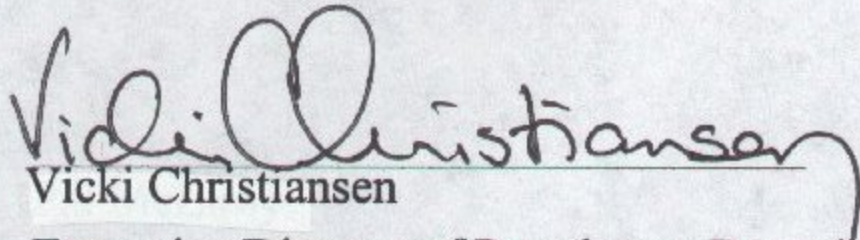


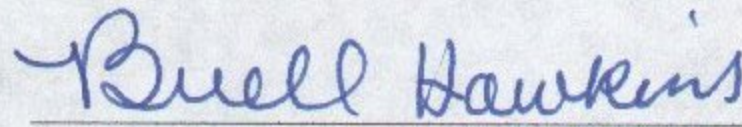
South Shore Lake Chelan Community Wildfire Protection Plan

December 2006

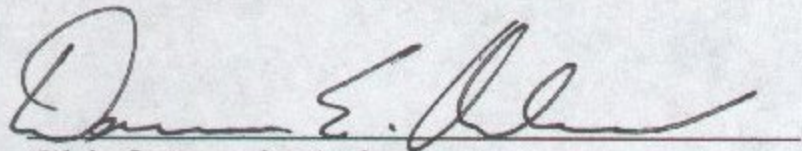
Prepared by
Chelan County Conservation District
with assistance from the
Washington Department of Natural Resources, Chelan County Fire District #7,
United States Forest Service and concerned citizens of Chelan County


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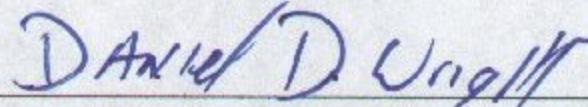
Executive Director of Regulatory Programs
Washington State Forester



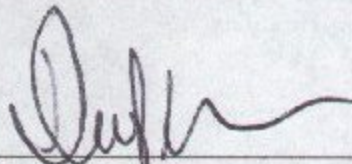
Buell Hawkins,
Chelan County Commissioner



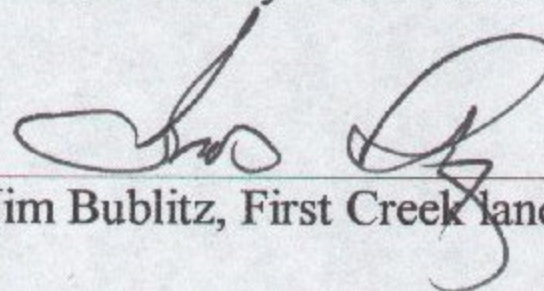
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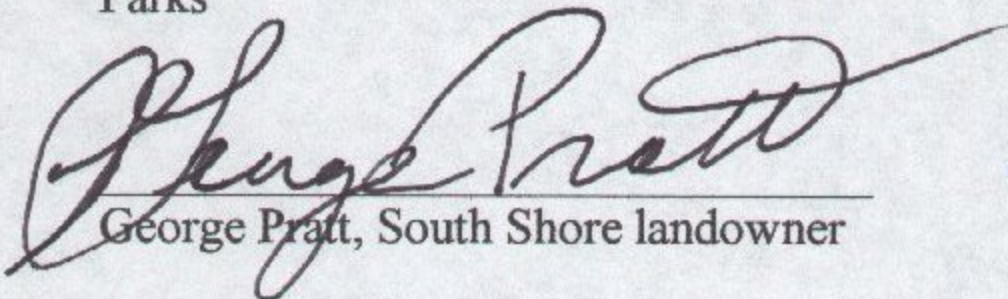
Dan Wright, Board member
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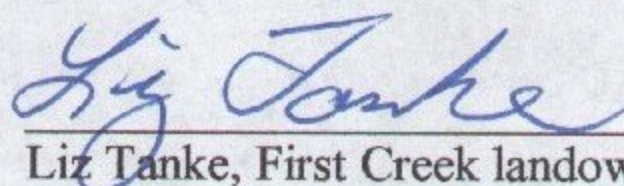
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1. Introduction

Residents along the South Shore of Lake Chelan are concerned about the effects of wildfire on their community. Recent wildfires in the area have prompted local residents, government officials, and fire department personnel to join together to proactively plan and implement actions to protect human life and property, and reduce the risk of future wildfire related disasters.

For the purpose of this project, the entire planning area is considered to be in the Wildland Urban Interface (WUI).

Vision and Goals

Through the production of a Community Wildfire Protection Plan (CWPP), residents of the South Shore of Lake Chelan aim to protect their community from the effects of wildfire through outreach, education, strategic planning, and action. They wish to face each fire season confident that they have done everything possible to prepare for and mitigate the effects of a potential forest fire in their area.

The primary goal of the CWPP is to protect human life, private property, and essential infrastructure and resources through the implementation of fire prevention projects that work to increase public awareness, improve forest health, sustain local wildlife and preserve the natural beauty of the area.

In an effort to minimize waste all options for the utilization of biomass produced from fuels reduction projects will be pursued.

Community Awareness

Residents along the South Shore of Lake Chelan are very aware of the need to develop a comprehensive wildfire prevention and protection plan. The planning area is bordered by public lands that are a source of vegetative fuels and wildfires are a common occurrence. Concerned residents began organizing in summer 2006. Their energy, input, and guidance have played an essential role in the creation of this CWPP. In addition to regular planning meetings, they have created a South Shore Lake Chelan CWPP website and hosted a FireWise workshop to help educate local landowners and keep the community informed. It is their hope that this document will not only help to protect their community but serve as an example for other communities facing similar challenges.

Values

South Shore residents value their homes, privacy, wildlife habitat and beauty of the surrounding forest and grass lands. They want to improve the safety of their community and play an active role in land management decisions affecting adjacent federal and state lands.

2. Planning Area

General Description of the Area

The South Shore Lake Chelan community wildfire protection planning area is located along the southernmost terminus of Lake Chelan. It includes areas within Chelan County Fire District #7 that are not a part of the Union Valley or Manson CWPPs, as well as, adjacent state and federal forestlands (Figure 1). The entire planning area is considered to be in the Wildland Urban Interface (WUI). Total acreage in the planning area is approximately 79,576 acres. Federal agencies manage 69,208 acres (87%), State agencies manage approximately 8,724 acres (6,465 acres managed by Washington State Department of Fish and Wildlife, approximately 2,179 acres Washington State Department of Natural Resources, and approximately 80 acres managed by State Parks, 11.1%), County: 0.68 acres (negligible %), Private & Other: 1,643 acres (2.1%)

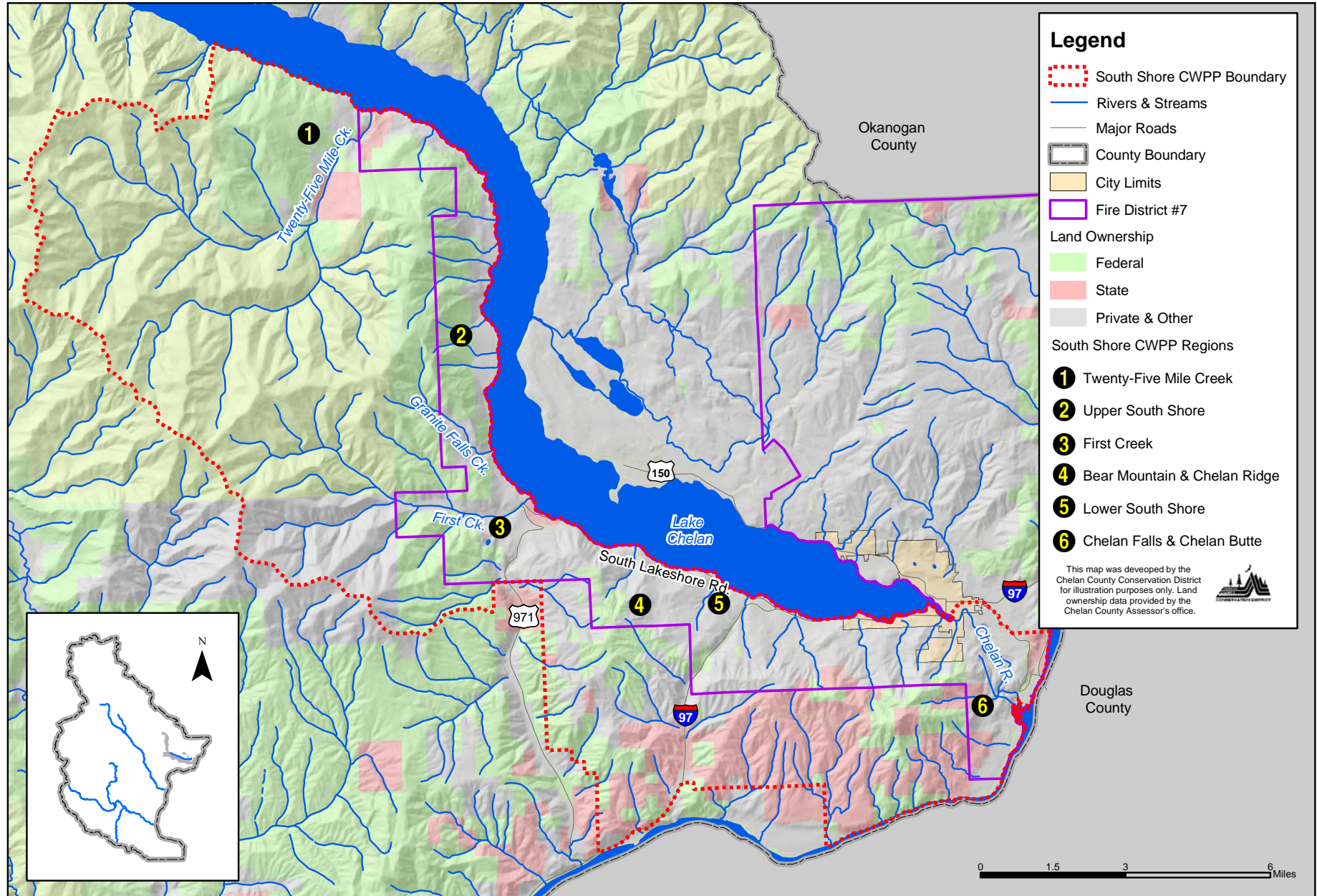
The Lake Chelan basin is a glacial U-shaped valley with steep sidewalls. Dominant vegetation includes grass-shrub species, mixed conifer, and open pine forests. Residential development is largely rural in nature and density varies with topography and proximity to the lake. Glacial moraines and alluvial fans constitute most of the buildable land and contain the highest density of development. According to Chelan County records 2,645 individual parcels currently comprise the planning area. A number of properties remain undeveloped. Many residences are second homes that are seasonally or intermittently occupied. In many cases the homes are very large. As of 2004 the total assessed value of homes in the planning area was approximately 93 million. The area is a popular recreation destination, particularly during the summer months. Two state parks, Lake Chelan and Twenty-Five Mile, are located within the planning area.

