



COMMUNITY WILDFIRE PROTECTION PLAN

For the Community of Occidental
Sonoma County, California

Development

This Community Wildfire Protection Plan (CWPP) was developed by Fire Safe Occidental with guidance and support from Fire Safe Sonoma, the County of Sonoma, and the California Department of Forestry and Fire Protection. This CWPP shall supplement the Sonoma County Community Wildfire Protection Plan.

Fire Safe Occidental
<http://firesafeoccidental.org>

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This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. This Community Wildfire Prevention Plan (the Plan) is a work in progress. Various changes are anticipated throughout the Plan over the next several years.

Readers are urged to consult with their own agencies having jurisdiction regarding the use or implementation of this Plan, as well as their own legal counsel on matters of concern.

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Because the Sonoma County CWPP does not legally commit any public agency to a specific course of action or conduct and thus, is not a project subject to CEQA or NEPA. However, if and once grant funding is received from state or federal agencies and prior to work performed pursuant to the Sonoma County CWPP or a local CWPP, or prior to issuance of discretionary permits or other entitlements by any public agencies to which CEQA or NEPA may apply, the lead agency must consider whether the proposed activity is a project under CEQA or NEPA. If the lead agency makes a determination that the proposed activity is a project subject to CEQA or NEPA, the lead agency must perform environmental review pursuant to CEQA or NEPA.

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INTRODUCTION

This Community Wildfire Protection Plan, collaboratively developed, with input from Federal, State, and local government, community-based groups, landowners, and other interested persons, has identified and prioritized treatment areas and mitigation strategies and treatments and provides recommended measures to reduce the ignitability of structures.

This CWPP provides a general overview and assessment of wildfire risks to the community of Occidental, California. This plan is consistent with the California Fire Plan, the CAL FIRE Sonoma Lake Napa Unit Wildfire Management Plan and the Sonoma County Hazard Mitigation Plan. Using input from local government, fire agencies, landowners and other interested community stakeholders a set of priority tasks were developed to increase fire resiliency. These tasks, once accomplished, will reduce the potential loss of human life, property, and natural and cultural resources due to wildfire.

Acknowledgements

All decisions regarding this plan were made by consensus of the following persons who constituted The Fire Safe Occidental CWPP Working Group: Paul Stange, Elizabeth Lawson, Amy Beilharz, Carolyn Sell, Carol Hetherington, Bob Burnett.

Funds provided by the California Fire Safe Council and Fire Safe Sonoma.

SECTION I: COLLABORATION

STAKEHOLDERS

Governmental and community stakeholders involved in the development of this CWPP are included in the following tables along with their role.

Governmental Stakeholders	
Name/Organization	Role
Chief Ben Nicholls / CAL FIRE - Division Chief	Fire representative input – CAL FIRE
Elise VanDyne / Supervisor Hopkins Office	County governmental representative input
Lisa Hulette / Office of Recovery & Resiliency	General input (County governmental concerns)
Robynn Swan / California Fish & Wildlife	Environmental concerns input, State of California
Richard Diaz / County Emergency Services	Emergency evacuations, alerts & communications
Ed Buonaccorsi / County Emergency Services	Emergency evacuations, alerts & communications
Nancy Brown / Office of Emergency Services	Emergency evacuations, alerts & communications
Misti Wood / Sonoma County Sheriff	Emergency evacuations, alerts & communications
Jason Hoorn / Goldridge Resource Conservation District	Registered Professional Forester input
Steve McNeal / Occidental Community Services District Board Member	Water Municipality Representative input
Susan Hadon / County Water Agency	County water/sewer representative input
Jason Wells / Resource Conservation District Forester	Registered Professional Forester input
Robert Aguero / Sonoma County Forester	Registered Professional Forester input
Brittany Jensen / Goldridge Resource Conservation District	General input & Camp Meeker CWPP contributor
Adriana Stagnaro / Goldridge Resource Conservation District	General input & Camp Meeker CWPP contributor
Tyler Pitts / California Conservation Corps	General input
Ron Lunardi	Occidental Volunteer Fire Department Chief

Community Stakeholders	
Union Hotel	Restaurant and Bar
Negris	Restaurant and Bar
St Philips	Church
Occidental Community Church	Church
Occidental Center for the Arts	Community Space, Gallery and Performance Venue
Harmony Union School District	School
Katy Mamen	Community Member
Occidental Arts and Ecology Center	Educational Programs and Conference Center
Occidental Community Market	Grocery and Liquor Store
Occidental Lodge	Hotel
Inn at Occidental	Hotel
Bohemian Market	Grocery
Occidental Hardware	Business
Occidental Area Health Center	Community Resource

EXECUTIVE SUMMARY

The general boundary of this CWPP and of Fire Safe Occidental's (FSO) work is roughly the Occidental Community Services District (OCSD). OCSD is a geographic designation for the 25 square mile region surrounding Occidental, California. The OCSD covers the region of Western Sonoma County located between Sebastopol and Bodega Bay, and it includes the Salmon Creek, Dutch Bill Creek, Willow Creek and Atascadero/Green Valley Watersheds. The area is a mecca for tourists in all seasons, and importantly, the heaviest part of Occidental's tourist season coincides with fire season.

In less than two years, FSO has grown from a handful of volunteers into a 600+ member organization that is still expanding. FSO efforts to date have focused on empowerment of the Occidental area community through information, organizing collectively and in smaller neighborhoods, and advocating for the area. This CWPP will enable FSO to progress their activities into tangible fire mitigation efforts and alert/evacuation plans that will both decrease the risk of fire and improve the community's preparedness in the event of fire with the primary objective of saving lives and a secondary objective of reducing property loss.

The area of OCSD bounds on three sides the densely populated community of Camp Meeker. Therefore, close collaboration with Fire Safe Camp Meeker is necessary in order to ensure that the work done in one area successfully supports the work done in the surrounding area.

Vegetation in the OCSD is typical of the coastal range in Northern California with mixed evergreen forest, oak woodland, grassland and chaparral. Much of the area was logged over multiple times from 1850 until the 1950s and is now either heavily forested or dense chaparral, with substantial understory vegetation fuel-buildup and no recent fire history.

This CWPP identifies four major areas of concern: 1) Alerts and Communications, 2) Access and Evacuation, 3) Fuel Reduction, 4) Ignition Reduction. It then catalogues key risks in each area and proposed treatments to reduce these risks. Of critical concern, most of the region's roadways are narrow two-lane roads with steep drop offs; many have only one exit. This is complicated by the fact that dense residential areas combined with significant overgrown acreage could contribute to both ignition and intensity of fires and add to the difficulty of evacuation.

With assistance and support from Fire Safe Sonoma, this CWPP was developed to provide a general overview and assessment of wildfire risks to the greater Occidental area, using the Federal CWPP requirements and the Sonoma County CWPP. Working with key stakeholders—fire agencies, governmental agencies, landowners, renters, business community members and others, a set of priority projects was developed to increase the area's fire resiliency. These projects are intended to reduce the potential loss of human life, property, and natural and cultural resources due to wildfire. The CWPP will also increase the ability to collaborate on, and secure funding for, these wildfire reduction projects.

SECTION II: PROJECT AREA OVERVIEW

COMMUNITY OVERVIEW

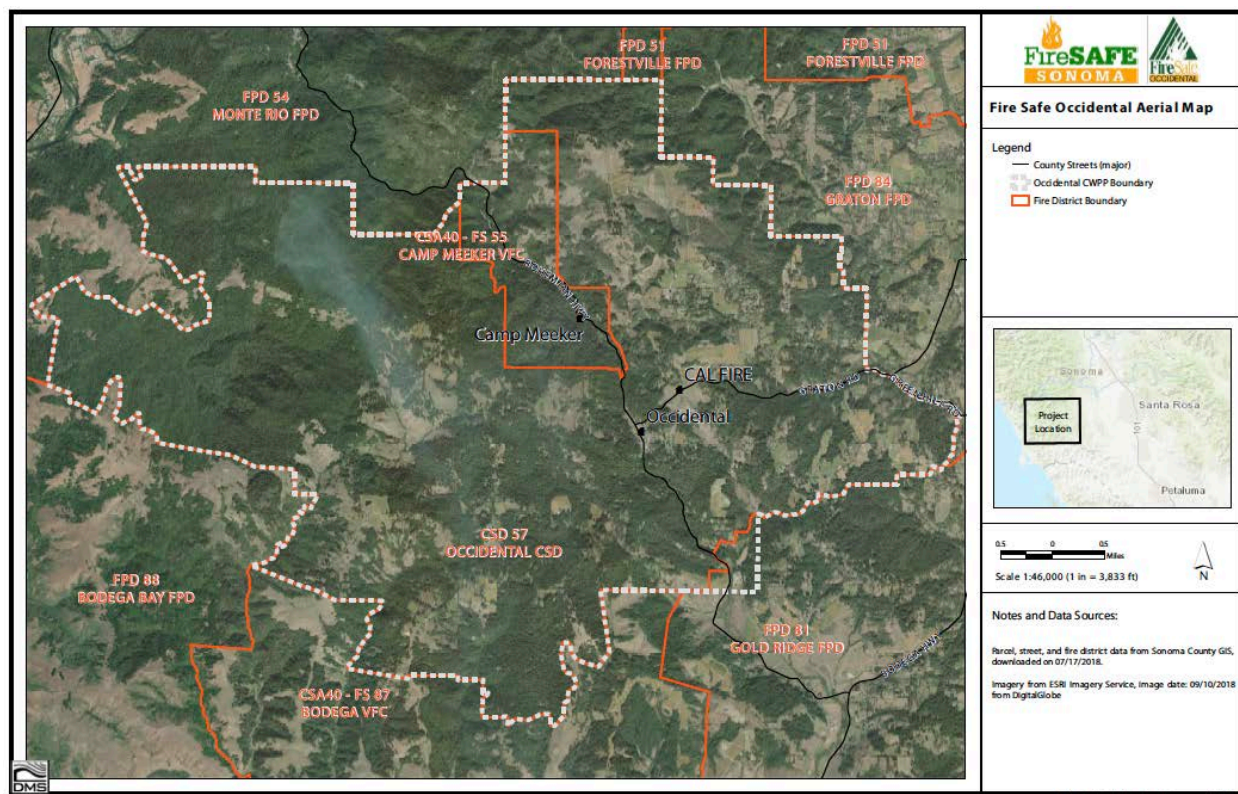
Sonoma County

Sonoma County encompasses over 1.1 million acres and is comprised of natural landscapes representing mixed conifer and hardwood forests, redwood groves, oak woodlands, riparian systems, chaparral, coastal scrub, serpentine-endemic vegetation, wetlands, freshwater and brackish marshes, and others. As with other areas bounded by the ocean to the west and low mountains along other borders, Sonoma County has a great degree of climatic variation, representing microclimates that range from marine at the coast, to coastal cool, then coastal warm moving inland. This climatic variation combines with diverse topographic and geologic environments to create multiple ecological zones.

