Orleans-Somes Bar Community Wildfire Protection Plan

A Wildfire Protection Plan for Residents, Communities, and All Lands in the Watershed of the Mid Klamath Basin, California

Coordinated by the Mid Klamath Watershed Council and
Orleans-Somes Bar Fire Safe Council

April 2024

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Reviewed Signature Page

The Orleans-Somes Bar Community Wildfire Protection Plan is certified as meeting the three criteria[1] defined by the Healthy Forest Restoration Act (HFRA) by the following entities. Certification of the OSB CWPP by these entities does not constitute plan adoption or approval but does represent the signees' agreement that the contents of the plan conform to the three HFRA CWPP standards.

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Russell "Buster" Attebery, Tribal Chairman Karuk Tribe	Date:
Eric Nelson, Fire Chief Orleans Volunteer Fire Department	Date:
Erik Haskell, Fire Chief Happy Camp Fire Protection District	Date:
Kurt McCray, Unit Chief CALFIRE Humboldt-Del Norte Unit	Date:
Greg Roath, Unit Chief CALFIRE Siskiyou Unit	Date:
Steve Madrone, District Representative	Date:

Humboldt County Board of Supervisors	
Ray Haupt, District Representative Siskiyou County Board of Supervisors	Date:
Margo Robbins, Executive Director Cultural Fire Management Council	Date:

[1]A CWPP, as defined by the Healthy Forest Restoration Act (HFRA), is a plan for a community at risk that: 1) is developed collaboratively 2) identifies and prioritizes fuel reduction projects, and 3) recommends measures to reduce the ignitability of structures.

Partners and Agencies

The following people and organizations contributed to the completion of the OSB CWPP. Titles and affiliation should be verified.

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PART 1. Introduction

1.1 Background

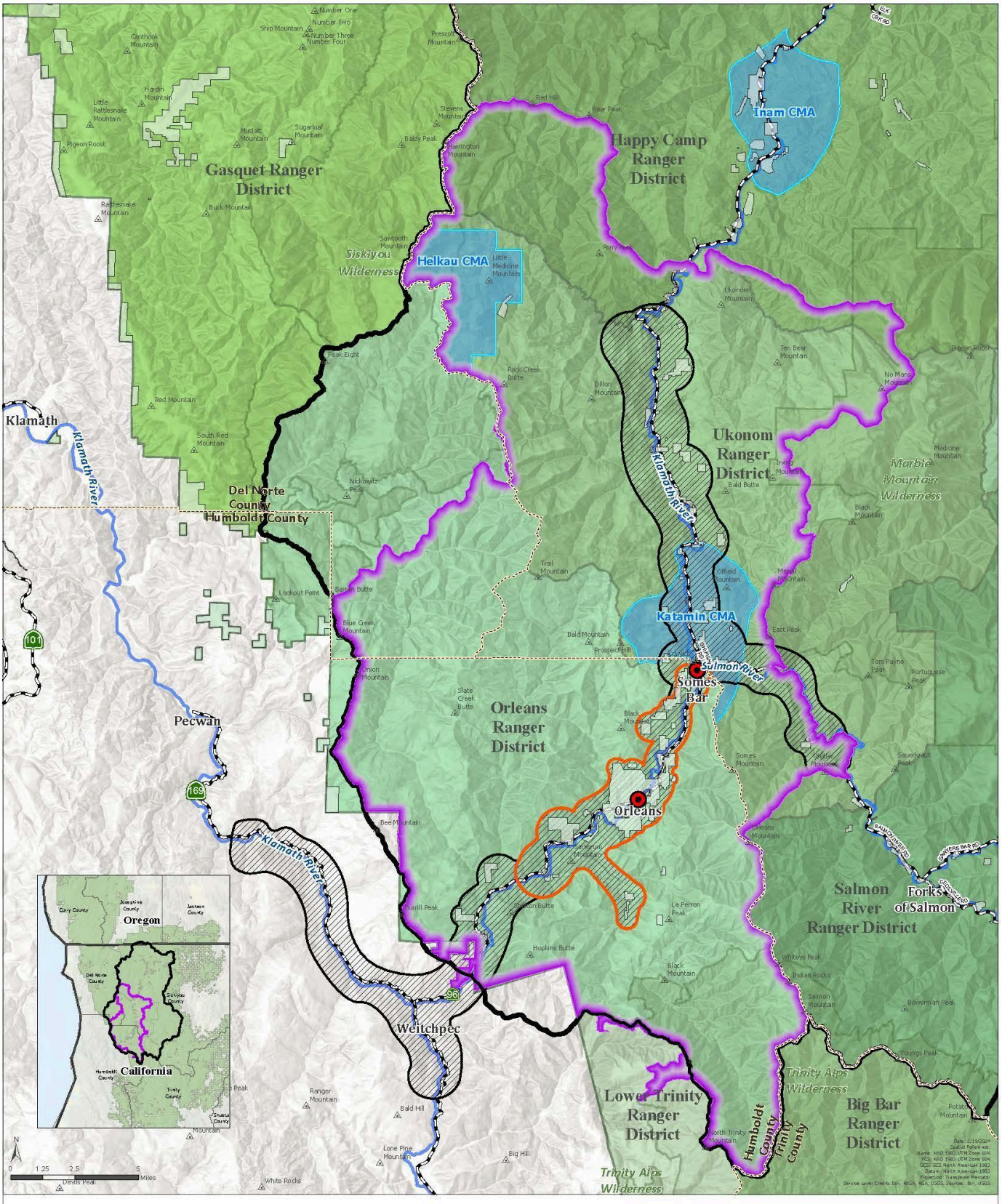
A Community Wildfire Protection Plan is a mechanism authorized in the Healthy Forest Restoration Act of 2003 (HFRA) to allow an "at-risk community" to collaboratively identify and prioritize fuel reduction projects on federal and non-federal land, and recommend measures to reduce the ignitability of structures. The HFRA gives funding priority to projects identified in a CWPP, directs Federal agencies to consider recommendations identified in CWPPs , and implement those projects on federal lands. Guidance for CWPPs is established by the Wildland Fire Leadership Council. CWPPs themselves are agreed to by the applicable local and Tribal governments, local fire departments, and CAL FIRE, in consultation with interested parties and the U.S. Forest Service as the federal land management agency responsible for land management in the vicinity of the at-risk communities. To allow an "at-risk community" to collaboratively identify and prioritize fuel reduction projects on federal and non-federal land, and recommend measures to reduce the ignitability of structures.

CWPP documents have evolved since 2003 due to changes in federal and state policies. In addition to being consistent with HFRA, CWPPs are required to be consistent with and tiered to the Federal Land Assistance Management and Enhancement (FLAME) Act of 2009. The National Cohesive Wildland Fire Management Strategy (Cohesive Strategy) emerged from the FLAME Act, wherein Congress directed federal entities to develop a cohesive framework for dealing with wildfires. The Cohesive Strategy is a national collaborative effort to make meaningful progress towards three goals: 1) Resilient Landscapes, 2) Fire Adapted Communities, and 3) Safe and Effective Wildfire Response. CWPPs in California should also be consistent and supported by the findings in the 2017 Forest and Range Assessment of California. (California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, 2017), as well as the 2019 Strategic Fire Plan for California (California Department of Forestry and Fire Protection and the California Natural Resources Agency 2019) . The Strategic Fire Plan is the State's road map for reducing the risk of wildfire. By placing the emphasis on what needs to be done long before a fire starts, the plan looks to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The plan was a cooperative effort between the State of California Natural Resources Agency and the California Department of Forestry and Fire Protection (CAL FIRE). The values in the CWPP are similar to CAL FIRE's strategic plan values of Service, Cooperation, and Protection.

1.2 The Orleans-Somes Bar Community Wildfire Protection Plan

One of the main responsibilities of the Orleans Somes Bar Fire Safe Council is to oversee the maintenance and implementation of the Orleans/Somes Bar Community Wildfire Protection Plan (OSB CWPP). In 2001, the Federal Register identified both Orleans and Somes Bar as at-risk communities within the wildland-urban interface, and the communities remain on the list at the time of plan publication. The Orleans/Somes Bar area is within the homelands of the Karuk, Yurok, and Hupa People. 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 and Fire Protection (CAL FIRE), and Mid Klamath Watershed Council (MKWC). The OSB FSC is a program of MKWC, which acts as its fiscal sponsor. MKWC employees

facilitated this planning process, with the assistance of other OSB FSC partner agencies, especially the Karuk Tribe GIS Department, and in coordination with the Salmon River Fire Safe Council, Humboldt County Fire Safe Council, and Fire Safe Council of Siskiyou County. As interested parties, Orleans and Somes Bar c



members have an opportunity through this CWPP to influence where and how fuel reduction projects are implemented on federal and non-federal lands in preparation for wildfire events.

This is the second edition of the OSB CWPP. The first edition was signed in 2012, and updated with data from the robust collaboration that occurred with the formation of the Western Klamath Restoration Partnership in 2014. The OSB 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, Cavenaugh Creek and the Yurok Reservation to the south and west, and Butler Creek to the east including the communities of Orleans and Somes Bar (see Figure 1). 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. As shown in the map above, the planning area includes the Karuk Tribe aboriginal territory, Humboldt County, Siskiyou County, the Orleans and Ukonom Ranger Districts of the U.S. Forest Service, the Helkau and Katamin cultural management areas, Highway 96 and the Salmon River Highway, and portions of the Salmon and Klamath Rivers. The OVFD is the “first due” response organization for a portion of the planning area and has a mutual aid response agreement with the Happy Camp Fire Protection District for the Siskiyou County portion of the planning area. Private lands in Orleans and Somes Bar are State Responsibility Area (SRA), protected by the Six Rivers National Forest under the Federal Direct Protection Area (DPA) agreement with California Department of Forestry Fire Protection (CAL FIRE). Private lands in the planning area are surrounded by NFS lands. Management of NFS lands within the planning area is guided by the KNF and SRF Land and Resource Management Plans (LRMP), respectively.

1.3 The Wildland-Urban Interface

The Healthy Forest Restoration Act (HRFA) allows community wildfire protection plans (CWPP) to define the wildland-urban interface (WUI). In the absence of a CWPP, the WUI is defined as an area extending one half (1/2) mile from the boundary of an at-risk community; or an area within one-and-one-half (1 ½) miles of the boundary of an at-risk community if the area has a sustained steep slope, has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or is in condition class 3, and an area that is adjacent to an evacuation route for an at-risk community that requires hazardous fuel reduction to provide safer evacuation from the at-risk community. This CWPP presents a WUI boundary (see Figure 5: Community Base Map) that is in some locations larger than the default definition due to the steep terrain in the planning area, the need to extend the WUI boundary from homes to the nearest reasonable fire control feature, and in order to prioritize fuel reduction along primary and secondary evacuation routes. In other areas with private inholdings, the WUI ends at the nearest potential control feature on adjacent public lands.

1.4 OSB CWPP Objectives

The primary objectives of the OSB CWPP are as follows:

- Integrated Planning
- Fire Preparedness
- Restoration of Beneficial Fire

- Post-Fire response

PART 2. Fire Environment

2.1: Topography, Slope, Aspect, Elevation

The Western Klamath mountains are characterized by complex, mountainous terrain with highly varied climatic gradients. 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. Reported historical fire return intervals for the Klamath Mountains vary with topography, aspect, elevation, and cultural influences, but were typically short (<15 years) especially in drier, lower elevation areas (OSB FSC 2012). The climatic and steep topographic gradients promote extraordinary diversity and high number of endemic species. As with many frequent-fire ecosystems, interacting Indigenous and lightning ignitions shaped landscape-scale fire dynamics, vegetation structure, and resources across the landscape (Greenler 2022). The steep topography has also led to the inability of fire suppression resources to rapidly contain wildfires, which often burn until they are put out by Fall rains.

2.2: Meteorology, Climate, Precipitation

The Mediterranean climate generally has cool, wet winters and warm, dry summers. Annual precipitation primarily occurs between October and April, mostly as rain at lower elevations and as snow at higher elevations. Precipitation records for Orleans indicate seasonal dry and wet periods with an average annual precipitation of 64 inches. Snow is common at elevations above 2500 feet with major flooding that can occur when warm rain follows heavy snowfall. The climate is also influenced by coastal fog, which reaches inland along the Klamath River into the western part of the planning area. Annual average daily temperature is 52.52 F and the June-August average maximum daily temperature is 82.94 F (Karuk Tribe 2019, OSB FSC 2012). Increased temperatures over the past century in the West have affected fire behavior by causing earlier spring snowmelt and by increasing the length of fire season. Fire season, in 2003–2012, averaged more than 84 days longer than in 1973–1982 (Butz et al. 2022). Lightning strikes are relatively common, especially in the eastern portion of the bioregion, with an estimated density of 12 lightning strikes/year/100 square km, the majority (95%) of which occur above 600 m (1,969 feet), primarily in June, July, and August (Greenler, 2022).

2.3: 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 plan area is greatly influenced by upstream conditions and flows. Hydrology in the area is greatly impacted by fire. In a recent paper titled “Growing impact of wildfire on western US water supply”, A. Park Williams et al. (2022) showed that in the western United States (WUS) annual forest fire area increased by more than 1,100% during 1984 to 2020. Among 72 forested basins across the WUS that burned between 1984 and 2019, the mean streamflow was significantly elevated for an average of 6 water years postfire. Among the 29 basins where >20% of forest area burned in a year, streamflow over the first 6 water years postfire increased by an average

of 30%. Postfire streamflow increases were significant in all four seasons. Locally, stream gauges in Indian Creek documented a 45% instantaneous increase instream flows following the 2020 Slater Fire (Soto 2024).

2.4: Past Fire Environment

Fire has shaped ecological processes, resources, and landscape patterns in the western US for millennia. Historical fire regimes in the Western Klamath Mountains are typically classified as frequent, mixed-severity regimes that were historically dominated by frequent (1-15 years) fires that predominantly burned at low or moderate severity, but also included small patches of high severity. In these systems, heterogeneous landscape mosaics and multi-aged tree stands developed under interacting influences of spatially and temporally variable lightning and cultural ignitions, and underlying biophysical and vegetation mosaics. Figure 3 shows the modeled cultural ignition pattern in the Orleans/Somes Bar area – with dense ignitions along the river corridors. Frequent fire on fire interactions limited the potential for large scale, high severity wildfires, and allowed for the formation of forests dominated by spaced, late seral hardwoods and conifers that were resilient to natural processes such as fire, wind, snow, and disease (Greenler 2022).

Colonization and forced cessation of Indigenous fire stewardship (circa 1800s) began a period of forests growing a ‘fire deficit’ leading to densification of biomass and fuel accumulation (see Figure 2). This was exacerbated by heavy grazing and timber harvesting, further shifting composition and structure into the mid-1900s. Most forests today look nothing like they did 200 years ago, and it takes careful reconstruction to understand what forests looked like before Western contact and the interruption of natural and cultural processes. True oak woodlands and associated grasslands have dramatically declined during the fire exclusion era (Taylor and Skinner, 2005). Wet conditions created by increasing forest density have allowed tan oak and Douglas fir to invade oak woodland, grassland and shrub habitats.

These changes in the structure and composition of vegetation have resulted in a small, but increasing, number of ignitions that escape initial suppression efforts, burn relatively large areas, contain unprecedented large patches of high severity, and pose high risks to communities. These fires often occur during periods of hot, dry, and windy weather which have increased due to rising global temperatures, drought, earlier snow melt, and generally longer fire seasons. As the climate continues to warm, these conditions will continue to intensify and drive increased fire activity spatially and temporally (Greenler 2022).

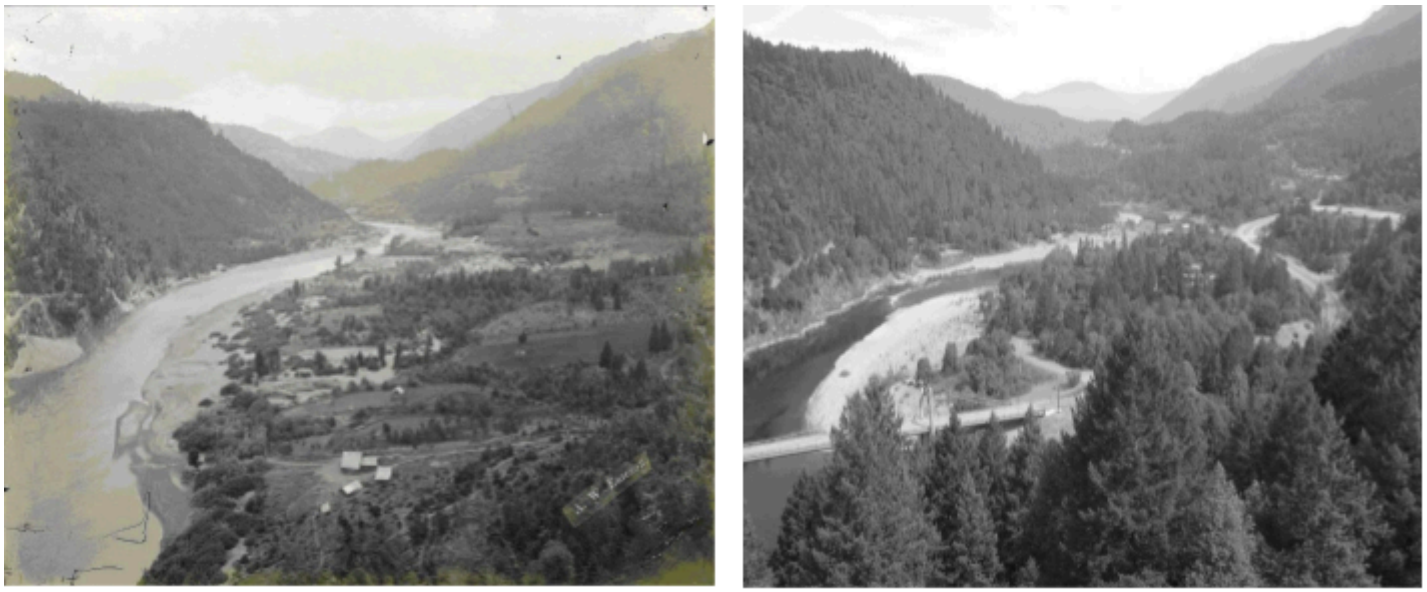


Figure 2: Looking north, upriver from Big Rock, Orleans, CA 1894. Photographer AW Ericson (left); Looking upriver from Big Rock, Orleans, CA, 2006. Photograph by F.K. Lake (Lake 2007)

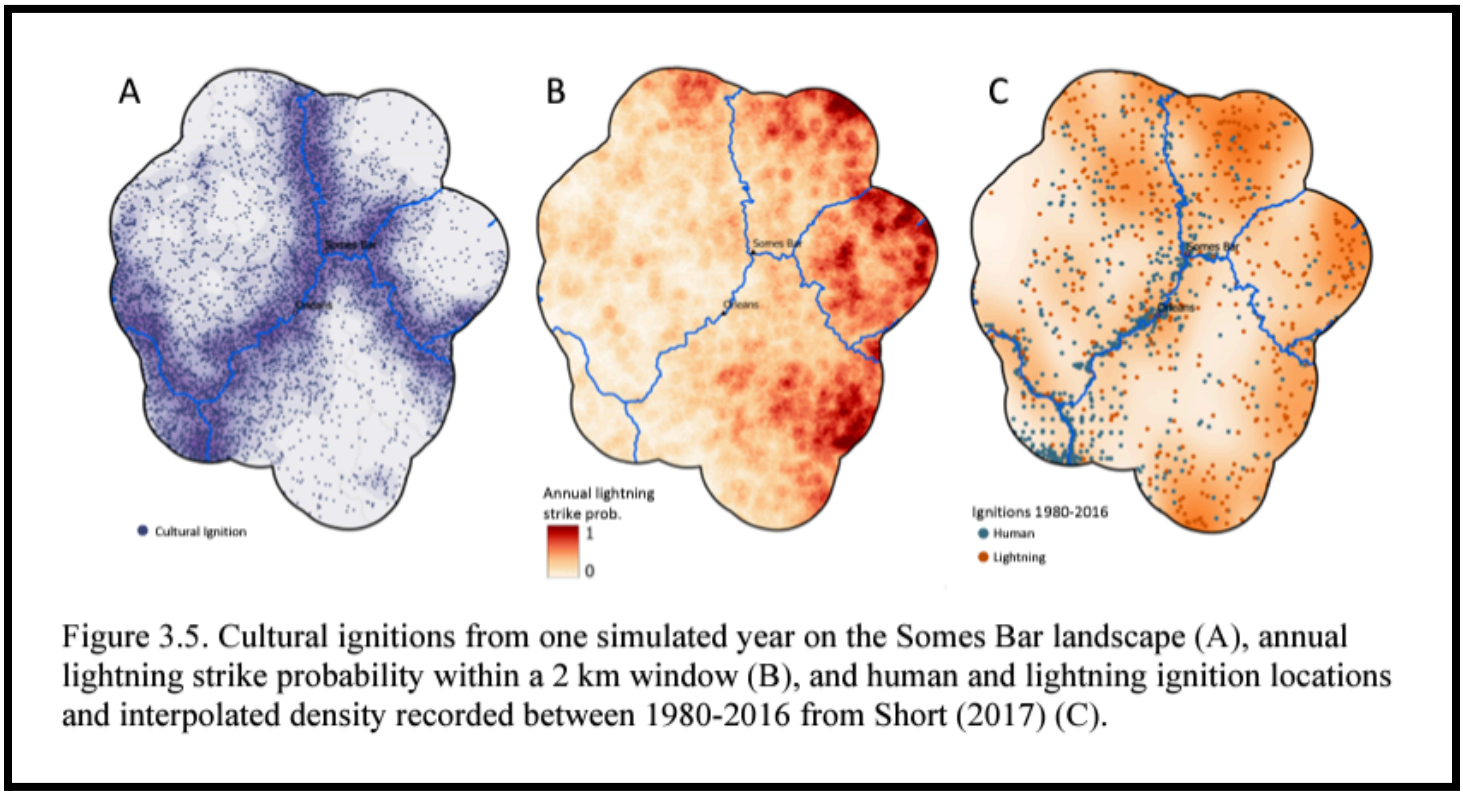
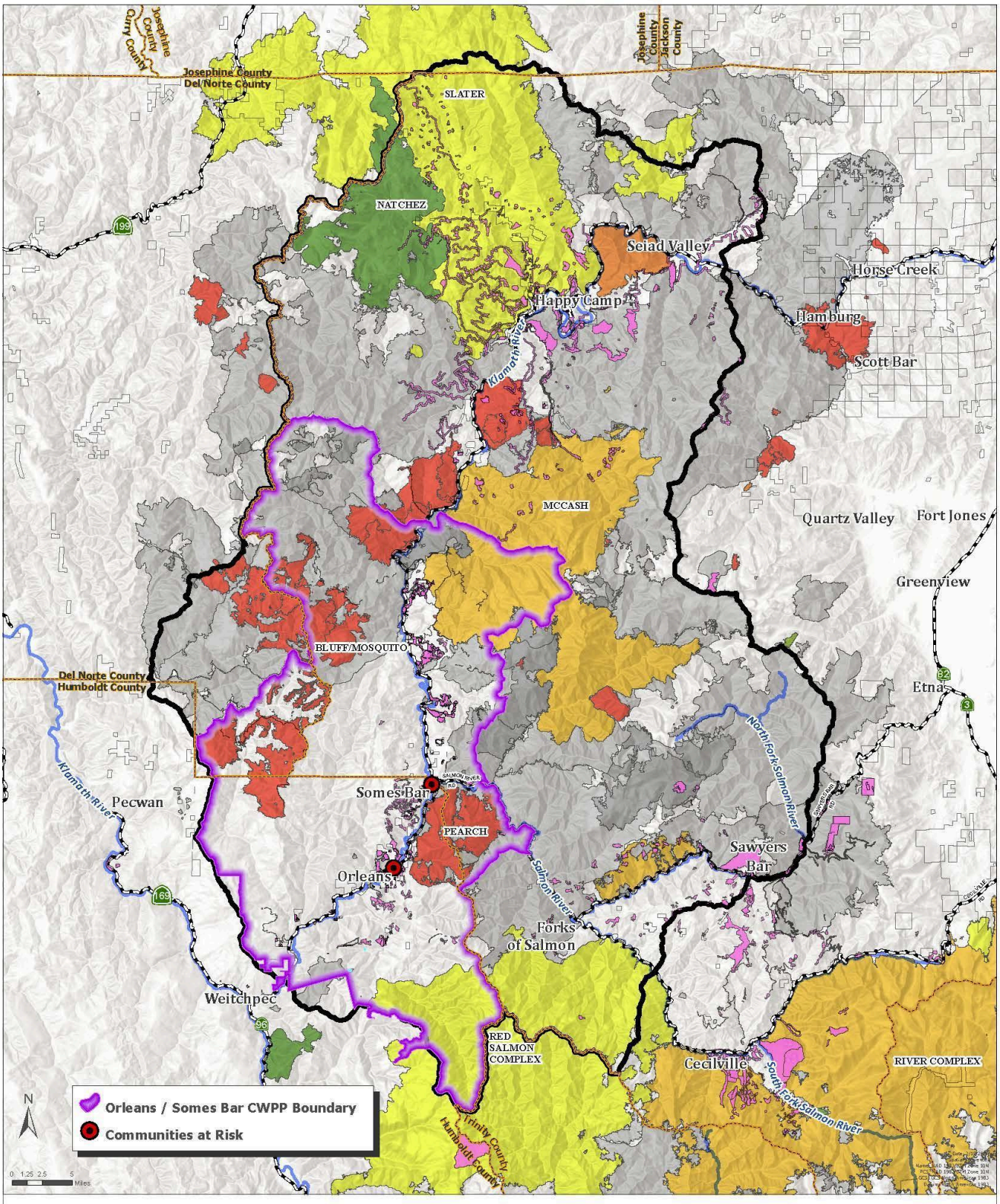


Figure 3.5. Cultural ignitions from one simulated year on the Somes Bar landscape (A), annual lightning strike probability within a 2 km window (B), and human and lightning ignition locations and interpolated density recorded between 1980-2016 from Short (2017) (C).

Figure 3: Cultural Ignition Model for OSB Planning area (Greenler 2022)

2.5: Present Fire Environment

Expanding impacts of wildfire in the western U.S. have become an increasing social, economic, and ecological concern, but is complicated by the fact that fire is a natural and unavoidable component of these systems. “Wildfire influences forested ecosystems in complex and dynamic ways. It can threaten many ecological services including watershed protection, soil erosion, wildlife habitat, carbon sequestration, timber production, subsistence and recreational opportunities, but is also a critical driver of nutrient cycling, seedbed preparation, regeneration dynamics, landscape diversity, and habitat creation” (p.2). Additionally, in many ecosystems historically characterized by low and moderate severity fires, annual area burned is still significantly below historical levels (Greenler 2022). Many western plant species are fire adapted and occur in the region, these include mixed hardwood/conifer forests, conifer forests, oak woodlands, grasslands, and riparian plant communities. Forested areas became adapted to frequent occurrence of relatively low intensity fire from human and natural ignitions for thousands of years. A local study showed that during climate periods over the past 3,000 years when fire should have decreased and conifers would have encroached on open habitats, frequent cultural burning maintained oak woodlands on the landscape, as evidenced by charcoal and oak pollen in Fish Lake sediment cores (Knight et al 2022).



Orleans-Somes Bar
Community Wildfire Protection Plan
3.1.1 Fire History Area Map

Karuk Aboriginal Territory
Major Roads
Counties

Wildfire History (2003 - 2023)
2023
2022
2021
2020
2019
2018
2003-2017
Prescribed Fire (Pile and Broadcast)

Figure 4: Fire History Area Map.

Karuk use of fire, also referred to as Indigenous Traditional Ecological Knowledge (ITEK), has been central to the evolution of the flora and fauna of the Mid Klamath. ITEK was developed alongside changing climates, natural processes, vegetation, and associated fire effects. Over eighty percent of plants utilized by Karuk people found in grasslands or open forest conditions are fire-dependent species. For example, basketry materials and acorn abundance are dependent on regular burning and specific fire intervals to properly manage these resources (Karuk Tribe 2019).

A legacy of Euro-American colonization coupled with fire exclusion have dramatically altered vegetation structure and composition across the landscape, leading to increased vulnerability to climate change, uncharacteristic wildfires, and altered abundance and distribution of key cultural resources. A recent study by Kreider et al (2024) shows empirically how fire suppression specifically has made wildfires worse and accentuated the impacts of climate change and fuels accumulations. Recent decades have experienced increased frequency and severity of wildland fire within and adjacent to the planning area. These fires demonstrate the need and urgency for maximizing community preparedness for wildland fire. For more on the socio-political factors currently present, see 4.1.

2.6: Future Fire Environment

Balancing the wide range of ecosystem and human responses to wildfire is a complex and evolving challenge requiring innovative policy, research, and management. While developing wildfire management strategies, it is critical to acknowledge the many inherently fire-adapted ecosystems in the West. Many wildfires burn under a wide range of severities and often do not create vast high severity wastelands; and overall fire extent on the landscape is still generally lower than historic levels. However, total area burned is predicted to continue increasing in the coming decades, which will lead to an increasing number of fires that burn within recent fire footprints. Understanding fire behavior and effects of reburning landscapes will be critical for strategic fire management, planning, and postfire restoration in the years to come (Greenler 2022). See also 4.1.4 and 4.4.3.

Currently, post-fire management on public lands is primarily focused on short term mitigation and may include post-fire rehabilitation, salvage logging, and replanting. While it is important to address critical needs immediately following a fire, there is an increasing need for post-wildfire management that takes a broader and longer-term approach in the expectation of future fires. There are increasing calls for post fire management that balances historic and modern management with ecologically-based approaches, for example regenerating heterogeneous and resilient stands. Recommended actions include the years and decades following a wildfire to manage intentionally and adaptively to promote establishment of future forests that are healthy; valuable ecologically, socially, and economically; and are more aligned with fire processes on the landscape (Greenler 2022). Post fire recovery in the Klamath region considers topographical aspect as a key factor in these systems. South aspects share dominance between hardwoods and conifers, and drive fire frequency with higher frequency found here, while more northerly aspects shift dramatically away from this. (Ortiz et al. 2019). See also 4.5.

North et al. points out, pyrosilviculture is critical to restoring forest resiliency in dry western U.S. forests (2021). As fire use and management has always been central to Karuk people on this landscape, it has been found

that Karuk fire regimes encourage pyrodiversity. And in the era of climate change, indigenous knowledge and management practices are being sought and offer viable solutions to reduce the likelihood of high severity fires (Karuk Tribe, 2019).

