

Calistoga Firesafe Council Community Wildfire Protection Plan

CALISTOGA FIRE SAFE COUNCIL



NAPAFIREWISE

Community Wildfire Protection Plan (CWPP)

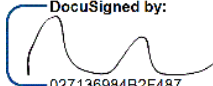
Calistoga Fire Safe Council

Dated: 9/1/2020

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Calistoga Firesafe Council Community Wildfire Protection Plan

Executive Summary

The Calistoga Firesafe Council (CFSC) has developed this Community Wildfire Protection Plan (CWPP) for the Wildland Urban Interface (WUI) areas within the CFSC. A CWPP is a community-based plan focused on identifying and addressing specific local hazards and risks from wildfire. It determines what is at risk and provides a road map of actions for a community to address the wildfire threat. It may also open up funding opportunities to implement the plan. CWPPs are authorized and defined in Title I of the Healthy Forests Restoration Act (HFRA), passed by Congress in 2003.

The area included within the CFSC has had an active fire history, which brings focus to this plan. It is understood that not all fires can be prevented, but appropriate vegetation management and other mitigation practices can minimize the impact and destruction of wildfires.

Decision Makers

The following Community representatives collaborated in the development of the CWPP:

- CFSC
- Napa Communities Firewise Foundation (NCFF)
- City of Calistoga
- CAL FIRE/Napa County Fire Department
- Napa County Board of Supervisors

Community Risk Assessment

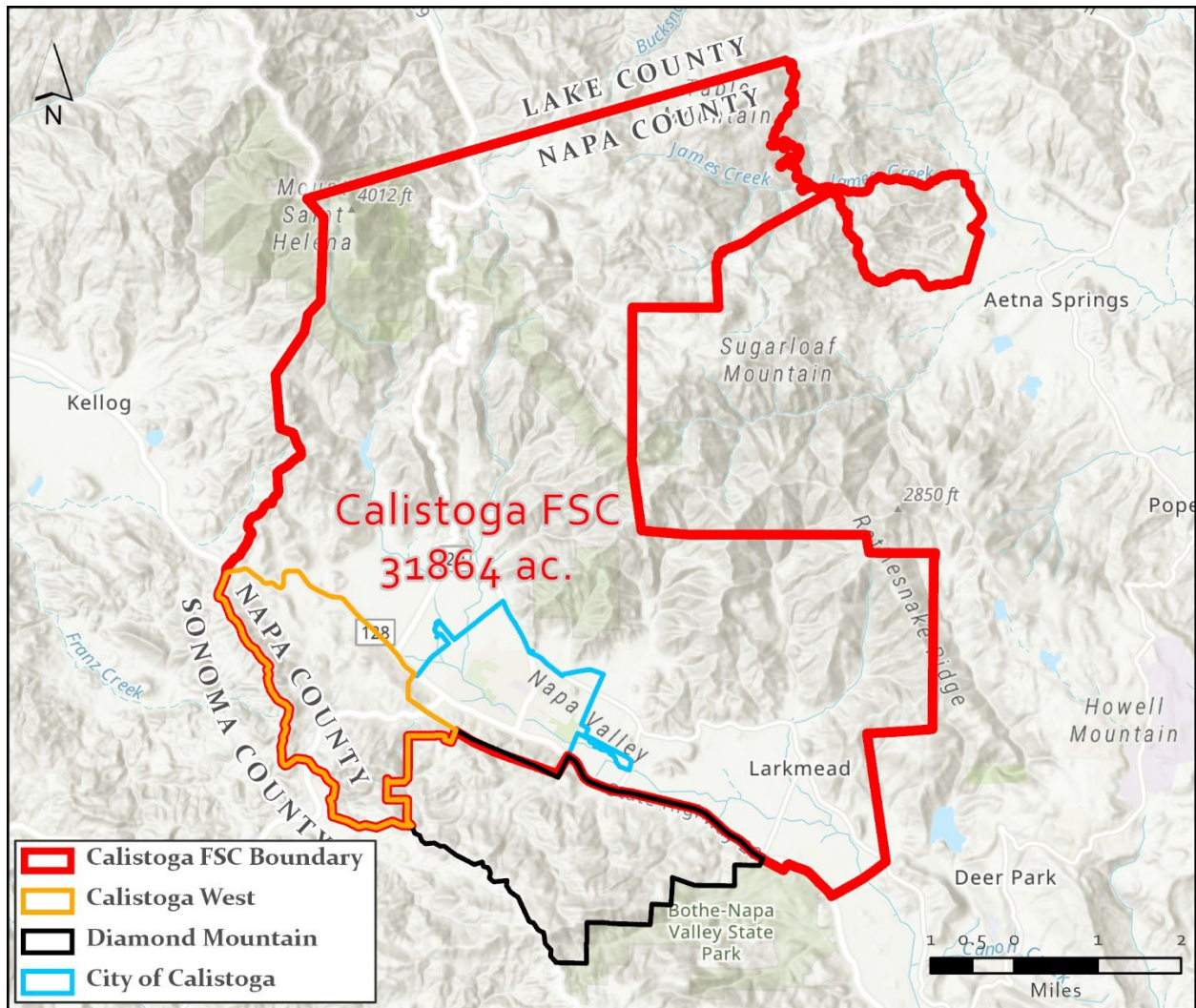
A Community Risk Assessment, dated June 21, 2020 and attached as Exhibit A, was engaged by NCFF and the CFSC and prepared by Carol Rice, a wildland fire manager specializing in fire risk issues, and includes input from the CFSC community, including local government, non-profits and local fire authorities. The Risk Assessment serves as a foundation for recommendations for projects to minimize threat from wildfire to life safety and damage to homes and natural resources. It is based on a review of the terrain, weather, fuels, and fire history of the area, compared to the values at risk, and likely scenarios of fire ignition and spread.

Because the CFSC is located in the interface between wildlands and developed areas, fire hazard is a special concern. Fires may spread from wildlands to homes and vineyards, threatening lives and developed property. Conversely, wildlands are subject to increased ignition potential from elevated levels of human activities.

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The Area (Values at Risk)

This CWPP covers an area of 31,864 acres, outlined in red below. It follows the Napa County line on the north and west sides, Petrified Forest Rd and Hwy 128/29 on the south side and prominent ridges, significant watersheds, property boundaries on the east, to include James Creek watershed, Dutch Henry Canyon, and Napa Land Trust lands such as Dunn-Wildlake Ranch.



Area of Interest – CFSC Community neighborhood boundary is shown outlined in red. The smaller area outlined in black is the Diamond Mountain FSC boundary (excluded from this CWPP). The City of Calistoga is also included in this CWPP and is shown in bright blue.

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Values At Risk

The most important values at risk are life safety, followed by improvements to property (residences and vineyards), then natural resources.

Population: A detailed population count of the CWPP area using ESRI GIS mapping software shows a total of 6155. Of these 763 households include a person with a disability. The population of the mobile home parks, which includes a very large percentage of residents over 55 years of age, represents 25% of the housing in the City of Calistoga¹. Because fire risk is so high in the area and many of the evacuation routes are long and involve poor road conditions, the threat to human life is significant.

Homes: In total there are about 2,500 homes in the CWPP area, although this is a low estimate because the database for the Risk Assessment did not account for residences in mobile home parks. Many of the homes are highly vulnerable to fire.

	Entire Area Number	Entire Area Percent
Total Number of Structures/Buildings	4,249	
Addressed Buildings	2,468	58%
Non-Addressed Structures	1,300	38%
Outbuildings	181	4%

Table 1. Number of structures within the CFSC Community neighborhood boundary (Napa County GIS Open Data Portal, accessed in December 2019).

Almost two-thirds (65%) of the buildings/structures/outbuildings accounted for in Table 1 are found within the City of Calistoga.

Wineries: Many large wineries and vineyards are located throughout the CFSC (approximately 21% of the area, see Exhibit A) and constitute a significant value at risk. While the vineyards themselves may moderate fire behavior and increase survivability of nearby structures, wildfire is a risk to vineyards from smoke taint in the summer and fall before harvest, when the possibility of a fire is highest. The edges of vineyards that abut wildlands are apt to be damaged; this is especially true where patches of brush and woodlands break up the vineyards. In addition, vineyards on steep slopes may not till between vines; in these cases the grass/vine vegetation spreads fire rapidly and produces enough heat to damage the vines.

¹ <http://www.ci.calistoga.ca.us/Home/ShowDocument?id=9270>

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Land Use Distribution and Neighborhoods

Outside of the City of Calistoga, residential development on large lots is generally scattered following the winding road network of the area. Vineyards are located among residences, and some of these newer vineyards are planted on large lots at the edge of the community.

The majority of the CFSC is vacant land. Undeveloped wildlands account for a significant portion of the CFSC (approximately 57% of the area). Several of the larger parcels are overseen by the Napa County Land Trust and will likely remain wildland. Another is a state park; however, all other vacant lands are privately held and could change land use, likely to either residential or vineyards. Changes in land use would likely improve the fire safety of the area (assuming the new residential area is constructed with ignition-resistant practices and landscaping is maintained).

Residential parcels account for approximately 16% of the CFSC and are concentrated within the City of Calistoga and along roads. These lots are generally smaller than the vineyard or vacant lots. Because structures are rarely within 100 feet of the neighboring parcel, lots are generally large enough that the landowners can influence fire behavior to protect their structures.

