Orleans/Somes Bar Community Wildfire Protection Plan

A Collaborative Fire Protection Strategy for the Communities of Orleans and Somes Bar

Coordinated by the Orleans/Somes Bar Fire Safe Council

Orleans, California
January 2012

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Orleans/Somes Bar Community Wildfire Protection Plan

1. Objectives of a Community Wildfire Protection Plan:

Introduction:

In response to federal and state legislation, the Orleans/Somes Bar community started preparing a community wildfire protection plan (CWPP) to enhance collaboration between local, state, tribal and federal wildland fire protection agencies, as well as community members. Local communities now have a unique opportunity to influence where and how federal agencies implement fuel reduction projects on federal lands, and how federal funds may be distributed on non-federal lands.

Wildland fires are a common occurrence in the Klamath-Siskiyou region; the Orleans-Somes Bar area has a long history of wildland fire. For untold millennia, the Karuk Tribe used prescribed fire to manage for the health of natural and cultural resources. Also, lightning fires are prevalent, especially at higher elevations. The forests early European settlers saw in the Mid Klamath region were shaped by anthropogenic and lightning fires. Today, many people in this region still view fire as a powerful tool to be used carefully and thoughtfully.

Figure 1.1: 1999 Megram Fire

The Orleans/Somes Bar Fire Safe Council facilitated this planning process, with the assistance of the Orleans Volunteer Fire Department, U.S. Forest Service, Karuk Tribe, California Department of Forestry and Fire, Salmon River Fire Safe Council, Humboldt County Fire Safe Council, Fire Safe Council of Siskiyou County, Siskiyou County, private landowners and the community at large. The Orleans/Somes Bar Fire Safe Council (OSB FSC) is a group composed of community members, community service providers (such as the Orleans Volunteer Fire Department (OVFD)), and representatives from the Karuk Tribe, United States Forest Service (USFS), California Department of Forestry (CAL FIRE), and other land management agencies. Since May of 2001, the OSB FSC has been acting on the direction of the National Fire Plan (USDA Forest Service 2000), which instructs federal land managing agencies to work closely with communities to protect people and resources in the Wildland Urban Interface (WUI). In 2001, the Western Governor's Association published a 10-year comprehensive strategy for reducing wildland fire risks to communities and the environment, which further highlighted the role of communities in shaping fire and fuels management decisions on private and adjacent public lands.

The purpose of this Plan is to provide the communities, agencies and the Karuk Tribe with information that can be used to help protect Orleans and Somes Bar from severe wildland fires, while helping to guide the planning and implementation of community fire safety projects. This Community Wildfire Protection Plan (CWPP) planning area is in northwestern California in Humboldt, Siskiyou, and a small portion of Del Norte Counties. Specifically, this plan addresses the area in the Lower Mid Klamath Subbasin along the Klamath River from Swillup Creek to the north, Aikens Creek to the south and west, and Butler Creek to the east including the communities of Orleans and Somes Bar (Figure 1.2). Almost all of the planning area falls within the Karuk Ancestral Territory. The majority of the area is public land managed through both the Six Rivers National Forest and the Klamath

National Forest. The majority of private land is at low to mid elevation along the Klamath and Salmon River corridors.

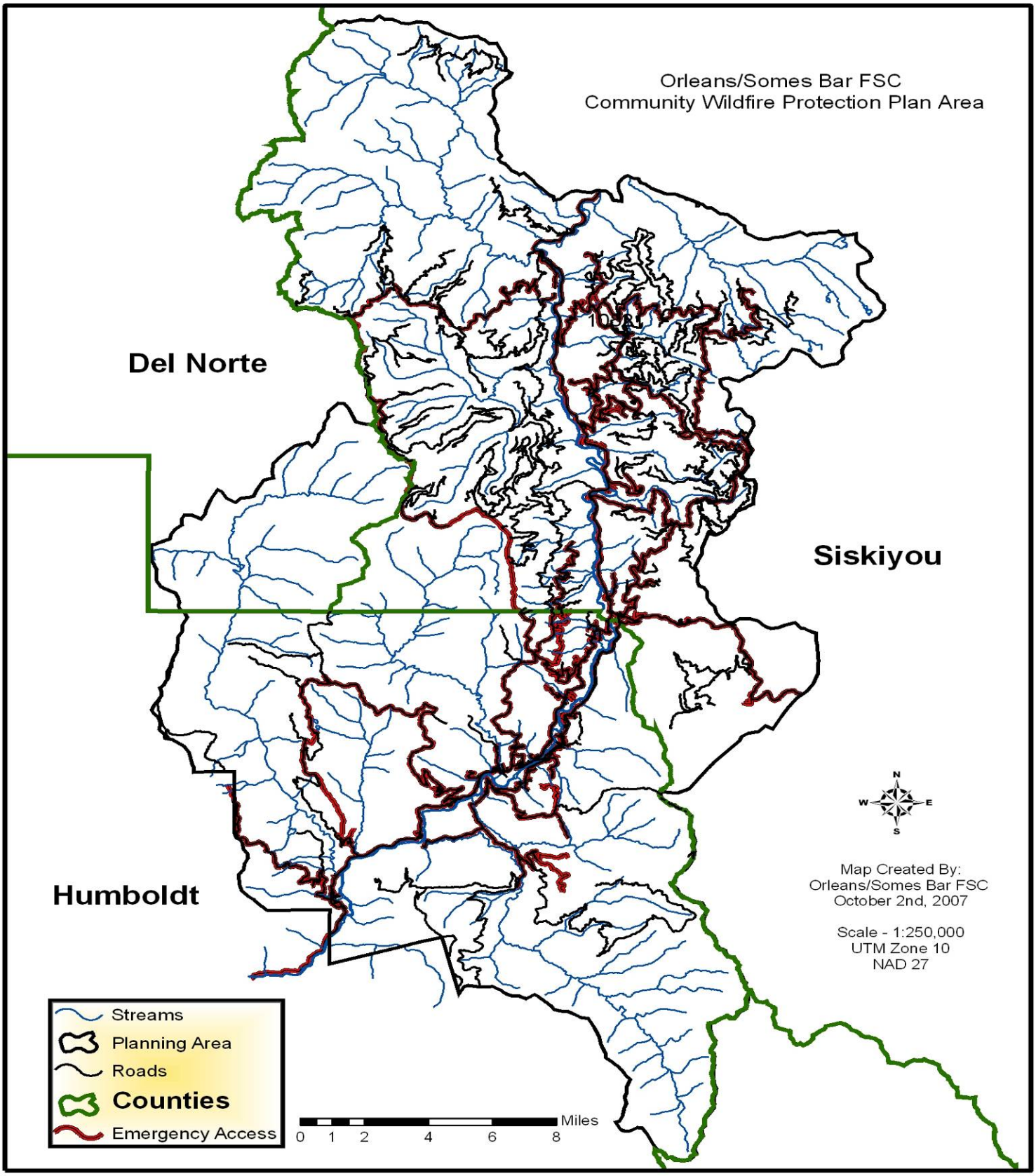

Figure 1.2: Community Wildfire Protection Plan Planning Area

The primary goal of this plan is to protect life, property and resources in and around the Orleans/Somes Bar community, especially in regards to protection from wildland fire. After nearly 100 years of fire suppression and exclusion, fuel loading has increased over the majority of the planning area. The area burned by wildland fires in the West since the 1920's continuously declined into the 1960's with the advent of fire suppression. However, local data shows that while firefighting resources have increased, fires are more difficult to contain (USFS 1995).

This plan gives the community an opportunity to create a strategic document for protecting our community before there is a state of emergency when fewer options will be available. While this plan offers us a great opportunity to prepare for the future, it also presents challenges. It's difficult to plan for the unknown. No one can truly predict where fire starts and in what weather conditions. However, there are tools and resources available to assist us in confronting these concerns. Our community is spread out along the river and creek corridors. The terrain is steep. Many recent wildland fires have occurred during relatively mild weather conditions; however, we must also plan for the possibility of wildland fire during extreme fire conditions.

In summary, the objectives of this plan are to:

- Propose comprehensive forest planning and project prioritization.
- Provide a mechanism for federal agencies and tribal governments to give considerations to community priorities.
- Summarize results of community input regarding local community wildland fire protection.
- Provide maximum flexibility for communities to determine the substance and detail of their plans.
- Merge the goals and objectives of individual landowners with the needs and expectations of the community, tribes and agencies regarding fire risk reduction.
- Coordinate fire protection strategies across property boundaries and land management jurisdictions.
- Coordinate grant funding and federal program budgets to achieve the most effective results with limited funding.
- Coordinate with land management entities, organizations, and universities to facilitate study, monitoring and research that will guide implementation and management strategies.

For more information on the resource materials used to create this plan, see Appendix A. For more information on the federal, tribal, state, local and agencies, as well as interested parties, invited to participate in this plan, please see Appendix B.

About the OSB FSC

The mission of the OSB FSC is to help plan, implement and monitor the reinstatement of historic fire regimes primarily through strategic fuels reduction in a manner that protects life, property, improves forest health, and enhances the resources valued by its stakeholders. We believe the reintroduction of fire at the landscape level is necessary to protect, promote, and preserve the cultural and natural resources and ecological processes within the planning area. This mission will be accomplished in collaboration with the Karuk Tribe, USFS, and other agencies and community organizations.

This document shall be known as the Orleans/Somes Bar Community Wildfire Protection Plan (CWPP).

Decisionmakers

The decisionmakers for this Community Wildfire Protection Plan are:

- ☐ Will Harling, Program Director, Orleans/Somes Bar Fire Safe Council
- ☐ Program Director, Salmon River Fire Safe Council
- ☐ Todd Salberg, Fire Chief, Orleans Volunteer Fire Department
- ☐ Leaf Hillman, Director, Karuk Tribe Department of Natural Resources
- ☐ Fire Plan Chief, Humboldt Unit, California Department of Forestry and Fire Protection
- ☐ Fire Plan Chief, Siskiyou Unit, California Department of Forestry and Fire Protection
- ☐ Jim Bennett, Fire Chief, Salmon River Fire and Rescue
- ☐ Fire Chief, Happy Camp Volunteer Ambulance
- ☐ Siskiyou County Board of Supervisors
- ☐ Humboldt County Board of Supervisors

Federal and Tribal Agencies

The representatives of the federal agencies managing land in the vicinity of the communities are listed in Table 1.1.

Table 1.1 Federal and Tribal Agencies within the Planning Area

Agency	Representative	Date Invited to Participate
U.S. Forest Service – Six Rivers National Forest	Nolan Colegrove Bill Rice Stan Pfister Lucy Salazar	12/01/2009 05/19/2005 05/19/2001 05/19/2001
U.S. Forest Service – Klamath National Forest	Ken Harris Alan Vandiver Jon Grunbaum	12/01/2009 07/28/2005 05/19/2001
Karuk Tribe Department of Natural Resources	Earl Crosby Sandi Tripp Bill Tripp	04/18/2007 05/19/2001 05/19/2001
Yurok Tribe	Ron Reed	04/18/2007
U.S. Fish and Wildlife Service	Don Flickinger	05/19/2001
Natural Resource Conservation Service – Humboldt Unit	Todd Golder	10/1/2006
Natural Resource Conservation Service – Siskiyou Unit	Pete Townley Justin Ly	10/20/2005 10/1/2006

State/Local Agencies

The representatives of the state/local agencies that have jurisdictional responsibilities in the vicinity of the communities are listed in Table 1.2.

Table 1.2 State and Local Agencies within the Planning Area

Agency	Representative	Date Invited to Participate
California Department of Forestry and Fire – Humboldt Unit	Hugh Scanlon Kim Price	05/19/2001
California Department of Forestry and Fire – Siskiyou Unit	Ted Tsudama Alan Stovall Bernie Paul	05/19/2001
California Department of Fish and Game	Mark Elfgen	04/18/2007
Siskiyou Resource Conservation District	Carolyn Pimentel	04/18/2007
California Department of Transportation	Kathleen Sartorius	04/18/2007
North Coast Unified Air Quality Management District	Lloyd Green	04/18/2007
Humboldt County Building Department	Todd Sobolik	04/18/2007
Humboldt County Planning Department	Tom Hoffweber	05/19/2001
Humboldt County Sheriff's Office and OES	Dan Larkin	04/18/2007
Orleans Community Service District	Shirley Reynolds	05/19/2001
Orleans Volunteer Fire Department	Todd Salberg Tom Bouse	05/19/2001 05/19/2001
Siskiyou County Building Department	Mike Crawford	04/18/2007
Siskiyou County Sheriff's Office and OES	Lt. John Veloni	04/20/2007
Siskiyou County Planning Department	Teri Barber	04/18/2007

Interested Parties

The parties from our community that have shown interest in forest/fire management or may be interested in this CWPP are listed in Table 1.3.

Table 1.3 Interested Parties within the Planning Area

Interested Parties	Date Invited to Participate
Humboldt County Fire Safe Council	11/30/2002
Crawford Creek Municipal Water District	05/19/2001
Thunder Mtn. Municipal Water District	05/19/2001
Orleans/Somes Bar Residents	05/19/2001
Klamath Riverkeeper	01/15/2007
Karuk Indigenous Basketweavers	05/19/2001
Klamath Forest Alliance	05/19/2001
Orleans Chamber of Commerce	05/19/2001
Mid Klamath Watershed Council	10/01/2004
Salmon River Restoration Council	05/19/2001
University of California Extension Office	05/19/2001
Pacific Gas and Electric	04/24/2007
Humboldt State University	09/10/2008

2. Fire Environment

For residents in the communities of Orleans and Somes Bar, the question is not *if*, but *when* the next wildland fire will occur. Effective fire suppression, forest management practices, cessation of indigenous burning, and increased precipitation over the last century have resulted in a landscape-level increase in stand density and fuel loading and susceptibility to stand replacing fire. Understanding fire and its role in the ecosystem will help us to better coexist with it in our mountainous landscape.

Topography, Slope, Aspect, Elevation

The planning area is positioned in a rugged, mountainous setting. Three mountain ranges are present on the planning area: the Klamath Mountains, Siskiyou Mountains and the Salmon Mountains. Geographic elevations range from approximately 400 feet along the Klamath River corridor to over 6000 feet at Orleans Mountain. Most of the area is in the 60 percent or greater slope class. Geographically diverse, steep, incised drainages have created a landscape with a multitude of various slope, aspect and elevation combinations (Skinner et al. 2006).

Meteorology, Climate, Precipitation

Northwest California has a predictable and relatively wet climate (Hickman 1993). It is characterized by warm, dry summers, and cool, wet winters. However, periods of drought have occurred. It is thought that drought conditions existed six times since 1600 in California and that the period from 1890 to 1980 was considerably wetter than the average for the past 360 years. The climate is also influenced by coastal fog, which reaches inland along the Klamath River into the western part of the planning area. Precipitation records for Orleans indicate seasonal dry and wet periods. The annual precipitation during the period of record (1885 to present) ranges from 22 (1923-24) to 83 (1973-74) inches, with an average annual precipitation of 64 inches (USFS 2002). Snow is common at elevations above 2500 feet, but generally melts quickly except on higher, shaded, north-facing slopes. In the past, major flooding has occurred when warm rain followed heavy snowfall (USFS 1995).

Hydrology

The Klamath River system is the second largest river system in California, draining an area of approximately 10,039 square miles in California and 5,560 square miles in Oregon. The planning area is about 500,000 acres in size and includes about 35 miles of the mainstem Klamath River, the lower portion of the Salmon River, and several major creeks including Dillon, Ukonom, Rock, Camp, Red Cap, and Bluff Creek.

The mean annual flow of the Klamath River at Orleans is 8,200 cubic feet per second. The drainage area of the Klamath River Basin above Orleans is 8,475 square miles. Therefore, the mainstem within the planning area is greatly influenced by upstream conditions and flows.

Past Fire Environment

Both lightning and anthropogenic fires have been an integral process in the renewal and diversification of the planning area landscape for millennia and has been a major component of the local ecosystem (Skinner et al. 2006, Anderson 2006). In the Klamath-Siskiyou region, fire's influence as an evolutionary force can be seen in "forest structure, species composition, soil properties, wildlife habitat, landscape patterns, watershed hydrology, nutrient cycling and numerous other ecosystem processes" (Frost and Sweeney 2000). In the planning area, many ecosystem types have evolved with fire, including mixed hardwood/conifer forests, conifer forests, oak woodlands, grasslands, and riparian plant communities (Skinner et al. 2006). Frequent, low-intensity surface fires cleared the forest floor and maintained open stands of trees, allowing sunlight and moisture to reach the understory. Fire also reduced ladder fuels and increased height to live crown (fire pruning of lower limbs). Fire maintained a mosaic of age classes of forests, shrub and grassland taxa and associated fuel types. The mixed severity fire regime of the planning area historically reduced the expansion of shade-tolerant trees, such as Douglas fir and tanoak, from forming the dense stands that are present today (USFS 2003).

Figure 2.1: Low intensity controlled burn at Bull Pine Ranch in 2007

Low-intensity burning of surface fuels was very common, yet medium to high-intensity fires occasionally occurred (Figure 2.1). This maintained ecosystem resiliency and forest health, resulting in a patchy mosaic of species and uneven aged forests, shrub and grassland communities. The fire process helped forge the complexity of vegetation and fuel types that led to the diversity of plants and animals (Wills 1991, Skinner et al. 2006).

Indigenous-set fires in the Klamath Mountains are well documented (LaLande and Pullen 1999, Pullen 1996, Lewis 1993, Lake 2007). Tribal management systems were major factors in creating and maintaining the composition of low-elevation grasslands, chaparral, oak woodlands and ponderosa pine forests (LaLande & Pullen 1999, Sugihara 2006, Anderson 2005 and 2006). In the lower Mid Klamath Subbasin, the Karuk people historically developed intricate strategies of forest management that ensured the production of beneficial resources in perpetuity. Traditional Ecological Knowledge (TEK) was developed through experiences with changing climate, natural processes, vegetation, and associated fire effects (Lewis 1993, Stewart 2002, Anderson 2005). Fire was an integral part of their management of these forests, with lasting effects that survive the past century of aggressive fire suppression (De Rijke 2001, Lake 2007).

Over eighty percent of the plants utilized by Karuk people are found in grasslands or open forest conditions and are fire-dependent species (Schenk and Gifford 1952, Davis and Hendryx 2004). These plants depend on fire for germination, as well as the use quality and quantity of the plant

materials (Anderson 2006). Basketry materials are required to be specific sizes for various types of baskets (Lake 2007). Acorn abundance was also dependent on regular burning (Anderson 2005). Specific fire intervals are required to properly manage these resources, and these intervals vary between different cultural use plant species (Lewis 1993, Anderson 2006, Lake 2007).

Present Fire Environment

Euro-American settlement brought drastic changes to the fire-adapted landscape and the Native Americans who managed that landscape (Skinner et al. 2006, De Rijke 2001, Lake 2007). In the Orleans-Somes Bar area, part of the Karuk Tribe Ancestral Territory, settlement practices and the control of naturally occurring wildland fires have altered historic fire cycles. Lands managed by the Karuk were appropriated by the United States Government and then managed by the US Forest Service. With the passage of the 1911 Weeks Act, aggressive fire suppression policies were applied throughout the West (Agee 1993).

Fire suppression, extensive road construction, intensive timber harvesting, and subsequent tree plantations have put much of the planning area at risk of uncharacteristically intense fires. Vegetation changed from more open conditions composed of species requiring frequent fire return intervals to species benefiting from longer fire return intervals (Skinner 1995, Skinner et al. 2006) (Figures 2.2, 2.3, 2.4). Recent studies from the Klamath Mountains show that catastrophic wildland fire has become more prevalent due to changes in the occurrence and frequency of burning (Taylor and Skinner 2003, Skinner et al. 2006). The result is increased risk of large-scale, high-intensity wildland fires that threaten forest ecosystems adapted to lower intensity fires (Agee 1993, Miller et al. 2009). A study of the 1994 Dillon Fire, in the Dillon Creek Watershed, found that clearcuts and plantations burned with higher intensity than unmanaged stands and intense fire behavior in plantations in turn led to increased fire intensity in neighboring unmanaged forests (Key 2000).

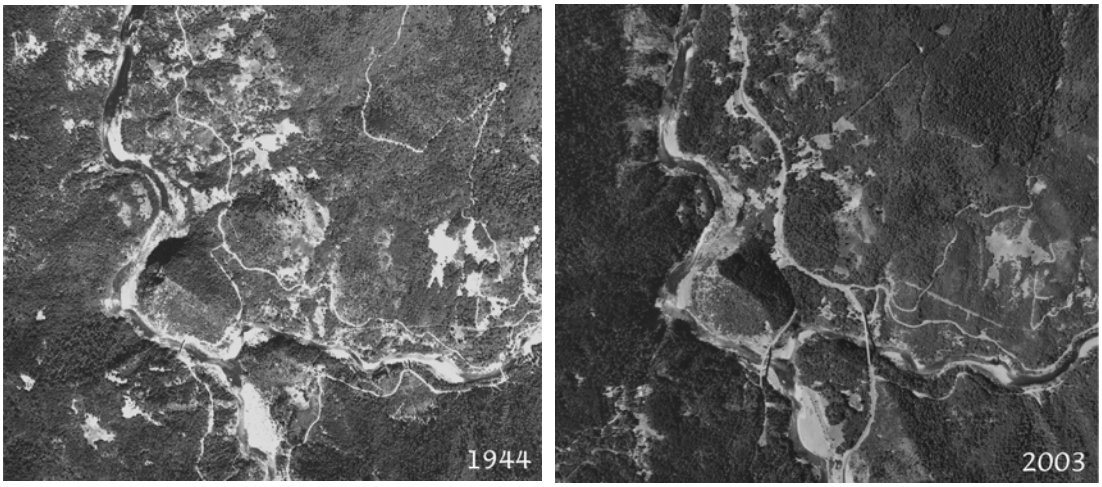

Figure 2.2: 1944 aerial photograph (left) compared to 2003 (right) showing vegetation patters. T. Dunklin and F. Lake enhancement of USFS photographs courtesy of Mid Klamath Watershed Council

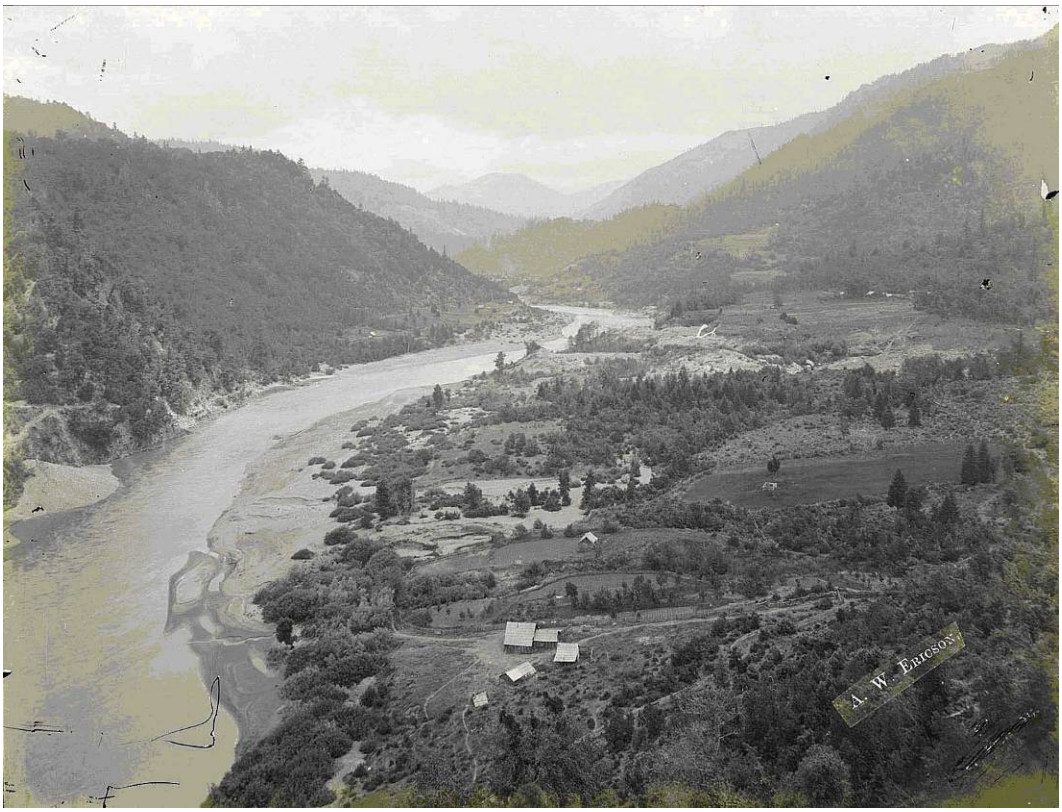

Figure 2.3: Looking north, up-river from Big Rock, Orleans, CA. Circa 1894. Photographer A.W. Ericson. "View from Rattlesnake Rock, Orleans" No. 62 (Lake 2007).

Figure 2.4: Looking north up-river from Big Rock, Orleans, CA in September 2006. Photograph by F. K. Lake (Lake 2007).

Effective fire suppression, fire prevention and changing weather conditions have allowed fuel to accumulate, creating a wider distribution of forest types that are less fire resistant. For example, Douglas fir is quite abundant throughout Humboldt and Siskiyou Counties, but would not have proliferated had fire been continuously used to manage the landscape. The stand structure now includes more dead and down material and ladder fuels of shrubs and shade-tolerant, understory tree species. Forests are more crowded, trees are unable to retain their vigor, and they are more vulnerable to insects, disease, and stand-replacing fires.