PART 3. Planning Area

3.1: Overview and description of neighborhood and landscape scale projects

Part 3. of this document contains maps of Orleans-Somes Bar community and adjacent landscapes of interest.

3.2: Base map neighborhoods, private properties, and other local areas of importance

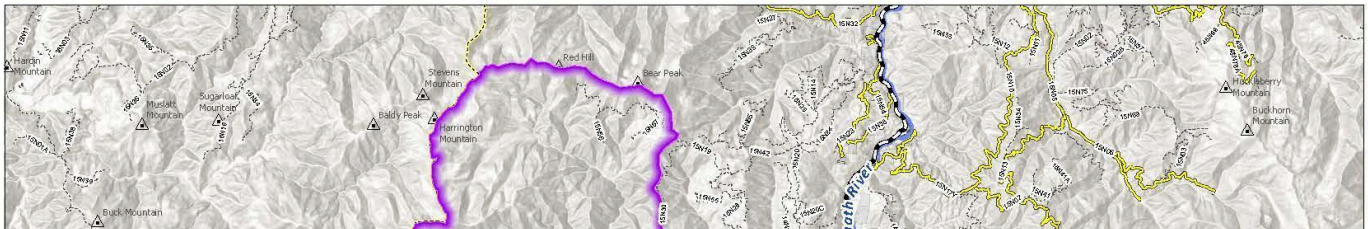
The following CWPP base map (Figure 5) exhibits detailed information including all neighborhoods and private properties, WUI designations, travel routes (primary roads), and emergency access routes (ingress/egress). The wider community has been divided into neighborhoods based on geography and roads, which facilitates planning efforts by neighborhood, and advances cohesion and readiness between neighbors. The Community Liaison Program (see section 4.2.3) has been instrumental in defining these boundaries and has enabled community engagement in the development of this plan.

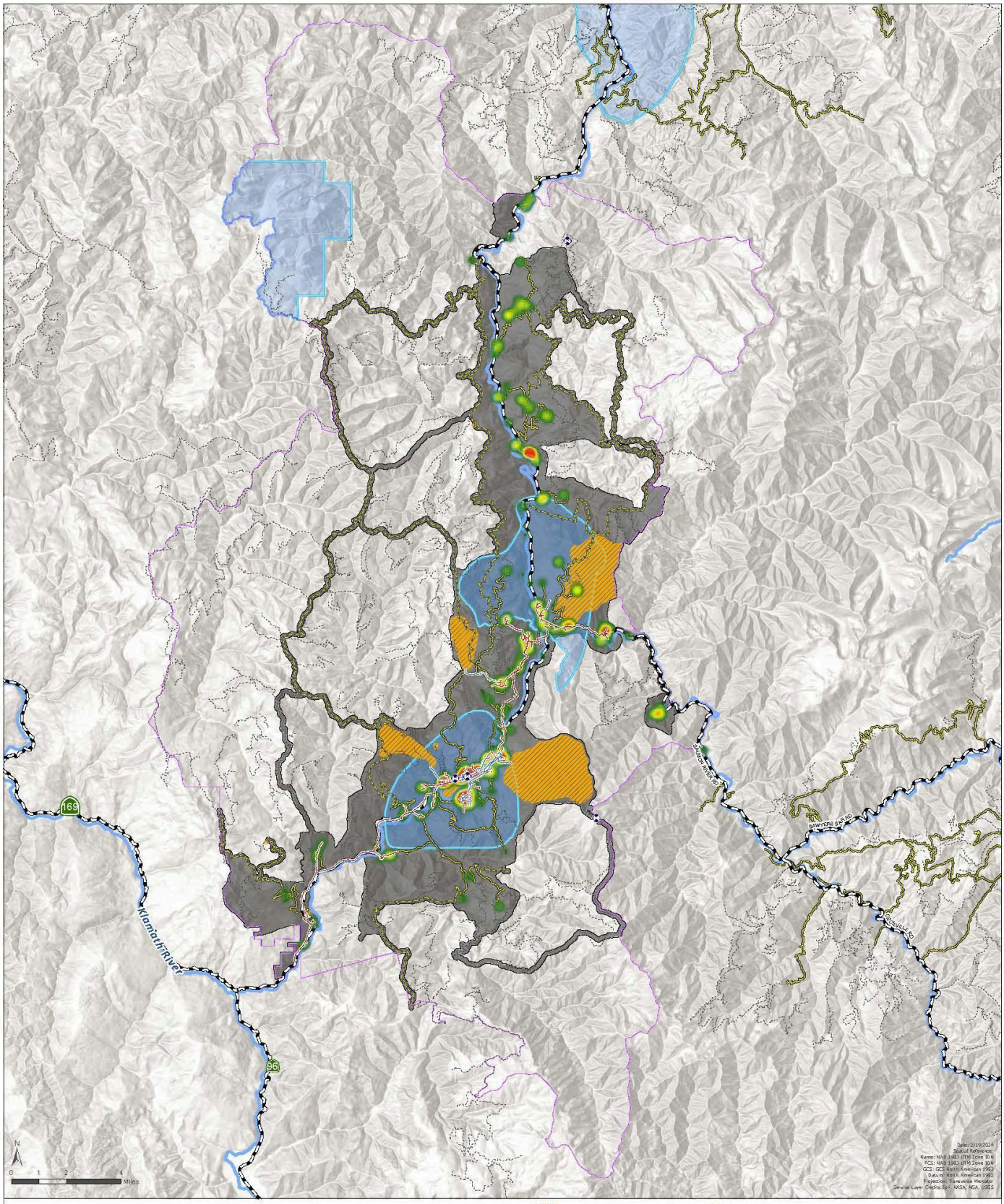
3.3: WUI designation(s)

The Healthy Forest Restoration Act (HRFA) allows community wildfire protection plans (CWPP) to define the wildland-urban interface (WUI). In the absence of a CWPP, the WUI is defined as an area extending ½-mile from the boundary of an at-risk community; or an area within 1.5 miles of the boundary of an at-risk community if the area has a sustained steep slope, has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or is in condition class 3, and an area that is adjacent to an evacuation route for an at-risk community that requires hazardous fuel reduction to provide safer evacuation from the at-risk community. This CWPP presents a WUI boundary (see Figure 5 and the neighborhood maps Figures 7-17) that is larger than the default definition due to the steep terrain in the planning area, the need to extend the WUI boundary from homes to the nearest reasonable fire control feature, and in order to prioritize fuel reduction along primary and secondary evacuation routes. 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. The WUI is composed of three separate categories. 1) 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. 2) 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. 3) Municipal Watersheds: The municipal watersheds within the planning area are within the WUI.

3.4: Values at Risk; Maps of local areas and neighborhoods

The Community Values at Risk map (Figure 6) shows population/structure density as a way to evaluate density of values at risk. Also pictured are primary roads, power line easements, cultural management areas and other areas of community importance. More detailed views can be found in individual neighborhood Values at Risk maps.




Klamath River
96
Miles
Orleans-Somes Bar Community Wildfire Protection Plan
3.3 Community Values at Risk
Orleans Somes Bar CWPP Boundary
Primary Ingress Routes
Secondary Egress Routes
Areas of Community Importance
Cultural Managment Areas
Community Water Systems
PG & E Powerlines
Communication Tower
Structure Density
Sparse
Dense

The following neighborhood maps (Figures 7-17) represent a closer view at infrastructure, including the following:

- Community water systems (including municipal watersheds) facilities, lines, tanks, and pumps.
- Water Sources, including hydrants, standpipes, water tanks and pump houses
- Powerlines and electrical switch stations
- Communication systems, including the Orleans and Ukonom Mountain repeaters, telephone translators, Áan Chúuphan ISP system, and call boxes
- Private properties
- Structures
- Critical facilities (Orleans Volunteer Fire Department, Schools, Tribal Health Clinic, Gas Station, USFS fire Stations, Tribal community centers/kitchens, MKWC community center and fire response supplies/equipment, Karuk Department of Natural Resources fire response supplies/equipment, grocery stores)
- Cultural management areas, including the Panámniik Ceremonial District (eligible for the National Register of Historic Places); Ka`tim`îin Cultural Area (including Offield Mountain); Amikiarum Cultural Area; and Tishániik Flat (cultural value)
- Primary ingress/egress routes
- Secondary egress routes
- Helicopter Landing sites
- Salmon River (Wild and Scenic River), including river access points
- Klamath River (Wild and Scenic River), including river access points
- U.S. Forest Service Campgrounds (Pearch Creek, Ti Bar, Dillon Creek, Oak Bottom, Frog Pond, E-Ne-Nuk, Aikens Creek, Fish Lake, Camp Three, Camp Creek Recreation Area, dispersed campsites.

Maps are organized from north to south on the east side of the river, central area, and north to south on the west side of the river.

North and East: Ti-Bar, Patterson, Rogers, Somes Bar, Butler, Upper Red Cap,

Central: The following neighborhoods are shown on a single map. Orleans, Lower Ishi Pishi, Pearch Creek, School Road, Red Cap.

North and West: Donahue, Upper Ishi Pishi/Ten Eyck, and Thunder Mtn/Middle Ishi Pishi,
South: Owl Mine/Cedar Camp/Boise, Slate Creek/Bluff Creek

Additional information about priority actions in these neighborhoods is available in Appendix G.

3.5 Other areas of community importance

The majority of this recreation in the Orleans Somes Bar planning area takes place during the summer and fall, during wildfire season -- increasing the number of people at risk in wildfire events and likelihood of human-caused fires. Recreational sites such as campgrounds, trailheads, and river access points should be prioritized. Treatment of roads accessing these highly used recreation locations and around developed campgrounds will reduce the risk both of fires being started from these locations and the risk to individuals using these recreation sites during wildfire season.

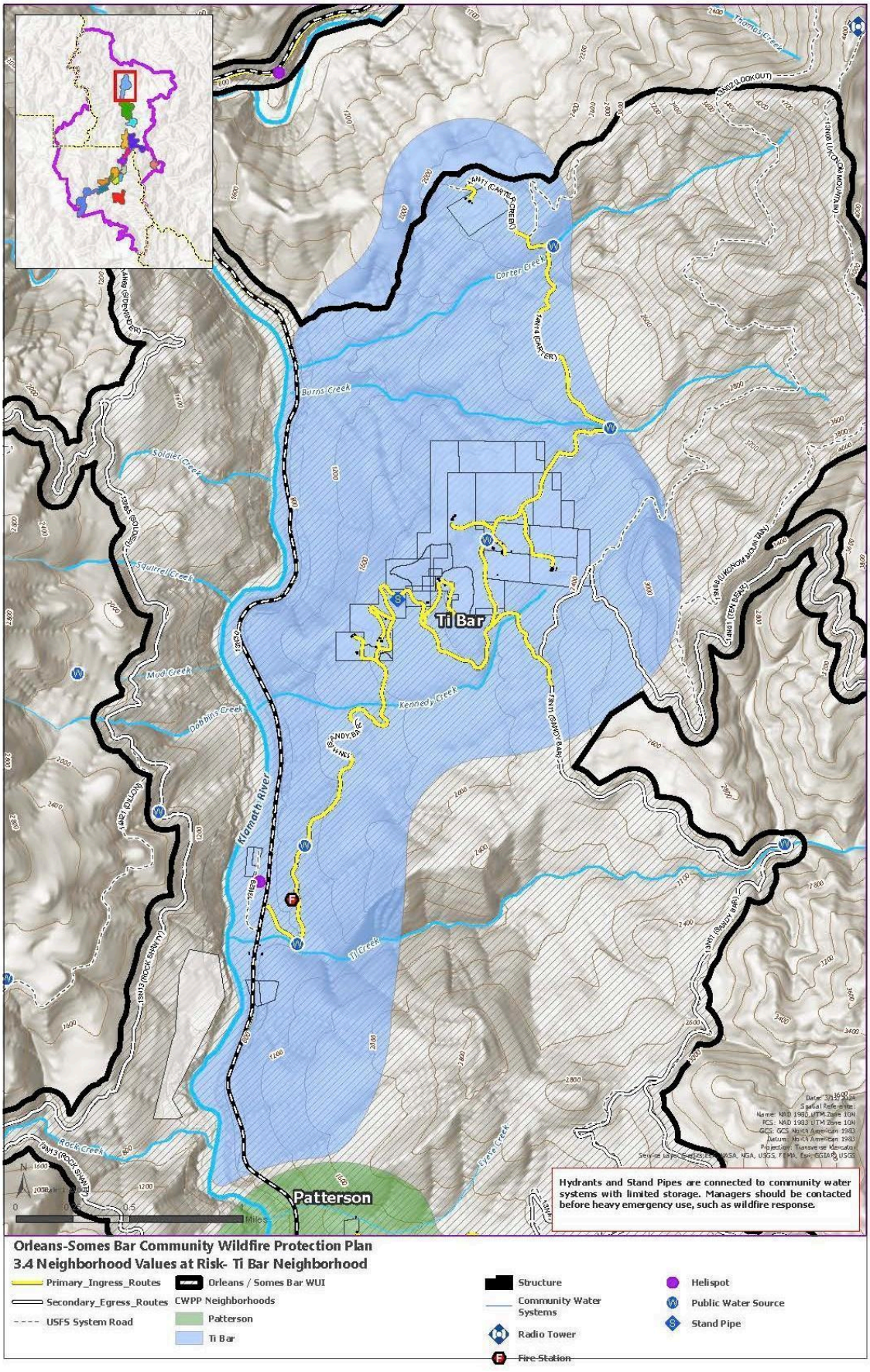

Ti Bar
Patterson
Corter Creek
Burns Creek
Soldier Creek
Squirrel Creek
Mud Creek
Dobbins Creek
Kennedy Creek
Klamath River
Ti Creek
Rock Creek
Lyons Creek
Thomas Creek
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Ti Bar Neighborhood
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Patterson
Ti Bar
Structure
Community Water Systems
Radio Tower
Fire Station
Helispot
Public Water Source
Stand Pipe

Figure 7: Ti Bar Neighborhood Values at Risk

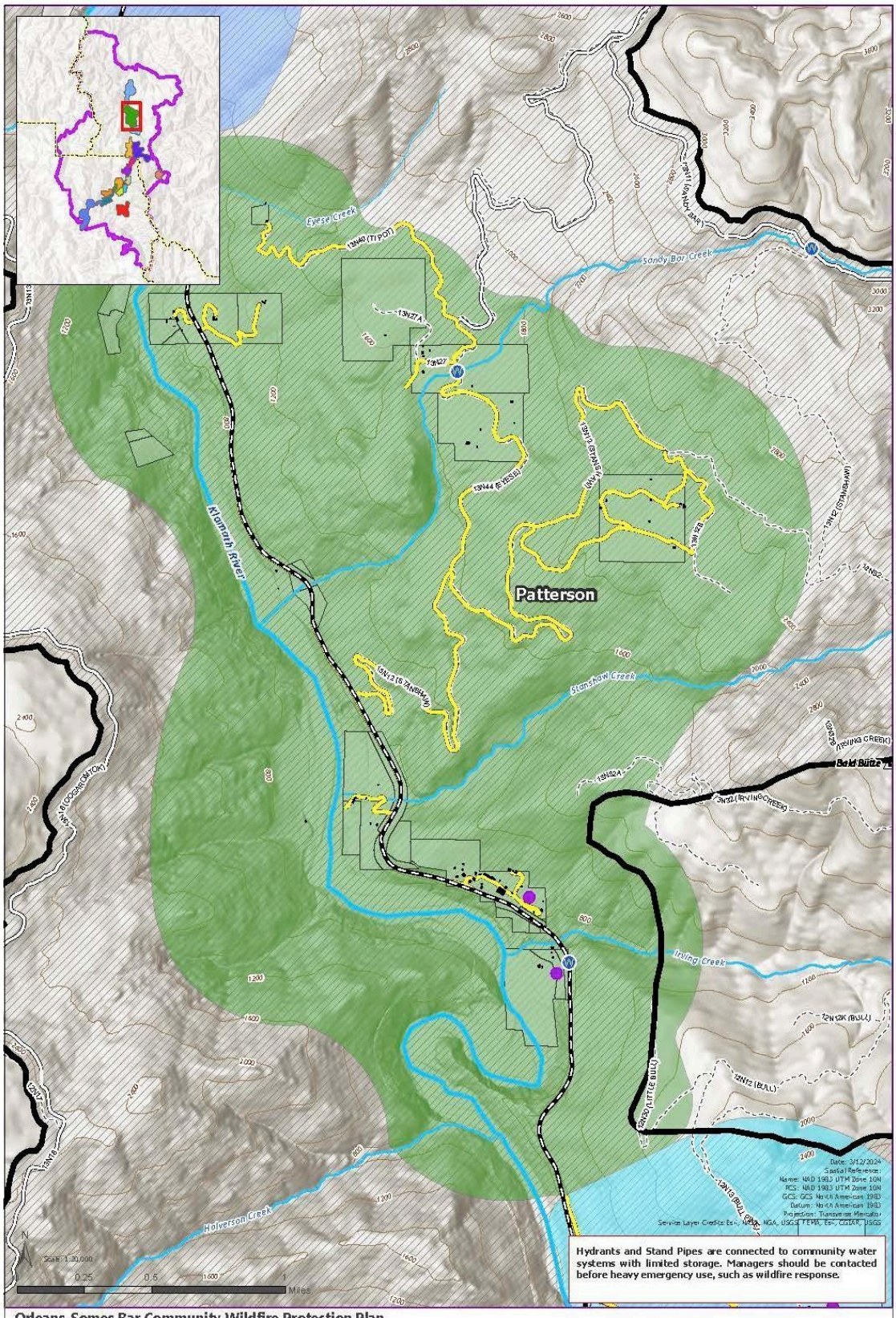

Patterson
Klamath River
Sandy Bar Creek
Eyese Creek
Stanshaw Creek
Irving Creek
Holverson Creek
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Patterson Neighborhood
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Patterson
Rogers Creek
Ti Bar
Structure
Community Water Systems
Helispot
Public Water Source

Figure 8: Patterson Neighborhood Values at Risk

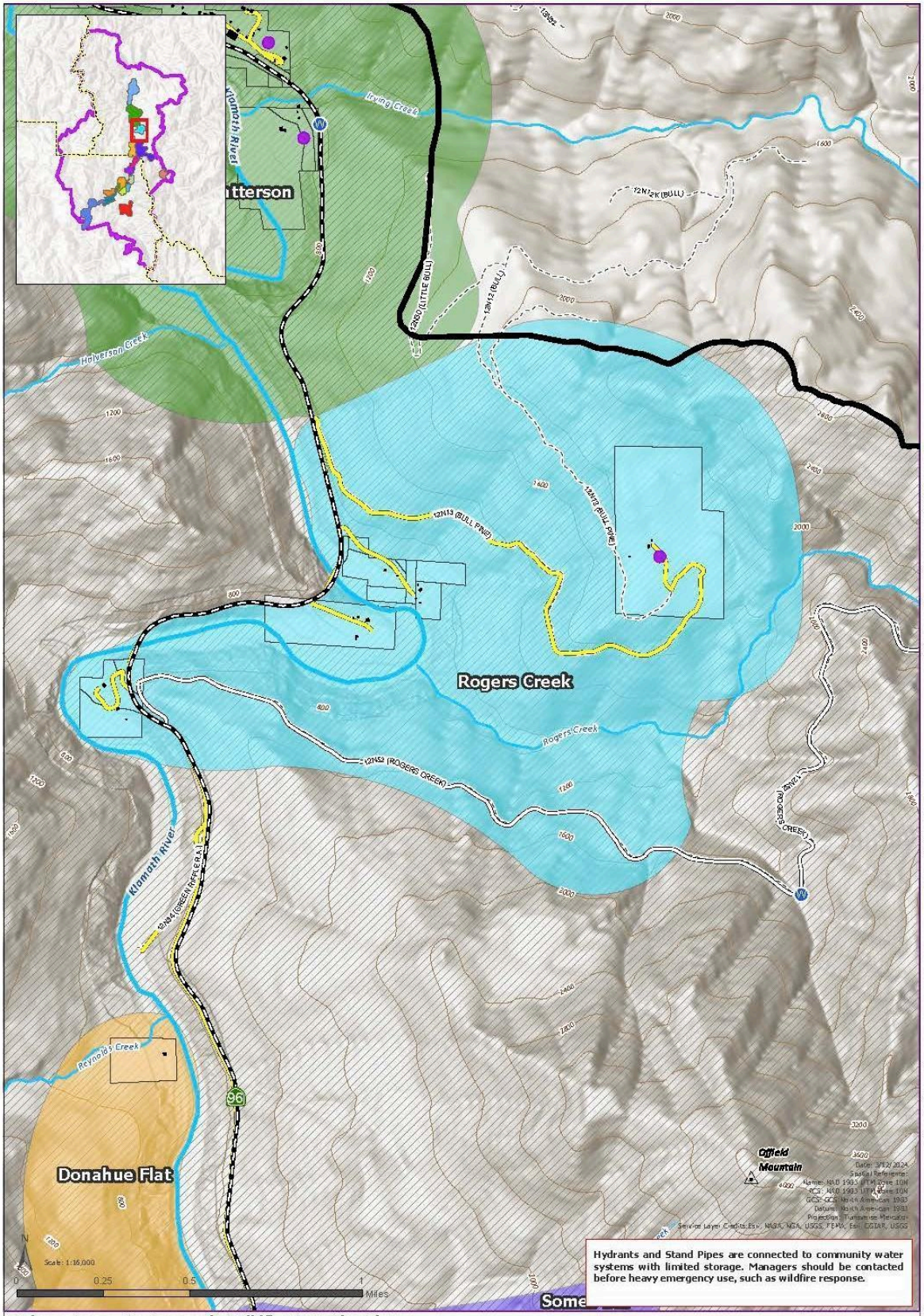

Rogers Creek
Donahue Flat
Patterson
Somes Bar
Klamath River
Irving Creek
Holyerson Creek
Rogers Creek
Reynolds Creek
Offield Mountain
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Rogers Creek Neighborhood
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Donahue Flat
Patterson
Rogers Creek
Somes Bar
Structure
Community Water Systems
Helispot
Public Water Source

Figure 9: Rogers Creek Neighborhood Values at Risk

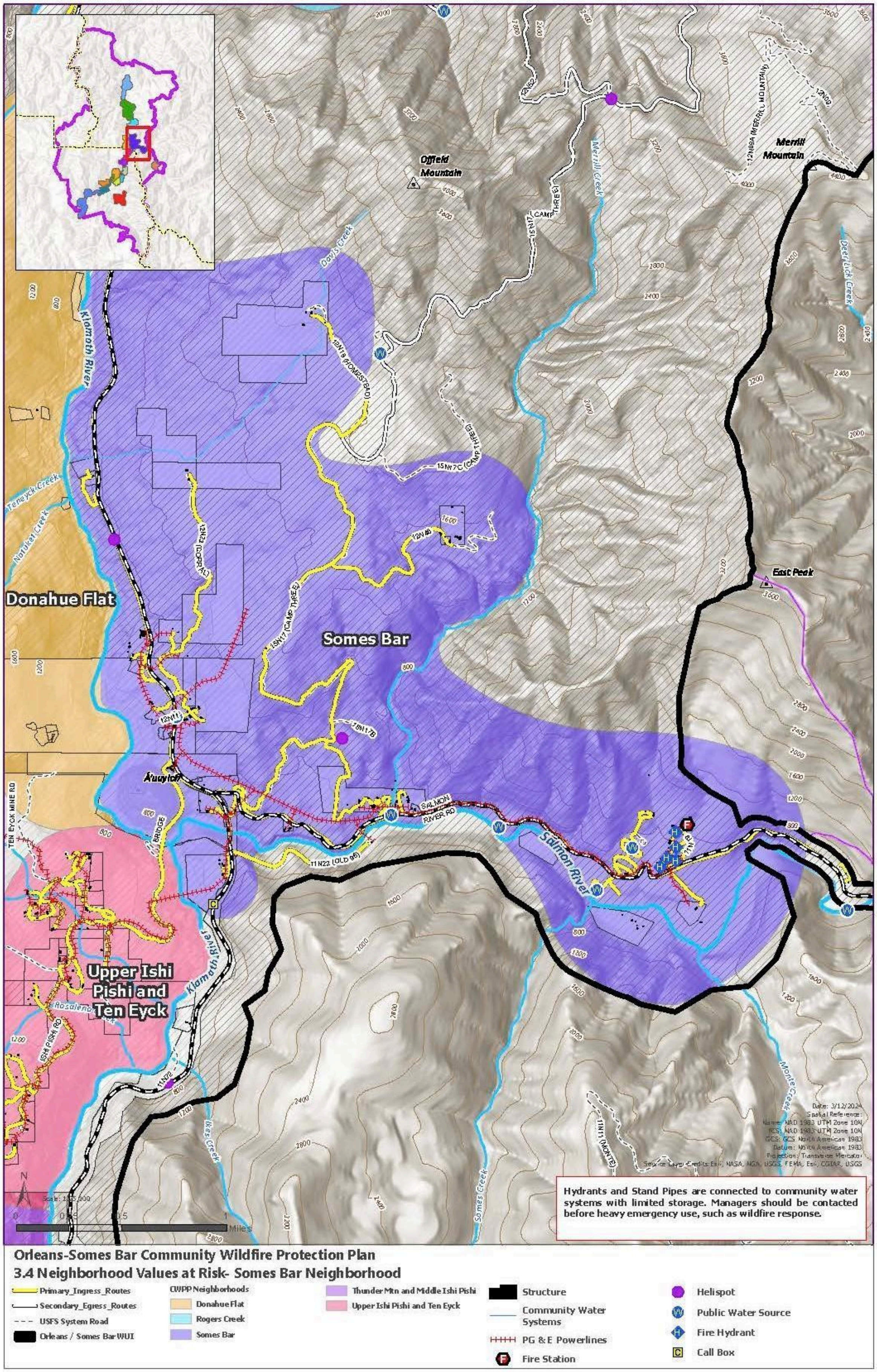
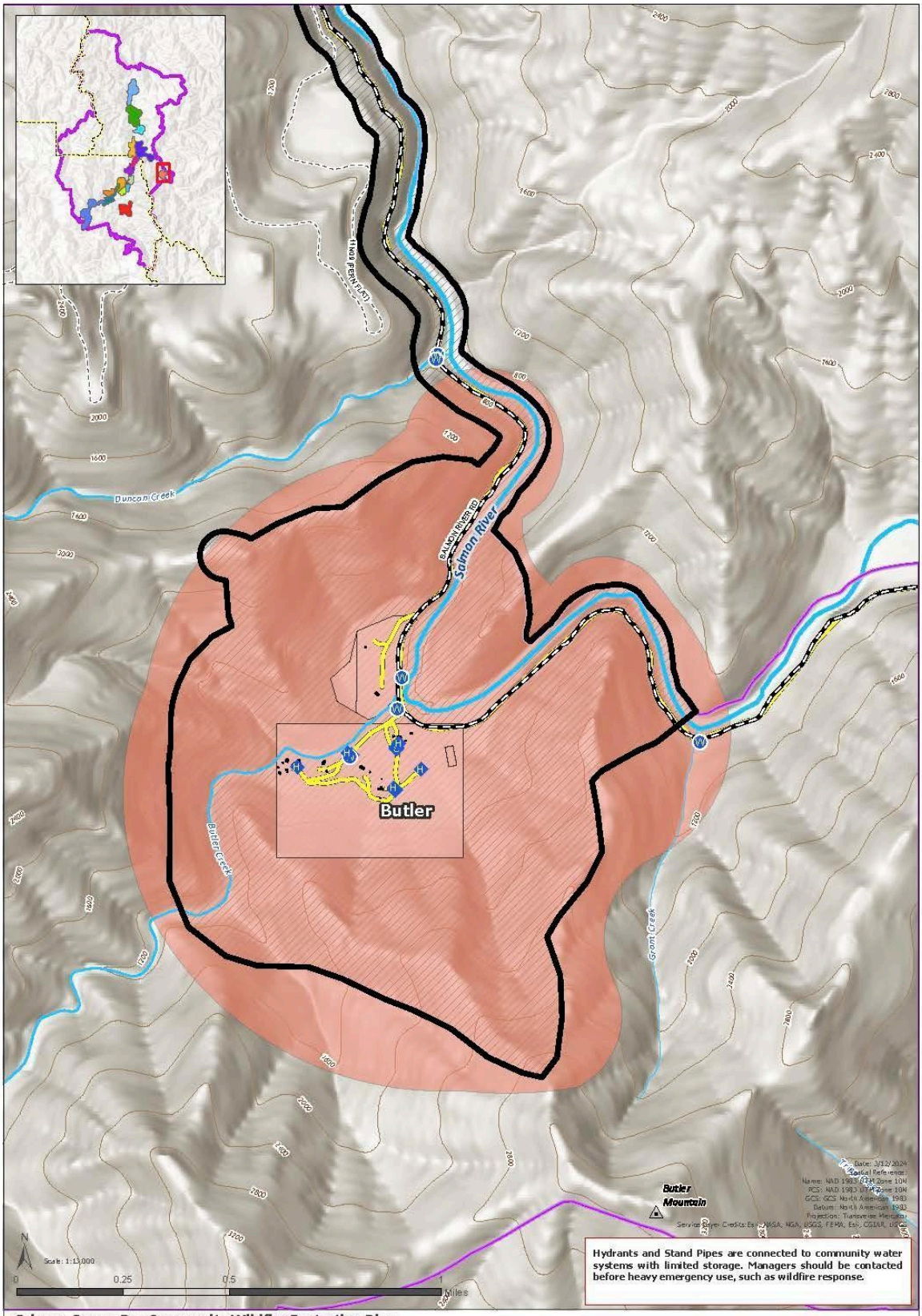

Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Somes Bar Neighborhood
Somes Bar
Donahue Flat
Upper Ishi Pishi and Ten Eyck
Offield Mountain
Merrill Mountain
East Peak
Klamath River
Salmon River
Merrill Creek
Davis Creek
Teneyck Creek
Nanukai Creek
Deer Lick Creek
Rosalieno
Ikes Creek
Somes Creek
Monte Creek
Ameyich
SALMON RIVER RD
11N22 (OLD 96)
12N11
12N18 (FROMSIS ROAD)
15N17C (CAMP THREE)
15N17 (CAMP THREE)
12N24 (DOPRAL)
12N45
78N17B
BRIDGE
TEN EYCK MINE RD
ISHI PISHI RD
11N22
11N11 (MONTE)
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Date: 3/12/2024
Miles
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Donahue Flat
Rogers Creek
Somes Bar
Thunder Mtn and Middle Ishi Pishi
Upper Ishi Pishi and Ten Eyck
Structure
Community Water Systems
PG & E Powerlines
Fire Station
Helispot
Public Water Source
Fire Hydrant
Call Box