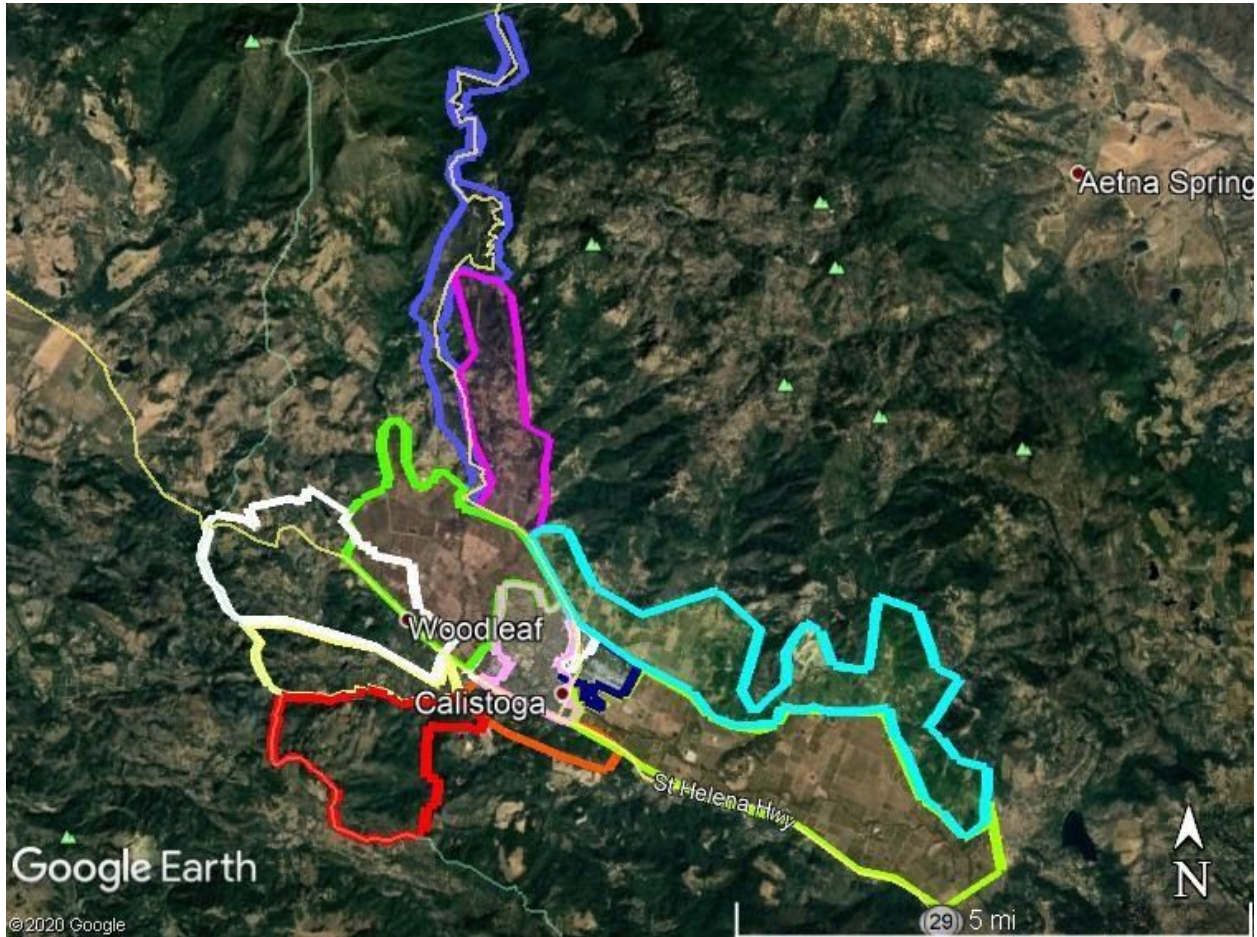
Category	Parcel Count	Total Area (acres)	Percent
VACANT	461	20,098.06	57.3%
VINEYARD/WINERY	285	7,431.72	21.2%
RESIDENTIAL	1,663	5,759.69	16.4%
OTHER	23	1,259.56	3.6%
COMMERCIAL	167	454.92	1.3%
INDUSTRIAL	9	48.05	0.1%

*Table 2. Acres by broad land use and percent of total within the CFSC Community neighborhood.
(Napa County Tax Assessor Data)*

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Neighborhood Assessment

There are eleven neighborhoods identified in the attached Risk Assessment. Of these ten were assessed in detail, with one (South Calistoga) to be described later because it has low structure density with relatively low risk from wildfire.



This shows the outlines of the ten neighborhoods assessed, plus South Calistoga in Yellow/Green.

The neighborhoods assessed are:

1. Old Lawley Toll Rd (Magenta)
2. Lake County Hwy (Lavender)
3. East Calistoga (Aqua)
4. Foothill District (Orange)
5. Downtown Calistoga (Pink)
6. Dense Calistoga (Blue)
7. Northwest Calistoga (White)
8. Franz Valley Rd (Yellow)
9. Petrified Forest Rd. (Red)

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10. North Calistoga (Neon Green)

All of these neighborhoods face similar risk factors, but there are also significant differences. In most cases, however, because of their physical characteristics fire poses a significant threat to human life and property. Each neighborhood and the specific threat it faces is discussed below after the Risk and Vulnerabilities discussion

The Risk and Vulnerabilities

Topography

Topographic features—such as slope and aspect (orientation with respect to sun and wind) and the overall form of the land—have a profound effect on fire behavior.

Topography affects a wildfire's intensity, direction, and rate of spread. An area's topography also affects local winds, which are either "bent", intensified, or blocked by topographic features. Topographic features can also induce daily upslope and downslope winds. The speed, regularity, and direction of these winds (and other winds) directly influence the direction of wildfire spread and the shape of the flame front.

CFSC and its environs rise from the valley floor to the Napa County boundary along a high north-south trending ridge, from approximately 250 to 4,200 ft in elevation. The topography includes flat valleys as well as topography with deep, narrow canyons. Most slopes are quite steep, but there are some broad plateaus located throughout the area on the west, and almost all have vineyards on them. Ridge lines on the east are sharp, steep, and abrupt, characterized by names like "The Palisades."

Orientation of Canyons, Ridges, Creeks and other wind-ways: The higher elevations around Mount Saint Helena make up a northwest to southeast oriented ridge. Just north of this is Table Mountain. These major landforms lead to a complicated array of drainages that lead both north to south and east to west. To the southwest of the Mount Saint Helena-Sugarloaf Mountain ridge lies the upper reach of the Napa River and its valley. Other significant features are:

- Kimball Canyon which sits at the very top of Napa Valley and funnels directly into the Kimball Reservoir;
- Jericho Canyon that aligns from north to south and drains into Napa Valley.
- Moving to the east of these canyons, the drainages start to angle from the northeast to the southwest; and include Hoisting Works Canyon, Garnett Creek, and Simmons Canyon,

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- From Simmons Canyon to the east, the large drainages again align from the north to south, culminating into Napa Valley. These include Dutch Henry Canyon and Bitter Creek
- Cyrus Creek forms an east-west running canyon on the west side of the CFSC, west of Kortum Canyon, before turning sharply north until it meets the Petrified Forest Road.
- Petrified Forest Road is on the west side of the CFSC and runs from the southwest to the east, following milder slopes that flank a seasonal creek just north of the road.
- North of Franz Valley School Road, the terrain is dominated by rolling terrain except for to the west where steep slopes rise sharply to the county boundary.

These topographic features can make fire spread difficult to control and predict depending on the specific neighborhood or area.

Weather

Temperature and Humidity: Summer days are usually comfortable; temperatures normally range from lows in the 40s to highs in the 90s, occasionally reaching over 100 degrees. Humidity can drop to the single digits in the summer and fall.

This overall weather pattern – characterized by continuous high temperatures and low relative humidity and months without precipitation – enhances the possibility of ignition, extreme fire behavior and extreme resistance to fire control.

Winds: The most important influence on fire behavior is wind, which can greatly affect the direction and rate of fire spread and heat output. Wind increases the flammability of fuels both by removing moisture and by angling the flames so that they heat fuels in the fire's path. The direction and velocity of winds can also control the direction and rate of the fire's spread. Winds can carry embers and firebrands downwind that can ignite spot fires ahead of the primary front. Gusty winds cause a fire to burn erratically and make it more difficult to contain.

Wind will tend to follow the pattern of least resistance and is therefore frequently deflected and divided by landforms. Canyon slopes produce pronounced daily up-canyon and down-slope winds caused by differential heating and cooling of air during the day.

The winds that create the most severe fire danger in Napa typically blow from the north, usually in October. Winds from the east and north bring low humidity and elevated fire danger and cause fire to spread to the south. These winds are the same ones that blew

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when the largest fires in Napa history occurred: the 1964 Hanley Fire, the 1981 Atlas Fire, the 2017 Tubbs Fire, Nuns Fire and Atlas Fire Complex, and the 2019 Kincade Fire.

Vegetation

There are six main vegetation types within the CFSC neighborhood. These include:

- Coniferous Forest
- Oak Woodlands
- Vineyards and other agriculture
- Shrubland
- Grassland
- Riparian Woodland

In addition there are landscaped areas surrounding buildings and homes.

The 2017 Tubbs fire caused dramatic changes in the northwestern portion of the CFSC area. In general, the vegetation in these areas is more open, comprised of sprouting hardwoods (especially California Bay), and far fewer Douglas fir trees. Patches of grass have expanded, and are more common in hardwood stands.

Coniferous Forests occur in large patches throughout the hills within the CFSC, primarily to the north and west, and constitute about 39% of the area. These dense forests are often found on north-and east-facing slopes and do not pose a significant fire hazard under normal conditions. However, when hot, dry weather occurs, they offer a large fuel load to burn and can exhibit greater fire intensity. Of all the vegetation types in the CFSC, dense Coniferous Forests are most likely to burn as a crown fire. When a fire reaches tree crowns, embers are distributed throughout adjacent areas (including vulnerable residential neighborhoods).

Oak Woodland. 23% of the CFSC is oak woodland, which occurs in clumps on the lower flanks of hillsides throughout the area. They are, on average, 10 acres in size and dense with little or no grass or shrubs underneath. Fire intensity, flame lengths, and scorch heights are usually low in Oak Woodlands. Slow-burning surface fires and low flame heights (less than one foot) are the rule, producing a manageable, moderate fire hazard. Only under severe weather conditions, involving high temperatures, low humidity, and high winds, or when shrub undergrowth, such as fir seedlings, are allowed to develop, do these fuels pose serious fire risks.

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Agricultural/Vineyards. 5% of the land in the CFSC is mapped as agricultural. This occurs in large sections along the Calistoga area valley floor, along with a few patches located in high ground. Fires are usually benign in vineyards. Vineyards were instrumental in stopping the Howell Mountain fire in 1983 and can sometimes act as fire breaks. Vineyards often have access roads on the perimeter and within the interior that aid in containment.

