels reduction projects rather than burning the debris.
- 10. Investigate biomass conversion technology for opportunities to implement biomass utilization technology in the CWPP area and county wide as part of fuel reduction projects.

#### Public Education and Outreach

- 1. Conduct risk assessments of individual structures and essential infrastructure for the entire planning area and implement identified recommendations.
- 2. Utilize existing highway billboards to provide fire-related information such as fire danger level, burn ban regulations, informational messages or reminders (i.e. "No campfires" or

"use your ashtray"), and/or what to do if smoke or a fire is detected (i.e. "Report signs of smoke or fire immediately Call 911").

- 3. Compile essential "FireWise" information and distribute it to landowners in and adjacent to Chelan County. Information presented should cover landowner responsibilities and residential security options (i.e. creating defensible spaces and fire breaks, "FireWise" construction materials, etc.) and individual preparedness (i.e. how to create a Personal Emergency Action Plan, what to do/what not to do in the case of a wildfire, etc).
- 4. Participate in Forest Service and State Forest Management policy issues during amendment processes to ensure local land/home owner interests are considered. Input to the Forest Plan revision is a good conveyance of community concerns for all aspects of forest management. There are land allocations in the drainage that are not conducive to effective fire prevention or control. The development of the CWPPs and Chelan County WUI designations should help fuel reduction management in areas that may not strongly encourage such projects due to the Forest Plan land allocation. Existing allocations may limit the degree and extent of fuels reduction mitigation projects in areas that may need it the most.
- 5. Incorporating burn bans, campfire closures, etc. into the CWPPs and the Plan is highly appropriate based on community concerns. Such action would require special orders or dictate closer interagency communication (USFS, DNR, and fire protection districts) and is a desired outcome of the process. Chelan County could potentially propose campfire closures to coincide with the appropriate Fire Precaution Level and County burn bans.
- 6. Provide information to non-residents who own property and/or vacation homes on steps they can do to reduce the threat of fire to their homes and property.
- 7. Produce emergency evacuation route maps Provide maps of emergency evacuation routes and emergency contact information to landowners in the CWPP area
- 8. Work with the County planning department to get FireWise building materials information, access design and landscaping ideas provided to developers and home builders during the permitting process.

#### Improving Protection Capabilities/Human Safety in the WUI area

- 1. Emergency Safety Issues
  - o Address coordination and signing
  - o Road Signs
  - Evacuation Escape routes Develop warning systems and safe escape routes, including the following:
  - Mark exit routes on maps. (Emergency Management may already have)
  - Make directional emergency exit signs. (may require State and County involvement)
  - Procure and install warning siren.

- Contact radio station for possible help with emergency information.
- 2. Address coordination Properties need to be renumbered in a logical, sequential way. This should be completed anywhere this is a problem. After completion of address assignments we suggest the following.
  - Standardize location of address signs.
  - Standardize appearance of signs
  - Contact person at Chelan County responsible for assigning addresses to assist and verify correct information.
  - <u>Road signs</u> Develop uniformity of all road signs and install signs at strategic locations. Sign design will meet County and State (if appropriate) requirements.
    - o Location
    - Size and type of lettering.
    - Mounting heights.
    - Special signage (i.e. dead ends, curves, fire risk area, FireWise block watch community etc.).
- 3. Develop a water source for fire fighting efforts Identify and improve water sources in the CWPP planning area.

#### 9. PLAN ADMINISTATION AND IMPLEMENTATION

#### Administration

The CCD in cooperation with the local coordinating group will implement the Plan. Individual wildfire mitigation projects and education and outreach efforts are expected to primarily be administered by various entities in the county with overall coordination provided by the Local Coordinating Group and the County Commissioners.

The Plan will be evaluated on an annual basis by the Chelan Local Coordinating Group (LCG) or subsequent group to determine the effectiveness of mitigation projects and education and outreach efforts, programs, or other related activities. Annual Plan evaluations will also consider changes in land development or programs that may affect mitigation priorities and/or strategies. Any recommended updates to the Plan should be reviewed by the Chelan County Commissioners during a regularly scheduled commissioner meeting.

The Plan will be updated as conditions warrant and funds allow. Updates and edits to Chelan County CWPPs will be performed annually and will be coordinated by the Cascadia Conservation District as funds and time allow. It is expected that updates will be necessary to reflect future work done to address CWPP issues. Another important aspect of CWPP plans will be the monitoring of effectiveness of implemented projects. The CCD is anticipated to lead any Plan and/or CWPP update efforts.

