

SALMON RIVER COMMUNITY WILDFIRE PROTECTION PLAN

OCTOBER 30, 2007 FINAL

PREFACE

“The most important aspect of hazardous fuels reduction is reducing the threat to local communities. When it comes to reducing threat, we need to protect communities and help the communities to help themselves through changing the landscape from high risk to low risk. We’ll accomplish that by working closely with communities on major projects.”

USDA Forest Service Chief, Dale Bosworth

From his “Statement on the 2000 National Fire Plan”

The Salmon River Community Wildfire Protection Plan (CWPP) has developed a prioritized list of projects to focus and guide implementing landowners, organizations and funders. A key product of this Plan is the development of wildfire safety zones to reduce citizen and firefighter risks from future large wildfires. This project list consists of structure protection needs, prevention measures, pre-treatment and shaded fuelbreak construction to protect life and property in towns, residential areas, emergency access areas, and private/public interface areas. Other activities, such as adequate accessible water systems, plantation thinning, underburning, and natural fire management will be recommended. This Plan will also make recommendations that homeowners and communities can take to reduce the ignitability of structures throughout the Salmon River Watershed. The Plan will contain a Suppression Response plan and updating of the Residential Risk Assessment for Structures, Improvements and Wildfire readiness. The Salmon River Fire Safe Council (FSC) is sponsoring the development of this project. Cooperators on the FSC include community members, the U.S. Forest Service, California Department of Forestry, other managing agencies, the Karuk Tribe, the Salmon River Volunteer Fire and Rescue (SRFR), the Orleans/Somes Bar Fire Safe Council, and the Salmon River Restoration Council (SRRC).

The Salmon River CWPP is tiered to various documents and direction, including:

- 1) U. S. Forest Service National Fire Plan, August 2000
- 2) California Fire Plan, March 1996
- 3) Land & Resource Management Plan – KNF, July 1995
- 4) Fire Management Plan – KNF, February 2004
- 5) Six Rivers National Forest Fire Management Plan FY 2001
- 6) Forest Wide and specific LSR Assessments – KNF, Various dates
- 7) Salmon River Subbasin Restoration Strategy – KNF/SRRC, April 2002
- 8) Watershed (Ecosystem) Analysis – KNF, Various dates
- 9) Salmon River Roads Assessment and Planning – KNF/SRRC, June 2002
- 10) Salmon River Residential Risk Assessment – KNF/SRVFR, 1994
- 11) Private Land Management Plans i.e. Godfrey Ranch Ecosystem Management Plan
- 12) Dialog of continued Karuk culture management strategies
- 13) SRRC Community Restoration Plan, February 2006
- 14) Salmon River Noxious Weed Management Plan, SRRC, 2003
- 15) Long Range Plan For The Klamath River Basin Conservation Area, January 1991
- 16) USDA, Forest Service – Northwest Forest Plan, 1995

1. Executive Summary

1.1 Problem Overview

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The Salmon River is the highest wildfire risk watershed in the Klamath Basin. An analysis completed as part of the Fire Safe Council of Siskiyou County Community Wildfire Protection Plan found that the 480,000 acre Salmon River watershed has had over 408,000 acres burned since 1911. This makes the Salmon River the highest per acre wildfire region in the County. There is evidence that the more recent fires are also occurring at a higher intensity.

1.2 Process Overview

The Salmon River Fire Safe Council has held monthly meetings since its inception in December of 2000. Many of these meetings have been used to develop this CWPP.

1.3 Overall Goals

The overall goals of this CWPP are to educate the public and agencies, assess area for high value and high risk areas, plan and implement fuel reduction, and plan for the reintroduction of fire into its natural role in appropriate areas.

1.4 Methodology

The Salmon River Fire Safe Council (SRFSC) is the lead cooperator for this plan. Starting in December of 2000, the SRFSC has held monthly meetings to deal with many issues, including: development of Community and Neighborhood detailed fire safe plans; water source (tanker fill sites) identification, mapping and signing; road signing; private properties universal number signage, helispot location and mapping; community outreach, and education; training; Water tanks and hydrant systems; general cooperation and sharing with stakeholders and agencies.

It was quickly realized that the development of a basin-wide Fire Safe Plan, or CWPP was necessary to help focus and generate a list of action items for Fire Safe and Fuel Reduction projects. The items below are elements needed generate stakeholder involvement and to bring this plan together.

1. Wildland Urban Interface Identification
2. Prescriptions for Structure and surroundings, Private/Public, Landscape
3. Designation of Emergency Escape and Access Routes
4. Prioritization Process
5. Identify Fire Safe Plan Elements
6. Education/Prevention
 - A) Circulate Outreach Tools (Posters, Flyers, Handouts)
 - B) Provide Presentations
 - C) Circulate Checklist to prevent Fires,
 - D) Have Annual Inspections – Outside and Inside Structures
 - E) Hold Annual Fire Week–
 - 1) Training,
 - 2) Planning,
 - 3) Community Clean-Up
 - F) Hold Workshops

Another planning step is to identify opportunities for returning fire to the ecosystem in appropriate areas. For the purposes of this plan, “returning fire to the ecosystem” refers to treating areas (or creating isolated areas)

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where it will be possible for fire to burn through with maximum benefit and minimum negative impacts. This can be accomplished with a multi-stage approach. Areas can be treated with a shaded fuel break, pull-back, lop and scatter, mechanical treatment-mastication, pile burning, jackpot burning, controlled burning, or a combination of prescriptions. These methods will reduce the fire intensity, thus increasing benefits and minimizing negative impacts when fire returns to the area. The particular series of events will vary depending on the area and surroundings. To the extent practicable, existing roads, trails, and streams will be used as firebreaks.

A Fuel Modification Zone (FMZ) is any area being assessed for the benefit of reducing fire risk. Actions within a FMZ can include anything from no action, to shaded fuel breaks, to areas cleared to bare ground. The above list is not in order of importance – prioritization will be a component of the Plan.

1.5 Strategic Plan Summary

This CWPP will present a environmental, economic and fire history background of the Salmon River, describe the current and desired future condition, discuss fire behavior and principles, develop a residential risk assessment, provide information on fire safety and how to reduce the potential for structural ignitability, and develop action and priority matrices for the Salmon River.

1.6 Priority Projects Summary

Priority projects primarily relate to fuel reduction activities on private property and on WUI areas in the Salmon River watershed. Other priority projects include assessment, planning and education components concerning wildfire on the Salmon River.

1.7 Acknowledgements

Many thanks to all the interested groups, agencies, businesses, tribes, and community members who have participated and provided input into this planning process.

2. Introduction

2.1 Background, History of Accomplishments

Background of the planning process; How did you get to this point; What else did we do

2.2 Mission of Group

“The Primary Mission of the Salmon River Fire Safe Council is to help plan, implement and monitor the reinstatement of natural fire regimes in the Salmon River ecosystem in a manner that protects life, property, improves forest health, and enhances the resources valued by its stakeholders.”

2.3 Planning Area Boundaries

The area covered by this Plan is the Salmon River Watershed.

2.4 Current Process and Plan Development

The specific goals of this plan are to:

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1. Plan the development of wildfire safety zones to reduce citizen and firefighter risks and help protect property and other high value areas from future large fires.
2. Increase awareness of residents and other stakeholders of fire's role in the Salmon River ecosystem, and how to be compatible with fire.
3. Enlist local residents support to create fire safe conditions inside and outside of their structures.
4. Plan for the reintroduction of fire into its natural role in appropriate areas of the Salmon River basin in a manner that reduces the risk of future unnaturally high intensity fire and increases the safety for residents, managers, and resource users.
5. Develop a Suppression Response plan and Residential Risk Assessment for structures, improvements, and Wildfire readiness.
6. Plan fire protection and fire reintroduction activities in the Salmon River watershed that foster business and employment opportunities.
7. To support the continuation of the Salmon River Volunteer Fire Department, and coordinate and share information with them to streamline fire preparedness and emergency fire response efforts.
8. Increase capability of landowners to maintain fuels and manage fire on their property.
9. Enlist active support from all key stakeholders.

The identified objectives that will achieve the above goals are:

1. Identify private properties, residences, and improvements on the Salmon River.
2. Identify other high value areas, such as special cultural and natural resource areas (Unique, Corridors and Core areas).
3. Break out Basin into Towns, Neighborhoods, and Isolated Residence Zones:
 - a. Somes Bar
 - b. Forks of Salmon
 - c. Sawyers Bar
 - d. Cecilville
 - e. Outlying Neighborhoods
 - f. Isolated Residences
4. Identify upcoming Forest Service, Private, and Tribal fuel reduction and fire management activities.
5. Coordinate Forest Service, Tribal, and Private fuel reduction activities.
6. Catalog and map completed fuel reduction projects and assess their effectiveness.
7. Identify high fuels risk areas in towns and residential areas.
8. Identify high fuels risk areas in public/private interface areas.
9. Identify roads and trails used for emergency response to towns and residential areas (and roads and trails used for emergency egress) to reduce the risk to life and utilize in creating firesheds for management.
10. Prioritize fuels reduction in private and public/private interface areas.
11. Determine actions required for each fuels reduction area.
12. Develop list and map of known firebreaks and fuelbreaks for future fire suppression use, and evaluate on a 3 year rotation. Identify which ones are good to go and which ones need work.
13. Update Residential Risk Assessments for fire suppression and emergency response use.
14. Promote annual inspections by Forest Service or Fire and Rescue to encourage fire compliance.
15. Increase cooperation among managing agencies, local community groups, tribes, and local community members.
16. Identify certain areas for special management considerations (i.e. areas of interest – not in Neighborhood: Water systems, Native American Cultural Sites).

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17. Continue to identify and sign residences and other facilities for emergency response.
18. Continue to identify and improve Water Sources that can be used for emergency response.
19. Promote funding for emergency response equipment and training for community emergency responders.
20. Integrate fire and fuels management with other resources – water, weeds, roads, recreation etc.
21. Develop a landscape approach to protecting and managing resources to maintain key values.

2.5 Stakeholders: Who, What, When, Why

The key stakeholders in the Salmon River are:

- U. S. Forest Service – Lead managing agency for 98.7% of the land
- Salmon River Restoration Council – Non-Profit watershed education and management organization.
- Mid Klamath Watershed Council – Non-Profit watershed education and management organization.
- Orleans/Somes Bar Fire Safe Council
- U. S. Fish and Wildlife Service – Regulatory agency
- NOAA Fisheries – Regulatory agency
- California Department of Fish and Game – Regulatory agency
- California Department of Forestry and Fire Protection – Fire protection agency
- Regional Water Quality Control Board – Regulatory agency
- Karuk Tribe of California
- Quartz Valley Rancheria
- Shasta Nation
- Salmon River Volunteer Fire and Rescue
- Forks of Salmon and Junction elementary schools
- Salmon River Outpost (Somes Bar store), Forks Store, and Doyle’s Camp (Cecilville store)
- Local residents and non-resident landowners
- Assorted local businesses
- Siskiyou County
- Siskiyou Public Works, Planning and Education Departments
- Siskiyou County Air Quality Management District
- California Indian Basketweaver’s Association

3. Community Description

3.1 General Environmental Conditions

3.1.1 Landscape/Land Use

An estimated 98.7% of the Salmon River subbasin land base is administered by the Forest Service with the remaining 1.3% in other ownership (private, state and county). Of the National Forest lands within the subbasin, 45% are managed as federally designated wilderness and approximately 25% as Late-Successional Reserve. The Karuk Tribe of California's Ancestral Territory occupies 60% of the subbasin. Several thousand acres of public lands are reserved as mining claims in accord with the 1872 Mining Law that entitles the claimant to mineral rights.

3.1.2 Topography, Slope, Aspect, Elevation

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Slopes are generally steep with very little flat ground. The region has all aspects, but generally facing west. Elevation ranges from 456 feet to 8,819 feet.