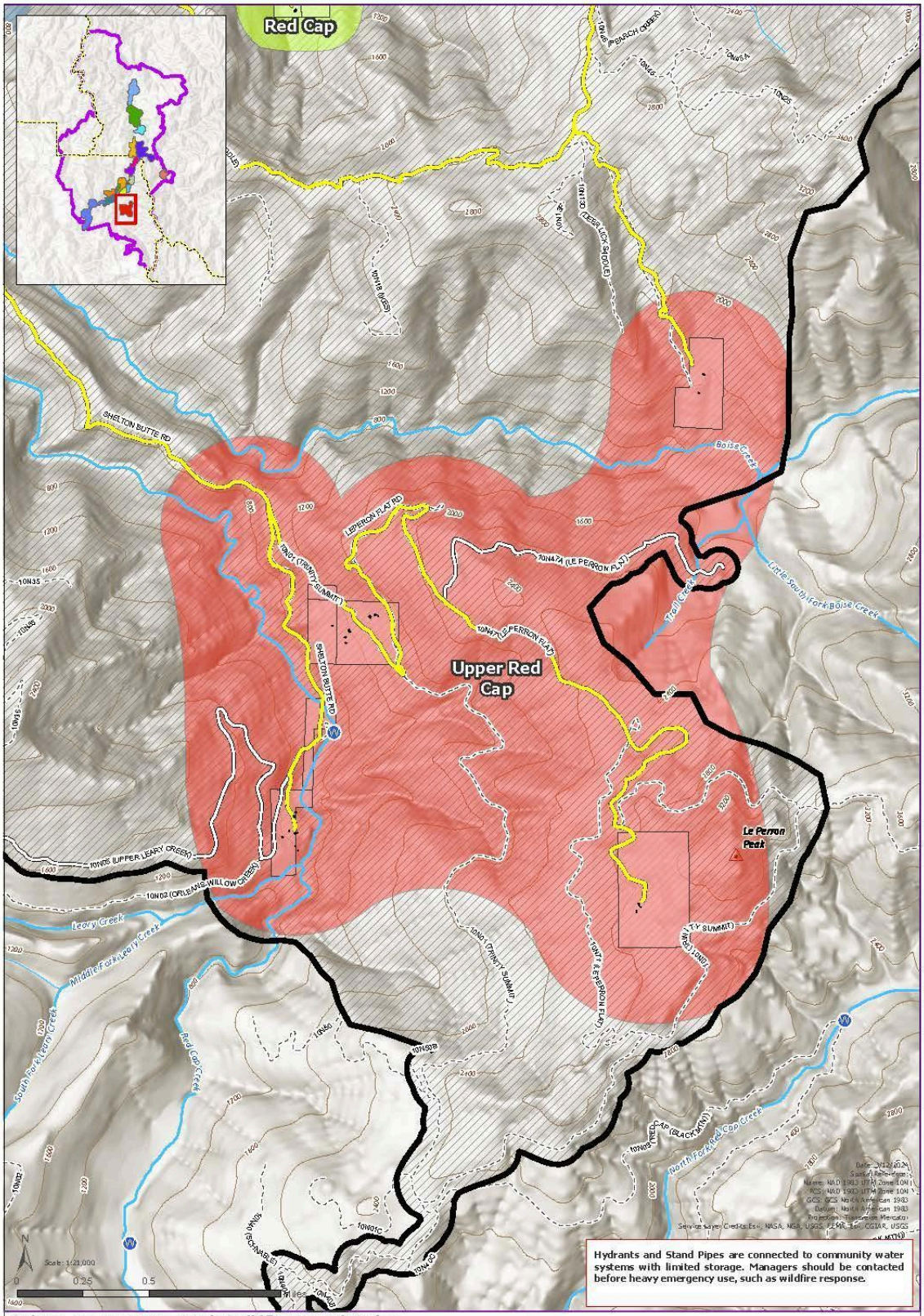
Figure 10: Somes Bar Neighborhood Values at Risk



Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Butler Neighborhood

- Primary_Ingress_Routes
- USFS System Road
- Orleans / Somes Bar WUI
- CWPP Neighborhoods
- Butler
- Structure
- Community Water Systems
- Public Water Source
- Fire Hydrant
- Stand Pipe

Figure 11: Butler Neighborhood Values at Risk


Red Cap
Upper Red Cap
Le Perron Peak
SHELTON BUTTE RD
LEPERON FLAT RD
10N47A (LE PERRON FLAT)
10N47 (PERRON FLAT)
10N01 (TRINITY SUMMIT)
10N03 (ORLEANS-WILLOW CREEK)
10N05 (UPPER LEARY CREEK)
10N02 (TY SUMMIT)
10N07 (LE PERRON FLAT)
10N03 (TRINITY SUMMIT)
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Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Upper Red Cap Neighborhood
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Boise Creek
Red Cap
Upper Red Cap
Structure
Community Water Systems
PG &E Powerlines
Public Water Source

Figure 12: Upper Red Cap Neighborhood Values at Risk

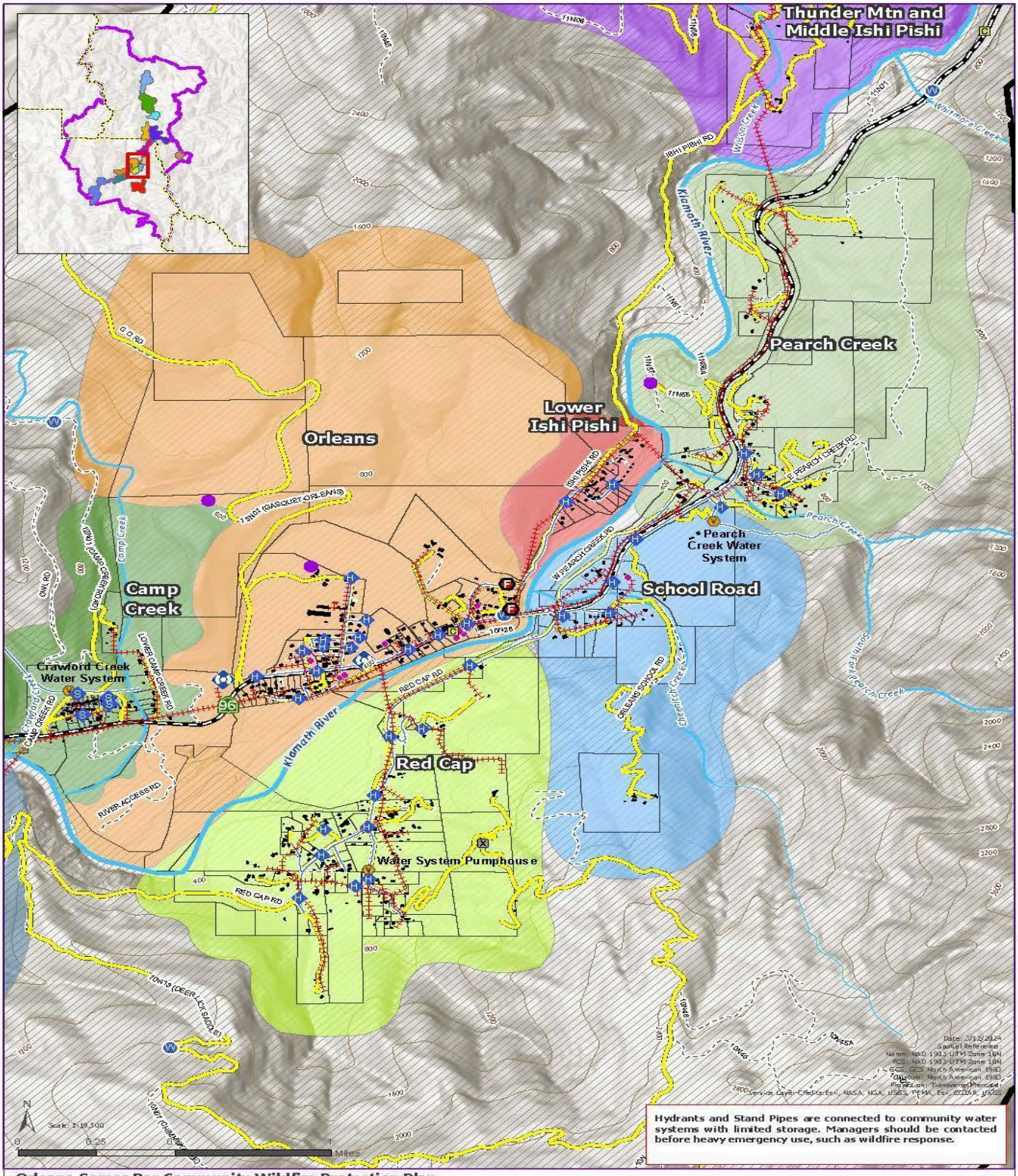

Thunder Mtn and Middle Ishi Pishi
Pearch Creek
Lower Ishi Pishi
Orleans
Pearch Creek Water System
School Road
Camp Creek
Crawford Creek Water System
Red Cap
Water System Pumphouse
Klamath River
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Orleans, Lower Ishi Pishi, Pearch Creek, School Road, Red Cap, Camp Creek Neighborhoods
Primary_Ingress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Boise Creek
Camp Creek
Lower Ishi Pishi
Orleans
Pearch Creek
Red Cap
School Road
Thunder Mtn and Middle Ishi Pishi
Critical Structure
Structure
Community Water Systems
PG &E Powerlines
Radio Tower
Fire Station
Helispot
Public Water Source
Fire Hydrant
Stand Pipe
Call Box
Value at Risk
Gate

Figure 13: Orleans, Lower Ishi Pishi, Pearch Creek, School Road, Red Cap, Camp Creek Neighborhood Values at Risk

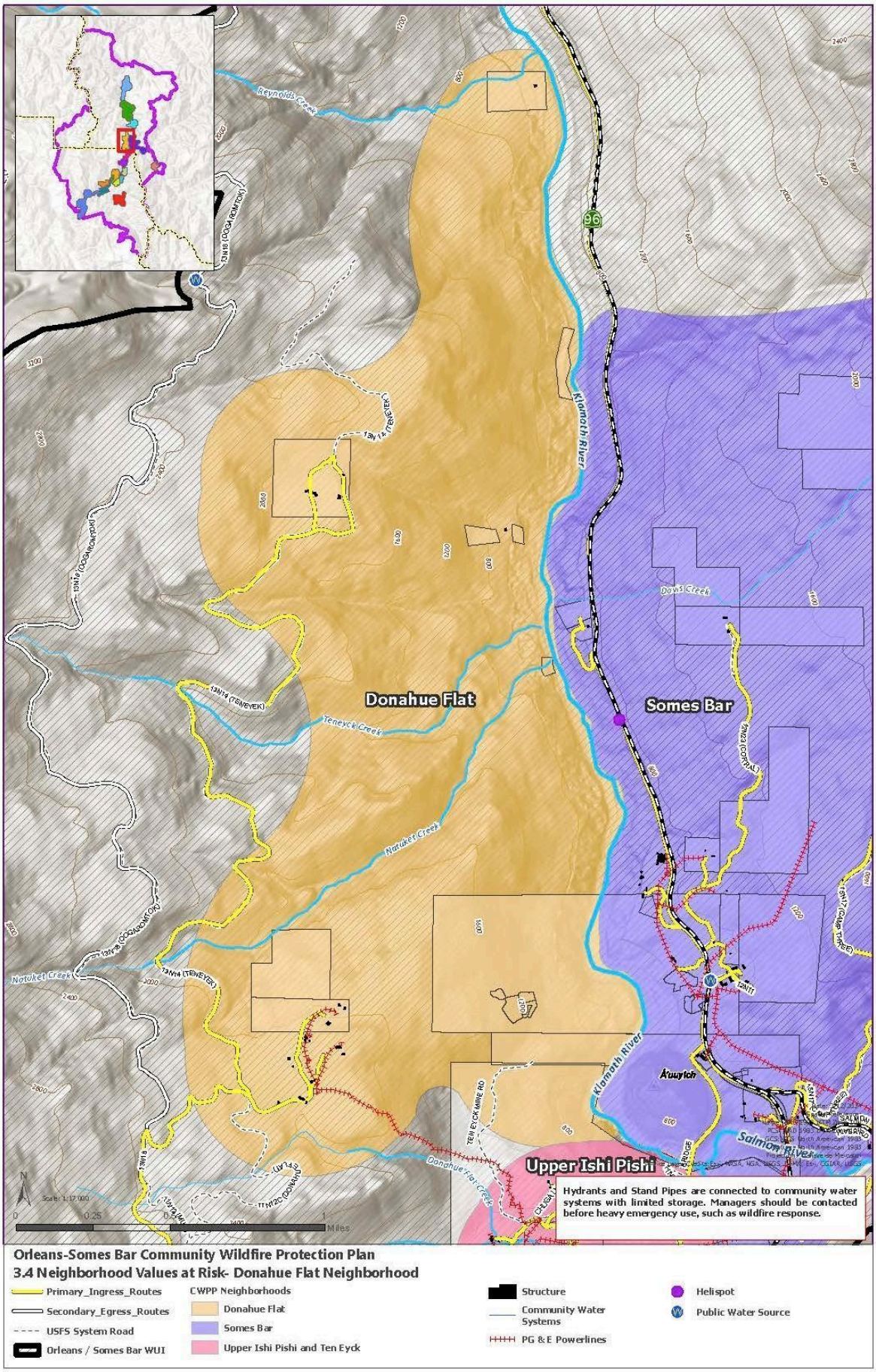

Donahue Flat
Somes Bar
Upper Ishi Pishi
Reynolds Creek
Klamath River
Davis Creek
Teneyck Creek
Natuket Creek
Donahue Flat Creek
Salmon River
A'uuy'ich
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Donahue Flat Neighborhood
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Donahue Flat
Somes Bar
Upper Ishi Pishi and Ten Eyck
Structure
Community Water Systems
PG & E Powerlines
Helispot
Public Water Source

Figure 14: Donahue Flat Neighborhood Values at Risk

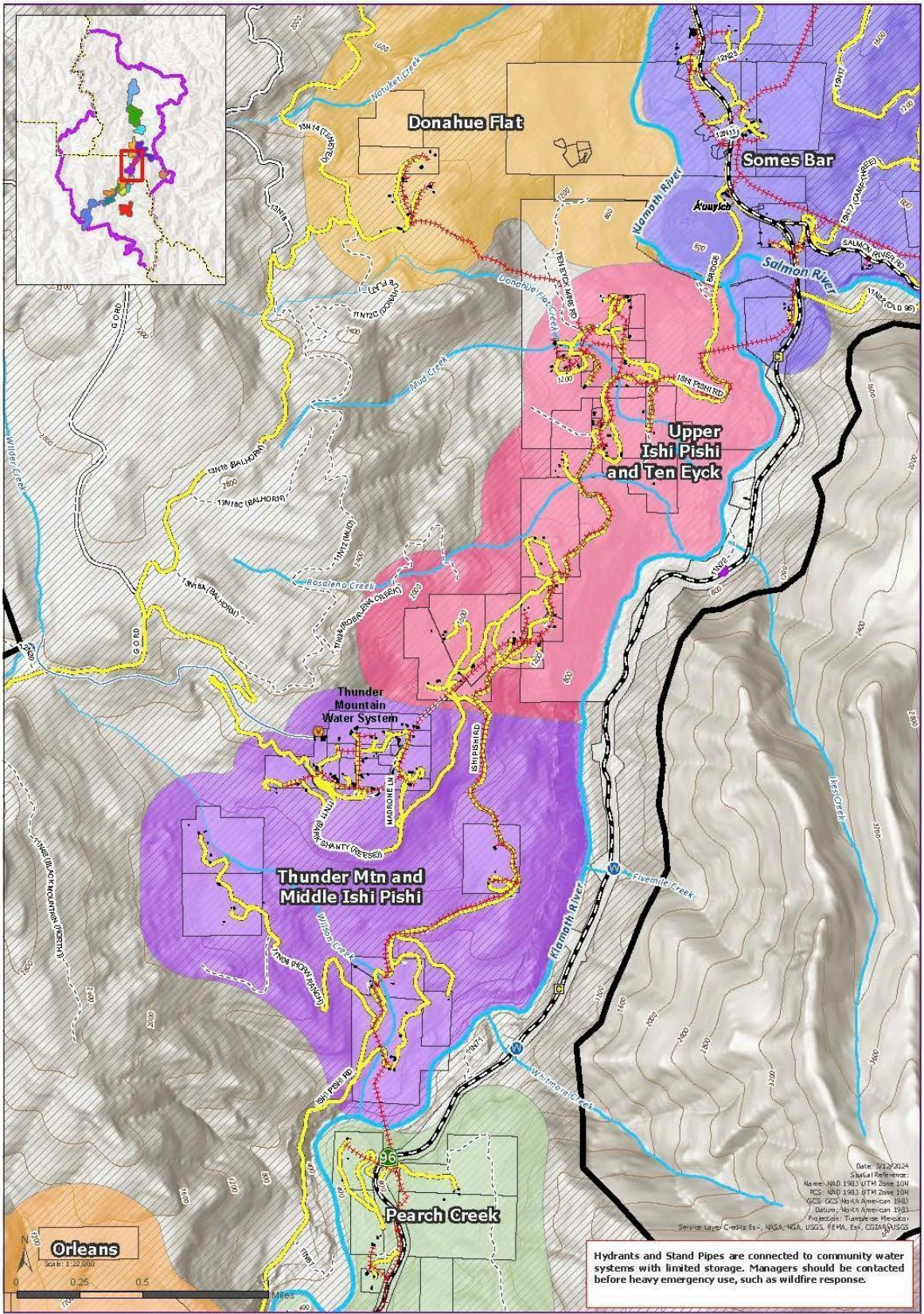
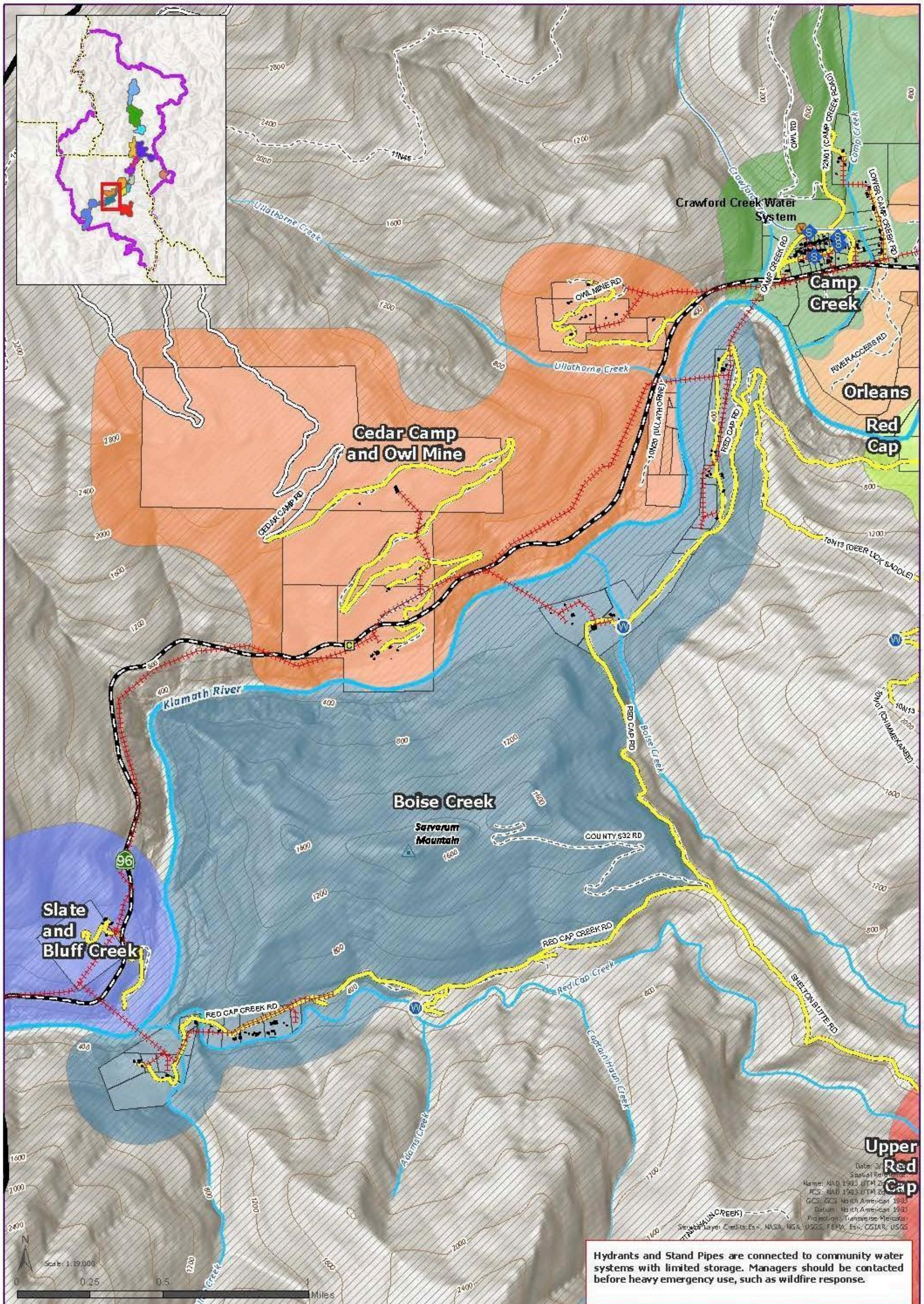

Donahue Flat
Somes Bar
Upper Ishi Pishi and Ten Eyck
Thunder Mountain Water System
Thunder Mtn and Middle Ishi Pishi
Pearch Creek
Orleans
Klamath River
Salmon River
Mud Creek
Rosalena Creek
Wilson Creek
Fivemile Creek
Whitmore Creek
Ikes Creek
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Upper Ishi Pishi, Ten Eyck, Thunder Mtn and Middle Ishi Pishi Neighborhoods
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Donahue Flat
Orleans
Pearch Creek
Somes Bar
Thunder Mtn and Middle Ishi Pishi
Upper Ishi Pishi and Ten Eyck
Structure
Community Water Systems
PG & E Powerlines
Helispot
Public Water Source
Call Box
Value at Risk

Figure 15: Upper Ishi Pishi, Ten Eyck, Thunder Mountain, Middle Ishi Pishi Neighborhood Values at Risk


Crawford Creek Water System
Camp Creek
Orleans
Red Cap
Cedar Camp and Owl Mine
Boise Creek
Slate and Bluff Creek
Upper Red Cap
Klamath River
Ullathorne Creek
Red Cap Creek
Boise Creek
Camp Creek
Captain Haun Creek
Adams Creek
OWL MINE RD
CEDAR CAMP RD
CAMP CREEK RD
LOWER CAMP CREEK RD
RED CAP RD
RED CAP CREEK RD
COUNTY 532 RD
SHELTON BUTTE RD
RIVER ACCESS RD
10N20 (ULLATHORNE)
10N13 (DEER LICK SADDLE)
Salverum Mountain
96
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Scale: 1:19,000
0 0.25 0.5 1 Miles

Orleans-Somes Bar Community Wildfire Protection Plan

3.4 Neighborhood Values at Risk- Cedar Camp and Owl Mine, Boise Creek Neighborhoods

- Primary_Ingress_Routes
- Secondary_Egress_Routes
- USFS System Road
- Orleans / Somes Bar WUI

CWPP Neighborhoods
- Boise Creek
- Camp Creek
- Cedar Camp and Owl Mine
- Orleans
- Red Cap
- Slate and Bluff Creek
- Upper Red Cap

- Structure
- Community Water Systems
- PG & E Powerlines
- Public Water Source
- Stand Pipe
- Call Box
- Value at Risk

Figure 16: Cedar Camp and Owl Mine, Boise Creek Neighborhood Values at Risk

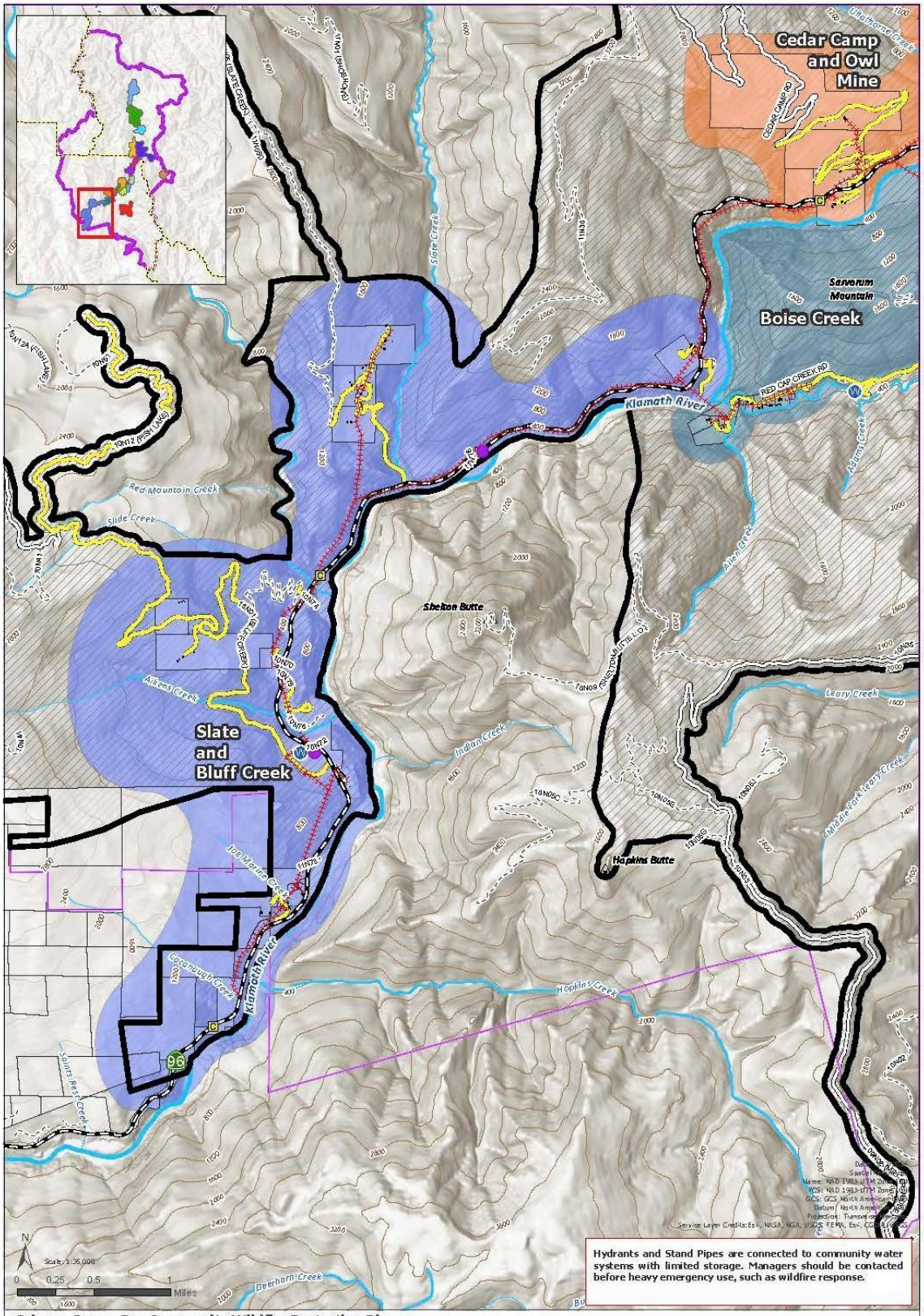

Cedar Camp and Owl Mine
Boise Creek
Slate and Bluff Creek
Klamath River
Red Mountain Creek
Slide Creek
Aikens Creek
Indian Creek
Leary Creek
Hopkins Creek
Deermorth Creek
Saints Rest Creek
Shelton Butte
Hopkins Butte
Hydrants and Stand Pipes are connected to community water systems with limited storage. Managers should be contacted before heavy emergency use, such as wildfire response.
Orleans-Somes Bar Community Wildfire Protection Plan
3.4 Neighborhood Values at Risk- Slate and Bluff Creek Neighborhood
Primary_Ingress_Routes
Secondary_Egress_Routes
USFS System Road
Orleans / Somes Bar WUI
CWPP Neighborhoods
Boise Creek
Cedar Camp and Owl Mine
Slate and Bluff Creek
Structure
Community Water Systems
PG &E Powerlines
Helispot
Public Water Source
Call Box

Figure 17: Slate and Bluff Creek Neighborhood Values at Risk

PART 4. Community Hazard Reduction and Action Plan

Summary of Priorities

Priorities are listed for each section below – focusing on the content of the section. Across the landscape, areas within the Wildland Urban Interface (WUI) with the highest population benefit should be prioritized (e.g. fuels treatments along ingress/egress routes, water systems). Critical infrastructure should also be prioritized, whether or not it is within the WUI. If using government funding for treatments, treatment areas will need to have environmental compliance. While not all areas with existing environmental compliance (see Figure 19) will fall within these priority areas, future environmental compliance efforts should address priority treatments. The Western Klamath Restoration Partnership (WKRP) conducted a separate prioritization process (see Figure 18) that may be considered when prioritizing projects. This WKRP "overlay assessment" includes several factors applicable to CWPP prioritization including layers for: structures, Public/Private Property Boundaries, Roads, existing firelines, historic trails, Cultural Use Areas (NACUAs), and areas with high likelihood of severe fire (e.g. high solar insolation, upper 1/3 slopes, south/southwest slopes). The overlay assessment also considers retreatment of past fuels reduction treatment areas, prioritizing areas 3-10 since treatment, as well as areas within the WUI that have experienced fire within the last 10 years.

4.1 Integrated Planning

The OSB CWPP planning area is a sub-part to, but central to the broader Western Klamath Restoration Partnership (WKRP) planning area that is multi-jurisdictional, multi-partner, and encompasses much of the Western Klamath Mountains. There is close alignment of priorities and values between the OSB CWPP under the broader umbrella of WKRP. WKRP partners comprise Federal, Tribal, and Non-governmental Organizations (NGO) and include the Karuk Tribe, Six Rivers and Klamath National Forests, Pacific Southwest Research Station, Mid Klamath Watershed Council (MKWC), Salmon River Restoration Council (SRRC), and Klamath Forest Alliance (KFA)/Environmental Protection Information Center (EPIC). Partners specific to the Mid Klamath include the Orleans Somes Bar Fire Safe Council (OSB FSC) and Orleans Volunteer Fire Department (OVFD). Operating in this collaborative reinforces strategic approaches and agreement on collective goals shared by regional partners. Therefore, reference to Mid Klamath partners in this document is by-and-large synonymous with WKRP partners as well. For more, see below on the 2014 Western Klamath Restoration Partnership Plan.