In the past decade, there has been frequent wildland fire within and adjacent to the planning area. These fires reinforce the need for the community to be prepared for wildland fire. Not only has the rate of fires increased, the cost of these wildland fires has also increased. The most expensive fire, per acre, was the 2006 Titus Fire at $1993/acre. Our response to these fires largely determines their cost. In contrast to the Titus Fire, the 2005 Wooly Fire only cost $127/acre since it was managed like a wildland-fire-use fire. Major fires of the past decade include:

- 2009 Backbone, 6712 acres
- 2009 Tennant, 3191 acres
- 2008 Siskiyou/Blue2, 99,797 acres (32% low severity, 11% moderate severity, 7% high severity)
- 2008 Panther, 53,149 acres (41% low severity, 15% moderate severity, 10% high fire severity)
- 2008 Ukonom, 80,147 acres (34 low severity, 13% moderate severity, 6% high severity)
- 2008 Anthony Milne, 1,778 acres (32% low severity, 8% moderate severity, 3% high severity)
- 2007 Elk Complex, xx acres
- 2006 Somes, 15,624 acres (58.7% low severity,10.7% moderate severity, 3.9% high severity) (
- 2006 Uncles, 3,760 acres (34.4% low severity, 28.1.% moderate severity, 23.7% high severity)
- 2006 Titus, 6,272 acres (39.4% low severity, 31.6% moderate severity, 16.6% high severity)
- 2006 Hancock, 22,170 acres (54.7% low severity, 25.5% moderate severity, 6.3% high severity
- 2005 Wooley
- 2002 Stanza
- 2002 Forks
- 2001 Swillup

Future Fire Environment

Despite concerted efforts at fire suppression and exclusion, fire continues to be the dominant form of forest disturbance. While suppression forces have kept wildland fires from significantly impacting residential areas, increasing fuel loads are making this task more difficult. 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 (Lake 2007). As Gresswell (1999) points out, the most effective way to minimize the negative impacts of fire on the ecosystem “is to protect the evolutionary capacity of these systems to respond to disturbance”.

Climate Change, Restoration & Fire

As the effects of global climate change set in, methods of forest restoration and fuels management need to be re-evaluated (DeSalla et al, Brown et al. Agee and Skinner 2005). Prescribed fire has recently come under attack as contributing to more carbon release. However, carbon release associated with prescribed burning does not compare to, and in fact may prevent, carbon release during a major wildland fire. Mastication, chipping and other methods of non-combustible fuels reduction release some carbon from their engines, as fuel-powered forms of treatment, but this release is relatively minor. However, mastication and chipping are not feasible in the majority of the planning area. New research at the Tea Kettle Experimental Forest in southern Sierra shows that thinning alone without fire produces more CO_2 from associated decomposition from fungi and bacteria (respiration) over time than CO_2 output from thinning followed by prescribed fire, or burning alone.

Climate change will affect fire severity, frequency, and behavior due to warmer regimes (Westerling et al, 2006, Whitlock 2004, Scholze et al 2006). In fact, a recent report by the California Climate Change Center (2006) estimates the increased risk of large wildland fires in California will increase by as much as 55 percent. Because of climate change, we will need to be even more fire ready.

Some have argued that forest's composition before Euro-American settlement no longer provide a point of reference for future ecosystem restoration due to the effects of climate change (Whitlock et al. 2004). Where does this place Traditional Ecological Knowledge (TEK)? The Klamath-Siskiyou Bioregion has undergone extreme climate change in the past and native people have adopted and developed specialized forms of knowledge about fire ecology and corresponding management techniques (Lake 2007, Lewis 1993, Stewart 2002, Anderson 2005). This plan incorporates contemporary TEK by including tribal interests and values related to fuels and fire management.

Another threat to community fire safety and use is invasive and exotic species (Dombeck et al. 2004). The introduction of exotic plants has altered plant communities, subsequent fuel types, and fire regimes (Brooks et al. 2004). Himalayan blackberries establish and quickly colonize disturbed or severely burned areas. Young regrowth with higher fuel moisture content can retard fire spread, but old patches with dead canes and foliage be of higher intensities. Exotic grasses cure earlier in the summer fire season and increase finer flashy fuels. Star thistle and scotchbroom can increase flammability and dominate areas following fires. Season and frequency of burns can either increase or decrease presence and abundance of exotic invasive species. Exotic pathogens, such as *Phytophthora lateralis* (Port Orford root rot*)* and *Phytophthora ramorum* (Sudden Oak Death) present the greatest threat to modifying vegetation community composition and structure resulting in an increase in fuel load and wildland fire danger.

3. Establish a Community Base Map

Attached are several maps of Orleans/Somes Bar community and adjacent landscapes of interest. This document contains an explanation of each of the maps and the reason for including them in this plan.

1) Fire Hazard Assessment: Fire hazard assessment is more complicated than can be described by Fire Regime Condition Class alone. Fire starts, mid mature dense stands, and slope-aspect insolation maps are also included to better determine fire hazard assessment within the planning area.
    a. Fire Regime Condition Class (FRCC) is a tool that helps planners determine how much landscape vegetation has changed from the way it was historically to the way it is today. This change includes differences in vegetation, fuels and disturbance. For our area, historical disturbances primarily came from fires and floods, as well as insects and disease. Assessing FRCC can help guide management objectives and set priorities for treatments. This FRCC map (Figure 3.1) was generated by Max Creasy at the USFS Klamath National Forest in 2009.
    b. Fire starts are displayed both as points and as a density gradient to show areas within the planning area that historically have had more fire starts. It is interesting to note that ignition density mirrors the precipitation gradient for the planning area. These maps (Figure 3.2 and Figure 3.3) include fire starts from 1922 to 2005.
    c. Mid mature dense stands are associated with intense fire behavior and when compared with the other maps can be used to raise or lower the fire hazard ranking for a given area (Figure 3.4).
    d. Slope-aspect is combined with existing vegetation to generate this map of solar insolation, or the amount of solar energy reaching the ground. These maps can be used to identify moist or dry stand microclimates across the planning area (Figure 3.5 and Figure 3.6). Areas with high insolation are typically southwest facing with little canopy cover, while areas with low insolation are typically northeast facing with a high, intact canopy. This layer is also used to more accurately determine fire hazard ranking across the planning area.

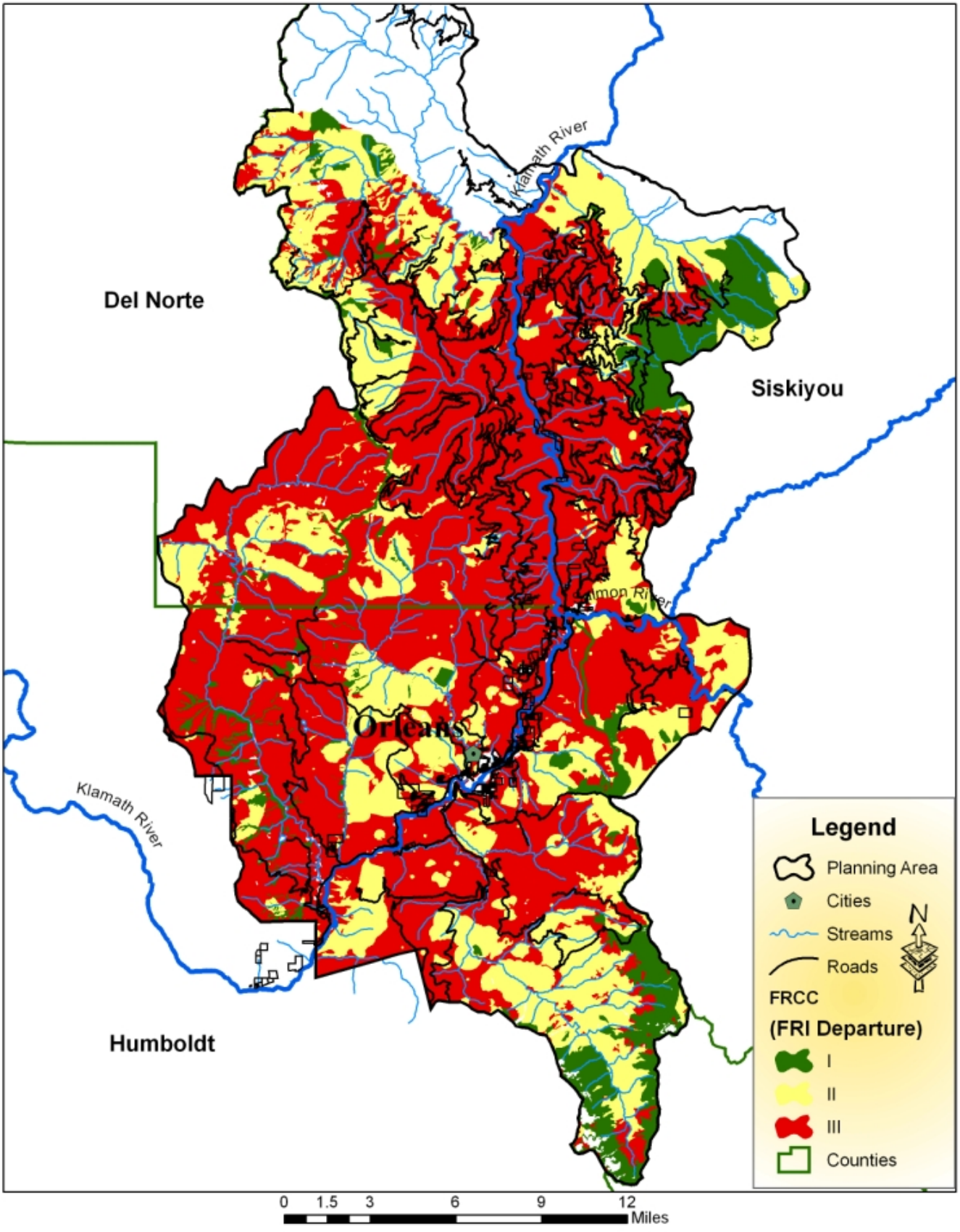

Figure 3.1: Fire Regime Condition Class based on Departure from Fire Return Interval

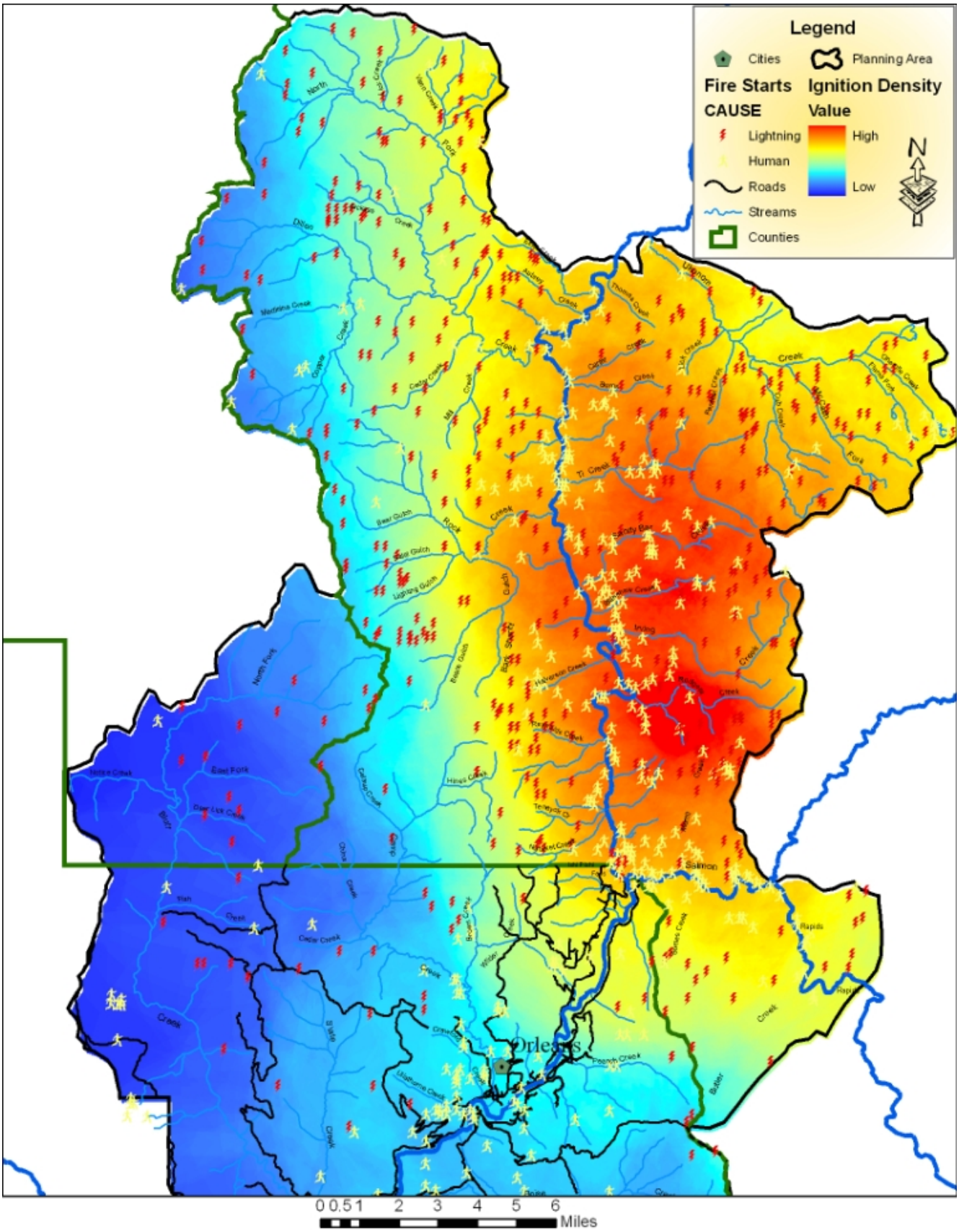

Figure 3.2: Fire Starts by Cause and Ignition Density (North)

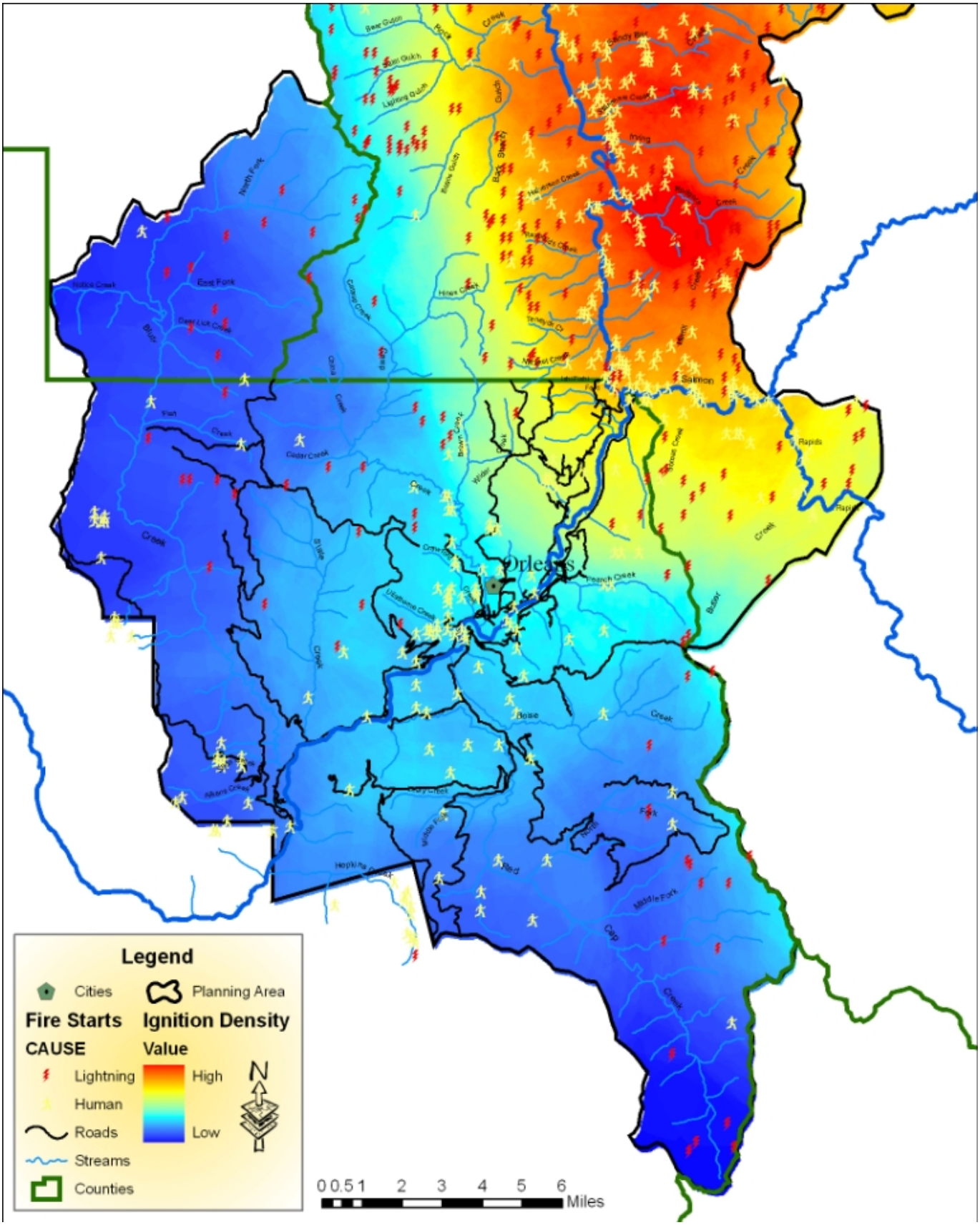

Figure 3.3: Fire Starts by Cause and Ignition Density (South)

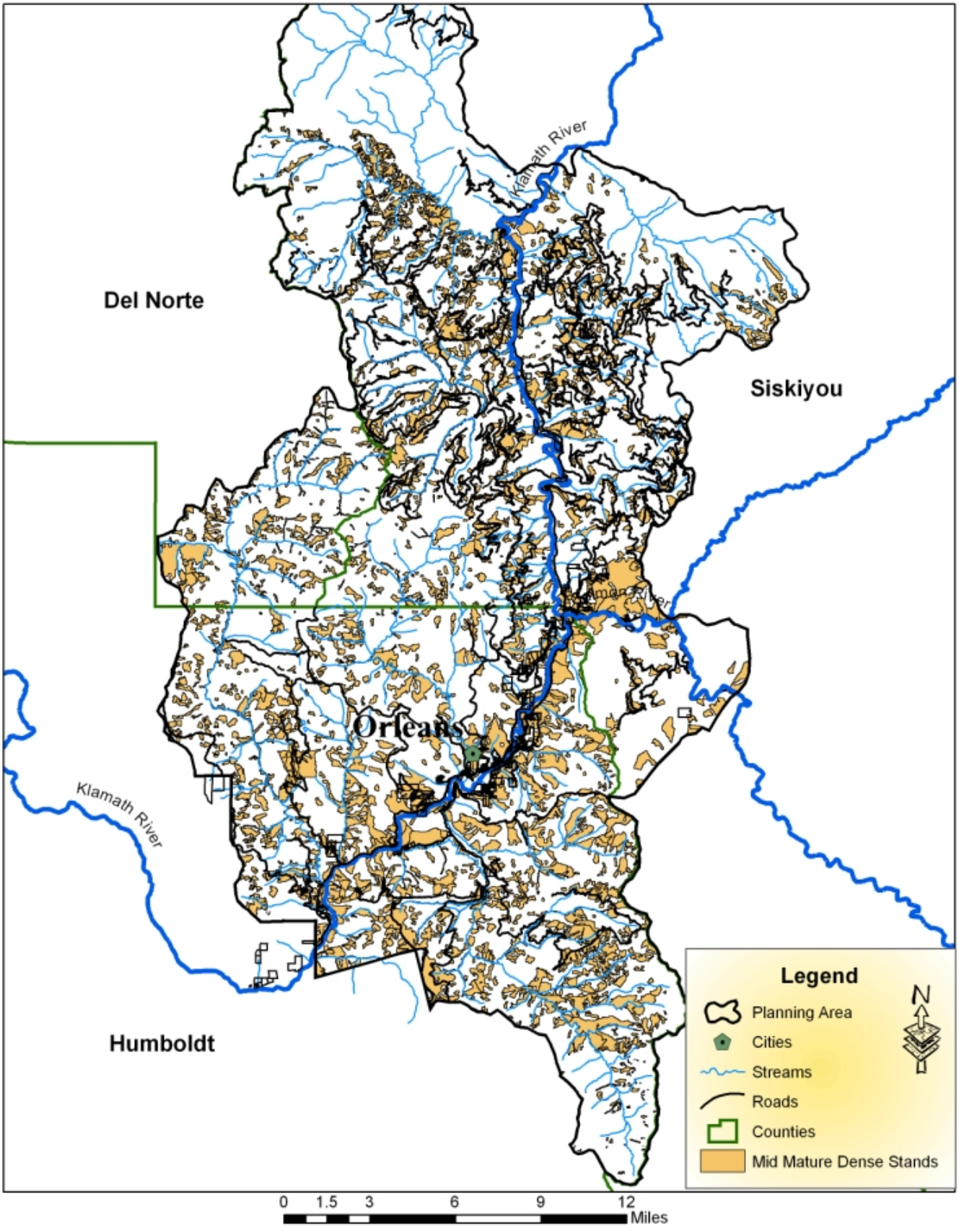

Figure 3.4: Mid Mature Dense Stands

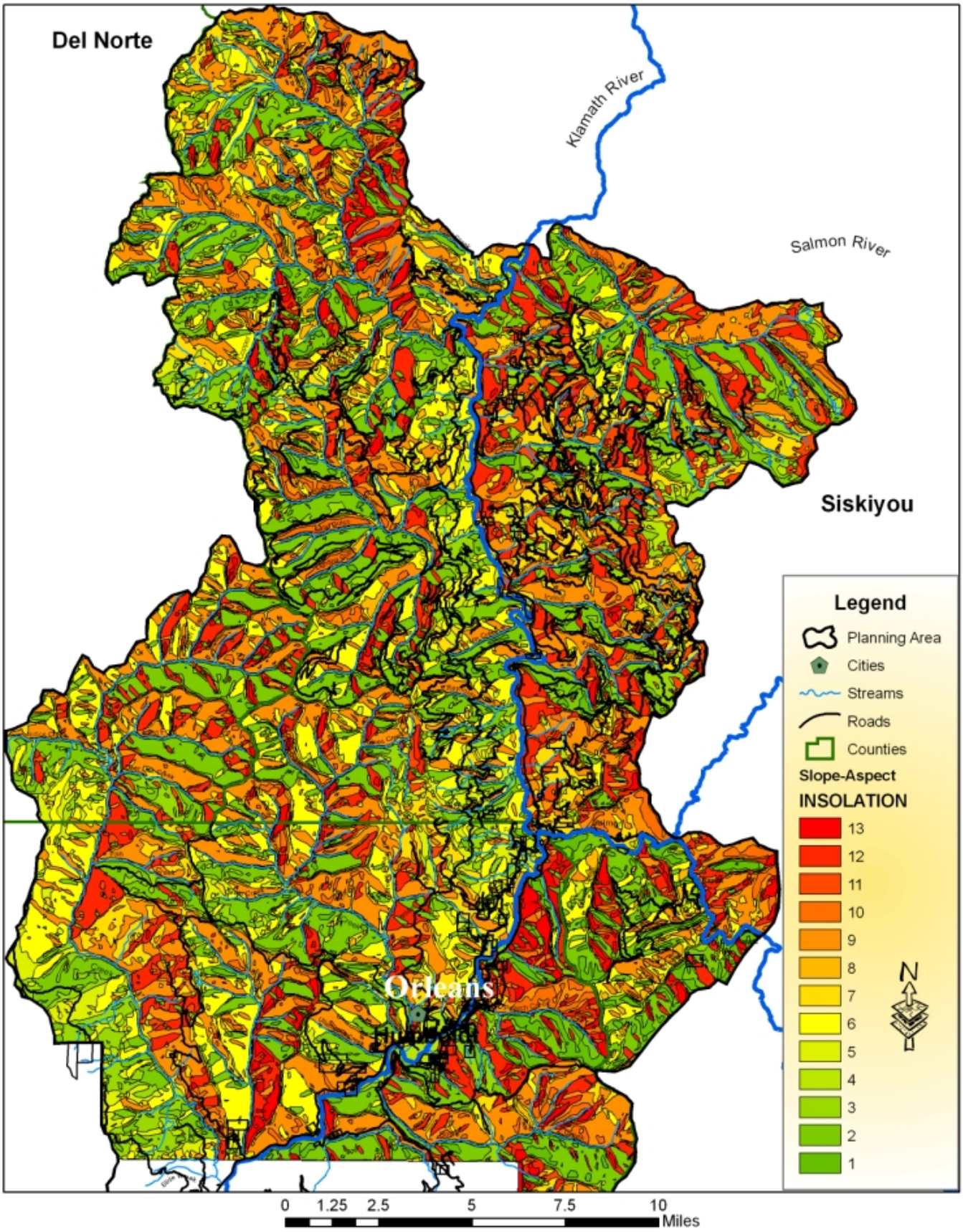

Figure 3.5: Slope Aspect Insolation (North)