3.1.3 Meteorology

The area has a Mediterranean climate with dry summers and wet winters. Summer temperatures get up to over 100 degrees Fahrenheit, winter temperatures rarely get down to 10 degrees. Precipitation within the Salmon River Watershed varies from over 80 inches in upper Wooley Creek to less than 40 inches along the South Fork. Intense, localized summer showers frequently occur, and have been associated with soil erosion and debris torrents. Historic weather data for the Salmon River from 1956 shows the average rainfall dropping from 48.75 inches to 43.59 inches in 2000 (rainklamath.xls from website).

3.1.4 Hydrology

The Salmon Basin (4th field hydrologic unit) is subdivided into four major watersheds (5th field hydrologic units), North Fork (130,468 acres), South Fork (185,608 acres), Wooley Creek (95,188 acres) and Main Stem (69,362 acres). Approximately 1,414 miles of stream drain these watersheds. The largest of the watersheds, the South Fork has 509 miles of stream or 36% of the total. The Salmon River subbasin contains sixty-three drainages (7th field hydrologic units), ranging in size from 3,300 to 14,500 acres, while averaging 7,625 acres.

Along much of its course, the river flows through a rugged gorge in which rock outcrops and bluffs are common. Several temporary landslide dams have formed along the Salmon River and its tributaries this century, with local influences on in-channel habitat and possibly fish passage. Periods of high precipitation, seismic events, and activities that disturb the soil or the vegetation can initiate landslide activity, which in-turn has resulted in major channel alterations through out the watershed. The hydrologic characteristics of the watershed are defined by climate and topography. Average annual discharge for the Salmon River is approximately 1.2 million acre feet.

3.1.5 Ecosystem Types

The Salmon River is known as one of the richest regions of species diversity in the temperate zone. The Salmon River basin is primarily a forested landscape with about 90% in forest cover. The majority of the forested land (81%) is coniferous forest with 9% in hardwood forests. The coniferous forests can be divided into the mixed conifer, Douglas-fir, and true fir types. There is also a small amount of knobcone pine forest type (> 1%). Evidence taken from Forest repeat photography, air photos and personal accounts, leads to the conclusion that forest settings 200 years ago were generally more open than today. Denser stands of conifers were found on north aspects, good soils, and in drainages. South aspects generally supported less dense stands of conifers with more hardwoods. Areas more intensely modified by American Indians generally are located within deep canyons adjacent to the Salmon River and tributaries.

The earliest timber harvest occurred in conjunction with mining and homesteading activities. Commercial harvest on public land did not begin until the 1950's. By 1974, there were about 7,500 acres of harvested public land in the watershed, and by 1989, there were about 30,000 acres. In several logged areas where little or no fuels treatment occurred, catastrophic fires have occurred over the landscape increasing erosion and water temperatures. The 1989 figures include about 18,000 acres of harvested

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land burned by the fires of 1977 and 1987. Several thousand acres are currently in plantation. These densely stocked plantations have a high likelihood of being consumed by wildfire before reaching maturity. They also increase the chance for stand replacing fires in adjacent larger stands.

3.1.6 Threatened and Endangered Habitat Types

The Salmon River watershed is home to many wildlife species such as: fishers, northern spotted owl, wolverine, and more recently elk. More than 25% of the Salmon River is designated as Late Succession Reserve. It is known for having rich botanical diversity, boasting one of the most diverse coniferous stands on the planet.

As a result of the large fires in 1977 and 1987, logging, and road building, there is less late-successional habitat and that habitat is fragmented and more isolated. These conditions expose animals to increased predation and make dispersal more difficult. The recent trend of frequent large fires will make it difficult to maintain late-successional habitat or grow early-seral stands to late-successional habitat.

The Salmon River also has Summer and Winter runs of wild Klamath Mountains Province Steelhead, Spring and Fall Chinook Salmon, Coho Salmon, Sturgeon, Lamprey, and other species of fish.

All of the fish and wildlife species found in the Salmon River have adapted to the natural disturbance regime of infrequent large-scale disturbance and more frequent moderate and small disturbances. A return to a disturbance regime that more closely follows the natural regime should benefit most wildlife species.

3.2 Population, Demographics

There are approximately 250 people that currently reside within the subbasin.

Residences are dispersed throughout the subbasin with concentrations located in, or near, the towns of Sawyers Bar, Cecilville, Somes Bar and Forks of Salmon. In addition the community is made up of several outlying small neighborhoods and isolated forest residencies. Significant neighborhoods include Butler Creek, Crapo/Nordheimer Creeks, Knownothing Creek, Taylor Creek (South Fork), Upper South Fork, Godfrey/Blue Ridge/Black Bear, Eddy Gulch, Pollocks Gulch, Little North Fork, Finley Camp, and Taylor Creek (North Fork). Private properties are widely dispersed with a few properties in wilderness areas.

There are currently several interest groups in the Salmon River subbasin: the United States Forest Service; California Department of Fish & Game, California Department of Forestry and Fire Protection; Siskiyou County, Karuk Tribe of California, resource users (mining, logging, grazing, recreation, fishing and others) and various community entities such as: Salmon River Restoration Council, Volunteer Fire & Rescue, schools and stores.

Neighborhood Descriptions

Sawyers Bar – (T. 401 N., R. 11 W., Sections 28, 29, & 32)

This contains the Sawyers Bar Township, Flapjack Bar (Immediately upriver), and properties extending downriver, including Little North Fork. Prior to occupation of the Sawyers Bar area by Euro-American and Chinese settlers spawned by the California Gold Rush of 1849, Native American Tribes populated

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the region. The major Tribes were the Konomihu, the Shasta, and the Karuk. Of these tribes, the Karuk is currently the only federally recognized Tribe, although the Shasta Tribe still has descendants living on the river. Sawyers Bar was probably a major Native American village and trading area, although artifacts were undoubtedly lost during the hydraulic mining era that stripped the soil from most of the Sawyers Bar Townsite.

The first Euro-American settlers came to the river shortly after the mid-California Strike, as noted on the Historic Plaque located outside the Sawyers Bar Town Hall: *“Sawyers Bar is perhaps the most picturesque of the Northern mining towns. It was founded in 1850 by Captain John Best & Party, who were guided to the spot by a friendly Indian. The town was originally called Bestville and had over 3,000 inhabitants. It owes its present name to the fact that on an adjacent gravel bar stood the camp of early day Mill Sawyers. The most noteworthy features are the block of century old frame buildings and the famous Catholic Church, counterpart of the southern mission. The Town’s first postmaster was John Daggett who, in 1882 became the (Lieutenant) Governor of California.”* Mining also brought in many support businesses, such as: stores, hotels, stables, etc. Sawyers Bar was also a major regional center, providing goods and services to the many other towns, mines, and homesteads in the area.

The major economy in Sawyers Bar from 1850 through the 1930s was mining. In its early days much of the surrounding timberlands were denuded of trees and vegetation for lumber to build houses, businesses, and other structures. Mining timbers were also used in great quantities to shore up the underground hard rock and placer mines that proliferated in the area. The miners may have also intentionally started fires so they could get a better look at potential mining ground. This maximum extraction and destruction of resources were in stark contrast to pre-mining management and use by Native Americans.

The first school district was established in 1875 and was housed in the Catholic Church located on the west end of town. This Church was the first Catholic Church in Northern California and continues to stand in its original location. The town now consists of approximately 87 private and county parcels on about 165 acres. Approximately 30 people now live in the town on a permanent basis, with another 40 people residing on a seasonal basis. Water is supplied by a municipal water system administrated by the Sawyers Bar County Water District. The water system is comprised of the 2000-acre Jessups Gulch watershed, and the 900-acre Tanners Gulch watershed. A series of hydrants and fire hose boxes are located throughout the town for fire protection. Water storage consists of two metal tanks located to the north and above the center of town – one with an 11,560 gallon capacity and one with a 36,720 gallon capacity.

Sawyers Bar Fire History and Current Fuels Conditions

The early day miners cut timber for wood and burned off the surrounding landscape. The Townsite itself was hydraulically mined, which cleared most of the vegetation prior to the building of the town. The major recent fire influences on the Sawyers Bar area were a 9-acre fire in 1963 that burned part of the western side of town, and a larger fire in early 1965 (after the December, 1964 flood). The 1965 fire burned most of the historic buildings in the center of town, and burned much of the vegetation and other structures above town. This burned area now has predominantly dense brush/hardwood/conifer vegetation. Forested areas in and around the town tend to have high fuel loading where fuel reduction has not recently occurred. Recently, the SRRC has completed approximately 20 acres of fuel reduction activities on private property in the town of Sawyers Bar. The FS has completed 265 of property buffer handpiled shaded fuel breaks and will be underburning another 2500 acres in the WUI area. Also in the Sawyers Bar WUI area, the FS will be completing 943 acres of fuel reduction activities with the Garden Gulch LSR. Mastication is also being completed in Jessups watershed timber sale units.

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Eddy Gulch Neighborhood – (T. 39 N., R. 11 W., Section 9)

The Eddy Gulch Neighborhood lies 2.5 miles up the Eddy Gulch Road on the North Fork Salmon River. Historically, the mining town of Rollin was up Eddy's Gulch near the Humpback Mine. It was named for Rollin Fergundes, who discovered the mine. There was a school, quartz mill, sawmill, boarding house and several homes. The post office was established in 1889. It was incorporated into the post office in Sawyers Bar in 1927.

Currently the Eddy Gulch Neighborhood consists of 6 parcels of private property, with 5 permanent residences.

In 2000-2003 SRRC contracted a local crew to perform fuels reduction on much of the private property in the neighborhood. In 2002 and 2003 the USFS thinned the forest and made hand piles in Glassups Timber Sale Units adjacent to County Road 1E001 in the Eddy Gulch Neighborhood. There was an estimated 150 acres treated. There are 429 acres of additional acres that will be underburned in the near future.

Black Bear Ranch –

The Black Bear Ranch property was a mining town from 1862 until the 1950s, supporting the Black Bear Mine. The Black Bear Mine is up Black Bear creek to the northeast of the Ranch property. The town had its own Post Office, sawmill, trading center, iron foundry, church, school, general store, and boasted a population of over 2,000 people at its height. During the active mining years, the land on and surrounding the property was heavily impacted. Historic pictures show a very open and often treeless landscape. Wood was used for mining timbers, building construction, fuel, etc. In the late 1960s, the property was sold to a group of San Francisco hippies who established a commune on the property that still exists today.

The Black Bear Ranch property is a 70-acre parcel that is jointly owned by numerous people, formed as the Black Bear Family Trust. The property still has 2 historic houses, (John Daggett's Homestead and the original school house run by Hallie Daggett), as well as the original Black Bear Barn and what used to be the Black Bear general store. The ranch also has numerous cabins and several sheds and outbuildings. Other valued features include community water systems, two potential helispots and community safety areas, extensive gardens and orchards, and a county-maintained access road. In the commune's heyday, there were over a hundred residents. Fuel wood in the area was collected by the many people and goats free ranged, leaving an open and uncluttered forest. More recently, there are 3-15 residents, with 50-100 visiting on holidays and special occasions, especially during the summer and late fall.

Black Bear Ranch Fire History and Current Fuels Conditions

The 1987 lightning fires burned lightly through the property, on the east side of Black Bear creek and the south side of Callahan Creek. During this fire, Black Bear residents put in a fireline above the houses on the southwest side of the property as the fire was creeping down, saving the structures. The property is surrounded by publicly owned land. Large areas of medium and high intensity fire occurred below the ranch to the south and west in 1987 (3,681 acres). A number of clear cuts were created in late 1980s and early 1990s on the public land in the watershed below Black Bear Ranch. The 1987 fire, combined with logging, has created high-risk fuel areas below the Black Bear Ranch property. These high risk areas, and the fact that the steep and narrow county road is the only drivable emergency access or egress in case of a fire coming from below, makes for a very dangerous situation. With 140 years of occupancy, 35

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years of woodcutting and maintenance, 20 years of goat grazing, and the absence of over-story removal for over 60 years the forest under-story on the property is quite clear. The forest can be generalized as mature, 2nd growth, conifer stands with scattered hardwoods, increasing on the south and west facing slopes. The under-story is clear of brush for the most part, however there has been an increase in dead and down in several small pockets on the property. For the past 9 years there hasn't been a steady herd of goats at Black Bear Ranch. As a result, under-story vegetation has increased somewhat in forested areas, and encroachment of seedlings, brush, and other flammable vegetation has greatly increased in the open, meadow areas and along roads and streams. The FS has completed approximately 500 acres of underburning on areas around the Black Bear drainage.