4.1.1 Local integrated wildfire-preparedness capacity

The OSB community contains **several agencies and organizations** creating a baseline of wildfire-preparedness capacity that is continually being grown and advanced. Here, the **Karuk Tribe Department of Natural Resources** (Karuk DNR) operates a robust Wildland Fire Program under cultural objectives to return seasonal low intensity fires, promote species abundance and diversity, and prevent catastrophic wildfires to restore cultural practices. The **Six Rivers National Forest Orleans and Ukonom Ranger Districts** operate locally and engage a wildland fire management program including; prevention, suppression, managing for resource benefits, prescribed fire, and hazardous fuel reduction. The **Mid Klamath Watershed Council** (MKWC) has a Fire and Forestry Program that engages a variety of different activities for wildfire preparedness including prescribed fire, fuels reduction, forest restoration, home hardening and defensible space, a Community Liaison Program, and broader network partnering and regional planning with

the Karuk Tribe and others on spatial fire planning and fire modeling. And the **Orleans Volunteer Fire Department** (OVFD), operates an all-volunteer team that has provided fire protection and emergency medical response to the communities of Orleans, Somes Bar, and Weitchpec since 1963.

The **Klamath TREX** (Prescribed Fire Training Exchange) provides high quality training to more than 80 participants annually. Organizers provide quality National Wildfire Coordinating Group (NWCG) training assignments to residents and fire managers from local, Tribal, state and federal agencies, supplies training for IMT (Wildfire Incident Management Team) staff, and provides a safe, structured environment for diverse fire practitioners to work together. Since 2020 Klamath TREX organizers began engaging an **All Hands-All Lands** burn team, in addition to the regular fall event, which pools resources from diverse organizations to provide key staffing for rapid response to fleeting burn windows. The Karuk Tribe and MKWC also provide staffing and resources for prescribed burns implemented through the Siskiyou Prescribed Burn Association (PBA), ensuring that landowners have the resources needed to successfully burn their properties.

Engagement of the **Community Liaison Program** (CLP) in the OSB planning area is another key program supporting local wildfire-preparedness capacity. It works under the OSB Fire Safe Council (FSC) and MKWC. The CLP was initially created in 2009 by the Salmon River Restoration Council (SRRC) and later adapted to the OSB area where it has been equally valuable and successful. Its purpose "is to facilitate timely and transparent communication and information exchange between incoming IMT's, the local Forest Service, and the affected communities during and after a wildfire event. Liaisons are often trusted community members with ample fire, natural resource, and community knowledge who can be effective at getting real-time information out to local and interested audiences, assure that place-based and accurate local knowledge and information is available for fire teams, and ease tensions as they arise in the stressful wildfire environment." (SRRC CWPP, p.3). See also 4.3.2.

The OSB planning area has been declared a "**Firewise** Community" since 2013, and through the OSB FSC continues this status by maintaining a Firewise board, investing in Firewise projects, maintaining a Firewise plan, and hosting an annual Firewise event. The national program helps neighbors work together to reduce wildfire risk through education and collaboration. In addition to annual youth and broader public educational events, a focus of fuel reduction work is done through roadside chipping. Capacity has significantly grown in recent years shown by MKWC and the OSB FSC acquiring a company Morbark Chipper in 2023, to scale-up this work.

4.1.2 Local integrated wildfire-preparedness planning

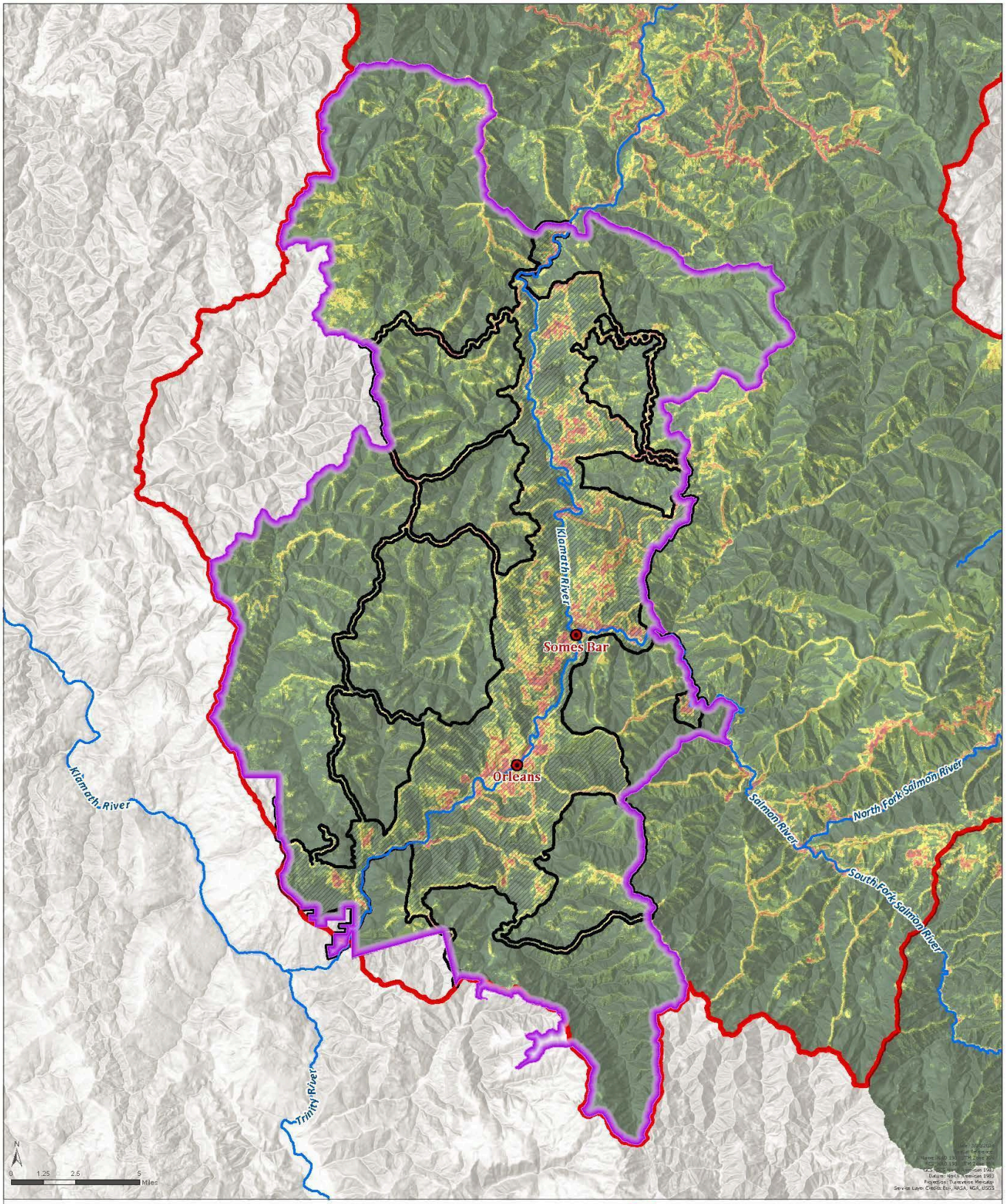
Alignment with local and regional CWPP's include: **Happy Camp, Salmon River, Humboldt County, and Siskiyou County CWPP's**. These are all either within, or overlap with, the WKRP planning area (see Figure 18), which stretches across 1.2 million acres, two national forests, and largely follows the Karuk Tribe's Aboriginal Territory. There is overlap between the **Salmon River** and OSB CWPPs on the lower Salmon River from the it's confluence with the Klamath River up to Butler Flat. Additionally, shared partners and resources from the Salmon River Restoration Council, Salmon River FSC, and Happy Camp FSC mutually support MKWC and the OSB FSC. All three CWPP's share goals, partner capacities, and resources with respect to the WKRP framework that works to create resilient communities, landscapes, and economies. A fundamental approach locally is to plan big but start small, and learn from outcomes in our collective work toward fire resiliency. The OSB CWPP also aligns with recommendations and specific priorities outlined in both CWPP documents, see: Happy Camp, p.12; Salmon River, p.106.

Alignment of the OSB CWPP with the more regional **Siskiyou County and Humboldt County CWPPs** are shown in both similar and different ways. Both share common planning areas, landscapes, partners, infrastructure, and resources. The OSB CWPP will supplement Siskiyou County's "Mid Klamath" planning region (#2) and shares "Specific Recommendations" on p.121 (part 3.2.4). Similarly, the OSB CWPP supplements Humboldt County's "Mid Klamath Fire Planning Unit", which is currently outdated. In general, we found more alignment with Humboldt County's goals and priorities. For example, a set of shared goals include to increase community resilience and adaptation to wildfire (part 3.2); increase residents' ability to effectively prepare for and survive wildfire disasters (part 3.3); restore beneficial fire at the landscape scale (part 3.5); and maximize integration of planning efforts to improve community and ecosystem resilience to wildfire (part 3.6). And a shared set of priorities include: local wildfire preparedness and increasing community resilience, planning areas and landscapes (part 5.4); collaboration with PG&E (part 3.2.6.2); and providing resources and supporting the county on managed wildfire (part 3.5).

The **2014 Western Klamath Restoration Partnership Plan** (10 year update in progress) planning area includes the communities of Orleans, Somes Bar, Happy Camp, Forks of Salmon, among others. WKRP formed between 2013 and 2014, and is an open group of partners and participants. The WKRP Plan outlines how partners developed "Zones of Agreement" based on diverse parties agreeing on the need for upslope restoration to create fire resilient communities and forests. The Zones of Agreement (ZOA) informed a set of shared values that guide partnership activities. These include: 1. Fire Adapted Communities, 2. Restored Fire Regimes, 3. Healthy River Systems, 4. Resilient Bio-diverse Forests/Plants/and Animals, 5. Sustainable Local Economies, and 6. Cultural and Community Vitality. Further analysis revealed a set of direct and indirect threats to these values and associated strategies (which broadly frame ZOA) for overcoming them. In this Situation Analysis model, identified strategies turned threats into opportunities for change to achieve our shared values. Spatial layers were collaboratively identified that reflected our shared values, and combined on a map through a product called an Overlay Assessment (see Figure 18). The OA serves as a guide for prioritizing projects across the landscape for multiple social, ecological, and economic factors. In looking at the OA map it's clear to see heavier weighting and prioritization for treatments around the wildland urban interface (WUI). The OA represents WKRP's ZOA for all treatment types and has just undergone, in recent months, an update to reflect contemporary landscape conditions and the current fire environment. The Somes Bar Integrated Fire Management Project (SBIFMP) operationalized the ZOA and took them from "agreement(s) in principle" to "agreement(s) in practice". Forest treatment prescriptions were developed that tier to fire protection activities in the OSB CWPP; and build out from the WUI to the landscape scale for accomplishing socio-ecological resiliency. The SBIFMP comprises four distinct areas that surround isolated private and tribal land parcels. These areas were selected for their strategic value to help protect the neighborhoods in the community of Somes Bar from wildfire.

In 2018, the Karuk Tribe DNR was funded by PG&E to author **"Electrical Ignitions, Wildfire Risk and Community Climate Adaptation in Northern California"**, a report outlining a collaborative mitigation strategy to increase disaster resilience through preventative application of prescribed fire along key areas with high ignition risk, in the remote rural mountain region of the Mid Klamath. The strategy worked to address the high risk of electrical infrastructure including distribution and service lines and transformers as leading causes of wildfire ignitions. Potential treatment/prescribed fire units (#104) were determined and surveyed, and Geographic Information System (GIS) layers were drawn and established places where prescribed fire control lines could be safely created (see also 4.2.1, "Electrical Grid"). One of the spatial layers included was the WKRP Overlay Assessment. A number of recommendations from this report echo actions supported by the

OSB CWPP. For example, developing micro-grid technologies to help alleviate loss of power either during a wildfire event (e.g. for use of water pumps, air filters, communications, etc.); or while conducting infrastructure protection burns to minimize power failures and transmission hazards. This report also outlined where cultural burning could occur to prevent the loss of power infrastructure during wildfires. Another action in alignment



Orleans-Somes Bar Community Wildfire Protection Plan
WKRP Comprehensive Overlay Assessment (2014)

WKRP Comprehensive Overlay Assessment (2014)
Priority Class
0 - 2 points
3 - 4 points
5 - 6 points
7 - 8 points
9 - 10 points
11 - 17 points

Karuk Aboriginal Territory
Orleans Somes Bar CWPP Boundary
Orleans/Somes Bar WUI
Communities at Risk

Figure 18: WKRP Overlay Assessment

includes initiating systematic public outreach regarding hazardous fuel treatments and maintenance, and making known what resources are available in and around communities. In recent years, PG&E has activated their Enhanced Vegetation Management Program (EVM). This report is a resource to be used in supplement to the EVM program that directly targets high risk power pole-based ignition sources.

In the beginning paragraphs, the **Karuk Climate Adaptation Plan** (CAP, 2019) offers, “by reconnecting the human role to the whole landscape, we can strengthen the spiritual, subsistence and management practices that the place calls the people to perform” (p. 7). Later, it states that “revitalizing the practice of attending to the presence and behavior of other species as cultural indicators to guide human management actions is a necessary step in the face of climate change” (p.56). The climate adaptations provided in this document “utilize Karuk Traditional Ecological Knowledge (TEK), knowledge based on the use of fire across millennia, alongside western science, and focuses on the revitalization of 22 focal species as cultural indicators for human responsibilities and necessary human actions” (p.44). Importantly, the utilization of TEK applies locally, but also more broadly, and requires that “Karuk people need to be intimately involved in revitalizing Karuk ecological knowledge practices” (p.44). Steps are outlined in the Karuk CAP for what restoring fire process might look like. Karuk fire management practices include “burning at a specific season, frequency, and intensity at a variety of severities for different purposes" (p.45). A main driver of the OSB CWPP is to help plan, implement, and monitor the reinstatement of historic fire regimes, including cultural ignitions around the communities of the OSB area. And the goal of these fuel reduction activities is to allow for the reintroduction of fire through wildland fire management, prescribed and cultural burning to improve forest health, protect life and property, and resources over the long term. Figure 3.4 in the Karuk CAP outlines a multi-step sequence through which fire can be returned at the landscape scale “providing climate adaptations … and creating landscape protection for the present-day OSB communities.”

In 2021, the **Good Fire Report (I)**, authored by Sara A. Clark et al., was published by the Karuk Tribe. Additionally, there were many local and regional collaborators who also contributed to this publication, and are either directly or indirectly involved in informing the OSB CWPP. This report distills the current challenges of fire management in California, and the barriers and limitations that systematically restrict viable solutions. There’s a focus on removing many of the procedural barriers to implementing the essential tools of intentional fire in the forms of cultural burning and prescribed fire for addressing the increasing vulnerabilities faced by communities and landscapes in this era of climate change, elongated fire seasons, and severity of wildfires. Importantly, it centers the role of Tribal people (e.g. Karuk Tribe), who pre-European contact, employed “Traditional law and Indigenous knowledge [in recognition of] the need to burn to minimize wildfires and impacts thereof” (among a myriad of other socio-ecological factors). But who find themselves in a current situation where “cultural burning is largely curtailed by state and federal policies rooted in paternalistic governance and the legacies of racism which conflict with traditional law and cultural practices for burning. Central to this issue is the lack of recognition of sovereignty and self-determination” (p.2). Furthermore, key impediments to prescribed and cultural fire are detailed, and accompanied with recommendations for potential solutions. Regulatory attempts to “mitigate or avoid all risks of intentional fire …have significantly impeded its use” (p.2). While concerns about liability and availability of insurance have also impeded burning. The report describes how agencies like CAL FIRE and U.S. Forest Service have had to wrestle with reorienting agency culture, staff, and resources away from fire suppression during the worst fire seasons in modern history. And while some progress on these complexities has been made, there is still much further to go. Key legislation, in

part informed by this report, have resulted in several limiting factors being address in California policy and law. Some are described here, as well as in other integrated planning documents below.

In 2021, Senate Bill 332 was passed in California that established a “gross negligence” standard for conducting prescribed burning for the purpose of wildland fire hazard reduction, ecological maintenance and restoration, cultural burning, silviculture, or agriculture.” The bill provided that unless gross negligence is at play, and given that specific conditions are met, a person shall not be held liable for fire suppression or other costs that may be incurred. To accompany SB332, a prescribed fire liability claims fund was created to cover burn bosses and other burners (e.g. cultural practitioner) in the case a claim by a private party, for example, is made and in order to not disincentivize these activities, and to address the collapse of the private insurance market for the practice of prescribed fire. Another piece of legislation, Assembly Bill 642 was also passed in 2021, and directly responded to other specific barriers outlined in the Good Fire (I) report. The following provides a snapshot of policy responses to certain barriers, for complete descriptions see the document links provided. AB642 requires CAL FIRE: 1) appoint a Cultural Burning Liaison in order to increase cultural burning activity; 2) respect tribal sovereignty, customs, and culture; 3) develop a proposal for a **prescribed fire training center** in consultation with state and inter-tribal organizations; 4) employ burn suspensions at the unit level (to the extent feasible), not at the state or regional level; and 5) develop and deploy an **automated system for burn permits**.

The release of the **Good Fire Report II** came in late winter, 2024. The report was again authored by Sara A. Clark et al. for the Karuk Tribe (see document for co-authors and contributors), and takes the recommendations of Good Fire (GF I) to “a larger scale, calling for transformational change at both the state and federal level, and provides a roadmap to revitalizing the relationship between humans and fire and fundamentally reimagining the systems used to steward it” (p.3). It continues to prioritize reforms that will support cultural fire practitioners and community-based prescribed burners, based on the understanding that intimate knowledge of place is required for effective stewardship” (p.3). GF II follows the September 2023 release of the Federal Wildland Fire Mitigation and Management Commission’s final report, and responds to the Commission’s mandate to develop federal policy recommendations to more effectively prevent, manage, and recover from wildfires. Bill Tripp, who serves as Director of the Karuk Tribe’s Department of Natural Resources and Environmental Policy, served as the designated Tribal Government Representative on the Commission. In many ways, “*Good Fire II* is intended to serve as a supplement to the Commission report, to be used as a tool for implementing the Commission recommendations in a manner that protects Tribal sovereignty and prioritizes Tribal leadership at all levels of stewardship and fire management” (p.3). Examples of barriers in GF II (see document for associated recommendations) include: 1) the enabling conditions necessary for landscape-scale, multi-jurisdictional stewardship are not yet in place; 2) funding challenges (for Tribes and Non-Governmental Organizations); 3) fire management centeredness on suppression activities by state and federal agencies; 4) fire management agencies deprioritize prescribed fire and other stewardship activities; 5) liability concerns continue to limit burning; and 6) insurance products remain unavailable, expensive, or inadequate.

4.1.3 Fire-planning data management integration

The Karuk Tribe DNR and MKWC GIS planners are creating **online interactive, live mapping products** that will be made publicly accessible to ensure the continued sharing of data sets. Outreach and educational opportunities will be organized and hosted to make the existence of the products well known so that residents and partners (both local and broad) understand the benefits and utility of the products. Functionally, these

products will enable changes and data updates to be reflected such as: landscape features, progress on projects, identification of new priorities, landscape condition, and more. These products will also be available for IMT's that understand their value and utility. A goal has been established to create a system to manage the data generated through this tool, and that will be shared with interested publics as it's developed and engaged with.
Early in 2022, partners of the Mid Klamath engaged in a regionally-specific, spatial fire planning workshop for the development of Potential Operational Delineations (PODs, data for public use), which was part of a broader effort (see NCRP Regional Priority Plan below). PODs are a network of potential control locations that inform risk- and value-based fire management decisions across the landscape. Development of these in this public manner provided an opportunity to use them as a risk management and planning tool for wildfire response/suppression, prescribed and cultural fire, and hazardous fuel mitigation. This contrasts with the standard internal agency development and application of PODs for planning and engaging with wildfires. Part of the Mid Klamath regionally-specific PODs will be the eventual integration of a cultural ignition layer within the Western Klamath Restoration Partnership (WKRP) planning area led by the Karuk Tribe DNR. This will demonstrate cultural ignition location, frequency, and timing to better guide planning and wildfire response/suppression. One of the research scientists who led the NCRP PODs effort then updated the PODs in the OSB CWPP area during the 2023 Six Rivers Forest Lightning Complex. This updated information was used to develop the Strategic Firing Plan that was implemented to bring wildfire safely to containment lines, burning an additional 26,000 acres at low to moderate severity. The Karuk Tribe has begun working with national PODs leaders to develop PODs products that acknowledge Tribal data sovereignty and stewardship that will also be available as needed for wildfire management. 4.1.4 Federal, state, and regional integrated wildfire planning efforts

In January 2022, the Forest Service responded to the wildfire crisis in the West by launching the 10-year Wildfire Crisis Strategy. It builds upon the National Cohesive Wildland Fire Management Strategy and agreements with states and other partners for Shared Stewardship. It combines historic investments of congressional funding with years of scientific research and planning into a national effort. Initially the program was funded by the Bipartisan Infrastructure Law when 10 initial landscapes were selected that were declared to pose the most immediate threats to communities. In early 2023, 11 additional landscapes were added after more funding became available through the Inflation Reduction Act. The **Klamath River Basin** (KRB) was the second landscape in this second set to be added. The selection criteria for these included protecting underserved communities, critical infrastructure, public water sources, proximity to Tribal lands, and landscapes with enough planning and resources for work to begin immediately. Specifically, it's stated the KRB was selected due to the catastrophic wildfires that have degraded ecosystems and communities and is a trend likely to continue as the climate becomes hotter and drier. In addition, the program will seek up to $15 million in partner contributions. Mid Klamath and WKRP partners have received multiple rounds of this funding and are prepared to put FY 24 funding to work immediately once it's received. The OSB CWPP will be one tool informing priorities for this funding and work that is focused in the WUI.

Alignment with the National Cohesive Wildland Fire Management Strategy (2012, Cohesive Strategy) has been a fundamental part of the WKRP planning effort. Unlike earlier national wildland fire management strategies, the Cohesive Strategy has been developed by federal, state, Tribal and local organizations.
The National Cohesive Wildland Fire Management Strategy encourages everyone to work together using the best management practices and good research to make progress in 3 main goals:

1. **Resilient landscapes:** Landscapes, regardless of jurisdictional boundaries, are resilient to fire, insect, disease, invasive species and climate change disturbances, in accordance with management objectives.
2. **Fire-adapted communities:** Human populations and infrastructure are as prepared as possible to receive, respond to and recover from wildland fire (that impacts communities).
3. **Safe and effective risk-based wildfire response:** All jurisdictions, responding in all land types, participate in making and implementing safe, effective and efficient risk-based wildfire management decisions.

The Cohesive Strategy was updated in May 2023 by an addendum to address 4 important ideas that were not addressed in depth in the 2014 strategy. These include:

1. The impacts of climate change, including the increasing frequency and intensity of storms bringing severe wind and flood events, longer sustained periods of extreme heat and drought that establish the conditions for wildfire, and the overall change in the baseline risks of communities across the nation.
2. Workforce capacity, health and well-being inclusive of local, Tribal, state and federal fire service and partner communities of practice.
3. Community resilience (preparation, response, recovery and mitigation) in the built environment including adoption of strong building codes.
4. Diversity, equity, inclusion and environmental justice.

Five key implementation challenges were also identified by the addendum:

1. The existing wildland fire management system has not kept pace with demands. The lack of wildland management can and will encroach on communities adjacent to or intermixed with the wildland or forested areas.
2. There is still a need for the significant increase in the proactive use of fire (prescribed and managed wildfire for resource objectives) across the country.
3. Science, data and technology has not kept pace with the extent of wildland fire and post-fire impacts, or been fully integrated into decision-making for fire, land and community managers.
   The same statement applies to communities and built environment adjacent to or intermixed with the wildland and forested areas.
4. Markets, infrastructure and skilled human resource capacity are inadequate to utilize biomass and other wood products from ecosystem management or hazardous fuel treatments.
5. Education, communications and marketing are insufficient to inform communities and decision-makers about Cohesive Strategy implementation.

This CWPP encourages progress towards the three primary goals and updated priorities, as well as actions that reduce barriers to implementation of the Cohesive Strategy. At its launch in 2012, the Cohesive Strategy was broken up into the West, Northeast, and Southeast Regions. The Western Region is chartered by the Wildland Fire Leadership Council and charged with facilitating implementation of the National Cohesive Wildland Fire Management Strategy. Utilizing a network approach, the Western Regional Strategy Committee facilitates learning and understanding of what the Cohesive Strategy is, and what it looks like at local, state, Tribal and federal levels. One of WKRP's Co-Leads, Bill Tripp, has had a seat on the **Western Region Strategy Committee**, which is chartered by the Wildland Fire Leadership Council (est. 2002 by the Secretaries of Agriculture and the Interior to support implementation and coordination of federal fire management policy). In the 2014 WKRP Plan, the stated intent is to "implement all three primary components of the Cohesive Strategy that include: 1) restoring and maintaining resilient landscapes; 2) creating fire-adapted communities; and 3) safe and effective wildfire response" (p.16). And as early as 2012, WKRP partners were cited as one of

the initial success stories of efforts demonstrating all three aspects of the Cohesive Strategy. Since 2012 the Cohesive Strategy underwent an update in May 2023 to address 4 important ideas and their associated implementation challenges.

The California Wildfire and Forest Resilience Action Plan (2021) features recommendations developed by the Governor's Forest Management Taskforce, in development of California's Wildfire and Forest Resilience Action Plan. To note, some members of WKRP participated in the state's taskforce. Areas of close alignment are highlighted here, however the following examples are not exhaustive but demonstrative. From the four overarching goals, Mid Klamath and WKRP partners most closely align with the following three: Goal 1: Increase the Pace and Scale of Forest Health Projects, Goal 2: Strengthen Protection of Communities, and Goal 4: Drive Innovation and Measure Progress. One objective under Goal 1 states to "Improve Regulatory Efficiency". In 2023, MKWC, contracted with Ascent Environmental Inc. for production of the Project Specific Analysis (PSA) for submission to the California State Vegetation Treatment Program Environmental Impact Report (**Cal VTP EIR**). In September 2023, the **Western Klamath Landscape Fuels Reduction and Forest Health Project Specific Analysis** was signed, providing California Environmental Quality Act (CEQA) coverage for all private and Tribal fee lands within the WKRP planning area, approximately 32,000 acres in total. This CEQA document allows MKWC and partners to complete botany, wildlife and archaeological surveys as properties are identified and prioritized for treatment, reducing the time frame from project conceptualization to implementation from years to months.

An objective under Goal 4, "Improve Coordination of Climate and Fire Research … and develop the knowledge and tools to advance predictions of wildfire on multiple timescales, and to inform management decisions" is a priority of WKRP partners occurring in tandem with PODs development, through the NCRP Strategic Fire Planning and Modeling work, **State and Transition (STM)** and **REBURN** modeling. STM and REBURN modeling is an ongoing project in collaboration with Susan Prichard (University of Washington) and Paul Hessburg (Pacific Northwest Research Station) and their labs to create models that grow vegetation on this landscape through simulation based on empirical local data for thousands of years as they experience fire on fire interactions. These models are able to track individual plant responses, as well as habitat structure, as it changes through time, and will yield the best scientific data yet on what pre-Settlement forest structure and composition were. These models are also driven by locally developed cultural ignition models based on extensive ethnographic and contemporary traditional ecological knowledge. Ultimately, the REBURN model will be able to show how management actions can affect everything from forest structure, carbon sequestration, fire risk, to water yield, and help create shared vision for what restored forests actually look like.

California's Strategic Plan for Expanding the Use of Beneficial Fire (2022), builds on California's Wildfire and Forest Resilience Action Plan and provides a roadmap for significantly increasing the pace and scale of management activities for improving forest resiliency through prescribed fire, cultural burning, and fire managed for resource benefit. The plan establishes targets for a broad spectrum of state and federal agencies, California Native American Tribes, and NGO partners to deploy beneficial fire on 400,000 acres annually by 2025. It states new policies, programs, and regulations will improve permitting, availability of State-Certified Prescribed-Fire Burn Bosses, address liability issues and the lack of insurance, tailor funding to prescribed fire activities, and increase capacity and collaboration. WKRP and other Mid Klamath managers are currently demonstrating these new programs with at least one local person obtaining their **CARX** state certified burn boss qualifications, with others who are in-process. After the passing of SB332, and the active participation of local people in this, the resulting **Prescribed Fire Claims Fund** has already been utilized as local managers ramp up capacities to expand utilization of this program benefit. Further, this plan promotes launch of an

online prescribed fire permitting system to streamline prescribed fire projects, this is another program local managers have engaged with in recent months for local prescribed burn events. Another area of alignment is leadership by local managers in the development of a **Prescribed Fire Training Center**. Last, one key goal of the plan is to use fire managed for resource benefit where and when appropriate. Managers in the Mid Klamath are a resource to be consulted with after demonstrating in 2023 through the Six Rivers Forest Lightning Complex, which more than doubled the landscape that received beneficial fire effects after **managing the fire for resource benefit while still under the full suppression mandate**. The community, local Tribes, fire managers, and partners took advantage of favorable conditions and decades of work building capacity for such an event. Managers are hopeful for more of these opportunities.

In 2019, the California Department of Conservation (DOC) launched the Regional Forest and Fire Capacity Program, funded by the California Natural Resources Agency. It was developed to support regional leadership; build local and regional capacity; and to develop, prioritize, and implement strategies and projects that create resilient communities and landscapes (to wildfire) by improving ecosystem health, community wildfire- and other extreme event preparedness. The DOC meets these goals by providing block grants to regional and statewide entities. The North Coast Resource Partnership (NCRP) was one of the Northern Region entities to receive funding, it tasked itself with developing a Regional Priority Plan (see below), and through this, at that time, partners of the Mid Klamath participated in this program. Regional block grantees were expected to partner extensively across their region to identify priorities and develop projects in collaboration with Tribal, federal, state, and local governments as well as water agencies, Resource Conservation Districts, FSCs, and other NGOs. The goal was to support the implementation of the program, and all its elements which are consistent with California's Wildfire and Forest Resilience Action Plan, the California Forest Carbon Plan and more. To add, most recent grantees of RFFC for 2023 included the Karuk Tribe winning an award to support development of a multipurpose facility that will serve as a **Prescribed Fire Training Center** as well as provide critical support functions in times of emergency.