Navarre Coulee Rd. and Highway 97 through Knapp Coulee provide access in and out of the planning area. South Lakeshore Road, also known as State Route 971 and Highway 97 comprise the main access route through the planning area. State Route 150 connects the City of Chelan and the unincorporated community of Chelan Falls. Many neighborhoods are served by a single point of access providing only one way in and one way out. Most of these roads are too narrow for fire protection vehicles to easily access and maneuver in.

Primary land uses in the planning area consist of agriculture, forest land, recreational areas (golf course and State Parks) and rural residential.

For the purpose of this CWPP, the South Shore Lake Chelan planning area has been divided into six regions. From west to east the regions are 1) Twenty-Five Mile Creek, 2) Upper South Shore, 3) First Creek, 4) Bear Mountain & Chelan Ridge, 5) Lower South Shore, and 6) Chelan Falls & Chelan Butte regions.

South Shore Lake Chelan Community Wildfire Protection Planning Area Overview of Planning Area



General Description of Planning Area Regions

1) Twenty-Five Mile Creek - The Twenty-Five Mile Creek region is comprised of low to moderate density development and includes the Twenty-Five Mile Creek State Park. The region is characterized by steep slopes with dense stands of conifers and brush. South Lakeshore Road provides access to the mouth of Twenty-Fire Mile Creek, where Forest Road 5900 begins and is the main access through the drainage and connects with the Entiat Valley. Forest Road 5900 also accesses Forest Road 8410, Slide Ridge road. Neither of these roads provides a reliable means for escape during a fire. Spur and private roads are narrow, steep and generally in poor condition. The majority of residents pull their water directly from Lake Chelan, but two domestic water systems exist. Neither of these systems is capable of providing water for fire fighting operations. Additional infrastructure includes a boat launch, helibase and camping facilities adequate to accommodate fire personnel. Major land uses in the area include residential, recreation, forest, and agriculture. Priority fire prevention and protection projects identified by community members include the development of a fuels reduction program, construction of a rural firehouse and water storage facilities, and communication system improvements.

2) Upper South Shore - The Upper South Shore region includes the area from Granite Falls uplake to Twenty-File Mile Creek. Vegetation in the region ranges from grass-shrub species with interspersed conifers to heavy mixed conifer stands. High density development is dominant. Several planned communities are found in the region including Granite Falls, The Cove, The Lake Chelan Yacht Club, and Morning Sun. South Lakeshore Road is the only route in and out of the region. It is a two-lane county road that bisects buildable land into two narrow corridors; one above the road, and one between the road and the lake. The area above the road is steep and prone to landslides. In fact, severe landslides (which occur 2 to 3 times a year) will close the main South Lakeshore Road. Lots below the road are narrow with an average width of fifty feet. Homes are typically situated near the lake with dense vegetation separating the home site from the road. Access is limited to private roadways that are often steep and narrow. Two resorts are located in the Upper South Shore region and it is a popular destination for tourists and second-home owners. Land use is predominately forest but a couple small orchards are still located in this area. Residential and vacation homes are the other primary land use. Utilities are in overhead lines and a Public Utility District sub station is located in the area. Domestic water systems are in place at the Cove Marine and Yacht Club but they can not be relied upon as a means of fire fighting.

3) First Creek - Private property in First Creek lies along the valley bottom along both sides of the dead-end gravel First Creek Road for about three miles. National Forest land lays upslope of the private land, rising steeply to the ridge defining the First Creek watershed and elevations of 3,000 to 7,000 ft. The lower 1.5 miles of the road is fairly steep, cut into a slope with a drop-off into the creek bottom, often with washboard conditions, and warrants cautious driving.

The road leaves private land and provides public access to National Forest at its upper end, with one fork entering an old pumice mine, now an open area in which the Forest Service is attempting to restore vegetation. The other fork crosses seasonal Baldy Creek and dead ends at First Creek in another .7 miles. These areas are sometimes used by local residents and visitors

for recreation (hunting, target shooting, walking, biking, camping, OHV riding, and firewood cutting). Occasionally these areas are used for less desirable partying type activities, sometimes leaving considerable garbage and the possibility of escaped campfires.

Currently there are 20 permanent homes and several vacation homes, and there is potential for about 5 to 10 more. Lot/parcel sizes range from about 3 to 25 acres, and homes are generally out of sight of their neighbors. Driveways which access several parcels are located at several locations up the road. Some driveways are steep and narrow. All but a handful of the homes are on the north side of the road and creek.

Most homes have metal roofs, their own well and have been built in the last 15 years. Many of the residents are well aware of the potential for wildfire and have thinned trees and cut brush near their homes and driveway, and taken steps to reduce their home's flammability. There is a close sense of community in this valley, and neighbors recognize their need to communicate and help each other in the event of an emergency. Utilities are above ground only at the bottom of First Creek valley, but are at risk of cutting off upstream power.

A few residents have water tanks or pools which can be used for emergency firefighting. First Creek usually flows subsurface at river mile 1.6 and below 3 miles up the valley, by late June or July.

4) Bear Mountain - The northwestern slope of Bear Mountain is predominately private lands with areas of national forest east and southeast of the private lands. The homes in this area are located on steep terrain accessed by one gravel road, Bear Mountain Road, which begins at Navarre Coulee Road, goes to the summit of Bear Mountain, beginning at 1500 feet and raising to about 3200 feet. The upper mile of the road is a very steep 4 wheel drive road. Chelan County maintains the lower third of Bear Mountain Road. Heavy fuel (dead trees and branches, grasses, ladder fuels) loads exist on the uphill side of the road the entire way, except for grass near the summit. From the summit the road goes east to Bear Mountain Golf Course. However, access is not permitted beyond the private property east of the summit.

Bear Mountain has eleven full or part-time residents and each relies upon Bear Mountain Road for access to their driveways. Bear Mountain Road provides the only way in and out of this residential area. A majority of the homes are surrounded by dense underbrush of bitterbrush, serviceberry and thick stands of pine and fir trees. In addition to the homes, there are several trailers on lots. Some owners use their trailers on occasional weekends and summer vacations. Each resident has a well that provides the only water supply. Water pressure is not consistent for all residents. There are some underground water storage tanks. Four residents on Upper Ridge Road share a 5000 gal storage tank.

The privately owned lands within and the National Forest lands adjacent to the Bear Mountain area contain areas of overstocked pine and fir trees with thick underbrush that create an existing fire threat. Most homes would benefit from fuels reduction work and other FireWise recommendations. Bear Mountain in general has many areas of over stocked small trees that could be thinned, dense ladder fuels and grasses.

4) Chelan Ridge - Chelan Ridge neighborhood consists of forty-eight lots ranging in size from a half acre to two acres. There are forty property owners. Chelan Ridge is bordered on the uphill south side by Bear Mountain, separated by Upper Ridge Road which is a dead end road no longer maintained by the county. The north and west sides are bordered by eighty acres of Chelan State Park Property. The northeast side borders South Lake Shore Road. East of the neighborhood is a steep rock ridge of privately owned land. Chelan Ridge elevation is from about 1100 to 1500 feet.

There are two entrances to Chelan Ridge and both are dead-end roads. The main entrance, Ridgeview Drive, is about a half mile up Navarre Coulee Road from South Lakeshore Road. The second entrance is at Upper Ridge Road. The roads are paved or gravel surfaced and all are maintained by Chelan County except for the Chelan Ridge Road.

There are twenty homes in Chelan Ridge. Thirteen home owners are permanent residents. Seven homeowners reside part time at their Chelan Ridge home. Five homeowners use their homes in Chelan Ridge as vacation homes. Twenty-eight owners own lots and live elsewhere.

Vegetation is predominately made up of large and juvenile pine and fir trees with underbrush of Bitterbrush, Elderberry, Serviceberry, Oregon Grape, Snowberry, Wild rose and other broadleaf shrubs. Chelan Ridge has non enforceable restrictive covenants that mandate that lot owners clean up their lots on a yearly basis by trimming dead branches, removing dead and diseased trees, eliminating ladder fuels and trimming up trees to a height of ten feet. Vegetation maintenance on lots is sporadic, if done at all. A few homeowners have created defensible space around their homes, but that is not the case for all.

Chelan Ridge has a 100,000 gallon water tank maintained by the Chelan PUD that serves all residents in addition to Lake Chelan State Park, the McCully Farm and the Guthmiller residence on Bear Mountain. Lake water is used to refill the tank. There is a pump house adjacent to lot 30. PUD is in the process of digging a well forty feet from the lake on State Park property. This change will take place in 2007. All utilities are underground in Chelan Ridge. Currently there are seven fire hydrants in Chelan Ridge and three fire boxes (each of which contains 300 feet of hose, a wrench and a connector for hooking the hose to the fire hydrant). There is a water connection adjacent to lot 42 which is designated as a future fire hydrant.

