

Spring Mountain Fire Safe Council Community Wildfire Protection Plan



NAPAFIREWISE

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Spring Mountain Firesafe Council Community Wildfire Protection Plan

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Executive Summary

The Spring Mountain Fire Safe Council (SMFSC) has developed this Community Wildfire Protection Plan (CWPP); 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 SMFSC 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:

- SMFSC
- Napa Communities Firewise Foundation (NCFE)
- CAL FIRE/Napa County Fire Department
- Napa County Board of Supervisors

Community Evaluation

A Community Evaluation, dated (February, 2022) was engaged by NCFE and the SMFSC and prepared by Carol Rice, a wildland fire manager specializing in fire risk issues, and includes input from the SMFSC community, including local government, non-profits and local fire authorities. The Evaluation 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.

Introduction

Fire hazard is a special concern in the Spring Mountain area in western Napa County. The area is located in the interface between wildlands and developed areas where fires spread from wildlands to the homes, damaging structures or even threatening lives. Conversely, wildlands are subject to increased ignition potential from elevated levels of human activities. Most fires in the coastal mountains are human caused.¹

This evaluation serves as a platform for recommendations for projects to: minimize threat to life safety and damage from wildfire 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.

The Spring Mountain community boundary covers 10,571 acres in western Napa County (Figure 1). It is an organized Fire Safe Council (FSC) sandwiched between the Diamond Mountain FSC to the north and the Mt. Veeder Fire Safe Council to the south. The city of Saint Helena (also an FSC) is to the southeast. The Spring Mountain FSC area of interest is bounded by Highway 29 to the east, Bothe-Napa Valley State Park to the north, and the Sonoma/Napa County boundary to the west (for the most part).

Within this area, data records show approximately 259 parcels and 463 structures. Elevation ranges from 230 feet on the Napa Valley floor to over 2,600 feet at the Napa County border. The area includes geographic features such as Heath Canyon and White Sulphur Springs in the south and York Creek, Mill Creek, and Richie Creek in the north, with prominent topographic knobs such as Buckeye Knoll, and rolling terrain throughout. An unnamed ridge north of Spring Mountain Road helps define the terrain in the area.

The pattern of access is few through roads, and several spur roads. The main roads that bisect the area include State Highway 29/St Helena Hwy ("Highway 29"), and Spring Mountain Rd., with significant spur roads including White Sulphur Springs Rd., Langtry Rd., Sulphur Springs Ave., Rockland Dr./Tychson Hill/Byrd Hill, Madrona Ave., Bale Grist Mill Rd.

Much of the Spring Mountain community boundary shares the county boundary between Napa and Sonoma Counties. While there are many rural residents within the Spring Mountain community boundary, there are no incorporated or informally recognized cities or towns within its boundary. The city of St. Helena borders the area to the east. While the majority of the Spring Mountain is privately owned, it also includes lands owned by the following public or non-profit entities: California State Department of Parks and Recreation, Save the Redwoods League, and the City of St. Helena.

More details on each will be presented in the following sections.

¹ <https://www.nps.gov/articles/wildfire-causes-and-evaluation.htm>

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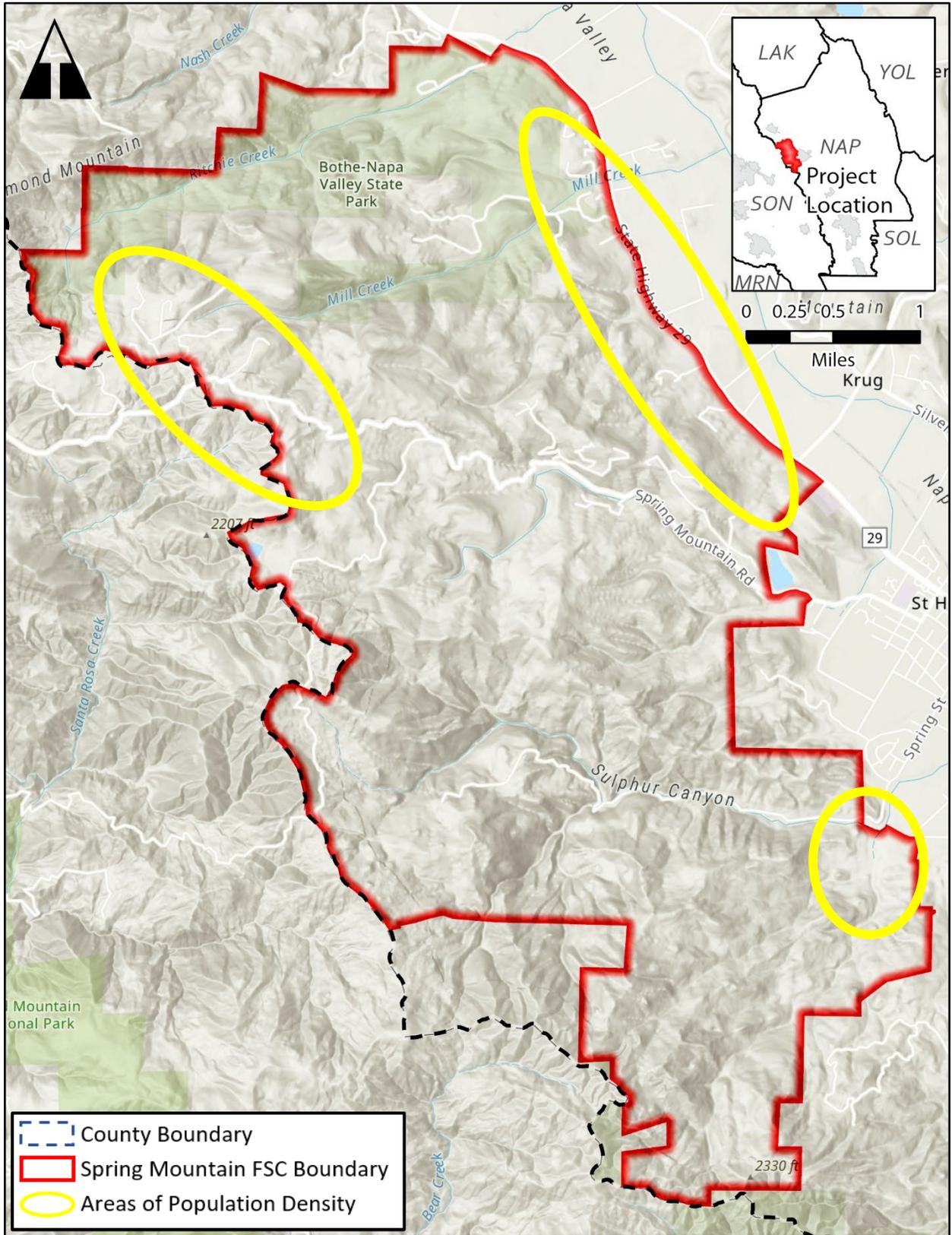