Shrubland is the next largest vegetation type and occupies 9% of the CFSC. It can be found at the lowest elevations, transitioning between the conifer forests/Oak Woodlands to the Grasslands at the valley floors. This fuel type constitutes the highest hazard. It produces severe fire behavior, with flames longer than 20 feet in length. Intense, fast-spreading fires in chaparral burn the foliage as well as the live and dead woody material in the brush crowns. The foliage is highly flammable, and dead woody material in the stands significantly contributes to increased fire intensity. Direct attack is not possible, and containment efforts need to rely on backfiring or suppression strategies other than line building, because the perimeter of the fire is likely to grow faster than a line could be built.

Annual Grasslands account for roughly 4% of the CFSC neighborhood. They are found throughout the area, but primarily along the valley edges and in pockets in the central part of the area. Fire spread through Grasslands can be quick; however, it is easy to spot and quick to extinguish.

Landscaped areas, which are close to homes and other development, may have the greatest impact on the survivability of buildings. Landscaped areas either (1) are moist, and thus will not likely burn; (2) contain large amounts of fuel which will burn with great intensity; or (3) are landscaped with fire resistant plants, and burn only slowly, with little heat release. Horizontal spaces between planting masses and the house are important components of a fire safe landscape. Landscaping in the CFSC is generally consistent with fire safety principles, but a few residences in each neighborhood have abundant vegetation that can endanger adjacent and nearby residences, if they are within a few hundred feet of each other.

Predicted Fire Behavior

Flame lengths are expected to be long because of the combination of heavy fuels, especially in the Shrubland and in the Coniferous Forests under especially dry conditions. Where a well-developed understory is present under the oak canopies, fires are also expected to burn with high intensity.

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Fires can also be expected to burn fast when they are propelled by dry grass and shrubs. Vineyards can moderate both the fire intensity and fire spread but would not provide good suppression opportunities for safe evacuation because few border the road.

Predicted Flame Lengths: Long flame lengths can be expected in coniferous and oak forests where understory is present. Vineyards and areas of well-maintained defensible space can be expected to burn with low intensity even under the most extreme conditions. Flame length most directly relates to the ability of a firefighter to safely attack a fire: flames longer than eight feet prevent safe, effective direct attack. Flame length is also most closely related to structural damage: the higher the flame length, the more likely a structure loss.

Flame lengths over 20 feet account for 32% of the predicted fire behavior. This occurs throughout the CFSC boundary but is most pronounced to the north and east and on the south-facing southern portion of the area and on steep western (but east facing) slopes along the county boundary. These areas are dominated by Coniferous Forest, Oak Woodland, and Shrublands, and a mix of these vegetation types.

In recent fires, flame lengths were lowest surrounding the vineyards (where no fire was predicted due to its classification as agricultural land) and along the valley floor near Highway 128. This indicates there is a stark difference between relatively low and high fuel areas.

Predicted Crown Fire Activity: While both the Coniferous and Oak forests can torch, hardwoods are less likely to have fire reach to the tree crowns unless vegetation is burning underneath. Crowning potential is crucial. When fires spread into crowns, thousands of embers are produced and lofted into ignitable fuels, often overwhelming fire suppression personnel.

A combination of no predicted fire and surface fire accounts for approximately 58% of the CFSC neighborhood. These areas are scattered throughout but are most pronounced in the areas of vineyards and within the Oak Woodland vegetation type.

In the remaining areas, torching and crown fire are predicted. A relatively small area is predicted to have fire spread within the tree canopy (tree-to-tree), which is actually pretty rare and virtually unheard of in hardwoods. Areas with higher density of Coniferous Forests are most at risk to torching and to crown fires. With that said, there are small

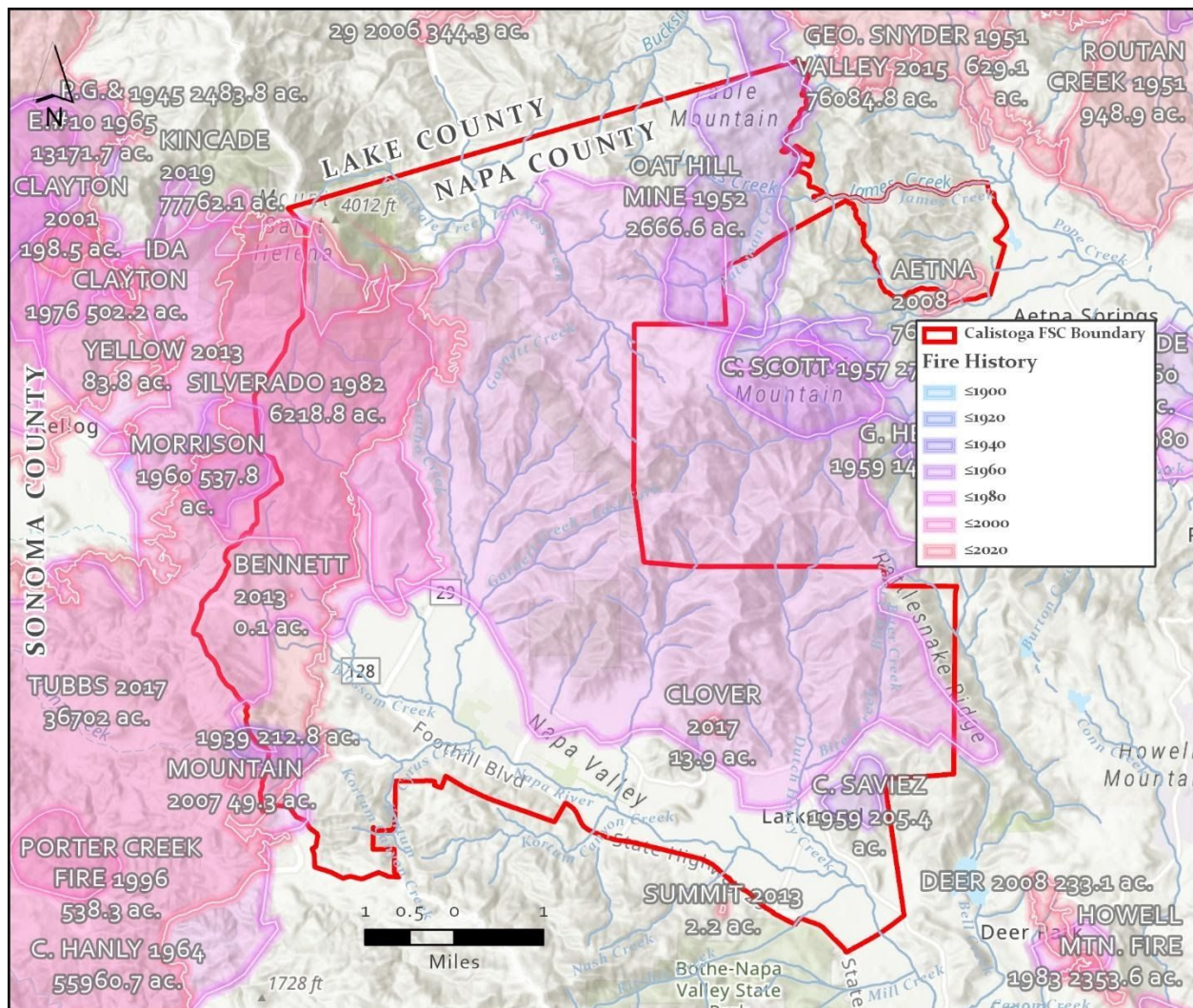
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areas surrounding the vineyards to the south and central area that do predict crown fire. These locations should be targeted and evaluated for fuel reduction projects.

Fire History

Large fires have visited the north and western portions of the CFSC numerous times. Mostly notably, in 1964, the 55,560-acre Hanley fire burned through the northern section of the CFSC and in 2017 the 36,701-acre Tubbs fire burned down to the Petrified Forest Road and covered most of Robert Louis Stevenson State Park. Other smaller fires have occurred in those same areas.

The Napa Valley has a recurring history of large fires (over 10,000 acres in size), which typically burn for several days.



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Fire perimeters/fire history map of CFSC (CALFIRE FRAP, 2020). CFSC Community neighborhood boundary shown in red.

In the past, fires did not involve large numbers of structures because of the historic rural nature of Napa County; however, structures are now a common concern whenever wildland fires of any size occur.

In 2019, the Kincadee fire burned in nearby Sonoma County, consuming over 77,000 acres of land. In 2015, the Valley fire burned over 70,000 acres and destroyed several hundred structures in Lake and Napa County and caused one fatality. Many other, smaller fires burned into the area including the Silverado, Aetna, Bennett, Summit, Clover, and others.

The cause of over 99% of the fires in Napa County is human activity. Almost 33% of the fires were caused by equipment use which accidentally causes fires. Vehicles caused 17% of the fires; arson caused 3%. Other causes such as smoking, electrical power lines, and debris burning caused the remaining fires. Historically, 80% of wildland fires in California have started within 10 ft of a paved road.

Structure Characteristics

The presence of ignition-resistant construction is closely related to the age of the structures. Structures built after 1996 have features that prevent ignition such as non-flammable roofs, double-paned windows, and stucco siding. However, many residential structures are mostly made of wood because of their age. They have wood porches and decks, though wood fences are a rarity. Many older structures have been remodeled and a few property owners have installed personal fire suppression systems involving various water sprinkler strategies.

Calistoga City has three mobile home parks with a very large number of mobile homes. The construction materials and short distances between structures make them more ignition prone and vulnerable to wildfire than many other types of residences. These locations are also challenged by restricted access that could hamper safe evacuation.

Many large wineries and vineyards are located throughout the CFSC and are ignition resistant due to construction material used and defensible space, whereas a few vineyards/wineries have structures on the property that are made of wood and are located in a heavily vegetated canyon setting.

Accessibility — Evacuation and First Responder Access

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Except for the valley floor, access to, from, and within the CFSC is generally a concern. All neighborhoods within the Firesafe Council are accessed by Silverado Trail, Highway 128 or Highway 29. A few other main roads provide access to the valley and western portion of the area. These roads include Petrified Forest Road and Franz Valley School Road. Congestion on these two-lane roads is expected to be significant during an evacuation.