The combination of highly flammable fuel, long dry summers and steep slopes creates a significant natural hazard of large wildland fires in many areas of Sonoma County. Wildland fire season in Sonoma County spans the months after the last spring rains until the first fall or winter rains occur. The months of August, September and October have the greatest potential for wildland fires as vegetation dries out, humidity levels fall, and offshore winds blow. However, an impact of climate change is that fire season is longer; and fires can occur at any time of year in this county.

The Community of Greater Occidental

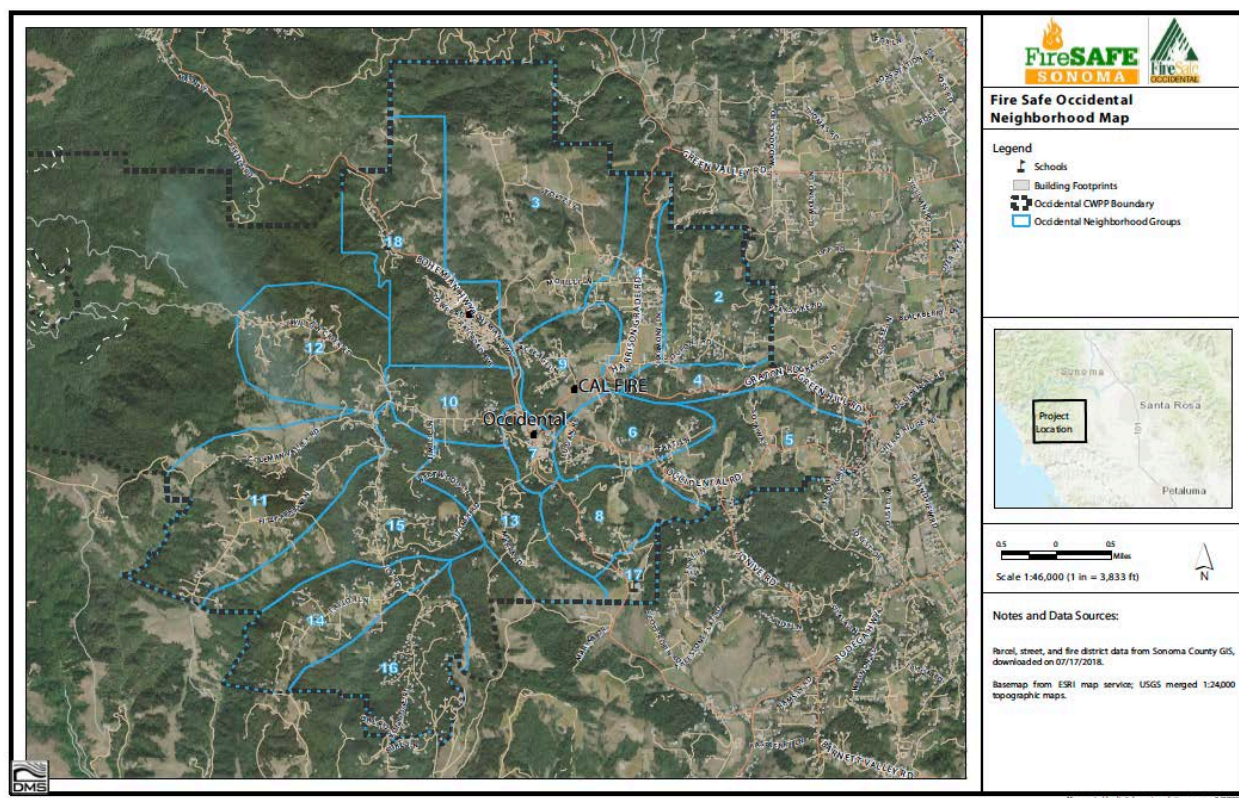
This CWPP focuses on the community of greater Occidental with boundaries that roughly match those of the Occidental Community Services District (OCS). OCS is a geographic designation for the 25 square mile region surrounding Occidental, California and encompasses approximately 16,000 acres.



As shown in the map on the previous page, the area of OCSD (and thus the area covered by this CWPP) bounds on three sides the densely populated community of Camp Meeker. Therefore, close collaboration with Fire Safe Camp Meeker is necessary in order to ensure that what is done in one area successfully supports the work done in the surrounding area.

In addition to the approximately 1,200 parcels and 5,000 residents in the greater Occidental area, there is a thriving downtown in Occidental proper that hosts a weekly farmers market and has numerous shops, restaurants, and lodging. In the hills surrounding downtown there are orchards, wineries, vineyards, artist's galleries, and other businesses. The area is a mecca for tourists in all seasons and is heavily used by bicyclists. Two separate Artist's Open Studio tours and the Farm Trails event bring in additional tourists. Importantly, the heaviest part of Occidental's tourist season coincides with fire season.

Nearly two years ago, Fire Chief Ron Lunardi, of the OCSD supported Volunteer Fire Department, asked a few community members to begin forming a Fire Safe Council for the district. This later became Fire Safe Occidental. The goal was to engage the cooperation and involvement of the community in improving fire safety. Incentive was high because many members of the community had relatives and friends that lost their homes in the devastating 2017 Tubbs Fire. The 2018 Camp Fire increased local awareness of the potential risk for a devastatingly similar occurrence in Western Sonoma County with its steep ridges and narrow roadways. The speed and intensity of the Kincadee Fire in 2019 provided still more incentive to the community.



In the eighteen months since its first meeting, FSO has developed from a handful of volunteers into a robust organization that is still expanding. FSO identified 16 unique neighborhoods that encompass the entire district, developed neighborhood leaders, and created communication systems within and between the neighborhoods. In addition, Safer West County, a 501(c)(3), was formed as the umbrella organization for FSO and other area Fire Safe Councils or non-profit groups focused on a sustainable, healthy wildlife urban interfaces in Western Sonoma County.

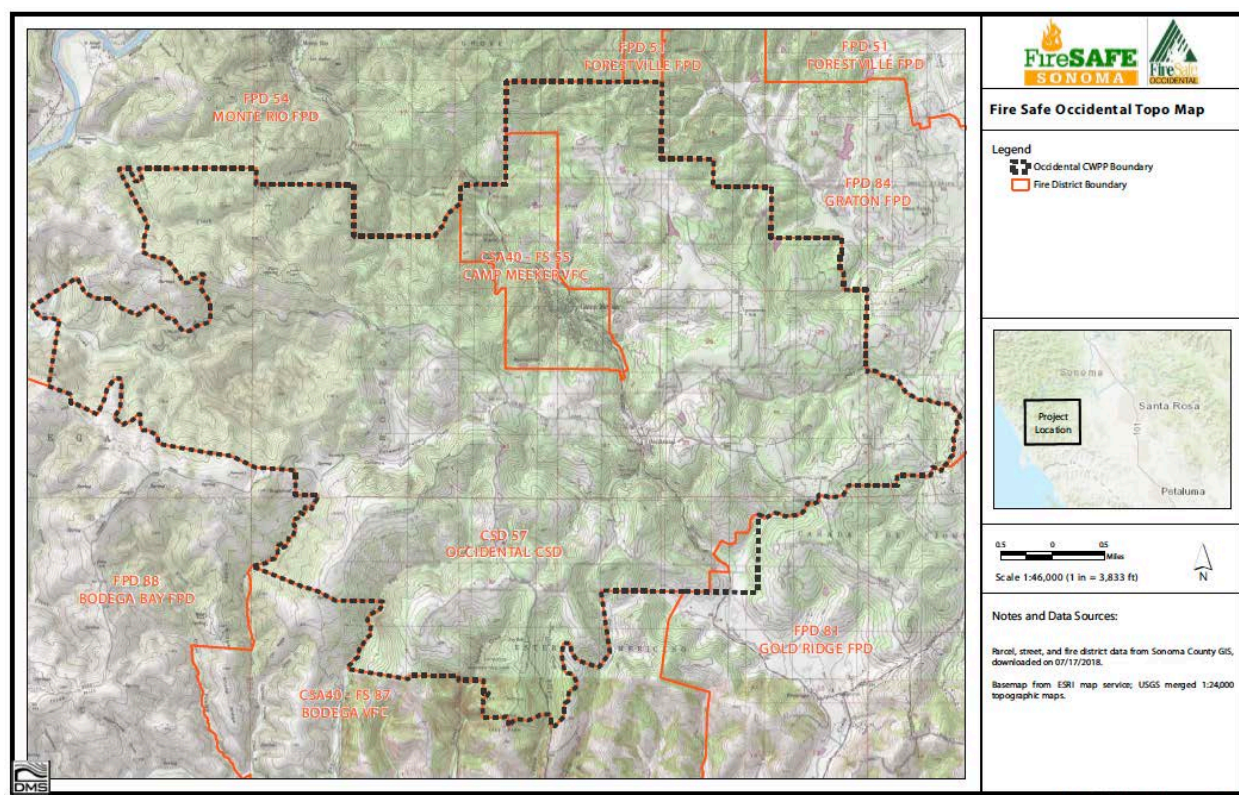
Area History

The land in this area was originally the ancestral territory of the Coast Miwok and Southern Pomo people that have inhabited the Sonoma Coast for over 12,000 years. Fire was an integral part of the Miwok and Pomo land management practices. Western European settlers began to inhabit the area in the 1840's and 50's, which brought major change to forestry.

Founded in 1876, the town of Occidental, which is in the geographic center of the OCSD, was a stop on the North Pacific Coast Railroad connecting Cazadero to the Sausalito ferry. The railway supported a rapid expansion of the timber industry, and by 1877 there were six sawmills in the Occidental area. Trains also brought the first tourists (vacationers from San Francisco) to the area. Logging of the area began to decrease throughout the first half of the 20th century, with the last large logging occurring in the 1950's and the region slowly became what it is today: a region used for agriculture, viniculture, tourism, and rural residences. The majority of homes in the project area are Wildland Urban Interface (WUI) non-compliant, lacking hardened exteriors and adequate defensible space. This includes many of the historic wood frame structures in downtown Occidental.