Figure 1. Area of interest - Spring Mountain FSC boundary (shown in red) and areas of population density (shown in yellow).

Values at Risk

The most important values at risk are life safety, then improvements to property (residential structures, wineries and vineyards), then natural resources. Because many of the evacuation routes are long and involve poor road conditions, the threat to human life is significant.

Homes in the Spring Mountain area are at risk from wildfire for a number of reasons. Structures are generally older, dating before the requirement for ignition resistant construction. Most roofs are less flammable, however, wood siding, decks, and unprotected vents that are part of most homes all make the buildings prone to ignition.

Homes: Residential structures are mostly made of wood because of their age. They have wood porches and decks, though wood fences are a rarity. 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. Many older structures have been destroyed in the Glass Fire, or remodeled and a few property owners have installed personal fire suppression systems involving various water sprinkler strategies.

Structures are located primarily along Highway 29, however, there are a significant number of structures located along Spring Mountain Rd and White Sulphur Springs Rd.

In 2020, the Glass fire burned through the entire Spring Mountain area. Twenty five percent or 115 structures within the area were destroyed (per CAL FIRE post-fire assessment, greater than 50% damage). An additional 14 structures were affected (Table 1). Most of the structures lost were off Highway 29, or up Spring Mountain Rd and, White Sulphur Springs Rd.

Table 1. Structure data from the Spring Mountain area. Structures provided by Napa County open data. Structure loss data provided by CAL FIRE (2020).

	Number	Percent
Total Number of Structures/Buildings	463	
Structures Lost in GLASS Fire (2020)	115	25%

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Landuse: The Napa County parcel database shows that the Spring Mountain is dominated by agricultural lands (vineyards) and vacant lands. Agricultural lands account for 40% of the lands within the Spring Mountain area. Most of the agricultural lands are along the valley bottom nearest Highway 29. There are a few large agricultural parcels in the west along the Sonoma County boundary. The next largest land use category is Vacant, also at 40% of the area. These lots are located in the central portion where unmanaged vegetated hills exist.

Parcels categorized as residential account for 10% of the area and are made up mainly of smaller lots, but there are large residential lots throughout the area. Eleven percent of the parcels are designated as Commercial (which includes wineries) (Table 2).

Table 2. *Number of parcels and county land use within the Spring Mountain area (Napa County GIS Open Data Portal, accessed in March, 2020).*

CATEGORY	PARCEL COUNT	AREA (ACRES)	PERCENT
AGRICULTURAL	54	4,285.88	40%
COMMERCIAL	30	1,143.40	11%
RESIDENTIAL	83	1,080.41	10%
VACANT	92	4,325.63	40%

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" or intensified 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.

For example, fires burning on flat or gently sloping areas tend to burn more slowly than fires burning on steep slopes. This makes ridgetop positions more vulnerable than those at the bottom of a slope.

The area encompasses a broad range of slopes and aspects with almost equal representation of southwestern and northeastern facing slopes (Figure 2). Slopes range from zero at the bottom of Napa Valley and more than 400% along the upper reaches of Iron Mine Creek (south of Sulphur Canyon). There are no large peaks in the area. An unnamed ridge north of Spring Mountain Rd. is the most prominent ridge in the area other than the Napa/Sonoma County boundary, but there are numerous creeks and canyons that bisect the area in a roughly west to east direction. Some winters boast snow on the highest peaks in the surrounding area. Immediately outside the Spring Mountain area to the north, Diamond Mountain ridge runs in a west to east direction. To the south, many of the canyons run perpendicular to the dominant southwestern winds, that is, they run northwest to southeast.