In addition, while roads are flat and wide in the City, the Napa River blocks east-west travel. Only five streets cross the Napa River: Lincoln and Berry in the City, and Tubbs, Dunaweal, and Larkmead north and south of the City.

Access in all rural neighborhoods is challenged by topography. Most lengths of the road are barely two lanes with no shoulders. Some curves are simultaneously sharp and steep. Pavement (road surface) is generally in good shape (with the exception of the top of Old Lawley Toll Road).

Driveways in all neighborhoods outside the City are generally long. Some residences are served by long shared driveways behind locked gates. Locked gates are common and can further delay emergency response. Locked gates also discourage/prevent inspection by local fire authorities.

Most roadsides have abundant roadside vegetation. This vegetation could block the road while burning, and after, as trees fall (a common event during a fire). Roadside vegetation has been maintained throughout many lengths of roads; however, one blockage would be significant.

Water availability

There is a centralized water system within the city limits of Calistoga. The unincorporated area of Calistoga depends primarily on wells for its water. The County requires 2,500 gallons of emergency water storage for properties that have been rebuilt, but that is not universal throughout the area. That said, many properties have larger water tanks.

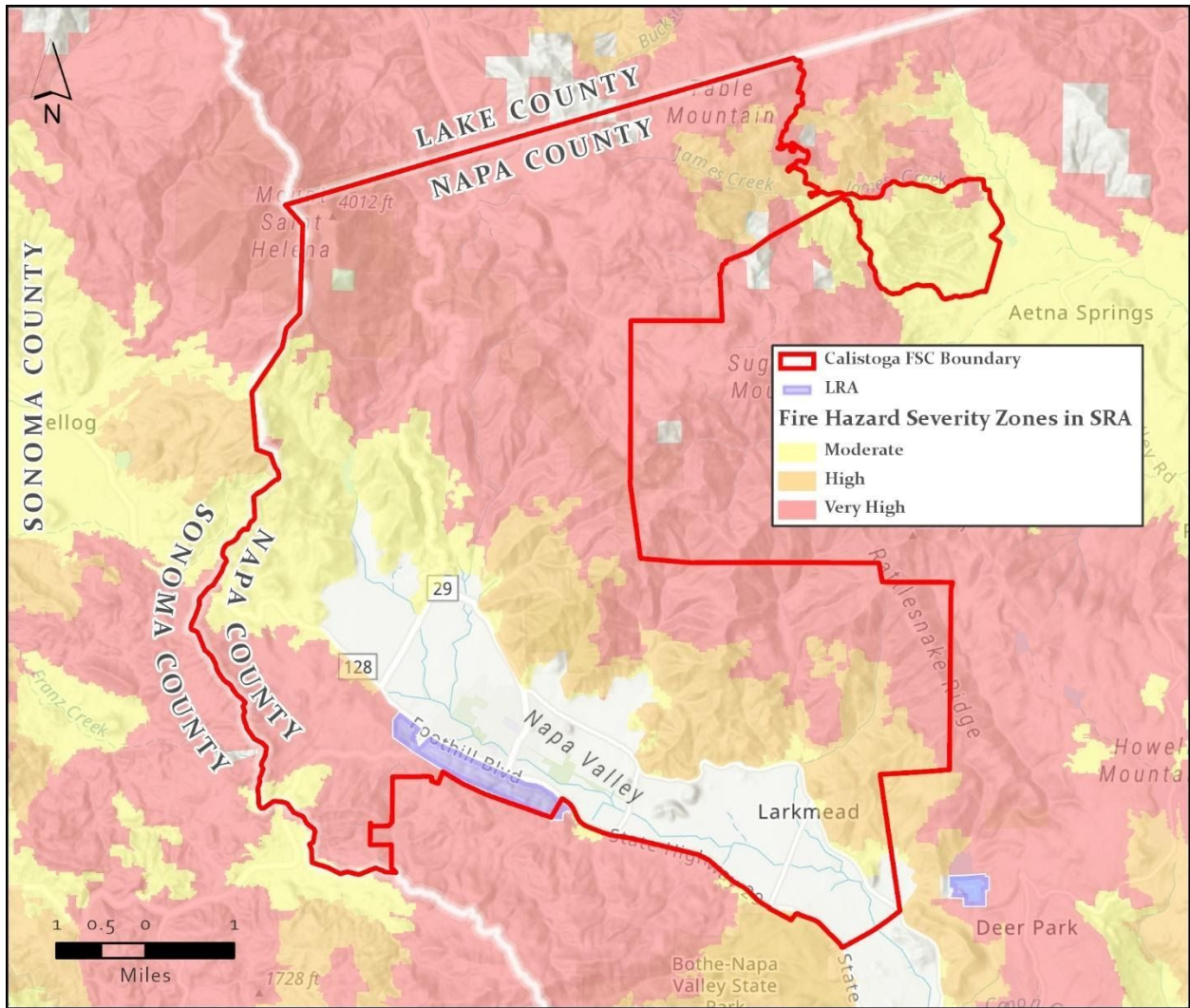
Fire Hazard Severity Rankings

A Fire Hazard Severity Zone (FHSZ) is a mapped area that designates areas (based on factors such as presence of structures, fuel, slope, and fire weather) with varying degrees of fire hazard (i.e., moderate, high, and very high). Most of the CFSC (~84%) is within CAL FIRE's State Responsibility Area (SRA). The remaining 16% of the area is Local Responsibility Area (LRA), Federal Responsibility Area (FRA), or otherwise not mapped

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by CAL FIRE. CAL FIRE maps the SRA and designates the FHSZ.; A small portion of LRA (369 acres) that runs along the southwestern portion of the City of Calistoga was classified as Very High Fire Hazard Severity Zone.

For the other portions of the CFSC where CAL FIRE is responsible for fire protection (SRA) 67% of the CFSC area is categorized as a **Very High Fire Hazard Severity Zone**. Sections along the valley floor were categorized as High and Moderate.



Fire Hazard Severity Zone (CAL FIRE)	Acres	Percent
Moderate	4,918.68	17%
High	4,800.86	16%
Very High	19,729.18	67%

Fire hazard severity zone by area (acres) within the CFSC Community neighborhood boundary (CAL FIRE, 2007 – current version).

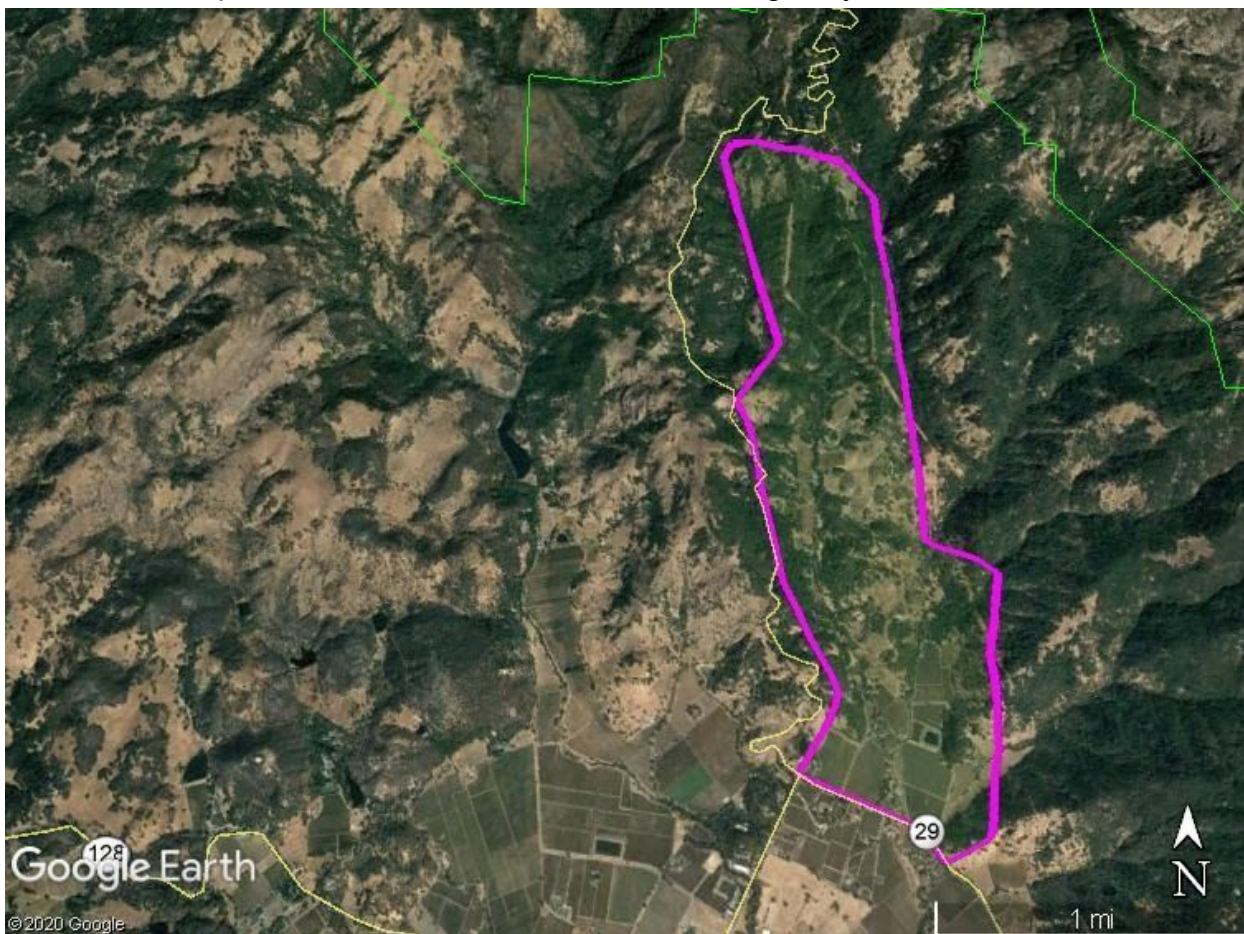
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Neighborhood Risk Profiles

1. Old Lawley Toll Rd. (OLTR)

This neighborhood extends along the east side of Highway 29 from just south of Palisades Road up to where the OLTR intersects with Highway 29.