Topography

The topography of the OCSD is defined by the high ridges of the coastal range, with deep, narrow canyons running between.

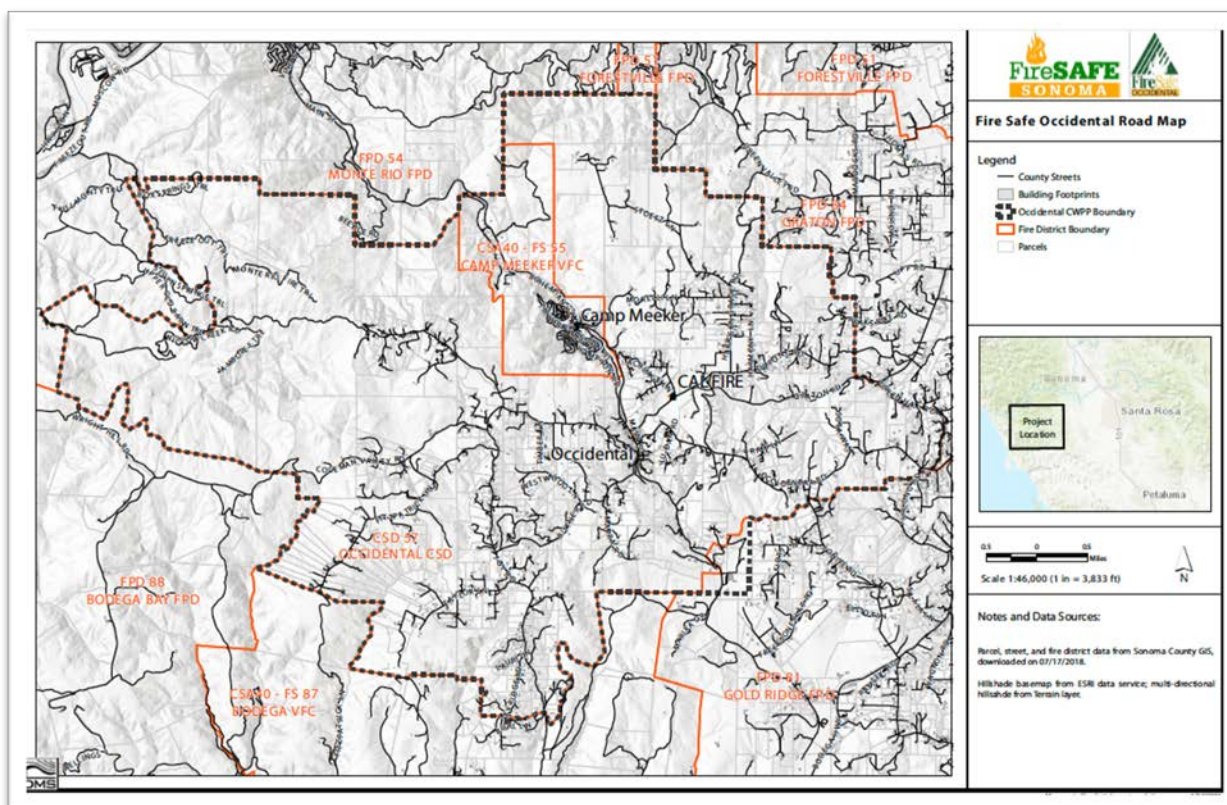


Most slopes are quite steep, and elevations can reach as high as 1000' above sea level. The town of Occidental is located in a large relatively low basin at 594' surrounded by hills. From that basin Salmon Creek drains south to the ocean and Dutch Bill Creek drains north to the Russian River. To the west of downtown is the Willowcreek Watershed and to the east is the Atascadero/ Green Valley Watershed.

Property parcel sizes vary. Large areas of the district are heavily residential with lots under 5 acres. These areas are interspersed with parcels made up of between 10 and 500+ acres. A large percentage of parcels have main homes, plus Accessory Dwelling Units (ADUs), often a guest home, sometimes office studios or other non-dwelling structures. The largest parcels in the area are ranch properties, in many cases still owned by the original settler families. Other large parcels are part of land trusts, and conservancy programs, camps, conference and retreat centers.

Access

Feeding the Occidental area's main roads, are many miles of minor, one and two-lane roads woven throughout the project area. Of these, a large percentage have few or no turnouts to allow the safe passage of fire-fighting equipment during an evacuation. Some are private roads, some are publicly maintained, many are need of repair. In addition, hundreds of residences (approximately 57%, see Appendix A) are located on rural roads with only one egress. Nine of these public and private roadways are longer than 500' and some of these roadways are up to two miles long.



The main routes through the Occidental area the Bohemian Highway, Graton Road, Occidental Road, and Joy Road. Bittner and Coleman Valley roads connect Bohemian Highway with Joy Road. All of these two-lane roads narrow significantly in sections, have occasional steep drop offs, and are in grave need of repair and extensive vegetation management. Joy Road actually narrows to one lane in some sections.

These main routes then connect with slightly larger two-lane roadways. The shortest route to the only major highway in the region US101 is 13 miles. Evacuation of the entire population in a short period of time is therefore a daunting challenge.

Population

Within the boundaries of the OCSD there are 1,200 tax parcels and a population of approximately 5,000. This greater Occidental community has a wide age-range from newborn to 102. Currently, the average age in the community is 61+ years including many retirees and seniors. The area is economically and culturally diverse. While newer residents have been building large homes, it is primarily an older population of longtime residents, many with minimal fixed incomes as a large percentage are retired. The area is known for its Health Clinic that serves the low-income population, and also for the Rural Food program, run by St. Philip's Church which serves 106 families each month. The Harmony School District children's free food service is run out of the Community Center each day.

This community includes both full time and part time residents, absentee landlords, and vacation rental visitors. Many new residents and vacationers are unfamiliar with the wildfire risks they face, have minimal knowledge of the roadways, and lack the knowledge needed to respond to evacuation orders appropriately. VRBO and Airbnb type rentals are becoming more common and research is needed to understand the impact of this on ignition prevention and evacuation.

Climate

The Occidental area in general has a Mediterranean climate, with cool, wet winters and warm, dry summers. Average January temperatures range from 42 °F to 54 °F and average September temperatures range from 46°F to 83°F. August and September are the warmest months of the year with recorded high temperatures of 101°F in 2007. Because of the terrain, there are major differences between the western side of the district, where redwood forests dominate, and the eastern side of the district which is a chaparral.

The rainy season typically begins in late November and ends in May with no rainfall during the summer months. On the western side of the district, coastal fog is common during normal weather patterns in the summer months. The fall becomes drier with fewer morning fogs. Extended periods of drought across multiple years occur and seem to be becoming more common.

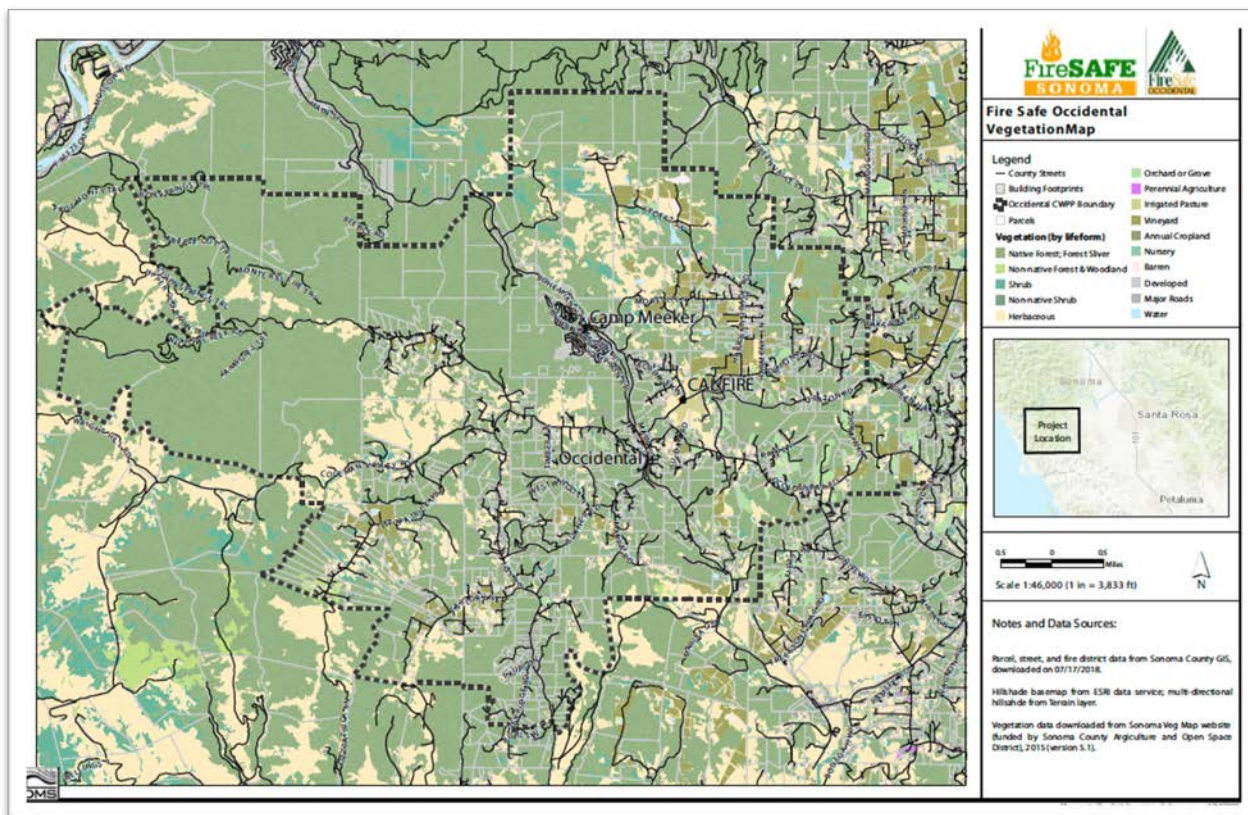
The Occidental area can experience both high on-shore and off-shore winds in the typical heat exchange cycle of Coastal California. Both will fan fires along the valleys and ridges of this region. According to longtime local residents, historical fires pre 1970, like the Robertson Fire in 1961, an un-named fire in 1964 and the Coleman Valley Fire in 1965 were driven by winds from the west.