The result of NCRP receiving an RFFC block grant in 2019 was creation of the NCRP Regional Priority Plan (RPP), now termed: A Vision For North Coast Resilience; Priorities For Enhancing Watershed, Fireshed, Forest, And Community Resilience In The North Coast Region. Development of this RPP was a multi-year process and followed the NCRP Adaptive Planning and Prioritization Framework described in the Figure on p.6. It was guided by hundreds of experts, partners, and community members, and aligned with the goals and objectives of Tribal, federal, state, regional, and local plans. It used the best available data and information, including Indigenous science and Traditional Ecological Knowledge, regional remote sensing, and local knowledge. This RPP is intended to guide capacity investments and implementation of activities focused on community and watershed resilience in the North Coast. There are four core elements, one of which is demonstration projects, that pilot measurable innovations to help the region expand the pace, scope, and scale of watershed, community, and forest resilience. There were **three different demonstration projects** engaged in by Mid Klamath and WKRP partners that included: 1) North Coast All Hands All Lands Prescribed Fire Team (participated in by the Karuk Tribe, MKWC, Siskiyou County Prescribed Burn Association, and Watershed Research and Training Center); 2) Burning Across Boundaries: An Inter-Tribal Collaboration led by the Karuk Tribe; and 3) **NCRP Strategic Fire Planning and Modeling** in partnership with Tukman Geospatial and Oregon State University, and coordinated by MKWC and the Pepperwood Preserve. Due to the emphasis on expanding the beneficial use of fire and the mechanisms highlighted by state plans, we describe some of the findings from the NCRP Strategic Fire Planning and Modeling demonstration project. The effort comprised three key datasets: a network of potential control locations, or PODs; a cultural ignition dataset (see Figure 3); and a draft of an ecologically and culturally nuanced State and Transition Model (STM) - for collaboratively

developed "strategic fire planning data layers". MKWC and partners hosted seven workshops across the sub-regions of NCRP to help develop tools to create a shared understanding of fire on the landscape in the past and to inform a vision for the future. The intention of the data is to generate widespread social support for landscape scale fuel break prioritization and construction, increased use of prescribed fire, cultural fire, and wildfire managed for resource purposes where appropriate.

4.2 Fire Preparedness

The OSB CWPP planning area is entirely within a Mediterranean climate that experiences several months of high temperatures and dry conditions every year. The adjacency of high elevation ridges and peaks means that summer time lightning strikes are a given. Recent wildfire history shows both lighting and human caused ignitions have resulted in catastrophic wildfires. Whether lightning or human caused, the summertime parched landscape means that wildfire risk is at its highest right when local and state firefighting resources are committed to other incidents. Fire preparedness therefore is essential for anyone living within the OSB CWPP area. The better prepared this community is, the safer it is during wildfire season and the more feasible is the safe reintroduction of fire across the landscape.

This chapter focuses on community resilience-building needs and actions including hardening water systems and homes, creating and maintaining defensible space and safe ingress/egress routes, building communication networks, and evacuation planning. Much of the following data were informed by a series of neighborhood and community meetings held in 2022 and 2023 as part of the CWPP update process. Very specific recommendations were made by landowners and residents during these meetings. These are listed in Appendix G.

4.2.1 Infrastructure hardening

Water Systems

Water systems and water availability are critical for wildfire response, as well as safely implementing prescribed and cultural burning. Available water for fire protection is an ongoing concern in the Orleans-Somes Bar communities, especially for incidents that last for months and/or threaten multiple properties and residences. There are some locations where water for firefighting efforts is not available or where emergency water storage is needed to supplement the municipal or neighborhood water systems. Many existing water sources, both on public and private lands, need maintenance, protection, or improvements. Water drafting sites are susceptible to changes each year due to vegetation growth, road conditions, and/or hydrological changes. Many private landowners have tanks or ponds that can be available during a wildfire situation, in coordination with the applicable landowner. Locations of existing water sources may not be apparent to firefighters and water sources may not be properly outfitted for firefighting equipment.
Wildfire emergencies create an immediate need for easily accessible and ample water supply for suppression use.

Timely communication between firefighters and water system operators is critical in order to avoid dangerous draw-downs and system failures. During the 2006 Somes Fire, the community water system for Orleans was drawn down to the point where residents at the highest elevation had little to no water pressure. During the 2013 Orleans Fire and again during the 2023 Lightning Complex, the water system serving Camp Creek was accessed improperly causing a system wide failure. Enhanced avenues of communication and public works projects to increase capacity and reliability of community and neighborhood systems are a high priority.

Additionally, with many water systems being tied to surface water lines that typically utilize a water source on public lands and convey it onto private lands, the potential for these systems to be damaged during wildfires is high.

Water System Hardening: Water systems vary from community or neighborhood systems (see table below) to small, single-family systems. The two primary municipal systems, Orleans Community Services District (Pearch Creek) and the Orleans Mutual Water Company (Crawford Creek) both have severe vulnerabilities and need major upgrades. Many water sources are located on public land and have long (some over a mile), above ground distribution lines. These distribution waterlines are highly susceptible to damage during wildfires and prescribed fires either due to burning up or damage from tree and rock strikes. Many of these waterlines are connected to USFS special use permits and are mapped only on paper. Some neighborhoods have reflective blue dots to indicate a water source, but this is not consistent across the planning area.

Water System	Residences Served	Additional Information
Orleans Community Services District (Pearch Creek)	115	System upgrades including old redwood tank replacement and new filtration system are in the planning stage (2024)
Orleans Mutual Water Company (Crawford Creek)	40	System upgrade is funded and designed (2024): new tank and other equipment soon.
Thunder Mountain Water Association	25	Extensive above-ground lines across USFS with a special use permit. Operated as a 501(c)(7).
East Pearch Spring System	7	Informal organization
Butler Creek Community LLC	7	Non-profit LLC

The Orleans Somes Bar FSC created the “Lifestyles of the Rural and Firesafe” video nearly 20 years ago to highlight landowners that are getting it right with fire preparedness (https://www.youtube.com/watch?v=0hmFABXAojA). For water systems, this segment highlights long-time Somes Bar resident Fred Naef’s work to provide ample protected water storage, underground delivery lines, hydrants and sprinkler systems. OSB FSC also worked with the Salmon River FSC in the 2000’s to demonstrate the inexpensive construction of under the eaves half inch poly pipe mister systems that could be quickly installed and use water effectively and efficiently to wet home siding and the immediate surroundings in the event of a wildfire.

Water System Priority Actions:

1. *Public works projects to increase capacity and reliability of community and neighborhood systems (Orleans Community Water District, Camp/Crawford Creek Water System (Orleans Mutual Water Company), Thunder Mountain Water Association).*
2. *Facilitate increased water storage for outlying neighborhoods and residences during wildfires. Note: while all neighborhoods in our service area need improvements, the Ten Eyck, Pearch and Upper Ishi Pishi neighborhoods have critical immediate needs for, at minimum, one 5,000 gallon tank each.*
3. *Update blue dot signage for water source identification during wildfire events.*
4. *Digitize all water draw sites and ground truth each wildfire season for maintenance needs, as well as concerns, and potential mitigations regarding impacts to plants, wildlife or cultural resources. Secure funds to improve and maintain access to water draft sites.*
5. *Digitize all water lines and systems, including on private lands, when possible.*
6. *Bury above ground water lines where feasible, or replace plastic water lines with galvanized metal where it is not feasible to bury them, including on public land through special use permits and necessary compliance measures.*
7. *Ground truth and map water draft sites, besides the USFS spatial layer, to prioritize infrastructure and fuel treatment projects.*
8. *Facilitate communication between water managers and wildfire responders. Post signage regarding use.*
9. *Identify all private water sources available for fire use, both wild and prescribed, and the conditions of use, and any upgrades needed to make them more available for use. Identify communication pathways to allow for use of private water sources during incidents.*
10. *Work with Federal partners to identify all public lands water sources available for both prescribed and wildfire use.*

Roads

The maintenance of road systems as fuel breaks and as primary and/or secondary access/egress routes during wildfires (for residents, water drafting, and fire personnel), are of great concern to community members, second only to defensible space treatments. These access routes must be maintained and kept open every year to allow for safe access and egress during wildfire events. Additional roads that are located along strategic control features, whether or not they are access/egress routes, should be maintained to be used as control features during wildfire events. A number of roads are lacking street signs, creating confusion for wildfire responders.

Road systems provide for rapid response to new fire starts with firefighting crews and fire apparatus, and provide anchor points for fire suppression actions. Additionally, roads provide strong containment features for prescribed burns. The vast majority of roads are on public lands. Caltrans is sufficiently funded to maintain fuels along the Highway 96 corridor, while Humboldt and Siskiyou Counties, as well as the Six Rivers National Forest lack funding and staff to adequately manage fuels along county and Forest Service roads. Roads on private lands are also generally in great need of additional thinning efforts. Dense, early mature forests resulting from clearcutting and fire exclusion along roadways have favored trees with small root systems that are prone to falling during wind, snow and fire storms. Intentional management of these road corridors and the development of resilient forests, oak woodlands, and grasslands along these routes, is essential to maintaining travel routes during these natural events and promoting long-term fire safety.

The Cultural Fire Management Council has created a powerful example along Highway 169 of maintaining road corridors both as fuel breaks and cultural gathering areas through fuels reduction and cultural burning. This model parallels several of the strategies developed by the Karuk Tribe Department of Natural Resources (DNR) in their plan to protect and maintain landscapes along our PG&E powerlines, which mostly follow the road corridors. This plan is discussed more in the "Electrical Grid" section below.

Road Priority Actions:

1. *Implement fuel treatments along ingress/egress routes to maintain safe routes during wildfire events.*
2. *Implement fuels treatments along roads that can act as strategic control features during fire events.*
3. *Maintain roads that can act as ingress/egress and as fire control features.*
4. *Facilitate creation and installation of road signs where needed.*
5. *Support culturally-appropriate maintenance of roadside areas, including through cultural gathering and burning.*

Utility Easements

Phone and Internet

Cellular phone service is extremely limited in the planning area and the communities rely on landlines or internet based phone service (Wi-Fi). The majority of the phone lines in the Orleans area are unburied and either share space on PG&E power poles or have independent phone line poles. Siskiyou Telephone has buried both their phone and internet transmission lines throughout the Somes Bar area and partly across county lines into Humboldt (along Ishi Pishi road from the Somes Bar store to Bark Shanty road). The landline phones in Orleans are distributed through a microwave "line-of-sight" system that relies on a reflector perched on the side of one of our west facing mountains, surrounded by forest, which nearly burned at high severity during the 2006 Somes Fire. This reflector, if compromised by wildfire would disrupt communications on the valley floor. The "phone" frequency is captured by the small, unstaffed telecommunication station in the middle of Orleans. From there, distribution lines branch off and feed the towns, residences and businesses. These unburied phone lines are highly susceptible to damage from a wildfire event, cutting off the ability for these communities and residences to communicate and or receive information during an emergency. During the 2013 Orleans Fire, the phone system in town went down immediately, and many residents were only alerted of the fire through social media. Frontier Communications as the main provider of landline phone service, has not maintained the vegetation/trees around their distribution lines, leading to continued non-functionality of the phones. If residences are unable to call emergency services to report and/or ask for help, this is a major issue. Phone lines that share power line routes will benefit from PG&E maintenance of vegetation growth around and under these distribution branches. The internet service for most of Orleans is provided by the Karuk Tribe and is generated by a local satellite tower that is well buffered and has very little fuel around it. Cell service can only be found in certain areas of high elevation or with cell boosters that rely on power. Additional information on alternative phone and internet options can be found in the Community Emergency Preparedness section (4.2.3).

Phone and Internet Priority Actions:

1. *Implement fuel treatments along phone and internet distribution lines, including line-of-sight systems.*

2. *Extend buried fiber optic cable from Ishi Pishi Road to the Orleans community to allow for continued high speed internet, including internet based phone services, during wildfire events.*

Electrical Grid

Many miles of easements managed by Pacific Gas and Electric (PG&E) go through both public and private land within the WUI. PG&E hires contractors to cut vegetation under the power lines. If this material is left on site, the dead fuels, and resprouting live vegetation, create significant fuel loading. These fuels present holding concerns for prescribed fire projects as well as wildfire events, and often create a wick to bring fire directly to homes at high severity. Additionally, due to the age and the length of the line, transformers have caused episodic ignitions within the OSB CWPP area.

As referenced in the *Roads* section above, the Karuk Tribe, with PG&E funding, created a document called *Electrical Ignitions, Wildfire Risk and Community Climate Adaptation in Northern California.* This plan incorporates by reference the findings of DNR's report, located here. The document identified 104 potential treatment units, including for prescribed fire. GIS layers were created and utilized to establish places where prescribed fire control lines could be safely created. These resource should be used to prioritize fuels treatments for the Orleans and Somes Bar communities.

Electrical Grid Priority Actions:

1. *Collaborative fuels management of PG&E easements, including establishing vegetation management prescriptions, with Tribal and other community entities.*
2. *Support the implementation of plans to create resilient electrical generation and distribution systems, including line hardening, microgrid infrastructure, and back-up power solutions (including portable power systems).*

4.2.2: Landowner self-inspection/Home Risk Assessment

Landowners and residents living in this wildfire prone environment can be proactive in reducing their wildfire risk. A Home Risk Assessment done by landowners themselves or with the help of the OSB FSC can be an excellent tool for helping identify the most serious vulnerabilities of the home/ structures, defensible space, water system, and the surrounding property. This assessment also helps the public understand the recommended improvements, based on the best available science. Humboldt County has developed an excellent home risk assessment which is available here and in Appendix D.

Home Risk Assessment Priority Actions:

1. *Assist all landowners and residents in voluntary Home Risk Assessments.*

4.2.3: Community Liaison Program

The purpose of the Orleans/Somes Bar Community Liaison Program (CLP) is to facilitate communication between United States Forest Service Fire Suppression Incident Management Teams (IMTs), local Forest Service (Districts and Forests), the Orleans/Somes Bar Fire Safe Council (FSC), and local community members during a large wildfire event. When a single wildfire event or a fire complex (several wildfires) becomes more than the local fire crews can handle, an IMT is brought in to manage the fire suppression

operation. The IMT needs to be brought up to date on many aspects including location of private properties and structures, emergency access routes, Engine Fill Sites, and other infrastructure and community information. Too often the IMT is unprepared for the complexities of managing wildland fires in the rugged and isolated Klamath Region. Many community members have lived here through multiple wildfire events and know a surprising amount about fire behavior, fuel conditions, topography, and the needs and resources of community residents and properties. Community members here are always concerned and want to know detailed information about the wildfires and their management. The IMT is too often either reluctant to listen to local community input due to valid concerns for accuracy and consistency, or concerned about being inundated by local community members giving advice and asking questions.

To assist the Team and local US Forest Service, the CLP has engaged a team of Community Liaisons (Liaisons) who come prepared with accurate information that can save the Team time, increase efficiency, and promote safety for the Team, the FSC, landowners, and the community. Liaisons will be responsible for coordination with the Team to address their needs and concerns and to serve as a tiered link with landowners and the Community.

The CLP does not negate the important need for formal community meetings which give the Team and community members periodic face to face information sharing; instead, the Liaisons will participate in these meetings and build cooperation and information exchange that will increase the Team's effectiveness in protecting residents and residences, as well as providing the maximum amount of information to the communities affected. Since 2009, community liaisons have supported trust building between the community and IMT's through real-time two way information sharing, and the identification of mutually beneficial actions to better protect firefighters, residents and homes, and allow for more beneficial fire at the landscape scale.

Community Liaison Program Priority Actions:

1. *Continue to develop the OSB CLP program*
2. *Engage new liaisons to fill gaps in neighborhood representation.*
3. *Host trainings for liaisons in fire behavior, the structure of the Incident Command System, etc.*
4. *Communicate regarding the CLP with local USFS and Tribal resources at the beginning of each season.*

4.2.4 Evacuation

Wildfire evacuations may be coordinated by the Humboldt County Sherriff's department, and/or in conjunction with the Wildfire Incident Management Team (IMT) and local fire departments. This coordination is dependent on timing: when the fire started, fire behavior/activity, and the time it takes and the number of resources available to implement an evacuation. With the technology available today, evacuation warnings and/or notices can be distributed to the public effectively and expeditiously.

For example, the Genasys Protect application (formerly Zonehaven Aware) is an evacuation management tool that helps communities and first responders more effectively plan, communicate, and execute evacuations. It is a platform where residents can look up their addresses using the search bar and use the zone map to find evacuation information for their area - https://protect.genasys.com/search. It should be noted that the current zones do not necessarily match with the OSB CWPP neighborhood groupings. The Orleans Somes Bar Community Liaison Program also maintains a neighborhood by neighborhood list of current residents with

updated contact information to expedite notifications during evacuation scenarios. This information is shared with IMT's during wildfire events.

Evacuation Priority Actions:

1. *Understand differences between OSB FSC neighborhood designations and Genasys evacuation zones and recommend changes, if needed, to make the two planning tools align.*
2. *Implement priority actions in other emergency planning documents, such as through the Humboldt County and Siskiyou County CWPPs, as well as Karuk Tribe Emergency Services Department documents.*
3. *Identify evacuation shelters as critical infrastructure and prioritize infrastructure development (e.g. power systems, water systems) to make these shelters resilient during wildfire events.*
4. *Engage the community and the Community Liaison Program around evacuation best practices. Annually update the CLP Neighborhood Resident contact spreadsheet.*

4.2.5 Defensible Space

Defensible space is a term that describes strategic treatment and maintenance of vegetation and other combustibles surrounding a home. Its purpose is to minimize pathways for fire to directly reach the home, by reducing radiant heat exposure, and to provide a safe place for fire personnel to defend the home. During a large-scale wildland fire, when many homes are at risk, firefighters must focus on homes they can safely defend (structure triage). 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. Defensible Space means creating a fire resistant area on all sides of your home commensurate with slope, topography and surrounding fuels. Clearing and establishing space between all flammable vegetation a minimum of 100 feet out from your home and other structures will not only provide you with the greatest chance for survival, it is also required by California law. For a list of applicable California laws, please see Appendix A. Residents and landowners on hills should extend this treatment, especially on the downhill side, to 200 feet or greater, depending upon the steepness of the slope and the surrounding fuel type and density.

There are three zones within this 100 foot buffer. Zone 0, which is from 0 to 5 feet from your home, is often seen as the most important. This is because ember ignitions are responsible for the majority of home losses during a wildfire. Assembly Bill 3074 which went into effect on January 1, 2023, specifies Zone 0 to be entirely ember-resistant. Often this means using gravel or paving stones for "hard-scaping". The intensity of fuel management can vary within the 100-foot perimeter of the home. Working out from the home in Zone 1, from 5' to 30', and in Zone 2 from 30' to 100', will each need varied intensity of fuels reduction and maintenance. The closer to the house or other structures, the more critical. For more detailed information on Defensible Space requirements, see the CAL FIRE Ready for Wildfire site or the National Fire Prevention Association site.

In addition to defensible space being important for your home's survival, it may also help home insurability. Some insurance companies may offer discounts if your home and surroundings comply with the following lists:

Immediate Surroundings Protections:

- Cleared vegetation and debris from under decks
- Removal of combustible shed and other outbuildings from the immediate surroundings of the home, to at least a distance of 30 feet
- Defensible space compliance (including trimming trees, removal of brush and debris from yard, and compliance with state law and local ordinances)

Structure Protections:

- Class-A fire rated roof
- Maintain a 5-foot ember-resistant zone around a home (including fencing within 5 feet)
- Noncombustible 6 inches at the bottom of exterior walls
- Ember and fire-resistant vents (See Low-Cost Retrofit List in Appendix F)
- Upgraded windows (Double paned or added shutters)
- Enclosed eaves

Additional discounts are available for Firewise communities. Orleans is currently in good standing as a Firewise Community.

Defensible Space Priority Actions:

1. *Assist low income, elderly residents and those with disabilities in creating and maintaining defensible space, and work towards creating defensible space around all homes in the OSB community*
2. *Assist residents in replacing or removing wooden fences.*
3. *Seek funding to support the removal of hazard trees from around homes.*
4. *Distribute educational materials regarding the importance of clearing all flammables from Zone 0.*
5. *Educate the community regarding combustibles other than vegetation, e.g. inoperable vehicles and junk that compromise their defensible space.*

4.2.6 Home Hardening

Home Hardening is equally as important as Defensible Space when it comes to home protection. State building codes and standards specifically designed for the State Responsibility Area (SRA) aim to reduce the risk of burning embers igniting buildings. These building codes require new construction to meet minimum fire safe standards for roofing, siding, exterior doors, decking, windows, vents, and enclosed overhanging decks, to name a few. These measures decrease the chance of a home catching fire from burning embers. The new ignition resistant codes apply to all fire hazard zones in the SRA. The OSB CWPP planning area is in the SRA and is defined by CalFire as ”Very High Fire Hazard Severity Zone". These building practices cannot make the home fire proof but they can improve the chances that it will still be standing after the wildfire front has passed.

Since most residents in Orleans and/or Somes Bar will not be building a new home anytime soon the rules for new construction do not apply to them. Instead, there are many ways to harden and retrofit our existing buildings. Specific information can be found in Appendix F.

The University of California Agricultural and Natural Resources Fire Network has excellent information on all aspects of fire preparedness https://ucanr.edu/sites/fire/Prepare/Building/

Following is a list of a few guidelines for Firewise home construction.

- The roof is the most vulnerable part of a home to wildland fires. Once a 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. All new construction and re-roofing projects in the SRA require Class B roof assembly. Class A roof assembly is required in Very High Fire Hazard Severity zones. If you are not building a new roof it is best to maintain your current roof by regularly removing debris and fixing damaged areas. Cleaning gutters is also a low cost effective practice that will help

reduce the risk of ember ignition. Blowers are excellent tools for safely clearing fuels from roofs and gutters.

- The material used for siding is also important. “Hardy Board”, stone, stucco, or cement siding are the most fire resistant compared to wood. That said, the vulnerabilities of a wood sided home have more to do with gaps, corners, gutters, and vents; places where an ember can land or get sucked inside. For this reason, soffits are recommended on the eaves and vents, and should have a maximum 1/8” mesh screen. You can harden existing siding by reducing the number of gaps and corners, removing flammable material leaned against your house, and removing any vegetation touching your siding.
- Decks sticking out from a house act as kindling for fires. A deck should be enclosed on the underside. The same is true for the perimeter of a house if it’s a post-and-pier foundation. This should be done either with solid building materials or with lattice and tight screen. This allows for much more storage space as well, since it is unsafe to store anything (especially firewood or cardboard boxes) under your house.
- All chimneys should have spark arrestors at the top with three-eighths (3/8) to one-half (1/2) inch mesh screen.
- Because single-paned windows can break under extreme heat, double-paned glass windows on all windows with a minimum of one tempered pane are recommended. For homes in high fire danger areas and those with single pain windows, it may be a good idea to have plywood precut to cover your windows. Similar to homes in hurricane areas this may be mounted before you leave your house in an evacuation and can help reduce the risk of a window failure causing home ignition.
- Having a ready-made sprinkler systems designed to rapidly and completely wet the home and immediate surroundings has proven effective in local wildfires. These systems can be either left in place or stored for rapid deployment in the event of a wildfire. Systems can and should be designed around available water pressure and capacity.

Priority Home Hardening Actions

1. Provide assistance to residents in home hardening activities.
2. Facilitate a workshop focused on home hardening options for those with low income.

4.2.7 General Fuels Reduction Treatments

The purpose of fuels reduction planning, implementation, and monitoring around the communities of Orleans and Somes Bar is to protect life, property, improve forest health, and enhances the resources valued by the communities. As a fire-dependent ecosystem, the Orleans-Somes Bar area depends on fire for forest and community health. Fire suppression has changed the area from being fuel-limited to being ignition limited. The goal is to decrease fuel loading across the landscape – through manual and mechanical fuels reduction treatments as well as beneficial wildfire and prescribed and cultural fire. 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 Orleans and Somes Bar communities are deeply connected to their surrounding environment. The following guidelines are recommended for fuels reduction prescription development:

- Protect and enhance culturally important species, in coordination with the Karuk Tribe
- Understand historical composition of fuels in project location and use this as a guide for treatments
- Favor native plant and tree species when selecting for removal
- Focus treatments in areas of cultural use, around structures, along access and egress routes, and in areas that serve as useful fuel breaks for wildfire
- Restore oak woodlands through site specific Douglas Fir removal based on the stage of encroachment.
- Prioritize and design treatments that support or enhance instream work for fisheries habitat and water security
- Design treatments to provide opportunities for beneficial fire
- Maintain snags and other wildlife habitat structures unless they threaten safety or fire containment features
- Prioritize treatments in the WUI. Within the WUI, prioritize areas based on population density (or use density in the case of road treatments). Prioritize critical infrastructure. Prioritize homes and ingress/egress routes.
- Prioritize treatments that adjoin other pre-existing treatments or future treatments (e.g. that are strategic to an overall plan)
- Reduce barriers to strategic fuels reduction that are imposed by jurisdiction boundaries by facilitating an all-lands approach and actively engaging all landowners and land managers in wildfire preparedness solutions

It must be understood that fuelbreaks may not stop a fire, but will give suppression forces and landowners more opportunities for safely managing the fire and accessing or evacuating the fire area.

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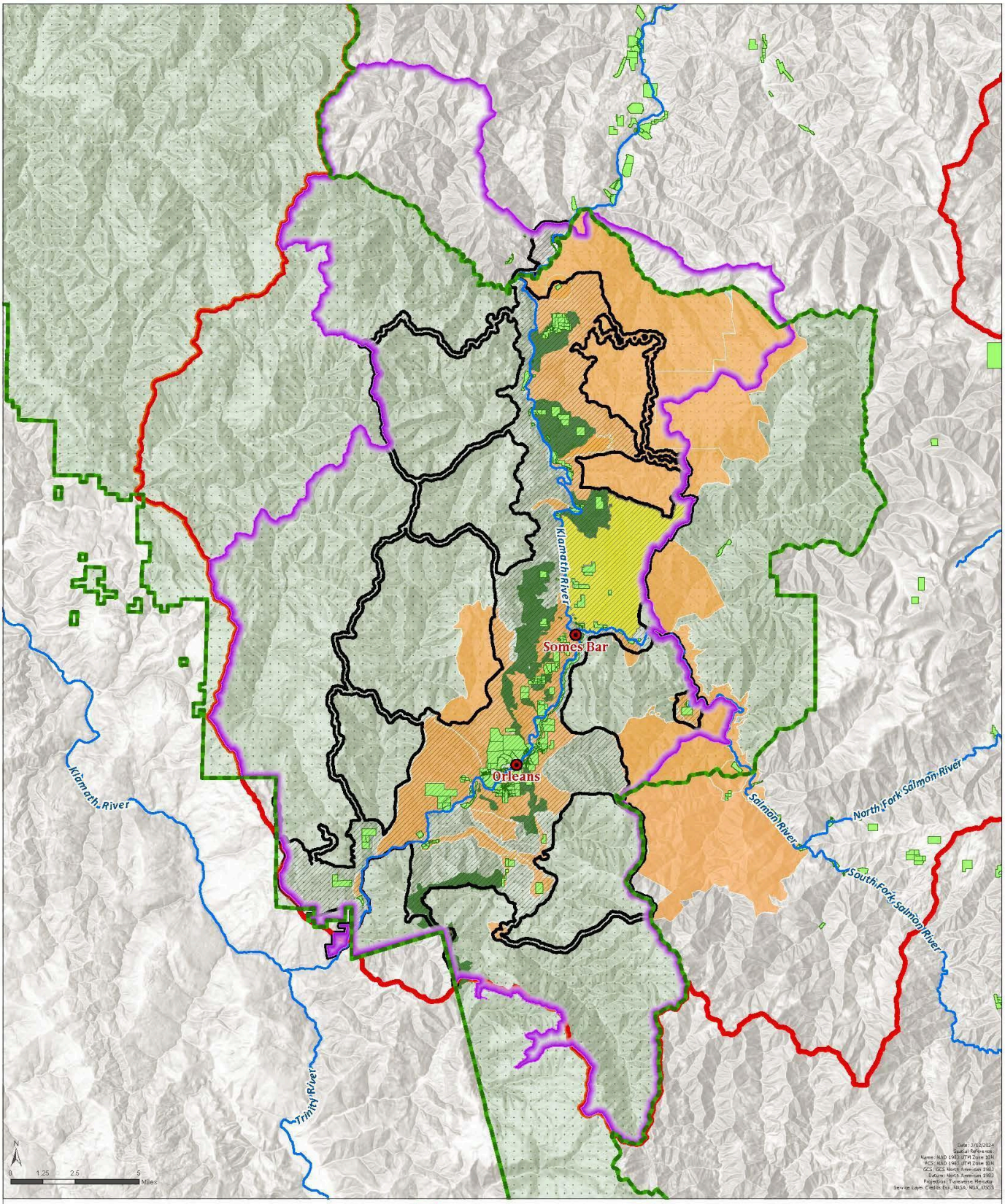


Orleans-Somes Bar Community Wildfire Protection Plan
Current and In-Progress Environmental Permitting

- Karuk Aboriginal Territory
- Orleans Somes Bar CWPP Boundary
- Orleans/Somes Bar WUI
- Communities at Risk
- CAL VTPEIR Coverage (CEQA CE)
- SRF Fire and Fuels EA Coverage
- NEPA Complete - WKRP Projects
- NEPA In Progress - WKRP Projects
- WKRP 10 Year Work Plan

Figure 19: Current and In-Progress Environmental Permitting

Power and Communication Systems

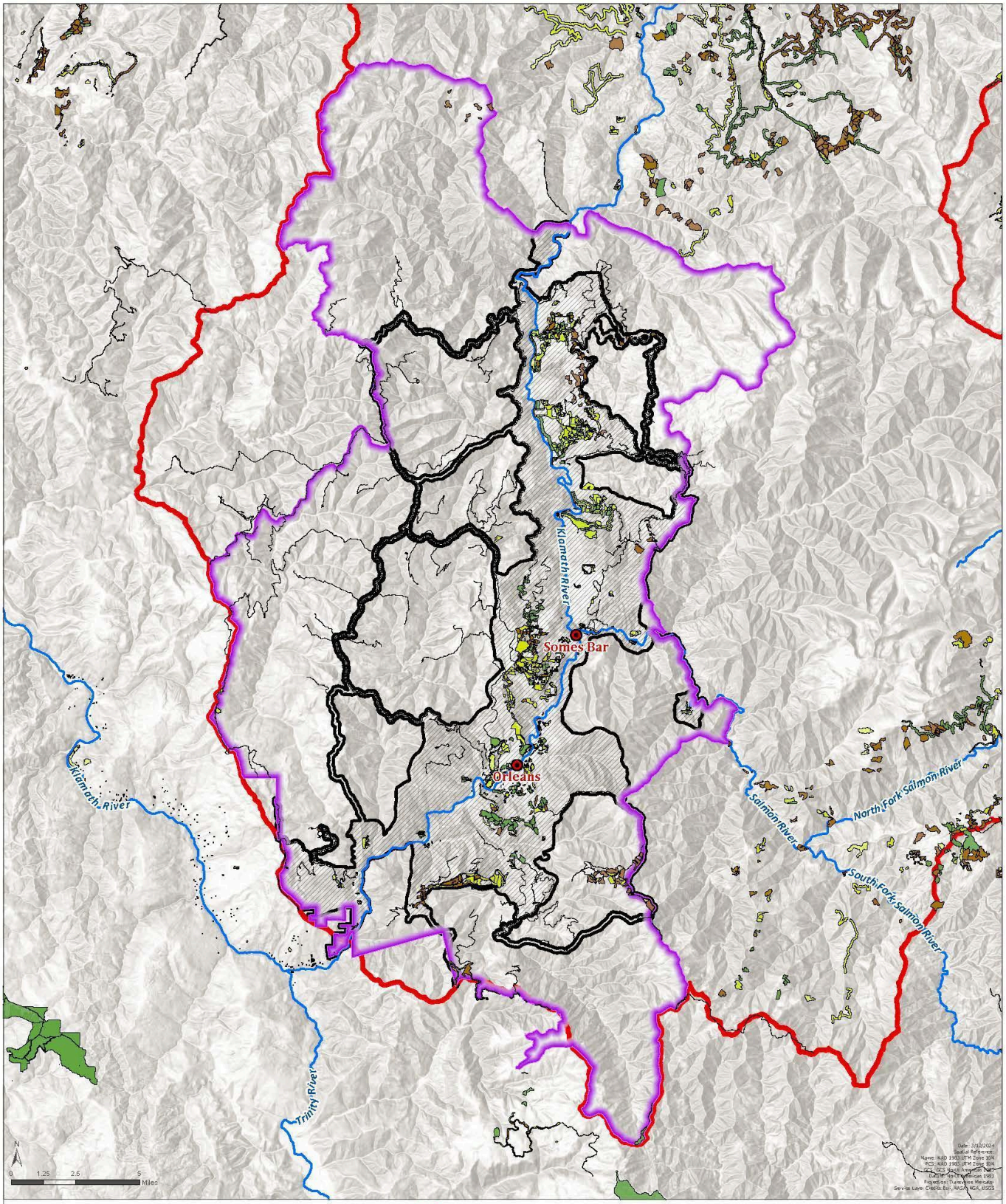
During PG&E power outages, power can be generated by generators in the Hoopa Valley if the integrity of power lines from Hoopa to Orleans are not compromised. Many residents and local organizations have generators for emergency backup. If fire emergencies require road closures that also cut off fuel supplies to the community, generators are only short-term solutions without additional fuel (e.g. diesel, propane, gas) resources. Backup fuel storage as well as non-fossil-fuel generators are necessary during emergencies. Power outages affect phone landlines, food storage, air purifiers, satellite internet systems, medical equipment, and other critical resources -- creating compounding impacts to the community. Due to these additional complications, emergency preparedness becomes considerably more complicated and critical. With limited cell phone coverage and frequent power outages during emergencies, many of the local organizations use generator power to support satellite internet and open those services to the community. The Karuk Tribe Emergency Services Department has a vehicle that can act as a Starlink hotspot during emergencies. This vehicle is located in Happy Camp and needs road access to the Somes and Orleans communities. The Mid Klamath Watershed Council applied for a Low Power FM station as a communication option during emergencies when other modes of communication are unavailable. The Karuk Tribe operates FCC-regulated radio and phone repeaters, in addition to the USFS/CAL FIRE repeaters, that are critical to communication during emergencies.