Pattern of Development and how it relates to fire safety: Larger parcels are the rule with mostly residential land use. There are three wineries (two with vineyards), as well as another two vineyards in the neighborhood.

Access: OLTR is a through road, connecting Lake County Highway and Silverado Trail. Few spurs exist. The road is narrow, one lane in places with few turnouts or places to turn around. The grade is significantly steep and curves are sharp. All this limits/slows fire response from all but brush rigs. This is a concern for evacuation, because traffic going up and down the road would compete with emergency response vehicles.

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Terrain: Jericho Canyon has moderate to steep slopes, whereas the Hoisting Works Canyon and slopes to the south are extremely steep making fire-fighting difficult.

Defensible Space Conditions: Most homes have adequate defensible space. Approximately half are newer homes, built with construction that prevents ignition, and half are older, buildings without protective sidings, vents, and window panes.

Adjacent Fuels: The east-facing slope supports higher risk Douglas fir forests, whereas higher up the road and on south and west facing slopes Oak forests are the rule. Generally, vegetation on large residential parcels is not managed except for areas immediately surrounding structures. This allows fuels to accumulate and promote fire spread and intensity.

Unusual Wind Conditions; Cause; Likely Spread: The rise and fall of terrain results in daily wind flows up and down the area. Wind flows above the neighborhood from the west, through a topographic gap, and then down Jericho Canyon on a routine basis. This can accelerate fire spread. Ignitions from vehicles on Lake County Highway have caused fires. Similarly, when accidents occur on Highway 29, OLTR is used as an alternative route; this is a potential ignition source.

*Calistoga Firesafe Council Community Wildfire Protection Plan***2. Lake County Highway (Highway 29)**

This neighborhood runs along Highway 29 from the start of Old Lawley Toll Road (OLTR) to the Lake County border.



Pattern of Development and how it relates to fire safety: A few large parcels dominate the area including the Robert Louis Stevenson State Park and the Montesol Ranch. Many landowners have 40+ acres, while others have less than 5 acres. There are homes and other structures. Vineyards at the base of the neighborhood span Old Lawley Toll Rd to Palisades Road, creating a break in wildland vegetation.

Access: Lake County Highway is a major through road that can accommodate emergency vehicles. Few spurs exist, and each is fairly narrow, windy, and steep. Most of the residents are served by short driveways off the highway; most are gated, which could cause delays in fire response. Because there is only one main through road, this is a concern for access and egress for both emergency response vehicles and evacuees.

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Terrain: This neighborhood follows the highway route as it climbs up on the east side of a sharp-spined ridgetop that runs north-south. Side slopes are extremely steep, limiting fire management options, and fostering fast fire growth. Further north, the terrain becomes more complicated with significant side canyons that can cause erratic winds.

Defensible Space Conditions: Most homes have adequate defensible space, as landowners were likely motivated by the nearby 2017 Tubbs Fire. Most of the homes are older buildings of wood construction, without protective features.

In 2015-2016 CAL FIRE treated the roadside for approximately 30-feet on both sides of the road, but this area has re-grown and supports a thick understory of French broom and other sprouting species.

Adjacent Fuels: The east-facing slope supports Douglas fir forests, whereas higher up the road and on south and west facing slopes, dense oak forests are the rule. Generally, vegetation in large residential parcels is not managed except for areas immediately surrounding structures. This allows fuels to accumulate and promote fire spread and intensity.

Unusual Wind Conditions; Cause; Likely Spread: The rise and fall of terrain results in daily wind flows up and down the drainage, due to the heating and cooling of different parts of the slopes. Significantly, wind flows from the west, through a topographic gap, and then down Jericho Canyon on a routine basis. Ignitions from vehicles on Lake County Highway caused a fire in 1990; several fires from Highway 29 have spread into adjacent neighborhoods.

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3. East Calistoga

This neighborhood includes the area northeast of the Silverado Trail, from the northeastern end of Lincoln to the Deer Park FSC boundary, and includes Pickett Road, Palisades Road, Rosedale Road, and Lommel Road.



Pattern of Development and how it relates to fire safety: The area is a mix of residences, vineyards, wineries and wildlands, and a large landfill. Parcel size is almost uniformly large. Some of the largest parcels in the CFSC are located in this neighborhood including Calistoga Ranch, and a number of vineyards. Residences are sometimes associated with those vineyards and generally present no hazard, but for some on the fringe of a vineyard at the interface of wildlands, defensible space is especially important.

Access: Because most of the roads are along the valley floor they do not limit fire response; however, some roads hug the toe of the canyon slope which is heavily vegetated. This could preclude safe passage of emergency vehicles. In times of evacuation these access roads and the Silverado Trail can be expected to be congested.

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Terrain: Most of the acreage in this neighborhood is on the valley floor, and thus poses no challenge for fire safety. Two exceptions exist here: Dutch Henry Canyon Road lies at the bottom of a pronounced canyon trending down from High Point, and Lommel Road is at the end of a long canyon; in both cases, winds from the northeast are funneled into the valleys at risk at the bottom of the canyons.

Defensible Space Conditions: Residences generally have good defensible space, and since most are located in vineyards they are less likely to be at risk from fire. Because Calistoga Ranch is surrounded by a lot of vegetation, they need to make sure that they are particularly diligent in maintaining defensible space throughout that property.

Adjacent Fuels: The west-facing slopes are covered with high volumes of vegetation certain to burn with intensity. During a northeast wind event, these fuels will serve as a contagion to the structures at the edge of the wildlands, and the long flame lengths at these locations would most likely easily ignite structures. Those structures surrounded by vineyards, and those in the middle of valley floor are insulated from the effect of these fuels (except through ember distribution).

Unusual Wind Conditions; Cause; Likely Spread: Because of the steep slopes and high ridges above, winds flow up and down the valleys. In addition, winds are funneled down the canyons during a northeast wind event, as mentioned above. Roadside ignitions on the Silverado Trail are a constant possibility. With a westerly wind, fires caused by roadside ignitions could blow to the heavily vegetated slopes nearest the road, which could burn fast and intensely. Wherever vineyards border the road, spread is minimized.

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4. Foothill District

The Foothill District neighborhood covers the area west of Highway 128 (Foothill Blvd) within Calistoga city limits. It extends from a few hundred feet northwest of Petrified Forest Road to below the mouth of Kortum Canyon.



Pattern of Development and how it relates to fire safety: This neighborhood is among the most hazardous and is designated as a Very High Fire Hazard Severity Zone by the Calistoga Fire Department. There is a mix of residential and commercial (cottages, B+B) and a cemetery, with other commercial businesses such as a BBQ and small market on the south, and a gas station and small markets to the north.

Access: This neighborhood is at the base of long roads leading off of Hwy 128 such as Kortum Canyon and Lerner Rd. All roads except for Petrified Forest Road are narrow, one-way in and out. Their grades vary with some steep roadways gaining elevation quickly and others rising more gently. In some locations the grade of roads is at the limit for fire response. Most driveways are short, with a few exceptions. During an evacuation event Highway 128 and possibly Petrified Forest Road can be expected to be congested.

Calistoga Firesafe Council Community Wildfire Protection Plan

Terrain: The terrain in the Foothill District is moderately steep, rising consistently to the west with five small, but well-defined canyons south of Petrified Forest Roads.

Defensible Space Conditions: For the most part, there is compliance with defensible space standards. Other locations, such as those properties surrounding the Pioneer Cemetery require significant treatments to achieve defensible space.

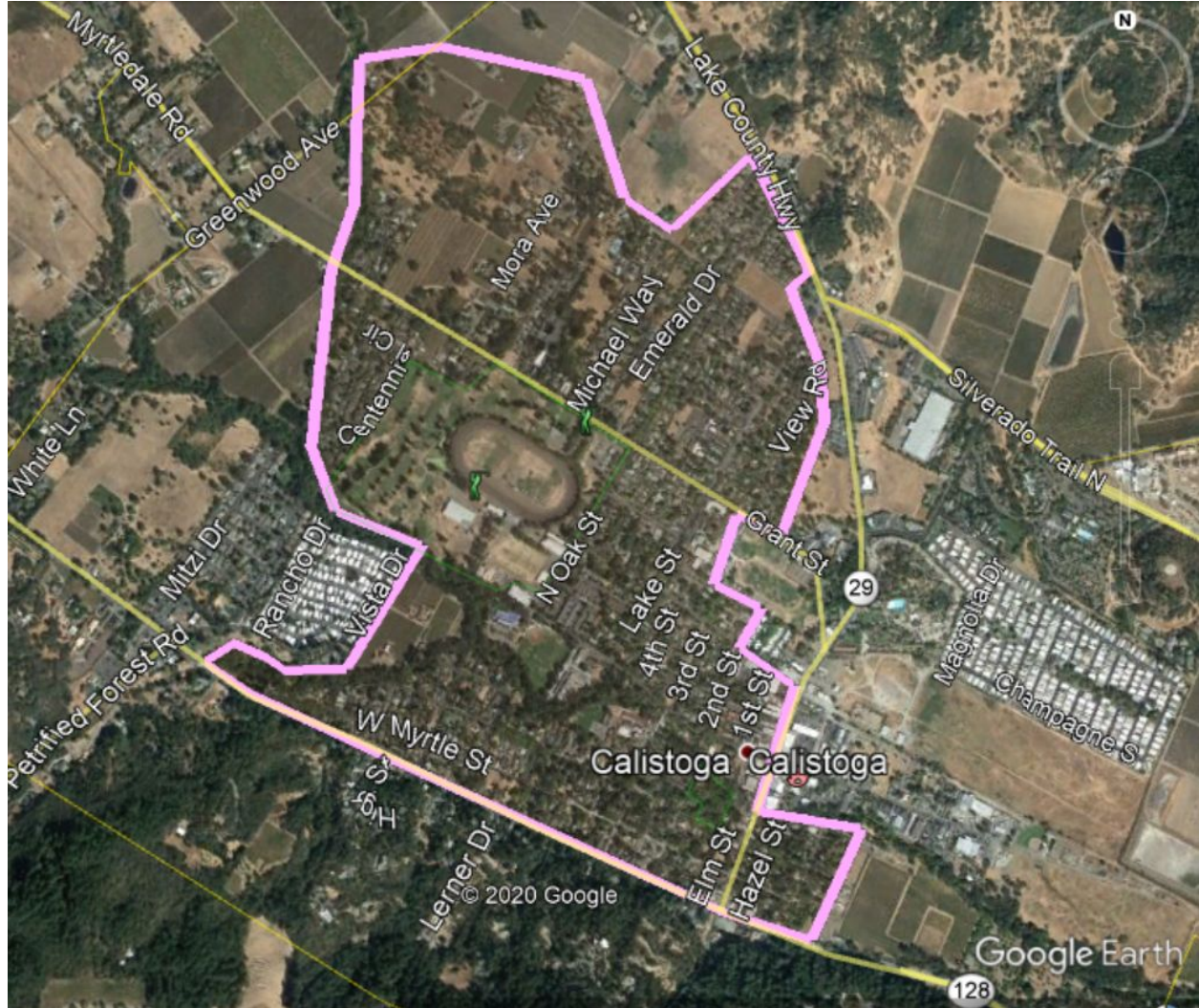
Adjacent Fuels: Vegetation beyond 100 feet from structures to the southwest is a serious concern. A large parcel to the southwest consists of Douglas fir forests with thick understory of young conifers and shrubs. The current volume of shrubby fuel in the cemetery creates a hazard for surrounding neighbors.