Finley Camp Neighborhood and Rainbow Mine –

Finley Camp is located on the North Fork Salmon River, 5 miles upstream from Sawyers Bar. Historically, the site had a large sawmill. The neighborhood consists of 14 parcels on 96 acres with 4 permanent residences, 2 part time residences and seasonal use on the Lost Dutchman Mining Association's property. County road 1C01 (Sawyers Bar Rd.) divides the east and west sides of most parcels. Two systems provide water to the residences and there is an existing Type 1 helispot,

The Rainbow property is a 254-acre parcel that is jointly owned by Mr. and Mrs. Richard Watts and Rita Watts. The property has 4 home sites and 4 large shop buildings. Other valued features include two water systems, a potential helispot, and access roads. No fires have burned on the Rainbow property boundary since 1911, except for part of a 1,767 acre fire in 1917 that burned the lower east side of the property. Fire starts around the property have been mainly lightning caused, except for near the North Fork Salmon (downslope from Rainbow) where there have been fires started from campfires and debris burning. The property is surrounded by publicly owned land, and on the south side, two 3-acre private parcels, a 1-acre private parcel, and a 0.5 acre private parcel. A number of clear cuts were created in the 1970s through the 1990s on the public land in the Rainbow watershed. The Rainbow property was logged (partial cut) in the 1990's.

Forks of Salmon – (T. 10 N., R. 8 E., Section 13)

Located at the confluence of the North and South Forks of the Salmon River this mining town was the supply center for many miles in all directions. For many years, supplies were brought to Forks by pack trains. There was a sawmill, a two-story hotel, bars and a store. Dorsey built the first hotel of any size. It was later owned by the Bennett Co. The hotel was fortified by the miners during an Indian raid. The post office was started in 1858 and still serves the communities down river and on the South Fork. The school was the second one established in the district. The oldest school at Forks, a log cabin, was located at the present site of Otter Bar, between Forks of Salmon and Nordheimer Creek. The Old School, which replaced it, was built in Forks in 1915. The Old School, was built in 1930s, and still serves as a community club. The new school was built in 1962, with buildings added in 1978 and 1985. The hotel was torn down in 1940s by Charlie Woodburn, who used the lumber to build a house just up river.

The Forks of Salmon community includes Downtown Forks of Salmon, and extends down the Mainstem to Otter Bar, up the North Fork to Pollacks Gulch, and up the South Fork ½ mile. Downtown Forks currently consists of 12 residences on 5 parcels, a school, a post office and a community club. It should be noted that the 150 acre Rosemary Butte property has now changed hands and is in the process of being developed by a community organization. The Mainstem neighborhood consists of 7 residential parcels and the County road maintenance facility.

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Water is supplied to the Downtown Forks of Salmon area by a resident maintained town water system. The pipeline comes out of McNeil Creek about 1 mile above town. The residences in the surrounding neighborhoods have varying individual water systems, maintained by the owners.

Forks of Salmon Fire History and Current Fuels Conditions

Like Sawyers Bar, early day miners cut timber for wood and burned off the surrounding landscape. More recent fire history shows fire burned down to the road at Forks of Salmon in the 1977 Hog Fire, and also the 1987 fire burned close to the town. In 2002 the Forks fire burned 1,400 acres to the north and east of Forks of Salmon. The FS has no current or near future planned fuel reduction activities, but acknowledges the need for fuel reduction in the Forks of Salmon area. Fuel reduction projects have been completed on portions of the private properties on the north fork, south fork and mainstem surrounding Forks of Salmon. There is still much of the private property with hazardous fuels, especially in downtown Forks of Salmon. As mentioned above, the Forest Service closed its fire station in the early 1990s, leaving the only close fire suppression crew available – the Salmon River Volunteer Fire & Rescue.

Knownothing Creek Neighborhood –

From 1888 to 1893, there was a post office in the town of Novelty, on Knownothing Creek, which served the mines in the Knownothing area. In 1893 the post office was incorporated into the post office at Forks of Salmon.

The Knownothing Creek neighborhood lies on the South Fork Salmon River, approximately two miles upstream from Forks of Salmon. Knownothing Creek consists of 15 residences spread over two miles.

The Knownothing Creek ditch originally supplied water to many of the residences in the neighborhood, but has been out of use for a number of years. The ditch is currently being considered for a renovation. Nine residences could benefit from the repair of this central water system.

Godfrey Ranch Neighborhood –

The Godfrey Ranch is a 180 acre private in holding surrounded by National Forest lands. The Godfrey Ranch is divided into 7 separately owned parcels. There are 21 people who are the landowners. There are 15 residents on the 7 parcels of private land that make up the Godfrey Ranch. Currently at the Godfrey Ranch there are 12 residences, 8 of which are occupied year-round. Current resource uses on the Godfrey Ranch include: subsistence gardening, orchards, a small native plant nursery, residencies, related water uses and storage, firewood cutting, falling and milling individual trees for small portable sawmills, wild-crafting of native plants and mushrooms, roads and road maintenance, trails, 12 free range horses that heavily use the meadow areas, and numerous other domesticated animals including, rabbits, chickens, dogs, and cats. Many hunters use the Negro and surrounding drainages to hunt for deer each year in the fall, due to the high density of deer on and surrounding the Godfrey Ranch.

Godfrey Ranch Recent Fire History – 1970 to Present

The presence of open meadows, abundant water, and large oaks at the Godfrey Ranch suggests a high likelihood of use by local indigenous people. If this is true, the flat, open areas of the ranch and beyond would have been burned frequently, if not annually to promote valued resources. The current presence of knobcone pine, as well as the west and southwest exposure, also suggests that there was a frequent fire return rate at and around the Godfrey Ranch.

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Godfrey Ranch has been subject to three recorded fires of any size. A disgruntled neighbor started the first recorded fire in 7 places below Godfrey, in 1919. Local fire fighting forces stopped the fire at 35 acres, sparing the houses, barns, and even the garden and outhouse. However, the fire consumed the gold ore processing stamp mill in the southwestern portion of what is now the 37.5 acre, McCullough parcel. In the 1977 Hog Fire, one house was burned but otherwise most of the Ranch remained intact, an island of green in the heavily burned Negro Creek drainage. In 1987, a re-burn of the Hog Fire caused a firestorm destroying 9 of the 13 dwellings. More than 95% of the vegetation was consumed in a crown fire. None of the original structures survived this fire. This fire seriously altered both the makeup of the community and the environment at Godfrey Ranch.

The current residents have worked on fuels reduction efforts and the Salmon River Restoration Council has helped the landowners to initiate a shaded fuel break system at the Godfrey Ranch, utilizing road corridors, skid trails, and ridges. Fuels conditions on the Ranch are, however, extremely high. Fuels conditions on the surrounding federal land also continue to create a high hazard fire problem for the Godfrey Ranch and the rest of the watershed. Each parcel of land at the Godfrey Ranch has received some fuels treatment by the landowners or caretakers; continued coordination of fuels treatment across the Godfrey landscape is necessary. It has been strongly voiced by the entire body of stakeholders, as well as numerous specialists, that the threat of wildfire is a number one concern for the Godfrey Ranch and its residents, and will continue to grow if treatment is not continued. The FS has completed 400 acres of mastication in plantations around Godfrey Ranch in the last four years.

Blue Ridge Ranch –

Located on the south facing slope of Blue Ridge, Blue Ridge Ranch ranges in elevation from 4,045 feet to 3,600 feet. The property burned with medium to high intensity in the 1987 Wildfire. Fuels conditions on the Ranch are moderate to extremely high. Fuels conditions on the surrounding federal land also continue to create a high hazard fire problem for the Ranch and the rest of the watershed. The Salmon River Restoration Council has helped the landowners to initiate a shaded fuel break system at the Godfrey Ranch, utilizing road corridors, skid trails, and ridges. The FS has completed many acres of mastication in plantations around Blue Ranch in the last four years.

Cecilville Neighborhood (including Taylor Creek) – (T. 38 N., R. 11 W., Section 29)

First known as Sisselville, the town was founded by John B. Sissel. Both town and the nearby creek were named after him. Town and creek both carried this spelling until the town was mined out and moved down river to its current site, at which time the spelling of the creek and town changed from Sissel to Cecil.

The old Cecilville occupied both sides of the river upriver and downriver of the current bridge across the Salmon River just downstream from Cecil Creek. The town had been second in size and importance only to Petersburg. The billiard-saloon had been brought from Buell's Post in 1858. The dates vary, but sometime between 1873 and 1890, the town, except for the school, moved down river to Crawford Creek. The school, at its original site, is currently used as a community center. Although uncertain of the date of the move, it is clear that George Sightman had bought what was left of Cecilville by at least 1890. At that time there was a post office, a store, a hotel, a saloon, and a livery stable located on the flat that runs along Crawford Creek, across from the current store at Doyle's Camp.

George Sightman was host, storekeeper, bartender, hostler, and U.S. Postmaster in the early 1890s. He had cattle, which roamed wild on the mountains around. Sightman sold beef on the hoof; the buyer had to find and shoot the animal. Sightman charged four cents a pound for the dressed meat. Sightman and his

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boarding housekeeper, Carrie Roff (later Mrs. Clifford Phares), were Cecilville's only full-time residents. George Green Brown of Brownsville on the East Fork came frequently to keep books for Sightman. George Sightman was a kind and generous man, and extended credit to all. About 1897 he lost the store to his primary creditor, the Denny Bar Co. of Callahan.

The new owners put Thomas Markham in charge. Clifford Phares became postmaster. Sightman lived with the Phares family until his death in 1903. He was buried in the cemetery near Cecilville. The store passed from the Denny Bar Co. to John McBroom in 1921, who continued the store and ran a pack train. The post office was moved upstream when John McBroom's daughter, Frances (Dove) Kaiser, became postmaster. The post office was merged into the Forks of Salmon post office in 1972. The store was purchased by Joe and Eileen Snipes in 1977. The old store and the one remaining old cabin were destroyed by fire in 1987. The Snipes built a new store and bar across the road from the old site and continued operating them until 1999, when Jim and Leni Doyle purchased them.

Cecilville Fire History and Current Fuels Conditions

Recent fire history shows fire burned down to the road west of Cecilville during the 1987 fire. Approximately 10,000 acres have been control burned by the Forest Service since 1993 on public lands surrounding Cecilville. An additional 3,000 acres are planned over the next few years. The SRRC has completed fuel reduction activities on approximately 100 acres on private properties in the Cecilville area. Fire suppression crews are available in the summer months (Forest Service) and year round (Salmon River Volunteer Fire & Rescue).

Butler Creek Area –

The Butler Creek property is an 87-acre parcel that is jointly owned by numerous people, formed as the Butler Creek Community Corporation. The property has 8 designated home sites, currently 6 of these sites are distinct residential high value areas. Other valued features include a community water system with 5 fire hydrants, a potential helispot and community safety area, and well-maintained access roads. No fires have burned on the Butler Creek property boundary since 1911, but the 1977 Hog fire burned within ½ mile to the east and south of the property, and the 1987 fire burned within ½ mile to the northeast of the property. The property is surrounded by publicly owned land, and on the north side, a 14-acre private parcel, and a 4-acre private parcel. There is 0.5 acre in-holding near the northeast corner of the Butler Creek property (the Davis cemetery). A number of clear cuts were created in 1980 on the public land in the Butler Creek watershed. The Butler Creek property was logged in the 1950's. In January of 2005 a snowdown event brought down a number of trees that have created a fuel situation in need of treatment.

Adjoining the Butler Creek property are two parcels locally called Butler Flat. These properties are relatively undeveloped but also has a large field that could be a community safety area and a helispot.