The Karuk Tribe may deploy a siren system in the community of Happy Camp and the OSB FSC should consider whether or not this is a priority action for the Orleans and Somes Bar communities.

Developing and maintaining the Community Liaison Program is key to emergency preparedness. Liaisons and neighborhood representatives can play an important role in timely communications during a wildfire emergency – especially when door-to-door visits are the most feasible communication option. For more information on the CLP program, see 4.3.2.

Air Quality

The Karuk Tribe supplies air purifiers for home use during wildfires when smoke impacts sensitive community members. Very few facilities, including the elementary schools, have sufficient HVAC systems to reduce particulate matter to an acceptable level during wildfire and prescribed fire events. The future of the Orleans and Somes Bar communities is a smoky one, adequate air filtration and power backup for air filtration is needed. While indoor air quality is a concern, a significant portion of the workforce in the communities work outdoors. Vehicle air filters, fit-tested respirators, and flexibility in job site locations across the landscape can improve air-quality conditions for this workforce and mitigate long-term exposure to smoke. A broad geographic distribution of PurpleAir air sensors can provide real-time information on site-specific air quality for workforce planning purposes.



Orleans-Somes Bar Community Wildfire Protection Plan
WKRP and USFS
Completed Fuels Treatments 2002 - 2024

Karuk Aboriginal Territory
Orleans Somes Bar CWPP Boundary
Orleans/Somes Bar WUI
Communities at Risk

Completed Fuels Treatment Category
Manual
Mechanical
Fire

Figure 20: Completed Fuels Reduction 2002-2024

Fire Cache

The Karuk Tribe, Mid Klamath Watershed Council, and the Orleans/Ukonom Ranger District of the Six Rivers NF all maintain a fire cache which includes fire hose, pumps, tools and other needed supplies during wildfire response. These caches are used for prescribed fire but can also be used during initial attack wildfires that threaten the community. Expansion and maintenance of these caches is a priority.

Previous treatments

The treatments provided in Figure 20 represent some of the work done in the community on private and public lands. These are not all the treatments, and do not suggest that follow up treatments are not required. Although much work has been completed, more is needed. Fuels treatments require maintenance and attention. Although many of the treatments shown on the map provide some level of protection and opportunity, they alone do not solve our current fuels issues. Aggressive management of the forest utilizing all appropriate types of treatments is needed and will continue.

When planning treatments, it is a focus to design and implement treatments that create a fuel reduced halo around communities or private properties. Knowing that it is not feasible to treat all acres in the forest in advance of future fires, we must accept that wildfire will play an important part in fuels reduction. Our treatments should provide opportunity for wildfires to be as beneficial as possible – and not harmful to communities, life and property, nor deferring fire risk to future generations. As these fires move closer to private property or communities, the treatments that have been completed should slow their progress and provide fire managers an opportunity to contain them. Focusing treatments on and around private property also reduces the risk of a fire start within this area to escape to the surrounding area.

Emergency Preparedness Priority Actions

1. *Invest in emergency-resilient power solutions*
2. *Invest in emergency-resilient communication systems*
3. *Develop and maintain the Community Liaison Program*
4. *Increase clean-air options for homes and public facilities during fire events*
5. *Support the California “Smoke Ready” campaign to coordinate messaging and content to plan for and protect communities from smoke impacts.*
6. *Increase air filtration and job placement options for the outdoor workforce.*
7. *Expand and maintain fire caches for all fire preparedness entities.*
8. *Maintain past fuel treatments.*

4.3: Restoration of Beneficial Fire

Beneficial Fire is a term used to collectively refer to prescribed fire, cultural burning, and fire managed for resource benefit. As described in the 2022 California Strategic Plan for Expanding the Use of Beneficial Fire, it is the most inclusive term to describe the full suite of beneficial fire activities that may be selected to reach certain management or stewardship objectives. These objectives range from fuels reduction, ecological benefits, cultural ceremonies, hazard abatement, restoration, and many more. The restoration of beneficial fire is necessary to restore a more resilient landscape for our environment and future generations.

Since the first version of the OSB CWPP, many collaborative planning documents have been written about the importance of beneficial wildfires. The 2021 California Wildfire and Forest Resilience Action Plan (“state Action Plan”) summarizes that decades of fire suppression, coupled with the increasing impacts of climate change, have dramatically increased wildfires’ size and intensity. Human and lightning-caused fires were common prior to the 20th Century. Fire suppression, selective overstory thinning, grazing, invasive species, pests, drought, extreme wind events, and changing temperatures have combined with human population growth and steep topography to shape fire regimes today. Building resilience to wildfires means restoring the health of our forests and diverse landscapes across the state and strengthening wildfire preparation within our communities. As a fire-dependent ecosystem, the health of our forests depends on beneficial wildfires.

4.3.1: Prescribed Fire

Implementation of prescribed fire is instrumental to increase the safety and health of the forest. Manual treatments like cut and pile, as well as mechanical treatments like selective logging alone do not complete the fuel reduction need. The implementation of understory burning provides some of the greatest fuel reduction benefits of all the treatment types. It is important that fuel treatments are designed with the implementation of beneficial fire as the end goal. In the past, many unit boundaries were established that did not correspond to feasible burn unit boundaries. It is critical that prescribed fire unit boundaries are considered during unit layout and treatment design.

The Six Rivers National Forest (SRNF) implements prescribed burns, in coordination with the Karuk Tribe, and at times through the TREX program, on public lands in the Orleans-Somes Bar area. These burns require National Environmental Policy Act (NEPA) compliance, burn plans, air quality permits, monitoring, and other requirements. Not only are these burns limited by weather conditions being conducive to meeting burn objectives, there are many administrative hurdles to overcome before burning can be implemented. In early fall, when conditions may be conducive to prescribed fire, fire personnel may still be responding to wildfires in other areas and unavailable to engage in prescribed fire. Recently, the SRNF has received funding to significantly staff up prescribed fire efforts, including the ability to order up regional resources on short notice to take advantage of available burn windows.

A significant source of prescribed fire implementation is the Klamath Prescribed Fire Training Exchange (KTREX) that’s been ongoing since 2014. Each year, KTREX is consistently one of the largest national TREX events hosted by The Nature Conservancy’s Fire Learning Network Program and co-led by local partners including, the: Karuk Tribe, Mid Klamath Watershed Council, Salmon River Restoration Council, and others. Dozens of organizations, hundreds of participants including international individuals gather together on some of the most complex terrain to “learn and burn together” on the rugged, steep canyon Klamath landscape. Participants take the lessons and experience they gain to their “home units” spreading the use of fire as a tool. The mission of KTREX is unique with its focus on learning together and practicing the use of prescribed fire for natural resource management, wildfire risk mitigation, indigenous cultural values as well as to provide a unique training opportunity for NWCG (National Wildfire Coordinating Group) qualified applicants of all levels. Simultaneously, we focus on building local capacity and the workforce for this work in our area into the future. Each year KTREX partners engage the Type III Incident Management Team structure to continue building capacity for the skills and training that enable management of late season wildfires when the opportunity arises.

Prescribed Burn Associations (PBAs) are community-based mutual aid networks that help private landowners restore beneficial fire through prescribed fire. The Humboldt County PBA formed and conducted its first burns in 2017, and was the first PBA formed in the western United States. The Siskiyou PBA offers training opportunities, equipment and tools, fire behavior expertise and planning to help promote responsible prescribed burning throughout the county. PBAs are excellent resources for landowners who want to conduct a prescribed burn. They can assist with site visits, burn plans, permits, assessing liability, and burn supplies. A sample burn plan is available in Appendix H. For additional resources, visit . The CARX state certified burn boss program, CA Prescribed Fire Claims Fund, and gross liability standard for recovering suppression costs from escaped prescribed burns have all made it easier for PBA's and interested individuals to become involved in, and safely implement, prescribed fire on State Responsibility Area lands in California. MKWC has been utilizing these programs to expand the use of prescribed fire outside of the TREX model over the past two years and will continue to expand this model within the WKRP area.

4.3.2: Cultural burning

Recognition and expansion of ongoing cultural burning practices can begin to rectify historic injustices and return stewardship roles to Indigenous communities. As defined in the Strategic Plan for Expanding the Use of Beneficial Fire, *cultural burning* is the intentional application of fire to land by California Native American Tribes, Tribal organizations, or cultural fire practitioners to achieve cultural goals or objectives, including for subsistence, ceremonial activities, biodiversity, or other benefits. In the Good Fire II Report, Sara Clark and Bill Tripp highlight many of the necessary steps, both at the state and national level, that are needed to remove the barriers to cultural fire. These recommendations parallel many of the recommendations in the recent national Wildfire Commission report that aims to inform the overhaul of wildfire management in the United States. The Healthy Country Plan, written by the Indigenous People's Burning Network (2020), outlines priorities for revitalizing fire culture over the next three to five years. The vision that came from the Healthy Country planning process that include knowledge holders from the Karuk ,Yurok and Hupa peoples, and shows what the future will look like when fire culture is revitalized: "When our work is successful, life will be thriving with deer, birds, mushrooms, open prairies, grasslands, and clear creeks. There is laughing. Children are playing all over. All of the brush is gone and we can see the river. The land all the way down the road has been burned. It is like the pre-contact landscape, and we are able to truly live off the land. We get that humble and respectful feeling. Our prayers with our ancestors are heard because our connection with the land is growing stronger and stronger. These prayers are carried by the smoke and answered by the fire. People are leading, and the agencies support it. A little ways back and a long ways out, we have the knowledge to make rain."

In order to manifest this vision, significant investments, recognition, policy change and support for cultural burning is needed. While our area Tribes are leading this effort, there is also an allyship role for non-native residents in the OSB area to play in supporting the restoration of cultural fire on our landscape. Agreements between landowners and Tribes or third parties can allow for cultural burning and the organized gathering of cultural resources by Tribal families from SRA lands where deemed beneficial by all parties. These actions can, in turn, greatly contribute to the reduction of fire risk and rebuilding of stewardship relationships with the land.

4.3.3: Beneficial Fire Use

"As we stand on the precipice of a new wildland fire paradigm, we have the opportunity to define it, not be defined by it."
(National Cohesive Wildland Fire Management Strategy Western Region, 2024)

Every community has a unique relationship with wildfire. For the Orleans and Somes Bar communities, wildfires are a regular occurrence. The availability of resources during wildfire events varies greatly from year to year or even at different times within the same fire season depending on wildfire activity across the nation. Community members have worked to increase community preparedness in the event that few outside resources are available. Also, when resources are available, while there is diversity of opinions within the community, it is common to hear strong opinions regarding the tactical response of firefighting resources. It is the goal of this document to present pathways for local knowledge to be incorporated into fire response.

The name of this document is the "Community Wildfire *Protection* Plan." The planning area culture and environment are incredibly fire dependent. At the same time, fuel loading and changing weather patterns create an environment where communities must also prepare to *protect* themselves from fire as a threat to homes and human lives.

There is incredible opportunity in the Orleans-Somes Bar area to reestablish a mutually beneficial, interconnected, relationship to wildfires -- increasing the number of wildfires that have beneficial impacts to the environment, economy and community. In wet years, under the right circumstances, wildfire starts can achieve fuels reduction and ecosystem benefits at the landscape scape, and have better luck stopping wildfires during the dry years. Federal, state and local agencies, Tribal governments, non-governmental organizations and landowners must address the urgency in increasing beneficial fire on the landscape while also protecting homes from burning (California Wildfire & Forest Resilience 2021). The first section of this chapter addresses "protection" from wildfire – both before and during wildfire events. This section addresses strategies and actions to increase the number of beneficial wildfires fires on the landscape.

Community/Partner Response Capacity

Local Incident Management Team Capacity

The Six Rivers National Forest has a local Type III Incident Management Team (IMT) that activates and manages wildfire in the Orleans-Somes Bar area. For larger fires, this team is often replaced with other IMTs from around the nation. Especially during the early stages and late stages of large wildfire events, local IMT capacity is particularly important for fire response. The Karuk Tribe has a Wildland Fire Program, including personnel and equipment for wildfire response. This program plays a critical role in local fire management. The Orleans Volunteer Fire Department has some capacity to support fire response, including fire engines and a water tender. There are many benefits to local fire personnel, from all agencies, to fill roles in Type III teams.

In order to increase fire qualifications for fire personnel, local partners host a Prescribed Fire Training exchanges, in coordination with The Nature Conservancy. Current TREX event include the Klamath TREX (KTREX), Yurok TREX, the Karuk Indigenous Women's+ TREX, and occasional hosting of other TREX events such as the NorCal TREX. While hosting KTREX is a great benefit to our training and development within our community and organization, it also served the purpose of increasing NWCG qualifications and familiarity with the Incident Command System. During TREX, the team uses the Incident Command System to manage the event, which allows the participants to fill and train in roles identified by NWCG to fill the requirements of an

IMT. TREX events also provide an avenue for participants that meet NWCG qualifications, but may not have those qualifications documented in a “red card” to support fire management activities – gaining more familiarity with local fire personnel. Red carded individuals can be utilized during wildfire response to fill needed roles in teams and support the local units in fire management.

The Mid Klamath Watershed Council owns and operates 1 type 3 engine, 1 type 6 engine, 2 full size tow behind chippers, 2 400 gal water buffalos, multiple portable pumps, and a fire cache with needed supplies for prescribed fire. This equipment and supplies are intended for use on prescribed fire as MKWC is not a fire response agencies. With that being said, during initial attack of wildfires that threaten our community MKWC will deploy these resources in coordination with fire officials to help in efforts of structure protection and response. As seen during the first 3 days of the 2023 SRNF Lightning Complex MKWCs chipper was heavily used and served a great need to reduce and remove vegetation near homes that were directly threatened by wildfire.

The community of Orleans Somes Bar is well adapted and experienced living with wildfire. There is an understanding of place and the systems that are present. Time and time again the community has come together to provide services needed during wildfire. Providing vehicles for evacuation, hands for labor, and support for loss. Utilizing KTREX, many of the community members are educated through NWCG based classes for at least their basic 32 and can utilize these skills and knowledge to help others in a time of need. The community liaison program is activated during wildfire to plan and track needs, serve as information sharing source, and communicate between the community and incident management teams.

Community/Partner Response Capacity Priority Actions:

1. *Continue trainings for NWCG qualifications, working toward filling more Type 3 Incident Management Team roles with qualified individuals.*
2. *Establish a community fire cache for use during wildfire.*
3. *Support the Orleans Volunteer Fire Department in increasing their capacity.*

Wildfire Response

Cohesive Strategy

While the Cohesive Strategy applies outside of wildfire events, the CWPP team is focusing on the Cohesive Strategy as a guiding document for the Wildfire Response. The National Cohesive Wildland Fire Management Strategy encourages everyone to work together using the best management practices and good research to make progress towards **Safe and effective risk-based wildfire response:** All jurisdictions, responding in all land types, participate in making and implementing safe, effective and efficient risk-based wildfire management decisions. The Western Region adopted the following vision statements:

Extinguish fires when needed
Where wildfires are unwanted or threaten lives, communities and homes, actively utilize all available strategies and tools to suppress fires and its growth.

Use fire where allowable

Utilize prescribed fire and managed wildfire for landscape and ecosystem benefit in the right place, at the right time, under the right conditions.

Manage our natural resources
Use and expand non-fire, cross boundary fuels treatments to increase landscape and community resiliency.

Learn to live with wildland fire
We all have a role in our wildland fire system. We must redeem our individual, community and organizational responsibilities as part of this integrated system.

There is still a need for the significant increase of managed wildfire for resource objectives across the planning area. The 2023 wildfire season .

Managed Wildfire

While many unintentional ignitions require full fire suppression efforts (including ignitions located in proximity to communities and other assets or under adverse weather conditions), some ignitions can be managed in a way to achieve ecosystem and other resource benefits without undue risk to public safety or significant impacts to public health or the environment. This practice, referred to here as “fire managed for resource benefit” or “managed fire” is already in use by the USFS and other public land managers where land management plans allow.

In his 2023 pre-wildfire season Letter of Intent, USFS Chief Randy Moore allowed Forests where there was public support for managed wildfire that did not have Fire Management Plans that specified the use of managed wildfires to utilize tactics even within the umbrella of fire suppression that allowed for wildfire to be brought to significantly larger extents in order to reduce firefighter exposure to risk and increase community and ecological benefits. Using this direction as a guide, the Six Rivers National Forest chose to manage the SRF Lightning Complex fires on the Orleans and Ukonom Ranger Districts for resource benefits, aerially igniting strategic ridgelines along PODs boundaries to connect four separate wildfires just north and west of the communities of Orleans and Somes Bar. Whereas wildfires in other districts in the Six Rivers NF were suppressed through direct attack, decades of community and tribal advocacy created the social license for federal fire managers to take a different approach on the Orleans/Ukonom Ranger Districts. Given recent high-severity wildfires, including the 2020 Slater Fire that burned 125,000 acres in one 24-hour period with over 70% burned at high severity, the 2023 SRF Lightning Complex created a powerful model for how wildfires could be managed in wet seasons to return fire to areas where it has been long absent.

While there is often agreement on when fires should be extinguished in order to protect homes, it is less clear how the community can express when to *use* wildfire to increase forest resiliency. Community members know how long it takes to complete fuels reduction and prescribed fire projects. Some projects being implemented in 2024 have been in various stages of planning and implementation for almost 20 years. A wildfire at the right place, time, and under the right conditions, can provide a greater amount of fuels reduction that 20 years of project planning and implementation at our current capacity.

There are several actions identified in the state Action Plan that relate to wildfire response in this planning area. For State Responsibility Areas: **Modify Suppression Tactics on State Lands –** CAL FIRE will continue to expand its use of modified suppression tactics on state lands to allow a wildfire to burn under predetermined

and carefully prescribed conditions to reduce forest fuels and provide ecological benefits. These tactics will follow predetermined plans that consider property and life safety issues.

For Federal Responsibility Areas: The USFS is tasked with identifying **Strategic Fire Management Zones** to expand its use of managed wildland fire while protecting public and community health and safety. The USFS is also working to significantly increase its use of managed wildland fire – especially as its National Forest land and resource management plans are revised (California Wildfire & Forest Resilience 2021).

Since 2021, the Orleans-Somes Bar area is part of a **Collaborative Forest Landscape Restoration Program**, established by the Omnibus Public Land Management Act of 2009. The CFLRP program funds large landscape collaborative restoration actions with the goal of "wildfire management cost reduction "through reestablishing natural fire regimes and reducing the risk of uncharacteristic wildfire." Funding through this program can be used to implement strategies outlined in this document – including fuel management in strategic locations expand opportunities for beneficial fire during wildfire events.

The USFS has identified **Potential Operational Delineations (PODs)** -- areas where natural ignitions can be contained within identified or planned fuel breaks such as roads, ridge tops, water bodies, or fire footprints. PODs are used for both fire suppression and fire managed for resource benefit. These PODs will be more effective if Orleans Somes Bar Fire Safe Council partners, especially the Karuk Tribe, can ground-truth these lines and ensure that their locations are not in conflict with areas of cultural resource concern.

PODs are one example of **Spatial Fire Management Planning.** The USFS, the NPS, and other land managers will continue to invest in spatial fire management planning, including advanced planning to identify pre-fire landscapes where wildfires may be managed for resource and other benefits, taking into account public safety, smoke management, protection of private lands, infrastructure and resources, and ecological benefits. Land managers will work with Tribes and local communities in these planning efforts

Implement On-the-Ground Projects to Facilitate the Use of Unplanned Ignitions: Collaborative identify and implement on-the-ground projects to facilitate the subsequent use of fire managed for resource benefit, such as strategically placed fuel breaks.

Incident Strategic Alignment Process: Framing fire strategy tradeoffs in terms of the four pillars of the Incident Strategic Alignment Process is important. These pillars are 1) Critical Values at Risk, 2) Strategy, 3) Responder Risk, and 4) Probability of Success. This framing allows communication to occur in a bounded space focused on things that can be objectively assessed rather than forecasting site-specific fire effects devoid of other context.

On the 2023 SRF Complex, choosing a strategy that expanded the wildfire to strong containment features meant the same or lower risks to critical values, reduced responder risk, and marked improvements in probability of success. The intent of the agency administrators and Tribes did not include a minimizing acres burned; therefore, that did not enter the equation. And at the same time, the Incident Management Team was able to show these areas would not burn at high severity, would return fire to areas long unburned, and have a demonstrable beneficial effect on the containment of future fires. Most of the fires in the 2023 SRF Complex were in an unbroken sea of fuel – fuel that in almost any other year would burn aggressively and with few options to protect assets or limit risks to firefighters. The strategy addressed not only the current fires, but the

next ones as well. A Strategy Map was created and shared with local, regional and national line officers displaying the following inputs:

- ISAP Critical Values
- ISAP Strategic Lines (Primary)
- Graded Potential Operational Delineations
- Evacuation Zones
- Existing Management Action Points
- Fire History
- Fire Spread Probability

The value of the community of Orleans or the knowledge of the Karuk, Hoopa Valley, and Yurok Tribes cannot be overstated in this process. Ultimately, there was agreement at all levels to engage in beneficial fire use as a strategy within the full suppression mandate. The ISAP process was essential in achieving this agreement by adequate characterizing both risks and opportunities, and will be instrumental in making these decisions during future wildfire seasons.

Modify Suppression Tactics in State Responsibility Area: Support CAL FIRE partnering with the Yurok Tribe, Karuk Tribe, USFS, and other land managers to evaluate landscapes where modified suppression techniques may be implemented. Where appropriate and authorized by the state Legislature, CAL FIRE will use plans and agreements with land managers and landowners in order to allow unintentional ignitions to burn under predetermined and carefully prescribed conditions, utilizing planned infrastructure for accomplishing resource benefits similar to prescribed fire.

Establish Metrics: Land managers and fire scientists will evaluate options for moving beyond simple acreage targets to communicate the impacts of specific beneficial fire activity on forest resilience, carbon stability, community safety, and biodiversity. The Fire MOU Partnership and/or Prescribed Fire Work Group of the Task Force will propose a new framework for quantifying outcomes of beneficial fire across the full range of values for use in future goals and targets. The metrics will align the framework for quantifying the benefits of beneficial fire with the WFR Action Item to Develop Performance Measures for community wildfire risk reduction and adaptation.

Public Support: Assess and Document Public Health Impacts: Using data gathered from mobile air quality monitors and other sources, CARB will lead, with contributions from other agencies, entities, and academic researchers, an analysis of potential public health impacts of prescribed fire smoke compared to wildfire smoke. Particular attention will be paid to impacts on disadvantaged communities and climate vulnerable communities. [Implementing Action Plan 1.39]

Wildfire Response Priority Actions

- *Identify large wildfire restoration and maintenance fire management zones where unplanned ignitions can be used to restore and maintain ecosystem resilience when conditions are favorable.*

4.4: Post-Fire Response

The pace and scale of wildfires appears to be increasing as a century of fire exclusion and the cessation of Indigenous burning collide with climate change. Wildfires have, and will continue to be, the largest form of fuels treatment on our landscape. How we prepare for, react to, and work with these wildfires will greatly affect both human and natural communities. We are returning to a fuel limited landscape with every new large wildfire, and there are significant opportunities to maintain these burned areas as fuel limited, fire resilient landscapes into the future. In order to do this, we must transition from fire suppression as our primary method of fire management, to a model that relies much more on managing wildfires for resource objectives and larger scale seasonal prescribed burning. Post-fire treatments are a critical step in preparing for this management shift.

- Western Klamath Restoration Partnership Post-Fire Recommendations

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- Western Klamath Restoration Partnership Post-Fire Recommendations

Since the Orleans-Somes Bar area is fire dependent, the entire planning area is always in a “post-fire” response. However, the period immediately following a fire up until about 7 to 12 years following the fire (depending on the vegetation type), is an important period in which fuel loading is reduced, providing opportunities for restoration of beneficial fire. Unfortunately, more wildfires are burning large landscapes at higher severities than there is any precedent for since the last Ice Age, and these landscapes require significant investments to recover. The Strategic Plan for Expanding the Use of Beneficial Fire (2022) prioritizes the following action:

Strategically Deploy Wildfire Footprints: As part of post-wildfire assessments and recovery planning, fire managers and their cooperators, including Tribes and cultural fire practitioners, will evaluate both the need for maintenance beneficial fire within recent wildfire footprints, and the potential for using the burn footprint and control lines to anchor adjacent beneficial fires across the landscape. The evaluation will be shared with willing landowners and managers for incorporation into prescribed fire and other project planning where appropriate.

In response to the 2020 wildfire season that was devastating in the Happy Camp area, the Western Klamath Restoration Partnership (WKRP) provided post-fire management recommendations to managers and communities based on Indigenous and western science-based knowledge systems. WKRP partners acknowledge that restoration projects cannot address the scale of fire debt in the planning area on a timeline that compares to the pace and scale of wildland fires and climate change. WKRP put forward post-fire recommendations to address a collaborative response to wildland fire as the dominant management force in our planning area. These WKRP recommendations are not a substitute for collaboration and should be used to assist in the collaborative identification of desired future conditions. The recommendations do not address all potential circumstances that may arise in a post-fire environment, instead they may guide appropriate project collaborations on a case-by-case basis. The following recommendations are particularly relevant to this CWPP:

- Collaboratively develop treatment descriptions for a range of post-fire scenarios – including a range of severities, vegetation and soil types.
- Prioritize re-introduction of fire process into recent fire footprints.

- Design NEPA to facilitate the re-application of fire in recent fire footprints as well as to use recent fire footprints as a fuel-limited area for adjacent prescribed fires, cultural burns, and managed wildfires.
- Complete NEPA and write prescribed burn plans that allow for utilization of recent wildfire footprints to expedite safe restoration of historic fire regimes, including Indigenous fire use practices. Include prescribed burning in all NEPA documents analyzing post-fire tree removal.
- Work collaboratively to identify funding for post-fire management treatments.
- When multiple fire footprints need to be addressed: 1) prioritize high severity landscapes, 2) prioritize fire in fire footprints that have conditions such as a limited fuelbed, that allow for a lower complexity reentry of fire (typically 0-12 years), 3) recognize the importance of maintaining low and moderate severity fire footprints.
- Post-fire logging is a highly controversial issue. One area of agreement is to use post-fire logging, if needed, to create implementable burn units to restore fire processes in, and adjacent to, recent fire footprints.
- Use post-fire logging around homes and along critical access routes and infrastructure, when appropriate. Prioritize treatments based on road maintenance level (Level 5 - highest priority, Level 1 - considered if they serve larger function (e.g. secondary ingress/egress). Remove hazard trees in administrative areas (e.g. campgrounds), near houses and other areas with infrastructure.
- Focus fuel treatments in the WUI, including ingress/egress routes. Prioritize reduction of hazard to power poles and distribution lines.
- Identify, enhance, and maintain strategic control features for future use -- both in wildfire management and prescribed fire.
- Don’t plant control lines with conifers, instead promote natural regeneration. Minimize erosion on strategic firelines without using vegetative materials that reduce potential for future fireline utilization. Minimize the use of heavy slash to reduce erosion. Pile and burn slash associated with fireline construction.
- Identify a reburn schedule for recent fire footprints and ensure that NEPA will allow for this.
- Maintain recent fire footprints with appropriate fire intervals (typically 5- to 10-year intervals, but dependent on the vegetation type) to restore historic fire regimes and reduce threats to communities.
- Use recent fire footprints as a fuel-limited area adjacent to prescribed fire units.
- Maintain sufficient coarse woody debris, good-quality snags on post-fire landscapes while considering future community protection and pre-fire management needs (short and long-term).
- Prioritize toxic runoff from fires in WUI areas (e.g. burned homes) and pre-existing superfund sites (e.g. mines).
- Wildfires are an opportunity to restore fire resiliency in burned forests. First, natural regeneration and invasive species management are a top priority. Planting can complement a climate-smart approach when slope, aspect and solar radiation are factored into planting decisions. The goal of post-fire treatments needs to be diverse, fire-resilient forests. Wildfires can be an opportunity to increase heterogeneity in plantations.
- Protect and retain older, larger, fire-resistance conifers and hardwoods – especially species (living or dead) such as rare endemic conifers, sugar pine, yews, and broken top/wildlife trees.
- Retain hardwoods with potential for bole sprouting even if < 8 in. in diameter, especially dogwood.
- Count natural hardwood regeneration in stocking requirements.