There are several topographic knobs and knolls in the area, creating breaks in the landform; these can be significant flow-through passages for wind, as discussed in the following section of this report.

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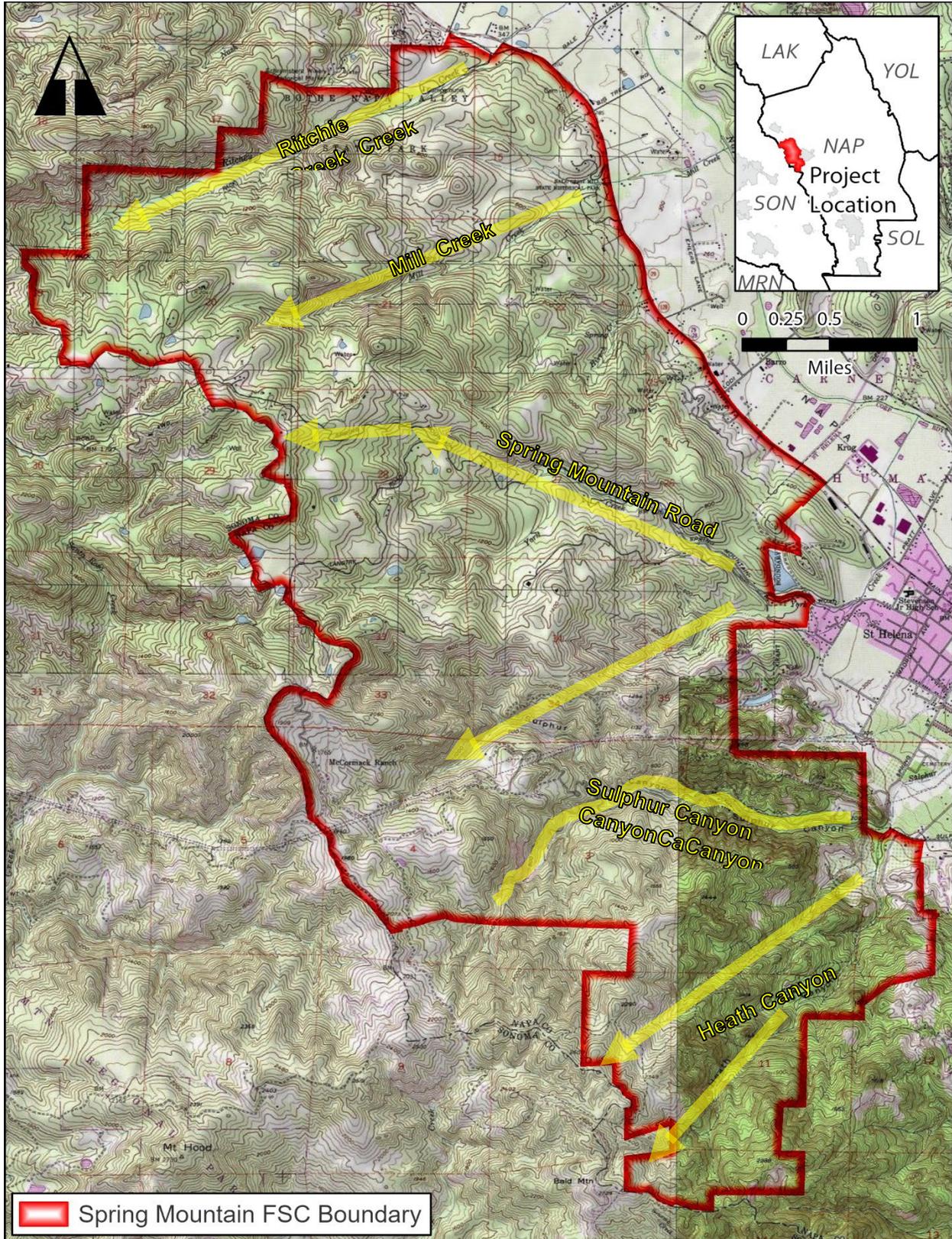


Figure 2. USGS Topographic map of the Spring Mountain area (boundary shown in red). Yellow arrows indicate general location of canyons that might facilitate wind flow.