The winds that have created the most severe fire danger in the last few decades typically blow from the northeast, usually in October. These winds—referred to as “Diablo winds”—bring low humidity and elevated fire danger and can wreak havoc in Sonoma County. These winds are the same ones that blew during the 1964 Hanley Fire; the 1981 Atlas Peak Fire; and the 2017 Tubbs, Nuns, and Atlas Fires and the 2019 Kincade Fire. Diablo wind events generally last from 15 to 35 hours, but in 2000, 2003, 2005, 2017, 2018, and 2019 these events in October and November lasted for five to 14 days. As climate change continues to affect weather patterns, the area experiences warmer temperatures, less coastal moisture,

and the period of fire danger extends both earlier and later in the year. Rising temperature levels will also increase the frequency and intensity of the fires.

Vegetation

The community of greater Occidental is within the Coastal Franciscan section of the four USDA ecological subsections in Sonoma County. The vegetation within the community is predominately native forest/forest silver and herbaceous along with some areas of shrub. These fuels, if ignited, will pose a significant threat to the community of Occidental.

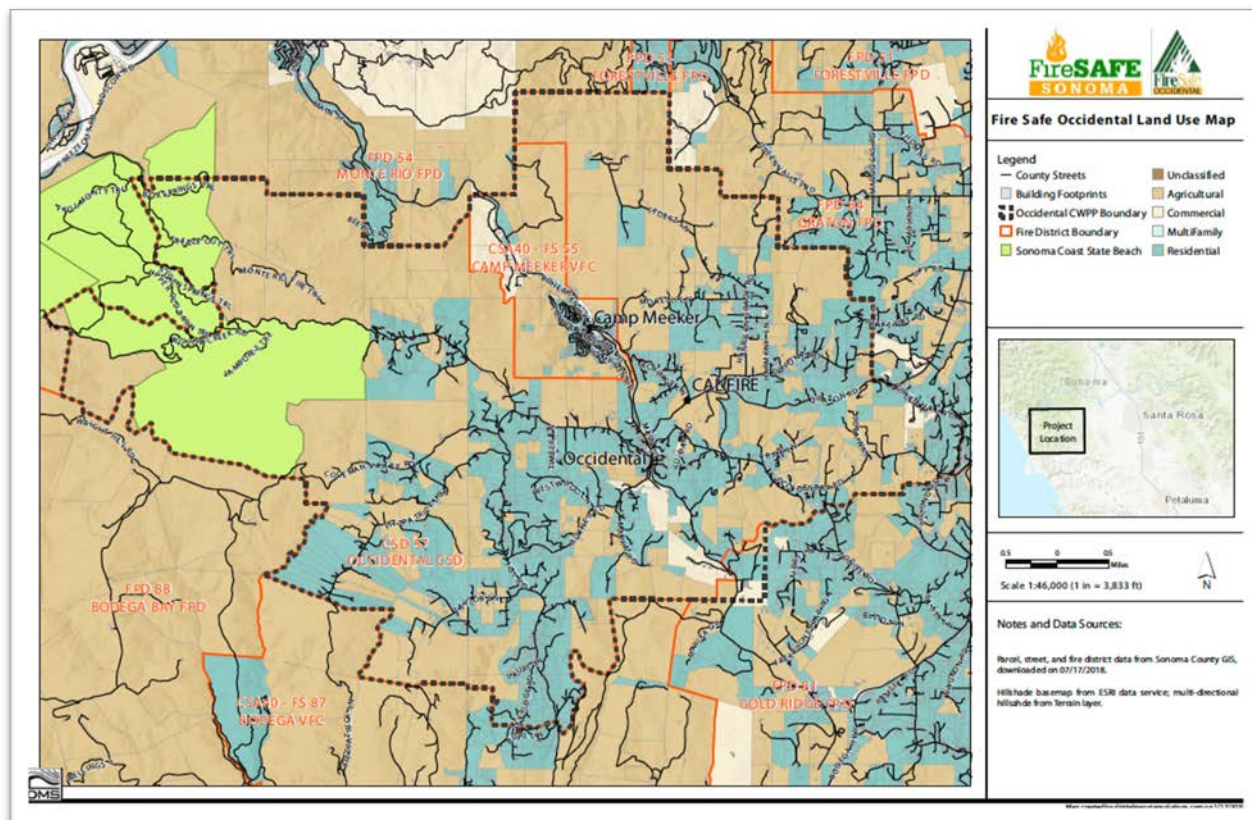


Vegetation in the area is typical of the coastal range in Northern California with mixed evergreen forest, oak woodland, grassland and chaparral. Heavily logged in the late 1800's, early 1900's and again in the 1950's, the forests surrounding Occidental have a higher risk of fire than a natural redwood forest including overcrowding of younger trees, dead trees due to Sudden Oak Death and significant ladder fuel. The chaparral areas are also heavily overgrown and, if ignited, will pose a significant threat to the community.

Densely inhabited rural Occidental neighborhoods have one of two characteristics: 1) steeper terrain and relatively dense and even-aged forest cover of redwood, Douglas fir and mixed hardwoods, or 2) open environments of chaparral and grassland that are characterized by hilly terrain with frequent drains. (*Ecological Subregions: Sections and Subsections for the conterminous United States; 2007*)

LAND USE

Land use in the area includes agricultural, vineyards, grazing, forestland, recreational, commercial and residential. There is a thriving downtown in Occidental proper that hosts a weekly farmers market, and arts center and gallery, six restaurants, two hotels, and multiple small shops and businesses and two grocery stores, two churches, a library, a hardware store, butcher shop, and a health center. South of town on Bodega Highway are the grade school and middle school and a large camp facility.



In the surrounding hills there are orchards, wineries, vineyards, farms, ranches, artist's galleries, and garden centers, as well as other event and environmental education centers, and small businesses operated on private property. The area is a mecca for tourists in all seasons, and experiences heavy use by bicyclists. Two separate Artist's Open Studio tours and the Farm Trails event bring in even more tourists. The heaviest part of tourist season coincides with fire season.

Businesses

The Occidental Historic District is a geographically contiguous district consisting of approximately 103 buildings primarily located on a grid plan of streets within the town of Occidental, most on the parallel roadways of Bohemian Highway and Main Street. Residential buildings are located on the streets perpendicular to Bohemian Highway and Main Street. Additional building types in the district include two churches, two motels, a post office, a community center, a fire station, seven restaurants, a coffee shop, and the community arts center. Approximately 42 buildings contribute to the historic designation, approximately 32 buildings are non-contributing, and of the 103 buildings only 24 are less than 45 years old complicating investment in structural hardening with historic preservation.

The Occidental Historic District encompasses downtown Occidental, the east and west sides of both Bohemian Highway and Main Street between 1st Street and Graton Road; and extends along the west side of Bohemian Highway from the intersection of Graton Road to about 1000 feet northwest, and along both sides of Coleman Valley Road from the intersection with Bohemian Highway to approximately 400 feet northwest. Four buildings in the Occidental Historic District are designated as Individual County Landmarks: 3730 Bohemian Highway (St. Philips Catholic Church); 3637 Church Street (Occidental Community Church); 3731 Main Street (Union Hotel); and 3611 Main Street (Taylor Building).

Schools

Occidental is home the Harmony Union School District that consists of two schools that serve the surrounding area. The Harmony Elementary School is a charter school for Kindergarten Leap (TK), Kindergarten and 1st grade which serves approximately 58 students. Salmon Creek School is a grade school for 2nd through 8th grade, which serves approximately 191 students.

Both schools are located to the south of downtown on Bohemian Highway. The road is a two-lane road with no shoulder. This could potentially cause a significant egress issue should an evacuation occur during school hours requiring parents to drive into the area to pick-up their children.

Camps

While the Catholic Youth Organization Retreat Center is the only camp officially in the CWPP area, Occidental is also surrounded by camps north of town in Camp Meeker and beyond which need to be accounted for in any comprehensive evacuation plan. These camps dramatically increase the area's population when in session. These are Westminster Woods, St. Dorothy's Rest, and Alliance Redwoods. In addition, there are conference/retreat/educational centers such as the Occidental Center for Arts and Ecology, Land Paths, Shanti Permaculture Farm, and Western Hills Garden.

Electrical Utility

PG&E is responsible for the delivery of power to the Occidental area. Of special concern are the drop lines from PG&E lines to households, which were installed in the 1970's and before. Many may be uninsulated.

Occidental Community Services District

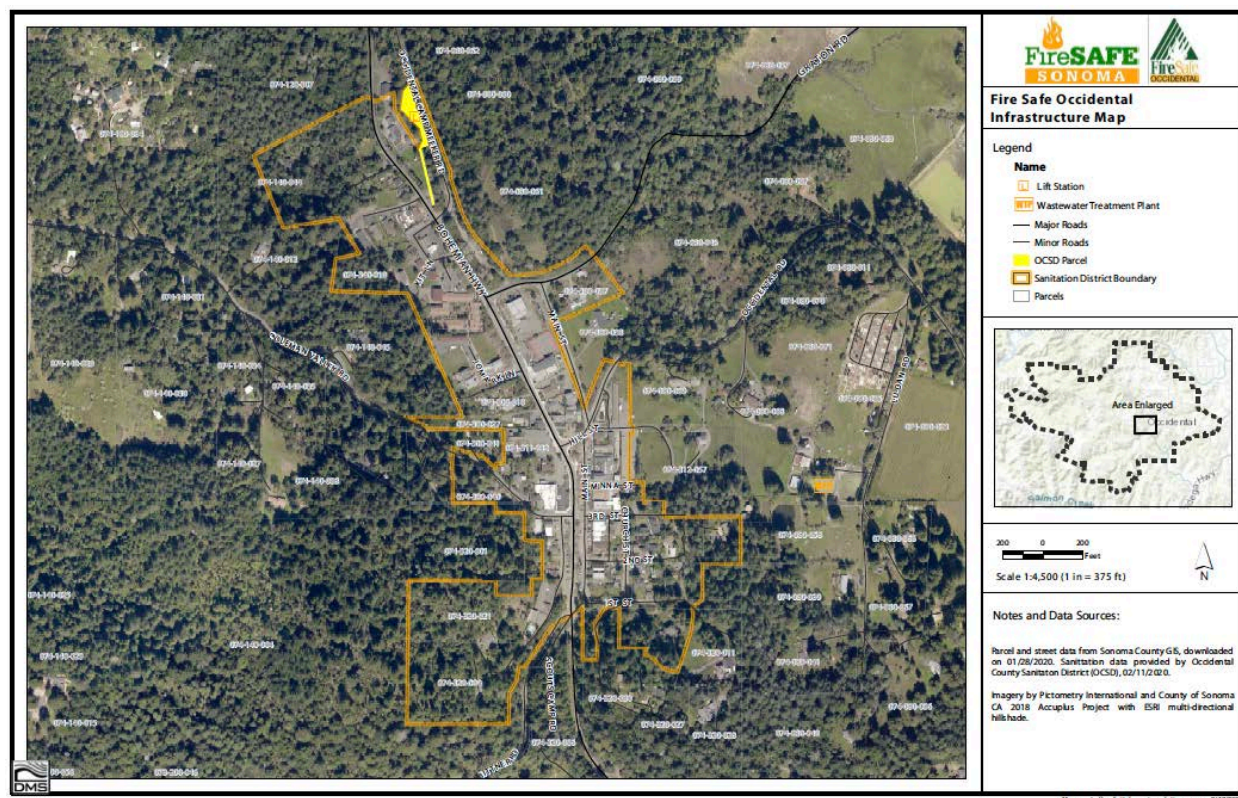
The OCSD, formed in the early 1960s, provides water and fire services to the Occidental community. The OCSD Board is the only locally elected political entity and financially supports the local volunteer fire department, in conjunction with Sonoma County.