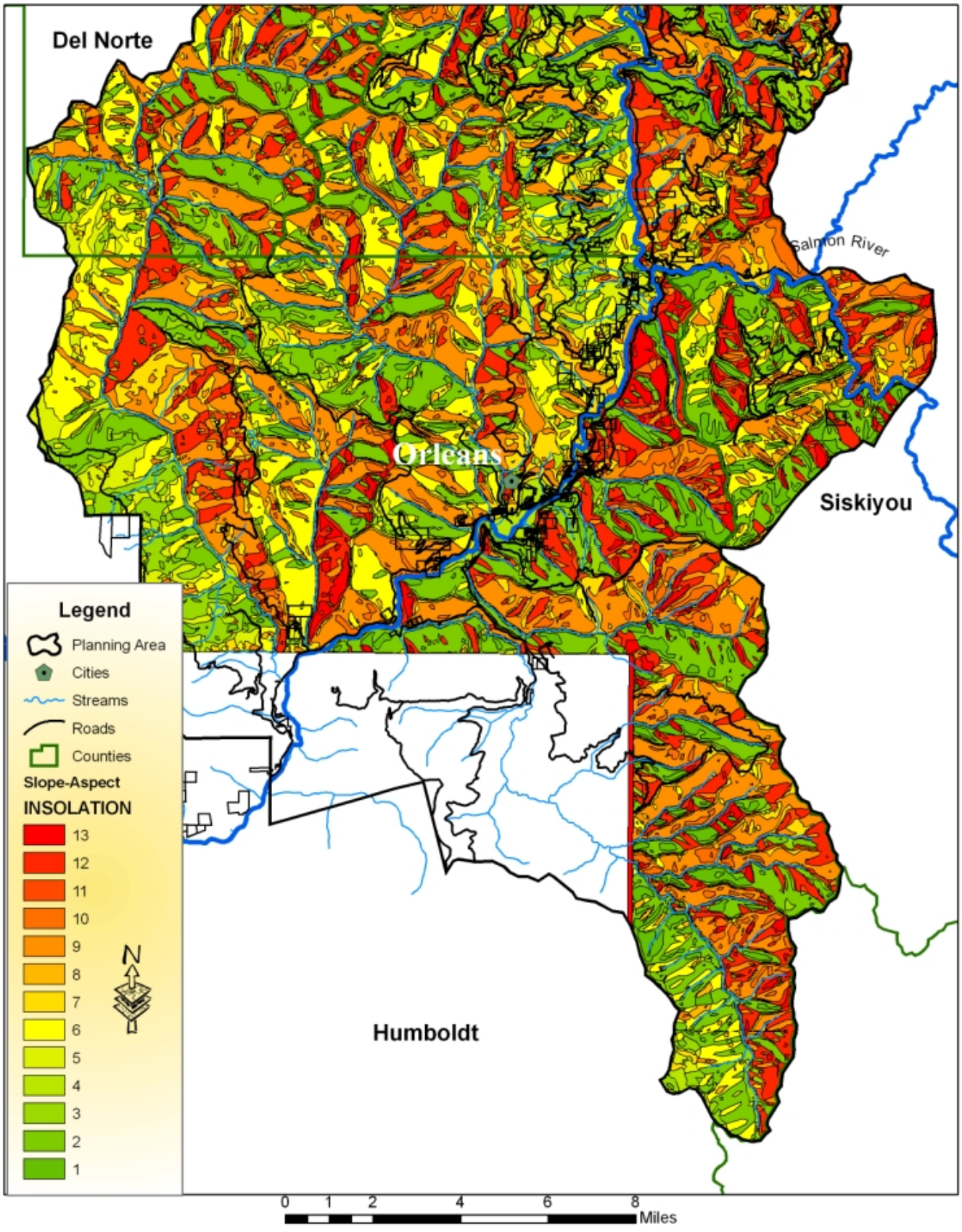

Figure 3.6: Slope Aspect Insolation (South)

2) Areas of Community Importance: These maps (Figure 3.7 and Figure 3.8) show areas that contain life, property and resources of concern, including residential areas, areas containing critical human infrastructure, and areas of community and cultural importance. This specifically includes:

i. Private properties
ii. Emergency access routes
iii. Municipal watersheds (e.g. Pearch Creek, Crawford Creek, Wilder Creek, Merrill Creek)
iv. Communications and utility infrastructure: (e.g. Orleans Mountain repeater, Ukonom Mountain repeater, telephone translators, water tanks and/or pump-house, hydrants, main electrical switching stations)
v. Cultural areas:
    1. Panámniik Ceremonial District (eligible for the National Register of Historic Places)
    2. Ka`tim`îin Cultural Area (including Offield Mountain)
    3. Amikiavum Cultural Area
    4. Tishániik Flat (cultural value)
vi. Salmon River (Wild and Scenic River)
vii. Klamath River (Wild and Scenic River)
viii. U.S. Forest Service Campgrounds
ix. Orleans School/Seventh Day Adventist Church (evacuation centers)
x. Orleans Volunteer Fire Department

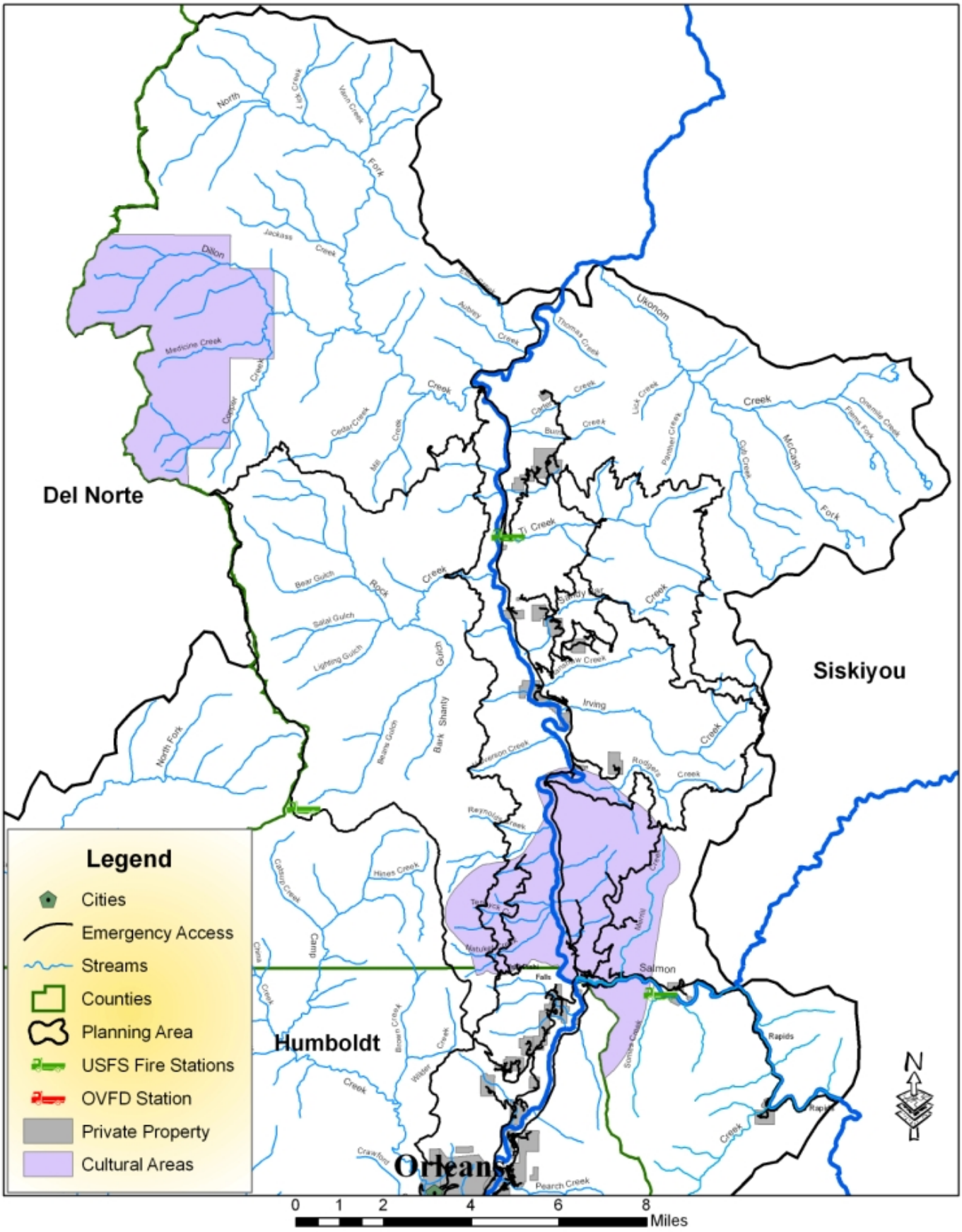

Figure 3.7: Areas of Community Importance (North)

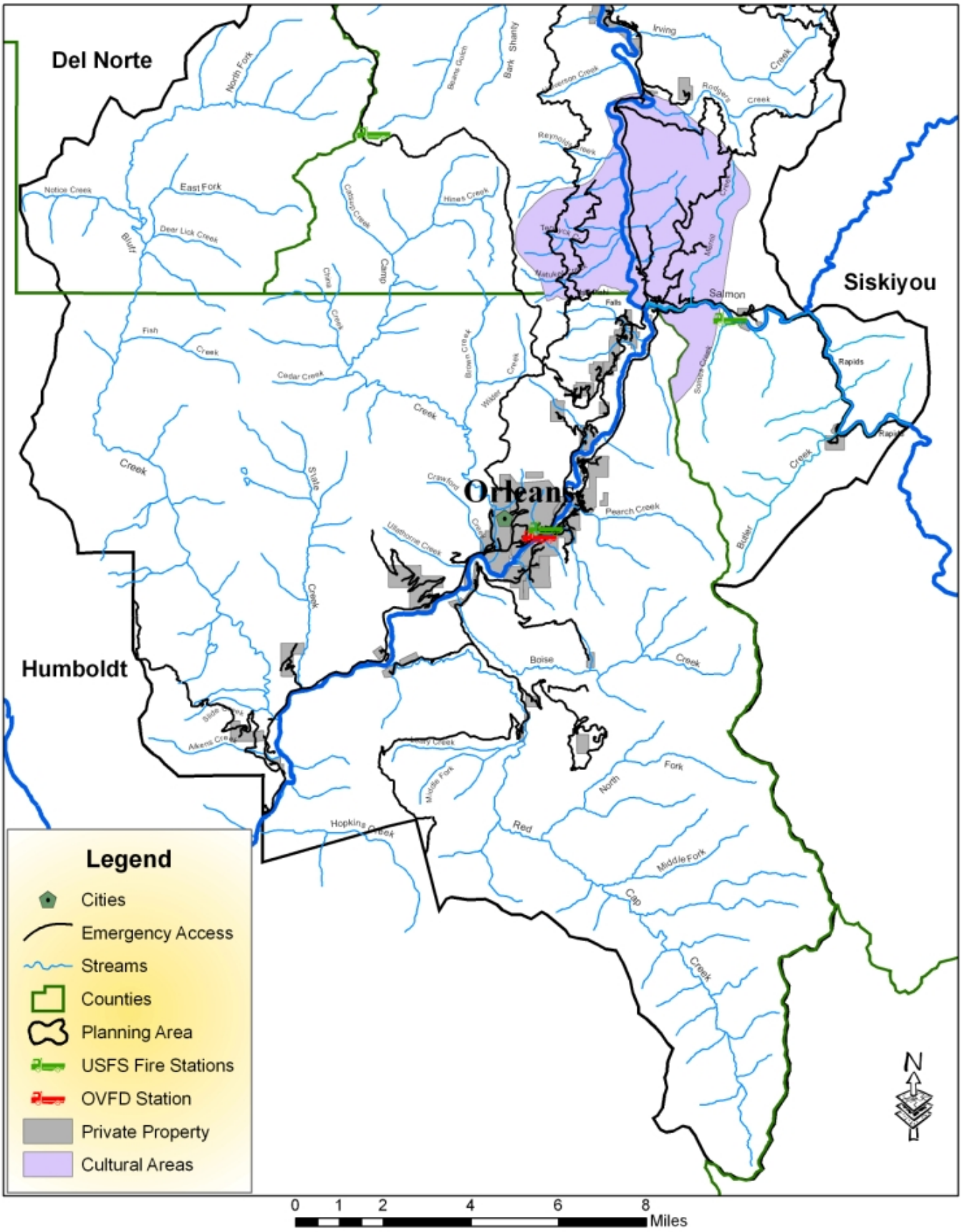

Figure 3.8: Areas of Community Importance (South)

3) Wildland Urban Interface: These maps (Figure 3.9 and Figure 3.10) show the designation of the community's WUI zone. After considering the location of the inhabited areas in relation to topographic features, road systems, vegetation patterns, critical human infrastructure, and the risk of wildland fire, the community has identified a WUI zone around community assets. We have divided the WUI into three separate categories. WUI areas around residences and municipal watersheds are incorporated into one WUI map layer. Our emergency access map layer and associated buffers are also considered part of the WUI (Suggested treatment prescriptions for these categories are discussed in Section 6).

    a. Around Residences: Properties with residences, regardless of the ownership, are within the WUI. The distance of the WUI boundary away from residences depends on the risk of wildland fire surrounding the property, including topographical features, and vegetation patterns. The WUI boundary around properties with residences is broken into four categories. Each category has specific prescriptions associated with it.
        i. *Defensible Space* - This buffer extends up to 1000 feet away from the residence, regardless of ownership.
        ii. *Property Buffers* – This buffer extends up to 1000 feet away from the property boundary, regardless of ownership. The property buffer focuses on creating functional fuelbreaks along property boundaries with limited funding. Buffers may vary from 100 feet to 1000 feet based on fire risk.
        iii. *¼ Mile Buffers* – This buffer extends one fourth of a mile from the property boundary, regardless of ownership. This buffer provides for larger fuelbreaks along property boundaries as funding becomes available.
        iv. *Extended WUI Areas* – This buffer varies in width depending on the properties position on the slope – often extending to the nearest ridge feature. Not all properties with residences have an extended WUI area.

    b. Emergency Access Routes: While maintaining emergency access routes does not guarantee that firefighters will be able to access an area under extreme fire conditions, these routes are critical for fire suppression and as escape routes. These roads, and associated road buffers, are within the WUI.

    c. Municipal Watersheds: There are four municipal watersheds within the planning area: Pearch, Crawford, Merrill and Wilder Creeks. All four are within the WUI.

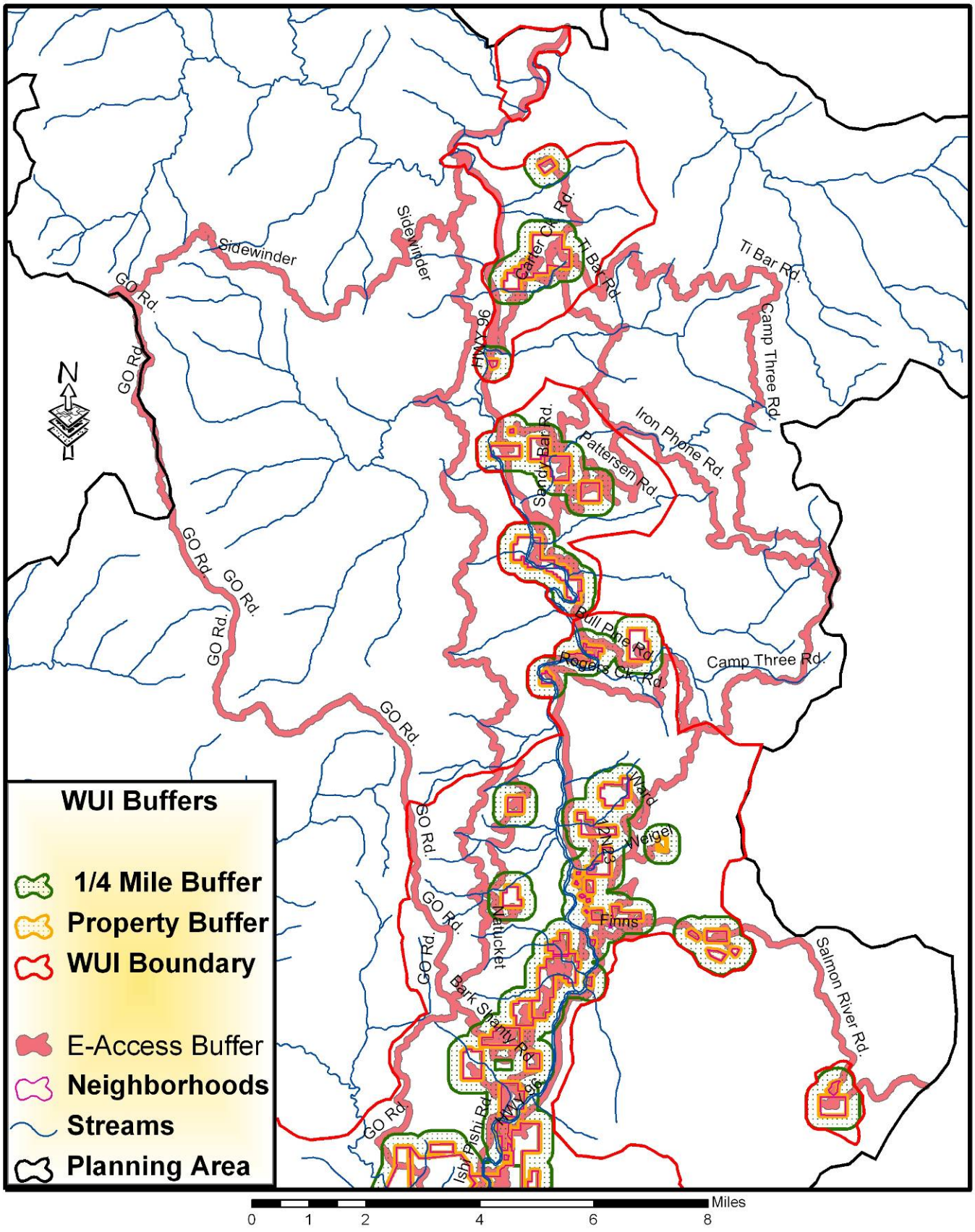

Figure 3.9: Wildland Urban Interface (North)

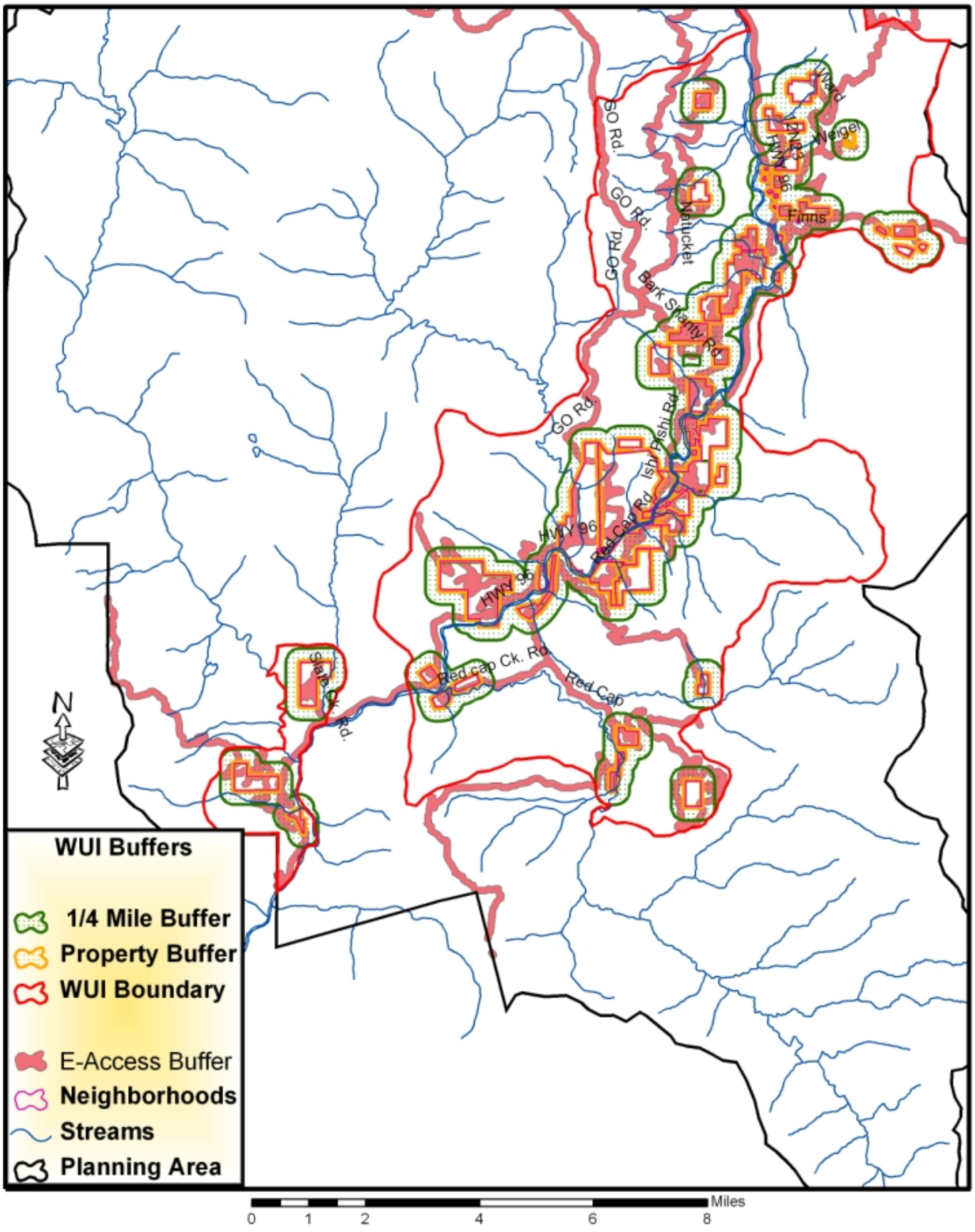

Figure 3.10: Wildland Urban Interface (South)

4. Develop a Community Risk Assessment

As designated on the base map, the following tables list the structures, roads and other areas of community importance within the planning area. The tables also identify the fuel hazard, risk of wildland fire, firefighting capability associated with each of these community assets. The combination of these factors determines the overall risk for each asset. Fuel hazard is determined by using Fire Regime Condition Class ratings and fuels surveys conducted by the Orleans/Somes Bar Fire Safe Council. These surveys include specific information of fuel accumulations on and around the property, assets at risk, resources available for fire fighting (water draw sites, etc.), and emergency response information. Risk of wildland fire is determined by using a combination of the asset's position on the slope (low, mid, upper) and how frequently the area has experienced fire in the past. For a copy of the surveys (two versions), see Appendix C and Appendix D. Firefighting capability is determined by road access to the asset, response time, and fire fighting resources available (water draw sites, hydrants). In some instances, neighborhoods (located on the Areas of Community Importance map) have been further broken down to better assess the overall risk. For example, there is one property in the Rogers Creek neighborhood that is on the upper slope (compared to the lower slope for the other properties) and has significantly different firefighting capabilities (upper slope, limited water, longer response time, single access/egress route). This property is designated as Rogers Creek Neighborhood 2. This example applies to properties in the Ti Bar, Red Cap, and Bluff Creek neighborhoods, which were also split to allow for proper ranking. For more information on which structures are associated with each neighborhood, see Appendix D.

This ranking system is based upon a simple point scale. For fuel hazard and risk of wildland fire occurrence, low, medium and high rankings are valued as one, two, or three points respectively. However, for firefighting capability, ranking and value have an inverse relationship. For example, the Karuk Medical Clinic and DNR have a fuel hazard ranking of low (one point), a risk of wildland fire occurrence of medium (two points), a firefighting capability ranking of high (one point). This point scale has possible total values ranging from three to nine which correlate to overall risk. Overall risk is defined as low (3-4 points), medium (5-7 points), and high (8-9 points).