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- **Heath Canyon:** This canyon runs from the southwest to the northeast, contrary to many of the canyons to the north and south of it. This direction is aligned with the predominant winds from the southwest and the more concerning Diablo winds from the northeast. Heath Canyon originates at the base of Bald Mountain on the county boundary. Some of the steepest slopes are in the upper reaches of this canyon.
- **Sulphur Canyon:** Iron Mine Creek and Sulphur Creek originate in the west and merge to form Sulphur Canyon. Again, the upper (western) reaches of these creeks have the steepest slopes in the region. While Iron Mine Creek maintains the orientation of Heath Canyon, the upper reaches of Sulphur Creek run from the west to the east. This may create erratic or unpredictable winds at the confluence of these two creeks.
- **York Creek area:** This area is less defined and is more characteristic of rolling terrain. There are no major ridges to halt or alter strong winds from the southwest or northeast, as was the case in the 2020 Glass fire. Many of the homes that were lost during that fire were within this area.
- **Hirsh Creek area:** This area has steep slopes along the sides of the Hirsch Creek area, particularly near the base where it meets highway 29 and density of homes is highest. This area was entirely burned during the Glass Fire of 2020, and has no easily discernable methods of providing fuel breaks as the ridge line on both the north and south side is not clearly defined and is amorphous. The only road through the area is a private, unmaintained lane (Bea Lane) that sits mid-slope and poses a risk for evacuation or any ingress by fire personnel.
- **Ritchie Creek/Mill Creek area:** The ridges and valleys within this area, which make up most of Bothe Napa Valley State Park, are again a bit amorphous and not particularly strong, with the exception of the prominent ridgeline that forms the Spring Mountain area's northern boundary. The orientation of the valleys is more aligned in the southwest to northeast direction. Again, as with Heath Canyon, this orientation provides a path for strong winds from the southwest (most common in the afternoons) and northeast (common during Diablo wind events). This area was also burned during the Glass fire of 2020.

The Spring Mountain area contains portions of the Heath Canyon watershed, York Creek watershed, and the Ritchie Creek watershed (Figure 3). Several creeks exist in the area. They include: Ritchie Creek, Mill Creek, Hirsh Creek, York Creek, Sulphur Creek, and Heath Creek.

More details of the terrain follow in the discussion of weather.

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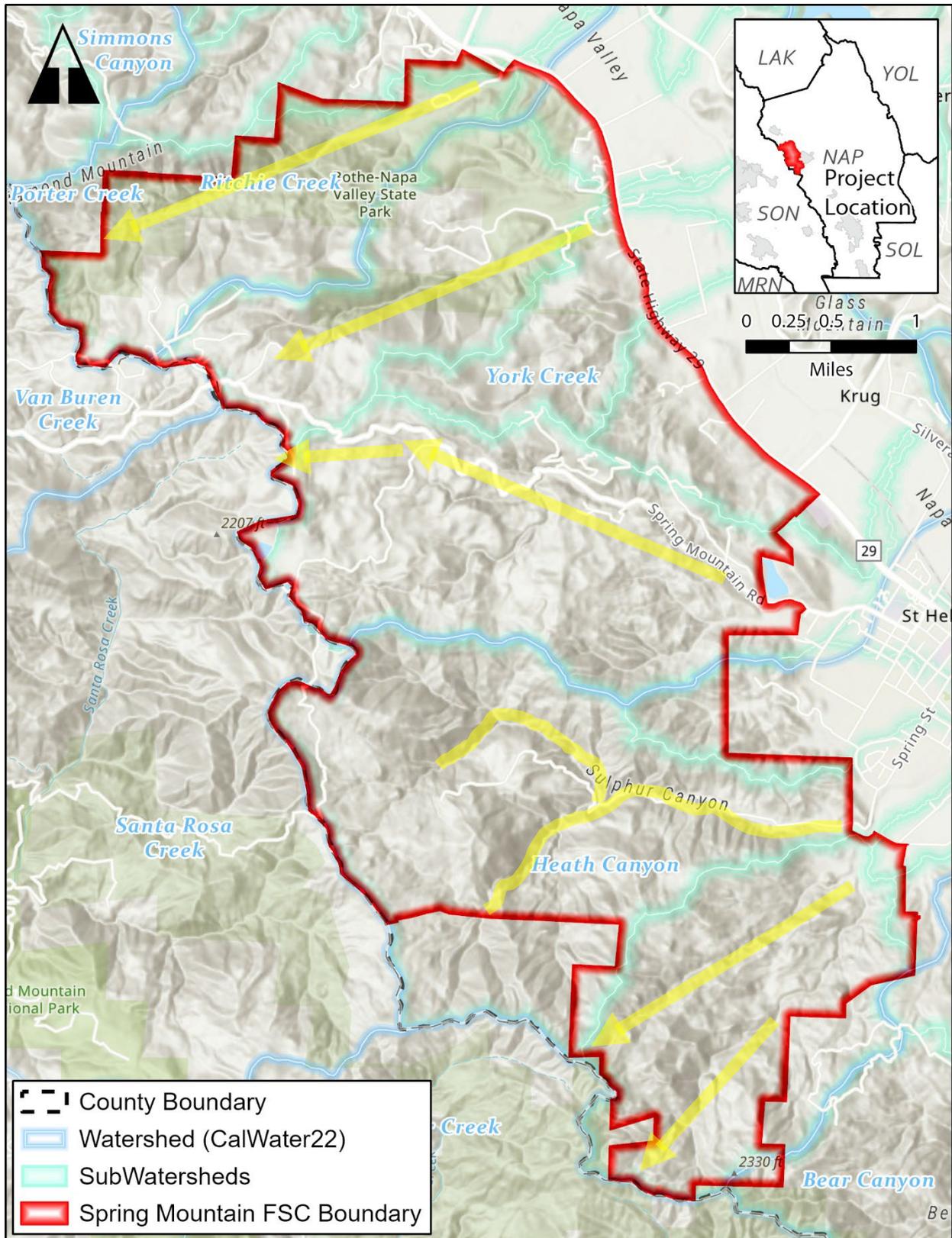


Figure 3. Watershed map of the Spring Mountain area (boundary shown in red). Yellow arrows indicate general location of canyons that might facilitate wind flow.