5) Lower South Shore - The Lower South Shore region consists of the area between the junction of Hwy 97 A and Hwy 971 (where Pat and Mike's Gas Station is located) and continues up lake approximately 4 miles to the area just west of Sunnybank (near the monument). Dominant vegetation includes grass-shrub species with pockets of dense stands of conifers. The terrain is steep and characterized by moderate to high density development often separated by pockets of dense vegetation or steep rocky hillside. South Lakeshore Road is the only route in and out of the area. It is a two-lane State road that bisects buildable land into two narrow corridors; one above the road, and one between the road and the lake. The area above the road is steep and some areas are prone to landslides. Three wineries, housing developments and individual homes also exist above the road. Currently the largest development above the highway is Sunnybank comprised of approximately 50 lots (most of which have homes). Sunnybank consists of 2 separate homeowner associations and has a large canyon/ravine

separating the two. The other residential developments on the lower south shore (Grandview and Karma Canyon) are new and only a small percentage of the lots have had homes built on them. It is likely that development of these two new communities will continue until fully built out.

Lots between the road and the lake are narrow with an average width of fifty feet. Homes are typically situated near the lake with dense vegetation separating the home site from the road. Access to individual parcels is limited to private roadways that are often steep and narrow with many lined with trees and other landscaping materials, making entry by fire engines difficult or impossible in some places. The homes below the highway, along the shore line, do have individual access to the lake water, so homeowners have the option of purchasing their own pumps, hoses and generators to pump water out of the lake to be prepared for the event of a fire. The homes above the highway do not have that option.

The lower south shore currently relies on the Chelan District 7 Fire Department for fire protection. There is one city/county fire hydrant located near the junction of 97Alt and 971 and a very sparse amount of private fire hydrants along the lower southshore.

The two communities of Sunnybank above the highway jointly use one water system, pumped from the lake. It has a filtration plant located in a building above the highway on the access road to the down lake section of Sunnybank. The water is pumped up hill from there to holding tanks (currently approximately 85,000 gallon capacity). These tanks service each of the 50 lots with drinking water, irrigation water, and would be the water available in those communities for fighting fires. There are four or five fire hydrants in the Sunnybank communities. Some of these fire hydrants were code approved at the time the development was started, but are substandard hydrants in regard to current code requirements of today.

Priority fire prevention and protection actions identified by community members include overgrown brush and trees in several canyons and ravines above the highway, overgrowth of planted trees and landscaping on individual properties, open hillsides with brush and grass which would be fuel for wildfires. Road problems include areas where rocks and trees could fall on the highway (especially in the event of wildfires) and very few places along the highway where open roadway would allow for fire engines to turn around.

6) Chelan Falls & Chelan Butte - The Chelan Falls and Chelan Butte region is comprised of the unincorporated community of Chelan Falls, the Little Butte Ranch development, and interspersed residences. Dominant vegetation includes grass-shrub species with scattered ponderosa pine. Development in the region ranges from low to high density, with the highest density development found in Chelan Falls and other areas along the Columbia River. Terrain is steep with limited access to water. State Route 150 is a lateral of Highway 97 and is the main road in and out of the region. Millard Road access the Butte from Chelan and it turns into Chelan Butte Lookout Road. Utilities include two 98,000 gallon reservoirs, underground utility lines, and communication towers on Chelan Butte. Land use is predominately rural residential homes and orchards. The Chelan Falls State Park is located at the confluence of the Chelan and Columbia Rivers. Also located near the park is the Chelan Falls Public Utility District power house. Priority fire prevention and protection actions identified by community members of the Little Butte Ranch include the development of a fuels reduction program and emergency

evacuation plan, access road improvements and installation of a back-up generator to power the back-up generator will be used as emergency power to the pumps which serve the Little Butte Ranch's 90,000 reservoir and 8000 gallon pressure tank. These tanks are the main source of water for firefighting in the development.

3. Planning Process

Background

The enactment of the Healthy Forest Restoration Act (HFRA) of 2003 created the 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 US Forest Service (USFS) and the Bureau of Land Management (BLM) to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuels reduction projects.

In order for communities to take full advantage of this opportunity, a Community Wildfire Protection Plan must first be prepared. The South Shore CWPP is meant to conform to the intent and letter of HFRA and consistent for Chelan County which is an at risk community of catastrophic wildfire.

The process of developing a CWPP is intended to help the communities of Chelan County clarify and refine priorities for the protection of life, property, and critical infrastructure in the wildland-urban interface (WUI). It can also lead community members through valuable discussions regarding management options and implications for the surrounding watersheds.

The language of in the HFRA provides maximum flexibility for a community to determine the substance and detail of CWPPs and the procedures used to develop them. Because the legislation is general in nature, a Chelan County is providing assistance in the preparation of CWPP. Currently, CWPPs are being developed on the County Fire District boundary scale in coordination between the landowners of the county, County Fire District staff and representatives of the United States Forest Service, Bureau of Land Management and Washington State Department of Natural Resources are providing assistance to the effort. There are nine Fire Districts in Chelan County and CWPPs are being developed for each. These CWPPs will be addendums to the Chelan County-Wide Community Wildfire Protection Plan. Priorities developed for each Fire District will be ranked for the County.

Updates and edits to the CWPPs developed for Chelan County will be performed yearly and will be coordinated by the Chelan County Conservation District. It is expected that updates will be necessary in order to reflect recent work done to address issues identified in the CWPPs. Another important aspect of these plans will be the monitoring of effectiveness of projects implemented under these plans.

The wildland urban interface (WUI) is commonly considered the zone where structures and other human development meet and intermingle with undeveloped wildland or vegetative fuels. This

WUI zone poses tremendous risk to life, property, and infrastructure in associated communities and is one of the most dangerous and complicated situations firefighters face.

Both the National Fire Plan and the Ten-Year Comprehensive Strategy for Reducing Wildland Fire Risks to Communities and the Environment place a priority on working collaboratively within communities in the WUI to reduce their risk from large-scale wildfire.

The HFRA builds on existing efforts to restore healthy forest conditions near communities and essential community infrastructure by authorizing expedited environmental assessments, administrative appeals, and legal review for hazardous fuels projects on federal land.

The Act emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and it places priority on treatments identified by communities themselves in a CWPP.

The HFRA provides communities with a tremendous opportunity to influence where and how federal agencies implement fuel reduction projects on federal lands and how additional federal funds may be distributed for projects on nonfederal lands. A CWPP is the most effective way to take advantage of this opportunity.

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

In addition, these entities are directed to consult with and involve local representatives of the USFS and BLM and other interested parties or persons in the development of the plan. The process is intended to be open and collaborative, as described in the Ten-Year Strategy, involving local and state officials, federal land managers, and the broad range of interested stakeholders.

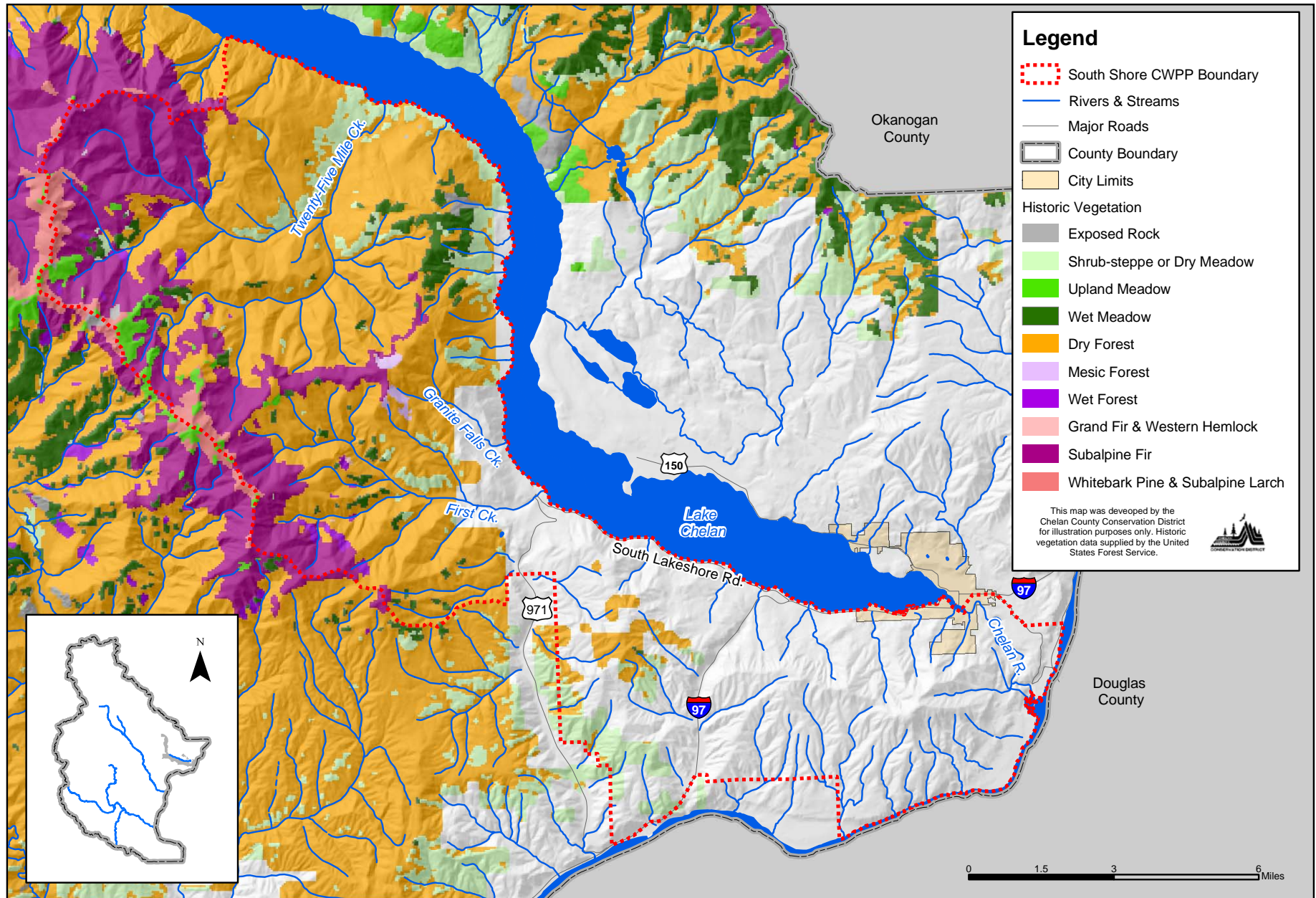
In the absence of a CWPP, the HFRA limits the WUI to within ½ mile of a community's boundary or within 1½ miles where mitigating circumstances exist, such as steep slopes or the presence of a critical evacuation route. At least 50 percent of all funds appropriated for projects under the HFRA must be used within the WUI as defined by either a CWPP or by the limited definition provided in the HFRA where no CWPP exists. For the South Shore CWPP, the WUI is defined as the entire project area (see map on Page 3).