Table 4.1 Risk Assessment for Structures at Risk

Structures	Fuel Hazard	Risk of Wildland fire Occurrence	Firefighting Capability*	Overall Risk
Community Assets			* Ranking is inverted	
Karuk Medical Clinic and DNR	Low	Low	High	Low
Orleans Volunteer Fire Dept. Fire Station	Low	Low	High	Low
USFS Fire Station (Orleans)	Low	Low	High	Low
USFS Fire Station (Ti Bar)	High	High	Medium	High
USFS Fire Station (Oak Bottom)	Medium	High	High	Medium
Karuk Tribe Fire Station (Somes Bar)	Medium	High	High	Medium
Orleans Elementary School	Low	Medium	High	Low
Junction Elementary School	Medium	High	Medium	Medium
Karuk Community Center	Low	Low	High	Low

Panamnik Building	Low	Low	High	Low
Panamnik Elder Center	Low	Low	High	Low
Assembly of God Church	Low	Low	High	Low
Seventh Day Adventist Church	Low	Low	High	Low
Verizon Communication Structure	Low	Medium	High	Low
Ukonom Mountain Lookout	Medium	High	Low	High
Orleans Mountain Lookout	High	High	Low	High
Residences (from North to South)				
Ti Bar Neighborhood 1	Medium	High	Medium	Medium
Ti Bar Neighborhood 2	High	High	Low	High
Ti Bar Neighborhood 3	High	High	Low	High
Patterson/Sandy Bar Cr. Neighborhood	High	High	Low	High
Stanshaw/Irving Cr. Neighborhood	Medium	High	Medium	Medium
Rogers Creek Neighborhood 1	Medium	Medium	Medium	Medium
Rogers Creek Neighborhood 2	High	High	Low	High
Offield Mtn. Neighborhood	High	High	Low	High
Somes Bar Neighborhood 1	Medium	High	Medium	Medium
Butler Neighborhood	Medium	Medium	Medium	Medium
Ten Eyck Neighborhood	Medium	Medium	Low	Medium
Upper Ishi Pishi Neighborhood	Medium	Medium	Medium	Medium
Donahue Flat Neighborhood	High	Medium	Low	High
Thunder Mountain/Madrone Lane/Bark Shanty Neighborhood	High	Medium	Low	High
Lower Ishi Pishi Neighborhood	Medium	Medium	High	Medium
Pearch Creek Neighborhood (east)	Medium	Low	High	Low
Pearch Creek Neighborhood (west)	Low	Low	High	Low
Orleans Neighborhood	Medium	Medium	High	Medium
Orleans School Road Neighborhood	Medium	Low	High	Low
Red Cap Neighborhood 1	Medium	Medium	High	Medium
Red Cap Neighborhood 2	High	Medium	Low	High
Red Cap Neighborhood 3	Medium	Medium	Low	Medium
Red Cap Creek Neighborhood	Medium	Medium	Low	Medium
Camp Creek Neighborhood	Medium	Medium	Medium	Medium
Owl Mine Road Neighborhood	High	High	Low	High
Cedar Camp Neighborhood	High	Medium	Low	High
Lammon Neighborhood	Medium	Low	Medium	Medium
Slate Creek Neighborhood	High	Low	Low	Medium
Bluff Creek Neighborhood 1	Medium	Low	Medium	Medium
Bluff Creek Neighborhood 2	High	Medium	Low	High

Table 4.2: Emergency Access Routes at Risk

Roads	Fuel Hazard	Risk of Wildland fire Occurrence	Firefighting Capability	Overall Risk

State Highway 96	High	High	Medium	High
Sidewinder (13N35, 14N21, 14N69)	High	High	Low	High
Frog Pond Rd (13N13)	High	High	Low	High
Ti Bar Road	High	High	Medium	High
Carter Creek Road	High	High	Low	High
Ti Bar to Ten Bear Mtn. to Stanshaw Meadows to Haypress meadows to Camp Three to Salmon River Road (14N01/15N17)	High	High	Low	High
Iron Phone Road (13N11)	High	High	Low	High
Eyeese Road (GO Road) (15N01)	High	High	Medium	High
Sandy Bar Creek Road	High	High	Low	High
Patterson Ranch Road	High	High	Low	High
Carson/Hanson Driveway (Road number?)	High	High	Low	High
Bull Pine Mine Road	High	High	Low	High
Roger's Creek Road	High	High	Medium	High
Lower Natucket Road	Medium	Medium	Medium	Medium
Upper Natucket Road	Medium	Medium	Medium	Medium
Lower Offield Mountain Ranch Road	High	Medium	Low	High
Offield Mountain Ranch Road	High	Medium	Low	High
Wiegel (Cornwell) Driveway	High	High	Low	High
Salmon River Road	High	High	High	Medium
Old Salmon River Road (to Hippo Rock)	High	High	High	Medium
Ishi Pishi Road	Medium	High	High	Medium
Ten Eyck Mine Road	Medium	Medium	Low	Medium
Bark Shanty Road	Medium	High	Medium	Medium
Madrone Lane	Medium	Medium	Medium	Medium
Thunder Mountain Road	Medium	Medium	Medium	Medium
Horn Ranch Road	Medium	Medium	Low	Medium
McLaughlin Ranch Road	Medium	Medium	Low	Medium
East Pearch Creek Road	Medium	Medium	High	Medium
West Pearch Creek Road	Medium	Medium	High	Medium
Orleans School Road	Medium	Medium	Low	Medium
Ferris Ranch Road	Medium	Medium	High	Medium
Red Cap Road (10N01)	High	High	Medium	High
10N13 and 10N13b	High	Medium	Low	High
Shelton Butte Road (to Hoopa)	High	Medium	Medium	Medium
Short Ranch Road	High	High	Low	High
Downs Ranch Road	Low	Medium	High	Low
Gold Dredge Road	Low	Medium	High	Low
Big Rock Road	Low	Medium	High	Low
Camp Creek Road	Medium	High	High	Medium
Lower Camp Creek Road	Low	High	Medium	Medium
Owl Mine Road	High	High	Low	High
Cedar Camp Road (12N12)	High	High	Medium	High
Slate Creek Road (11N05)	High	Medium	Medium	Medium
Bluff Creek Road	High	High	Medium	High

Table 4.3: Other Areas of Community Importance

Other Areas of Community Importance	Fuel Hazard	Risk of Wildland fire Occurrence	Firefighting Capability	Overall Risk
Pearch Creek Municipal Watershed	Medium	Medium	Low	Medium
Crawford Creek Municipal Watershed	High	Medium	Low	High
Thunder Mountain Municipal Watershed	Medium	Medium	Medium	Medium
Merrill Creek Municipal Watershed	High	High	Low	High
Orleans Mountain repeater	High	Medium	Low	High
Pacific Gas and Electric utility corridor	High	High	Medium	High
Tishániik Flat	Medium	High	High	Medium
Ti Bar cultural use area	High	High	Low	High
Offield Mountain area	High	High	Medium	High
Panámniik Ceremonial District	Medium	Medium	Medium	Medium
Ka`tim`îin Cultural Area	High	High	Medium	High
Amikiavum Cultural Area	Medium	High	Medium	Medium
Helkau Cultural Use Area	Medium	Medium	Low	Medium
Dillon Creek Campground	Low	Medium	Medium	Medium
Ti Bar Campground	Medium	High	Medium	Medium
Frog Pond (Lake Oogaromtok)	High	High	Low	High
Oak Bottom Campground	Medium	High	High	Medium
Pearch Creek Campground	Medium	Medium	High	Medium
E-Ne-Nuk Campground	Medium	Medium	Medium	Medium
Aikens Creek Campground	Medium	Medium	Medium	Medium
Fish Lake Campground	High	Medium	Low	High
Camp Three Campground	High	High	Low	High
Camp Creek Fish Hatchery and Recreation Area	Medium	Medium	Medium	Medium
Helicopter Landing Sites (various)	Varied	Varied	Varied	Varied

5. Develop the overall community priority

The priority rating reflects the overall risk (from Section 4), community values, and cultural values. All residences and community structures have been ranked as having high community value. Community value for emergency access routes is determined by the number of people served by the route and the route's strategic placement for fire protection for the entire community (ridge road vs. midslope road). Community value for other areas of community importance is determined by the percentage of community members served or protected by the resource/area. Implementation of this plan should also be coordinated with Karuk Tribe planning efforts.

The ranking system for overall community priority uses a simple point scale corresponding to overall risk and community value rankings. The point scale ranges from one (low) to three (high) with a possible total values ranging from two to six which correlate to overall priority. Overall risk is defined as low (2-3 points), medium (4-5 points), and high (6 points).

Table 5.1: Priority for Structures at Risk

Structure at Risk	Overall Risk	Community Value	Overall Priority
Community Assets			
Karuk Medical Clinic Building and Community Center	Low	High	Medium
Orleans Volunteer Fire Dept. Fire Station	Low	High	Medium
USFS Fire Station (Orleans)	Low	High	Medium
USFS Fire Station (Ti Bar)	High	High	High
USFS Fire Station (Oak Bottom)	Medium	High	High
Karuk Tribe Fire Station (Somes Bar)	Medium	High	High
Orleans Elementary School	Low	High	Medium
Junction Elementary School	Medium	High	High
Karuk Community Center	Low	High	Medium
Panamnik Building	Low	High	Medium
Panamnik Elder Center	Low	High	Medium
Assembly of God Church	Low	High	Medium
Seventh Day Adventist Church	Low	High	Medium
Verizon Communication Structure	Low	High	Medium
Ukonom Mountain Lookout	High	High	High
Orleans Mountain Lookout	High	High	High

Table 5.2: Priority for Neighborhoods at Risk

Neighborhoods at Risk	Overall Risk	Community Value	Overall Priority
Residences (from North to South)			
Ti Bar Neighborhood 1	Medium	High	High

Ti Bar Neighborhood 2	High	High	High
Ti Bar Neighborhood 3	High	High	High
Patterson/Sandy Bar Cr. Neighborhood	High	High	High
Stanshaw/Irving Cr. Neighborhood	Medium	High	High
Rogers Creek Neighborhood 1	Medium	High	High
Rogers Creek Neighborhood 2	High	High	High
Offield Mtn. Neighborhood	High	High	High
Somes Bar Neighborhood	Medium	High	High
Butler Neighborhood	Medium	High	High
Ten Eyck Neighborhood	Medium	High	High
Upper Ishi Pishi Neighborhood	Medium	High	High
Donahue Flat Neighborhood	High	High	High
Thunder Mountain/Madrone Lane/Bark Shanty Neighborhood	High	High	High
Lower Ishi Pishi Neighborhood	Medium	High	High
Pearch Creek Neighborhood (east)	Low	High	Medium
Pearch Creek Neighborhood (west)	Low	High	Medium
Orleans Neighborhood	Medium	High	High
Orleans School Road Neighborhood	Low	High	Medium
Red Cap Neighborhood 1	Medium	High	High
Red Cap Neighborhood 2	High	High	High
Red Cap Neighborhood 3	Medium	High	High
Red Cap Creek Neighborhood	Medium	High	High
Camp Creek Neighborhood	Medium	High	High
Owl Mine Road Neighborhood	High	High	High
Cedar Camp Neighborhood	High	High	High
Lammon Neighborhood	Medium	High	High
Slate Creek Neighborhood	Medium	High	High
Bluff Creek Neighborhood 1	Medium	High	High
Bluff Creek Neighborhood 2	High	High	High

Table 5.3: Priority for Emergency Access Routes

Emergency Access Routes	Overall Risk	Community Value	Overall Priority
State Highway 96	High	High	High
Sidewinder (13N35, 14N21, 14N69)	High	Low	Medium
Frog Pond Rd (13N13)	High	Medium	High
Ti Bar Road	High	High	High
Carter Creek Road	High	Medium	High
Ti Bar to Ten Bear Mtn. to Stanshaw Meadows to Haypress meadows to Camp Three to Salmon River Road (14N01/15N17)	High	High	High
Iron Phone Road (13N11)	High	Medium	High
Eyeese Road (GO Road) (15N01)	High	High	High
Sandy Bar Creek Road	High	High	High
Patterson Ranch Road	High	High	High

Carson/Hanson Driveway	High	Low	Medium
Bull Pine Mine Road	High	Low	Medium
Roger's Creek Road	High	Low	Medium
Lower Natucket Road	Medium	High	High
Upper Natucket Road	Medium	High	High
Lower Offield Mountain Ranch Road	High	Low	Medium
Offield Mountain Ranch Road	High	Low	Medium
Wiegel (Cornwell) Driveway	High	Low	Medium
Salmon River Road	Medium	High	High
Old Salmon River Road (to Hippo Rock)	Medium	Low	Medium
Ishi Pishi Road	Medium	High	High
Ten Eyck Mine Road	Medium	High	High
Bark Shanty Road	Medium	High	High
Madrone Lane	Medium	High	High
Thunder Mountain Road	Medium	High	High
Horn Ranch Road	Medium	Low	Medium
McLaughlin Ranch Road	Medium	Low	Medium
East Pearch Creek Road	Medium	High	High
West Pearch Creek Road	Medium	High	High
Orleans School Road	Medium	High	High
Ferris Ranch Road	Medium	High	High
Red Cap Road (10N01)	High	High	High
10N13 and 10N13b	High	High	High
Shelton Butte Road (to Hoopa)	Medium	Medium	Medium
Short Ranch Road	High	Low	Medium
Downs Ranch Road	Low	Low	Low
Gold Dredge Road	Low	High	Medium
Big Rock Road	Low	High	Medium
Camp Creek Road	Medium	High	High
Lower Camp Creek Road	Medium	High	High
Owl Mine Road	High	Medium	High
Cedar Camp Road (12N12)	High	Low	Medium
Slate Creek Road (11N05)	Medium	Medium	Medium
Bluff Creek Road	High	Medium	High

Table 5.4: Priority for Other Areas of Community Importance

Other Areas of Community Importance	Overall Risk	Community Value	Overall Priority
Pearch Creek Municipal Watershed	Medium	High	High
Crawford Creek Municipal Watershed	High	High	High
Thunder Mountain Municipal Watershed	Medium	High	High
Merrill Creek Municipal Watershed	High	Medium	High
Orleans Mountain repeater	High	High	High
Pacific Gas and Electric utility corridor	High	High	High
Tishániik Flat	Medium	Medium	Medium
Ti Bar cultural use area	High	Medium	High

Offield Mountain area	High	Medium	High
Panámniik Ceremonial District	Medium	High	High
Ka`tim`îin Cultural Area	High	High	High
Amikiavum Cultural Area	Medium	High	High
Helkau Cultural Use Area	Medium	Medium	Medium
Dillon Creek Campground	Medium	Low	Medium
Ti Bar Campground	Medium	High	High
Oak Bottom Campground	Medium	High	High
Pearch Creek Campground	Medium	High	High
E-Ne-Nuk Campground	Medium	Medium	Medium
Aikens Creek Campground	Medium	Medium	Medium
Fish Lake Campground	High	High	High
Camp Three Campground	High	Medium	High
Camp Creek recreation area and fish hatchery	Medium	High	High
Helicopter Landing Sites (various)	Varied	Varied	Varied

6. Community Hazard Reduction Priorities and Prescriptions

The Orleans/Somes Bar Fire Safe Council is responsible for helping to plan, implement and monitor the reinstatement of historic fire regimes around the communities of Orleans and Somes Bar in a manner that protects life, property, improves forest health, and enhances the resources valued by its stakeholders. As part of our responsibility, the OSB FSC developed a prescription policy that details acceptable methods for fuel reduction activities within and outside the wildland urban interface. The community prioritized fuel reduction around residential properties, emergency access routes, municipal watersheds and areas of historic and cultural importance. Existing or proposed projects on federal lands should be assessed for compatibility with the priorities and prescriptions outlined in this plan. The goal of these fuel reduction activities is to allow for the reintroduction of fire through wildland fire management and prescribed burning to effectively protect life, property and resources over the long term.

Recommended Prescriptions

This prescription policy will be updated based on the availability of new information from ongoing research and monitoring efforts and/or changes in community values following the process of adaptive management (Berkes et al. 2000). Prescriptions vary by category based on the level of fire risk (high, medium, and low). As noted in Section 4, fire risk is based on fuel hazard, risk of wildland fire occurrence and firefighting capability and capacity.

The prescription policy mainly calls for construction of shaded fuelbreaks that break up fuel continuity and fuel ladders, while maintaining canopy cover (Agee et al. 2000). According to Green (1977), “a fuelbreak is a strategically located wide block, or strip, on which a cover of dense, heavy or flammable vegetation has been permanently changed to one of lower fuel volume or reduced flammability.” It must be understood that a shaded fuelbreak may not stop a fire, but will give suppression forces and landowners more opportunities for safely fighting the fire and accessing or evacuating the fire area. Shaded fuelbreaks retain forest canopy. More open canopies will result in a ground surface with lower moisture content and increased windspeeds (van Wagtendonk 1996, Agee et al. 2000). Furthermore, maintaining canopy cover limits brush regrowth, increasing the ease of fuelbreak maintenance.

A fire may move as a surface fire or a crown fire. The initiation of a crown fire depends on surface fireline intensity, the height to live crown, and canopy moisture content (Agee et al. 2000). As stated by Agee et al. (2000):

> “In order to avoid crown fire initiation, fireline intensity must be kept below the critical level. This can be accomplished by managing the surface fuels such that fireline intensity is kept well below the critical level, or by raising crown base heights such that the critical fireline intensity is difficult to reach.”

The prescriptions in this plan are designed to manage surface fuels and raise crown base heights to avoid crown fire initiation (Agee and Skinner 2005). Once a crown fire is initiated, it can continue to spread through the canopy. This spread is dependent on crown rate of spread, canopy bulk density and crown foliage ignition energy. In some cases, decreasing canopy bulk density (i.e. thinning of the canopy) is a strategy that can be used to decrease the chances of a spreading crown fire. However, canopy bulk density is just one factor that influences the spread of a crown fire. The prescriptions in this plan, generally, do not address reductions in canopy bulk density.

The fuelbreak network proposed in this plan surrounds private property, emergency access routes, and potential control features that can be used to modify fire behavior (e.g. ridges, ridge roads, and major streams). These fuelbreaks are designed to be used as anchor points for prescribed fire as well as backfiring operations during wildland fires. Not all fuelbreaks will be connected to one another. As stated by Finney et al.: “There is no a priori rule that each segment must be connected to all other segments for a fuelbreak strategy to be effective.” In this plan, fuelbreaks are prioritized as initial fuel treatments. After prioritized fuelbreaks are created and funding is secured for maintenance, the intent is to follow up with more extensive landscape fuel treatments integrating natural and human potential control features. However, the maintenance of existing and proposed fuelbreaks is prioritized over landscape treatments.

Trimming the branches six to eight feet up the stem of the remaining trees can reduce a future fire’s ability to climb the “fuel ladder” and burn the crowns of the remaining trees (Agee et al. 2000, Agee and Skinner 2005). Trees and shrubs are thinned based on density and flammability in preparation for fire being reintroduced. The goal is to maintain diversity of species and age classes (where feasible) while reducing the risk of future stand replacing fire (DellaSalla et al. 2003, Brown et al. 2003). In areas with structures, or other high value areas, more vegetation would be removed (with higher maintenance) than in outlying areas (Table 6.1). In order to minimize the regrowth of fuel ladders in treated stands, this prescription policy recommends keeping the overstory canopy at a 60% minimum (in areas where it exists) in conifer and mixed conifer/hardwood stands.

The subject of diameter limits is controversial (DellaSalla et al. 2003). An upper diameter limit of 27 inches in fuelbreaks outside of the property buffer area may reduce controversy and facilitate timely project implementation. Within the property buffer area, an upper diameter limit of 20 inches may reduce controversy and facilitate timely project implementation. These diameter limits are just recommendations and the fuel reduction and forest health requirements of each forest stand will require individual consideration (Brown et al. 2003, Agee and Skinner 2005). In areas where land managers propose to reduce the canopy below 60% in mid- to late- seral forests, or remove trees over 20 inches within, or 27 inches outside, of property buffer area, a collaborative stewardship group composed of, at least, adjacent landowners, USFS representatives, tribal representatives, and interested local community organizations should be consulted.

Snags can greatly increase fire behavior and potential for spread across containment features (roads, streams, fuelbreaks). Snags also have ecological and cultural importance that must be balanced with their potential negative impacts to fire suppression efforts and safety. In general, recommended prescriptions suggest complete snag removal in areas directly around homes and within buffers along emergency access routes, except in special circumstances. Snag removal may entail removal from area if felled snags would significantly impact fuel loading. Snags should be felled, piled and burned, or cut up for firewood. Alternately, a tradeoff between wildlife use and fuel loading danger would be to remove finer fuels adjacent to or on downed snags (foliage and limbs removed) and existing large woody material (e.g. logs, stumps) and have a fireline constructed around them. Snags that are being used by wildlife should be kept and their location recorded for reference in case of a wildland fire entering the area. This information should be kept by the USFS district wildlife biologist. Wildlife snags will have additional fuel treatment to protect them from fire. Before snag removal is implemented along emergency access routes and on federal lands, the Karuk Tribe should be consulted.

This prescription policy does not apply to areas of importance to endangered species, historical sites, or cultural-use areas. These areas 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. Also,

the prescriptions for residences and high-value areas (e.g. water tanks, water lines, springs, communication systems, fuel storage) are recommendations that should be customized on an individual basis with the landowner(s). Prescriptions will vary by specific vegetation types. In areas without consistent overstory canopy cover, less flammable vegetation species should be encouraged to promote future shading. In addition to the above prescriptions for shaded fuelbreaks, the OSB FSC developed specific prescriptions for fuel reduction activities in WUI areas and along potential control features:

Residences: Properties with residences, regardless of the ownership, are within the wildland urban interface. The distance of the WUI boundary away from the property boundary depends on the potential control features present, topographical and geologic complexity, vegetation patterns and risk of wildland fire surrounding the property. The WUI boundary around properties with residences is broken into four categories: defensible space, property buffers, ¼ mile buffers, and extended WUI areas. Each category has specific prescriptions associated with it.

i. *Defensible Space* – This buffer extends up to 1000 feet away from the residence, regardless of ownership. See Table 6.1 and Appendix E.
ii. Property Buffers – This buffer extends up to 1000 feet away from the residence, regardless of ownership. See Table 6.3.
iii. *¼ Mile Buffers* – This buffer extends one fourth of a mile from the property boundary into the surrounding public land. Jackpot pile in areas of heavy fuel concentration. Pullback from leave trees, where appropriate. Understory burn to achieve fuel reduction, where appropriate. See Table 6.4.
iv. *Extended WUI Areas* – This buffer varies in width depending on the properties position on the slope – often extending to the nearest ridge feature. Not all properties with residences have an extended WUI area. Prescriptions are the same as those for ¼ mile buffers (see Table 6.4).

Emergency Access Routes: See Table 6.2 and Appendix E.

Municipal Watersheds: Limit use of ground-based harvest systems. Jackpot pile in areas of heavy fuel concentration. Pullback from leave trees, where appropriate. Ridgetop shaded fuelbreaks, where economically and ecologically feasible, should be used to further protect the watersheds from wildland fire. Limit the use of retardant during suppression operations.

Potential Control Features: These are features that can be used to control a fire. The Klamath and Salmon River, several roads, ridges, trails, substrate/soil types, existing firelines and creeks have been identified as potential control features. These features are located both within and outside of the WUI area. These features are listed in Appendix E.

Priorities

The following priorities are based on community input at Orleans/Somes Bar Fire Safe Council meetings from 2001 to 2011. Each priority has several subcategories, or locations. These locations have been ranked above in Sections 4 and 5. Each of these locations is listed in order of priority based on the Overall Priority recommendations in Section 5.

Table 6.1: Prescriptions for Defensible Space around Residences

Priority 1: Defensible Space around Residences and Community Structures					
Location	**Prescription**				
	Fire Exclusion Zone	**Shaded Fuelbreak**	**Reduce Jackpot Fuels**	**Remove Snags**	**Prescribed Burning**
High-priority neighborhoods	100-200 feet	300 feet	1000 feet	Remove all snags from the shaded fuelbreak*	up to 300 feet**
Medium-priority neighborhoods	100 feet	200 feet	600 feet		up to 200 feet**
Low-priority neighborhoods	100 feet	100 feet	300 feet		NA
* Snag removal may entail removal from area if felled snags would significantly impact fuel loading. Snags should be felled to avoid fuel jackpots.					
** Prescribed burning prescription is for the area outside of the fire exclusion zone. Prescribed fire should be used to maintain the shaded fuelbreak, including treatment of resprouts and accumulated ground fuel. Large logs (1000 hr fuels) may be left if they are stable on the slope and associated fine fuels are treated.					

Table 6.2: Prescriptions for Shaded Fuelbreaks along Emergency Access Routes

Priority 2: Shaded Fuelbreaks Along Emergency Access Routes					
Location	**Prescription**				
	Shaded fuelbreak (>50% slope)	**Shaded fuelbreak (<50% slope)**	**Reduce Jackpot Fuels**	**Remove Snags**	**Prescribed Burning**
High-priority emergency access routes	250' below road, 200' above road	200' below road, 150' above road	1000 feet**	Remove snags in the shaded fuelbreak and one tree length below (downhill), and 1.5 tree length above (uphill) fuelbreak.*	300-1000 feet**
Medium-priority emergency access routes	200' below road, 150' above road	150' below road, 100' above road	600 feet**		200-600 feet**
Low-priority emergency access routes	200' below road, 150' above road	100' below road, 75' above road	300 feet**		100-300 feet**
* Snag removal may entail removal from area if felled snags would compromise the integrity of the fuelbreak. Snags should be felled, piled and burned, or utilized for firewood. Snags that are being used by wildlife should be retained and their location recorded. This information needs to be provided to fire protection agencies if a wildland fire enters the area. Wildlife snags will have additional fuel treatment, including pullback, to protect them from fire. Before treatments are implemented, the Karuk Tribe and other appropriate agencies need to be consulted regarding snag removal.					
** Includes both sides of the road					

Table 6.3: Prescriptions for Buffers around Residential Property Boundaries

Priority 3: Buffers Around Residential Property Boundaries				
Location	**Prescription**			
	Shaded Fuelbreak	**Reduce Jackpot Fuels**	**Remove Snags**	**Prescribed Burning**
High-priority neighborhoods	300-1000 feet	1000 feet	Remove snags in the shaded fuelbreak.*	300-1000 feet
Medium-priority neighborhoods	200-600 feet	600 feet		200-600 feet
Low-priority neighborhoods	100-300 feet	300 feet		100-300 feet
* Snag removal may entail removal from area if felled snags would compromise the integrity of the fuelbreak. Snags should be felled, piled and burned, or utilized for firewood. Snags that are being used by wildlife should be retained and their location recorded. This information needs to be provided to fire protection agencies if a wildland fire enters the area. Wildlife snags will have additional fuel treatment, including pullback, to protect them from fire. Before treatments are implemented, the Karuk Tribe and other appropriate agencies need to be consulted regarding snag removal.				