Weather

Weather conditions significantly impact both the potential for ignition and the rate, intensity, and direction in which fires burn. The most important weather factors used to predict fire behavior are wind (speed and direction), temperature, and humidity.

Temperatures and Humidities

Summer days are usually comfortable; temperatures normally range from lows in the 40's and to highs in the 90's, with an occasional high reaching a maximum of 105 degrees Fahrenheit. Humidities can drop to the single digits in the summer and fall.

Portions of the Spring Mountain neighborhood lie in a relatively protected area and would be subject to occasional episodes of stagnant air formed by stationary highs during summer months. This overall weather pattern -- characterized by continuous high temperatures and low relative humidities -- enhances the possibilities of ignition, extreme fire behavior and extreme resistance to fire control.

Winds

The most important influence on fire behavior is wind. Wind can greatly affect the rate of fire's spread and the direction of a fire. Wind increases the flammability of fuels both by removing moisture through evaporation and by angling the flames so that they heat the 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.

Terrain plays an important role in wind flow. Wind will tend to follow the pattern of least resistance and is therefore frequently deflected and divided by landforms. Long, continuous slopes offer buffers from high elevation winds, but also direct the surface air flow upwards, which pre-heats and dries the higher elevation fuels. Breaks in the landforms, as in the knolls and unorganized terrain within Spring Mountain can result in swirling winds and resulting erratic fire behavior.

Pronounced canyon slopes produce pronounced daily up-canyon and down-slope winds caused by differential heating and cooling of air during the day. This occurs region-wide and on a local scale.

Regional southwesterly winds are slowed by the northwest-to-southeast aligned ridges that form the Spring Mountain area; however, strong winds from the northeast could produce strong up-slope and erratic winds.

The winds that create the most severe fire danger typically blow from the north, usually in October. Winds from the east and north bring low humidities and elevated fire danger and can

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wreak havoc on the forested and chaparral covered, causing fire to spread to the south. These winds are the same ones that blew during the largest fires in Napa County; an unnamed fire in 1939 follows the pattern of larger fires influenced by these northeasterly winds. Those larger fires include the C. HANLY fire in 1964 along with its companion fire in 1965, the P.G. & E. #10 fire. Again, in 1976 and 1982, two fires, the IDA CLAYTON fire and the SILVERADO fire also started under these conditions. More recently, the TUBBS and NUNS fire in 2017 and the GLASS fire in 2020 also followed this pattern and burned substantial parts of the Spring Mountain area of interest as well as surrounding lands.

These northeasterly events generally last from 15 to 35 hours, but in seven of the past twenty years, these events in October and November lasted for 5 to 14 days. This type of wind could “push” a fire from the upper eastern slopes on the other side of Napa Valley down across into the vineyards on the valley floor to the higher slopes to the west and beyond into Sonoma County.

Any southwestern-facing aspect of the Spring Mountain area can exacerbate its risk from the Diablo winds. This is because these foehn or subsiding winds accelerate with decreasing elevation.

Vegetation

The 2016 Vegetation Map of Napa County² (updated from the 2004 version) was used as reference for this evaluation. Before the Glass Fire, there are seven main vegetation categories within the Spring Mountain area along with four non-veg types (rock outcrop, developed, water, unclassified) (Figure 4). Even though most of the area burned, much of the vegetation will return to its original classification within five years. Forested stands of Douglas fir with high tree mortality are the exception. The major vegetation categories mapped are listed below (Table 3).

Table 3. Vegetation acres by major vegetation categories within the Spring Mountain area (Vegetation Map of Napa County).

Vegetation Major Category	Acres	Percent
Coniferous forest	4,499.6	43%
Oak Woodland	3,284.1	31%
Agriculture	1,440.7	14%
Shrubland	671.5	6%
Grassland	285.7	3%
Developed, with structures or pavement	166.2	2%
Riparian woodland	136.4	1%
Water	33.0	0.3%
Rock Outcrop	20.7	0.2%
Unclassified/Unknown	0.4	0.004%

Along with the mapped vegetation is the landscaped environment surrounding buildings and homes.

Each vegetation type burns differently, based on the amount of biomass available to burn, the distribution of biomass in the vegetation, as well as the moisture and oil content of the foliage and dead material. A discussion on each major type follows the map on the next page.

Note: the tables and maps presented here reflect pre-2020 conditions.