Process and Partners

In the spring of 2006, residents of the South Shore area of Chelan, Washington organized to begin develop a Community Wildfire Protection Plan for the area. A group of approximately 35 neighbors initiated the effort, along with assistance from Chelan County Fire District #7, United States Forest Service and Chelan County Conservation District staff. This effort was coordinated with adjacent CWPP efforts in Manson (Fire District #5), Union Valley (portion of Fire District #7) and Entiat (Fire District #8).

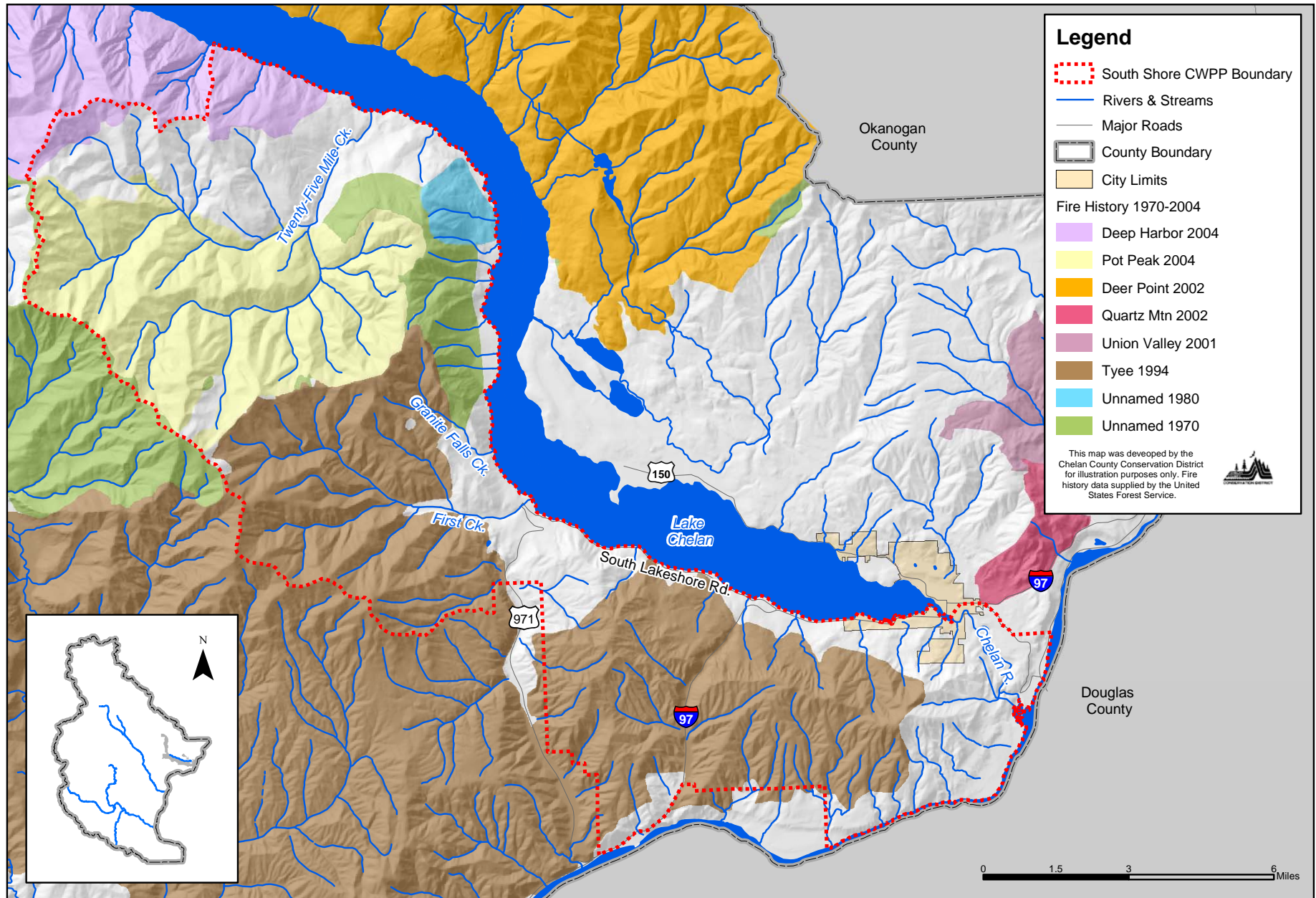
South Shore Lake Chelan Community Wildfire Protection Planning Area

Vegetation Types on National Forest Lands



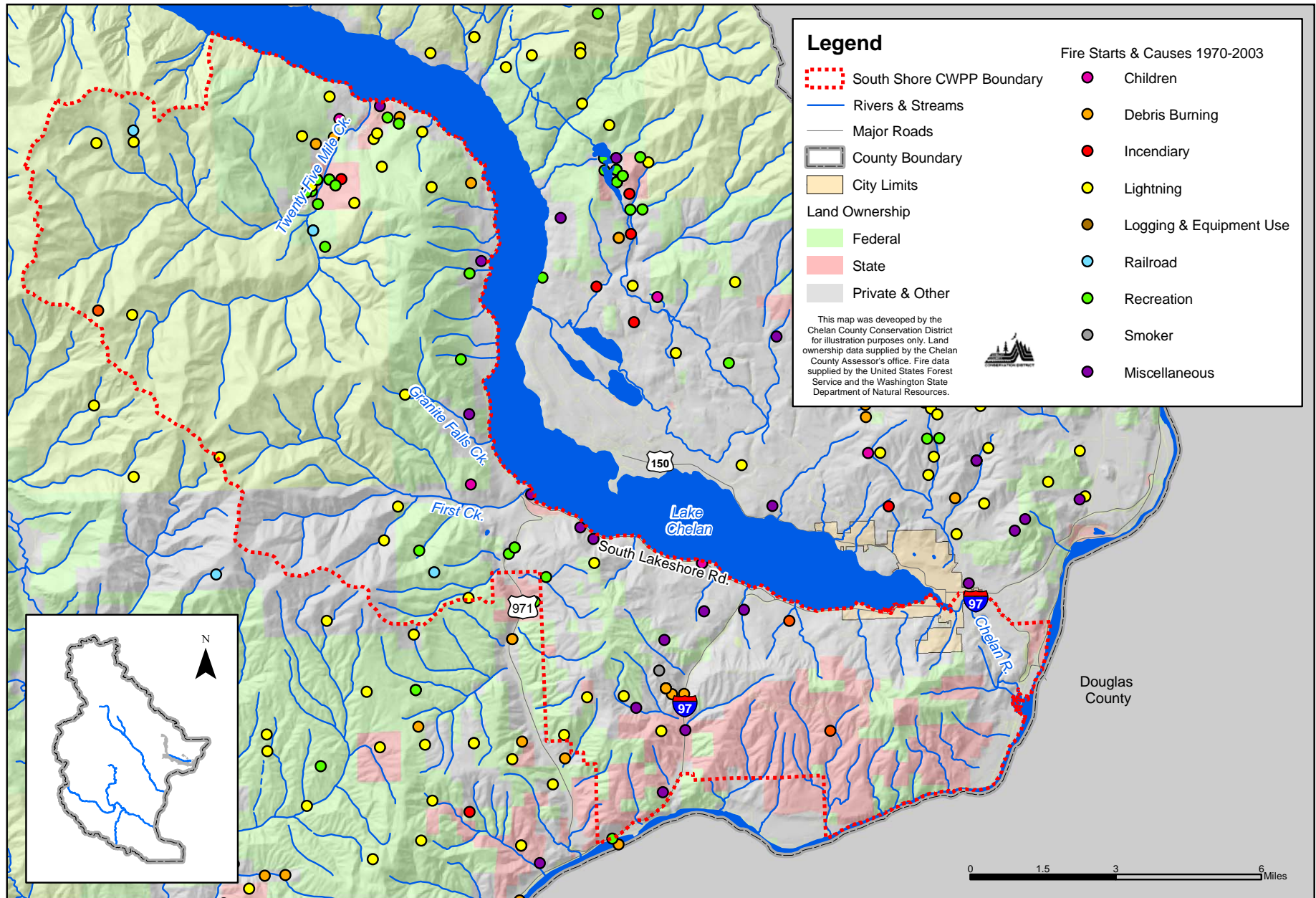
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Fire History 1970-2006