Somes Bar – (T. 11 N., R. 6 E., Section 3)

In 1852 the year of the Klamath River gold rush records show that there were five hundred to a thousand miners seeking their fortunes at the junction of the Klamath and Salmon Rivers.

The first camp was at what is now Offield Ranch. In 1860 Abraham Somes had acquired property on the Salmon River 2 miles up from the mouth of the river and was called Somes Bar. In 1868 Somes sold his store to Alexander Brizzard and it became one of several Brizzard stores in the area. By 1875 there was a hotel and post office at Somes Bar. The Junction School was established April 4, 1892 and a school at

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Irving Creek in 1918 when the crews were working on the Klamath River Road. The Irving Creek school was disbanded in 1940.

Mining continued for quite some time at the more promising claims. Further up the Klamath there were several claims being worked at Sandy Bar, one by Chinese. Below this there was the Stanshaw Mine also employing many Chinese. There was a hydraulic mine at Horseshoe Bend owned by Billy Lord, who also owned a large ranch which he sold to John Spinks. George Teneyck had a hydraulic mine 2 miles above the mouth of the Salmon. This was the oldest mine in the area and later became known as the Hickox Mine owned by Luther Hickox.

Up the Salmon River, the Oak Bottom Mine and the Grant's Mine and Mill were located at Butler Flat. The Halverston Mine was located at Irving Creek.

Abe and Jim Fry started a store and stock business at what became known as Hay Press Meadows as a press was built to care for the tons of hay that was grown there. The brothers maintained a pack business packing from Trinidad to supply their store.

Carl Langford, an engineer came to study the possibilities of a power plant on the Klamath just above the confluence of the Salmon River. A site had been chosen and a tunnel started to divert water for construction of a dam when the voters in 1924 passed legislation prohibiting the construction keeping the area for recreation and maintaining the fishing rights of the Karuk Tribe.

In 1964 a flood destroyed the bridge and store at Somes Bar. The bridge was replaced (and moved and replaced once again) and the store moved to another location no longer on the Salmon but just above the confluence with the Klamath River.

3.2 Socio-Economic History

Post European settlement historic economic patterns in the Salmon River have been driven by resource extraction. In 1850 gold was discovered on the river and the rush was on. Over 20 towns sprung up and the population in the basin numbered in the thousands. Mining was a major occupation of residents through the 1930s. During the mining period, timber was used in the basin for mines and buildings. Beginning in the late 1940s, the Forest Service began earnestly selling timber off the National Forest lands. Timber production reached a peak in the late 1980s. Current timber production is low and geared more towards forest health than meeting production quotas. Another historic employment opportunity was government service. The Forest Service had their district headquarters in Sawyers Bar and stations in Cecilville, Forks of Salmon, and Somes Bar. In the early 1980s, the USFS Salmon River District's office moved out of the watershed to Etna, which reduced the population in the basin. The Forks of Salmon Fire Station was closed and torn down in the early 1990s. Population levels have continued to drop to the current level of approximately 250 permanent residents. Summertime population levels increase to over 350. This low population has impacted the communities dramatically. Infrastructure facilities such as stores have closed and we are losing our schools.

Past land management activities, combined with effective fire suppression and the wettest century in the last 1000 years, have produced unnaturally high intensity fires that have destroyed homes and resources.

3.3 Infrastructure: Roads, Driveways, Utilities, Communication, Water Supply, Schools, Hospitals, Airports

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There are approximately 900 miles of County, private, and Forest Service roads in the Salmon River. The majority of the roads are Forest Service, originally built to access natural resources in the area. The main County roads are: 2B01, the mainstem Salmon River road that goes from Highway 96 near Somes Bar in a southeasterly direction to Forks of Salmon; 1C01, the North Fork Salmon River road that goes from Forks of Salmon in a northeasterly directly, through Sawyers Bar, to Etna (in Scott Valley); 1C02, the South Fork Salmon River road that goes from Forks of Salmon in a generally eastern direction, through Cecilville to Callahan (in Scott Valley). The County roads are the primary emergency routes in the Salmon River as well as many forest roads that provide ingress and egress to those residences away from County roads (see risk assessment section).

Telephone service is available on the North Fork, South Fork and a portion of the Mainstem. Telephone Microwave repeaters are located in Sawyers Bar and outside of Cecilville. Telephone cables are mostly buried throughout the watershed. Electrical service is only available approximately 3 miles up the Mainstem from Somes Bar. There are no hospitals or airports in the watershed, but there are 34 helispots mapped throughout the basin. There are two schools servicing the area: Forks of Salmon elementary and Junction elementary. The Sawyers Bar School is currently used as an office by the Salmon River Restoration Council. Sawyers Bar, Somes Bar and Forks of Salmon each have a U.S. Post Office.

There are numerous water supplies throughout the watershed, including those providing domestic water, hydrant systems in Sawyers Bar and Forks of Salmon and numerous Tanker Fill Sites (see Appendix 4 Tanker Fill Site Map).

There is a store, restaurant and Bar in Cecilville, a small store in Forks of Salmon, and a store in Somes Bar. Gas is available in Forks of Salmon and Cecilville.

3.4 Emergency Services (see Appendix 3 for map of all helispots)

The Forest Service and the Salmon River Volunteer Fire and Rescue (SRVFR) are the main fire responders in the Salmon River. The SRVFR has fire response capabilities in Forks of Salmon and Cecilville. The SRVFR also has ambulance services in Forks of Salmon and Cecilville with EMTs on call. The lower mainstem Salmon River will have response from SRVFR and Orleans Volunteer Fire Department (in Humboldt County). Etna and Orleans Ambulance Services respond to emergency calls. Helicopter evacuation is provided by Mercy Air out of Weed and Medford Air.

The Salmon River region is in a high fire danger zone. The Forest Service has seasonal fire stations in Sawyers Bar, Petersburg (near Cecilville) and Oak Bottom (near Somes Bar).

3.5 Community Legal Structure, Jurisdictional Boundaries –

The Salmon River Volunteer Fire and Rescue response area extends from Somes Bar (junction with Hwy 96) up the North Fork to Cow Creek on County Rd. 1C01 (23 river miles from Forks), and up the South Fork to Sixmile Creek on County Rd. 1C02 (30 river miles from Forks). The US Forest Service, Salmon River District, covers the entire watershed above Nordheimer Creek on the mainstem (river mile 14.75). The lower mainstem (below Nordheimer) is administered by the Six Rivers National Forest.

3.6 Fire Safe Councils, Watershed Councils, Resource Conservation Districts (RCD), Non-Governmental Organizations –

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The Salmon River is home to the Salmon River Restoration Council, the Salmon River Fire Safe Council, Salmon River Volunteer Fire and Rescue, the Forks of Salmon Community Club, the Sawyers Bar Town Hall Association and the Cecilville Community Center. The Salmon River is within the Siskiyou RCD boundary. In the lower Mainstem area, the Orleans/Somes Bar Fire Safe Council and the Mid Klamath Watershed Council cooperate on fire and fuel reduction planning and restoration activities.

3.7 Land Use/Development Trends –

The Forks of Salmon community will see a population increase as the 150 acre Rosemary Butte property has now changed hands and is in the process of being developed by a community organization. The Cecilville has seen an increase in families in the last few years. The Forest Service has made land exchange deals on outlying parcels and has also purchased at least one 40 acre private property. There are Tribal land allotments in Forks of Salmon and down the Mainstem. Occupancy on Mining Claims has virtually been eliminated in the last 20 years, but there has been a marked increase in Recreational Mining, adding seasonal residents. Other Recreational uses include rafting, kayaking, camping, hiking, hunting, fishing, and biking. Land prices are rising.

There is a shortage of jobs and a distinct lack of housing for people wanting to live on the Salmon River

4. **Current Fire Environment** [For overall area; can divide into sub-areas as well.]

4.1 Wildfire Problem Definition

Prior to European settlement, wildfire occurrence interval was between 10-25 years. While suppression forces have kept wildfires from significantly impacting residential areas since the 1987 fire year, increasing fuel loads are making this task more difficult in many areas.

4.2 Local Fire Ecology

The typically dry summers, localized human fire activity, steep topography, and existing vegetation types and seral stages within the Planning Area indicate that wildfires have been a major component of the local ecosystems. In the Salmon River area, many ecosystem types have evolved with fire, including mixed hardwood/coniferous forests, coniferous forests, oak woodlands, grasslands, and riparian plant communities. Fire is a natural process in these ecosystems.

Cultural Perspective –

The Salmon River is within Native American Ancestral Territory. The Karuk Tribe has had a continual aboriginal presence and history in the area, and has a continuing interest in fire related issues. Fire has been utilized by tribal people since time immemorial for protecting and enhancing resources valued by individuals, as well as family groups. Bringing the use of fire back to a level in which humans are once again an integral part of this natural ecological process, is a high priority for tribal and community members alike.

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Before fire suppression, the landscape was extensively managed as a part of everyday life. As with everything in nature, there was no taking without giving. One could not kill a deer for food without allowing ample time for it to reproduce and ensure it had a healthy environment in which to live. Low intensity fire was a critical component of this process. In burning for the management of any resource, there would be an abundance of healthy forage materials for all creatures to share.

Some Tribal Members would dedicate a good portion of their lives to picking up the ground fuels and breaking down the ladder fuels just to pack them home for heating and cooking. This kept lightning fires burning at such low intensities that these fires would creep around until the rains came and the fire would go out. With these two “natural” processes combined at regular intervals, there was a constant cycle of low-intensity fire maintaining a natural ecological balance to a preexisting healthy environment.

Burning by individuals would take place in many forms for many reasons. People would burn piles in tanoak groves after the acorn harvest. The accumulated fuels and bug-infested acorns would be piled as gathering occurred, and set on fire as they traveled home. As these piles burned the smoke would settle at tree level and the bugs remaining in the branches would drop to the ground. Many of these bugs would burn up as the fires slowly burned together and went out over night. This process also ensured that these areas did not become overcrowded with brush because most of the acorns would be picked up and the smaller seedlings would be scorched.

Eighty percent of the plants utilized by Karuk people are fire dependent species. These plants depend on fire for germination, as well as the use quality and quantity of the plant materials. Basketry materials are required to be specific sizes for various types of baskets. Specific fire use intervals are required to properly manage these resources, and these intervals vary between different cultural use plant species.

After 90 years of effective fire suppression and the halting of large-scale traditional treatments, the levels of forest fuels have risen dramatically. The current fuel loading and preceding fire intensities are considered by the Karuk Tribe to be in an unnatural state. Areas around homes and communities are a logical place to begin the reinstatement of these large-scale treatments, while protecting the public from the inevitable onslaught of extremely intense catastrophic wildland fires.

The past fire regime, prior to European settlement, within the Salmon River subbasin is described as having frequent fires (1-25 year intervals). Two recent fire history studies looked at fire regimes for two vegetation types found in the Klamath National Forest. Wills (1991) did a fire history study on Hotelling Ridge, located in the South Fork Salmon River watershed. This study revealed a pre-suppression fire return interval of 10-17 years in Douglas-fir/hardwood stands. In the Thompson Ridge area on the Happy Camp Ranger District, Taylor and Skinner (1994) have estimated pre-suppression fire return intervals for Douglas-fir/sugar pine between 15 and 25 years. Lightning and American Indian burning were the causes of ignition. Stand-replacing events were common in the subbasin, occurring when vegetative conditions were susceptible and ignition and weather opportunities were presented. However, they were only a few acres in size to a few hundred acres.

The southern exposures and drier sites tended to burn with higher severity. Fire would burn into the crowns in some locations while burning only in the ground fuels in others. This created a mosaic of vegetation types, sizes, and age classes within the watershed. During this fire regime, the south slopes were usually in a more open condition. Fire-created openings were larger on south slopes than on north slopes. Also, the lower on the slope the fire started, the larger the opening created.