² https://data-cdfw.opendata.arcgis.com/datasets/b9855bea85c14190ab030da86441301c_0/explore

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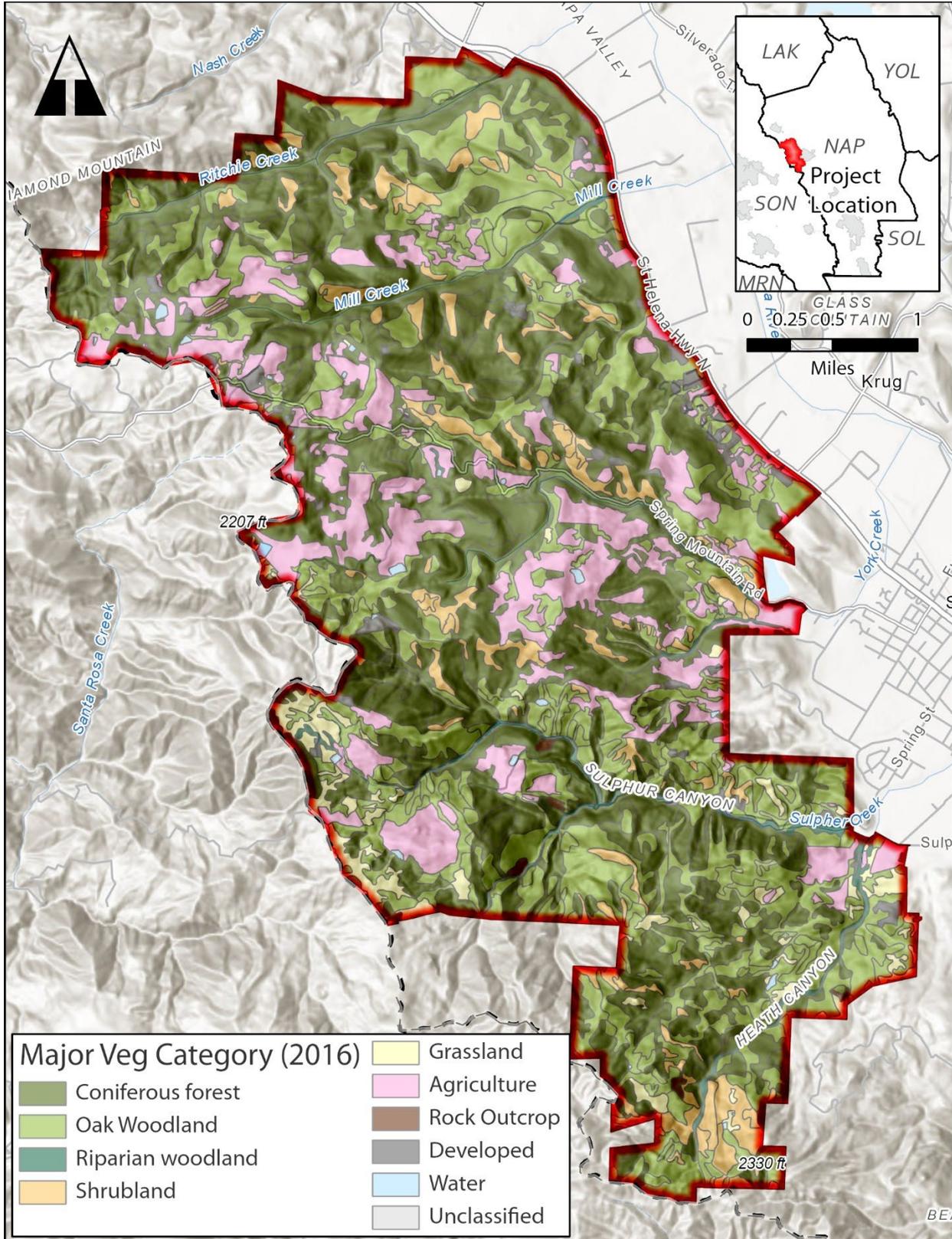


Figure 4. Vegetation map – Spring Mountain area (boundary shown in red) (Napa Vegetation Map, 2016).

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Conifer forest: These areas include mapped Douglas-fir (3,346 acres), Douglas-fir with Ponderosa Pine (114 acres), Coast Redwood mixed with Douglas fir (811 acres), Coast Redwood (207 acres), Knobcone Pine (3 acres), and Foothill Pine (18 acres). These coniferous forests occur in large patches throughout the hills within the Spring Mountain area, particularly in the higher elevations and on northeastern slopes/draws. They constitute about 43% of the area.

These dense, conifer forests are often found on north-facing slopes and do not pose a significant fire hazard under normal conditions. However, when hot, dry weather occurs, these forests do offer a large fuel volume to burn and exhibit greater fire intensity. Of all the vegetation types in the Spring Mountain area, dense, coniferous forests are most likely to burn as a crown fire. When a fire reaches tree crowns direct firefighting is not possible and embers are distributed throughout adjacent areas (including vulnerable residential areas).

Oak Woodland: 31% of the Spring Mountain area is mapped as Oak Woodland, which occurs on the lower flanks of hillsides throughout the area. Dense canopies typify these oak woodlands. Deciduous oak stands typically have grass and some shrubs under the tree canopy whereas coast live oak stands normally have leaf litter and shrubs under the tree canopy. The tree canopy in the lower reaches of the drainages is dominated by coast live oak, but also includes California bay, madrone, black oak, blue oak, Oregon white oak, canyon live oak, valley oak, interior live oak, Douglas fir and occasional pines.

Fire intensity, flame lengths, and scorch heights are usually low in oak woodlands. Slow-burning surface fires (approximately two-feet per minute) are carried in the compact leaf litter layer. Low flame heights (less than one foot) are the rule. Only under severe weather conditions involving high temperatures, low humidities, and high winds do the fuels pose fire hazards in this vegetation type. Leisurely spread rates, combined with the relatively short flame lengths of the predicted fire behavior produce a manageable, moderate fire hazard.