Unusual Wind Conditions; Cause; Likely Spread: One concern specific to this neighborhood is for fire spreading downhill to cross the highway. Roadside ignition (or an ignition associated with commercial enterprise such as the BBQ) that could spread quickly uphill is also a concern. This could be especially challenging when there is a northeasterly wind. Fortunately, the fuels to the northeast of Highway 128 are managed and not of a significant concern.

Calistoga Firesafe Council Community Wildfire Protection Plan

5. Downtown Calistoga

This neighborhood spans the area between Highway 128 and 29, and from vineyards on the northwest to southeast of the City limits.



Pattern of Development and how it relates to fire safety: This area generally has a standard grid pattern with parcel sizes of one eighth of an acre, where house-to-house fire propagation is a possibility during a wildfire. Commercial development near Lincoln Ave., and government-owned civic facilities (ball field, track, fairgrounds, schools) cover a significant portion of the center of the neighborhood. This creates large areas of low fuel. Parcels north of Mora Avenue are larger, ranging from 2-15 acres, and contain vineyards which can limit fire growth.

Access: Only five streets cross the Napa River over a 10.5 mile distance, and only two in the neighborhood: Berry and Lincoln. Otherwise there is no constraint to emergency

Calistoga Firesafe Council Community Wildfire Protection Plan

access as the streets are broad, flat, and in a grid pattern. There are multiple exit routes should evacuation be necessary; however, they all feed into two highways, where congestion can be anticipated.

Terrain: The terrain is nearly completely flat.

Defensible Space Conditions: Most yards have defensible space; however, vegetation is used for privacy, creating a continuous fuel bed from house to house. The commercial and government parcels in the center of town have defensible space and low fuel conditions created by parks, and parking lots.

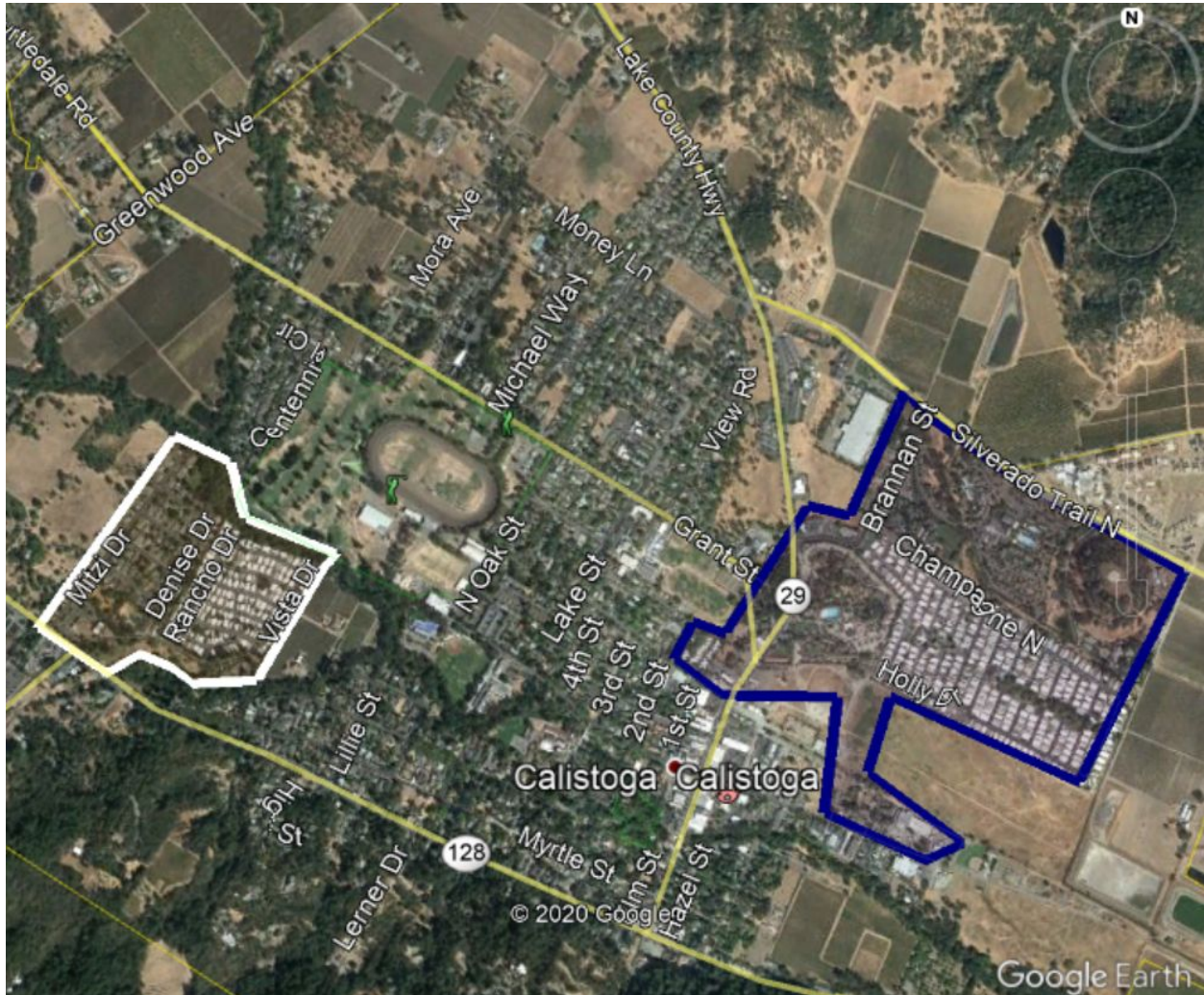
Adjacent Fuels: The downtown area is surrounded by vineyards and open fields. The most heavily vegetated area is to the southwest of Highway 128.

Unusual Wind Conditions; Cause; Likely Spread: There are no unusual wind conditions in the Downtown area. High levels of human activity would present multiple ignition possibilities, most likely being a structure fire that would catch nearby vegetation; a wildfire is not likely to originate in this neighborhood.

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6. Dense Calistoga

This neighborhood includes two distinct locations: one in the northwest portion of the city at the intersection of Petrified Forest Road and Highway 128, and the other on the southeast side of the City, south of Lincoln near the Silverado Trail. The neighborhood includes mobile home parks and resorts with small cottages.



Pattern of Development and how it relates to fire safety: While most residential parcels in downtown Calistoga are smaller than one-quarter acre, a large portion of the population lives in very high density developments. In the mobile home parks all residences are on one parcel; every structure is within 20 feet of the next, and in most cases the separation is less. Should a structure ignite, the heat of the fire is likely to ignite the next one; house-to-house fire contagion is a concern, and was experienced in the 2020 LNU Complex at the Spanish Flat Mobile Villa.

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Access: All these facilities have one way in and one way out, with an additional emergency exit on Brannan for the Solage Resort. Road design (width, grade, curvature, surface), are all adequate for fire response; however, the number of vehicles that will need to evacuate using the single entrance is a concern. Parking is all off street, thereby freeing up lanes for emergency response.

Terrain: Terrain is not a factor in wildfire risk scenarios.

Defensible Space Conditions: All residents are in compliance with defensible space; however, vegetation is used as privacy screening, which would create greater spread of fire between structures.

Adjacent Fuels: Almost all of these facilities are adjacent to an open field, creek bed, or other heavy vegetated environments. All these offer fuels that can be ignited and can spread to the facilities.

Unusual Wind Conditions; Cause; Likely Spread: No wind special patterns or topographic concerns are present.

*Calistoga Firesafe Council Community Wildfire Protection Plan***7. Northwest Calistoga**

This neighborhood surrounds Hwy 128 from northwest of Petrified Forest Rd to the Napa Sonoma County line.



Pattern of development and how it relates to fire safety: This neighborhood includes a large portion of the structures in the CFSC outside the City limits. Land use is a mixture of residential parcels, ranging from 1 to 20 acres in size, and larger parcels with vineyards.

Access: This neighborhood is served by Highway 128, with only a few spur roads to the northeast. Many properties have long driveways, although there are a few shorter driveways that are accessed directly from Highway 128. Some residences are accessed via shared driveways. Most have locked gates.

Terrain: The terrain slopes gently up to the county border on the west and south, with a broad valley that runs southwest to northeast, generally paralleling Highway 128.

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Defensible Space Conditions: Most residents are in compliance with fire safety regulations regarding defensible space.

Adjacent Fuels: Vegetation beyond 100 feet from structures are either vineyards or a mixture of Douglas fir forest with varying levels of understory trees and shrubs. The vineyards comprise a fire safe condition. The parcels in the northwestern portion of the neighborhood burned in the 2017 Tubbs Fire, so there are many cleared properties with only sprouting grass or bay trees

Unusual Wind Conditions; Cause; Likely Spread: Highway 128 is a likely source of roadside ignitions due to the high level of traffic.