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PART 5: APPENDICES

Appendix A: Resource Materials and Additional References

The following resources were used in the creation of this plan, including as tiering documents.

- Assembly Bill 3074: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB3074
- CA Code of Regulations Title 14, Fire Safe Regulations dealing with emergency access, address signage and water standards https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IEC5359C0A76E11ED9E1BBAE9320F3C1A&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)
- CA Building Code Chapter 7A, Building materials and construction methods for exterior wildfire exposure: https://codes.iccsafe.org/content/CBC2019P4/chapter-7a-sfm-materials-and-construction-methods-for-exterior-wildfire-exposure
- CAL FIRE Ready for Wildfire website: https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/defensible-space/
- California Department of Conservation Regional Forest and Fire Capacity Program https://www.conservation.ca.gov/dlrp/grant-programs/Pages/Regional-Forest-and-Fire-Capacity-Program.aspx
- California Department of Forestry and Fire Protection and the California Natural Resources Agency 2019 https://www.fire.ca.gov/media/5504/strategicplan2019-final.pdf
- California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, 2017
- California Prescribed Burning Association information for shared learning https://calpba.org/planning-a-burn
- California's Strategic Plan for Expanding the Use of Beneficial Fire, 2022 https://wildfiretaskforce.org/wp-content/uploads/2022/05/californias-strategic-plan-for-expanding-the-use-of-beneficial-fire.pdf
- California Wildfire and Forest Resilience Action Plan (2021) https://wildfiretaskforce.org/wp-content/uploads/2022/04/californiawildfireandforestresilienceactionplan.pdf
- Electrical Ignitions, Wildfire Risk and Community Climate Adaptation in Northern California: https://www.karuk.us/images/docs/dnr/kari%20norgaard%20-%20Climate%20Change%20and%20Critical%20Infrastructure%20FINAL.pdf

- Federal Land Assistance Management and Enhancement (FLAME) Act, 2009.
- Federal Wildland Fire Mitigation and Management Commission's Final Report
  https://www.usda.gov/sites/default/files/documents/wfmmc-final-report-09-2023.pdf
- Good Fire Report (I)
  https://karuktribeclimatechangeprojects.com/good-fire/
- Good Fire Report (II)
  https://karuktribeclimatechangeprojects.com/good-fire/
- Guidelines for Creating Defensible Space:
  https://bof.fire.ca.gov/media/8935/defensible-space-guidelines.docx
- Happy Camp Community Wildfire Protection Plan (2024 update in process)
  https://drive.google.com/file/d/1q2KkE19MNgIhgMQ-KsO5T_QR5ZUS-Lx7/view?usp=sharing
- Healthy Country Plan
  https://www.natureunited.ca/content/dam/tnc/nature/en/documents/canada/healthy-country-planning-case-study.pdf
- Healthy Forest Restoration Act of 2003:
  https://www.congress.gov/congressional-report/108th-congress/senate-report/121/1#:~:text=The%20legislation%20provides%20land%20managers,protecting%20both%20life%20and%20property.
- Humboldt County Community Wildfire Protection Plan:
  https://humboldtgov.org/2431/Community-Wildfire-Protection-Plan
- Karuk Tribe Climate Adaptation Plan
  https://karuktribeclimatechangeprojects.files.wordpress.com/2019/10/reduced-size_final-karuk-climate-adaptation-plan.pdf
- National Fire Prevention Association
  https://www.nfpa.org/education-and-research/wildfire/preparing-homes-for-wildfire
- National Cohesive Wildland Fire Management Strategy
  https://www.forestsandrangelands.gov/strategy/thestrategy.shtml
- North Coast Resource Partnership Regional Priority Plan
  https://northcoastresourcepartnership.org/resilience-plan/overview/
- Prescribed Fire Liability Claims Fund
  https://wildfiretaskforce.org/prescribed-fire-liability-claims-fund-pilot/
- Potential Operational Delineations (PODs) (data for public use)

https://ncrp.maps.arcgis.com/home/item.html?id=22a5d025eba64b5e9e0fb44c8089deee

- Public Resources Code 4291, State Fire Safe Regulations and defensible space codes https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=4291

- Siskiyou County Community Wildfire Protection Plan: https://bosagenda.co.siskiyou.ca.us/335566/354234/354116/354125/354129/2354129.pdf

- Salmon River Community Wildfire Protection Plan https://drive.google.com/drive/folders/1nqPn2TL4eUY8gUqTlLgB4eYk1z-cM0Cz?usp=sharing

- University of California Agricultural and Natural Resources Fire Network site on fire preparedness https://ucanr.edu/sites/fire/Prepare/Building/

- Western Klamath Restoration Partnership Plan, 2014 https://drive.google.com/file/d/1OLwGFChl5iOAlplTuk2Lvw3s1ufWxU04/view?usp=sharing

- Wildfire Crisis Strategy https://www.fs.usda.gov/managing-land/wildfire-crisis

- Wildland Fire Leadership Council https://www.forestsandrangelands.gov/leadership/index.shtml

Recent Prescribed Fire Legislation from California's Strategic Plan for Expanding the Use of Beneficial Fire.

- AB 2551 (Wood, Ch. 638, Stats 2018) Forestry and fire prevention: joint prescribed burning operations. Allows the Director of CAL FIRE to enter into agreements with landowners to conduct joint prescribed fire operations, and requires CAL FIRE to provide advances to landowners of the Department's cost share for work agreed to through the California Forest Improvement Program.

- SB 901 (Dodd, Ch. 626, Stats 2018) Wildfires. Directs that $35 million be made available for CAL FIRE from the GGRF through Fiscal Year 2023-24 for prescribed fire and other fuel reduction projects.

- SB 1260 (Jackson, Ch. 624, Stats 2018) Fire prevention and protection: prescribed burns. Authorizes federal, state, and local agencies to engage in collaborative forestry management, creates new opportunities for public and private land managers to mitigate wildfire risks, and creates presumption of due diligence for permitted prescribed fire activities.

- SB 332 (Dodd, Ch. 600, Stats 2021) Civil Liability: prescribed burning operations: gross negligence. Modifies the liability standard for state fire suppression costs resulting from escaped prescribed fires from simple negligence to gross negligence if certain conditions are met.

- AB 642 (Friedman, Ch. 375, Stats 2021) Wildfires. Requires appointment of a cultural burning liaison within CAL FIRE, development of an automated system for issuing burn permits. Defines cultural burning and cultural fire practitioner.

- SB 170 (Skinner, Ch. 240, Stats 2021) Budget Act of 2021. Establishes a $20 million Prescribed Fire Claims Fund to support coverage for losses from prescribed fires by non-public entities, such as Native American tribes, private landowners, and nongovernmental entities.

- SB 456 (Laird, Ch. 387, Stats 2021) Fire Prevention: wildfire and forest resilience: action plan: reports. Requires Wildfire and Forest Resilience Task Force to prove annual reports to the appropriate policy and budget committees of the Legislature regarding process on the Action Plan.

Appendix B: List of Acronyms

CAP	Climate Adaptation Plan
CAL FIRE	California Department of Forestry and Fire Protection
CARX	California State Certified Prescribed Fire Burn Boss
Caltrans	California Department of Transportation
Cal VTP EIR	California Vegetation Treatment Program Environmental Impact Report
CWPP	Community Wildfire Protection Plan
DNR	Department of Natural Resources
DPA	Federal Direct Protection Area
EVM	Enhanced Vegetation Management Program
FRAP	Fire and Resource Assessment Program (of CAL FIRE)
FSC	Fire Safe Council
FRCC	Fire Regime Condition Class
FSC	Fire Safe Council
GF	Good Fire (Report)
GIS	Geographic Information System
HCFPD	Happy Camp Fire Protection District
HFRA	Healthy Forest Restoration Act
IMT	Incident Management Team
ITEK	Indigenous Traditional Ecological Knowledge
KDNR	Karuk Department of Natural Resources
KRB	Klamath River Basin
KTREX	Klamath Prescribed Fire Training Exchange
LRMP	Land and Resource Management Plan
MKWC	Mid Klamath Watershed Council

MOU	Memorandum of Understanding
NCRP	North Coast Resource Partnership
NEPA	National Environmental Policy Act
NQUAQMD	North Coast Unified Air Quality Management District
NWCG	National Wildfire Coordinating Group
OA	Overlay Assessment
OSB	Orleans/Somes Bar
OVFD	Orleans Volunteer Fire Department
PBA	Prescribed Burn Association
PODs	Potential Operational Delineations
PSW	Pacific Southwest Research Station (of the USDA Forest Service)
SRA	State Responsibility Area
SRRC	Salmon River Restoration Council
STM	State and Transition Model
TEK	Traditional Ecological Knowledge
TREX	Prescribed Fire Training Exchange
USDA	United States Department of Agriculture
USFS	United States Forest Service
WKRP	Western Klamath Restoration Partnership
WUI	Wildland Urban Interface
ZOA	Zones of Agreement

Appendix C: Glossary of Terms

All Hands-All Lands
As stated in the National Cohesive Wildland Fire Management Strategy is an approach to reducing long-standing and widespread wildfire risks through restoring and maintaining landscapes, assisting communities to become more fire adapted, and ensuring a safe, effective, risk-based wildfire response. Policy visionaries know that this approach will require social and cultural change and unprecedented collaboration. Federal, state, tribal and local entities, and communities, must work together, across jurisdictional boundaries to determine shared values and risks, prioritize those risks and make collective investments at scale in high priority areas that result in progress toward the three goals (stated in the first sentence).

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

Aspect (topographical)
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.

At-Risk Community
In the context of CWPPs means an area that is comprised of, 1) a community within the WUI and vicinity of federal lands that are at high risk from wildfire; or a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to federal land; 2) conditions conducive to a large-scale wildland fire disturbance event; and 3) a significant threat that exists to human life or property as a result of a wildland fire disturbance event.

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.

Beneficial Fire
Collectively refers to prescribed fire, cultural burning, and fire managed for resource benefit. Describes the full suite of beneficial fire activities that may be selected to reach certain management or stewardship objectives

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

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

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).

Cultural Burning
The intentional application of fire to land by Native American tribes, tribal organizations, or cultural fire practitioners to achieve cultural goals or objectives, including for subsistence, ceremonial activities, biodiversity, or other benefits

Cultural Burning Liaison
Provided in AB642, see Appendix A. In this context, requires the Director of Forestry and Fire Protection to appoint. Duties to included, but not limited to, serving on the State Board of Fire Services and to advise the Department of Forestry and Fire Protection on developing increased cultural burning activity.

Cultural Fire Practitioners
A person associated with a Native American tribe or tribal organization with experience in burning to meet cultural goals or objectives, including for subsistence, ceremonial activities, biodiversity, or other benefits.

Cultural Objectives (in land management)
A landscape management approach that recognizes places and cultural resources can have different or multiple meanings and levels of significance based on how people from different cultures, times, or backgrounds have interacted. Generally, this approach examines relationships among all the resources of a place and their environment over time. Broad interconnections and complex relationships are considered that often integrate management of cultural and natural resources at the ecosystem and landscape level.

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.

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 Deficit
Due to decades-long policy of wildfire suppression, a “wildland fire deficit” has resulted that increases the risk of severe wildfires during fire season because of an accumulation of fuels.

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 Resilient Landscape
A socio-ecological system that accepts the presence of fire, while preventing significant losses through landscape management, community engagement and effective recovery

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.

Firewise (Program)
Encourages local solutions for safety by involving homeowners in taking individual responsibility for preparing their homes from the risk of wildfire. The program provides resources to help homeowners learn how to adapt to living with wildfire and encourages neighbors to work together to act now to prevent losses

Forest Resiliency
A measure of the forest's adaptability to a range of stresses and reflects the functional integrity of the ecosystem.

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 Reduction

Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

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

Home hardening
Describes vegetation management compliance and building materials used to resist the intrusion of flames or embers projected by a wildland fire. It can be applied to new construction or for retrofitting an older home.

Indigenous Knowledge
A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Tribes and Indigenous Peoples through interaction and experience with the environment. It is applied to phenomena across biological, physical, social, cultural, and spiritual systems.

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.

Ignitability
Factors that influence ignition, in this context often refers to homes, their design and materials, nearby vegetation, and other structures or attachments like outbuildings

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).

Prescribed Fire Liability Claims Fund
Administered by CAL FIRE, a $20 million fund to cover losses in the rare instance that a prescribed or cultural burn escapes control, providing up to $2 million in coverage for prescribed fire projects led by a qualified burn boss or cultural practitioner.

Pyrodiversity
The spatial or temporal variability in fire effects across a landscape

Pyrosilviculture
A management approach where the two dominant forest-treatment tools (silvicultural thinning and fire) expand beyond the current use of each individual tool to affect large-scale ecological restoration and be integrated to work at larger scales needed for landscape resilience

Residence
Any structure used or intended for supporting occupancy.

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

Socio-Ecological Resiliency
The capacity to adapt or transform in the face of change in social-ecological systems, particularly unexpected change, in ways that continue to support human well-being

Soffits
The material beneath the eave that connects the far edge of your roof to the exterior wall of your house. They are often vented and can also be on the underside of a porch roof.

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.

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

[Lands of] Territorial Affiliation
Refers to the broadest area over which a Tribe would typically claim treaty, reserved, retained, or other similar Tribal rights, and is defined as those places of customary and consistent use by a Tribe before contact with Europeans. Some Tribes were forcibly removed from all or some of their ancestral homelands, this term should also include those places of customary and consistent use established by a Tribe after such relocation.

Tribal Sovereignty
The right of Tribes to form their own governments; to make and enforce laws, both civil and criminal; to tax; to establish and determine membership (i.e., tribal citizenship); to license and regulate activities within their jurisdiction; to zone; and to exclude persons from tribal lands.

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 drafting
Drawing water (via pump or other means) from a natural or constructed supply of water that is readily available for fire control operations.

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

Water System Hardening
Reinforcement of water system infrastructure to withstand disturbances (e.g. wildfire).

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: Home Risk Assessment

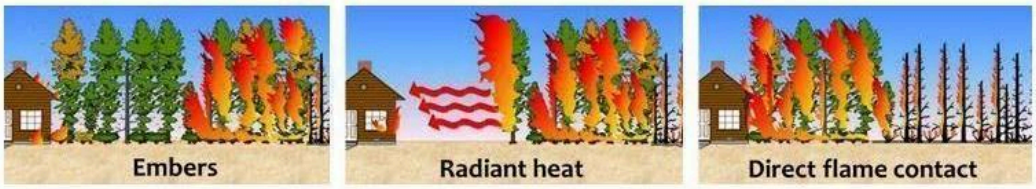
Humboldt County Fire Safe Council
HOME RISK ASSESSMENT

While wildfire is a natural component of the California landscape, the recent increases in wildfire severity and the loss of homes and lives underscore how important it is for you to prepare your home and property to reduce the risk of wildfire damage and loss. **Understanding your wildfire risk is the first step to reducing it.**

This Home Risk Assessment focuses on two important risk-reducing factors: home hardening and defensible space. The Assessment will help you identify vulnerabilities around the structures on your property and recommend improvements based on the best available science. As you complete the assessment, keep in mind that maintenance is an essential part of your wildfire resilience.

In a wildfire situation, home ignitions can occur in multiple ways including:

1) **Embers** – This is the most common way that homes ignite during a wildfire. Wind-driven wildfires can pick up and move firebrands up to a mile ahead of a fire creating new spot fires ahead of the flaming front. Embers can be deposited onto or into a building. Embers can ignite combustible materials such as leaves, mulch, stored materials, or wooden decks. Embers can also enter through open windows; attic, under-eave, and foundation vents; or other openings.
2) **Radiant heat** – Radiant heat is the heat from burning materials that is transferred through the air, resulting in heating of a nearby surface. If the radiant exposure is high enough, and/or long enough, ignition of the material can occur even without direct flame contact. A radiant heat exposure to a home can occur from the burning of nearby buildings (e.g., sheds, garages , or a neighbor's home or out-buildings), vehicles and RVs, nearby firewood piles, uncovered recycling bins, or surrounding vegetation.
3) **Direct flame contact** – Where flames can touch the home, siding, combustible materials in the under-eave area, and decking can ignite and window glass can break, increasing the likelihood that the home will be destroyed or sustain major damage.

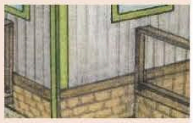


Homes have a better chance of surviving wildfire through a combination of adequate **defensible space** and **wildfire-resistant construction**. Defensible space is created through 1) careful landscape selection, placement, and maintenance and 2) awareness and management of combustible materials on the property (e.g., leaf litter or lawn furniture) during your fire season. Defensible space provides firefighters and equipment a safer environment with more room to work and a better chance at being successful. It can also help you save your home from a wildfire when firefighting resources are stretched thin. Wildfire-resistant construction materials should be paired with regular home and property maintenance. Seemingly small actions can greatly improve your home's chances of survival.

HOME RISK ASSESSMENT

QUICK START GUIDE

IMPROVEMENTS TO THESE FEATURES WILL HAVE THE GREATEST IMPACT

HIGH PRIORITIES	ROOF (PG 2) 	VENTS (PG 3) 	DEFENSIBLE SPACE *Particularly Zone 0* (PG 6) 
MEDIUM PRIORITIES	DECKS (PG 5) 	WINDOWS (PG 4) 	SIDING (PG 4) 

CONSIDER:

STEEP SLOPES: Reduce vegetation down slope of the home. Site new construction away from the slope.

PROXIMITY: Increase the fire-resistance of the outer wall and intensify vegetation management.

Structure		
Roof	**Why does this matter?**	**What can be done?**
Roof type: Metal Asphalt/composition shingles Other noncombustible material Wood shingle **Complex rooves with roof to wall intersections or dormers:** Yes / No **Debris present:** Yes / No	The roof is most vulnerable because it has the largest surface area for leaves, needles, and embers to accumulate. Complex roofs (e.g., rooves that intersect with walls and rooves with dormers) present tend to be more vulnerable than simple roofs. The various corners and gullies of complex roofs can accumulate leaf and needle debris and provide a fuel-bed for windblown embers that can cause extended flame exposure on unprotected siding.	Maintain your roof and replace, when necessary, with a Class A-rated roofing material. Wood shake roofs offer no fire protection. Carefully follow the manufacturer's installation instructions because some roof coverings need additional protection to meet the Class A requirements. Common Class A fire-rated materials include asphalt composition shingles, tile, and steel. Where walls intersect with roofing, install metal step flashing from under the roof covering and up the exposed wall, a minimum of 6 inches. Remove tree branches overhanging or within ten feet of the roof to reduce accumulation of needles or leaves and damage to the roof. Keep the roof, valleys, and gutters clean, especially during wildfire season.
Condition: Good / Poor Age: _____	Embers can also enter small gaps and cracks in the roof assembly and the roof edge.	Repair any damage, replace missing shingles, and seal all gaps or cracks larger than 1/8 inch.

Gaps in roof covering: Yes / No		
Roof edge includes a metal drip edge: Yes / No	Without a metal drip edge, a fire in the gutter will expose the roof edge to direct flames.	Protect openings at the roof edge by installing a metal drip edge.
Skylights: None Plastic Glass	Flammable debris can accumulate on or around skylights.	Replace plastic or dome skylights with flat, tempered-glass skylights. Close skylights when wildfire threatens. Remove accumulated debris next to and on the skylight especially during wildfire season.
Chimney	**Why does this matter?**	**What can be done?**
Present: Yes / No **Spark Arrestor 3/8"-1/2" mesh:** Yes / No **Chimney Design:** Straight Offset (angles/bends) **Vegetation nearby:** > 10ft < 10ft	Spark arrestors are required to prevent large embers from escaping through your chimney and igniting the roof or surrounding vegetation. Flues with multiple bends and non-vertical runs accumulate soot and creosote faster, reducing draft function and increasing chance of a chimney fire.	Install a spark arrestor that has between 3/8" and 1/2" mesh. These are available at lumberyards, hardware stores, or fireplace specialty stores. Flues with multiple bends should be cleaned more often. Always avoid burning wet wood. Remove all branches and trees within 10 feet of any chimney or stovepipe outlet.
Vent Mesh Screen	**Why does this matter?**	**What can be done?**
Vents for the attic, eaves, soffit, roof turbine, crawl space/foundation, etc.: **Mesh screen type:** All Noncombustible Some Noncombustible All Combustible None **Mesh screen size:** ≤ 1/8" > 1/8" **Mesh screen condition:** Good Poor	Vents allow for air circulation to reduce the heat in your attic and allow moisture to escape which can lead to moisture degradation issues over time. In the event of a wildfire, embers can enter small spaces and ignite combustible materials inside the building. Post-fire surveys have found that embers large enough to cause ignitions can pass through 1/4-inch mesh screening.	Move combustible items away from vents both inside and outside the house. Replace 1/4" mesh with 1/8" mesh (use noncombustible corrosion resistant metal mesh screen; commonly referred as hardware cloth). Alternatively, install vents that meet new wildfire-resistant requirements. Regularly check vents and remove materials that may plug vent openings. If the vents cannot be upgraded, prepare temporary vent covers of plywood, metal, or metal tape to install as part of a pre-evacuation preparedness plan. Install a flapper vent that stays closed unless the dryer is operating.

Windows	Why does this matter?	What can be done?
Type of windows: Single-paned Double-paned Tempered glass	Single-pane windows may break after 1 to 3 minutes of exposure to intense heat or flame, subsequently exposing window coverings and home interior to embers and firebrands. Single-pane windows are more vulnerable than dual-paned or tempered glass windows. Larger windows are more vulnerable to breaking than smaller windows.	Replace windows with double-paned glass and where radiant heat exposures are likely, with tempered glass. Consider installation of deployable metal shutters for use during wildfire. At a minimum, close all windows and skylights upon evacuation. Keep vegetation at least 5 feet from windows to avoid glass failure caused by heat exposure from burning plants. Replace plastic window screens with metal screens.
Eaves	**Why does this matter?**	**What can be done?**
Type: Boxed-in (soffited) Open-eave	The eave overhang protects your home from rain and sun. With open-eave construction, gaps between the rafter tails and the blocking can be vulnerable to ember entry. Soffited eaves (boxed-in) are more robust to embers.	Inspect open-eave construction for gaps around rafter roof tails and blocking. Plug or caulk gaps. If possible, create a soffited eave where an open-eave design exists. Make sure vents under eaves are fire- resistant and that there are no combustible materials below eaves.
Gutters	**Why does this matter?**	**What can be done?**
Type: None Metal Wood Plastic or vinyl **Clear of litter:** Yes / No **Gutter Cover:** Noncombustible / Combustible None / Not Applicable	Gutters accumulate leaves and needles that can be ignited by embers. A fire in the gutter exposes the roof edge to flames. Fire in plastic or vinyl gutters will likely lead to the gutter melting and falling to the ground. This may ignite combustible materials below. Gutters do protect the siding from water damage.	Replace wooden, plastic or vinyl gutters with metal gutters. Develop a regular gutter cleaning cycle. Install noncombustible gutter covers.
Siding	**Why does this matter?**	**What can be done?**
Siding material: Metal Fiber Cement (i.e., Hardie plank, lap or panel) Stucco T1-11 or other wood panel Log or heavy timber Wood vertical and horizontal Wood shake Vinyl	Where buildings are within 30 feet of each other, a radiant heat exposure is likely. Some siding materials are more resistant to radiant heat and direct flame impingement than others. Radiant heat can preheat wood siding that may ignite later with direct flame contact. If siding is too close to ground (<2-inches) ground fuels or embers may ignite the siding. Exposed foundations will allow embers to travel underneath the home and	Maintain a 5-foot noncombustible **horizontal zone** around the perimeter of the home and remove combustible vegetation that may ignite and be in direct contact with the siding. In addition, maintain a 6-inch noncombustible **vertical zone** between the ground (and other horizontal surfaces) and the start of the siding. Where radiant heat exposures are likely (i.e., when other buildings are within 30-feet of the home), replace wood siding with noncombustible materials or upgrade the fire rating of the wall by including a gypsum board beneath siding.

Condition: Good / Poor **At least 6" vertical clearance:** Yes / No **Skirting:** Noncombustible / Combustible None / Not Applicable	possibly ignite flammable material, if there is no noncombustible skirting.	Caulk and seal any gaps in the siding and where the siding meets the trim. Enclose foundations with noncombustible skirting.
Decks and Other Attached Structures	**Why does this matter?**	**What can be done?**
Decks (and stairs): Decks / Stairs / Patio Covers Porches / Garage Not applicable **Receptive fuels around attached structures:** Below / Adjacent / All Clear **Enclosures around posts and piers, decks, porches:** Noncombustible / Combustible Not applicable / None **Enclosures Vented:** Yes / No	Combustibles on or around attached structures can ignite and expose other attached structures or the home itself to direct flame contact. This is of particular concern with wood decks; if the deck ignites, it will provide a flame exposure to the exterior wall and/or under-eave area. Decks extending out over slopes may preheat during a wildfire. Extra vegetation management is required for these situations.	Treat the deck or steps as a part of the house. Implement Zone 0 standards under and in the first five feet surrounding these parts of the building. Remove debris that can accumulate on the deck and in the between deck board gaps. For added protection, install a noncombustible deck board immediately adjacent to the home. When replacing decks, follow new installation standards in Insurance Institute for Business & Home Safety recommendations. Keep areas around structures clean and clear of debris/vegetation. Never store combustible materials under or on top of decks or porches attached to your home. Replace any rotten wood. Install a metal flashing strip to separate attachment from the home. Before evacuating, bring combustible door mats, brooms, and furniture cushions inside. Move deck furniture off the deck. Move barbeque propane tanks away from the house.
Attached Fences	**Why does this matter**	**What can be done**
Fences: Wood / Metal / Other / None	Wooden fences or more susceptible to catching fire if there is vegetation and/or combustible material on or near them. Fences may act like a wick to bring fire to a building.	Keep wooden fences clear of vegetation/combustible material Install noncombustible gates or fencing where wooden fences connect to structures within the first five feet out from the building.

Structures within 30 ft of Home	Why does this matter?	What can be done?
Gazebo, carport/detached garage, storage building/shed, mother-in-law unit, barn, etc.: **Meet Home Hardening Standards?** Yes / No / Partially Met Not applicable	Carports and garages may be storage for fuel, oil, or other flammable automotive liquids. Ignition of non-attached structures within 30 feet of the home can expose the main house to embers, radiant heat, or direct flame.	All structures on the property should receive the same home hardening as the main home.
Defensible Space Considerations		
Zone 0 (0-5 feet)	**Why does this matter?**	**What can be done?**
Ember resistant zone within 5 feet of home: Yes / No **Ground cover:** Combustibles (i.e., wood mulch, wood chips, grass) Non-combustible (i.e., pavers, gravel) Other: _____ **Grass:** Short/maintained Tall/unmaintained None **Shrubs:** Yes / No **Trees:** Yes / No **Ladder fuels:** Yes / No **Zone 0 (percent complete):** 0 - 25% / 25 - 50% 50 - 75% / 75 - 100%	This is the highest priority zone. Ignition of combustible vegetation, mulch, and trellises in Zone 0 can expose windows or siding to radiant or direct flame contact, leading to glass failure and/or ignition of the home. Embers can easily be blown across a green lawn and ignite vegetation adjacent to the house. Leaf litter and needles accumulate next to the house or in or on roofs, gutters, decks, porches.	Remove highly combustible mulch and vegetation in the first five feet surrounding the building and attached decks or stairs. Zone 0 is an excellent location for walkways, or hardscaping with pavers, rock mulch, or pea gravel. Remove trees located within 5 feet of the structure and any branches overhanging the roof. If removing a tree is not an option, prune lower limbs to reduce the chance of a fire spreading to the treetop then moving to the roof. Remove shrubs and keep grass short in this zone. All structures on the property (e.g., house, sheds, garages, mother-in-law units) need defensible space.
Zone 1 (5-30 feet)	**Why does this matter?**	**What can be done?**
Stored Items 5-30 feet from home (e.g., wood piles, cars): Yes / No **Grass:** Short/maintained Tall/unmaintained None **Shrubs:** Light/well maintained Heavy/dead material Separated or small islands Continuous None	The goal of this zone is to prevent direct flame contact to the house and to create a safe location for fire personnel to work. A grass fire can rapidly spread toward the home. A fire in tall grass can have flame lengths that are difficult to control. The greater the flame length and heat intensity, the harder it is to control. Heavy ground fuels will result in a fire with high flame length, high fire intensity and a long duration of heat. Ladder fuels will cause a surface fire to climb into the canopy of the trees.	Work to eliminate connectivity to the house in this zone by creating islands of vegetation. Increase the spacing between trees, remove lower branches of trees and shrubs, and create areas of irrigated and mowed grass or hardscape between lush vegetation islands. Maintain at least 10 feet of space between treetops or between small groupings of trees and/or shrubs. More space may be warranted on steep slopes. Prune lower limbs of trees to reduce the chance of a fire spreading to the canopy (min. 6 feet). To maintain the health of smaller trees (<15 feet), prune only the lower 1/3 of the tree's height.