Table 6.4: Prescriptions for Potential Control Features within the WUI

Priority 4: Potential Control Features within the WUI				
Location	Prescription			
	Shaded Fuelbreak	Reduce Jackpot Fuels	Remove Snags	Prescribed Burning
Ridge roads	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Existing firelines	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Midslope roads	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Ridge Trails	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Ridges	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Midslope Trails and Connections	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Rivers and Creeks	None	100-500 feet on each side	Before fire approaches	none
* Snag removal may entail removal from area if felled snags would compromise the integrity of the fuelbreak. Snags should be felled, piled and burned, or utilized for firewood. Snags that are being used by wildlife should be retained and their location recorded. This information needs to be provided to fire protection agencies if a wildland fire enters the area. Wildlife snags will have additional fuel treatment, including pullback, to protect them from fire. Before treatments are implemented, the Karuk Tribe and other appropriate agencies need to be consulted regarding snag removal.				

Table 6.5: Prescriptions for ¼ Mile Buffers around Residential Property Boundaries

Priority 5: 1/4 Mile Buffers Around Residential Property Boundaries				
Location	Prescription			
	Shaded Fuelbreak	Reduce Jackpot Fuels	Remove Snags	Prescribed Burning
High-priority neighborhoods	1/4 mile	¼ mile	Remove all snags in the shaded fuelbreak.	1/4 mile
Medium-priority neighborhoods	1/4 mile	¼ mile		1/4 mile
Low-priority neighborhoods	1/4 mile	¼ mile		1/4 mile
* Snag removal may entail removal from area if felled snags would compromise the integrity of the fuelbreak. Snags should be felled, piled and burned, or utilized for firewood. Snags that are being used by wildlife should be retained and their location recorded. This information needs to be provided to fire protection agencies if a wildland fire enters the area. Wildlife snags will have additional fuel treatment, including pullback, to protect them from fire. Before treatments are implemented, the Karuk Tribe and other appropriate agencies need to be consulted regarding snag removal.				

Table 6.6: Prescriptions for Extended WUI Areas

Priority 6: Extended WUI Areas				
Location	Prescription			
	Shaded Fuelbreak	Reduce Jackpot Fuels	Remove Snags	Prescribed Burning
High-priority neighborhoods	1/4 mile	¼ mile	Remove all snags in the shaded fuelbreak.	1/4 mile
Medium-priority neighborhoods	1/4 mile	¼ mile		1/4 mile
Low-priority neighborhoods	1/4 mile	¼ mile		1/4 mile
* Snag removal may entail removal from area if felled snags would compromise the integrity of the fuelbreak. Snags should be felled, piled and burned, or utilized for firewood. Snags that are being used by wildlife should be retained and their location recorded. This information needs to be provided to fire protection agencies if a wildland fire enters the area. Wildlife snags will have additional fuel treatment, including pullback, to protect them from fire. Before treatments are implemented, the Karuk Tribe and other appropriate agencies need to be consulted regarding snag removal.				

Table 6.7: Prescriptions for Potential Control Features outside of the WUI Area

Priority 7: Potential Control Features outside of the WUI Area				
Location	Prescription			
	Shaded Fuelbreak	Reduce Jackpot Fuels	Remove Snags	Prescribed Burning
Ridge roads	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Existing firelines	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Midslope roads	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Ridge Trails	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Ridges	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Midslope Trails and Connections	50-150 feet on each side	100-200 feet on each side	100-200 feet on each side	50-150 feet on each side
Rivers and Creeks	none	none	Before fire approaches	None
* Snag removal may entail removal from area if felled snags would compromise the integrity of the fuelbreak. Snags should be felled, piled and burned, or utilized for firewood. Snags that are being used by wildlife should be retained and their location recorded. This information needs to be provided to fire protection agencies if a wildland fire enters the area. Wildlife snags will have additional fuel treatment, including pullback, to protect them from fire. Before treatments are implemented, the Karuk Tribe and other appropriate agencies need to be consulted regarding snag removal.				

7. Action Plan and Assessment Strategy

The following table displays a list of projects proposed in this plan. This list tiers to the recommended priorities and prescriptions identified in this document. The community intends to assess the progress annually and invite stakeholders to submit projects that provide education, planning and coordination, fuels reduction, policy modification, infrastructure, fire protection, utilization, and research and monitoring.

Table 7.1: OSB CWPP Action Plan

Sub-Topic	Action	Responsible Party	Timeline	Range of Costs (per year)	
EDUCATION					
				Minimum	Maximum
Fire Safe Information	Disseminate most current fire safe information to the community as it becomes available. This information may include: CalFIRE regulations, FSC brochures, USFS regulations, NCUAQMD regulations, educational videos, etc.	FSC, OVFD, Karuk, CalFIRE, USFS	Ongoing	$3,500	$10,000
Sub-Topic	**Action**	**Responsible Party**	**Timeline**	**Range of Costs (per year)**	
Workshops/Trainings	Host workshops and trainings to provide landowners with skills and information regarding prescribed burning, fuels reduction, defensible space, fire safe building techniques, and emergency response.	FSC, Karuk, OVFD, CalFIRE, USFS	Ongoing	$2,000	$4,000
Trainings	Develop community-assisted interagency/tribal capacity for wildland fire management actions and activities through collaborative training opportunities using a consistent set of training standards, such as NWCG qualifications, to provide for successional personnel and scalable community resource use.	FSC, Karuk Tribe, OVFD, CALFIRE, USFS, The Nature Conservancy Fire Learning Network	Ongoing	$1000	$10000
Conferences and Symposia	Host conferences and symposia to convene scientists, researchers, agencies, practitioners and residents to create common understanding of research needs and management options.	USFS, Karuk, PSW, FSC, CalFIRE	Annually	$2,000	$5,000
Outreach to Regulatory Agencies	Work with regulatory agencies, insurance agencies and others to continue a dialogue about how current and proposed regulations affect federal, state, and local landowners' ability to effectively manage fuels on their lands.	FSC, Karuk, OVFD, CalFIRE, USFS, NCUAQMD	Ongoing	$1,000	$2,000

"Red Truck Program"	Institute "Red Truck Program" whereby the Orleans Volunteer Fire Department will visit neighborhoods to educate landowners and residents about defensible space, access and emergency response issues.	OVFD, FSC	Ongoing	$3,000	$6,000
K-12 Fire Safe Education	Outreach to area students from elementary through high school to educate them about fire safety, fire ecology and fire use. Utilize multimedia including physical props (stump cuts, etc.), PowerPoint Presentations, and field trips.	FSC	Ongoing	$1,000	$2,000
PLANNING AND COORDINATION					
Meetings	Coordinate meetings to address community fire safety and fire preparedness issues, fuel reduction planning, and foster collaboration amongst stakeholders.	FSC	Ongoing	$600	$1,500
Map Firelines and Fuelbreaks	Develop a GIS map of existing firelines and fuelbreaks, with specific notes on current condition, past effectiveness, and unique attributes, such as land ownership and landowner cooperation. Maps will be made available to USFS Incident Command during fire suppression activities.	FSC, USFS, Karuk	Ongoing	$1,000	$2,000
Supplemental Community Fuels Reduction Action Plan	Create a Supplemental Community Fuels Reduction Action Plan through a series of neighborhood meetings where neighborhood-based projects and priorities are identified. The Action Plan will be updated to reflect completed projects	FSC, OVFD	2012, then ongoing updates	$1,000	$4,000
Orleans/Somes Bar Community Wildfire Protection Plan (CWPP)	Revise the Orleans/Somes Bar CWPP for use in fire safety and fire preparedness planning. Include the Supplemental Community Fuels Reduction Action Plan (see above).	FSC, OVFD, Karuk, CalFIRE, USFS	2012-2017	$1,000	$3,000
Firewise Program	Maintain Firewise community status, through annual renewals, by maintaining a Firewise board, investing in Firewise projects, maintaining a Firewise plan, and hosting an annual Firewise event.	FSC	Ongoing	$1,000	$10,000

Sub-Topic	Action	Responsible Party	Timeline	Range of Costs (per year)	
PLANNING AND COORDINATION (continued from previous page)					
Fuels Reduction on Public Property MOU	Create a Memorandum of Understanding to allow for landowners to accomplish fuel reduction on adjacent public lands to ensure defensible space of homes and outbuildings.	FSC, OVFD, Karuk, CalFIRE, USFS	2010	$500	$1,000
Update Critical Info and Fire Protection Surveys (RedZONE)	Continue to conduct RedZONE surveys on properties within the planning area for use in fire prevention and fire suppression efforts.	FSC, OVFD	Ongoing	$2,000	$5,000
Orleans Fuels Reduction Partnership	Convene and facilitate a partnership to plan and prioritize stewardship projects and other projects to address fuels reduction across the landscape. Use this as an educational forum to evaluate past projects, create monitoring goals, discuss policy, and p	FSC, OVFD, Karuk, CalFIRE, USFS	Ongoing	$2,000	$6,000
Large Fire Suppression Coordination Plans	Develop Large Fire Suppression Coordination Plans involving Forest Service and OVFD/FSC/Community/Tribe. Plans would identify appropriate community liaisons to disseminate information between USFS Incident Command and neighborhoods within the planning area.	FSC, OVFD, Karuk, CalFIRE, USFS	2008-2009	$1,000	$2,000
FUELS REDUCTION					
Defensible Space	Implement fuels treatment around homes, community infrastructure, and other assets at risk to create defensible space (at least 100' radius around structure) throughout the service area.	Landowners, FSC, Karuk, USFS	Ongoing	$20,000	$50,000
Emergency Access Routes	Create shaded fuelbreaks, reduce jackpot fuels, remove snags, and conduct prescribed burns along prioritized emergency access/egress routes.	Landowners, FSC, Karuk, USFS	Ongoing	$50,000	$150,000
Residential Property Buffers	Create shaded fuelbreaks, reduce jackpot fuels, remove snags, and conduct prescribed burns along prioritized property boundaries, on public, private, and tribal lands.	Landowners, FSC, Karuk, USFS	Ongoing	$50,000	$150,000
Potential Control Features	Create shaded fuelbreaks, reduce jackpot fuels, remove snags, and conduct prescribed burns on ridge roads, existing firelines, midslope roads, ridge trails, ridges, midslope trails, rivers and creeks that can function as control features.	Landowners, FSC, Karuk, USFS	Ongoing	$100,000	$300,000
1/4 Mile Buffers	Create shaded fuelbreaks, reduce jackpot fuels, remove snags, and conduct prescribed burns on prioritized property boundaries within the WUI on public, private and tribal lands.	Landowners, FSC, Karuk, USFS	Ongoing	$100,000	$200,000

Sub-Topic	Action	Responsible Party	Timeline	Range of Costs (per year)	
FUELS REDUCTION (continued from previous page)					
Extended WUI Areas	Create shaded fuelbreaks, reduce jackpot fuels, remove snags, and conduct prescribed burns on prioritized extended WUI areas adjacent to identified neighborhoods regardless of ownership.	Landowners, FSC, Karuk, USFS	Ongoing	$100,000	$500,000
Potential Control Features Outside of the WUI	Create shaded fuelbreaks, reduce jackpot fuels, remove snags, and conduct prescribed burns on prioritized control features outside of the WUI.	USFS, Karuk	Ongoing	$50,000	$150,000
Maintenance	Maintain existing shaded fuelbreaks through prescribed burning, mechanical (following blowdown or snowdown), and follow-up manual treatments.	Landowners, FSC, Karuk, USFS	Ongoing	$50,000	$300,000
POLICY					
Wildland Fire Use	Support USFS in use of unplanned ignitions, based on existing information, which will allow for positive resource benefits and reduce risk to life, property and resources.	USFS, FSC, Karuk, Enviro Groups	2010-2011	$500	$2,000
Fuels Reduction in Riparian Areas	Work with regulatory agencies to allow for needed fuels reduction treatments in riparian areas, while ensuring resource protection.	FSC, USFS, Karuk, NOAA, FWS, CA DFG	Ongoing	$500	$1,500
FACA	Encourage open and inclusive public process in the planning and implementation of ecosystem restoration and maintenance projects.	FSC, MKWC, USFS, Karuk	Ongoing	$500	$1,000
Air Quality Restrictions	Work with NCUAQMD to have separate air quality monitoring stations within the planning area to differentiate the planning area from the coastal area.	FSC, Karuk, NCUAQMD, USFS, Landowners	Ongoing	$500	$1,500
Secure Rural Schools and Self-Determination Act	Work with policy groups to support Title II and Title III funding to counties.	FSC, Sisk CO, Hum CO	Ongoing	$1,000	$2,000
Tribal Forests Protection Act	Support the Karuk Tribe and other tribes within the planning area in developing and implementing proposals and projects under the TFPA authority.	Karuk, FSC, USFS	Ongoing	$500	$1,000
Carbon Credits	Increase support for policy research on the economic value of ecological services provided by trees and forests (e.g. Carbon credits, water yield credits).	FSC, USFS	Ongoing	$500	$1,000
Enforcement of Labor Regulations for Contractual Forestworkers	Work with the federal government to promote contractor compliance with existing labor laws on our National Forests.	FSC, USFS	Ongoing	$500	$2,000

Sub-Topic	Action	Responsible Party	Timeline	Range of Costs (per year)	
POLICY (continued from previous page)					
Sustainable Funding for Fuels Reduction, Workforce Training	Promote the creation of an ecosystem workforce through training and apprenticeship programs that provide skilled workers to ongoing and newly developed jobs in forest restoration and management.	USFS, Karuk, FSC, SBDA	Ongoing	$1,000	$2,000
Firewood Gathering	Revise firewood gathering regulations to allow for felling and use of dead standing trees in identified locations (along critical access/egress routes, etc). Allow for firewood utilization of snowdown/blowdown trees blocking USFS roads.	USFS, FSC, Karuk	Ongoing	$500	$5,000
Insurability of Homes with Defensible Space	Work with insurance companies to ensure that residents in the planning area are eligible for fire insurance.	FSC, HC FSC, FSC of Sisk. CO	Ongoing	$500	$1,000
UTILIZATION					
Alternative Forest Products	Facilitate the sustainable development and marketing of alternative forest products, in particular products that are byproducts of the fuels reduction industry.	USFS, Karuk, FSC, Landowners, SBDA	Ongoing	$5,000	$10,000
Biomass Utilization	Develop a biomass utilization plan for the planning area. Conduct outreach and education to all stakeholders to increase opportunities for collaborative efforts.	USFS, Karuk, FSC, Landowners	Ongoing	$3,000	$8,000
Small Diameter Wood Products	Facilitate the sustainable development and marketing of small diameter wood products, in particular products that are byproducts of the fuels reduction industry. Outreach to regional entities who have succeeded in developing small diameter wood products.	FSC, Karuk, Landowners	Ongoing	$2,000	$4,000
FIRE PROTECTION					
Orleans/Somes Bar Emergency Response Book	Finalize and maintain Orleans/Somes Bar Emergency Response Book with current information.	OVFD, FSC, CalFIRE, USFS, Landowners	Ongoing	$1,000	$4,000
Evacuation	Work with law enforcement, CalFIRE, SRNF, and OVFD to update (where necessary) and educate residents on evacuation options for their neighborhood. Explore development of alternate evacuation routes. Incorporate changes into emergency response book.	OVFD, FSC, CalFIRE, USFS, Landowners	2008-2009	$1,000	$4,000

Sub-Topic	Action	Responsible Party	Timeline	Range of Costs (per year)	
INFRASTRUCTURE					
Orleans Volunteer Fire Department Support	Maintain and Support our local fire & rescue organization, the Orleans Volunteer Fire Department, to meet community needs. This includes procurement of necessary equipment, fundraising through events and grantwriting, and member and volunteer recruitment.	OVFD, FSC, USFS, Karuk, Landowners	Ongoing	$5,000	$20,000
Update Communication System	Ensure that normal and emergency communication systems are maintained and improved to best serve communities within the planning area.	OVFD	Ongoing	$1,000	$10,000
Water Storage	Initiate program to place water storage tanks at strategic locations to provide adequate water for fire suppression efforts. Identify water storage needs by neighborhood, then prioritize needs. Support efforts to provide more municipal water storage for the town of Orleans.	OVFD, USFS, FSC, Karuk	Ongoing	$20,000	$50,000
Emergency Access/Egress Routes	Keep emergency access roads driveable for emergency vehicles, through volunteer and grant funded fuels reduction work, and coordination with stakeholders.	USFS, FSC, Karuk, Landowners	Ongoing	$500	$15,000
RESEARCH AND MONITORING					
Develop Implementation Monitoring Plan	Coordinate with all stakeholders to develop and implement a monitoring plan for all fuel reduction activities within the planning area.	USFS, Enviro Groups, Karuk, FSC	2008-2009	$5,000	$10,000
Upslope Management's Effects on Stream Flows	Support efforts to understand the relationship of upslope management on instream flows.	FSC, PSW, USFS, Karuk	Ongoing	$2,000	$50,000
Develop Fuels Treatment by Vegetation Type Matrix	Work with all stakeholders and research partners to correlate specific fuels treatment prescriptions to vegetation types at various slope-aspect-elevation-soils-fire history-management history configurations.	Karuk, USFS, PSW, FSC, Universities, Landowners	Ongoing	$2,000	$5,000
Develop CWPP Monitoring Plan	Monitor implementation of CWPP objectives through multi-agency tracking of accomplishments.	Karuk, USFS, FSC, OVFD	Ongoing	$300	$800
Develop vegetation and fuel-type risk assessment tool	Coordinate sampling of fuel properties (wood, foliage) to examine flammability.	USFS, PSW, Karuk, FSC, Universities, Landowners	2010-2013	TBD	TBD

Sub-Topic	Action	Responsible Party	Timeline	Range of Costs (per year)	
RESEARCH AND MONITORING (continued from previous page)					
Develop projects to study the season of burn affects on vegetation response	Coordinate pre/post treatment and fire use surveys of vegetation mortality, diversity and abundance.	USFS, PSW, Karuk, FSC, Universities, Landowners	2010-2013	TBD	TBD
Develop prescribed fire applications for enhancement of tribal valued resources	Coordinate alternative treatments (e.g. propane burning) to broadcast prescribe burning when air quality restrictions or seasonal moisture conditions restricts fire use.	USFS, PSW, Karuk, FSC, Universities, Landowners	2010-2013	TBD	TBD
Develop projects to evaluate fuels reduction treatments affects on non-timber forest products	Coordinate identification of potential species, desired habitat composition, structure or growth conditions that promote use of NTFPs in treatment areas.	USFS, PSW, Karuk, FSC, Universities, Landowners	2010-2013	TBD	TBD
Coordinate research modeling efforts to evaluate simulation output for fuel and fire behavior models applicable to community and/or tribal interest.	Develop projects to evaluate and test with modeling the effectiveness of fuel reduction treatments and/or the potential effects of introducing fire based on desired seasonality, frequency, or extent of area burned for various fuel types. For example, FARSITE, FSPRo, FVS-SVS, Fireshed, and ArcFuels extensions.	USFS, PSW, Karuk, FSC, Universities, Landowners		TBD	TBD
			Total:	$594,900	$2,060,300

Table 7.2 displays a list of projects proposed in the Humboldt County Hazardous Fuels Reduction Plan Update for the Orleans/Somes Bar Area. The purpose of the plan update process was to refresh the hazardous fuels reduction plan portion of the 2006 Humboldt County Master Fire Protection Plan (MFPP) which is Humboldt County's equivalent to a Community Wildfire Protection Plan. The fuels reduction projects in this table were generated through the evaluation of projects identified in the 2006 MFPP, gathered at community based meetings, and reviewed and refined by local Fire Safe Council (FSC) representatives, Humboldt County staff, and fire agency personnel.

For more information about the update process visit: http://co.humboldt.ca.us/planning/fire_safe_council/fsc_default.asp. In addition to proposed projects, completed projects can be viewed in a web-based geographic Information systems (GIS) mapping tool known as the Humboldt GIS Portal. The GIS Portal allows users to search for and view specific fire planning features by location or to zoom into a desired area from an aerial view. To access the Portal, go to www.humboldtGISportal.com and choose "Fire Planning" from the list of mapping applications.

Table 7.2: Orleans Community Identified Projects from the 2009-2010 Humboldt County Hazardous Fuels Reduction Plan Update (uncompleted projects within the planning area)

Project Info (Location/ Value at Risk)		**Treatment Info – East Klamath Fire Planning Compartment**							
Number corresponds with location on map	**Community, Stricture, or Area**	**Description**	**Status**	**Year**	**Type**	**Acres**	**Vegetation Type**	**Maintenance (actual or proposed)**	**Funding Source (actual or possible)**
ORL005	Camp Creek Road/Hwy 96/GO Road	Thinning Crawford Hill Subdivision/Downs Ranch, roadside clearance on Camp Cr Rd and GO Rd - Thinning, Burning	Treat-High	0	Landscape		Mixed Con-Hdwd, Grass	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL006	Orleans School Road above residential area	Orleans School Road Shaded Fuelbreak - Orleans School Road - King, King and Smith Properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL006	Ishi Pishi Road near Orleans	Sandy Bar Fuel Reduction - Lower Ishi Pishi Road - Sandy Bar - Incl. road thin and def. space - Thinning, Burning	Treat-High	0	Landscape		Oaks, Brush, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL006	School Road and Driveway off Hwy 96	McGains Pond Fuel Reduction - Pearch Creek - West Pearch Creek and Lower School Road - Incl. road thin and defensible space. - - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL006	South Side of Whitey's Gulch	Red Cap South Fuel Reduction - Red Cap 2 - Residential area on South Side of Whitey's Gulch - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL006	Upper Ferris Ranch Road area	Upper Ferris Ranch Fuel Reduction- Ferris Ranch Rd - Ferris Ranch & Southeast Orleans - Inc. def. space around structures Thinning, Burning	Treat-High	0	Landscape		Mixed Conifer-Hardwood	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL006	North Side of Whitey's Gulch	Red Cap North Fuel Reduction -Red Cap 1 - Residential area incl. lower Ferris Rnch Rd, Skunk Hollow Ln - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association

Project Info (Location/ Value at Risk)		**Treatment Info – East Klamath Fire Planning Compartment**							
Number corresponds with location on map	**Community, Stricture, or Area**	**Description**	**Status**	**Year**	**Type**	**Acres**	**Vegetation Type**	**Maintenance (actual or proposed)**	**Funding Source (actual or possible)**
ORL006	Ishi Pishi Road near Orleans	USFS/LDS Church Fuel Reduction - Lower Ishi Pishi Road- USFS Compound/LDS Church - Incl. road thin and defensible space. - Thinning, Burning	Treat-Low	0	Roadside Clearance Landscape	13.58	Oaks, Brush, Grassland	Every 3-10 years	USFS - landowners - grants
ORL008	East Pearch Cr Rd, Driveways off Hwy 96	Pearch Creek Neighborhood Fuel Reduction - Pearch Creek - Residential Area on Pearch Creek to McLaughlin Homestead - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL011	Pearch Creek Area - Ricke Homestead	Pearch Creek - Ricke Homestead Fuel Reduction - Incl. road thin and defensible space - Thinning, Burning	Treat-High	0	Landscape	31.50	Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL019	Allen Creek/ Hwy 96	Lammon Property Fuel Reduction -Lammon - Lance Lammon Property Across from Red Cap Creek - Inc. road thin and potential landscape tx -Thinning, Burning	Treat-High	0	Landscape	32.05	Mixed Con-Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL019	8Q100 off of 10N01	Red Cap Creek North Fuel Reduction - Red Cap Creek - Residential area on North Side of Creek - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	41.90	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL019	8Q100 off of 10N01 over Calligan Bridge	Red Cap Creek South Fuel Reduction - Residential area on South Side of Creek - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	42.20	Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL066	Mouth Of Camp Creek	Mouth Of Camp Creek including Gold Dredge Rd.	Treat-Med	2010	Landscape				grant - landowner - neighborhood or rd. association
ORL068	Bacon Flat	Bacon Flat Road Shaded Fuelbreak	Treat-Med	2010	Landscape				grant - landowner - neighborhood or rd. association

Project Info (Location/ Value at Risk)		**Treatment Info – East Klamath Fire Planning Compartment**							
Number corresponds with location on map	**Community, Stricture, or Area**	**Description**	**Status**	**Year**	**Type**	**Acres**	**Vegetation Type**	**Maintenance (actual or proposed)**	**Funding Source (actual or possible)**
ORL073	Driveway off Hwy 96	Englert Property Fuel Reduction - Somes Bar 1 - Englert property - Incl. road thin and defensible space. - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	4.71	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	Ishi Pishi Rd	Lower Ishi Pishi Road - Pierce Ranch Fuel Reduction - Thinning, Burning - Incl. road thin on Ishi Pishi Rd and landscape tx.	Treat-High	0	Landscape	39.71	Tanoak, Mixed Con-Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	Ten Eyck Mine Road, Chuga Lane	Ten Eyck Residential Fuel Reduction - Residential Properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	60.45	Oaks, Brush	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	Ishi Pishi Rd/Bark Shanty Rd Area	Bark Shanty - Lower Bark Shanty Private Property Shaded Fuelbreak - Includes thinning and burning along Bark Shanty Rd and lower Bark Shanty neighborhood	Treat-High	0	Landscape		Mixed Conifer-Hardwood	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	11N08 off Ishi Pishi Rd	Lower Ishi Pishi Road - Horn Ranch Fuel Reduction-Thinning, Burning - Incl. road thin and landscape tx	Treat-High	0	Landscape		Mixed Con-Hdwd, Grass	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	Bark Shanty Rd, Thunder Mtn Rd Madrone Ln	Bark Shanty - Upper Bark Shanty Private Property Shaded Fuelbreak -Includes thinning and burning in Thunder Mtn, Madrone Ln, Reese Homestead	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	Ishi Pishi Rd/Bark Shanty Rd Area	Knudsen Ranch Fuel Reduction - Ishi Pishi Private Property Shaded Fuelbreak - Thinning, Burning -Incl. road thinning along Ishi Pishi and landscape tx.	Treat-High	0	Landscape		Mixed Con-Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL073	Along Ishi Pishi Rd Betw Bark Shanty and Ten Eyck	Upper Ishi Pishi Fuel Reduction - Ishi Pishi Private Property Shaded Fuelbreak - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association