Water Supply

Public water supply for fire protection in the community of Occidental is provided by three entities: the OCSD, the Union Hotel, and the Camp Meeker Park and Recreation District. All three of these entities contracts with the Russian River Utility to operate the water systems which maintains the facilities and collects all water quality samples. Outside of the downtown area, most parcels are on wells with varying levels of private water storage. During the hot dry months of fire season many of these private well's yields are low and residents are forced to truck water in to supply household needs.

Occidental Community Services District - water services

The OCSD's water service area is much smaller than the entire district service area and provides water mostly to the town's small commercial area. The utility serves approximately 81 customers, with about 7 of the customers using around 50 percent of the water. The users purchase approximately eight million to nine million gallons of water per year. According to the Occidental Fire Department, this system provides at least 500 gallons of water per minute for fire flow.



The Union Hotel

The Union Hotel is a commercial establishment in the Occidental historical downtown area and has its own commercial water system. This is a single-service, non-community transient water system. The Union Hotel owns the water supply facilities and is responsible for the water quality. The Hotel also has a water service connection to the OCSD. However, this is a redundant supply and is used only in emergencies. According to the Occidental Fire Department, this system provides at least 500 gallons of water per minute for fire flow.

Camp Meeker Park and Recreation District

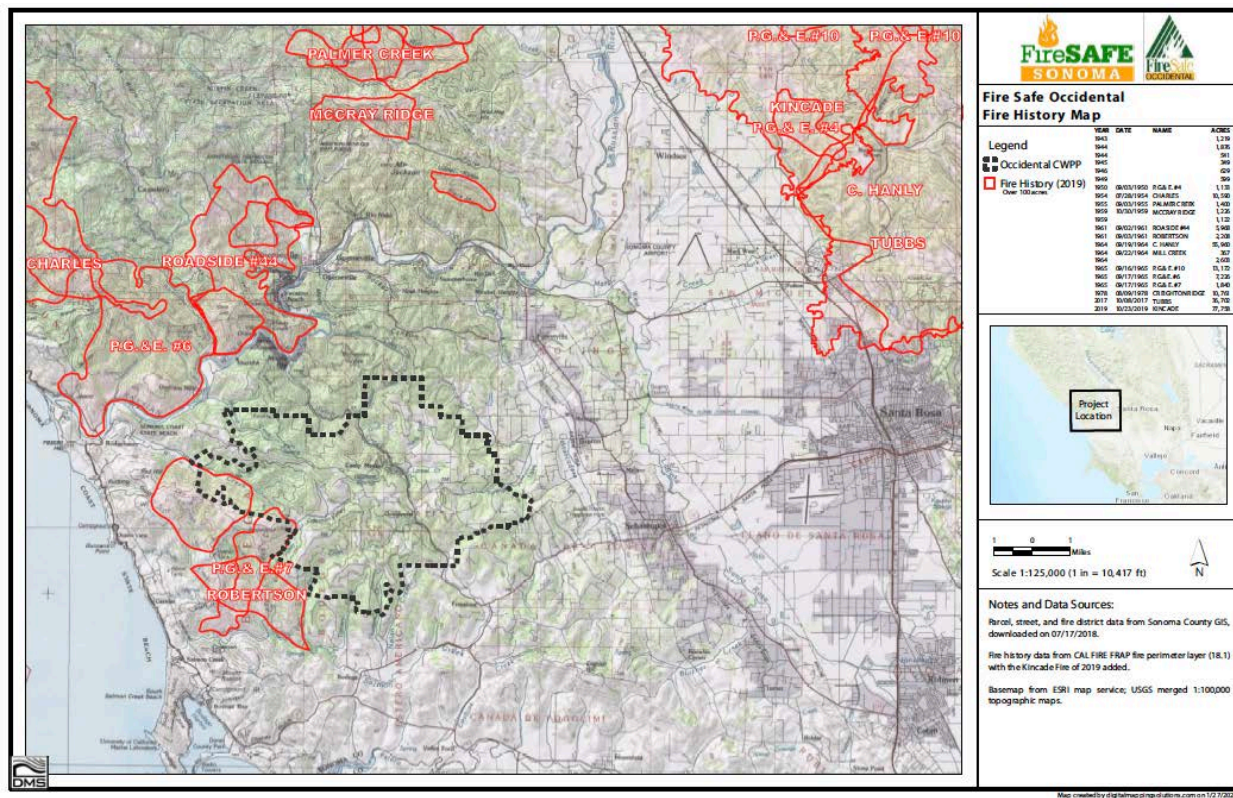
The OCSD is also connected to the neighboring Camp Meeker Park and Recreation District water system. In 1994 the state legislature passed legislation granting this Recreation and Park District the power of a County Water District. The board of directors secured financing in 1996 for the construction of a water source well at Monte Rio, a transmission main and a pump station to deliver water to a storage tank on Morelli Lane.

Subsequently, a second project replaced all water delivery facilities, and included two additional storage tanks. This project was constructed in 1999/2000. All operations are monitored by a remote telemetry

system which reports the status of all critical equipment to a control center and sends alarms to the operator's pager. The system serves 365 customers and provides fire protection with a minimum flow of 750 gpm.

FIRE HISTORY

Both Occidental and Camp Meeker (which is bounded on three sides by the OCSD) were designated “Communities at Risk” by CAL FIRE in 2001. All communities within the project area were evacuated during the recent Kincadee Fire. Strong offshore winds made the likelihood of fire spread from eastern Sonoma County to western Sonoma County high. As seen in this satellite image of the Kincadee Fire on page 23, the smoke and ash plume blew directly over Occidental.

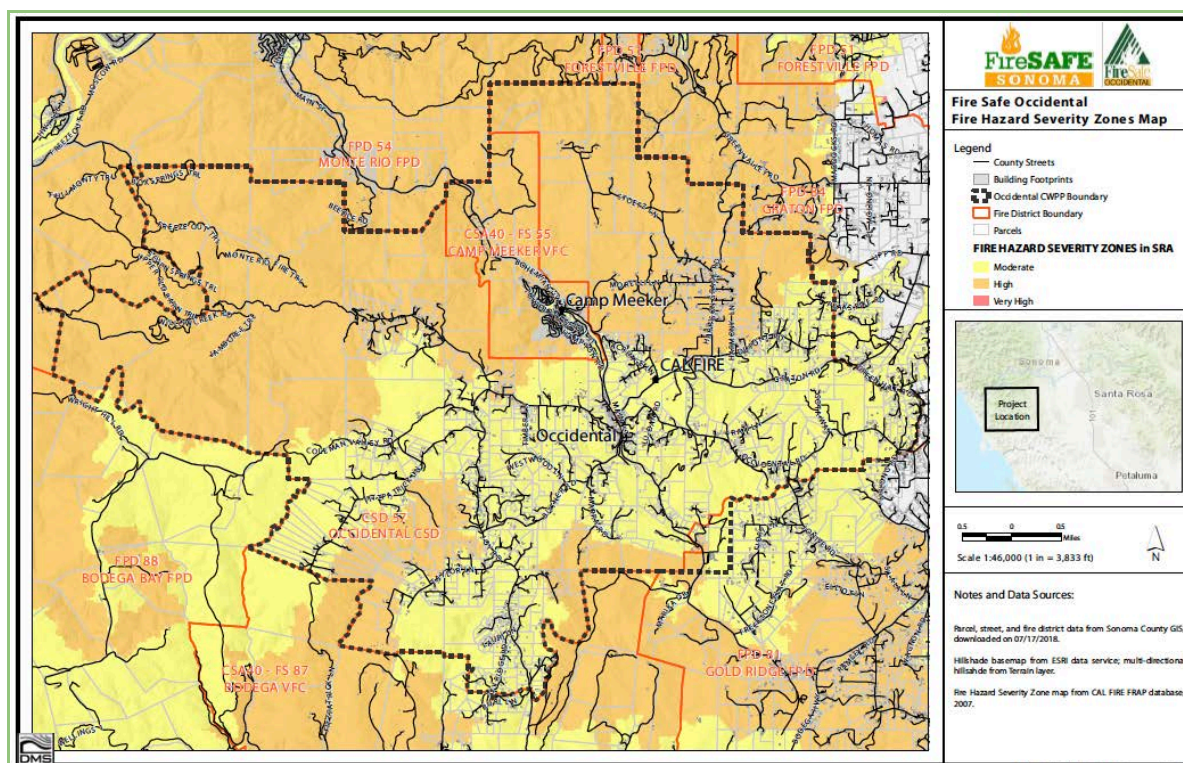


CAL FIRE Battalion Chief 1410 Wildfire Concern Survey May, 2016		
CAL FIRE Battalion Chiefs were asked to rank their level of concern (Low, Moderate, High, Very High) about the following wildfire issues.		
Wildfire Issue	Ranking	Comment
1. Fuels build up in areas around your community	High to Very High	Fuels build up is a significant concern in several communities in the battalion, including Mark West, Camp Meeker and Occidental.
2. Fuels build up and lack of defensible space around homes.	High	While some communities have enacted local ordinances and made progress, others need to make significant progress.
3. Increasing tree mortality due to disease or drought.	High	Bug kill is increasing due to drought conditions.
4. Local residents lack understanding about wildfire risks & mitigation strategies.	High to Mod	The 2015 Lake County fires have helped raise awareness, but there are still areas of concern.
5. Availability and safety of evacuation routes.	Moderate to High	In areas dense building and narrow roadways, there is significant concern.
6. Emergency Vehicle Access/clearances/turnouts	Moderate to high	
7. Addressing/Signage	Moderate to High	
8. Power line issues	Moderate	
9. Specific Concern #1: Add a specific concern not already noted.		
10. Specific Concern #2: Add a specific concern not already noted.		