#### Implementation

The cost of wildfire mitigation is often a small portion of the overall cost of a program when Plan activities are implemented through existing programs and resources. Implementation of the Plan depends on an integrated schedule of mitigation projects targeted at eliminating of lives lost and reducing the number of structures destroyed, infrastructure compromised, and area of unique ecosystems damaged. Differing schedules of plan adoption will be made and varying degrees of completed mitigation projects are anticipated because Plan implementation depends on the actions of several land management agencies and thousands of Chelan County private landowners, Where available, the schedule of USFS and DNR land treatments have been considered in the CWPP process to better facilitate coordinated wildfire mitigation efforts.

#### REFERENCES

National Interagency Fire Center. 2003. Information posted on the Agency's Internet web site at <a href="http://www.nifc.gov/">http://www.nifc.gov/</a>



















### APPENDICES

## **APPENDIX** A

# Union Valley Community Wildfire Protection Plan

## **APPENDIX B**

# Squilchuck Valley Community Wildfire Protection Plan

## **APPENDIX C**

# Peshastin Creek Drainage Community Wildfire Protection Plan

## **APPENDIX D**

# Manson Community Wildfire Protection Plan

## **APPENDIX E**

# Leavenworth Area Community Wildfire Protection Plan

## **APPENDIX F**

# South Shore Lake Chelan Community Wildfire Protection Plan

### **APPENDIX G**

# Lake Wenatchee/Plain Area Community Wildfire Protection Plan

### **APPENDIX H**

### Monitor, Cashmere, Dryden and Peshastin Community Wildfire Protection Plan

## **APPENDIX I**

Ponderosa Area Community Wildfire Protection Plan (Draft)

## **APPENDIX J**

# Stehekin Valley Community Wildfire Protection Plan

## **APPENDIX K**

# **Entiat Valley Community Wildfire Protection Plan**

Organization	Contact	Phone Number
Chelan County Sheriff	Sheriff Mike Harum	(O) (509) 667-6851
		(C) (509)630-1700
	RiverCom	911 or (509) 667-6851
Chelan County Fire District #1	Randy Johnson	(O) (509) 662-4734
		(C) (509)679-9799
Chelan County Fire District #3	Chief Kelly O'Brien	(0) (500) 548 7711
		(0)(509)548-7711 (H)(509)548-7995
Chelan County Fire District #4	Bruce Merighi (retired)	
		(O) 763-3581
Chelan County Fire District #5	Arnold Baker	
		(0) (509) 687-3222 (0) (509) 670 2775
Chelan County Fire District #6		(C) (303) 070-2773
Blewett Pass	Phil Guthrie	(O) (509) 548-4385
Cashmere	Rob Sweigard	(C) (509) 433-1113
Dryden		
Monitor	Troy Stevens	
Peshastin	Mike Spies	
Chelan County Fire District #7	Dennis Ashmore	(O) (509) 682 4476
		(C) (509) 670-4967
Chelan County Fire District #8	Mike Asher	(O) 509-784-1366
Chelan County Fire District #9	Rod Fountain	(O) 509-763-3034
		(C) 509-433-1153
Chelan County Fire District #10	Robert Neilson	
(USFS)		
Wenatchee River Division	Michelle Ellis	(O) (509) 548-6977
Columbia River Division		
	Marsh Haskins	(O) (509) 682-2576
Central WA Interacency Comm		(0) (500) 884 2472
Center (CWICC)		(0)(307)004-3473

# **APPENDIX L: Key Contacts**

### **APPENDIX M: Pre-designated Resource Staging Areas**

- CCFD #1, Station 14, 4852 Squilchuck Road
- CCFD #1 Station 13, 1836 South Mission
- Beehive Grange, 4000 block Squilchuck Road
- CCFD #3, Station 1 228 Chumstick Highway
- CCFD #3, Station 2, 7miles north along Chumstick Highway
- Cascade High School, 10190 Chumstick Highway
- Leavenworth Fish Hatchery at 12790 East Leavenworth Road
- CCFD #4, Station 1, 21300 Cayuse Street, (509) 763-0221
- CCFD #5 Station 1 250 West Manson Boulevard (509) 687-3222
- CCFD #5, Station 2 2010 Wapato Lake Road, (509) 687-9041
- Manson High School, 1000 Totem Pole Road, (509) 687-9585
- CCFD #6, Blewett Pass Fire Hall, Allen Lane, Valley Hi,(509) 548-7706
- CCFD #7, Station 1, 232 E. Wapato , Chelan (509) 682 4476
- CCFD #8, Station 1, 4491 Entiat River Road, Entiat
- CCFD #10, To be determined