However, when shrubs are allowed to develop under the hardwoods, these fuels could pose fire hazards under severe weather conditions, e.g. those conditions involving high temperatures, low humidities, and high winds. If the shrubs develop under oaks, torching is likely to occur because of the ladder fuels that allow a fire to burn from the shrub to the tree crowns. Foliage of both bay and coast live oak can be very flammable when fire reaches the crowns.

Agriculture (Cropland/Vineyards): 14% of the land in the Spring Mountain area is mapped as agriculture. These occur in large sections east of Sulphur Canyon and along Spring Mountain Road, as well as smaller patches along Highway 29. Most of these agricultural areas are vineyards.

Fires are sometimes benign in croplands or vineyards. In the case of vineyards, biomass is concentrated in live vines, with a mowed or bare soil surface. A fire can spread quickly through the vineyard where there is a ground cover. Vineyards were instrumental in stopping the Howell Mountain fire in 1983, formed the edges of fires in the Tubbs, Nunns, and Kincade Fires, but

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were part of the contagion in the Cavedale Fire in Napa in 1996. Vineyards often have access roads on the perimeter and within the interior, further aiding containment. With all that said, however, in the Glass Fire of 2020, many vineyards were burned through.

Shrubland: The next largest mapped vegetation type occupies 6% of the Spring Mountain area and can be found at the lower hillsides transitioning between the conifer forests/oak woodlands to the grasslands at the valley floors. While these distinct areas were mapped as Shrubland, brush exists throughout and often contributes to other vegetation types described in this document. The specific mapped shrub alliances include:

- California Bay – Leather Oak (Mesic Serpentine)
- Chamise Alliance
- Leather Oak – California Bay (Mesic Serpentine Chaparral)
- Leather Oak – White Leaf Manzanita – Chamise (Xeric Serpentine)
- Mixed Manzanita
- White Leaf Manzanita – Leather Oak (Xeric Serpentine)

Brush 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 fine woody material in the brush crowns. The foliage is highly flammable and dead woody material in the stands significantly contribute to increased fire intensity.

This fuel type constitutes the highest firefighting hazard. Direct attack is not possible, and containment efforts would 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. In addition, spotting is likely in chaparral which will present even more challenges to suppression efforts.

Annual Grasslands (Herbaceous): Accounting for only 3% of the Spring Mountain area, annual grasslands were mapped along the edges of shrublands or vineyards. Fire spread through grasslands can be quick, however, they are easy to spot and quick to put out.

Landscaping/Developed: Landscaped areas -- being closest to homes -- may make the greatest impact on survivability of a house during a fire arising in wildlands. Landscaped areas either (1) are moist, 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 only burn slowly with little heat release.

While research results regarding fire resistance of landscape plants are meager, several important generalities have surfaced. For example, the overall volume of biomass as well as the spacing and design of the garden is more critical than the species selected. Horizontal spaces between planting masses and the house are important components of a fire safe landscape. Similarly, vertical spacing between tree branches, shrubs, ground cover and the structure (particularly windows) are also part of a well-designed garden.

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Maintenance of landscaped areas is necessary to remove dead material and to maintain vertical and horizontal spaces. Neglect of landscape maintenance can lead to a significant worsening of the fire hazard closest to the structure.

Landscaping in the Spring Mountain FSC is generally consistent with fire safety principles. A few residences in each neighborhood have abundant vegetation that can endanger adjacent and nearby residents if they are within a few hundred feet of each other.

Predicted Fire Behavior

The distribution within an area of expected flame lengths can be predicted using public-domain software and data. FlamMap³ was used to model fire behavior using a county-wide dataset developed from the Napa County Vegetation Map.⁴

Using post-Glass Fire fuel conditions, flame lengths are expected to continue to be high (more than 12 feet) because of the combination of heavy fuels, especially in the conifer, mixed forest, chaparral, and in especially dry conditions, in the redwood forests. Where a well-developed understory is present - or now, more likely, where a preponderance of the vegetation is scorched and dead - under the oak canopies, fires are also expected to burn with high intensity (Figure 5a).

Fires can also be expected to burn fast when they are propelled by dry grass and chaparral. Vineyards can moderate both the fire intensity and fire spread, but would not provide good suppression opportunities for safe evacuation because they are small in comparison to the tracts of uninterrupted vegetation.