Project Info (Location/ Value at Risk)		**Treatment Info – East Klamath Fire Planning Compartment**							
Number corresponds with location on map	**Community, Stricture, or Area**	**Description**	**Status**	**Year**	**Type**	**Acres**	**Vegetation Type**	**Maintenance (actual or proposed)**	**Funding Source (actual or possible)**
ORL074	Delaney Hill/ Camp Creek Area	Delaney Hill Fuel Reduction	Treat-Med	2010	Defensible Space Landscape				grant - landowner - neighborhood or rd. association
ORL079	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape				grant - landowner - neighborhood or rd. association
ORL080	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape				grant - landowner - neighborhood or rd. association
ORL081	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Landscape				grant - landowner - neighborhood or rd. association
ORL082	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape				grant - landowner - neighborhood or rd. association
ORL083	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Landscape				grant - landowner - neighborhood or rd. association
ORL084	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape	59.75			grant - landowner - neighborhood or rd. association
ORL085	Orleans/Somes Bar Fire Safe Council Planning Area	or_west Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape	18.78			grant - landowner - neighborhood or rd. association
ORL086	Orleans/Somes Bar Fire Safe Council Planning Area	Sunset2 Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape				grant - landowner - neighborhood or rd. association
ORL087	Orleans/Somes Bar Fire Safe Council Planning Area	Sunset2 Fuels Reduction Project	Treat-Med	0	Defensible Space Landscape				grant - landowner - neighborhood or rd. association

Project Info (Location/ Value at Risk)		**Treatment Info – East Klamath Fire Planning Compartment**							
Number corresponds with location on map	**Community, Stricture, or Area**	**Description**	**Status**	**Year**	**Type**	**Acres**	**Vegetation Type**	**Maintenance (actual or proposed)**	**Funding Source (actual or possible)**
ORL088	Bluff Creek Rd	Bluff Creek - Cooper Ranch Thinning - Continue thinning and broadcast burning where treatments have not been completed - Thinning, Burning	Treat-High	0	Landscape		Mixed Conifer-Hardwood	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL089	Bluff Creek Resort - Hwy 96	Creek Resort Thinning - Clear around existing structures and along Hwy 96 - Thinning, Burning	Treat-High	0	Landscape	24.63	Mixed Conifer-Hardwood	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL090	Cedar Camp Rd Area	Fuel Reduction in Cedar Camp - Cedar Camp Private Property - Key tx for protecting Orleans. Road thin along Hwy 96, def. space around Klam. River Lodge/TPZ prop. - Thinning, Burning	Treat-High	0	Landscape		Mixed Conifer, Brush	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL091	Donahue Flat Neighborhood	Donahue Flat Fuel Reduction - Donahue Flat - Donahue Flat -Incl. road thin and broadcast burning. - Thinning, Burning	Treat-High	0	Landscape	56.27	Mixed Con-Hdwd, Grass	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL092	Donahue Flat Neighborhood	Donahue Flat - Cornwell Property - Thinning, BurninIncl. road thinning -	Treat-High	0	Landscape	41.93	Mixed Conifer-Hardwood	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL093	Red Cap Road/10N71	Marier Property Fuel Reduction- Le Perron - Marier Residence -Incl. road thin - Thinning, Burning	Treat-High	0	Landscape	57.11	Mixed Con-Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL094	10N02/Red Cap Creek	Le Perron - Sterling Ranch - Thinning, Burning - Incl. road thinning and def. space.	Treat-High	0	Landscape	36.01	Tanoak, Mixed Con-Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL095	Red Cap Road/10N71	Le Perron Fuel Reduction- Le Perron Flat - Thinning, Burning - Incl. road thin and landscape	Treat-Low	0	Landscape		Tanoak, Mixed Con-Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association

Project Info (Location/ Value at Risk)		**Treatment Info – East Klamath Fire Planning Compartment**							
Number corresponds with location on map	**Community, Stricture, or Area**	**Description**	**Status**	**Year**	**Type**	**Acres**	**Vegetation Type**	**Maintenance (actual or proposed)**	**Funding Source (actual or possible)**
ORL096	Salmon River Road at Butler Creek	Butler Creek LLC Fuel Reduction - Butler - Butler Creek LLC - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL097	Salmon River Road at Butler Creek	Butler Flat Fuel Reduction Butler - Butler Flat - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	17.47	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL098	12N18 off of Camp Three Road	Offield Mtn Ranch Fuel Reduction - Offield - Offield Mountain Ranch -Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL099	End of 12N33 off of Hwy 96	Lower Offield Mtn Ranch Fuel Reduction - Offied - Lower Offield Mountain Ranch -Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL100	12N33 off of Hwy 96	McLaughlin Ranch Fuel Reduction - Offield - McLaughlin Ranch - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL101	Downtown Orleans, Downs Ranch on Hwy 96/GO Road	Orleans Neighborhood Fuel Reduction- Downs Ranch, RUC, and Downtown Orleans - Part residential, part commercial, and part forested. All fuel tx methods needed - Thinning, Burning	Treat-High	0	Landscape		All except Redwood	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL102	Downs Ranch Upper Meadow off Downs Ranch Loop Road	Downs Ranch Upper Meadow Fuel Reduction - Orleans - Downs Ranch Upper Meadow - Thinning, Burning	Treat-Low	0	Landscape	34.08	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL103	13N44A off of 13N44 Road	Hansen Homestead Fuel Reduction - Patterson and Sandy Bar Creek - Hansen Homestead - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	2.87	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association

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ORL104	13N44, 13N44A	Sandy Bar Creek LLC Fuel Reduction - Patterson and Sandy Bar Creek - Sandy Bar Creek LLC - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL105	13N12	Patterson Ranch Fuel Reduction - Patterson and Sandy Bar Creek - Patterson Ranch - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	64.48	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL106	Driveway off Hwy 96	fuel reduction along Pearch Creek - Hatton/Palmer and Ratihn Residences - Incl. road thin and defensible space. Thinning, Burning	Treat-High	0	Landscape	49.24	Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL107	Driveway off Hwy 96	Rolling River Farm Fuel Reduction - Pearch Creek - Rolling River Farm - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	3.79	Mixed Con/Hdwd, Brush	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL108	Driveway off Hwy 96	Hang Down Hotel Fuel Reduction - Rogers Creek - Hang Down Hotel near H Lyle Davis Bridge - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	19.75	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL109	Driveway off Hwy 96	Spinks Ranch Fuel Reduction -Rogers Creek - Spinks Ranch just upriver H Lyle Davis Bridge - Thinning, Burning - Incl. road thin and defensible space.	Treat-High	0	Landscape	28.06	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL110	Driveway off Hwy 96	Conrad/Thom Fuel Reduction - Rogers Creek 1 - Conrad/Thom Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	26.37	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL111	On Slate Creek Road off Hwy 96	Slate Creek Fuel Reduction - Slate Creek - Eckert, Schmidt, Allen Orney Properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association

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ORL112	10N13 D Off 10N13 at Deer Lick Saddl	Short Ranch Fuel Reduction - Red Cap Creek - Carlson Property (Short Ranch) - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	33.50	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL113	Driveways off Red Cap Road at Chimakenee Flat	Chimakenee Flat Fuel Reduction - Red Cap 3 - Mollier, Wilder, Coates, Veth properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL114	Driveway off 12N13	Bull Pine Fuel Reduction - Rogers Creek 2 - Van Epps Property (Bull Pine Ranch) - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL115	On Hwy 96	Junction School Fuel Reduction -Somes Bar 1 - Junction Elementary School - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	1.67	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL116	On Hwy 96	Ukonom RD Facilities Fuel Reduction - Somes Bar 1 - USFS Weather Station and Storage - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	15.09	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL117	On Hwy 96	Karuk Watershed Center Fuel Reduction -Somes Bar 1 - Karuk Watershed Center Workstation - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	2.36	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL118	On Intersection of Hwy 96 and Ishi Pishi Rd	Salmon River Outpost Fuel Reduction - Somes Bar 1 - Salmon River Outpost - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	1.07	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL119	Intersection of Hwy 96/Salmon River Rd	Davis Property Fuel Reduction - Somes Bar 1 - Davis Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	20.91	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association

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ORL120	Between Salmon River Road and Camp Three Road	Atwood Property Fuel Reduction -Somes Bar 1 - Atwood Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	44.56	Oaks, Brush, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL121	Driveway off Salmon River Road	Neihardt Property Fuel Reduction - Somes Bar 1 - Neihardt Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	1.32	Oaks, Brush, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL122	Across river from Salmon River Rd - no access	George Geary Private Property Fuel Reduction - Somes Bar 1 - Karuk Tribe George Geary Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-Low	0	Landscape	9.00	Mixed Con/Hdwd, Grassland	Every 3-10 years	grant -Tribe - landowner - neighborhood or rd. association
ORL123	Across river from Salmon River Rd - skip access	Three Dollar Bar Fuel Reduction Somes Bar 1 - Manor Property (Three Dollar Bar) - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	20.18	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL124	Driveway toward river below Oak Bottom Workstation	Tripp Ranch Fuel Reduction Somes Bar 1 - Tripp Ranch - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	6.46	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL125	Approx. 3 miles up Salmon River Road.	Oak Bottom Compound Fuel Reduction - Somes Bar 1 - USFS Oak Bottom Compound - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	39.69	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL126	Driveway off Hwy 96	Conrad Ranch Fuel Reduction - Somes Bar 1 - Conrad Ranch - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	2.85	Oaks, Brush	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL127	On Hwy 96	Junction School Fuel Reduction - Somes Bar 1 - Junction Elementary School - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	1.85	Oaks, Grassland	Every 3-10 years	grant - landowner - neighborhood or rd. association

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ORL128	Driveways off Hwy 96	Stanshaw/Irving Neighborhood Fuel Reduction -Stanshaw / Irving Creek - Cole, Fisher, Tocher Properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape		Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL129	Driveways off Hwy 96	Lower Sandy Bar Creek Fuel Reduction - Patterson/Sandy Bar Creek - Glascoe, Quinn, Wesley Properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	63.16	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL130	Driveways off Hwy 96 at Bottom of Ti Bar Rd	Davis Estate Fuel Reduction - Ti Bar 1 - Davis Estate - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	8.11	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL131	Driveways off Ti Bar Road and Carter Cr Rd.	Ti Bar II Fuel Reduction - Ti Bar 2 - Creasy, Soto, Strouss, Rael, Unruh Properties - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	309.47	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL132	End of Carter Creek Road	Ti Bar III - Vogt/Magarian Fuel Reduction - Vogt Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	23.39	Mixed Con/Hdwd, Oaks	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL133	Ullathorne River Access of Hwy 96	Ullathorne Fuel Reduction - Unkown Owner (No Structures Known) - Incl. road thin and defensible space. - Thinning, Burning	Treat-Low	0	Landscape Roadside Clearance	30.98	Grassland, Brush	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL134	Driveway below Hwy 96 at Ikes Falls	Donahue Property Fuel Reduction Somes Bar 1 - Donahue Property - Incl. road thin and defensible space. - Thinning, Burning	Treat-High	0	Landscape	8.11	Oaks, Mixed Con/Hdwd	Every 3-10 years	grant - landowner - neighborhood or rd. association
ORL135	Ishi Pishi Road near Orleans	USFS/LDS Church Fuel Reduction - Lower Ishi Pishi Road- USFS Compound/LDS Church - Incl. road thin and defensible space. - Thinning, Burning	Treat-Low	0	Landscape	13.58	Oaks, Brush, Grassland	Every 3-10 years	USFS - grant -landowner - neighborhood or rd. association

Supplemental Action Plans

The Orleans/Somes Bar Fire Safe Council and Orleans Volunteer Fire Department will be hosting neighborhood meetings in order to refresh these action plans. These meetings will focus on the action needed in individual neighborhoods to address the fuels reduction needs of the community. The result of these meetings will lead to the creation of a Supplemental Community Fuels Reduction Action Plan. In addition to the supplemental fuels plan, there may be a need for additional supplemental plans.

8. Recommendations to Reduce Structural Ignitability

The general principle behind *fire-safing* an area (making it as safe as possible for when a wildland fire might eventually happen) 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. We can't 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. It is important to distinguish between fine, flashy fuels and larger (thicker, longer burning fuels). Fine, flashy fuels may not appear as threatening, but pose a greater risk to fire suppression efforts. It is in your best interest to reduce the amount of fuels around your home to reduce the risk of a wildland fire 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.

Defensible Space

Defensible space is a buffer zone, a minimum 100-foot fire-resistive area around your house that reduces the risk of a wildland fire from starting or spreading to your home. Clearing all flammable vegetation a minimum of 100 feet around your home and other structures will not only provide you with the greatest chance for survival, it is also required by California law (Senate Bill 1369). If you live on a hill, you should extend this up to 200 feet, depending upon the steepness of the slope and the surrounding fuel. Defensible space not only helps protect your home in the critical minutes it takes a fire to pass, it also gives firefighters an area to effectively work in. During a large-scale wildland fire, when many homes are at risk, firefighters must focus on homes they can safely defend. This fuel reduction work will not keep a fire from starting but in most cases will change the dynamics of how a fire burns in an area. In addition to defensible space being important for your home's survival, it may also help you keep your house insured. Many insurance companies offer insurance-based incentives for defensible space around homes. The following guidelines are just the beginning:

- Provide a minimum of 100 feet of clearance of flammable materials around your home.
- Landscape your defensible space zone with fire resistant plants. While these plants are not immune to fire, they can help slow the spread of fire.
- Keep your gutters and roofs clean of any debris and/or vegetation.
- Move all flammable materials—especially firewood, propane tanks, etc.—at least 30 feet away from your home and any structures.
- Contact the Orleans/Somes Bar Fire Safe Council, Salmon River Fire Safe Council, or go to www.firewise.org for fire safe guidelines and information on creating a defensible space.

Firewise Construction

While the creation of defensible space is key in the protection of your home from fire, house construction is equally important. Firewise construction is also required by law for all new construction

in communities identified by CDF as “Communities at Risk from Wildfires” (e.g. Orleans, Somes Bar) where an application for a building permit is submitted on or after January 1, 2008. However, re-roofing of existing structures will also require Class A roof assembly. The State Fire Marshal, CDF and other cooperators drafted new standards for fire safe building materials and construction.

The combined approach of both defensible space and fire-wise home construction will increase the chances that your home will survive a fire. Following is a list of a few guidelines for firewise home construction.

- The roof is the most vulnerable part of your home to wildland fires. Once your roof covering ignites, the rest of the home may soon follow. The best roofing material is metal or tile (with the tile ends capped). The second best is a composition roof covering. Beginning in 2008, all new homes and re-roofing will require class A roof assembly.
- Shake siding on your house is much more prone to ignite than stucco siding or ferrous cement.
- Decks sticking out from your house act as kindling to your house for fires. If you have a deck, make sure that you enclose the underside of it and your house if it’s a post-and-pier foundation. Do this either with solid building materials or with lattice and tight screen with green, fleshy plants. This will give you much more storage space as well, since it is unsafe to store anything (especially firewood or cardboard boxes) under your house if it’s open to the outside.
- Make sure you have three-eights (3/8) to one-half (1/2) inch mesh screen on all chimneys.
- Use double-pane or safety glass on all large windows. Beginning in 2008, California Building Code will require one of the panes to be tempered.

9. Finalize the Community Wildfire Protection Plan

The Orleans/Somes Bar Community Wildfire Protection Plan:

- Was collaboratively developed with interested parties and federal land management agencies managing land in the vicinity of Orleans, Somes Bar, Weitchpec and Forks of Salmon.
- Identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that may protect Orleans and Somes Bar areas.
- Recommends measures to reduce the ignitability of structures throughout the area addressed by the plan.

The following entities mutually agree with the contents of this Community Wildfire Protection Plan:

Will C. S. Harling

Will Harling, Program Director
Orleans/Somes Bar Fire Safe Council

Kathleen E. McBroom

for Program Director
Salmon River Fire Safe Council

Tom Bouse for

Todd Salberg, Fire Chief
Orleans Volunteer Fire Department

Leaf Hillman, Director
Karuk Tribe Department of Natural Resources

Michael Ha

Fire Plan Chief, Humboldt Unit
California Department of Forestry and Fire Protection

Fire Plan Chief, Siskiyou Unit
California Department of Forestry and Fire Protection

Richard (Jim) Bennett

Jim Bennett, Fire Chief
Salmon River Volunteer Fire and Rescue

Tom Mopas, Fire Chief
Happy Camp Fire Protection District

Grace Bennett

Siskiyou County Board of Supervisors

Virginia Bass

Humboldt County Board of Supervisors

Del Norte Board of Supervisors

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Appendix A: Resource Materials and Additional References

The following resources were used in the creation of this plan. They are available at the California Fire Alliance website

- Healthy Forest Restoration Act of 2003
- Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities, (NACO, NASF, SAF, WGA) March 2004.
- Field Guidance by National Association of State Foresters, June 27, 2003
- Leaders Guide Supplement, International Association of Fire Chiefs
- Fire Planning and Mapping Tools

The following references were used as tiering documents for this plan.

- Klamath National Forest Fire Management Plan (USFS 2004)
- Humboldt County Master Fire Protection Plan (Humboldt County Fire Safe Council 2006)
- Siskiyou County Community Wildfire Protection Plan (Fire Safe Council of Siskiyou County 2009)
- California Fire Plan 1996
- National Fire Plan (USDA Forest Service 2000
- Eco-Cultural Resource Management Plan (Karuk Tribe 2009)
- Lower Mid Klamath Watershed Analysis (USFS 2003)
- Red Cap Watershed Analysis (USFS 1996)
- Bluff Creek Watershed Analysis (USFS Bluff Creek – Draft in progress)
- East Ishi Pishi Watershed Analysis (USFS 1998)
- Six Rivers Land and Resource Management Plan (USFS 1995)
- Klamath National Forest Land and Resource Management Plan (USFS 1995)
- Dillon Creek Ecosystem Analysis (USFS 1995)
- Ishi-Pishi/Ukonom Ecosystem Analysis (USFS 1998)
- Mainstem Salmon Ecosystem Analysis (USFS 1995)
- Karuk Tribal Module for the Main Stem Salmon River Watershed Analysis (Karuk Tribe 1996)
- 2007 California Building Code (CBC 2007)

Appendix B: List of Acronyms

CAL FIRE	California Department of Forestry and Fire Protection
CDF	California Department of Forestry and Fire Protection (former acronym)
CWPP	Community Wildfire Protection Plan
DNR	Department of Natural Resources (of the Karuk Tribe)
FRAP	Fire and Resource Assessment Program (of CAL FIRE)
FRCC	Fire Regime Condition Class
FSC	Fire Safe Council
GIS	Geographic Information System
MOU	Memorandum of Understanding
NQUAQMD	North Coast Unified Air Quality Management District
OSB FSC	Orleans/Somes Bar Fire Safe Council
OVFD	Orleans Volunteer Fire Department
PSW	Pacific Southwest Research Station (of the USDA Forest Service)
SRA	State Responsibility Area
TEK	Traditional Ecological Knowledge
USDA	United States Department of Agriculture
USFS	United States Forest Service
WUI	Wildland Urban Interface

Appendix C: Glossary of Terms

¼ Mile Buffers
This buffer extends one fourth of a mile from the property boundary, regardless of ownership. This buffer provides for larger fuelbreaks along property boundaries as funding becomes available.

Anchor point
An advantageous location, usually a barrier to fire spread, from which to start constructing a fireline.

Aspect
Compass direction toward which a slope faces.

Assets at Risk
Assets at risk due to wildland fires in California include life and safety; timber; range; recreation; water and watershed; plants; air quality; cultural and historical resources; unique scenic areas; buildings; and wildlife, and ecosystem health.

Anthropogenic
Relating to or resulting from the impacts of human beings on nature.

Backfire
A fire set along the inner edge of a fireline to consume the fuel in the path of a wildland fire or change the direction of force of the fire's convection column. See
Burn Out.

Building
Any structure used or intended for supporting or sheltering any use or occupancy.

Burn Out
Setting fire inside a control line to consume fuel between the edge of the fire and the control line.

Burning Index
A number related to how hard the fire is to contain. The Burning Index value is flame length X 10. To get the flame length, just divide the BI by 10.

Community Base Map
A map having essential outlines and onto which additional geographical or topographical data may be placed for comparison or correlation

Community Risk Assessment
Risk assessment is a step in a risk management process. Risk assessment is the determination of quantitative or qualitative value of risk related to a concrete situation and a recognized threat (also called hazard). For the purposes of this plan, structures, roads and other areas of community importance within the planning area are the values at risk from wildland fire.

Community Wildfire Protection Plan (CWPP)
Address issues such as wildland fire response, hazard mitigation, community preparedness, or structure protection. The process of developing a CWPP can help communities clarify and refine

their priorities for the protection of life, property, and critical infrastructure in the wildland-urban interface (Source: *Preparing a Community Wildfire Protection Plan*. March, 2004).

Crown fire:
A fire that advances from top to top of trees or shrubs more or less independent of a surface fire. Crown fires are sometimes classed as running or dependent to distinguish the degree of independence from the surface fire.

Crown bulk density
Canopy bulk density describes the density of available canopy fuel in a stand. It is defined as the mass of available canopy fuel per canopy volume unit.

Crown foliage ignition energy
The net energy content of the fuel. Varies primarily by foliar moisture content, although species differences in energy content are apparent.

Defensible Space
An area between an improved property and a potential wildland fire where combustible materials and vegetation have been removed or modified to reduce the potential for fire on improved property spreading to wildland fuels or to provide a safe working area for fire fighters protecting life and improved property from wildland fire.

By creating a fire safe landscape of at least 100 feet around your house, you will reduce the chance of a wildland fire spreading onto your property and burning through to your home. This is the basis for creating a "defensible space" - an area that will help protect your home and provide a safety zone for the firefighters who are battling the flames. Clearing all flammable vegetation a minimum of 100 feet around your home and other structures will not only provide you with the greatest chance for survival, it is also required by California law.

Diameter limits
Diameter limits in a forestry prescription specify the maximum diameter of tree that can be removed in an operation.

Extended WUI Areas
This buffer varies in width depending on the properties position on the slope – often extending to the nearest ridge feature. Not all properties with residences have an extended WUI area.

Fire and Resource Assessment Program
The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) provides a variety of products including the Forest and Range Assessment, a detailed report on California's forests and rangelands. FRAP provides extensive technical and public information for statewide fire threat, fire hazard, watersheds, socio-economic conditions, environmental indicators, and forest-related climate change. Much of this information involves Geographic Information System (GIS) analysis, tables, maps, data and calculation tools that are available on this website.

Fire Environment
The surrounding conditions, influences, and modifying forces of topography, fuel, and weather that determine fire behavior

Fire Regime Condition Class
Fire regime condition classes measure the degree of departure from reference conditions, possibly resulting in changes to key ecosystem components, such as vegetation characteristics (species composition, structural stage, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances, such as insect and disease mortality, grazing, and drought.

Fire Risk
For the purposes of this document, fire risk is based on fuel hazard, risk of wildland fire occurrence and firefighting capability.

Fireline
Part of a containment or control line that is scraped or dug to mineral soil.

Fuel Break
Fuel breaks are wide strips of land on which trees and vegetation has been permanently reduced or removed. These areas can slow, and even stop, the spread of a wildland fire because they provide fewer fuels to carry the flames. They also provide firefighters with safe zones to take a stand against a wildland fire, or retreat from flames if the need arises. Fuelbreaks need to be tailored to the terrain, fuels, historic fire regimes and expected weather conditions of the landscape in which they are placed. A fuelbreak may be natural (e.g., a talus slope, a river, or a deciduous stand) or man-made.

Fuel Continuity
The degree or extent of continuous or uninterrupted distribution of fuel particles in a fuel bed thus affecting a fire's ability to sustain itself.

Fuel Hazard
A fuel complex, defined by volume, type condition, arrangement, and location that determine the degree of ease of ignition and of resistance to control

Fuel ladder
Flammable vegetation that helps a ground fire move into the canopy

Height to live crown
The vertical distance in feet from the ground to the base of the live crown, measured to the lowest live branch-whorl or lowest live branch excluding epicormics.

Historic fire regime
A fire regime includes the frequency of fire occurrence, fire intensity and the amount of fuel consumed. 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

Improved Property
A piece of land or real estate upon which a structure has been placed, a marketable crop is growing (including timber), or other property improvement has been made

Initial Attack
Initial attack means the first attack on the fire. The number of resources sent on the first dispatch to a wildland fire depends upon the location of the fire, the fuels in the area (vegetation, timber, homes,

etc) and current weather conditions. Municipal fire departments would call this the first alarm. Most fires are caught within the first burn period (the first two hours). Therefore, the vast majority of the fires CDF responds to are considered initial attack fires.

Jackpot Fuels
A large concentration of discontinuous fuels in a given area such as a slash pile.

Municipal Watershed
For the purposes of this plan, a municipal watershed is the watershed from which the runoff is used for drinking purposes for ten or more structures.