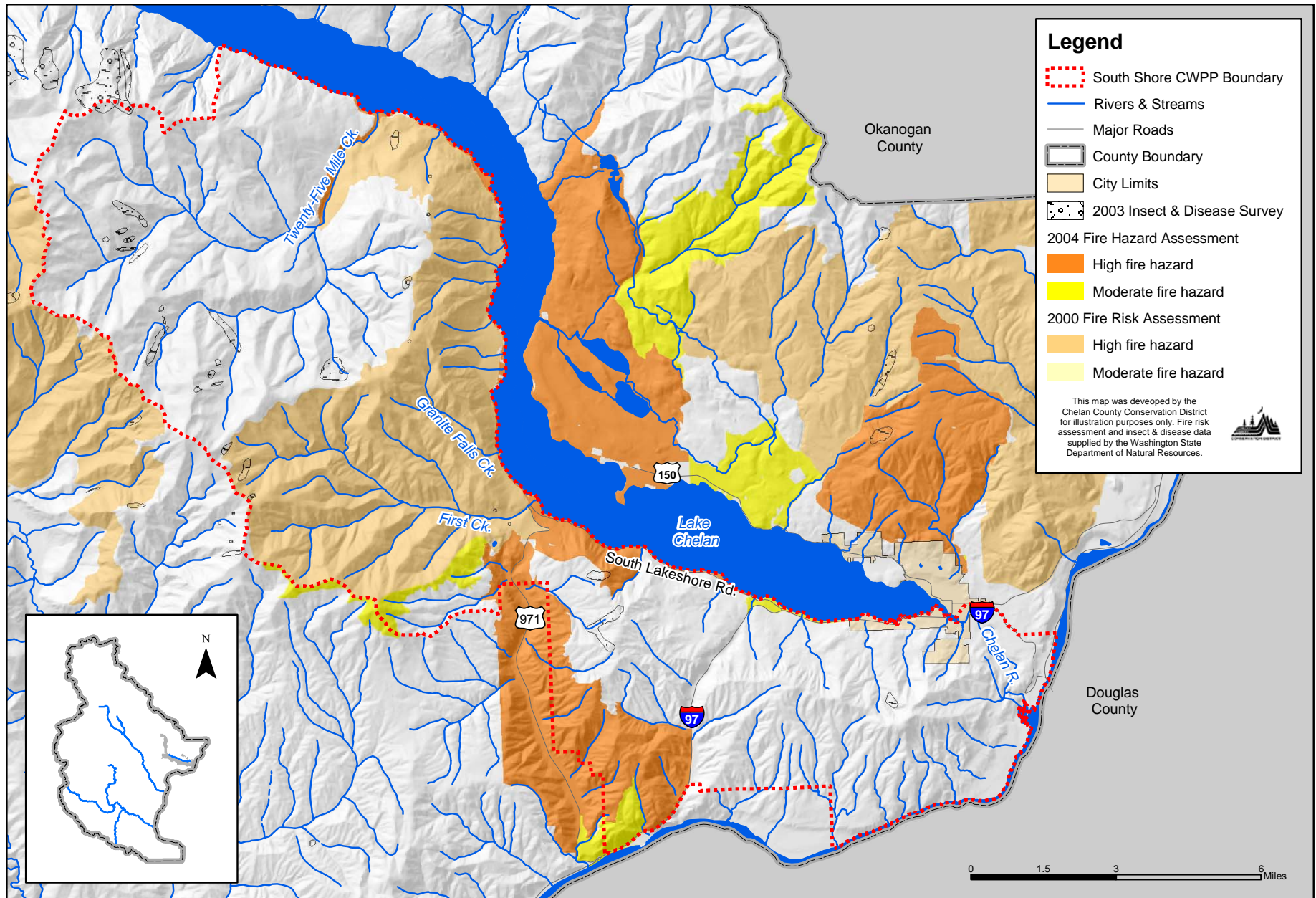
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Reported Fire Starts & Causes 1970-2003

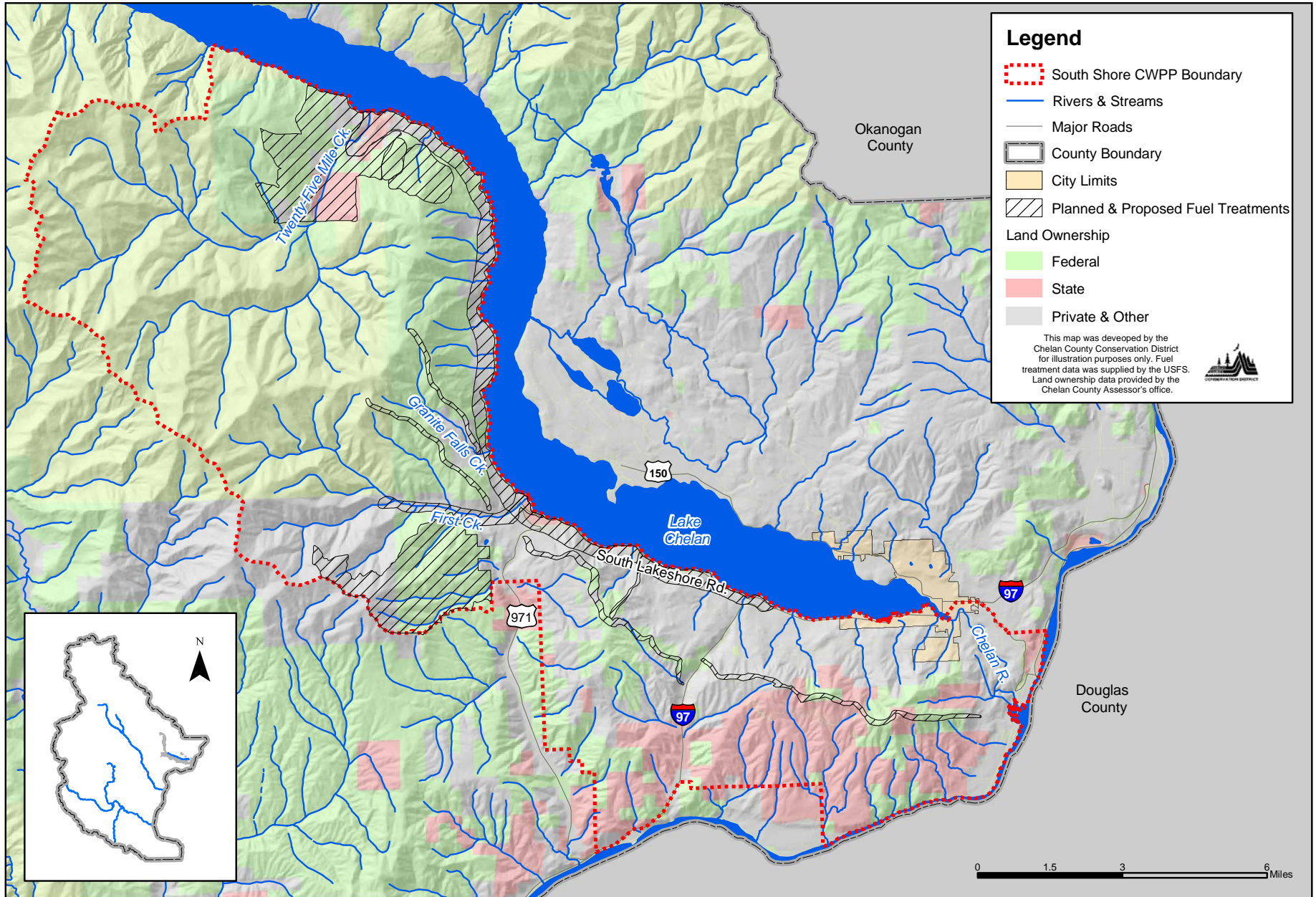


South Shore Lake Chelan Community Wildfire Protection Planning Area

Fire Risk Assessment and Insect & Disease Survey Data



South Shore Lake Chelan Community Wildfire Protection Planning Area Planned & Proposed Projects



4. Assessment

Existing Information

A substantial amount of data is already available from several sources. Primary data used in this plan came from the USFS-Wenatchee-Okanogan National Forest, Chelan Ranger District, National Forest Fire Management Plan, Chelan Basin Watershed Assessment, 3/95, Chelan County Fire District No. 7 (structure protection plan and evacuation plan, etc.) and WDNR (historic/potential vegetation, topography, fire cause statistics). *Note: Portions of this document include intellectual property of the WDNR and are used herein by permission. Copyright 2004, WDNR. All Rights Reserved.*

Vegetation

The vegetation in this CWPP area exhibits tremendous diversity, from the divide with the Entiat valley at 7,000 feet elevation to the Columbia River near Chelan Falls at 800 ft., due largely to a variation in annual precipitation of 60 inches at the divide, to only 10 inches near Chelan Falls. The lakeshore near First and Twenty-Five Mile Creeks receives about 20 inches annually. In general, forests become less dense, transitioning to shrubs and grass, going from west to east in this area. Ravines and north facing slopes support higher tree and shrub densities. The transition from forest to primarily grassland/shrubland occurs near Bear Mountain, so that to the east of Hwy 97A at Knapps Coulees, trees generally grow only in small groups and ravines.

In the forested portion of this area, the majority of structures are located in ponderosa pine and dry Douglas fir forest vegetation types, often with a variety of tall native shrubs including, ocean spray, bitter cherry, serviceberry, elderberry, Douglas and big leaf maple, and willow, and shorter shrubs of bitterbrush, ceanothus, snowberry, boxwood, Oregon grape and wild rose.

Some homes are located on more moist sites which support dense vegetation, in valley bottoms, draws and on north-facing slopes. Vegetation in these areas may include cottonwood, aspen, red-osier dogwood, alder and thimbleberry in addition to those mentioned above. Lodgepole pine grows with ponderosa pine and fir on north slopes in First and Twenty-Five Mile Creeks. Dense vegetation may also occur around residences where it is intentionally maintained for privacy and landscaping.

Natural vegetation in the dry grassland/shrubland ecosystems is primarily bitterbrush, sagebrush, bunchgrasses, balsamroot, wild buckwheats, phlox and other short plants. Small stands of pine, fir and taller shrubs grow where more moisture is available, such as draws, ravines and rocky areas. Fires and prior cultivation have changed patches of vegetation to cheatgrass, mustard, salsify and other weeds. Recent fires on Chelan Butte have reduced the density of shrubs in favor of grasses.

The majority of the CWPP area land in First and Twenty-Five Mile Creeks is undeveloped National Forest with a great variety of vegetation types and structural stages. The upper elevations support subalpine fir forests, along with lodgepole pine, whitebark pine and subalpine larch. These forests transition to lower elevations with primarily ponderosa pine and Douglas fir on south-facing slopes, and Douglas fir, ponderosa pine and lodgepole pine on north-facing slopes. South facing slopes include areas of sparse vegetation, sagebrush, bitterbrush,

bunchgrasses and balsamroot. Fires occurring in 1970, 1994, 1998, and 2004 with a variety of burn intensities, have created a patchwork of structural stages, habitats, and vegetation and fuel conditions.

Fire Ecology

Historically, our local ecosystems have been kept healthy and in balance by a variety of natural disturbances, including fire, insects, pathogens, wind throw, floods, weather variations, landslides, avalanches and earthquakes. Over the last few centuries, this balance has been affected by introduced disturbances of fire exclusion/suppression, livestock grazing, roads and development, logging, and introduced plants, animals and pathogens.

Fire is the disturbance of primary interest for this CWPP, and it is affected by most of the other disturbances mentioned. Lightning and human caused ignitions occur frequently in the area. Vegetation grows, dies and produces organic matter. Fire consumes organic matter, kills some vegetation, stimulates many types of plants and recycles nutrients. Without fire to perform these functions at the intensities and frequency under which they evolved, ecosystems can fall out of balance.