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8. Franz Valley School Rd.



Pattern of development and how it relates to fire safety: This neighborhood consists of approximately 40 residential parcels ranging from 3 to 200+ acres in size. Each parcel is large enough to influence fire behavior around the structure. Vineyard parcels range from 7 to 120 acres, large enough to calm fire behavior in that area.

Access: The neighborhood is served by one long through road, Franz Valley School Road (FVSR), with only one spur road (Shaw-Williams Rd). There are several long driveways in the neighborhood. A few residences are accessed via shared driveways. Many have locked gates. FVSR is two lanes but has no turnouts.

Terrain: Terrain consists of undulating, rolling hills, and small, broad valleys. The steepest terrain is where the slopes lead sharply up to the county border. The ridgeline slightly east of the border has a gap at Petrified Forest Road, where winds could funnel through during a Diablo wind event.

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Defensible Space Conditions: Some residential yards are exemplary. Most residents are in compliance with fire safety regulations regarding defensible space.

Adjacent Fuels: Vegetation beyond 100 feet from structures are either vineyards or Douglas fir forest with varying levels of understory trees and shrubs. The vineyards comprise a fire safe condition, whereas the Douglas fir forests could fuel an intense fire under extreme weather conditions. The parcels in the western half of the neighborhood burned in the 2017 Tubbs Fire, with grass and sprouting bay trees and many cleared properties, some with standing dead trees.

Unusual Wind Conditions; Cause; Likely Spread: The topographic gap between two knolls at the county border could accelerate dry winds and embers traveling to the west during an east wind event.

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9. Petrified Forest Rd.



Pattern of development and how it relates to fire safety: Most of the parcels in this neighborhood are large. This neighborhood includes approximately 30 residential structures in parcels ranging from 1 to 20 acres in size. Each parcel is large enough to influence fire behavior around the structure. Vineyard parcels range from 40 to 120 acres, large enough to calm fire behavior in that area; however, most are remote.

Access: This neighborhood is served by one long through road, with no named spur roads. Long driveways are the rule. Some residences are accessed via shared driveways, often with locked gates. Petrified Forest Road is wide, with generous turnouts; however, the northern slope is quite steep, and the grade west of the junction with Franz Valley School Road is also quite steep. Petrified Forest Road ends in a busy intersection with Highway 128, which is likely to be congested and could block exits during evacuation events.

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Terrain: The terrain slopes upward to the south. Several minor valleys trend upward to the southwest, and a more pronounced north-south trending valley follows Cyrus Creek. The eastern end of this neighborhood has more gentle terrain.

Defensible Space Conditions: Most residents are in compliance with fire safety regulations regarding defensible space.

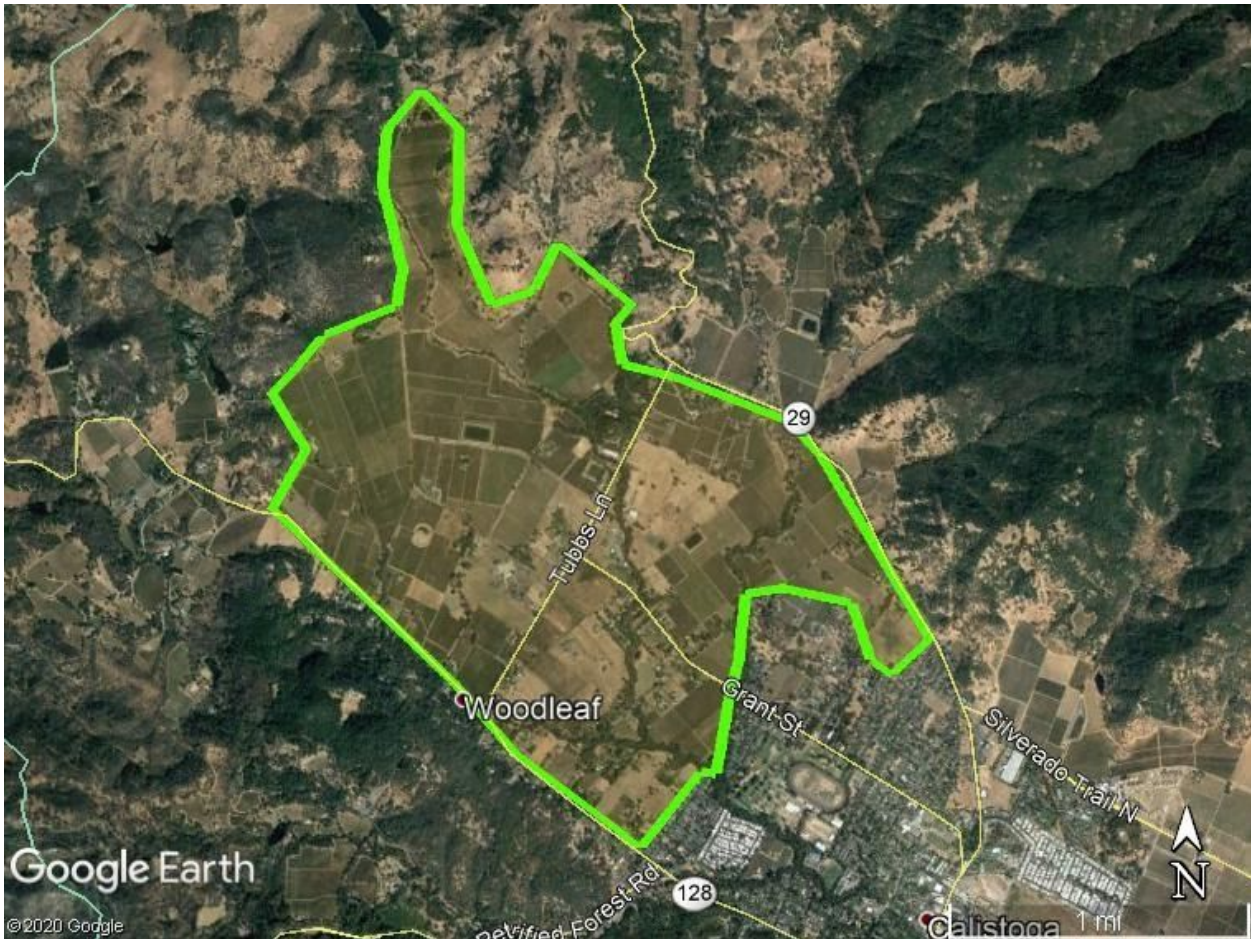
Adjacent Fuels: Vegetation on the south side of this neighborhood is dominated by Douglas fir forests and dense Oak Woodlands, with varying levels of understory trees and shrubs. The vineyards comprise a fire safe condition, whereas the Douglas fir forests and Oak Woodlands could fuel an intense fire under extreme weather conditions.

Unusual Wind Conditions; Cause; Likely Spread: Several of the narrow canyons are aligned with northeast winds, and would likely funnel dry winds and embers and heat the slopes and vegetation on the south side of Petrified Forest Road. The grade of Petrified Forest Road could cause vehicular accidents, which can cause wildfires.

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10. North Calistoga

This area surrounds Tubbs lane between Hwy 128 and Hwy 29.



Pattern of Development and how it relates to fire safety: The land use and pattern of development is a mixture of vineyards with sparse residential development. The lot sizes generally range from 1-40 acres. The commercial uses pose no particularly elevated ignition risk.

Access: Access is good in this neighborhood, with Tubbs Lane spanning Highway 128 and 29 and connections to downtown Calistoga. These roads are wide, and as with all roads in this neighborhood, nearly flat. The only concern would be that during an evacuation event Highway 128 can be expected to be congested.

Terrain: The terrain in this neighborhood is uniformly nearly flat, and poses no particular hazard

Defensible Space Conditions: The vineyards are well maintained, and under everything but the worst circumstances can slow fire spread. Many residential parcels have

Calistoga Firesafe Council Community Wildfire Protection Plan

exemplary defensible space, however a few residential parcels are either vacant and untended, or in a state of disrepair.

Adjacent Fuels: Vegetation in the vineyards, which comprise the majority of the land in this neighborhood, generally poses low hazard. Wildland vegetation adjacent to the neighborhood to the north and northwest was consumed in the 2017 Tubbs fire and now has a large proportion of dead material.

Unusual wind conditions; Cause; Likely spread: While this neighborhood is the location of the ignition of the 2017 Tubbs Fire, there is no inherent elevated cause of ignition in this neighborhood. While fire can spread in the neighborhood, fire intensity and rate of spread is normally moderated by vineyards and the low fuel volume present in the neighborhood.

The Plan

The elements of this Plan have been arrived at through a collaborative process, with the understanding that some elements of this Plan will require outside funding, that some elements will be easier to accomplish than others, and that all elements will take some time. The projects are listed in 3 sections based on the feasibility and expense of accomplishing these projects from easiest to more difficult.

Projects that can be tackled by residents now

These are projects that residents agree are important and that can be tackled by residents, working together or individually. Each of these projects will contribute to the safety and survivability of the individual residents as well as the community as a whole.