Planning Area
The Orleans/Somes Bar Community Wildfire Protection Plan (CWPP) planning area is in northwestern California in Humboldt and Siskiyou Counties. Specifically, this plan addresses the area in the Lower Mid Klamath Subbasin along the Klamath River from Swillup Creek to the north, Aikens to the south and west, and Butler Creek to the east. It includes the communities of Orleans and Somes Bar.

Potential Control Features
Landscape attributes that could be used to modify fire behavior (e.g. ridges, ridge roads, and major streams).

Residence
Any structure used or intended for supporting occupancy.

Risk of Wildland fire Occurrence
Determined by using a combination of the asset's position on the slope (low, mid, upper) and how frequently the area has experienced fire in the past

Snag
A standing, partly or completely dead tree, often missing a top or most of the smaller branches.

Stakeholder
Any person, agency or organization with particular interest - a stake - in fire safety and protection of assets from wildland fires.

State Responsibility Area (SRA)
The State Board of Forestry and Fire Protection classifies areas in which the primary financial responsibility for preventing and suppressing fires is that of the state. These include: lands covered wholly or in part by timber, brush, undergrowth or grass, whether of commercial value or not; lands which protect the soil from erosion, retard run-off of water or accelerated percolation; lands used principally for range or forage purposes; lands not owned by the Federal government; and lands not incorporated. By Board regulations, unless specific circumstances dictate otherwise, lands are removed from SRA when housing densities average more than 3 units per acre over an area of 250 acres. CDF has SRA responsibility for the protection of over 31 million acres of California´s privately-owned wildlands.

Surface fire
Fire that burns loose debris on the surface, which include dead branches, blowdown timber, leaves, and low vegetation, as contrasted with *crown fire*

Surface fuels
Loose debris on the surface, which include dead branches, blowdown timber, leaves, and low vegetation.

Understory burn
A controlled burn of fuels below the forest canopy, intended to remove fuels from on-coming or potential fires

Utility corridor
Parcel of land, either linear or aerial in character, that has been identified by law, Secretarial Order, the land-use planning process, or by other management decision, as being a preferred location for existing and future utility rights-of-way

Watershed
Any area of land that drains to a common point. A watershed is smaller than a river basin or sub-basin but larger than a drainage or site. The term generally describes areas that result from the first subdivision of a sub-basin, often referred to as a “fifth field watershed”

Water draw site
Any natural or constructed supply of water that is readily available for fire control operations.

Wild and Scenic River
A river or river segment designated by the National Park Service because of the outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values (16 USC 1271-1287).

Wildfire
An unplanned ignition caused by lightning, volcanoes, unauthorized, and accidental human-caused actions and escaped prescribed fires.

Wildland fire
Wildland fire can be either wildfire (unplanned ignitions) or prescribed fire (planned ignitions). “Use of wildland fire” is a term meaning the management of wildfire or prescribed fire to meet objectives in land and resource management plans.

Wildland Urban Interface (WUI)
The wildland–urban interface (WUI) is commonly described as the zone where structures and other human development meet and intermingle with undeveloped wildland or vegetative fuels.

Appendix D: Potential Control Features

Location	Type of Feature	Treatment and Maintenance Options
Dillon Mountain Quadrangle		
13N19 to Dillon Mountain, north along ridge to 13N35 (Sidewinder), north along ridge to Dillon Creek inner gorge	Ridge Road, Ridge	Proposed Shaded Fuelbreak
Bark Shanty Quadrangle		
Old Jeep Trail (ties in GO Rd. to Frog Pond Rd. along Beans Ridge)	Ridge Road (4WD)	Proposed Shaded Fuelbreak
Lonesome Ridge Quadrangle		
Lonesome Ridge Road (13N01)	Ridge Road	Proposed Shaded Fuelbreak
Cedar Camp Road (12N12) (Continuation of Emergency Access Route)	Ridge Road	Proposed Shaded Fuelbreak
12N14 from Cedar Camp Road to terminus	Ridge Road	Proposed Shaded Fuelbreak
12N13 from Cedar Camp Road to Bluff Creek	Ridge Road	Proposed Shaded Fuelbreak
Salmon Mountain Quadrangle		
1999 Megram Fire hand line shaded fuelbreak (connects 10N10 to 10N10A to Trinity Alps Wilderness boundary) on the Salmon and Boise/Red Cap Divide. Continues into Wilderness to Salmon Man. as walking trail. (Built around Indian Rocks).	OHV Trail (Ridge), Ridge Trail	Maintain Existing Fuelbreak
1999 Megram Fire hand line shaded fuelbreak from Devils Backbone west along ridge between mainstem and Middle Fork of Red Cap Creek. Continue hand line to Red Cap Creek.	Ridge Trail	Maintain Existing Fuelbreak
1999 Megram Fire hand line shaded fuelbreak (12W02 Forest Trail)	Ridge Trail	Maintain Existing Fuelbreak
1999 Megram Fire hand line shaded fuelbreak (connects 10N01 to 10N03) along Lubbs Trail	Ridge Trail	Maintain Existing Fuelbreak
Pack Saddle Ridge	Ridge Trail	Proposed Shaded Fuelbreak
10N01	Ridge Road, Midslope Road	Proposed Shaded Fuelbreak
10N03	Midslope Road	Proposed Shaded Fuelbreak
10N10	Midslope Road	Proposed Shaded

		Fuelbreak

Hopkins Butte Quadrangle		
continuation of 10N01	Ridge Road, Midslope Road	Proposed Shaded Fuelbreak
10N02 (entire road)	Ridge Road, Midslope Road	Proposed Shaded Fuelbreak
Schnable Trail	Midslope Trail	Proposed Shaded Fuelbreak
Handline to connect Schnable Trail with 10N03 and Black Mountain Ridge	Ridge	Proposed Shaded Fuelbreak
Existing fire line (Megram) along Pack Saddle ridge from Mill Creek Gap to Devil's Backbone	Ridge	Existing Shaded Fuelbreak
10N09 to OHV to 10N05f to 10N05d to 10N05g to 10N05 to Hopkins Butte Trail to 9N02	Ridge	Proposed Shaded Fuelbreak
Red Cap Creek	Creek	Proposed Shaded Fuelbreak

Ukonom Mountain Quadrangle		
Trail from Ukonom Mountain Lookout across Ukonom Creek, past Jacob's Ladder to Marble Mountain Wilderness	Ridge Trail	Proposed Shaded Fuelbreak
14N22 to Ukonom Mountain	Ridge Road	Proposed and Existing Shaded Fuelbreak
Ridge Trail Fuelbreak from Iron Phone Road to Stanshaw meadows	Ridge Trail	Proposed Shaded Fuelbreak
Ukonom Creek	Creek	Proposed Shaded Fuelbreak

Orleans Quadrangle		
11N30 to Head Camp Trail	Ridge Road	Proposed Shaded Fuelbreak
Ridge from Wilder creek Saddle and Go Road, over Black mountain, behind Bacon Flat to Sandy Bar. Consult with Karuk tribe for Black Mountain portion. (Wilder Ditch Fuelbreak by Bacon Flat)	Ridge	Proposed Shaded Fuelbreak
Tie in 10N13 to 10N20 (ridge road)	Midslope Connection	Proposed Shaded Fuelbreak
Trail from Short Ranch, across Boise and up ridge on east side of Trail Creek.	Ridge Trail	Proposed Shaded Fuelbreak
10N35c downridge to Red Cap Creek	Ridge	Proposed Shaded Fuelbreak
Camp Creek	Creek	Proposed Shaded Fuelbreak

Fish Lake Quadrangle

Cedar Camp Road (12N12) (Continuation of Emergency Access Route)	Ridge Road	Proposed Shaded Fuelbreak
10N06	Midslope Road	Proposed Shaded Fuelbreak
10N06 to Wright Place, tie across Bluff Creek to 10N22	Midslope Connection	Proposed Shaded Fuelbreak
10N22 to 11N21	Midslope Road	Proposed Shaded Fuelbreak
11N21 (Decommissioned Road)	Midslope Road	Proposed Shaded Fuelbreak
Red Cap Glade (ties in with 11N36 for awhile). Consult with Karuk Tribe when doing anything.	Ridge	Proposed Shaded Fuelbreak
Cedar Creek Trail (5E04) from Head Camp to 12N12c to Cedar Camp Road (12N12)	Ridge Trail, Ridge Road	Proposed Shaded Fuelbreak
From Hwy 96 bridge over Bluff Creek, over peak to 11N05 (connection)	Ridge	Proposed Shaded Fuelbreak
Bluff Creek	Creek	Proposed Shaded Fuelbreak

Orleans Mountain Quadrangle		
From mouth of Somes Creek, proceed Southwest (upridge) to Siskiyou/Humboldt County Divide. Follow Divide south, over Somes Mountain to Junction with Antenna Ridge (10N25/4WD road).	Ridge	Proposed Shaded Fuelbreak
Antenna Ridge (10N25/4WD road). Continue down Antenna Ridge to 10N45. Continue down 10N45 to 10N13.	Ridge Road	Proposed Shaded Fuelbreak
Monte Creek Road to Shoo Fly Road to Ridge-top 4WD road to Somes Mountain.	Ridge Road, Midslope Road	Proposed Shaded Fuelbreak
Butler Creek	Creek	Proposed Shaded Fuelbreak

Appendix E: Critical Information and Red Zone Survey Forms

Orleans/Somes Bar Fire Safe Council and Orleans Volunteer Fire Department

Critical Information and Fire Protection Survey

In an effort to gather information for emergency response and fire safety/fuels reduction planning, the Orleans/Somes Bar Fire Safe Council (OSB FSC) and the Orleans Volunteer Fire Department (OVFD) are distributing this survey to the community. The products of this survey will be: 1) an emergency response book that will travel with first responders from the OVFD in order to help them locate the caller and assess potential hazards before they arrive on site. 2) A Community Fire Safe Plan for the communities of Somes Bar and Orleans, including prioritized fuels reduction projects on private lands. This Plan will direct current and future grant funding to reduce hazard fuels, focusing initially on high-risk private properties. Community input from the survey will also help direct implementation of the Six Rivers Fire Management Plan.

This survey is fairly detailed and requires some time to fill out properly. Your input is appreciated greatly. If you have any questions or comments, please contact the Orleans/Somes Bar Fire Safe Council office at (530) 469-3216 or email latimerl@onid.orst.edu. **All responses are confidential.**

Residence Owner: _____ Ph#: _____
Current Resident/Contact: _____ Ph#: _____
Physical Address: _____

Directions to residence from a major road (include distances, land marks and sign #'s): _____
_____
_____
_____
_____

Is your road year round 2wd? Y N Turn around for a fire truck (50ft.)? Y N

Have you identified large, open fire safe zones (200+ ft) near your home where you could go in case of an oncoming crown fire? If yes, where? _____
_____

What possible evacuation routes given various fire scenarios (e.g. your main road is blocked by fire) could you use to leave your residence or property? _____
_____
_____

Is there brush encroachment along these routes? Bridges with weight limits? _____
_____

What is the average slope of the hillside directly below your property (within ½ mile)? (circle one)

Flat (0-10%) Gradual Incline (11-40%) Steep (40+%)

What is the average slope directly below your house? (within 500 ft)? (circle one)

Flat (0-10%) Gradual Incline (11-40%) Steep (40+%)

What is the position of the property on the slope (the lowest point of the slope being the river, the highest point being the nearest peak)? (circle one)

A) Lower 1/3 (close to the river) B) Middle 1/3 (midslope) C) Upper 1/3 (close to a peak or ridge)

Which direction does your property face? _____ Elevation of property: _____

Are there significant terrain features (narrow ridge or canyon, etc.) below your property that could increase fire intensity? _____
_____

Water system
How much water is available to your house? Gallons from water tank_____
Gallons per minute from water line (into tank):_____ Fire hydrant accessible? Y N

Is your water system protected from wildfire (brush cleared around tank, water line buried)? Y N
If no, what work needs to be done to make it fire safe? _____
_____

Do you need increased water storage capacity for fire protection use? Y N Explain: _____
_____

Are there any water tanker fill sites or potential sites in your area? Y N (Note: sites must contain at least 300 gallons of water year-round and be within 300 feet of a road)
Where are the sites located (please indicate location in writing and on "Site Map")?_____
_____
Are the sites developed?_____
How much water capacity do the sites have (in gallons)? _____
How quickly do the sites refill? _____
What are the distances of the sites from the nearest road that is tanker accessible?_____
Who owns the tanker fill sites?_____
If the tanker fill sites are located on your property, would you allow the OVFD to access these areas in case of emergency?_____

Please check all that apply:

Type and # of Structures:
___ House(s)
___ Mobile Home(s)
___ Garage(s)
___ Outbuilding(s)

Roof Material:
___ Wood Shake
___ Composition
___ Metal
___ Other

Defensibility Factors:
___ Green, mown lawn
___ Structures clear of vegetation
___ Clean roofs, gutters
___ Cleared around wood shed

Hazards:
___Propane tank
___Other fuel tanks
___Power lines
___Hazardous materials

Are there trees within 30' of house? Y N Wood exterior on house? Y N

Defensible space around structures (100' combustible veg clearance on all sides): Y N If not, approximately how many acres would need to be cleared to create 100' clearance on all sides of structures (Note: one acre is 43,560 square feet)?_____

What are your main assets at risk from wildfire (livestock, timber, structures)? _____
_____

What is the consistency of the fuels? (circle one) 1) Even (continuous) 2) Patchy (sporadic, broken)
How dense are the fuels? Open Moderate Dense Very Dense

Are there "ladder fuels" that would allow a ground fire to get into the canopy? Y N

Are there areas of dense "jackpot" fuels or other high-risk areas on or adjacent to your property (e.g. fuels from windthrow, snowdown, logging slash, timber plantations)? Explain. _____
_____

Fuel Type (circle all that apply to areas that need treatment):

Brush Grass Slash Berries Hardwoods Conifers

Acreage By Fuel Type:

Brush ____ Grass ____ Slash ____ Berries ____ Hardwoods ____ Conifers ____

How many acres of grass and berries are mower accessible? _____

How many of these acres are chipper accessible (200' upslope of a road?) _____

How many acres have you already treated fuels on?_____

How many acres *need* to be treated to make a defensible space around all of your valued assets at risk from fire_____

What is the total acreage you would *like* treated on your property? _____

How many acres of fuels are you, personally, planning on treating? _____

Do you need assistance creating a defensible space around your house? Y N

Are you a senior citizen or disabled and unable to treat fuels on your property? Y N

Are you interested in having fuels reduction done on your property as part of a grant through the Orleans/Somes Bar Fire Safe Council?
(**Note: Answering "Yes" does not obligate you to participate.**) Y N

After fuels reduction is complete, there are piles of slash that need to be burned. This is usually the landowner's responsibility. Are you willing/able to burn piles created from OSB FSC fuels work on your property? Y N
Explain:_____

After fuels reduction is complete, plants grow back and trees resprout, creating continued fire danger. Are you willing to be trained/able to underburn your property to maintain fuels reduction work? Y N Explain: _____
_____

Would you have use for any bi-products from fuels projects (poles, firewood)? Y N

If no, would you be willing to allow the OSB FSC to utilize these bi-products? Y N

Comments (e.g. history of fires and fire starts in your area, concerns about adjacent properties, other concerns related to fire danger):_____
_____
_____

Are there other areas in the community that you think have fire risk/fuels reduction opportunities? Where and why?_____
_____
_____

Do you know of anyone in the community who needs assistance in treating fuels and may be interested in this FSC program? (use space on back of this survey if necessary)

Name:	**Contact Info:**

Would you like to be added to our mailing list? Y N
Mailing address: _____
Email: _____

The Orleans Somes Bar Fire Safe Council has been organizing volunteer workdays reducing fuels around the homes of elderly or disabled community members. We typically have one workday a month on a weekend. We usually work for about six hours cutting, piling and burning piles. Would you be interested in participating in one of these workdays? Y N (If you answered "Yes" we will contact you before the next workday).

The Orleans Volunteer Fire Department (OVFD) provides several critical services to the community, including emergency medical response and fire protection. They depend on our community involvement and support. Would you be interested in participating in any of the following Orleans Volunteer Fire Department activities?

Emergency Medical Technician (EMT) Training	Y N
Becoming a Volunteer Fire Fighter	Y N
Certification to Drive a Fire Truck	Y N
Rope Rescue Training	Y N
Making a donation!!! If so, how much?_____	Y N
Volunteer other support (mechanical, clerical, fundraising)	Y N
Signing your driveway with your street number (physical address)?	Y N

We have materials (posts, signs, lettering) at a reasonable cost!

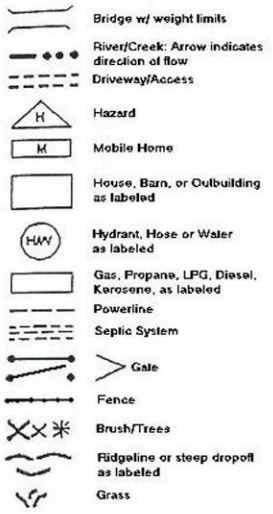
For more info, contact **Tom Bouse, OVFD Chief, at 627-3496**.

****

Please locate and identify all features listed on attached "SITE MAP." If appropriate, mark areas where fuels need to be reduced.

Thank you for taking the time to fill out and return this survey!

SITE MAP


Bridge w/ weight limits
River/Creek: Arrow indicates direction of flow
Driveway/Access
H
Hazard
M
Mobile Home
House, Barn, or Outbuilding as labeled
HW
Hydrant, Hose or Water as labeled
Gas, Propane, LPG, Diesel, Kerosene, as labeled
Powerline
Septic System
Gate
Fence
Brush/Trees
Ridgeline or steep dropoff as labeled
Grass

Appendix F: Red Zone Survey Form

Name of Surveyor:_____
Street # _____ Street Name: _____
Name of Property Owner:_____
Date:_____

Question 1: Is structure address clearly visible from street? If not standard then describe in notes.

Answers:

Present and visible (0)
- Sign is visible from direction(s) that the OVFD will be traveling.
- Sign is visible during the day and at night (reflective)

Present, not visible (2)
- Sign is not reflective
- Sign is not visible from direction(s) that the OVFD will be traveling.

Not present (5)

Question 2: Is there more than one ingress/egress?

One-way access (3)
More than one way access (0)

Question 3: Width of Driveway?

Note: Please measure with measuring tape the narrowest access point

Answers:

12 ft or less (4)
12-20 ft (3)
20-26 ft (2)
> 26 ft (1)
Inaccessible (5)

Question 4: What is the length of the driveway in feet?

Note: Estimations are okay.

Answers:

Less than 100 ft (0)
100-1000 ft (0)
Greater than 1000 ft (0)

Question 5: Is there clearance? (vertical and horizontal)

Note: A few hanging branches are okay.

Answers:

Yes (0)
- At least 15 feet vertical clearance
- At least 10 feet horizontal clearance with 4 foot graded shoulder.

No (describe in notes) (5)

Question 6: Is access to the home gated?

Answers:

No (0)
- No gate is present
- Gate is present but is never closed

Yes, fire dept has access (2)
- Gate is usually closed but there is no lock
- Gate is usually closed and locked, but OVFD has a key

Yes, fire dept has no access (4)
- Gate is locked (OVFD does not have access to the key)
- Gate is less 12 feet wide

Question 7: Grade of driveway:

Note: Please use a clinometer.

Answers:

Flat (0% - 5%) (0)
Low (6% - 8%) (1)
Moderate (9% - 12%) (3)
Steep (> 12%) (4)

Question 8: Is there an adequate fire dept turnaround?

Note: The length of a fire truck is…

Answers:

None (5)
- Fire truck would have to back out
- 3-point turn is not possible

Present but inadequate (3)
- 3-point turn is possible but cars may be blocking turnaround

Adequate (0)
- Circular turnaround of at least 40 feet diameter
- 3-point turn is possible with no obstructions (e.g. vehicles)

Question 9: Bridges accessing the property

Note: All rated bridges are marked with a sign indicating weight limit and vertical clearance. If a bridge cannot support a 40,000-pound load, then it is substandard.

Answers:

Present and rated (>20,000 axle load) (0)
Present and unrated / substandard (4)
Not present (0)

Question 10: Neighborhood

Answers:

Ti Bar (0)
Patterson/Sandy Bar Creek, Stanshaw/Irving Creek, and Rogers Creek (0)
Somes Bar and Offield Mountain (0)
Natucket (0)
Thunder Mountain/Madrone Lane (0)
Ten Eyck (0)
Upper Ishi Pishi (0)
Lower Ishi Pishi (0)
Perch Creek (0)
Orleans (0)
Red Cap (0)
Ferris Ranch Rd (0)
Camp Creek (0)
Ullathorne, Slate Creek, Bluff Creek (0)
LePerron/Boise and Lower Red Cap (0)

Question 11: Is the water system fire safe?

Note: Pearch Creek domestic water system is fire safe. The Crawford Hill system is fire safe; however, some properties across Camp Creek may not be fire safe due to suspended lines. The small Pearch creek neighborhood system is not fire safe.

Answers:

Yes (0)
- Metal pipes
- Metal tank
- Buried PVC pipes

No (4)
- Seasonal water systems not available during summer months
- PVC pipes not buried
- Fiberglass tank

Unknown (0)
- **Note:** Please avoid using this answer. If in doubt, answer "no."

Not applicable (0)

Question 12: Brush cleared around tank?

Note: Pearch Creek tank is cleared. Crawford Hill tank is not cleared. The small Pearch creek tank is not cleared.

Answers:

Yes (0)
- Cleared at least 100 ft away from tank.
- No significant terrain features that endanger tank.

No (4)

Unknown (0)
- **Note:** Please avoid using this answer. If in doubt, answer "no."

Not applicable (0)
- No tank present

Question 13: Do you want to volunteer for the Orleans Volunteer Fire Department?

Answers:

Yes (0)
- If yes, please note contact information in notebook.

No (0)
No contact (0)
- Use this if you did not have contact with the landowner

Not applicable (0)
- Use this if the landowner is out of the area

Question 14: Do you want to use bi-products from fuels reduction?

Answers:

Yes (0)
No (0)
No contact (0)
- Use this answer if you did not have contact with the landowner

Not applicable (0)
- Use this answer if the person does not want assistance creating defensible space (see question below).

Question 15: Do you need assistance creating defensible space?

Answers:

Yes (0)
No (0)
No contact (0)
- Use this answer if you did not have contact with the landowner

Not applicable (0)

Question 16: What is the predominant aspect around the structure?

Note: Please use a compass.

Answers:

Flat (0-5%) (0)
North (NW<-N->NE) (1)
East (NE<-E->SE) (1)
South (SE<-S->SW) (5)
West (SW<-W->NW) (4)

Question 17: Overall slope of the area within 150 ft of structure?

Note: Please use a clinometer. Please do not average the slope. If one side of property is steep, then list the steepest slope. However, if there is not significant fuel risk from the steep slope (e.g. the slope goes down to the river), then list the steepest slope that will actually drive a fire or pose an issue to fire suppression.

Answers:

Less than 9% (0)
Between 10% and 20% (1)
Between 21% and 30% (3)
Between 31% and 40% (4)
Greater than 41% (5)

Question 18: Position on Slope

Answers:

Bottom (0)
Lower Third (2)
Middle Third (5)
Upper Third (5)

Question 19: What is the fuel load around the structure?

Note: Generally, this question refers to fuels within 100 feet of the structure. Also note that the steeper the slope, the more space needs to be between shrubs/trees. (Please see the document titled: "General Guidelines for Creating Defensible Space).

Answers:

None (0)
- No flammable vegetation within 30 feet of structure.
- Grass is irrigated and mowed
- Vertical and horizontal space between plants
- Trees are well-spaced and pruned
- Vegetation maintained with regular water.
- Dead braches, leaves and needles removed from vegetation
- Woodpiles stacked at least 30 feet from all structures and vegetation is removed within 10 feet of woodpiles
- No stacks of construction materials, pine needles, leaves and other debris within 30 feet of structures.

Light (2)
- Small variation from above

Moderate (4)
- Substantial variation from above

Heavy (5)
- Extensive variation from above

Question 20: What is the fuel type?

Answers (Multiple answers):

None (0)
Timber (2)
Brush (5)
Grass (3)
Ground fuels (2)
Debris (3)

Question 21: Are there ladder fuels that would allow a surface fire to get into the canopy?

Note: Ladder fuels are fuels that can carry a fire vertically between or within a fuel type.

Answers:
- Yes (5)
- No (0)

Question 22: Defensible Space?

Note: Defensible space is where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. In order to do this, material capable of causing a fire to spread has to be treated, cleared, reduced, or changed to act as a barrier between an advancing wildland fire and resources or lives at risk. Law requires defensible space, to be an area of at least 100 feet around a structure. Please see the document titled: "General Guidelines for Creating Defensible Space."

Answers:
- More than 100 feet (0)
- 75-100 feet (1)
- 30-75 feet (3)
- Less than 30 feet or none (5)

Question 23: Describe the defensible space?

Note: This question is asking whether or not the space conforms to CDF regulations. Please see the document titled: "General Guidelines for Creating Defensible Space."

Answers:
- Conforming (0)
- Non-conforming (5)
- None (0)

Question 24: Vegetation near roof? (multiple answer)

Answers:
- Not Applicable (0)
- Branches/limbs Within 5 Feet (3)
- Overhanging Branches/Limbs (4)
- Leaf and/or needles on roof/gutters (5)

Question 25: Describe the fuels in the defensible space.

Note: If some of the area is not irrigated, answer not irrigated.