Fire regime is a generalized description of the role fire plays in an ecosystem and is an effective way to classify the effects of fire on vegetation by scale, frequency and severity. Fire regimes are based on the historic fire behavior in a given vegetation type, describing the potential fire behavior under historic conditions. Patterns of vegetation and their associated fire regimes are also related to local landforms, topography and weather patterns in the particular area.

Due to changes in ecosystem disturbance patterns, fire behavior may now deviate considerably from the historic fire regime. These changes may benefit some species, but they put others at risk. More importantly, altered fire regimes potentially destabilize ecosystems and landscapes, thus creating conditions that may promote unprecedented catastrophic disturbance events. In turn, they may seriously reduce ecosystem resiliency, the ability to return to prior levels of productivity.

Fire regimes I, II, III and IV are predominant in the South Shore Lake Chelan CWPP area and are described as follows.

Fire Regime I - <35 years non-lethal, Ponderosa pine and Douglas fir plant associations. Primarily Bear Mountain area, First Creek, Upper South Shore and Twenty-Five Mile Creek

Fire Ecology and Historic Conditions

Fire Regime I consists of all plant associations (categories of vegetation types based on dominant plant species) within the Ponderosa Pine (*Pinus Ponderosa*) series, Douglas fir (*Pseudotsuga menziesii*) series and drier association in the grand fir (*Abies grandis*) series, generally found where precipitation is 25 inches or less, but also on sites with up to 45 inches. (Note that little grand fir occurs in our area, but subalpine fir and lodgepole pine may play a similar role.) This fire regime includes the driest forested plant associations. As soil moisture decreases and soil temperature increases, the vegetation group grades into grassland/shrub land (Fire Regime II.)

Prior to Euro-American settlement, fires occurred every 35 years or less, and were seldom stand replacing. In this region, data shows that generally low severity ground fires covering several thousand acres burned at intervals of less than 15 years, with larger burns of 10,000 to 30,000 acres every 10 to 20 years. These frequent fires, caused by both lightning and Native Americans, reduced ground fuels, limited the establishment and growth of thin-barked, shade-tolerant species (fir and lodgepole pine), and perpetuated early seral species, particularly ponderosa pine. Forests were composed primarily of Ponderosa pine with a smaller component of Douglas fir, since the pine can survive fire at a much younger age than the fir.

The historic landscape was dominated by uneven-aged park-like forests with one or two canopy layers, numerous large, old (250-400 years) trees, and vertical discontinuity between ground vegetation and tree crowns. Frequent fires maintained under story vegetation of native grasses, shrubs and wildflowers, and generally limited establishment of tall and dense shrub communities.

Riparian areas, northerly aspects and other moist sites were the exception to the open park-like landscape. Better growing conditions on these sites allow Douglas fir, lodgepole pine and shrubs to become established during fire-free intervals. Higher moisture in these areas may also have prevented the spread of fire into them. With slightly less frequent fires, there would be more variation in burn intensities, resulting in a greater variety of vegetation species and structures. A similar situation may have occurred in forested areas which are isolated from surface fires by rock and sparse vegetation, resulting in longer fire-free intervals, more dense vegetation and more variability.

Insects and pathogens also play a role in these forests, contributing to the development of important wildlife habitat, nutrient cycling, and stand and landscape-level diversity. Historically, beetles, dwarf mistletoe and root diseases operated primarily in small patches across the landscape, and in combination with fire, increased diversity of structure and habitat. (see Ok/Wen NF FMP) Frequent fire helped limit the size and extent of these disturbances.

Current Conditions

Some forests in this fire regime still retain a low density and park-like structure similar to historic conditions. However, the majority of these dry forests have been radically altered, and now exhibit substantially increased densities of trees, a higher proportion of Douglas fir and thin-barked tree species, and greater susceptibility to insects and disease.

The exclusion of from 3 to over 10 predicted cycles of fire, results from a combination of fire suppression, elimination of Native American ignitions, and elimination of fine fuels from prior livestock grazing. Small trees, most of which would have been killed in the historic fire regime, have been allowed to grow for over a century, converting park-like ponderosa pine forests into multi-layered, dense forests with a much smaller proportion of pine.

Large, old ponderosa pines, which are resistant to fire and important for many wildlife species have become less prevalent, due to logging, recent uncharacteristic fires and moisture stress. These trees thrived in the open forest conditions maintained by frequent low intensity fire, but do not get sufficient sun and moisture in dense forests.

Dense multi-layered forests in Fire Regime I are more susceptible to bark beetles, defoliators, root diseases and dwarf mistletoe infestations than were the park-like pine stands they replaced. Susceptible host trees now grow in close enough proximity across landscapes to create the continuity required for major outbreaks. While insects and pathogens have replaced fire in the role of cycling biomass and nutrients, they are less efficient in this capacity than fire. The resultant accumulation of dead trees, logs and branches decays slowly in the dry climate and has increased fuel levels above historic conditions.

When fire does return to these dense, dry forests, they are more likely to burn uncharacteristically, at moderate and high intensity, rather than the historic low intensity. The increased fuel accumulation results in greater flame lengths, more crown fire and greater resistance to control. Tree mortality is often high, even for the fire resistant ponderosa pine and large Douglas firs. Soils, understory vegetation and wildlife populations which evolved with low intensity fires are at risk of long term damage from uncharacteristic fire intensity.

Fire Regime II - <35 years stand replacing (grassland and shrublands) Primarily Chelan Butte and South end of Bear Mountain area

Fire Ecology and Historic Conditions

This fire regime is generally found below, or as small inclusions within Fire Regime I, and in the eastern portion of the CWPP area usually related to topographic changes and located mostly in deep canyons on south and west aspects. They are part of the steppe region and are not capable of supporting a forested community. A few conifers may exist in isolated patches that are able to support limited forest community development.

Historic fire intervals necessary for a stand replacing fire in mountain grasslands/shrublands were less than 35 years. Local information indicates that stand replacement fire intervals in these grass/shrub lands was less than 15 years. Historic fire severity would be low due to fire timing when most grass communities would have already completed their annual growth cycle and were likely already semi dominate resulting in little damage to these communities. In most cases fire served to invigorate resprouting and also supported seed germination of many plant species. Canopy closure is generally less than 10% where trees exist. The climax shrub communities of the Eastern Cascades provide diversity to the landscape as part of a vegetative mosaic.

Downed woody debris was very uncommon and was less than 5 tons/acre. Coarse woody debris would have been subjected to repeated low intensity ground fires. Surface organic layers ranged from non-existent to over two inches in depth comprised almost entirely of decaying grass roots. Surface soil colors reflect the influence of herbaceous communities and are generally darker than adjoining forest soils. Climatic and soil/site features inferred that available soil moisture was always limited and that surface soils were almost always dry during most of the summer months. Moist stress would have been an important ecological process strongly influencing vegetation form and patterns.

Climax shrublands are communities where a shrub species are the dominant plant form, whereas grasslands are dominated by grass species. In the planning area, bitterbrush, sagebrush and

buckbrush are the most widespread shrub species and bluebunch wheatgrass, blue wild rye and Idaho fescue are the most widespread grass species.

Under historic conditions, vegetation within this fire regime was predominantly native bunch grasses, and balsamroot, the direct result of frequent fires. Shrub species were likely confined to more mesic (moist) sites such as draws or more northerly exposures, gradually spreading over the landscape until the next fire burned over the site once again resetting the successional clock to the native grasses.

Current conditions

Current vegetation within the shrub steppe community is a direct result of how recent the past fire disturbance has been. Those areas where fire has been excluded for more than 35 years are dominated by antelope bitterbrush whereas those that have burned more recently are dominated by native bunch grasses, balsamroot and to some extent cheat grass, a non-native species. It is also likely that fire exclusion has allowed ponderosa pine to develop in greater numbers within the shrub steppe community than would have occurred historically. This fire regime is covered with shrub species predominately bitterbrush due to fire exclusion.

Fire Regime III – 35-100+ years, mixed severity fire. Mixed severity vegetation types. Primarily mid-elevations of First Creek, Forest Mt, Twenty-Five Mile Creek

Fire Ecology and Historic Conditions

The mixed severity vegetation type is interspersed within and positioned generally above the dry forest group. Plant associations within this group tend to occur at elevations above 3,700 feet, but generally are not found on steep southern exposures. It can be found in some places below 3,700 feet elevation on north slopes and within riparian areas.

Historic fire intervals ranged from 35 to 100 years with mixed severity. Fire severity would range from non-lethal to stand replacement depending upon historic stand structure. Vegetation in this fire regime is transitional between the frequent, low intensity fire regime of the dry forests and the infrequent, high intensity regime of the high elevation/subalpine fir series.

Many mixed severity vegetation types are located in close proximity to dry vegetation group stand types. Fire frequency on these sites must have been influenced by these neighboring stand structures and fire regimes. The moderate fire regime seldom produced climax stands because successional development of these stands would require long fire free periods. . Very moist and protected riparian areas may have been the exception.

Current conditions

Vegetation within this fire regime is represented by both even-age and multi-storied high density stands, and generally supports an abundance of live and dead biomass. In mature forests, tree canopy closure is generally greater than 60 percent, and species composition and stand structure is likely similar to historic conditions. However, much of these vegetation types in our area have been affected by recent fires, beginning in 1970, resulting in many younger even-age stands.

Fire Regime IV - 35-100+ yrs, stand replacing. Subalpine Fir (including stands of larch, white bark pine, lodgepole pine, and spruce). Primarily in areas of higher elevation in the Upper South Shore, Twenty-Five Mile Creek and First Creek areas.

Fire Ecology and Historic Conditions

This fire regime covers a wide range of conditions, from 35-200+ years return interval of stand replacing fire, though in the planning area few stands exceed 100 years without fire. These fires were historically stand-replacing and less than 1,000 acres, with larger fires averaging between 1,000 and 2,000 acres.

High elevation forests of subalpine fir, lodgepole pine, subalpine larch, spruce and white bark pine extend from mid-elevation, generally above 4,900 feet, to upper timberline, in one of the coolest and moistest of the forested zones. This fire regime also captures those lodgepole stands that tend to remain in an early seral condition, due to fires often occurring more frequently than 100 years. Much of the higher elevations in the CWPP area has a component of single storied closed canopy lodgepole pine that often burns before other tree species are able to grow and mature. These areas tend to be located above drier sites where fires occurred more frequently and burn into these stands. This is referred to as the “dry site connection”.