1. **Public Education and Communication:** Voluntary parcel-by-parcel evaluation of residences in the CFSC area. Conduct voluntary parcel-by-parcel evaluations regarding defensible space and fire-resistant landscaping choices, and retrofit options, and distribute educational information, develop database of conditions assisting fire response, update Calistoga evacuation plan.
 - a. Objectives covered: Evacuation & Access, reduce property damage
 - b. Area: Throughout the CFSC residential areas, including vacation rental properties.
 - c. Goals:
 - i. Provide residents information about how to retrofit structures to be more ignition-resistant,
 - ii. Develop database for outreach,

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- iii. Create or update CAL FIRE's fire Pre-Attack and Evacuation plan, and
 - iv. Develop a list of properties that require defensible space work that are owned by disadvantaged, low income and/or senior homeowners
 - d. Actions:
 - i. Revise existing evaluation standards (Mt Veeder, Diamond Mtn) in conjunction with CAL FIRE,
 - ii. Train CFSC volunteers,
 - iii. Designate volunteer/staff to conduct evaluations,
 - iv. Enter info into database with appropriate privacy protections,
 - v. Transfer data to fire departments,
 - vi. Update as needed
 - e. Who: 1-3 volunteers or paid staff if grant-funded
 - f. Schedule: Starting now
 - g. Estimated Cost: \$150/yr GIS subscription, \$3000 to advertise and solicit evaluation(assuming volunteers collect information from residents)
 - h. Source of Funds: NCCF
 - i. Special Considerations and Prerequisites
 - i. Landowner permission for access,
 - ii. Data sharing and privacy protections,
 - iii. Checklist for property evaluation and data collection (use Mt. Veeder FSC as a starting point)
 - iv. Volunteer evaluators availability
2. **Suppression Support:** Install reflective signage. Make it easy to purchase and install reflective street address signs with options to include badges indicating the presence of water sources (pool, water tanks) and driveway turnaround
- a. Objectives covered: Evacuation & Access
 - b. Area: Throughout the CFSC residential areas, including vacation rental properties.
 - c. Goals: Inform responders of features that encourage entry and successful response
 - d. Actions
 - i. Create an e-commerce website
 - ii. Get sign-off on optional badges
 - iii. Develop Covid-19 sanitation protocols for student work spaces
 - iv. Develop volunteer hour protocols

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- v. Line up adult supervision
 - vi. Line up supply source (probably <https://interstate911.com>)
 - vii. Determine sign production workflow and training
 - viii. Determine sign installation workflow and training
 - ix. Launch marketing campaign
 - x. Seek sponsorship to lower cost or fund low income and disadvantaged signs
 - xi. Contact schools, Boys and Girls Club, Junior Achievement, Boy Scouts to secure volunteers
 - xii. Post volunteer opportunity on website
 - e. Who: volunteers, possible high school students who need to get community service hours (work with schools, Junior Achievement, Boy & Girls Club, Boy Scouts (Emergency Preparedness and Fire Safety Merit Badge), Rotary)
 - f. Schedule: Starting now
 - g. Estimated Cost: Initial cost of about \$500-1000 to buy supplies
 - h. Source of Funds: NCFF, grant, insurance industry, PG&E, California Fire Safe Council Volunteer Grant
 - i. Special Considerations and Prerequisites
 - i. Covid-19 issues
 - ii. Privacy issue, if any
 - iii. Volunteer training
 - iv. Sign placement considerations and need for multiple signs where roads fork
3. **Vegetation Management:** Calistoga Pioneer Cemetery Maintenance (lobbying the City). Reduce shrubby fuels (especially French broom) in the upper part of Cemetery, with hand tools, or goats.
- a. Objectives covered: Reduce Property Damage
 - b. Area: Calistoga Pioneer Cemetery (particularly above the grave site area).
 - c. Goals: Provide fire-safe environment for residents in City
 - d. Actions
 - i. Contact Mayor
 - ii. Approach City Council
 - iii. Newspaper and social media campaign, if necessary
 - e. Who: City of Calistoga and adjacent homeowners
 - f. Schedule: Best in the early spring before flowering, OK anytime but avoiding nesting season and red flag days.
 - g. Estimated Cost: \$500 / acre for goats, or hand labor to cut broom

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- h. Source of Funds: City of Calistoga
- i. Special Considerations and Prerequisites: CEQA required, may be exempt

Projects that can be tackled with “A Little Help From our Friends”

These are projects that require some resources, but small grants or contributions can be sought to fund these.

1. **Suppression Support:** Install Knox-Box facilities at base of roads, using Diamond Mountain FSC as an example. Includes gathering information from residents.
 - a. Objectives covered: Property Access, Reduce property damage
 - b. Area: At base of Old Lawley Toll Rd., Lommel Rd., Pickett Rd., entrance to Solage, Calistoga Ranch, and Franz Valley School Rd
 - c. Goals: Helps emergency responders to respond, gain access to property, and follow directions using aerial observations
 - d. Actions
 - i. FSC to develop database questionnaire, gather information and create an information in binder (or virtual),
 - ii. purchase Knox-Box, and
 - iii. deliver information about existence and location to Napa Co FD
 - e. Who: Willing members of CFSC on the above roads. There should be a “captain” for each area.
 - f. Schedule: Now, any time
 - g. Estimated Cost: \$1613 per Knox Box, plus any data gathering costs
 - h. Source of Funds: NCCF
 - i. Special Considerations and Prerequisites:
 - i. A strong privacy policy and privacy and security features
 - ii. Data gathering and storage mechanism,
 - iii. Volunteer efforts to track down and organize information
 - iv. May want to partner with COPE, which is doing this in Sonoma
 - v. Could be coordinated with Project 1 in Public Education and Outreach above

2. **Vegetation Management:** Maintain/expand existing fire breaks created during Tubbs Fire.
 - a. Objectives covered: Reduce Property damage, Contain fire
 - b. Area: Jericho Canyon vineyards, other locations on Old Lawley Toll Rd., Lake County Highway (at RLS St Pk+~3800 Hwy 29)
 - c. Goals: Facilitate fire containment

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- d. Actions
 - i. Cut and burn or chip previously cut material, using hand labor or machinery,
 - ii. Cut additional 10-30 ft of vegetation to create a shaded fuelbreak
- e. Who: Owners of land with contingency containment lines, and contractors to do the work
- f. Schedule: Best in the fall, OK anytime but avoiding nesting season and red flag days. Burn piles in winter.
- g. Estimated Cost: \$850/ac per cost estimates in the California Forest Improvement Program "Follow-up" treatment
- h. Source of Funds: Grant
- i. Special Considerations and Prerequisites: CEQA, landowner permission required, contractor insurance and indemnification

3. Vegetation Management: Roadside Treatments

- a. Objectives covered: Evacuation & access, Ignition prevention, Reduce property damage, Contain fire
- b. Area: 30-ft both sides of Old Lawley Toll Rd, Lommel Road, Lake County Hwy (if fuelbreak is not installed on Lake Co Hwy)
- c. Goals: Enable passage of evacuees and emergency vehicles, aid containment
- d. Actions
 - i. In wildlands, cut and chip all dead material,
 - ii. Remove (cut, pull and/or spray) understory shrubs,
 - iii. Prune lower branches of trees
- e. Who: Hand crews (CDC, CCCs or CAL FIRE Fuel Crew), property owners, +/- vendors for machinery
- f. Schedule: Best in the fall, OK anytime but avoiding nesting season and red flag days
- g. Estimated Cost: \$1500/day traffic control, \$8,000/ac (or homeowner-driven)
- h. Source of Funds: Grant
- i. Special Considerations and Prerequisites: CEQA, landowner permission and traffic control required

Aspirational Projects that require significant funding

1. Vegetation Management: Remove hazardous trees along roads

- a. Objectives covered: Evacuation & access, Reduce property damage, Contain fire

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- b. Area: Roadside, where leaning and/or failing trees exist, especially Old Lawley Toll Rd., Franz Valley School Rd., and Lommel Rd.
- c. Goals: Provide safe evacuation and response during an emergency
- d. Actions:
 - i. Encourage / promote vegetation management by County and PG&E to remove hazard trees along roads
 - ii. Hire contractor if can't be removed by county and/or PG&E
- e. Who: Willing members of CFSC
- f. Schedule: Now, any time
- g. Estimated Cost: \$1500 - \$3,000/tree
- h. Source of Funds: Grant
- i. Special Considerations and Prerequisites: CEQA, landowner permission required

2. Vegetation Management: Create shaded fuel break on both sides of Petrified Forest Road

- a. Objectives covered: Evacuation & access, Ignition prevention, Reduce property damage, Contain fire
- b. Area: 50-100 feet on both sides of Petrified Forest Road - especially east of 255/263 Petrified Forest Rd
- c. Goals: Calm fire behavior in strategic location, aid containment
- d. Actions
 - i. Request permit from landowners,
 - ii. Develop treatment Rx agreeable to all,
 - iii. Contract work
- e. Who: Selected parcel owners along border, access routes
- f. Schedule: Best in the fall, OK anytime but avoiding nesting season and red flag days
- g. Estimated Cost: \$1500/day traffic control, \$8,000/ac
- h. Source of Funds: Grant
- i. Special Considerations and Prerequisites: CEQA, landowner permission and traffic control required, contractor insurance and indemnification

Monitoring Project Progress and Updating the CWPP

A brief project progress report will be provided to NCFF annually and filed with the CWPP. This progress report will be submitted at the beginning of the calendar year for use by the NCFF Grant Committee to assist in grant request and funding planning for the

Calistoga Firesafe Council Community Wildfire Protection Plan

upcoming year. The CWPP will be updated every 4 years from the date of approval sign off.

Approval Signatures

The Calistoga Community Wildfire Protection Plan was developed collaboratively and in consultation with interested parties, including Napa Communities Firewise Foundation, Napa County Fire Department, CAL FIRE, and the residents of the Calistoga community.

The Plan identifies and prioritizes areas for hazardous fuel reduction treatments and recommends other types and methods of treatments that will protect the Calistoga community.

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

DocuSigned by:
 Agreed: Diane Dillon
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Date: 9/21/2020
 Diane Dillon, Supervisor, Napa County District 3

DocuSigned by:
 Agreed: [Signature]
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Date: 9/26/2020
 JC Greenberg, Fire Marshal's Office, Napa County Fire Department

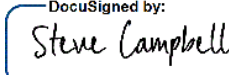
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Date: 9/22/2020
 Geoff Belyea, Napa County Fire Chief

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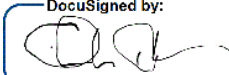
Date: 9/23/2020
 Chris Canning, Calistoga Mayor

Calistoga Firesafe Council Community Wildfire Protection Plan

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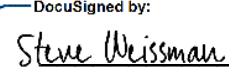
Date: 9/22/2020

Steve Campbell, Calistoga Fire Chief

Agreed:  _____
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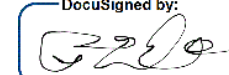
Date: 9/21/2020

Christopher Thompson, President, Napa Communities Firewise Foundation

Agreed:  _____
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Date: 9/22/2020

Steve Weissman, Co-Lead, Calistoga Fire Safe Council

Agreed:  _____
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Date: 9/21/2020

Piper Cole, Co-Lead, Calistoga Fire Safe Council

<https://calistoga.napafirewise.org/>