Answers:
- Irrigated (0)
- Not irrigated (3)
- No fuels (0)

Question 26: Adjacent fuels?

Note: Adjacent fuels are fuels outside of the 100ft defensible space area that would influence protection of the structure in the case of a fire (e.g. adjacent plantation, blowdown, or other jackpot fuels).

Answers:

Yes (3)
No (0)

Question 27: Are there significant terrain features that would increase fire intensity?

Note: Terrain features are physical features of a tract of land that can increase the intensity of a fire, especially by altering the wind (e.g. canyons, ridges).

Answers:

Yes (3)
No (0)

Question 28: How many acres would need to be cleared in order to create 100' defensible space around all structures?

Note: (approximately)

- ¼ acre = 105 ft. x 105 ft.
- ½ acre = 147 ft. x 147 ft.
- 1 acre = 210 ft. x 210 ft.

Question 29: What are the coordinates for the home

Note: Use your GPS unit to answer this question. Take the coordinates directly by the home. Each structure needs its own GPS point.

Question 30: Determine the size class of the structure?

Note:

- Single-wide trailer = 800 square feet (average)
- Double-wide trailer = 1500 square feet (average)

Answers:

Small (0-1500 sq ft) (0)
Medium (1500-3000 sq ft) (0)
Large (3000-8000 sq ft) (0)
Very large (8000 + sq ft) (0)

Question 31: Describe the construction type.

Answers:

Wood frame (3) (with loose boards – places for embers to get in)
Masonry (0)
Balloon-frame (4)
- Balloon framing is a system of wood-frame construction for two-story homes that replaced post-and-beam construction, in which the studs are continuous from the foundation sill to the top wall plate.

Ordinary (2)
- House in constructed to code. Wood frame home.
- Manufactured home

Steel (0)
- Double-wide or single-wide trailer

Question 32: What type of Roofing Material?

Answers:

Tile (0)
Cement Shingles (0)
Metal (0)
Metal Old (0)
Asphalt (2)
Wood - rated (3)
Wood - Non rated (5)
Other (0)

Question 33: What is the Siding Material?

Note: Combustible siding provides a rapid vertical path for flames to reach vulnerable portions of a house such as the eaves or windows. One problem with combustible siding is decay at the bottom edge caused by wetting in contact with soil, concrete, etc. This is a problem if fire enters the cavity below or through the siding. Some plastic siding deforms with heat and can expose the sheathing or the wall cavity to fire.

Answers:

Highly Combustible (5)
Combustible (3)
Non-Combustible (0)

Question 34: Eaves?

Answers:

Not Present (0)
Enclosed (0)
- If there are vents in the eaves, they must covered with metal screens with less than ¼ inch holes.

Not Enclosed (5)
- Eaves with vents that would allow embers to enter into the eaves (covered with screens greater than ¼ inch mesh or non-metal screens).

Question 35: Decks?

Answers:

Not Present (0)
Enclosed (0)
- No area to allow embers to enter under the deck

Not Enclosed (5)
- Lattice or other insufficient enclosure

Question 36: Describe the type of occupancy

Answers:

Part-time Residential (1)
Fulltime Residential (3)
Stacked (5)
- e.g.: Apartment complex (or close neighbors – several inhabited residences that are close < 200 feet)

Commercial (4)
Guest house (1)
Agricultural (1)
Other (0)

Question 37: Primary onsite water source for firefighting?

Note: Pearch creek and Crawford Hill domestic water systems have modified hydrants (year-round).

Answers:

None (5)
Pressurized hydrant (0)
Cistern (2)
- an artificial reservoir; especially an underground tank for storing rainwater

Modified hydrant seasonal (2)
Modified hydrant year-round (1)
- a Modified Hydrant does not have standard Fire Department fittings

Tank < 2500
Tank >2499 < 5000 (-2)
Tank >4999 (-3)
Dry hydrant (0)
- An arrangement of pipe permanently connected to a water source other than a piped, pressurized water supply system that provides a ready means of water supply for firefighting purposes and that utilizes the suction capability of fire department pumpers.

Unimproved water source seasonal (3)
Unimproved water source year-round (2)
- Creek, river, pond, well.
- Garden hose

Question 38: Describe the offsite water

Answers:

Pressurized hydrant (< 1 mile) (0)
Pressurized hydrant (> 1 mile) (1)
Cistern (< 1 mile) (1)
Cistern (> 1 mile) (2)
- an artificial reservoir; especially an underground tank for storing rainwater

Modified hydrant (< 1 mile) (1)
Modified hydrant (> 1 mile) (2)
- a Modified Hydrant does not have standard Fire Department fittings

Tank < 2500 (< 1 mile)
Tank >2499 < 5000 (< 1 mile)
Tank >4999 (< 1 mile)
Tank < 2500 (> 1 mile) (0)
Tank >2499 < 5000 (> 1 mile)
Tank >4999 (> 1 mile)
Dry hydrant (< 1 mile)
Dry hydrant (> 1 mile) (0)
- An arrangement of pipe permanently connected to a water source other than a piped, pressurized water supply system that provides a ready means of water supply for firefighting purposes and that utilizes the suction capability of fire department pumpers.

Unimproved water source (< 1 mile) (0)
Unimproved water source (> 1 mile) (0)
- Creek, river, pond, well.
- Garden hose

Unknown (0)

Question 39: Describe the known hazards

Answers:

Propane tanks (3)
Dangerous animals (3)
- e.g.: dogs

Livestock (1)
Hazmat (4)
- Fertilizer storage

Septic Tank (3)
Above ground fuel storage (4)
Overhead electrical line hazard (3)
Other (0)

Question 40: Are there interior sprinklers

Answers:

Yes (0)
No (0)

Question 41: Are there exterior sprinklers

Answers:

Yes (0)
No (0)

Question 42: Is There a Fire Break

Note: A firebreak is a gap in vegetation or other combustible material that is expected to slow or stop the progress of a wildfire. A firebreak eliminates all flammable vegetation and combustible growth.

Answers:

Yes (3)
No (0)
Somewhat (2)
- Firebreak that now has brush encroachment/regrowth

Question 43: Did you have contact the homeowner during your survey?

Answers:

No
Yes

Question 44: Resources Needed

Answers:

Engine (0)
Water Tender (0)
Hand Crew (0)
Dozer (0)
Aircraft (0)
Other (0)

Question 45: Additional Notes

Question 46: Specific items the homeowner can mitigate? (multiple answer)

Answers:

Post visible address marker (0)
Clean under deck (0)
Clean under home (0)
Clean roof and gutters (0)
Mow near home (0)
Limb trees to 10-15 feet (0)
Cut back vegetation along driveway (0)
Thin vegetation to recommended spacing (0)
Grade driveway or access road (0)
General clean property (0)
Relocate vehicles away from home (0)
Clear around propane tank (0)
Move firewood away from home (0)
Other (0)

Question 47: Primary contact: name and phone number

Note: Ask the landowner if they would like to be on our OSB FSC mailing list. MKWC? OVFD?

Question 48: Natural Gas shutoff

Note: Please use a compass. This survey does not allow you to check more than one answer. Make note if the shutoff is SE, SW, NE or NW.

Answers:

- North (0)
- South (0)
- East (0)
- West (0)
- Unknown (0)
- Not applicable (0)

Question 49: Electrical shutoff

Note: Please use a compass. Also, this survey does not allow you to check more than one answer. Make note if the shutoff is SE, SW, NE or NW.

Answers:

- North (0)
- South (0)
- East (0)
- West (0)
- Unknown (0)

Appendix G: Overview of Neighborhood Designations

Note: Letters in parentheses are initials of first names in order to avoid confusion when multiple landowners have the same last name.

Neighborhood	Structures (by Ownership)
Ti Bar Neighborhood 1	Davis Estate
Ti Bar Neighborhood 2	Creasy, Soto, Strouss, Rael, Unruh
Ti Bar Neighborhood 3	Vogt/Magarian
Patterson/Sandy Bar Cr. Neighborhood	Bearding, Wesley, Quinn, Moore, Mountain Home, Hanson/Carson, Watson
Stanshaw/Irving Cr. Neighborhood	Cole, Fisher, Tocher
Rodgers Creek Neighborhood 1	Norell, Conrad, Thom, Ferreira
Rodgers Creek Neighborhood 2	VanEpps (Galindo)
Offield Mtn. Neighborhood	Wiegel/Vavuris, Davis, Pierce, Ward
Somes Bar Neighborhood 1	Attebury, Atwood, Conrad, Davis, Donahue, Englert, Fulton, Gibbons, Hacking, Hatton, Peevey, USFS, Tripp,
Somes Bar Neighborhood 2	Manor
Butler Neighborhood	Super, Butler Land Association
Ten Eyck Neighborhood	Blanchard, Bywater, Conrad, Davison, Naef, Rutt, Short, Stearns, Strouss, Tripp
Upper Ishi Pishi Neighborhood	Allen, Beck, Buhler, Cormier, Deschaine, Harling/Henderson, Kehrig, Purcell, Roberts, Weeks
Donahue Flat Neighborhood	Lindbloom, Cornwell, Hoopes, Julien, Rickwalt, Lyons,
Thunder Mountain/Madrone Lane/Bark Shanty Neighborhood	Kehrig/Rudolph, Pearlingi, Korejko, Turner, Roberts, Williams, Terhofter, Palmer, Bowland, Ramsland, Ratihn, McLane, Jones, Rismiller, Harding, Noraas, McLane
Lower Ishi Pishi Neighborhood	USFS, Seventh-Day Adventists, Garlinghouse, Paulsrud, Butrick, Williams, Schmidt, Rentz, Tracy, DeLautour, Glaessner, Carroll, Latt, Glaze, Reis, Horn, McNeil, Varley, Sauls, Holzinger, Pierce
Pearch Creek Neighborhood (east)	Dondero, Robison, Horn (D), Graber, Cather, Walker, Horn, Flattley, Thompson, Chichizola/Staats, Good, Ricke, Bruce, Taylor, Webster, Horn (T), Wheeler, Hatton, Burdick, Robbi, Roegiers, Starritt, Horn, Karuk Tribe of California, Mooney, Pearson, Perry
Pearch Creek Neighborhood (west)	Perry, Peters, Horn (T), Starritt, Yuasa
Orleans Neighborhood	Horn (T), Downs Ranch Trust, Sanders, Piola, Taylor, Karuk Tribe of California, Lambert, Mingham, O'Brien, McLaughlin, Colegrove, Hussein, Bowland, Wild By Nature Inc, Cawley, Lisson, Lollich, Slusser, Buehler, Klamath Trinity Unified School District, Underwood, Smith, Continental Telephone Co. of California, Rabideu, Engdahl, Orleans Community Service District, O'Rourke, Billster, Sparks, Lambert, Peugh, Doman

Orleans School Road Neighborhood	Hadley, Bennett, Huber, King (D), King/Rand, Martin.
Red Cap 1	Hill (L), Howerton, Bettinger, Hill (B), Jordan, Woodman (F), Woodman (S), Woodman (L), Kirste, Bowen, Kale, Graber, Assembly of God, Hamilton, Conrad, Terrill/Coragliotti, Kruse, Johnson (R/P), McCovey, Allen, Stoney, Preyer, Slesinger, Simmons, Turner, Gale, Ferris, Edwards, Talley, Gault, Supahan, Johnson (W/P), Rosenbach, McLaughlin, Hillman (L), Hillman (G), Raffenburger, Lollich, Burrows, Blotz, Willett, Morehead, Burroughs, Mace (L), Decker, Mace (G), Mace (S)
Red Cap 2 Neighborhood	Mid and upper slope: Rivera, Carlyle, Weller, Hepp, Hill, McLaughlin
Red Cap 3 Neighborhood	Mollier (L/M), Wilder (L), Mollier (C/D), Mollier (M), Wilder (K), Wilder (W), Coates, Veth
Red Cap Creek Neighborhood	Allen (D), Allen (L), Allen (O), Beaver, Bishop, Callagan, Carlson, Flores, Gilkinson, Marier, Olson,
Camp Creek Neighborhood	Delaney, Allen (A), Allen (D), Gerard, Saxon, Minjiras, Bouse, Coragliotti/Salberg, McCall, Behrens, Hughes, Biggs, Wood, Williams, Hougham, Lee, Dummer, Tripp, Peugh, Bair, Warmington, Wood, Bowman, Costa, Winningham, Peterson, Hemus, Davis, Calhoun, Shellenberger, Cheek,
Owl Mine Road Neighborhood	Allen, Latt, Waters
Cedar Camp Neighborhood	Johnson, McMurray
Lammon Neighborhood	Blair, Lammon
Slate Creek Neighborhood	Eckert, Schmidt, Allen, Omey
Bluff Creek Neighborhood 1	Bluff Creek Resort
Bluff Creek Neighborhood 2	Riggan

Appendix H: Detailed Prescriptions for Defensible Space and Emergency Access Routes.

Defensible Space				
Fire Risk Reduction Goals	Description of Prescription	Fire Risk		
		High	Med	Low
Exclusion of Ground Fire	Fire will not burn in this area because there is little or no fuel (bare or green)	100-200 feet	100 feet	100 feet
Reduce Risk of Crown Fire	Use shaded fuelbreak - this breaks up fuel continuity and the fuel ladder. For late seral stands: leave 70 - 100% canopy cover (if available); For mid seral stands (40' - 80'): leave 50 - 80% canopy over (if available); For early seral stands (conifer < 40'): leave 50 - 70% canopy cover (if available); For early seral stands (conifer/hardwood mix < 40'): leave 40 - 60% canopy cover (if available); For oak/hardwood stands: leave 30 - 80% canopy cover (if available)	300 feet	200 feet	100 feet
Reduce Risk of Crown Fire	Reduce jackpot fuels from the start of the shaded fuelbreak and beyond	1000 feet	600 feet	300 feet
Reduce Risk of Carrying Fire and Hazards	Remove all snags from shaded fuelbreak	Includes one tree length below (downhill side), and 1.5 tree length above (uphill side).		

Emergency Access Routes				
Fire Risk Reduction Goals	Description	Fire Risk		
		High	Med	Low
Reduce risk of fire jumping road & provide safe access & egress	>50% slope: Create shaded fuelbreak to break up fuel continuity and fuel ladders.	250' below road, 200' above road	200' below road, 150' above road	150' below road, 100' above road
Reduce risk of fire jumping road & provide safe access & egress	<50% slope: Create shaded fuelbreak to break up fuel continuity and the fuel ladder. Leave 60 - 100% canopy cover (if available).	200' below road, 150' above road	150' below road, 100' above road	100' below road, 75' above road
Reduce risk of spreading crown fire	Reduce jackpot fuels	1000 feet	600 feet	300 feet
Reduce risk of carrying fire and hazards	Remove snags*	Includes one tree length below (downhill side), and 1.5 tree length above (uphill side). Up to 250' above road.		
*Snag removal may entail removal from area if felled snags would significantly impact fuel loading. Snags should be felled to avoid jackpotting. Snags that are being used by wildlife should be kept and their location recorded for reference in case of a wildland fire entering the area. Wildlife snags will have additional fuel treatment to protect them from fire.				

Appendix I: California State Public Resources Code for defensible space

California State Public Resources Code for defensible space requires compliance with Public Resources Code 4290 (Building Codes) and Code 4291 (100 foot defensible space). To access the full text of these State statutes on the Cal Fire WEB site go to the Cal Fire home-page at http://www.fire.ca.gov. Under the "Fire Prevention" tab click the "Wildland Hazard/Building Codes" link. About two thirds of the way down the page, click the "Wildland-Urban Interface Building Code Information" link. Under "Fire Safe Regulations" are the links to PRC 4290 and 4291 as well as Title 14.

Residents of Siskiyou County must follow county defensible space and fire safety codes found in Title 3- Public Safety of the County municipal code.

Title 3- Public Safety, CHAPTER 3. - FIRE HAZARDS AND FIRE PERMITS,

Sec. 3-3.02. Firebreaks: Removal of flammable materials. Any person who owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any mountainous area or forest-covered land, brush-covered land, grass-covered land, or any land which is covered with flammable materials shall at all times conform to the requirements set forth in this chapter.

Sec. 3-3.02.1. Maintenance of firebreaks. All persons shall maintain around and adjacent to such buildings or structures within the area defined in Section 3-3.02 of this chapter firebreaks made by removing and clearing away, for a distance of not less than thirty (30′) feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. The provisions of this subsection shall not apply to single specimens of 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.

Sec. 3-3.02.2. Removal of flammable materials near buildings and structures. All persons shall maintain around and adjacent to such buildings or structures within the area defined in Section 3-3.02 of this chapter additional fire protection or firebreaks made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such buildings or structures or to the property line, whichever is nearer, or as may be required by an authorized official if he finds that, because of extra hazardous conditions, a firebreak of only thirty (30') feet around such building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than thirty (30') feet from such buildings or structures, and less than eighteen (18″) inches in height above the ground, may be maintained where necessary to stabilize the soil and prevent erosion.

Sec. 3-3.02.3. Removal of trees near chimney outlets. All persons shall remove that portion of any tree which extends within ten (10') feet of the outlet of any chimney or stovepipe, and such persons shall maintain any tree adjacent to or overhanging any building free of dead or dying wood. All persons shall maintain the roof of any structure free of leaves, needles, or other dead vegetative growth. (§ I, Ord. 460, eff. May 9, 1968)

Location of County Codes: http://library.municode.com/index.aspx?clientId=16630

County Website: http://www.co.siskiyou.ca.us/default.aspx

Appendix J: Orleans/Somes Bar Draft Supplemental Action Plan (May 29, 2012)

Camp Creek Neighborhood Action Items:

- More volunteer recruitment and training of volunteers for the Orleans Volunteer fire department
- Owl Mine neighborhood needs to meet about their ingress/egress routes, turn a rounds, safety zones, and water sources for wildland and structure fire fighters.
- The Crawford communal water tank for Camp Creek Neighborhood needs maintenance.
- Some water lines on the Crawford water system need to be buried or otherwise protected from fire.
- Local weather forecasts need to be used to determine burn day status for Orleans and Somes Bar.
- Camp creek and Owl Mine neighborhoods need to form a communication network and begin discussing plans for disaster preparedness.
- The Forest Service should look into the possibility of reopening a spur road which connects Owl Mine road to the Cedar Camp road.
- A new and larger water system needs to be developed for the Camp creek neighborhood. Residents suggested stainless steel, much larger than 20,000 gallons.
- Residents need to secure their own sources of reserve water for fire protection.
- More stand pipes are needed throughout the Camp Creek neighborhood.
- The water tank near the Hatchery on Camp creek needs to be retrofitted and maintained to serve as a backup water source for the neighborhood.
- Maps should be provided to each land owner in the Camp creek neighborhood showing the location of water sources and their distribution lines.
- The hazardous fuels, especially thickets of black berry canes that surround the neighborhood need to be brushed around.
- A fuel break should be created around the Camp creek neighborhood.
- Homeowners need to maintain their defensible space and especially in the home ignition zone.

Red Cap Neighborhood Action Items:

- Homeowners on Ferris Ranch road need to reduce hazardous fuels around their residences.
- Residents living in the lower slope positions in the Red Cap neighborhood need to communicate with their upslope neighbors about the need for fuels reduction.
- Residents from School House Rd to the Mace residence need to work on developing additional water sources for fire protection instead of relying on the Orleans city water system.
- New solutions to reduce fuels in the Red Cap neighborhood need to be developed as grant funding is becoming scarce for this purpose.
- A workshop will be held to help the community adapt their water sources to the needs of wildland and structural fire fighting equipment.

- Ferris ranch residents need to discuss the creation and maintenance of engine turn a rounds or other solutions to the limited ingress and egress.
- Residents of the Red Cap neighborhood need to develop a phone tree or some system of communication and disaster preparedness.
- The dense thicket of evergreen huckleberry above the Mace residence needs fuels reduction work.
- The Fire Safe Council will search for grant funding for water storage tanks, and find sources for materials need for tank construction.

Slate/Bluff/Lammon Neighborhood Action Items:

- Roadside fuels reduction is needed along Lima's property.
- Lammon will communicate with the Forest Service to ensure that fire staff have access to his gate in the next fire event.
- The Fire Safe Council needs to make more "Controlled Burning" signs and place them in a wider area to normalize and make residents aware of burning.
- Agencies, groups, or individual land owners or contractors conducting controlled burns need to develop a contingency and communication plan in the advent of fire escape.
- Slate creek residents are looking into purchasing a large capacity stainless steel tank reserved for fighting fire. This tank would be larger than 10,000 gallons and equipped with 1 ½'' national safety thread fittings for use by a water tanker or engine. The neighborhood will meet again to discuss the locations of these communal tanks.
- The OVFD and the Fire Safe Council will research the applicability of the blue dot system for the 'rural' sections of Orleans and Somes Bar communities.
- The OSBFSC and OVFD will work with the USFS to combine data collected on residences and their water sources into a single system.
- The Slate Creek Neighborhood will work on its own communication plan for emergency preparedness.

Orleans Neighborhood Action Items

- The OSBFSC will research the restrictions placed on USFS, enterprise teams, and contractor wildland fire staff when using residents domestic or fire protection water sources. This information will be presented in a workshop on water systems for fire protection.
- Organizations within the Orleans and Somes Bar community need to research the Cohesive Strategy for Fire Management, and need to continue promoting the development of a well trained local work force.
- A local area operating plan, detailing the capacity of the local community to aid in wildfire management, needs to be developed.
- Neighborhoods or groups of neighbors should form phone or communication trees and designate a liaison to coordinate communication efforts in an emergency event.
- Workshops need to held on the basics of firefighting for landowners, safe methods of pile burning, and clearing vegetation and fuels for fire safety.
- A fuel break should be established between the community of Orleans and surrounding National Forest.

- Residents with gated properties need to arrange with the local fire authorities for access to their properties in case of emergency.

Perch Creek Neighborhood Action Items

- East Perch creek residents need additional tanks reserved for fire protection.
- Fire management teams need to have better communication with residents about the location of water lines, tanks, and other resources before conducting burnout operations.
- Fuels treatment is needed on the road down to Dolan's Bar, along the bar, and on the mountain side. Dolan's bar should be managed with controlled fire to reduce hazardous fuels.
- Firefighters need to be in communication with local residents and especially neighborhood liaisons.
- The USFS needs to look into placing a host at the Pearch creek campground and treat fuels between the campground and the neighboring private property.
- Residents on the Pearch creek spring water system will work hold all residents on the system accountable to their water allotment. A water board or other association will be formed to deal with these issues.
- Project work for fuels reduction and forest health need to be implemented on National Forest surround the school house road residences.
- The USFS needs to do project work in the Perch creek drainage to reduce fuels generated from back burning operations. Residents would like to see a series of controlled burns used to reduce fuels from these burns.
- The residents on Perch creek need to install additional water tanks reserved for fire safety.
- The Pierson property needs fuels reduction work. It is a hazard to the neighborhood currently.
- Residents in the Perch creek neighborhood need to establish a system of communication and develop plans for emergency preparedness.
- Fuels generated from fires on the upper 1/3 of the Perch creek watershed need to be treated.
- USFS, enterprise team, and contractor firefighting staff need to incorporate the advice of local residents and district staff knowledgeable about the area into fire management decisions.
- The Pearch creek water system needs to be brushed around, all the way to the source on National Forest.
- The Fire Safe Council will look into opportunities for aiding residents install water tanks for fire safety.

Somes Bar/Offield/Butler Neighborhood Action Items:

- Residents of the Somes Bar/Offield/Butler neighborhoods need to set up a communication network.
- NGOs, Karuk Tribe, OVFD need to develop a disaster preparedness plan for the community.
- Orleans Somes Bar Fire Safe Council will outreach to the neighborhoods during fire events to make air purifiers and other community resources available.
- The USFS should treat downed fuels in a 4 acre blowdown next to the Butler Neighborhood.

- USFS should brush the area between Wooley Creek trailhead and Oak Bottom Campground and burn to remove fuels created by 2008 backfire operations.
- Fuels should be treated along dozer lines behind the Hacking residence used for fire suppression during the 2008 wildfires.
- The community and concerned organizations need to agree on recommendations for the management of wildland fire so that this information can be used in the suppression planning process.
- Concerned Organizations in the Orleans/Somes Bar area need to develop local area operating plans for use by wildland fire fighting personnel.
- The rehabilitation practices of the BAER program need to be reexamined to determine their effectiveness.
- The USFS should develop and maintain a series of shaded fuel breaks for wild fire management.
- Fuels below Judy Davis's house need to be treated.
- Ceremonial burning practices on Offield Mountain should be reinstated.

Ti Bar/Patterson Neighborhood Action Items:

- USFS needs to brush 15 ft on either side of access road to Liana's residence on Ti Bar.
- USFS needs to reduce fuels in plantations below and above the Watson residence on Ti Bar.
- The Iron Phone road needs to be brushed, culverts need repair, and there are currently some erosion issues.
- Tree planting under the BAER program should move towards the creation of fire resilient oak forests by planting these trees instead of Douglas fir.
- National Forest below Martial and Liana's residence needs to be brushed; it is a likely spot for fires starts.
- Plantations below Jan and Sue's on National Forest need to be thinned and brushed.
- The Karuk tribe needs to continue thinning and burning work on National Forest Plantations south of Gary and Maria's property.
- The USFS should use existing fuel breaks around Ti Bar as boundaries for controlled burns.
- Fuels treatment is needed from the road above Hans and Chris's to the ridge line. A series of controlled burns should be used to reduce fuels from the 2008 backfiring operations.