### **APPENDIX N: Potential Command Post Locations**

Chelan County Fire District #3, Station #1, 228 Chumstick Road Mainline (509) 548-7711 Second line (509) 548-4091 Fax line (509) 548-0307

Chelan County Fire District C	One Main Station, 206 Easy Street
Main Office	(509) 662-4734
Second Line	(509) 662-4735
Third Line	(509) 662-3247

(307)002-3247
(509) 662-9717
(509) 663-3967
(509) 663-9640

Mission View Elementary School, 60 Tern	ninal Avenue
Mission View Elementary School	(509) 663-5851
Wenatchee School District	(509) 663-8161

Beehive Grange 4000 block Squilchuck Road

Leavenworth Fish Hatchery, 12790 East Leavenworth Road, (509) 548-7641

Dryden Gun Club, Saunders Road, Peshastin, WA (509) 782-2105

Peshastin-Dryden Elementary School, 1001 School Road, Peshastin, School (509) 548-5832

Cascade School District #228, <u>Superintendent's Office (509) 548-5885</u> Cashmere School District #222, <u>Superintendent's Office (509) 782-3355</u> Chelan School District #129, <u>Superintendent's Office (509) 682-3515</u> Entiat School District #127, <u>Superintendent's Office (509)784-1800</u> Manson School District #19, <u>Superintendent's Office (509) 687-3140</u>

### **APPENDIX O:**

#### **Fire Mitigation Project Prioritization Framework**

The purpose of this prioritization framework is for National Fire Plan grant applications or other grants that require a local prioritization process. The criteria below are intended to be used to prioritize projects that reduce the risk from wildfire. Further, it is assumed that all project proposals will, to some degree, protect life and property. As a result those items are not included as criteria. In addition, it expected that project proposals will address the appropriate hazard, a Community Wildfire Protection Plan has been developed for the area, and the project proposal mitigates the appropriate fire hazard?

Each question will result in a score of 1, 2 or 3 (3 the highest). Ranking will result in a relative score or index that categorizes projects (High, Medium and Low). It is also recognized that in some cases projects may have an equal ranking. In these cases the Local Steering Committee will be responsible to "break the tie" and will request input from the appropriate subject matter experts to explain each project in order to evaluate the merits of each project and provide an order of priority (of projects that end up tied after using criteria).

The LSC is made up of one representative from each Chelan County Fire District (Chief or someone designated by fire commissioners to serve this role), USDA Forest Service, Washington State Department of Natural Resources, Bureau of Land Management, Sheriffs Department (or Emergency Management) and Chelan County. State and federal land managers will not be voting members but will

- 1) Critical Infrastructure protected? (1, 2 or 3 points)
  - How does the action target protection of access/main roads, power or water supply and/or communication service?
  - Will the project improve emergency response time?
- 2) Does the project address a annual Funding item (1 or 3 points)
  - Does the action address an issue prioritized by state or federal funding sources? (Potential or appropriated funding)
  - Number of items project addresses of federal/state priority?
- 3) Proximity to adjacent federal/state projects (1, 2 or 3 points)
  - Will this project complement or enhance adjacent fire mitigation projects?
  - Is the adjacent project already completed or proposed?
  - How far away is the adjacent federal or state project (either currently active or within the last 3 years)
- 4) Community Support (1, 2 or 3 points)
  - Amount, type and timeline of local match?
  - Number (or proportion) of local landowners who will participate in project planning/implementation within the project area?
  - Continuation of previous work?

- Would action build community support for fuels reduction/fire safety
- Would action enjoy broad community support
- Would the project be resisted by parts of the community? If so, why?
- Does the action satisfy other community needs (e.g. access, communication, etc.?)
- Are there long-term funding requirements associated with successful implementation of the project? What are the proposed sources of those funds?
- Would the project have high visibility to help with outreach and education

#### 5) Risk and Hazard (1, 2 or 3 points)

- Does the project treat the vegetation structure?
- Is the project in a forest environment?
- Is the type of vegetation conducive to threatening life and property?
- How long will the treatment last? Is project maintenance free or will the effectiveness of the treatment gone after 5 years?
- Does the project mitigate the hazard such that fire behavior/risk is reduced (under 90<sup>th</sup> percentile weather)?
- Is the project in an area frequented by fire starts?
- What values are at risk?
- Is the project in grass, brush or timber fuel types? Timber and brush are higher hazard than grass.