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Much of the Salmon River watershed is at risk of unnaturally severe fire. Years of fire suppression have had its effect on the fuels build up of the area. In 1911, the United States Congress passed the Weeks Act. Traditional aboriginal burning, uncontrolled European settler burning practices, and a severe fire year in 1910, particularly in the western U.S, precipitated this Act. The Act set up the collaboration between federal and state fire agencies for the purpose of systematically and efficiently suppressing forest fires. Since 1911, records show that 44% of the Salmon River subbasin has burned in forest fires. Fire suppression, coupled with an abnormally wet century (increased vegetation growth), and federal agency management activities (such as logging with insufficient fuel cleanup and silvicultural practices), have contributed to the increased fire risk and damage from fire in our forests. A major heavy snow/wind storm in the winter of 1996 exacerbated the heavy fuels condition by breaking out the tops of trees and knocking trees over in many areas of the watershed. Previous years of drought and overstocking have also resulted in areas of heavy mortality. In areas which were predominately hardwoods, conifers have been encroaching, and they are also encroaching in meadows.

4.3 Fire History

Under the California Fire Plan, the California Department of Forestry and Fire Protection, Siskiyou Ranger Unit, has designated the Salmon River area as having a High Fire Risk. Salmon River Subbasin Restoration Strategy – 2002 states: “Many areas within the Salmon River subbasin are considered to be a fuel model 10... (Timber Litter with under story)...”. This fuel model makes most of the subbasin at high risk. It has a high natural frequency of lightning occurrence (see Fire Start Map). In recent years, the Offield Fire (1973) burned 8,277 acres near the river confluence. The Hog Fire (1977) burned extensively in the lower North and South Fork watershed and in Nordheimer and Crapo Creeks. The total area was about 80,000 acres. In 1987, wildfires burned 90,900 acres in four separate areas, covering much of the Salmon River subbasin. In 1994, the Specimen fire burned approximately 7,000 acres (3,045 acres within the LSR). Approximately 30% of the Salmon River subbasin has burned since the early ‘70s. Unnaturally high intensity fires in this area are known to denude riparian and upslope areas, which increases water temperatures, especially in previously burned areas and areas of bug kill. The Salmon Subbasin Sediment Analysis (USFS, 1994) provides evidence that denuding of these steep, granitic slopes drastically increases the amount of sediment entering the streams and rivers below.

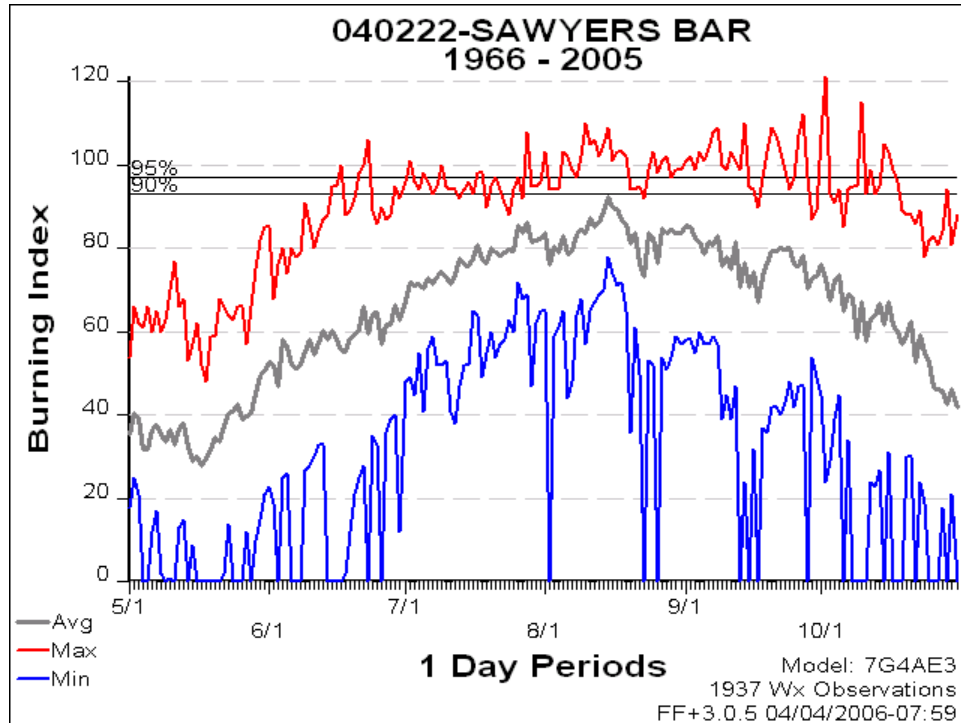
The conditions and threats in the watershed mandate that we identify short and long-term needs and prioritize and complete strategic projects that are integrated in a timely manner to protect life, property, and natural and cultural resources in this unique ecosystem. We must also reintroduce a natural fire regime to the Salmon River watershed. Fire suppression and fuels reduction activities are currently being used in the watershed. There is a critical need for more fuels reduction. As we look at the range of conditions and concerns, we can begin to piece together a cohesive strategy that will detail areas needing specific treatment or protective measures. The identification of priority areas on private and public interface lands will include the influence of these areas on each other and on adjacent areas – this will allow managers to treat smaller areas that will have an impact on the larger landscapes in the basin.

A completed Community Wildfire Protection Plan allows for the design of projects that will meet the objectives of the plan as well as provide economic opportunities to the community. Projects on private properties will provide employment for planning, assessment, education and outreach, fuels reduction, survey, and monitoring crews. Projects on public property are more extensive and potentially provide work for the long term. Both private and public lands will generate material that will have to be burned, chipped, used, or removed. Utilization of alternative forest products should be looked at as an option

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for removed vegetative material. There is a strong potential for the development of a cottage industry built around the utilization of alternative forest products. These different kinds of employment opportunities will diversify the economy of the Salmon River for the long term. The development of a sustainable economy in the basin will partially depend on the willingness of the federal managing agency to provide reasonable contracting and employment opportunities to local community residents and companies (Community-based Forestry and the National Fire Plan, Briefing Paper, April 2003, www.americanforests.org/downloads/fp/reports_pubs/hartzell_natl_fire_plan.pdf).

4.4 Fire Weather



Sawyers Bar RAWs for 30 years (90th and 95th %)

What is the Burn Index? The burn index (BI) represents a combination of fire spread and intensity, which is an indicator of the difficulty to contain and control a wildfire. The BI incorporates seasonal trends calculated from precipitation, temperature, relative humidity, and wind. The BI is scaled so that a value of 55 indicates a predicted flame length of 5.5 feet.

The burn index is one indicator used by wildland fire managers to help determine fire fighter staffing levels each day. It is also used by some structure fire departments for the same reason.

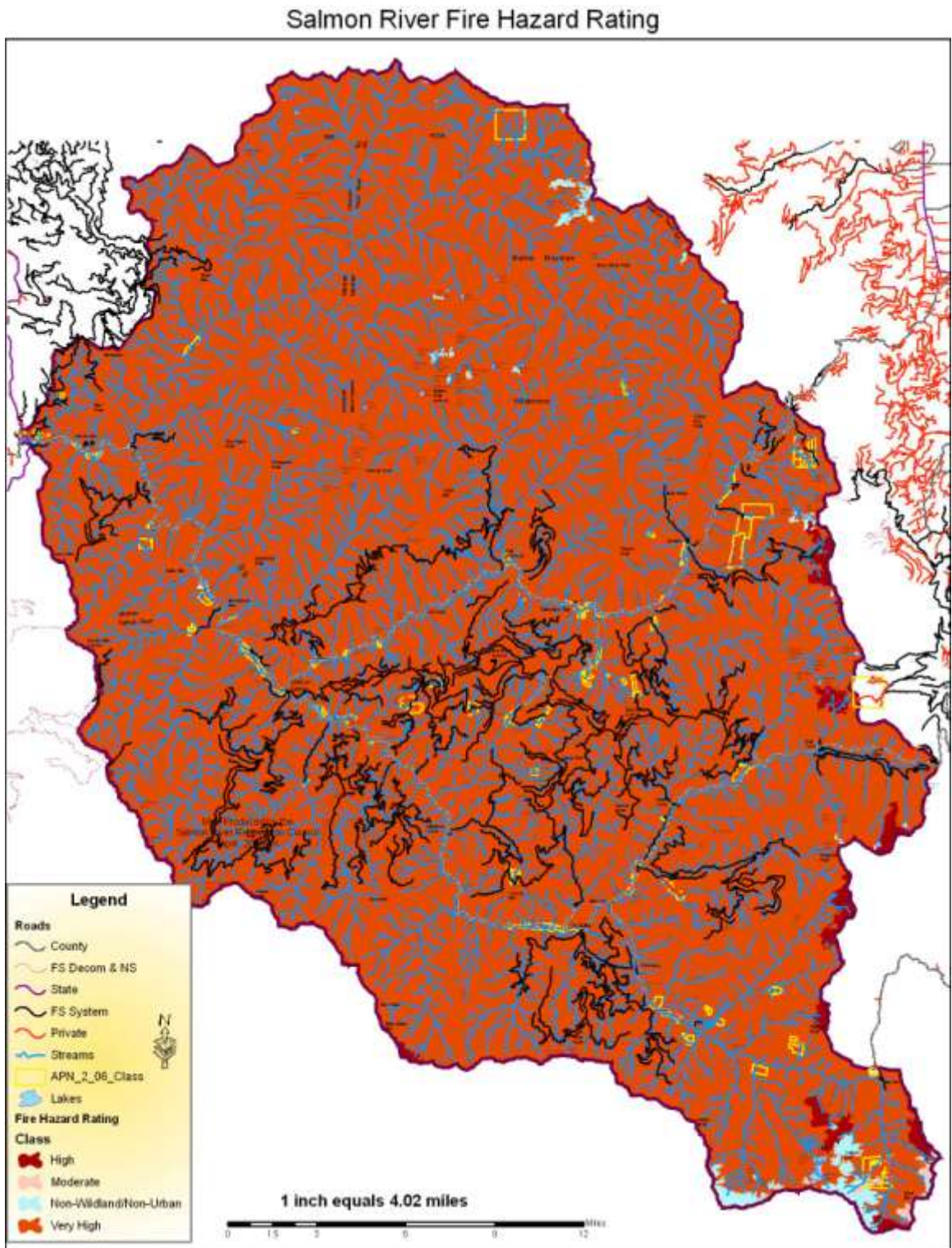
Fuel reduction: Design fuel reduction projects in conifer forest types (including 3x plantation types) to achieve the following standards within the treatment area:

- An average of 4-foot flame length under 90th percentile fire weather conditions.
- Surface and ladder fuels removed as needed to meet design criteria of less than 20 percent mortality in dominant and co-dominant trees under 90th percentile weather and fire behavior conditions.

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- Tree crowns thinned to meet design criteria of less than 20 percent probability of initiation of crown fire under 90th percentile weather conditions.