Trees: Separated or small islands Continuous Limbs within 10 feet of the structure/overhanging roof None **Tree canopy spacing:** < 10 feet > 10 feet **Ladder Fuels:** Absent Scattered Abundant		Remove all branches within 10 feet of any portion of the structure (walls, roof, chimney, etc.) Remove shrubs and tall grasses beneath or adjacent to trees to prevent them from spreading fire into the tree canopy. Mow grass regularly to a maximum height of 4 inches. Remove dead and dying trees and shrubs. Install noncombustible walkways and paths to break up fuel continuity.
Zone 2 (30-100+ feet)	**Why does this matter?**	**What can be done?**
Grass: Short/maintained Tall/unmaintained None **Shrubs:** Light/well maintained Heavy/dead material None **Trees:** Separated or small islands Continuous None **Tree canopy spacing:** < 10 feet > 10 feet **Ladder Fuels:** Abundant Scattered Absent **Heavy fuels on the ground:** Yes / No	In this zone, the goal is to moderate potential fire behavior by reducing the density of the trees, shrubs, and herbaceous plants or grasses to slow potential fire spread and reduce flame height. By thinning, grouping, or breaking up the continuous vegetation in this area, you can reduce vegetation that can cause radiant heat exposures or embers that can transfer to your home or other structures. Shrubs and lower limbs are ladder fuels that cause a fire on the ground to climb into the canopies of the trees.	Isolated or small groupings of trees or shrubs are best. Treat groups as individual units in terms of spacing. Maintain spacing between treetops or groups of trees and/or shrubs, prune lower limbs of trees, and remove vegetation from beneath trees as described above in Zone 1. Remove dead and dying trees and remove heavy accumulations of dead vegetation. Limit fallen leaves, needles, twigs, bark, cones, and small branches to a maximum depth of 3 inches. Because fire can travel faster uphill, consider expanding treatment of this area beyond 100 feet if your property is situated on a slope.
Structures within 30 ft of home	**Why does this matter?**	**What can be done?**
Do structures within 30 ft meet <u>defensible space standards</u>: Zone 0: Yes / No Zone 1: Yes / No Zone 2: Yes / No Not applicable	Carports and garages may be storage for fuel, oil, or other flammable automotive liquids. Ignition of non-attached structures can expose the main house to embers, radiant heat, or direct flame.	Keep areas around structures clean and clear of debris/vegetation. All structures on the property should receive the same <u>defensible space</u> treatment as the main home.

Firewood and Propane Tanks	Why does this matter?	What can be done?
Home is heated by: Wood / Propane Electricity / Natural Gas **Wood storage:** Adjacent to home Enclosed noncombustible storage < 30 feet away > 30 feet away Not applicable **Propane tank location:** Above ground with clearance Above ground no clearance On cement pad Not applicable	As previously mentioned, it is important that chimneys have a spark arrestor. Wood storage (firewood or lumber) can cause radiant heat exposures to buildings. Propane tanks when heated by nearby vegetation or combustible materials can explode.	Relocate wood storage to at least 30 feet away from buildings. Maintain 10 feet of clearance around exposed wood piles, down to bare mineral soil, in all directions. If wood piles must be stored within 30 feet, cover with a fire-resistant material tarp or noncombustible shed. Clear from the area around propane tanks—at least 10 feet of bare mineral soil and an additional 10 feet of no flammable vegetation. This will provide space for proper tank ventilation under high heat conditions.
Water Sources	**Why does this matter?**	**What can be done?**
Hydrant w/n 1000 feet of home: Yes / No **Water tank dedicated to firefighting:** Yes / No (capacity: _____) **Water tank discharge fittings:** 1 ½" or 2 ½" Needs Improvement Not applicable Fire Threads: Yes / No **Hoses reach all areas of home:** Yes / No **Water delivery:** Gravity fed: Yes / No Adequate pressure: Yes / No Buried water line: Yes / No Electric pump: Yes / No Backup pump: Yes / No **Emergency water sources:** Pond, pool, creek, or river Accessible to fire engines (safe parking within 10 ft)? Yes / No **Blue reflector dots or clear signs at driveway entrance:** Yes / No **At water source:** Yes / No	Most wildland fire engines carry only 500 gallons of water. Having water that you, or responding fire engines, can use is critical in rural areas. Unreliable water sources put whoever is using them for defense at risk. Darkness and thick smoke make locating water sources difficult.	Have multiple garden hoses available to reach areas 200 feet from your home. Tanks or hydrants must have a discharge with a male National Hose pipe thread fitting either 1½" or 2½" in diameter. Ask your local fire department for guidance. If you have a pond, pool, creek, or irrigation ditch, consider having a pump and hose available. A fire engine will need to safely park within 10 feet of the water's surface to pump from it. Post a blue reflector dot at the driveway's entrance and a sign pointing firefighters to where the water supply is located. Consider whether water can be accessed if the electric power is turned off (e.g., generator, pump with gas motor).

Access	Why does this matter?	What can be done?
Address visible, reflective, and noncombustible: Yes / No **Locked gate blocking access:** Yes / No **If yes, does fire department have access:** Yes / No **Access:** Two or more roads in/out One road in/out **Adequate turnaround:** Yes / No **Width of access road and driveways:** Two lanes (18 feet +) Single lane (< 12 feet) …with turnouts every 400 feet at least 10' W x 80' L …other turnouts …none or N/A **Access road clearance:** > 13 feet vertical clearance: Yes / No > 5 feet horizontal clearance: Yes / No **Bridge weight limits:** Posted / Unknown Not applicable	If emergency service vehicles cannot find your property, it can be difficult for them to respond quickly. In a large wildfire, firefighters from other counties may respond and will not be familiar with your neighborhood. Providing gate access to emergency services is important so they can respond as soon as possible. Having two or more evacuation routes increases the chances of a safe evacuation. Emergency vehicles, fire, or a downed tree or power line could be blocking some routes in an emergency. The length of your driveway, adequate turnaround space and bridge weight limits are helpful for emergency personnel to know so they can determine if it is safe for them to enter.	Ensure your house number is posted at the road, with reflective numbers at least 4 inches tall on noncombustible material that can be seen 100 feet away in both directions. Where appropriate, work with your neighbors/Road Association or notify the County if road signs are missing from intersections. Provide local fire department and/or emergency responders with gate access. Create an alternative evacuation route out of your property and/or community. Make sure driveway is clear of overhanging trees and vegetation (min. 13 feet vertical clearance) and has at least 5 feet cleared on each side of driveway. Consider creating a turnaround route for emergency vehicles. A circular driveway or large open area (40' x 40') is ideal for most engines.

SPECIAL NOTE: Certain topographic features can dramatically increase fire behavior around your home. Fire moves faster upslope than across flat ground, especially when slope and wind are in alignment; canyons, chutes, chimneys, and saddles can funnel winds. Be more aggressive with fuels mitigation where these features exist, especially on south-facing slopes and on the side of prevailing winds where fuels dry out more quickly and thoroughly.

See humboldtgov.org/FireSafetyResources for links to more resources.

Funding for this project provided by the California Department of Forestry and Fire Protection as part of the California Climate Investments Program with support from the following organizations:

This Risk Assessment has been adapted from a variety of sources including the Woodside Fire Department Home Risk Assessment and UCANR online resources. (v. 2023)

Top Priorities & Notes:

Appendix E: CAL FIRE Inspection Form

State of California, Natural Resources Agency
Department of Forestry and Fire Protection
Notice of Defensible Space Inspection
LE-100a (2/22)

Date: _____

NOTICE OF DEFENSIBLE SPACE INSPECTION

A fire department representative has inspected your property for fire hazards.
You are hereby notified to correct the violation(s) indicated below. Failure to correct these violations may result in a citation and fine.

OWNER/TENANT:	INSPECTION ADDRESS:		
INSPECTOR NAME:	CONTACT NUMBER:	Inspection No. 1 2 3	No Violations Observed ☐

CHECKED BOXES INDICATE VIOLATIONS

Zone 1 / Within 30 feet of all structures or to the property line (Refer to illustration below):

- ☐ A. Remove all branches within 10 feet of any chimney or stovepipe outlet, pursuant to PRC § 4291(a)(2) and 14 CCR § 1299.03(a)(2).
- ☐ B. Remove leaves, needles or other vegetation on roofs, gutters, decks, porches, stairways, etc. pursuant to PRC § 4291 (a)(4) and 14 CCR § 1299.03(a)(1).
- ☐ C. Remove all dead and dying trees, branches and shrubs, or other plants adjacent to or overhanging buildings, pursuant to PRC § 4291 (a)(3) and 14 CCR § 1299.03(a)(2).
- ☐ D. Remove all dead and dying grass, plants, shrubs, trees, branches, leaves, weeds and needles, pursuant to 14 CCR § 1299.03(a)(2).
- ☐ E. Remove or separate live flammable ground cover and shrubs, pursuant to PRC § 4291(a)(1) and BOF General Guidelines item1.
- ☐ F. Remove flammable vegetation and items that could catch fire which are adjacent to, or below, combustible decks, balconies, and stairs, pursuant to 14 CCR § 1299.03(a)(4).
- ☐ G. Relocate exposed wood piles outside of Zone1 unless completely covered in a fire-resistant material, pursuant to 14 CCR § 1299 .03(a)(3).

Zone 2 / Within 30–100 feet of all structures or to the property line (Refer to illustration below):

- ☐ H. Cut annual grasses and forbs down to a maximum height of 4 inches, pursuant to 14 CCR § 1299.03(b)(2)(B).
- ☐ **I.** Remove fuels in accordance with the Fuel Separation or Continuous Tree Canopy guidelines (see back), pursuant to BOF General Guidelines item 4.
- ☐ **J.** All exposed woodpiles must have a minimum of 10 feet clearance, down to bare mineral soil, in all directions, pursuant to 14 CCR § 1299.03(b)(2)(C).
- ☐ **K.** Dead and dying woody surface fuels and aerial fuels shall be removed. Loose surface litter, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches, shall be permitted to a maximum depth of 3 inches, pursuant to 14 CCR § 1299.03(b)(2)(A).

Defensible and Reduced Fuel Zone / Within 100 feet of all structures or to the property line (Refer to illustration below):

- ☐ **L.** Logs or stumps embedded in the soil must be removed or isolated from other vegetation, pursuant to BOF General Guidelines item 3.

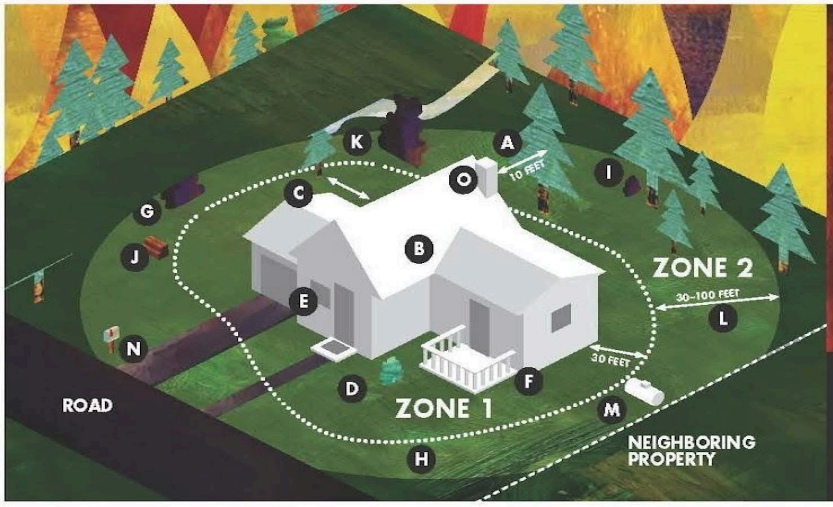
Other Requirements:

- ☐ **M.**Outbuildings and Liquid Propane Gas (LPG) storage tanks shall have 10 feet of clearance to bare mineral soil and no flammable vegetation for an additional 10 feet around their exterior, pursuant to 14 CCR § 1299.03(c)(1).
- ☐ **N.**Address numbers shall be displayed in contrasting colors (4" min. size) and readable from the street or access road, pursuant to 2016 CFC § 505.1.
- ☐ **O.**Equip chimney or stovepipe openings with a metal screen having openings between 3/8 inch and 1/2 inch, pursuant to 2016 CBC § 2113.9.2.

COMMENTS:

LEARN MORE:

IMPORTANT All violations marked must be addressed by the owner/tenant. A re-inspection of the property will occur on or after _____



KNOW THE LAW BE FIRE SMART

100 feet of Defensible Space is required under the Public Resources Code (PRC) 4291. California Building Code Chapter 7A requires certain construction materials and methods for homes in wildland areas. Be sure to contact your local fire department for additional requirements to ensure your home is compliant with the law.

READYFORWILDFIRE.ORG/THELAW

PRC § 4119. The department, or its duly authorized agent, shall enforce the state forest and fire laws. The department may inspect all properties, except the interior of dwellings, subject to the state forest and fire laws, for the purpose of ascertaining compliance with such laws.

WILDFIRE IS COMING.
ARE YOU READY?

HARDENING YOUR HOME

Flying embers can destroy homes up to a mile ahead of a wildfire. Prepare (harden) your home now before a fire starts.

Priority list for building or remodeling with ignition-resistant* materials:

- **Roof** (Above all else your roofing is the most important hardening feature)
- **Eaves and Soffits**
- **Walls**
- **Decks**
- **Patio Cover**
- **Fencing**

Other priority activities:

- **Vents:** Cover and protect all openings.
- **Windows:** Protect against blow-outs and install dual-paned windows.
- **Rain Gutters:** Screen or enclose.
- **Chimney:** Cover outlets with non-combustible screens.
- **Garage:** Have an accessible fire extinguisher.
- **Driveways:** Ensure access to your home complies with local fire codes.
- **Water Supply:** Have multiple garden hoses that are long enough to reach all areas of your home.

*Visit ReadyforWildfire.org/hardening-your-home for detailed information on ignition-resistant building materials and all home hardening activities.

VERTICAL SPACING

Eliminate opportunities for a vertical "fire ladder" by:

- Remove branches beneath large trees for a 6-foot minimum clearance.
- Create proper vertical spacing between shrubs and the lowest branches of trees by using the formula shown.

HORIZONTAL SPACING

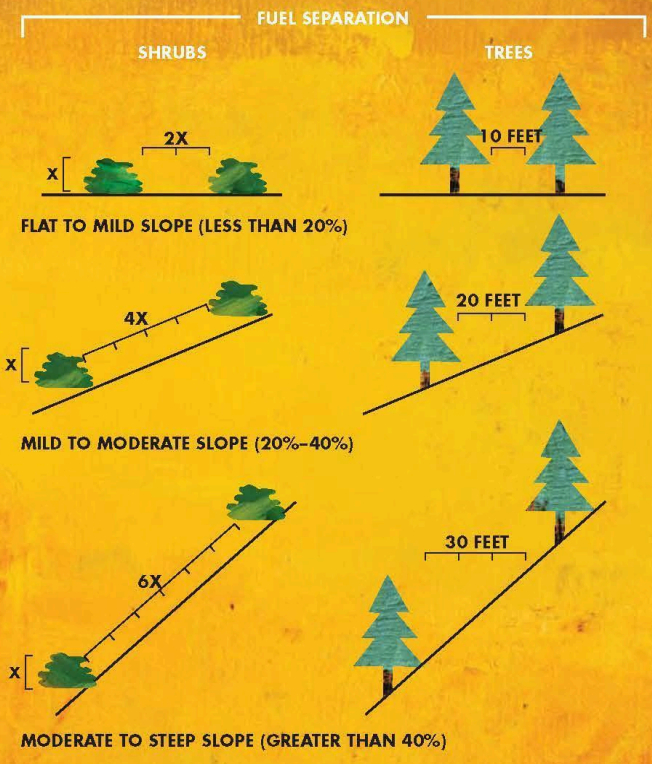
The spacing between grass, shrubs, and trees is crucial to reduce the spread of wildfire. The spacing needed is determined by the type and size of the shrubs and trees, as well as the slope of the land. For example, a property on a steep slope with larger plant life will require greater spacing between trees and shrubs than a level property that has small, sparse vegetation.

Fire-Safe Landscaping

Fire-safe landscaping isn't necessarily the same thing as a well-maintained yard. Fire-safe landscaping uses fire-resistant plants that are strategically planted to resist the spread of fire to your home.

Dead Tree Removal

If you have dead or dying trees on your property the entire tree needs to be removed to reduce wildfire risk. Visit ReadyforWildfire.org/dead-tree-removal to learn about permit requirements.



DOWNLOAD THE READY FOR WILDFIRE APP

It's never been more important to keep on top of preparing your family, home and property for a wildfire. Fires are on the rise, and are burning hotter, faster and more unpredictably than ever before. Download the app to:

Get custom wildfire alerts | Track your progress (% PREPARED) | Get detailed action steps ☑1. ☐2. ☐3.

Download on the App Store · GET IT ON Google Play

CAL FIRE · ONE LESS SPARK ONE LESS WILDFIRE

Appendix F: Low Cost Retrofit Guide

Low Cost Retrofit List

10 Low Cost Ways to Harden Your Home

1. When it is time to replace your roof, replace it with fire-resistant Class A roof material.
2. Block any spaces between your roof covering and sheathing (bird stops).
3. Install non-combustible corrosion resistant metal gutter covers on gutters to prevent the accumulation of leaves and debris in the gutter.
4. Cover your chimney and stovepipe outlets with noncombustible corrosion corrosion-resistant metal mesh screen (spark arrestor), with 3/8-inch to 1/2-inch openings.**
5. Cover all vent openings with 1/16-inch to 1/8-inch noncombustible corrosion resistant metal mesh screens.**
6. Caulk and plug gaps greater than 1/16-inch around exposed rafters and blocking to prevent ember intrusion.
7. Inspect exterior siding for dry rot, gaps, cracks and warping. Caulk or plug gaps greater than 1/16-inch in siding and replace any damaged boards, including those with dry rot.
8. Install weather stripping to gaps greater than 1/16-inch in garage doors to prevent ember intrusion. The stripping must be compliant with UL Standard 10C.
9. When it's time to replace your windows, replace them with multi-paned windows with at least one pane of tempered glass.
10. When it's time to replace your siding or deck, use compliant noncombustible, ignition-resistant, or other materials approved by the Office of the State Fire Marshal (OSFM).

5 No Cost Ways to Create Defensible Space and Enhance the Effects of a Hardened Home

1. Regularly clean your roof, gutters, decks, and the base of walls regularly to avoid the accumulation of fallen leaves, needles and other flammable materials (see Defensible Space for more details).
2. Ensure all combustible materials are removed from underneath, on top of, or within five feet of a deck.
3. Remove vegetation or other combustible materials that are within five feet of windows and glass doors.
4. Replace wood mulch products within five feet of all structures with noncombustible products such as dirt, stone, or gravel.
5. Remove all dead or dying grass, plants, shrubs, trees, branches, leaves, weeds, and pine needles within 30 feet of all structures or to the property line.

*This list was developed as a best practices guide and to assist homeowners to ensure their home is more ignition-resistant from wildfires. Low cost can be subjective. Some of these items are based on upgrading to more stringent materials when that feature is up for replacement due to normal maintenance or lifespan, i.e. roofs.
** Do not use fiberglass or plastic mesh as they can melt or burn.

Updated 1/31/2020

Additional information can be found at the following sites:

https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/hardening-your-home/ and https://www.readyforwildfire.org/wp-content/uploads/Low-cost-Retrofit-List-Update-2_17_22-2.pdf

Appendix G: Community and Neighborhood Meetings List of Priorities

Neighborhood meetings held in Orleans and Somes Bar during the fall-winter of 2022-2023 focused on identifying wildfire risk and establishing priorities for action in each separate geographical region/neighborhood.

Overall community priorities identified in every meeting: Water systems protection, increasing water storage, maintenance of egress routes, communication with USFS and contractors implementing fuels treatments on public land adjacent to private property, communication with wildfire managers during incidents, fuels treatments in the WUI (often public land).

See individual Neighborhood maps for specific wildfire risks and priority actions:

Consolidated Notes Neighborhood Meetings 2022-2024 OSB CWPP Update

Summary:	Attendance
Slate, Bluff, Cedar Camp mtg September 2nd 2022 (Eckert's)	7
Ten Eyck, Upper Ishi Pishi mtg Dec 13th, 2022 (Fournier's)	15
Ti Bar, Patterson, Rogers, Stanshaw mtg Dec 14th, 2022 (Creasy's)	15
Lower Salmon, Butler, Somes Bar Dec 19th, 2022 (Hacking's)	11
General community and other Neighborhoods Feb 3rd, 2023 (KDNR)	38

Priority issues:

Roads:

- Access, Egress
  - Cedar Camp Rd has multiple trees down, blocked since Jan 2022
  - Fish Lake Rd very tight due to vegetation. It should be maintained more regularly
  - Roads on Ten Bear Mtn need repair related to the McCash logging operations.
  - Widen and heighten roads for fire truck access
  - Access to Water Draw Sites
    - Widen road above Parkhurst/Malone for access to the Ricke pond.
    - Create a draw site and turn around at Wilson Creek where it crosses Ishi Pishi.
    - Holzinger property on Ishi Pishi has a draw site on property with turn around.
  - Signage. Signs are missing on several important roads. These include Old Orleans School Road, Owl Mine Road, Bluff Creek Road, Thunder Mtn Road, 10N01 and 10N02, Ferris Ranch Rd, and others.

- Potential Control Features
  - Lower Natucket Rd (11N26) has multiple trees down. If cleared it would be good control feature for Bark Shanty and Thunder Mtn neighborhoods.
  - Cedar Camp Rd (when cleared).

Treatments Needed:

- Cross Boundary treatments
    - Often impossible or inefficient to stop treatment at boundary. Wildfire does not stop at boundary.
    - Landowners are willing for FS treatments to extend onto private. Ryan Wiegel's property (Lower Salmon-Offield), is interior of the Ikxariyatuuyship project and he is concerned his piece will not be treated in the same way as the surrounding lands.
    - Brushy edge between Fischl and Stoa (Upper Ishi Pishi).
    - Brushy edge between Cormier and Pearlingi, 3 acre unit (Bark Shanty-Upper Ishi Pishi).
    - Tie together OCFR units with private e.g. Carlyle, Mace, and McCovey (Red Cap).

- Public to private adjacency
    - Suggest 500' swaths of treatment for buffer.
    - Unburied waterlines on public land. Many private parcels access their water from public land. These need to be mapped.
    - Unburned piles left for years e.g. Hacking (Lower Salmon)
    - Vogt-Margarian were left out of WKRP (Ti Bar)
    - Slope below Reece Ranch to Wilson Creek (Thunder Mtn-Middle Ishi Pishi)
    - Public land between Short and Pennington (Ten Eyck-Upper Ishi Pishi)
- Other
    - Steep slopes below private parcels on upper Ishi Pishi need fire. Involve Tribe since they will be managing the whole Katimin area
    - Holzingers on Ishi Pishi are very interested in work and burning. There is an area along their property edge and Ishi Pishi by Wilson creek that needs thinning and burning.
    - Power line easements (PG&E) and roadside easements (CALTRANS) each have their own vegetation management issues and needs. Engage with these entities.

Treatment Prioritization

- Equity in project prioritization has often been opportunistic, in the sense that certain landowners and residents have reached out with their needs and others have not. Future planning and implementation should prioritize elderly, indigenous ownership, people with disabilities, and strategic locations.
- Prioritization by neighborhood is clearly appropriate and strategic, especially in neighborhoods with small parcels packed tightly together, such as the Red Cap neighborhood.
- Regular maintenance of treated units should be implemented on a regular basis.

Water Systems:

- Community systems vulnerabilities: Orleans Community Water System (Pearch), Orleans Mutual Water Company (Crawford), Thunder Mountain Water Association facility, Pearch Creek Spring System
- Water Tanks
    - Neighborhood tanks designated for fire are needed e.g. 5000 gal tank for Ten Eyck and Upper Ishi Pishi, install on Short property
    - Provide the community with information on and designs of types of tanks (e.g. ferro cement on plastic water tanks).
- Home water systems
    - standpipes, buried water lines, sprinklers, additional tanks

Home Hardening and Defensible Space

- Education regarding locally appropriate Best Practices.
- Junk or Trash within DS zones is problem
- Wooden Fences are flammable
- Overhanging and hazard trees; beyond skill of homeowner

Wildfire Suppression

- Water Draw Sites should be mapped and accessible.
    - Creasy has a pond with hydrant available (Ti-Bar)
    - Cormier (Kehrig) on Ishi Pishi has pond available. They will install a hardline to road and standpipe for use during fire.
    - USFS digitizes all water sources. Make sure these are updated in CWPP.
    - Ricke's pond available? (Pearch Creek) TBD
- Hydrants
    - locations should be updated and mapped
    - Hydrants have known volumes, info to be passed from one team to another
- Water lines
    - Digitize all water lines on public land to avoid damage during burnouts.
- Communication is key:
    - Responders communicate through CLP and neighborhood liaisons. CLP info handed off to each team. Make sure each team is made aware of "letter of designation"
    - Individual landowners often have pertinent information regarding fire risk and/or behavior
- Accountability and documentation: map and document all burnouts, GPS all fire ignition points

Beneficial and Cultural Fire

- Return fire to the landscape
    - Smoky Bear legacy has created and sustained fear of fire.
    - Indigenous and family burning history is relevant (note: do not over-romanticize indigenous burning).
    - Prescribed fire has many roadblocks but this community is generally in favor of it.

Utility corridors (PG&E)

- The PG&E corridors represent a big fire risk. Vegetation management over the years has resulted in flammable fuses leading right to homes. The EVM program has created large amounts of fuel, including large diameter material, on the ground.
- Develop relationship with regional PG&E representatives.
- The CWPP should include a section on PG&E and other utility work
    - linking to Karuk report; "Electrical Ignitions, Wildfire Risk and Community Climate Adaptation in Northern California".
- Engage Board of Supervisors (Steve Madrone is our current supervisor).
- What role should/could PG&E play in the CWPP?

Appendix H: California Standardized Prescribed Fire Plan

California Standardized Prescribed Fire Plan

Project Title: _____

Prescribed Fire Burn Boss (CARX): _____

Author of Plan: _____

Agency Having Jurisdiction (AHJ): _____

Property Owner: _____

Date Created:_____ Date Re-Evaluated* (if applicable): _____

**Burn plans should be re-evaluated as needed to account for changes in fuel/site conditions or project objectives.*

1. Project Area Description

Location Description: _____

_____

Latitude and longitude *(in Degrees Decimal Minutes (DMM)):*

Latitude: _____ Longitude: _____

Property Ownership (private, state, etc.): _____

Unit Size (acres): _____

Unit Description:

	Within the Unit	Adjacent to Unit
Fuel type/model		
Slope		
Aspect		
Special features		

Prescribed fire goals and objectives *(include overarching project goals as well as specific project objectives. Objectives should be S.M.A.R.T. (specific, measurable, attainable, relevant, time-bound))*:

2. Pre-burn Considerations

Plan for unit preparation *(describe line type/construction, pre-treatment of fuels, pre-burn land management considerations (e.g., grazing deferment), etc.):*

Water supply *(describe quantity, location, and other considerations):*

Unit access *(describe roads, signage needs, etc.):*

Plan to protect values at risk *(if applicable; e.g., structures, water lines, sensitive species, cultural sites, etc.):*

3. Prescription

Element	Minimum (cool)	Desired	Maximum (hot)
Temperature (F)			
Relative Humidity (%)			
Mid-Flame Wind Speed (mph)			
Fine Dead Fuel Moisture (%)			
Probability of Ignition (%)			

**Include other prescription elements as appropriate*

Wind direction *(acceptable range and optimal):* _____

Seasonality of burn *(if applicable; in many cases, implementation will be appropriate at any time that prescription parameters are met):* _____

_____

_____

4. Smoke Management Plan

(to be prepared according to local air district rules; refer to SMP for detailed plan):

□ Submitted through PFIRS

□ Submitted in hard copy to air district

□ Not required by air district based on project size/emissions

5. Ignition Plan

□ Firing Boss to be designated

Note: test fire will be conducted in a location that is representative of the burn unit. Location to be determined by Burn Boss on the day of burn based on environmental conditions.

Firing plan *(describe sequence, patterns, techniques, and devices needed to meet objectives):*

Holding plan

□ Holding Specialist to be designated

Anticipated Fire Behavior (head fire)	**Flame length (FL) (feet)**	**Rate of spread (ROS) (chains/hour)**
Within the unit		
Adjacent to unit		
Production Rates	**Chains/hour**	
Crews/resources		

Resources *(describe total number and type of resources needed to implement burn safely, based on production rates outlined above. Include description of plan for on-site weather observations and weather forecasting):*

6. Post-Burn Activities

Mop-up and patrol plan (describe activities, timeframes, and standards):

Other post-burn activities (optional; include appendices for marked activities):

□ Fire effects monitoring plan

□ Project rehabilitation plan (including infrastructure, improvements, and land rehabilitation)

□ Other (describe): _____

7. Notifications

Pre-Burn Notifications:

Adjacent Landowners

□ Name: _____ Phone: _____

□ Name: _____ Phone: _____

□ Name: _____ Phone: _____

□ Name: _____ Phone: _____

□ Name: _____ Phone: _____

□ Name: _____ Phone: _____

Air Quality Management District

□ Name/Title: _____ Phone: _____

Fire Agency Having Jurisdiction

□ Name/Title: _____ Phone: _____

Other notifications may be required based on parameters outlined in the smoke management plan (e.g., schools and other sensitive receptors). Record additional notifications on separate page and include in appendices.

Day-of-Burn Notifications:

CAL FIRE Emergency Command Center (ECC):

□ Name/Title: _____ Phone: _____

Air Quality Management District

□ Name/Title: _____ Phone: _____

Other Fire Agency Having Jurisdiction (if applicable):

□ Name/Title: _____ Phone: _____

Other (if applicable; e.g., law enforcement, adjacent landowners, etc.):

□ Name/Agency: _____ Phone: _____

□ Name/Agency: _____ Phone: _____

□ Name/Agency: _____ Phone: _____

8. Wildfire Conversion Plan

Person designated to make declaration: _____

Designated Incident Commander in case of wildfire: _____

Person(s) to contact for declaration:

Name/Position: _____ Phone/frequency: _____

Name/Position: _____ Phone/frequency: _____

Name/Position: _____ Phone/frequency: _____

Size-up/reporting considerations:

- Rate of spread
- Fuel type
- Structure threat
- Potential acreage
- Current actions being taken

9. Risk Management Activities

Check boxes for risk management activities/plans attached to the prescribed fire plan:

□ Contingency plan (required)

□ Medical plan

□ Communications plan

□ Management Action Points (M.A.P.)

□ Briefing checklist

□ Safety plan (e.g., safety review, onsite assessment, 215A, etc.)

□ Other (describe): _____

10. Other Attachments

Check boxes for other pertinent attachments included with the prescribed fire plan:

□ Project and area maps (required)

□ Go-no-go checklist (recommended)

□ Other (describe): _____