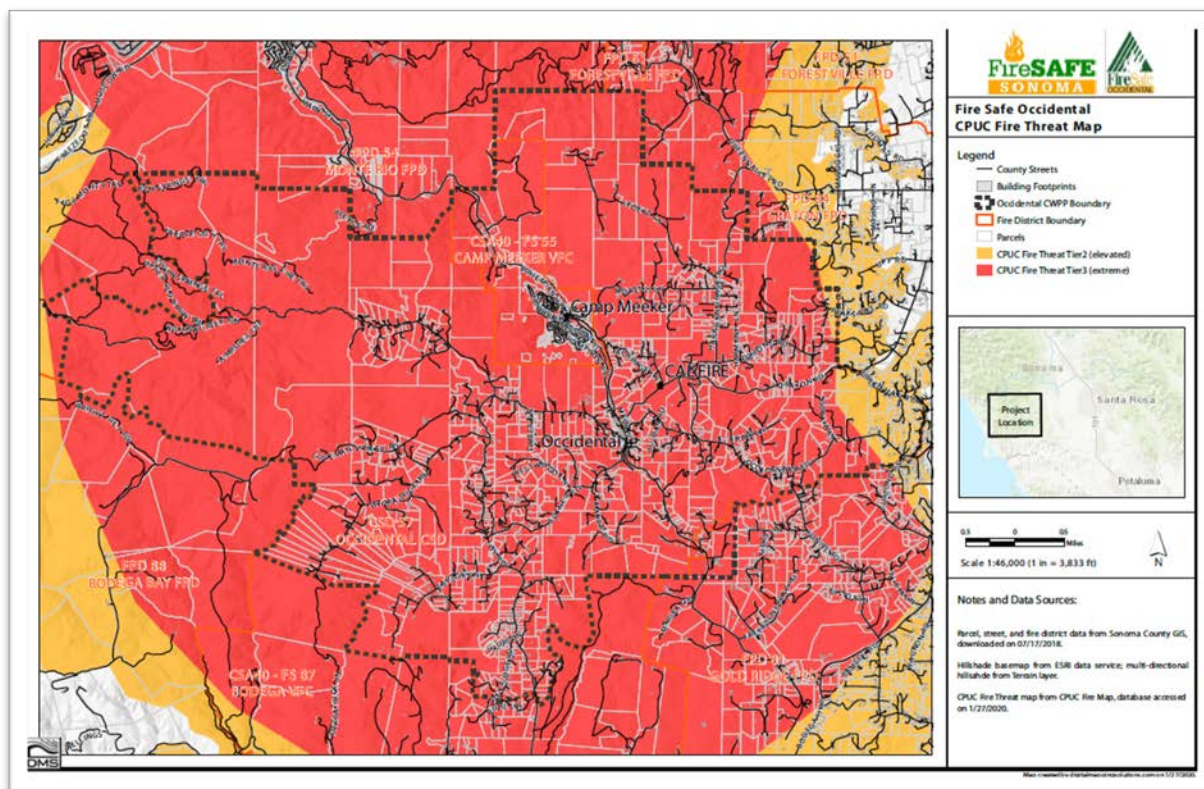
According to the Sonoma County Community Wildfire Protection Plan, CAL FIRE Battalion Chiefs working in Battalion 1410 listed fuels buildup in Camp Meeker and Occidental as a high, or very-high concern.

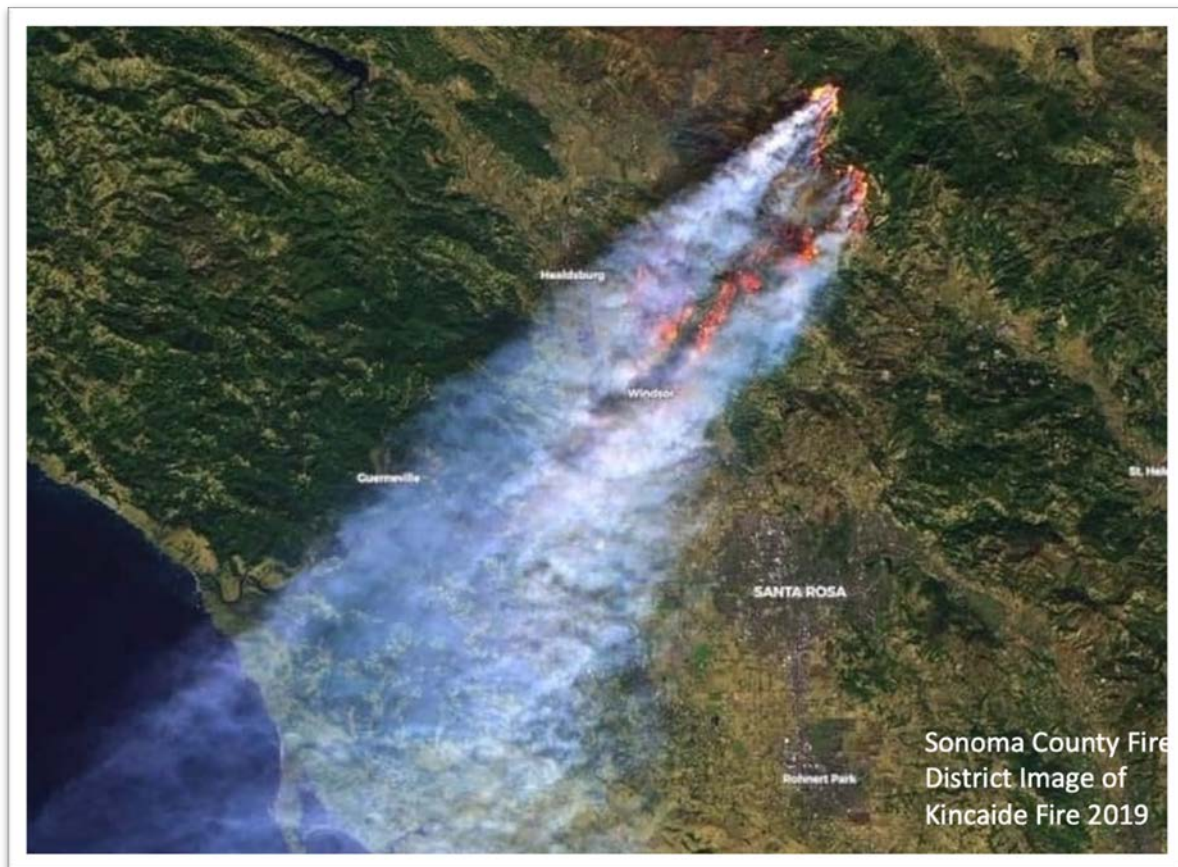
Moreover, the CAL FIRE Strategic Fire Plan of 2017 lists the entire length of Joy Road in the OCSD as a priority for Battalion 1410. Joy Road consists of multiple segments that narrow to one lane and has significant vegetation overgrowth that could pose a threat to residents and emergency vehicles during any emergency, especially an active fire. Other priority areas are the large area of largely

unmanaged manzanita scrub east of Harrison Grade and the Willow Creek State Park land where a county road has been allowed to deteriorate to the point that access is not possible with fire equipment.



The California Public Utilities Commission designates Western Sonoma County as a Tier 3 Extreme Fire Threat area (80%) and Tier 2 Elevated Fire Threat area (20%), not accounting for about one-fifth of the project area which is in Local Responsibility Area.





CAL FIRE designates Western Sonoma County as in Moderate (50%) and High (50%) FHSZ, not accounting for about one-fifth of the project area which is in Local Responsibility Area.

The Bodega Bay Fire Protection District provides a compelling argument for a reconsideration of the fire risk in Western Sonoma County based on other relevant factors affecting fire risk. The excerpt below is from the BBFPD Disaster Plan - 2018 (pg. 14) on the potential for fire following an earthquake:

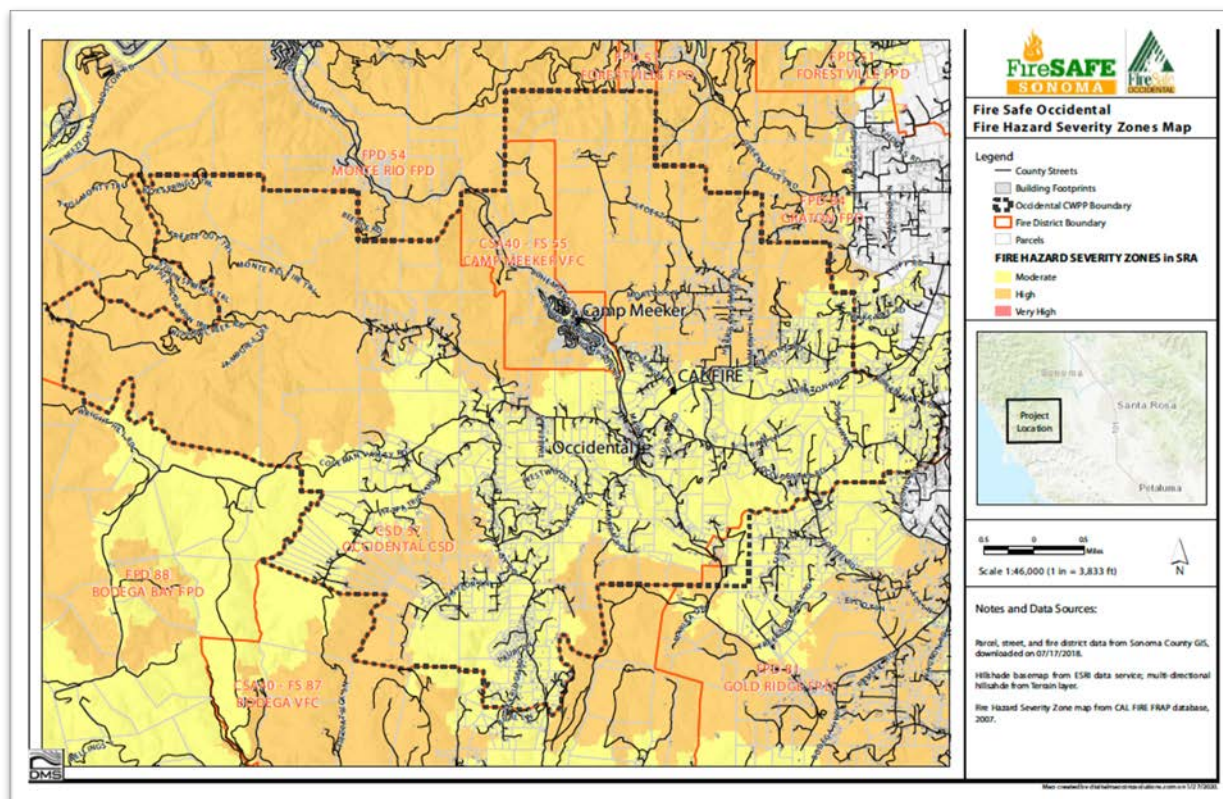
“Wildfire hazards could be substantially more as earthquake history tells us. An earthquake will likely down power lines and transformers as well as rupture propane gas lines commonly located in residences and businesses here. Gasoline contained in vehicles, boats and storage may also rupture and provide fire fuel. Explosions and fires will be started and may spread quickly in the heavy brush and wooded areas. We must therefore anticipate the need to fight wildfires during an earthquake instance. Historically, most modern earthquakes have had more destruction from fire than other earthquake factors.

The Bodega Disaster Plan also rightly references strong winds blowing inland. In historical fires in 1961, 1964 and 1965, inland winds were responsible for fires that burned as far inland as the Coleman Valley Schoolhouse, and Willow Creek State Park on the borders of the CWPP area. As seen in this satellite photo of the Kincaide Fire, the offshore wind is also a threat.

Despite the high wildfire hazard level, the project area has not experienced a wildfire since 1965. According to local knowledge, some large chaparral areas in the eastern part of OCSD have not burned in at least 150 years and have dangerously high levels of extremely flammable understory.

WILDLAND URBAN INTERFACE DESIGNATION

In addition to meeting the criteria noted below, the 25 square mile area of the OCSD, and thus this CWPP, is within the Sonoma County's State Responsibility Area and the Sonoma County Community Wildfire Protection plan designates all of Sonoma County's State Responsibility Areas as WUI. Under this designation, all of the greater Occidental area are WUI.



In the absence of a CWPP, Section 101 (16) of the HFRA defines the wildland–urban interface as “ (i) an area extending 1/2 mile from the boundary of an at-risk community; (ii) an area within 1 - 1/2 miles of the boundary of an at risk community, including any land that (I) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community; (II) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or (III) is in condition class 3, as documented by the Secretary in the project-specific environmental analysis; (iii) an area that is adjacent to an evacuation route for an at-risk community that the Secretary determines, in cooperation with the at-risk community, requires hazardous fuels reduction to provide safer evacuation form the at-risk community.”

Many of the structures throughout the community are considered high risk. They are older, dating from before the recommendations and requirements for ignition resistant construction. Most are made of wood, with wood siding, porches and decks.

The downtown area of Occidental holds historic significance and is a strong tourism asset. Local restaurants and lodging serve not only visitors to Occidental but also serves as a gateway to and from Sonoma Wine Country and the Russian River recreational area.

In the hills surrounding Occidental are other significant assets that serve a much wider community than the local area, including; the Occidental Arts and Ecology Center, Land Path's Grove of Old Trees, Tannery Creek Preserve, Sonoma Coast State Park and Ocean Song Preserve to name just a few.

LOCAL PREPAREDNESS AND FIREFIGHTING CAPABILITY

Occidental Fire Department

The primary provider of fire and emergency response in the community is the Occidental Fire Department, located at 3800 Bohemian Hwy, Occidental, CA 95465. The Occidental Fire Department is an all-volunteer department with approximately 25 staff. Their annual call breakdown is as follows:

Call Type	Number
Emergency medical	200
Structure fire	30
Wildland fire	20
Auto fire	6
Power-line down	30
Tree-down	45
Other (i.e. Traffic collision, public assist, etc)	30

The Occidental Fire Department holds a Class-4 Protection Classification by the Insurance Services Office (ISO) for the downtown area, and can, within five minutes of alarm time, deliver at least 200 gallons per minute of sustained fire-flow in most areas of the community. (Ref: FD Survey 6/11/20)

Other mutual-aid is provided by Camp Meeker Volunteer Fire Company, Graton Fire Department, and Monte-Rio Fire Department.

CAL FIRE

Automatic aid to Occidental is provided by a CAL FIRE Schedule-B staffed facility (Schedule "B" is defined as state funded, which deals with fires within the state's responsibility areas, which are primarily wildland fires) located at 4600 Cazadero Hwy, Cazadero, CA 95421.

CAL FIRE responds to wildland fires, structure fires, traffic collisions, hazardous material spills, and a variety of other emergency incidents. CAL FIRE staffs nine stations within the County, as well as the Sonoma Air Attack Base; total fire-season staff is approximately 115, with a reduced staff of approximately 50 during the non-fire season.

The Sonoma-Lake-Napa Unit (LNU) is one of 21 California Department of Forestry and Fire Protection (CAL FIRE) administrative units. It comprises six counties: Sonoma, Lake, Napa, Yolo, Colusa, and Solano (map, below). LNU has primary responsibility for more than 2.1 million acres of State Responsibility Area (SRA), and 2.3 million acres of CAL FIRE Direct Protection Area (DPA) lands, more than any other unit (table, below). It has the third largest population living within CAL FIRE DPA, and ranks third in the average number of annual fires.

The Sonoma-Lake-Napa Unit is divided into five divisions, and ten field battalions. Sonoma County defines the West Division. The West Division office is located in Santa Rosa. The West division is divided into four battalions, including Battalion 1410. This Battalion spans Sonoma County: its western boundary is the Pacific Ocean and its north-eastern the Lake County line, and encompasses the community of Occidental.

SECTION III: PRIORITIZED TREATMENT AREAS AND CURRENT ACTIVITIES

This CWPP has identified four priorities for future actionable projects.

- Emergency Notification and Communication
- Access & Evacuation
- Fuels Reduction
- Ignitions Reduction

While each of these key priority areas has been evaluated independently and assigned projects within them, many projects support improvements in more than one area. Below, each of our four priority areas is described in more detail, with specific projects outlined in Appendix B.

EMERGENCY NOTIFICATION AND COMMUNICATION TREATMENT

The ability of residents and visitors to receive emergency notifications is an extreme concern for the greater Occidental area. The County is working with FSO to find ways to mitigate the communication issues created by tall trees, high ridges and low valleys. Notification challenges include:

- Notification alerts depend on cell service which is spotty in the greater Occidental area and often non-existent without internet
- Internet reliability in an emergency could be hampered by power shutoffs
- Few people still have landlines as alternative communications to cell phones and ATT has been unresponsive to residents requesting new ATT landlines as they are no longer maintaining the infrastructure in this area
- Local Fire Department siren is not heard throughout the area, some areas hear sirens from neighboring fire stations, and some areas are unable to hear any sirens

Ongoing testing to confirm the reliability of the system and eliminate dead zones in the emergency notification system will be necessary. Working closely with Sonoma County to ensure that the messaging reaches as many members of the community using redundant layers of communication and networks, will increase awareness.

Existing Emergency Notification and Communication Projects

At the time of the development of this CWPP, the following FSO projects have either been implemented or are being implemented:

- Neighborhood specific automatic emergency calling systems to notify neighbors of localized fire information
- Education through community meetings, newsletters and social media to encourage all members of the community to register for all available alert systems
- Collaboration with the Sonoma County Department of Emergency Management to test the Emergency alert system to identify areas in the greater Occidental area that might be unable to receive these alerts
- Promotion of the use of and directed placement in key locations throughout the area of NOAA radios to increase notifications in areas with poor cell service

- Work with the Department of Emergency Management to improve alert redundancy and reception

ACCESS AND EVACUATION TREATMENT

In the event of an evacuation, egress routes are a major concern for the residents of the greater Occidental area. The concept of a mass evacuation at the same time firefighters are trying to enter the area to fight fires is daunting. Based on our risk assessments and community input the key concerns are:

- Many of the roadways are narrow (most less than 24 feet wide)
- In many areas two-way traffic in an emergency would be difficult, if not impossible
- Roads are constructed on steep slopes and narrow ridges
- Approximately 57% of the roads have only one exit route

In the event of a fast moving, wind driven fire in the area, evacuation needs would far exceed the road carrying capacity. All of the major evacuation routes are shared by the residents of Camp Meeker and the various communities to the north along the Bohemian Corridor. This includes several large camps and conference centers. The two schools for the region share a campus just south of town and on the major southern evacuation route. They do not have buses on campus for use if immediate evacuation is needed. Parking is limited and only one route into and out of the school grounds is functional. In addition, the exit route for a major camp with a potential population of 300 people is situated approximately 500 feet from the school driveway. A slow down at this point in the evacuation of Occidental would result in traffic being backed up for miles.

There is also concern that without clear communication regarding which direction to evacuate, residents may use roads that will be cut off by fire or be blocked by firefighters and their equipment. Many residents also have large animals to evacuate which is a challenge in terms of both timing and appropriate evacuation shelters. The final challenge is that while local residents may be familiar with alternate routes and the directions for evacuation, tourists, who contribute heavily to the local economy, may not be. Safe evacuation of tourists ensures a safer evacuation for locals.