Grasses or low-level shrubs generally occupied forest understories. Downed woody debris is common ten or more years after a fire event, and range from 15 to 25 tons/acre. Coarse woody debris subjected to the next fire is consumed. Duff layers ranged from a low of .5 inches to 1.5 inches dependent upon fire interval.

Current Conditions

The current condition of these stand types are likely not much different than historically. Some logging has occurred in this forest series, but not extensively. Although fire exclusion has altered the historical distribution of forest structures in this forest type in many areas, recent fires in the Lake Chelan Basin have produced a variety of younger forest stands.

Protection Capabilities

Chelan County Fire District #7 is responsible for protection of private property in the area surrounding the community of Chelan. District boundaries extend from Chelan Falls to 25 Mile Creek State Park. The City of Chelan is part of the fire district. The WDNR is the primary agency responsible for fire protection on forested private and state lands while the USFS is the primary agency responsible for management of fires on federal land. Areas outside the boundaries of the Fire Protection District #7 are not guaranteed fire response from the District. DNR will respond to forest fires however they do not have responsibility for structures. The District maintains mutual aid agreements with WDNR and all fire districts within Chelan and Douglas Counties.

Fire District #7 is a small combination department covering approximately 125 square miles. The District employs three career employees and estimated 25 volunteers. CCFD #7 has one station located at 232 East Wapato Avenue in the city of Chelan.

Current Equipment:

- 3 type 1 structure engines
- 3 type 3 wildland engines
- 1 type 6 brush truck
- 2 water tenders, 1,500 and 3,000 gallon
- 1 75' aerial ladder
- 1 Command vehicle
- 1 Rescue Truck

The objective of the CCFD#7 structure protection plan is to safely and efficiently manage resources to protect life, property and resources in the event of an approaching wildfire. Strategy decisions shall take into account the following tactical considerations:

1. Bottomlands are commonly grasslands with some scattering of timber, and creek beds. Steep slopes range from heavily timbered to patches of scattered trees. Fire may move rapidly through bottomlands igniting slopes where spotting, torching, and crowning can occur. Slopes and bottomlands are heavily populated with structures.
2. Most homes will require maximum effort to defend, requiring prompt implementation of this plan and the need to triage (determine which can safely be defended) structures for defensibility.
3. Access to areas differs in locations. Bottomlands are commonly accessed by county road or state highway. Slopes 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 and log dwellings in the district to multistory commercial structures in the City of Chelan.
5. A community water system exists within the city limits of Chelan as well as at Little Butte Ranch. Several other small community water systems exist in the planning area but none that could support fire fighting efforts.
6. CCFD#7 and its cooperators cannot assemble enough structure protection capabilities to protect all resources within the 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.

Structural Vulnerability

With the exception of the lake front, which is densely developed, residences within the boundaries of CCFD#7 are widely dispersed and are somewhat entwined into the forest landscape. Access, topography, slope, and fuels all play a role in each structure's fire risk; timber mixed with light fuel is conducive to fast moving wildfires. For these reasons, residences from the Monument area (includes Lower South Shore, Upper South Shore, First Creek, Chelan Ridge, Bear Mountain, and 25 Mile Creek neighborhoods) up lake and connected drainages are at the highest risk for large fire loss. Not having water systems in the planning area limits the amount of protection the district can supply. Structures within the City limits and the along the South Shore of Lake Chelan are primarily concerned with widespread spotting potential as their primary risk.

Key Contacts

Organization	Contact	Phone Number
Chelan County Fire District #7	Main Station RiverCom	(O) (509) 682-4476 911 or (509) 663-9911
Chelan County Fire District #7 Administration	Chief Dennis Ashmore Bat. Chief Mike Stowe Bat. Chief Rusty Stamps Bat. Chief Dan Nutley	(O) (509) 682-4476 (O) (509) 682-4476
Chelan County Sheriff	Sheriff Mike Harum RiverCom	(O) (509)667-6851 (C) (509)630-1700 911 or (509) 667-6851
DNR Southeast Region	Steve Goetz	(O) (509) 664-3100
Chelan Ranger District (USFS)	FMO Marsh Haskins	(509) 682-2576
Central WA Interagency Comm. Center (CWICC)	Mark Hayes	(O) (509) 662-4393
Chelan County P.U.D.		(O) (509) 663-8121 (E) (877) 783-8123

5. Risk Evaluation

An area risk assessment was completed by WDNR (NFP-299 area risk assessment) that grouped the area rather than analyzing risk to individual structures.

Fuels/Hazards

The WDNR has classified the area surrounding Chelan as a 'high risk' WUI community. Past activities such as logging, grazing and fire suppression have altered the normal fire regime, stand species composition and affected forest health. Dense, overstocked stands of trees are increasing the fire hazard in the South Shore CWPP area. 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 (WDNR GIS; see previous Vegetation map) and root rot (disease) is also a problem. Stands often have contiguous crowns and ladder fuels in the form of young conifers and tall brush species. All of these variables provide a continuous fuel profile which can create conditions for an intense and fast moving fire.

Access

There are several main roads that serve as designated emergency evacuation routes including Highway 97A, South Lake Shore Road, Navarre Coulee Road. However, several of the roads that access canyons or valleys are dead end roads. Not all roads in the planning area are paved or in suitable condition for fire equipment. Therefore, road access has been identified as a concern.

The lack of improved roads that could serve for two access roads for emergency evacuations has been identified as a concern in some areas.

Evacuation

The Chelan County Emergency Management Program administers the evacuation of the area surrounding Chelan in the event of a wildfire.

Staging Area for Tactical Resources

If a fire threatens the area surrounding Chelan, WDNR is primary agency for fire protection on forested private and state lands and USDA Forest Service is the primary agency responsible for management of fires on federal lands. Chelan County Fire District #7 will provide first response with mutual aid resources available throughout the county. These resources may respond to a pre-designated staging area.

Staging area options include;

- Fields Point
- Fire Camp at 25 Mile State Park
- Lake Chelan State Park

If fire threatens any portion of Fire District #7, the District will respond with mutual aid resources throughout the Chelan and Douglas County. These resources may use any one of the following locations can be pre-designated as a staging area.

- Chelan County Fire District #7, Station #1 at 232 East Wapato Avenue
- Chelan High School, 210 Webster

Command Post Locations

Chelan County Fire District #7, Station #1, 232 East Wapato Avenue

Mainline	(509) 682-4476
Fax line	(509) 682-3297
Email	ash7@chelanfireseven.net

Two other possible command post locations identify include 25 Mile Creek State Park Fire Camp and the Chelan Rodeo Grounds. Additional Phone lines would need to be connected.

Water Supplies

The location of water sources available for fire fighting efforts has been identified. Water sources are primarily surface water withdrawal sites located on private land and right-of-ways at stream crossings. Instead of locating additional sites for water storage tanks for fire fighting purposes, obtaining portable pumping stations has been identified as a means to provide water for fire fighting. Finding funding for the purchase of portable pumping stations will be pursued as part of the Mitigation Action Plan of this CWPP.

Fuel Breaks and Safety Zones

A primary treatment goal in the CWPP area is the creation of strategically-placed fuel breaks on federal and state managed lands and private lands in the planning area and along roads to allow for safe ingress and egress.

Domestic Animal Placement

In the event of a fire, the Wenatchee Valley Humane Society will work with landowners to find a safe location for livestock as well as domestic animals for homeowners who can not take their animals with them. Additionally, the rodeo grounds in Chelan have been identified as a location that can accommodate livestock in the event of a wildfire.

6. Current Activities

Protection Measures

Fire protection for the Chelan area is provided by CCFD#7. Depending on the location within the planning area, response times range between 2-25 minutes.

Existing Procedures

A group of landowners in the planning area organized themselves to address fire issues in the community. This group hopes to provide direction, through this plan, on the management of federal and state lands inside and adjacent to the planning area. In addition, the group desires to implement actions identified in the Mitigation Action Plan portion of the plan, page 28.

Project Proposals

No specific project proposals have been submitted as this time. However, as the result of developing this plan specific project areas have been identified on state, federal and private lands (See Planned and Proposed Projects on page 14). Additionally, the CWPP effort expects to prioritize where future project proposals will take place.

Coordination with Public Agency Activities

In order to maximize the fuels reduction work planned for private land, it would be desirable for complementary projects to take place on adjacent federal and state managed lands in and adjacent to the South Shore CWPP planning area. The CWPP is recognized as the instrument necessary to organize and educate the public to further encourage and suggest design of such future projects.

The USFS-Chelan Ranger District is preparing a 5-year Action Plan that will prioritize fuels reduction projects in the WUI. Within the South Shore CWPP, there are existing and planned Forest Service projects that include pre-commercial thinning, commercial thinning, pruning, piling, burning, and under burning treatments. The development of this document will facilitate the identification of areas to be included in the Mitigation Action Plan that will meet the objective of landscape fuels reduction and discontinuity in the pattern of fuels in the proximity of WUI. In the future, the entire South Shore CWPP planning area will be continuously reviewed for potential landscape fuels treatments in order to maintain a 5-year Action Plan.

Efforts will continue to be made to coordinate projects that maximize the benefits of landscape fuels reduction involving other public and private entities, and as outlined within the South Shore CWPP Mitigation Action Plan, can be considered for inclusion in the USFS-Chelan Ranger District 5-year Action Plan as it is amended in the future.

State agencies manage approximately 8,724 acres (6,465 acres managed by Washington State Department of Fish and Wildlife, approximately 2,179 acres Washington State Department of Natural Resources and approximately 80 acres managed by State Parks) or 11.1% of the planning area. Department of Fish and Wildlife lands located in the planning area are managed primarily for big game (mule deer and bighorn sheep) and upland game and are found on upper Chelan Butte. Prescribed burns to reduce fuel, if scheduled properly, are compatible with this management priority. Washington State Parks are also currently pursuing fuels reduction efforts at Lake Chelan State Park.

The Washington State Department of Natural Resources has a continuing management strategy for all state trust land parcels. The prescriptive practices are accomplished at various times throughout the management cycle for each parcel. The DNR recognizes the need to accomplish fuels reduction on state trust land parcels and works to include fuels reduction into management prescriptions as well as times when design of joint ownership projects will benefit all landowners involved.