4.5 Hazardous Fuels

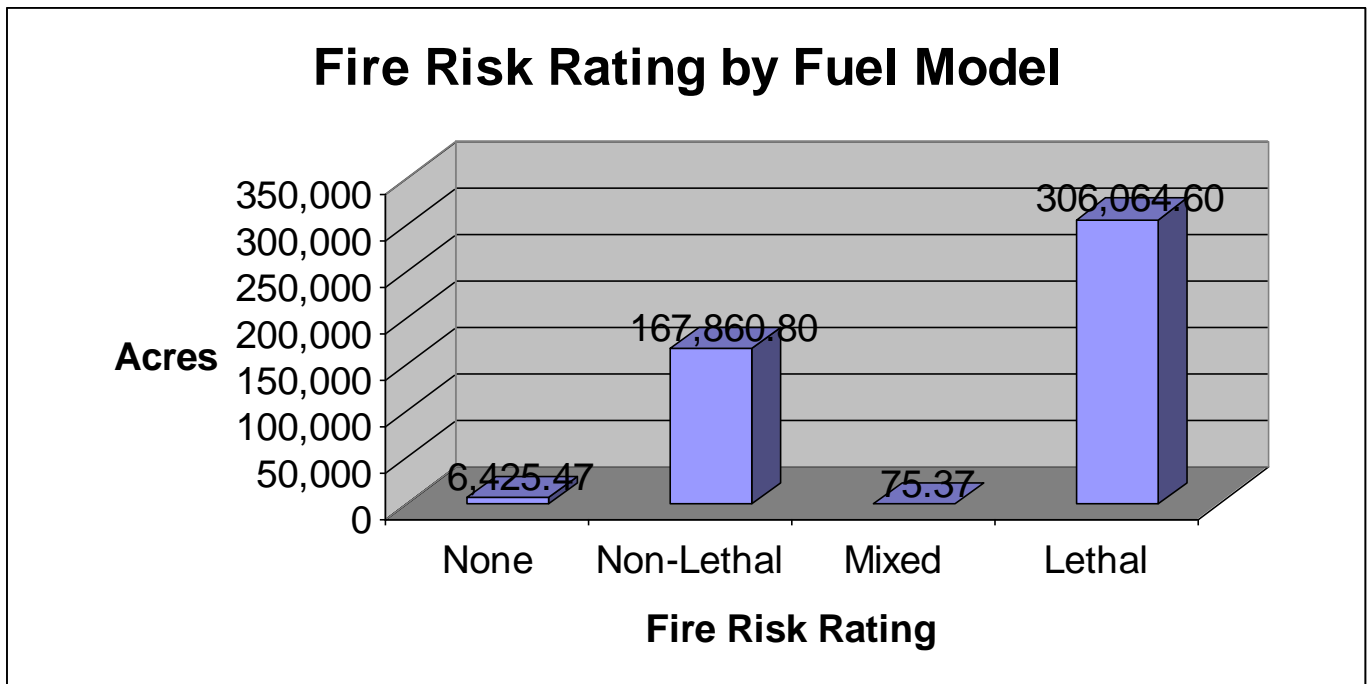


Data taken from Cal FIRE FRAP Fire Hazard Severity Zoning DRAFT, 2007
This data has not been verified by local Fire Experts (see Information Needs Appendix).

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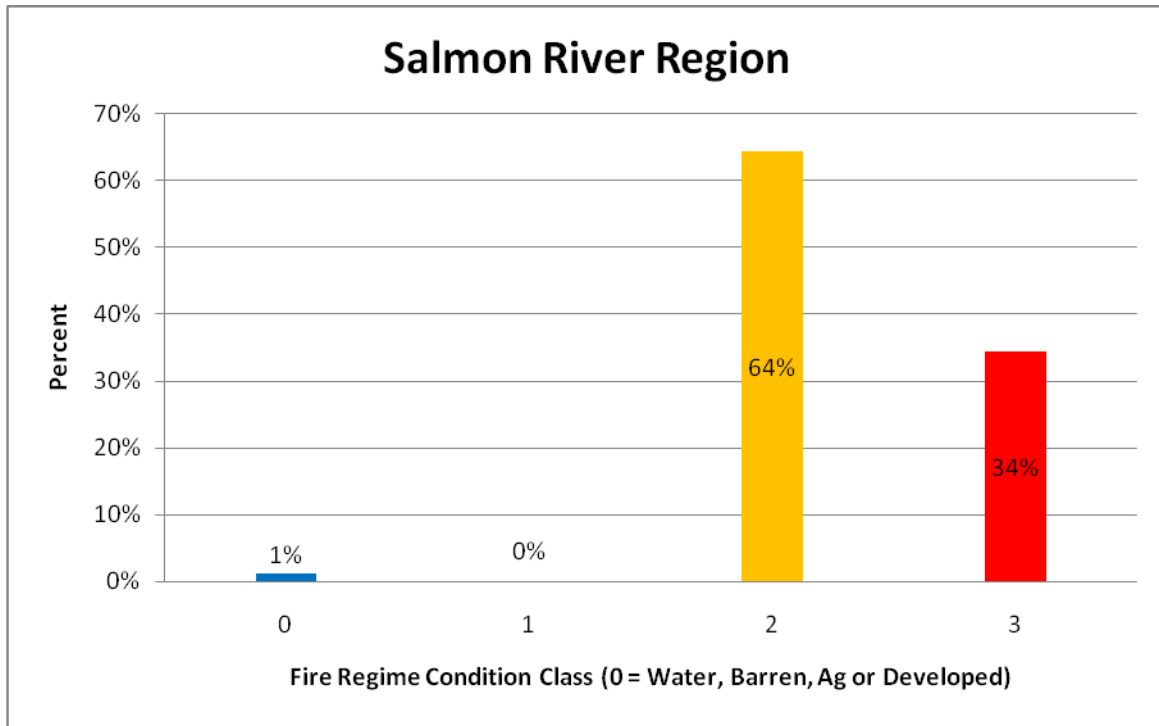
Salmon River Fire Hazard Severity Zoning Breakdown				
Hazard Rating	Non-Wildland/Non-Urban	Moderate	High	Very High
Area (sq m)	21,659,592.21	3,921,193.61	47,075,790.89	1,905,137,900.89
Area (acres)	5,352.2	968.9	11,632.6	470,767.94

4.5.1 Fuel Hazard Ranking



Based on US Forest Service Region 5 Fireshed Assessment Team Fuel Model Layer. The accuracy is questionable based on local Fire Experts (see Information Needs Appendix).

4.5.2 Condition Class



Percentages: Condition Class 1 = 0%; Condition Class 2 = 64%; Condition Class 3 = 34%. From Landfire.gov FRCC data (see Information Needs Appendix).

A natural fire regime is a general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning (Agee 1993, Brown 1995). Coarse-scale definitions for natural (historical) fire regimes have been developed by Hardy et al. (2001) and Schmidt et al. (2002) and interpreted for fire and fuels management by Hann and Bunnell (2001). The five natural (historical) fire regimes are classified based on average number of years between fires (fire frequency) combined with the severity (amount of replacement) of the fire on the dominant overstory vegetation. These five regimes include:

- I – 0-35 year frequency and low (surface fires most common) to mixed severity (less than 75% of the dominant overstory vegetation replaced);
- II – 0-35 year frequency and high (stand replacement) severity (greater than 75% of the dominant overstory vegetation replaced);
- III – 35-100+ year frequency and mixed severity (less than 75% of the dominant overstory vegetation replaced);
- IV – 35-100+ year frequency and high (stand replacement) severity (greater than 75% of the dominant overstory vegetation replaced);
- V – 200+ year frequency and high (stand replacement) severity.

As scale of application becomes finer these five classes may be defined with more detail, or any one class may be split into finer classes, but the hierarchy to the coarse scale definitions should be retained.

A fire regime condition class (FRCC) is a classification of the amount of departure from the natural regime (Hann and Bunnell 2001). Coarse-scale FRCC classes have been defined and mapped by Hardy et al. (2001) and Schmidt et al. (2001) (FRCC). They include three condition classes for each fire regime. The classification is based on a relative measure describing the degree of departure from the historical natural fire regime. This departure results in changes to one (or more) of the following ecological components: vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances (e.g. insect and diseased mortality, grazing, and drought). There are no wildland vegetation and fuel conditions or wildland fire situations that do not fit within one of the three classes.

The three classes are based on low (FRCC 1), moderate (FRCC 2), and high (FRCC 3) departure from the central tendency of the natural (historical) regime (Hann and Bunnell 2001, Hardy et al. 2001, Schmidt et al. 2002). The central tendency is a composite estimate of vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated natural disturbances. Low departure is considered to be within the natural (historical) range of variability, while moderate and high departures are outside.

4.5.3 Natural Fire Breaks

There are very few Natural Fuel Breaks – Generally, they consist of riverine and stream riparian areas and small meadows. In the wilderness areas there are some with large outcroppings. Anthropomorphic landscape features such as roads, trails and openings that serve as Fuel Breaks.

4.6 Ignition History: Source, Season, Slope, Aspect

Ignition History comes from a KNF GIS coverage that was built from the original Individual Fire Reports (Form 5100-29) dating back to 1922. 1,757 fires were started by lightning, 48 fires were started by debris burning, 100 fires were started by campfires, 14 fires were started by children, 40 fires were started by equipment, 85 fires were started by incendiary, 117 fires were started by smokers, and 85 fires were started by miscellaneous causes. In general there seems to be a pattern of more strikes in Picayune, Upper South Fork, and Marble Mountain ridgetop areas.

5. Risk Assessment: Identifying and Evaluating Assets at Risk

Suppression Response Plan and Residential Risk Assessment

Goals 11 through 13 above will be completed as part of a Suppression Response Plan and updating of the Residential Risk Assessments (section 2.4). The Suppression Response Plan will provide information on previously used fire breaks, water tender fill sites, potential fire camp locations, existing Forest Service and Volunteer Fire and Rescue Engines locations, and other fire infrastructure resources. This information will be used to develop detailed plans for towns/neighborhoods/residences; critical emergency access routes; and landscape management of firesheds. Also to be included in this Response Plan will be a mechanism for the Forest Service to coordinate with community/Fire Safe Council Neighborhood Liaisons, who have experiential knowledge of past fires and fire behavior in their neighborhoods. These Liaisons will be prepared with information from this CWPP, specific Fire and Fuels Management Plans for private lands, and up to date GIS data in order to coordinate with the incident command team. The Liaisons will also be

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responsible for providing information to (and from) the community (see Appendix 9.1.8 – Fire Safe Council/Community Liaison Program).

The Residential Risk Assessments were completed in the early 1990s and were intended to provide information to emergency response personnel about the access conditions into a property, hazards such as fuel storage and septic systems, water availability, fuel description, slope hazard factors, legal description, construction type, structure type, roof material, and significant terrain features. The assessment also suggests which resources will be needed for protection in case of an approaching wildfire. Promoting annual fire inspections will provide residences and landowners with valuable suggestions to keep their properties defensible.

5.1 Structures/Density

The density of structures in the Salmon River is relatively low. Generally, the private parcels are located throughout the watershed, with a few neighborhoods having a greater structural density. See Neighborhood Descriptions under item 3.2.

5.2 Businesses, Commercial, Recreation

Except for the USFS Guard Stations at Petersburg, Sawyers Bar, and Oak Bottom, the main business areas are currently limited to Forks of Salmon and Cecilville. In Forks of Salmon there is a small store with gas available, and Cecilville has a store, restaurant, bar, gas, and rental cabins. There are several packing and guide businesses offering pack trips into our surrounding wilderness areas, and Otter Bar Lodge runs a kayaking school. Many residents run home cottage industries selling jewelry, soaps, oils, puppets, and other items. Road and bicycle tours are popular in the summer months as are rafting, kayaking, swimming, backpacking and hiking.

5.3 Cultural Resources

Cultural resources, for the purposes of this plan, refer to the integration of cultural practices with those aspects of the native environment that sustain and contribute to the continuity of tribal life. From this perspective cultural resources are much more than simple “human values” that need to be integrated into watershed planning in order to “balance” human concerns with non-human ecosystem functioning. Indigenous cultural resources currently exist as part of a historically identifiable relationship between land and people. These relationships form an essential component in the restoration of natural disturbance regimes, with low intensity human directed fires as a critical component of a restored native ecosystem.

Traditional Ecological Knowledge is a cultural “resource” in itself, and every bit as important to future tribal cultural survival as hunting, fishing, gathering and sacred ceremonial activities. Tribal medicine, basketry and other crafts, foods, ceremonies, spirituality and quality nutrition are byproducts, or a “value added benefit” of utilization of this knowledge when coupled with the human resources found in the local and tribal community. This knowledge is also a critical ecosystem component in the form of a “human interacted ecosystem maintenance regime” that is at risk of loss from high intensity wildland fire, if not incorporated into the restoration of natural fire regimes.

Eighty percent of cultural-use plants are fire dependent species. Each of these species requires a specific fire return interval, to ensure useable quantities and quality. Tribally significant fish and large game species are cultural resources that require the balanced ecosystem function found in pre-historic natural fire

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regimes. When the human interacted ecosystem maintenance component is recognized as a contributing factor in the restoration of culturally based restoration activities in entire watersheds, this balance is restored and all cultural resources maintain a significant level of protection and can be enhanced with a well thought out wildland fire use strategy.