The goal is to bring all existing roadways as close as possible to the California State Board of Forestry and Fire Protection SRA Fire Safe Regulations , so they are safe for evacuation/egress during the times of heaviest use in fire season, at the same time that firefighters enter to fight the fires. Projects to address these issues include:

- Adequate signage to direct people out of the area
- Fuels reduction along roadways
- The creation of roadway pullouts on all one lane roads
- Identification and/or creation and maintenance of secondary egress routes on all roadways

Working with Fire Safe Camp Meeker to address the evacuation plans for their high-density residential areas, as well as working with the various camps, conference centers, and the schools will be an integral part of improving access and evacuation for residents and visitors of Occidental and the entire Bohemian Corridor.

Existing Access and Evacuation Projects

At the time of the development of this CWPP, the following FSO projects have either been implemented or are being implemented:

- Raise awareness throughout the community through meetings, newsletters, and social media of the current evacuation routes and encourage people to practice all routes regularly
- FSO, in collaboration with property owners, is working to develop secondary egress routes for a few of the many dead-end county and private roads throughout the area. Secondary egress routes have been created on Stoetz Lane, Dupont, Willow Creek, Marra and Joy Ridge Road to date.
- Identified a list of comprehensive directional signage to improve evacuation flow, especially for non-residents who might be traveling through the area at the time of an evacuation and not know how to reach main arteries like Highway 1 or Highway 101 as directed by emergency orders. FSO is working with County to implement.
- Work with the neighborhoods to install reflective address signs on non-combustible posts at all properties and where appropriate at intersections to ensure clear and quick locations of fires for firefighters (both local and non-local assigned to fires in the area)
- Collaborate with the County government to reduce vegetation along evacuation routes of Joy, Bitner, and Graton Roads, much work is still needed and most of the work done to date needs regular maintenance.

FUELS REDUCTION TREATMENT

The partnership that exists between the organizations listed in this CWPP and FSO will help the community of Occidental to identify and reduce hazardous vegetative fuels that could ignite residences and commercial facilities during a wildfire. Maintaining properties with the appropriate defensible space is a key factor to protecting lives and properties.

This past year, fuels reduction along major roadways has been a high priority for both FSO and the County. While there has been concerted effort to reduce fuel load and create shaded fuel breaks along evacuation routes, there is much still to be done and much of the work done to date is work that must be performed routinely to keep the edges of roadways from being overgrown.

Fuels reduction on private land is another significant challenge. Many of the residents of the area are elderly and/or low income and funding to support assistance with vegetation management on their properties is needed. Neighbors will continue to help neighbors as much as possible, however, professional assistance is also necessary to handle large trees and heavy brush loads.

There are also large public and private adjacent parcels in several areas of OCSD that are neglected and have heavy fuel loads, for example: the areas of dense chaparral adjacent to Harrison Grade (owned partly by the State of California Department of Fish and Wildlife), Willow Creek Park and the access road to it, and the entire length of Joy Road. Both CalFire and local Fire Officials have identified these as high priority areas with heavy overgrowth of vegetation that pose serious risk to densely populated sections of OCSD. The areas owned by the local camps and conference centers also represent an additional opportunity for collaborative large-scale fuel reduction projects.

Finding innovative ways to deal with the biomass created by the fuel reduction work will greatly expedite both small and large property owner's ability to reduce the fuel load.

Existing Fuels Reduction Projects

At the time of the development of this CWPP, the following FSO projects have either been implemented or are being implemented:

- In an ongoing project, FSO collaborates with property owners and with County Fire Mitigation teams so the work property owners do to remove ladder fuels is subsequently chipped by the County. FSO is able to expedite the chipping work of the County by coordinating residents into geographic areas to limit wasted “drive time” for the chipping crews. 84 property owners participated in this program in July of 2020.
- FSO continues to work with County agencies to identify and prioritize areas needing fuel load reduction along county roads in the area
- Periodic newsletters have been published encouraging homeowners to conduct specific fuels reduction activities, including;
 - Safe burn piles
 - Spotlights on key success stories
 - Before and after pictures and tools used for fuels reduction projects at properties both large and small
 - Other topics to activate the community’s individual efforts
- Multiple community wide trainings were conducted on forest management, fire resistant landscaping, and other topics to inform and inspire property owners
- Organize neighborhood work parties to complete roadside vegetation clearance on private roads and properties

STRUCTURAL IGNITABILITY TREATMENTS

In addition to continuing efforts to educate and inspire property owners to meet the challenge needed to reduce ignition sources to a minimum, this CWPP has identified two areas of risk in regard to structural hardening.

As discussed earlier, the historic structures in downtown Occidental pose a challenge for property hardening because they are wood framed. Finding solutions that meet ignition reduction requirements, while preserving the historic nature of the buildings will require close collaboration with home and business owners, historic preservation organizations and the County.

Second, working with the large number of residents in the community who are low income, disabled and/or elderly will require collaborative funding and man-power efforts to harden their homes and structures. Continuing efforts to educate and inspire property owners to meet the challenge will be needed to reduce ignition sources to a minimum.

In the Occidental WUI natural fuels and structure fuels are intermixed. Research based on modeling, observations, and case studies in the WUI indicate that structure ignitability during wildland fires depends largely on the characteristics and building materials of the home and its immediate surroundings. Most homes in the Occidental area are primarily wood constructions from the 1970's.

The dispersion of burning embers ("ember cast") from wildfires is the most likely cause of home ignitions. When embers land near or on a structure, they can ignite near-by vegetation or accumulated debris on the roof or in the gutter. Embers can also enter the structure through openings, such as an open window or vent, and could ignite the interior of the structure or debris in the attic. Wildfire can further ignite structures through direct flame contact and/or radiant heat. For this reason, it is important that structures and property in the WUI become less prone to ignition by ember dispersion, direct flame contact, and radiant heat. This presents a serious challenge to the area given the percentage of elderly and fixed income residents in the Greater Occidental Area.

While new buildings will meet the California Building Code (CBC)—Chapter 7A specifically addresses the wildland fire threat to structures by requiring that structures located in state or locally designated WUI areas be built of fire-resistant materials--older structures require significant upgrades to meet this hurdle. There are also requirements for fire safe construction in Chapter 13 Sonoma County Fire Code. Currently, the code specifies fire safe requirements that only apply to new construction or extensive remodels.

This CWPP strongly notes the continued need for work to improve the structural hardening in the area through home assessments and education. The partnership that exists between the listed organizations and citizens in this CWPP allows FSO to provide structural hardening education and outreach and promotes structural hardening projects to reduce the risk of structural ignition due to wildland fire in the community.

Existing Structural Ignitability Projects

At the time of the development of this CWPP, the following FSO projects have either been implemented or are being implemented:

- FSO is working closely with Fire Safe Sonoma to conduct targeted property assessments to give property owners tangible, actionable items they can perform to decrease their ignition risk
- Support CalFire and local Volunteer Fire Department property inspections through our newsletter and social media
- Publish newsletters focused on topics from best practices to successfully completed projects in the neighborhoods
- Organizes educational events (attended by over 200 people in the last two years) helping residents understand a variety of structural hardening topics, including a presentation by Carleon Stafford of Fire Safe Sonoma on defensible space

SECTION IV: CWPP DEVELOPMENT

Project Methodology

The methodology used to craft this CWPP included; team meetings, site evaluations, historical research, community meetings, objective risk assessments and community surveys to establish risk priorities and reduction treatments. The development team made a significant effort to reduce subjective bias to a minimum.

Community Collaboration

The Community Wildfire Protection Plan as developed by FSO for the greater Occidental area:

- This CWPP was collaboratively developed and is intended to meet the intent of the Healthy Forest Restoration Act (HFRA) in emphasizing the need for agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and places priority on treatment areas identified by communities themselves in a CWPP. Interested parties and state land management agencies in the vicinity of this CWPP have been consulted.
- Identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect areas within this CWPP.
- Recommends measures to reduce ignitability of structures throughout the area addressed by the plan.
- Is intended for use as a planning and assessment tool only, utilizing a compilation of community issues/goals and projected fire mitigation strategies and is not to be construed as indicative of project “activity” as defined under the “Community Guide to the California Environmental Quality Act, Chapter Three, Projects Subject to CEQA.” Per the Community Guide, Section 3.1.1, “CEQA only applies to public agency decisions to approve, or actions to carry out, a discretionary project.” Any actual project activities meeting this definition of project activity and undertaken by the CWPP participants or agencies listed shall meet with local, state and federal environmental compliance requirements.

CWPP Development Team

Representatives directly involved in the development of the GSFSC CWPP are included in the following table along with their roles and responsibilities.

Team Members

Occidental CWPP Development Team	
Name/Organization	Role
Paul Stange / Fire Safe Occidental	Development Team Leader
Amy Beilharz/Fire Safe Occidental	Business Community Liaison
Elizabeth Lawson / Fire Safe Occidental	Team Scribe/Community Overview section
Carolyn Sell / Fire Safe Occidental	Structural Ignitability section
Carol Hetherington/Fire Safe Occidental	Education Committee Liaison
Robert Burnett / Fire Safe Occidental	Maps section
Ron Lunardi / Occidental Fire Chief	Firefighting Capacity section
Roberta MacIntyre / Fire Safe Sonoma	Draft development
Stuart Mitchell / Contractor/Fire Safe Sonoma	Meeting Facilitator

SECTION IV: REQUIRED SIGNATORS

GOVERNMENT

The following entities attest that the standards listed above are proposed to be met and mutually accept the content of this Community Wildfire Protection Plan:


district5@sonoma-county.org (Nov 24, 2020 14:31 PST)

11/24/20

LOCAL GOVERNMENT

Date

Sonoma County Supervisor, 5th District

Lynda Hopkins, County Supervisor



11/24/20

[Ron Lunardi](#) (Nov 24, 2020 14:35 PST)

LOCAL FIRE

Date

Occidental Fire Department

Ron Lunardi, Fire Chief



11/24/20

[Shana Jones](#) (Nov 24, 2020 15:58 PST)

STATE AGENCY

Date

California Department of Forestry and Fire Protection (CAL FIRE)

Shana Jones, Unit Chief/CAL FIRE



11/24/20

COUNTY FIRE SAFE COUNCIL

Date

Fire Safe Sonoma

Roberta MacIntyre, President/CEO

SECTION V: APPENDICIES

These will be in separate documents as part of the overall document-set.

Appendix A – Community Risk Assessments

Appendix B - Prioritized Project Summary

Appendix C Maps