Landowner Committee

A landowner committee was established for the purpose of assisting with development of the South Shore CWPP. This committee was made up of concern homeowners who live, work and play in the WUI and responded to information about developing a Community Wildfire Protection Plan for the South Shore area. Many of these homeowners were already involved with fuels reduction and fire education efforts in the area as part of homeowner association led efforts or simply on their own. The committee provided the bulk of feedback from community members during the development of the plan. It was decided by the committee that the focus of the South Shore CWPP is to help ensure human safety and structure protection on private land. Based on this, committee members decided to have the Mitigation Action Plan concentrate on safety issues in the following categories: education and outreach, fuels reduction, and improved protection capabilities. Projects that address human safety issues will be of a higher priority than projects that benefit homes. No home is worth a life.

Education and outreach was identified as one of the most important tools to be included in the plan. It was recognized by the committee that landowners will need to be informed of the need and means to “FireWise” their property and ensure safety. In addition, education and outreach will need to reach people who are only part time residents or visit frequently but may not live in the planning area. A high percentage of the homeowners do not live full time in the area. Several items were identified as a means to get fire information out to the public (See 8. Mitigation Action Plan, page 28). The objective of this portion of the plan is to provide information to landowners and visitors to increase knowledge and understanding of fire related issues. Some things considered to accomplish this include hosting future “FireWise” presentations and workshops and work to support the volunteer firefighter program.

Fuels reduction, both around homes and across the landscape was the second priority of the landowner committee. The committee agreed that implementing defensible space around homes was the first priority for fuels reduction and the second priority was the general landscape. Landowners will be encouraged (and information provided on how) to create a defensible space around their own homes, but financial assistance should be provided to assist those landowners that do not have the funds or ability to do it all on their own. While shaded fuel breaks and other landscape level treatments are the first line of defense and should be pursued for implementation, the scale of this work will not return the immediate benefits that come from creating defensible space around individual homes. Creating defensible space and maintaining it to protect structures will provide a type of “back-up” if in the future fires spread to private lands. Landscape treatments and shaded fuel breaks should be located based on terrain, fuel conditions, etc. and the treatments take place where needed regardless of ownership.

The landowner committee will assist with investigating and prioritizing on-the-ground wildfire prevention and protection projects in the South Shore CWPP (Mitigation Action Plan, Page 28). In general, projects will be prioritized based upon their location in the planning area. The focus will first be on in the neighborhoods contained within the planning area and work outward toward adjacent public lands.

Communication was identified as another item to be addressed in the plan. Specifically, immediate communication of accurate information to landowners and appropriate emergency personnel in the event of a fire related emergency is critical. Through this planning effort, the best means of developing a defined method of communication between landowners will be established.

The steep, rugged topography of the South Shore CWPP area limits most roads to valley bottoms and ridge tops. Limited roads, particularly a lack of secondary access roads into populated areas of the planning area were identified as a substantial concern to safety. Means to improve/upgrade existing roads to provide for secondary access during emergency evacuation conditions should be pursued with the appropriate landowner.

7. Plan Maintenance

The landowner committee will be responsible for monitoring existing projects and proposing and prioritizing future projects aimed at wildfire prevention and protection in the South Shore CWPP. Members of this committee will take on the task of coordinating with outside groups and agencies to investigate, write, and submit future grants. This group is also responsible for partnering with appropriate agencies to review and update this CWPP on a timely basis under the direction and assistance of the CCFD#7 and the Chelan County Conservation District and with assistance from state and federal land managers.

8. Mitigation Action Plan

There are three main categories of mitigation actions identified by members of the South Shore CWPP committee. Categories include fuels reduction, education and outreach, and fire

prevention and suppression in the WUI area. Natural vegetation and habitat restoration activities are incorporated into fuels reduction projects. Recommendations are organized into categories but are not listed in order of priority. Rather, each project type identified are of equal value to the community.

- Fuels Reduction

1. Implement “FireWise” recommendations within 200 feet of all private homes and essential infrastructure. Actions include the establishment of defensible space, adequate turn-around space for emergency equipment, and clear consistent address signs.
2. Implement fuels reduction on strategically located areas that will have the greatest benefit for the entire project area. The objective of the proposed project is to help reduce the potential of a wildfire moving from public to private lands and vice versa across the landscape. Particular attention will be placed on undeveloped Lake Chelan State Park property uphill from South Lake Shore Drive.
3. Encourage the USFS to continue current fuels reduction activities at the landscape scale with an emphasis of restoration of low intensity fire regime and creating strategic fuel breaks that will enhance local fire suppression efforts and utilize “natural” fuel breaks where feasible (such as orchards, ridge tops, highways, rock outcrops and irrigated pastures). Encourage similar activities on other National Forest lands adjacent to private ownership within the CWPP area as risk assessment and prioritization process continues.
4. Encourage Chelan County to acquire a smaller, more mobile chipper(s) that can be used by folks in the CWPP area to dispose of brush generated through fuels reduction efforts rather than burning. The reduction of material going to landfills and improving air quality is the objective.
5. Identify and develop sites for the short term collection of material generated from fuel reduction efforts on private land. Multiple temporary collection sites will allow for easier access for home and landowners in the planning area
6. Identify extreme hazard sites and work with landowners to reduce fuel loads of these sites to improve safety for an entire area.
7. Treat vegetation along roads and driveways to improve site access and fire fighting. This can include shaded canopy defensible space on both sides of the roads.
8. Develop and maintain safe areas, shelters, and staging location as a base for fire fighting operations.
9. 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 “FireWise” workshops to be held locally.

10. Current regulations governing fuel reduction and road maintenance along creeks, wetlands and lakeshores will be compiled and made available through this CWPP process. If regulations would prevent necessary vegetation management, community members will work with agencies for waivers or special standards.
 11. Work with Chelan County to modify Shoreline/Riparian restrictions to allow establishing defensible spaces around structures and along ingress-egress routes by trimming of shrubs, pruning ladder fuels and generally reducing the fuels loads. This may include the County pursuing a mechanism that will allow homeowners to reduce fuels around homes while still meeting the objective of the Growth Management Act.
 12. Investigate biomass conversion technology for opportunities to implement biomass utilization technology in the CWPP area and County wide as part of fuel reduction projects.
- 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 billboard on highway 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” or perhaps establish with the local telephone company an easy-to-remember number that connects directly to the Chelan County Fire District #3 station, such as “Dial #FIRE”)
 3. Compile essential “FireWise” information and distribute it to landowners in and adjacent to the South Shore CWPP area. 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 and what not to do in the case of a wildfire, etc).
 4. Participate with Forest Service opportunities. Community members will work with the Forest Service pursue fuel treatments on private lands that compliment adjacent federal and state fuel reduction efforts. Opportunities to incorporate cooperative agreements and utilization of the wyden act to incorporate treatment on the landscape scale as opposed to individual efforts which increases cost and reduces efficiency will be pursued.
 5. Along with Federal lands, State agencies such as the DNR should be “encouraged” to work in conjunction with federal and private landowners when possible on joint projects

or work into management objectives for state parcels appropriate fuels reduction projects that will compliment the overall fuels reduction strategies for the area.

6. Incorporating burn bans, campfire closures etc into the CWPP is highly appropriate based on community concerns. This would require special orders or dictate closer interagency communication (USFS, WDNR, and Fire Protection Districts) which is a desired outcome of the process. Potentially could propose campfire closures to coincide with the appropriate Fire Precaution Level and County burn bans. Coordinate fire danger level with IFPL, currently it can be extreme fire danger and still at an IFPL 2
 7. Provide information to non-residents who own property and/or vacation homes about steps they can do to reduce the threat of fire to their homes and property. Especially since their non-action is putting their neighbors lives and properties at risk.
 8. Produce emergency evacuation route maps - Provide maps of emergency evacuation routes and emergency contact information to landowners in the CWPP area
 9. Work with the County planning department - to get FireWise building materials information provided to developers and home builders during the permitting process.
- Improving Protection Capabilities/Human Safety
 1. Emergency Safety Issues
 - Address coordination
 - 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 sirens.
 - Contact radio station for possible help with emergency information.
 - Make signs saying in case of emergency tune your radio to **KOZI**.
 2. Obtain portable pumping stations for fire fighting efforts - Obtain portable pumping stations for use during fires. Portable pumping stations allow flexibility in locating them and can be moved from site to site. Since Lake Chelan forms the northern boarder for the CWPP area, pumping stations could access lake or stream water to fight fires. Specifically, pumping stations should be established at the Lake Chelan State Park, First Creek, The Yacht Club, Fields Point and Twenty-Five Mile Creek State Park.
 3. Fuel reduction along County roadways. The Fire District should prioritize roadways for fuel reduction actions. Neighbors should be encouraged to organize their own clearing projects too (these might include driveways and clearing along non-county roads). The Fire District should collaborate on roadway projects with neighbors and landowners.

Mitigation actions should improve access for fire equipment and evacuation for residents while maintaining and enhancing the neighborhood's sense of place and aesthetic value.

4. Fuel reduction along Primitive roadways. Chelan County has established road standards, conditions of design and construction. However many of the rural roads in the County and District are classified as primitive. These primitive roads can be steep, narrow, dead-ended, and seasonal or in some other way limit access to fire fighting equipment. The considerable expense of upgrading these roads means that most will remain primitive for the foreseeable future.
5. Develop additional roads that can be used to evacuate during an emergency.
 - a. Open up Bear Mountain Road to the east (currently gated by property owner)
 - b. Continue Upper Ridge Road to Navarre Coulee Road.
 - c. Redesign B-line road so that it accesses South Lakeshore Road
 - d. Extend Navarre Drive with an easement between lots 42 and 43 and continue north to access the B-line road or South Lakeshore Road
 - e. Extend Upper Ridge Road past the Zigmanovich property and eventually connect north to South Lakeshore Road or south (uphill) to connect onto Bear Mountain Road.
6. The Fire District should collaborate with neighbors and landowners in order to develop fuel reduction plans and to inform the residents on the level of service they should expect. The Fire District is encouraged to try to accommodate the many special circumstances found on primitive roads in the South Shore area including seasonal contracts. There may be landowners who will provide safe zones and/or turnarounds for fire fighters and equipment