Archaeological resources are cultural resources that exist throughout the plan area. SHPO concurrence is required on activities that can potentially impact archaeological resources. Wildfires are exempt from this process, but the Karuk Tribe believes there is critical need to prepare watersheds for future fire returns so as to help mitigate these impacts prior to fire occurrence. These resources are only irreparably harmed when fires consist of high intensity and are of long duration.

5.4 Ecologically Sensitive Areas: Wildlife Habitat, Plants, Ecosystem Health, Primitive Areas –

Fire can cause extensive changes in Wildlife Habitat, Plants, Ecosystem Health, and Primitive Areas, especially in large stand replacing fires. Loss of Species Core areas, Corridors, and Unique areas such as the Russian Wilderness, unusual species such as Brewers Spruce wildlife habitat, sensitive plants and wilderness values over large areas can drastically change the characteristics of these areas for a long period of time.

5.5 Water and Watersheds –

Fire can cause extensive changes in a watershed, including: burning of vegetation and litter, which releases plant nutrients (such as N, P) and metals (such as Hg, Mn); heating of soils, which alters soil properties and flow paths; and post-fire erosion, which may increase turbidity and sediment loads. These changes can impact water quality; however, the nature and degree of the impact is largely unknown, leaving water managers unprepared to mitigate water quality impairment.

High intensity wildfires denude large areas of vegetation, causing destabilization of soil, mass wasting, increased sediment delivery to streams, and increased water temperature. These fire impacts are highly detrimental to fish at a time when fish surveys have been recording record low numbers. If the fire burns hot enough and the creek is small enough, it will cook the fish. It will kill them. There are also negative consequences for fish populations because of the toxicity of fire fighting chemicals to fish and the potential for invasives to take burned areas, replacing native plants.

5.6 Air Quality –

Slash burning is only one of many kinds of outdoor burning. Outdoor burning also includes residential burning such as leaf and yard waste burning, and agricultural burning of farm fields. Outdoor burning releases carbon monoxide, particulate matter, and volatile organic compounds into the air. Carbon monoxide is a gas that interferes with the body's ability to absorb oxygen. It can cause headaches, drowsiness, and even death at high concentrations. Particulate matter is made up of tiny particles of soot, dust, and unburned fuel suspended in the air. Visible smoke is largely composed of these particles. Chronic diseases such as emphysema, asthma, chronic bronchitis, and cancer have been linked to exposure to fine particulate matter. Particulate matter also contributes to smoke haze that obscures Siskiyou County's scenery. Volatile organic compounds contribute to the formation of ozone pollution. Ozone can irritate and inflame the breathing passages in the lungs, throat, nose, and sinuses. It can cause coughing, wheezing, chest tightness, dry throat, headaches, or nausea. Outdoor burning is also known to

release toxic air pollutants. Much of this pollution is released during half of the year, making its impact more concentrated.

5.7 Biological Impacts of Fire Suppression

Firelines: Constructing firelines by handcrews or heavy equipment results in a number of direct environmental impacts: it kills and removes vegetation; displaces, compacts, and erodes soil; and degrades water quality. When dozerlines are cut into roadless areas they also create long-term visual scars that can ruin the wilderness experience of roadless area recreationists. Site-specific impacts of firelines may be highly significant, especially for interior-dwelling wildlife species sensitive to fragmentation and edge effects.

Tree Felling: Besides habitat loss and scenic degradation, an additional impact of tree felling along firelines is, ironically, the creation of new fuel hazards by leaving "windthrows" of downed woody debris and vegetation.

Chemical Use: A host of different toxic chemical fire retardants are used during fire suppression operations. Concentrated doses of retardant in aquatic habitats can immediately kill fish, or lead to algae blooms that kill fish over time. Some retardants degrade into cyanide at levels deadly to amphibians. When dumped on the ground, the fertilizer in retardant can stimulate the growth of invasive weeds that can enter remote sites from seeds transported inadvertently by suppression crews and their equipment.

Suppression Firing: The most routine form of suppression firing, "burnout," occurs along nearly every linear foot of perimeter fireline. Another form of suppression firing, "backfiring," occurs when firefighters ignite a high-intensity fire near a wildfire's flaming edge, with or without a secured containment line. In the "kill zone" between a burnout/backfire and the wildfire edge, radiant heat intensity can reach peak levels, causing extreme severity effects and high mortality of wildlife by entrapping them between two high-intensity flame fronts.

Burning out is commonly used on wildfire "complexes" (a cluster of smaller wildfires) in order to merge them together into a single large fire perimeter. As well, large unburned "green islands" located far inside firelines are often deliberately ignited. During indirect attack strategies, burnout operations can take place several miles away from the edge of a wildfire, or alternately, several miles away from firelines. Consequently, firing operations can greatly add to the total acreage of wildfires, and cause a range of low to extreme fire behavior and severity.

Road Reconstruction: Roads that have been blockaded, decommissioned, or obliterated in order to protect wildlife or other natural resource values are often reopened for firefighter vehicle access or use as firelines.

Spread of Noxious Weeds: Both vegetation removal and soil disturbance by wildfire and suppression activities can create ideal conditions for the spread of invasive weeds, which can significantly alter the native species composition of ecosystems, and in some cases can change the natural fire regime to a more fire-prone condition. Firefighters and their vehicles can be vectors for transporting invasive weed seeds deep into previously uninfested wildlands.

6. Mitigation Strategy, The Action Plan

6.1 Desired Future Conditions

At the end of the first decade, there will be changes in the Forest. In some cases, random ecological processes, independent of Forest management actions, will have shaped the landscape. In other cases, management actions implemented to meet resource objectives will have influenced the outcome.

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The Forest will remain a place of high geologic diversity. The natural processes of landslides and hillside erosion will continue to shape and influence Forest ecosystems. Many landslides associated with past management activities will be stabilized. Much of this will be the result of the Forest's aggressive restoration activities. Productive forest soils will continue to provide the basic medium for the ecosystem. High quality water in Forest streams and rivers will continue to provide the medium for healthy riparian and aquatic habitats. The air quality over the Forest will be of high quality. Natural and prescribed fires will produce smoke over a longer period of the year than at present. During the summer months, there will be fewer periods of time when high levels of smoke emissions from wildfires fill the air.

Some watersheds that are currently in poor condition due to catastrophic fires or past management activities will begin to respond to restoration activities. In general, forested cover will be increasing while erosion and sediment production decrease.

The Forest will continue to be one of the most biologically diverse areas in the Nation. Biological diversity, although variable within natural limits at the stand and landscape levels, will be essentially the same as it is today at the Forest level. There will be a mosaic of vegetative patterns across the Forest. The composition and structure of forest, rangeland, and aquatic ecosystems will be within the natural range of variability. These ecosystems will function in a healthy manner and be resilient to changes, including repeated fires. Quality habitat will be present for aquatic and terrestrial species. Habitat will be conducive to the movement and interaction of species and to movement across landscape and Forest boundaries. The distribution of species will help insure perpetuation of healthy populations.

Ecological processes will be the primary influence evident in late-successional and "old growth" habitats, specifically in locations where wildfires are no longer suppressed. Over time, a larger portion of terrestrial habitat will favor species dependent on older forest habitats instead of those that thrive in younger, more open forests. However, overall species richness will remain essentially as it is today. Habitat components, such as snags and down logs, will be distributed across the Forest at levels that support species and organisms that depend on these forest attributes for existence. The Forest will be capable of supporting a growing population of Threatened, Endangered, and Sensitive (TE&S) species due to the increase in late-successional habitat, river and stream habitat, and other habitat conditions essential to these species. The population of Roosevelt elk will be large enough to support sport hunting of this reintroduced species.

High quality aquatic habitat will be capable of supporting abundant populations of anadromous and resident fish and other aquatic species. Pool frequency and depth as well as key rearing habitats will be increased. These ecosystems will be healthy and resilient to change.

The mixture of seral stages for forest and rangeland cover types will be capable of providing for a diversity of species. Wildfires and vegetative management activities will provide patches of early seral stages in a variety of patch shapes and sizes throughout the landscape.

The amount of acres burned in high intensity wildfires will have decreased significantly due to the large, aggressive fuel management program reducing fuel loading throughout the Forest. There will be more acres of lower intensity fires similar to conditions prior to 1900. These lower intensity fires will begin to create a more open forested condition in many areas.

The landscape will appear to be primarily shaped by ecological processes, rather than management activities. Openings in the forest canopy created by vegetation management will not be readily evident. Existing clear-cut units that are apparent today will blend into the surrounding vegetation in the future, as planted trees mature and visual restoration projects soften sharp contrasts in line, form, and color.

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Wilderness areas and Research Natural Areas (RNAs) will be primarily shaped by ecological processes, although trails, livestock, and other evidence of human use might be noticeable. Management activities, while visible in local areas, would not be obtrusive.

Land patterns in some areas of the Forest will be modified to accommodate the planned development of specific communities within the Forest boundaries. Acquisition or disposal of some priority lands will result in less mixed ownership across the Forest.

Mineral development on the Forest will continue as primarily small operations. Large-scale development will be driven by National demand.

6.2 Mitigation Goals

- ▶ Improve firefighter safety.
- ▶ Reduce fuels in the Wildland/Urban Interface.
- ▶ Return fire to the ecosystem where practical.
- ▶ Implement Firewise practices.
- ▶ Establish fire prevention partnerships.
- ▶ Provide the appropriate resources to maintain an effective emergency response system to structure and wildland urban interface fires in the Salmon River.
- ▶ Promote education on fire prevention and structure protection inside and out.
- ▶ Create a flexible plan that is updated regularly when needed.
- ▶ Identify infrastructure status and needs.
- ▶ Establish regional cooperation and communication.
- ▶ Determine and evaluate economic impacts.
- ▶ Identify bi-products to offset costs.
- ▶ Create short and long term funding strategies.
- ▶ Reduce the introduction of invasives.

6.3 Current Projects

1. Develop Inventory of Actions taken to Date
2. Complete Fire Plans:
 - A. All Towns, Neighborhoods, and Isolated Residences
 - B. Public/Private Interface – WUI's
 - C. Develop GIS Coverage for Emergency Escape and Access Routes
 - D. Fireshed/Watershed Scale
3. Update Residential Risk Assessment –
 - A. Develop and Implement Rx to make residences conform to 100' defensible space,
 - B. Identify and/or Install Suppression Lines
4. Design and Implement Prevention Program – (See Above)
5. Tanker Fill Sites – Identify and Improve as Needed
6. Complete Emergency Response Signage
7. Design and Implement Bulletin Board Plan
8. Implement Prioritized Fuels Reduction –
 - A. Emergency Routes,
 - B. Defensible space around structures,
 - C. Private Lands,
 - D. Private Public Interface,
 - E. Public Landscape

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F. Develop Maintenance Plan for A-E Actions,

G. Identify How/When Natural Fire Returns in A-E Actions

9. Develop Emergency Response Plan

10. Develop Fire Suppression Plan

11. Identify and Install Emergency Water Systems for Wetting Structures in fire event

12. Develop Alternative Forest Products Feasibility Study – Firewood, etc.

13. Make water supply available on each property for fire suppression use.

14. Continue education, outreach, coordination with community, community workdays and workshops through annual fire awareness weeks and other events

15. Integrate Appropriate Fuels Management in Timber Sales

6.4 Prioritization/Process

Private properties lie widely dispersed throughout the Salmon River basin. All properties or groups of properties are surrounded by forested public property. Limited time and funding mandate that we rank properties in order to plan for fuel reduction on the properties that are most at risk. The Prioritization Strategy was developed through the Salmon River Fire Safe Council, and is based on: occupancy, location, access (slope position, aspect, and distance from fire department), fuel loading, and resource values and assets at risk (See Appendix 1).

6.4.1 Project Prescription – See Prescription Policy – Appendix 2

6.4.2.1 Wildland Urban Interface (WUI) Areas

Public meetings have been held in Cecilville, Forks of Salmon and Sawyers Bar to gain input on WUI areas. WUI areas for the Salmon River are being defined by community members, the US Forest Service, US Fish and Wildlife Service, Karuk Tribe, Salmon River Fire Safe Council, and Salmon River Volunteer Fire and Rescue. The areas generally apply to public property surrounding private property. We've expanded the definition to include high value areas in addition to residential, including historic sites, municipal water supplies, emergency access and escape routes, and high fire risk drainages that threaten residential areas. Also, special consideration is given to connecting with Forest Service under-burn and other fuels management activities projects.

We have divided prescriptions into several initial categories that are rated by the level of fire risk (High, Medium, and Low) (See Appendix 2 for prescription policy tables). Fire risk is defined as the fuel loading in an area combined with other factors (i.e. ignition sources, slope, aspect, and elevation).

The technique generally used for the fuel reduction prescriptions mainly call for a standard Shaded Fuel Break (emphasizing use of existing roads, trails, old breaks and natural features where appropriate) that breaks up fuel continuity and the fuel ladder and leaves canopy cover of at least 60%. As shown in numbers 2 and 3, proximity to a structure or other high value area would prescribe more vegetative material removed (with higher maintenance) than in outlying areas.

1 Sensitive and Unique Areas (i.e. ESA, Historical sites, and other Special areas on private and public properties). Shall be analyzed on a site-specific basis with input from all appropriate federal, state, and tribal agencies that have responsibility for the resources at risk.

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- 2 Residences and High Value Areas (i.e. water tanks and systems, communication systems, fuel storage, etc.). New State law defines the minimum distance of defensible space surrounding a residence as 100ft.
- 3 Emergency Access (ingress and egress) Routes – Does not guarantee that fire fighters will be able to access area under extreme fire conditions.

The Salmon River Fire Safe Council is responsible for helping to plan, implement and monitor the reinstatement of natural fire regimes in the Salmon River ecosystem in a manner that protects life, property, improves forest health, and enhances the resources valued by its stakeholders. Along with cooperators, the FSC is developing prescriptions for fuel reduction activities in WUI areas. These treatment variations are described below for the 5 different WUI area types that have been established.

1. Emergency Access and Escape Routes – Approximately 200 feet above and below road (use number 3 in prescription policy tables).
2. Property Buffers – Approximately 200 foot areas on public property surrounding individual properties, neighborhoods, and towns (Use number 2 in prescription policy tables).
3. Domestic Water Use – Use handpiling in jackpot areas, pullback from leave trees where appropriate, and underburning to achieve fuel reduction and watershed protection. 300 foot Shaded Fuel Breaks on ridge tops to protect watershed from outside fires, where appropriate.
4. ¼ Mile Buffers – On public property surrounding individual properties, neighborhoods, and towns. Use handpiling in jackpot areas, pullback from leave trees where appropriate, and underburning to achieve fuel reduction and watershed protection.
5. Special Areas – These would include areas below properties located high on slopes, as well as culturally or biologically significant areas (Use number 1 in prescription policy tables).

These are suggested treatments; costs, fuel type and terrain will dictate treatments in specific areas. Treatment areas will also be prioritized based on maximum benefit to private residences, other high value areas and protection of public resources.

6.4.2 Resources Available, Project Readiness, Responsible Parties, Agency Involvement

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Resources Available	Project Readiness	Responsible Party
Collaborative Process includes non-profits, fire departments, community members, agencies, & businesses	recommends all fire related projects, several private property fuel reduction projects on private property either funded or ready to go	Salmon River Fire Safe Council (SRFSC)
Non-profit, experience w/project administration	writing proposals for planning and implementation of fire related projects, currently implementing 1 project on private property, w/another starting in fall - projects recommended by SRFSC	Salmon River Restoration Council (SRRC)
Non-profit, experience w/project administration	implementation of water related projects, currently implementing 1 hydrant project, with a water tank project starting in fall - projects recommended by	Salmon River Volunteer Fire & Rescue
Federal agency, experience w/land management & project administration	planning and implementation of fire related projects on public property	US Forest Service

6.5 Possible Actions

6.5.1 Vegetation Management/Fuel Modification Projects – The following are the methods that will commonly be used:

- Thinning and Brushing
- Prescribed Burning
- Fuel Breaks (Shaded, Strategic, DFPZ’s)
- Industrial Resource Management
- Green Belts
- Debris Disposal

6.5.2 Community Capacity Building – The following are the methods that will commonly be used:

- Job Training/Employment
- Integrated Development Funding
- Stakeholder Collaboration
- Green Belts
- Debris Disposal

6.5.3 Infrastructure Improvements

- Water Supply – Increase water storage (see Action Matrix and Sawyers Bar, Forks of Salmon, Cecilville, and neighborhood CWPPs)
- Roads/Access – There is a need for periodic maintenance or improvement of emergency access routes to keep them functional
- Communication – Develop a communication Plan, including a phone tree and a CB tree

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6.5.4 Emergency Response

- Readiness
- Equipment – have list of local resources under Emergency Equipment Rental Agreements
- Firefighter and Public Safety Training, Certification, and Qualification
- Strategic Fuel Breaks/Defensible Polygons

6.5.5 Defensible Space

- Roads: Ingress, Egress – have been identified and mapped
- Clearing, Fire-Resistant Landscaping – 100 ft. Defensible Space

6.5.6 Evacuation Plan

- 6.5.6.1 Emergency Communication System/Neighborhood Teams/Phone Trees
- 6.5.6.2 Potential Safety Zones, Assembly areas – have been mapped (see Appendix 5).
- 6.5.6.3 Emergency access Routes – have been identified and mapped (see Appendix 5).
- 6.5.6.4 Education: How, What – Meetings, letters, flyers, posters.
- 6.5.6.5 Fire Safe Councils: Process (define meetings and mission statements, Stakeholders include all, Resources – existing community, agencies, tribes and local groups equipment and staffing.)
- 6.5.7 Fire Safe Inspector Program – see Goal # 13
- 6.5.8 Senior/Disabled Assistance – Identify Senior Citizens and Disabled individuals who may need special assistance during a fire emergency
- 6.6 Watershed Protection – obey federal and state protection laws and follow established Ecological Restoration Principles.
- 6.7 Permitting, Exemptions – Obtain all pertinent permits, permissions and exemptions needed to complete projects.
- 6.8 Prioritized Actions, Implementation Plan and Timeline (see Appendix 6 – Action Matrix)
- 6.9 Monitoring and Evaluation (see Appendix 6 – Action Matrix)

7. Summary and Conclusions

7.1 Analysis and Findings

Fire has been a significant evolutionary factor in the Salmon River watershed. Past fire suppression has helped to create extreme fuels conditions that increase the probability of stand replacing wildfires. If the land managing agencies and landowners use this Plan and the included Priority Matrix (Appendix 7) there is an opportunity to make the area able to withstand future wildfires without having stand-replacing events. As actions are completed on private properties and WUI areas, there will also be less likelihood for loss of life and property from future wildfires.

7.2 Plan Update Process

This Plan will be updated every 5 years unless significant events occur or significant information is brought forward.

8. What is Fire Safety?

The general principle behind *fire-safing* an area (making it as safe as possible for when a fire might eventually pass through) is to reduce the amount of fuel that the fire can consume. Three factors dictate the extent and severity of fire: fuel, oxygen, and heat. If any one of these elements is missing, a fire won't burn. Usually it



is difficult to control the oxygen and heat available to a fire (i.e., trying to control the weather!). That leaves the option of controlling the fuel. When there is a lot of fuel, a fire can burn very hot, and move very quickly. When there is little fuel present, fires tend to slow down and to burn cooler. Those cooler fires are much easier to control. It is in your best interest to reduce the amount of fuels around your home to reduce the risk of a wildfire consuming it. That's what it means to *fire-safe* your home—reduce the amount of fuels a fire could consume, as well as reduce other risks that increase fire, such as possible ignition sources.

Inside Your Home

Smoke detectors have saved many lives by alerting residents to fires inside the home. Smoke detectors should be positioned on the wall or ceiling just outside each bedroom. If you have a multi-level home, install a detector on every floor. Sleep with your bedroom door closed, but make sure you can clearly hear the detector in the hall. If there is any doubt, or if you smoke, place an additional detector inside your bedroom. ***Be sure to test your smoke detectors monthly and replace batteries twice a year, perhaps when clocks are changed in the spring and fall.***

Portable fire extinguishers save lives and property by putting out or containing small fires until the fire department arrives. It is most important to place fire extinguishers in your kitchen and garage. Make sure that each member of your family can hold and operate your fire extinguishers and knows where they are located inside the home. ***Remember that fire extinguishers need to be maintained and must be recharged after every use.***

Consider installing a home sprinkler system. ***Home sprinkler systems are one of the most reliable and effective ways to protect your home because they provide an immediate response to extinguish a fire.*** They also can extinguish a fire when you are asleep or when you are away from home.

Make sure your appliances (Refrigerators, stoves, hot water heaters, heaters, lights, etc.) are fire safe.

There has been a lot of literature developed on fire safety issues. Several fire-safe documents and/or references are contained in Appendix 18. Fire-Safe Literature.

How to be Ready When Fire Comes

8.1 Before the Fire:

8.1.1 Defensible Space

8.1.1.1 Legal Requirements

Public Resources Code 4291

The State recognizes the basic principles behind fire safety, and hence enacted a law—Public Resources Code (PRC) 4291—about the amount of fuels you can have around your property. Yes, it is a law. In the past, it has been rarely enforced, but it is on the books, and it could be enforced if you happen to be the one to start the fire in your neighborhood. This is one of those laws that actually makes sense, since many people, especially those new to rural areas, are not sure what to do to reduce fire risks. PRC 4291 is a good summary of the basics of fire-safing. For the text of the entire PRC 4291, please see Appendix 18. Fire-Safe Literature.

The California Department of Forestry and Fire Protection (CDF) has the responsibility of both fire suppression and enforcement on all state and private lands in California.

CDF REMINDS YOU THAT PRC 4291 REQUIRES:

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1. Maintain around and adjacent to building or structures a fuelbreak for a distance of not less than 100 feet on each side, or to the property line, whichever is nearer. This does not apply to single trees, ornamental shrubbery, or similar plants which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.
2. Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.
3. Maintain any tree adjacent to or overhanging any building free of dead or dying wood.
4. Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

8.1.1.2 Clearing, Landscaping, Relocation of Flammable Materials

Use appropriate vegetation in landscaping. Information available from the Salmon River Fire Safe Council, CDF, USFS and the Salmon River Volunteer Fire and Rescue

8.1.1.3 Neighborhood Preparedness Programs

Several Community Wildfire Protection Plans have been developed for towns (Sawyers Bar, Forks of Salmon, and Cecilville), neighborhoods (Butler Creek, Black Bear Ranch, and Rainbow). The Godfrey Ranch Neighborhood has also developed a Land Management Plan with a large fire component. These plans tier to this Basin-Wide plan therefore increasing the detail of information available for the entire Salmon River.

8.1.1.4 Recommended Building Materials/Fire Wise Construction

Information is available from the Salmon River Fire Safe Council, CDF, USFS and the Salmon River Volunteer Fire and Rescue. Also visit www.firewise.org

8.1.2 Neighborhood Emergency Response Teams – Utilize existing agency and Volunteer Fire & Rescue Organizations and Neighborhood Liaison Program (see Section 5 above)

8.1.3 Water Sources – Identified and Mapped – Install sprinklers, misters, and foam units on outside of homes.

8.1.4 Agency Fire Response Plan – Klamath and Six River Fire Management Plans and Dispatch Plans

8.1.5 Emergency Communication – Utilize existing agency and Volunteer Fire & Rescue Communication plans and Neighborhood Liaison Program (see Section 5 above)

8.1.6 Evacuation Plans (see Appendix 11)

8.3 After the Fire: Assess Your Success, Evaluate and Plan for How to Be Better Prepared Next Time

9. Appendices

1. Prioritization Strategy
2. Prescription (Rx) Policy
3. Map of Helispots
4. Map of Tanker Fill Sites
5. Map of Emergency Access Routes
6. Fire History Map
7. Fire Start Map
8. Wildland Urban Interface Areas
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17. Current and Potential Funding Sources
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19. Internet Links
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