³ <https://www.firelab.org/document/flammap-software>

⁴ <https://ncff-cwpp-dms-usa.hub.arcgis.com/maps/b2de24b3562e4e27b0fbea2921e2c9e4/explore>

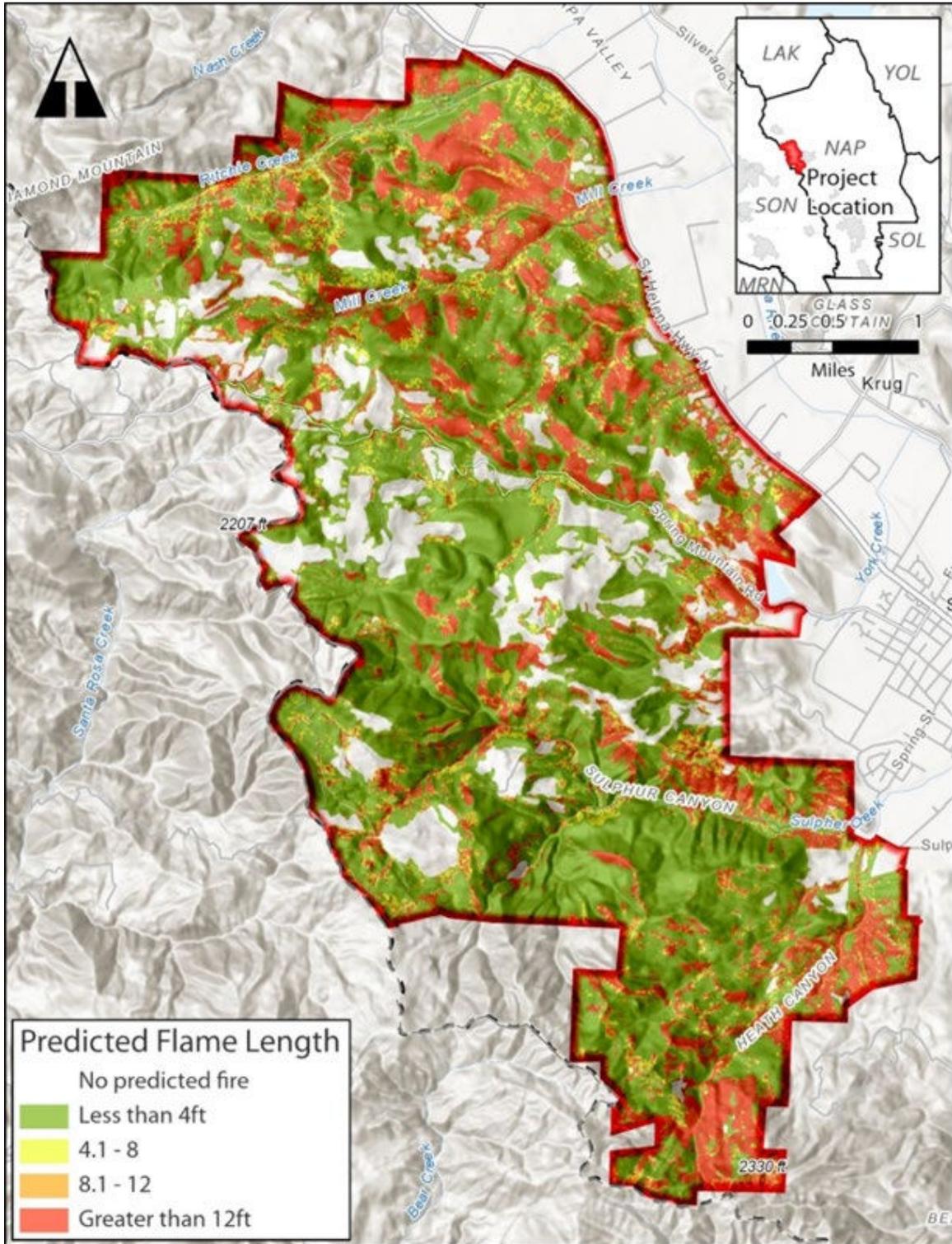


Figure 5a. Predicted flame length (feet) map (based on Napa Veg Map-based landscape version 2-2021 with a Northeast wind at 15 mph with low fuel moistures). Spring Mountain area boundary (shown in red). This map is post-Glass Fire. The areas showing zero flame length are vineyards, other agricultural parcels, or developed areas, which are all mapped as unburnable.

Predicted Flame Lengths

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 could be lost. Long flame lengths can be expected in coniferous and oak forests where an understory or dead material 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 lengths longer than 8 feet now account for 22% of the predicted fire behavior (Table 4). And more than 70% of the area is predicted to have less than 4-foot flame lengths. The higher flame lengths are concentrated at the bottom of Ritchie Creek and Mill Creek along with in the south in the upper sections of Heath Canyon. The lower flame lengths are located throughout the area and more importantly surrounding the vineyards (where no fire is predicted due to the limitations of the predictive software).

However, during the Glass fire, where these lower *predicted* flame lengths are located, the most homes were lost (Figure 5b). Homes that were lost were located primarily in areas where our model does not predict. In addition to having flames near a structure, structure loss from wildfire is greatly influenced by the presence of flying embers and the design and construction materials used to build the structures.

Note that the no predicted fire category accounts for agriculture and developed areas that may indeed burn – as evidenced in the Glass fire of 2020.

Table 4. Predicted flame length by category and area (in acres) within the Spring Mountain area (based on Napa Veg Map-based landscape version 2-2021 with a Northeast wind at 15 mph with low fuel moistures).

Predicted Flame Length	Acres	Percent
No predicted fire	1,607.59	15%
Less than 4 feet	5,908.30	56%
4 - 8 feet	712.14	7%
8 - 12 feet	259.76	2%
Greater than 12 feet	2,076.67	20%

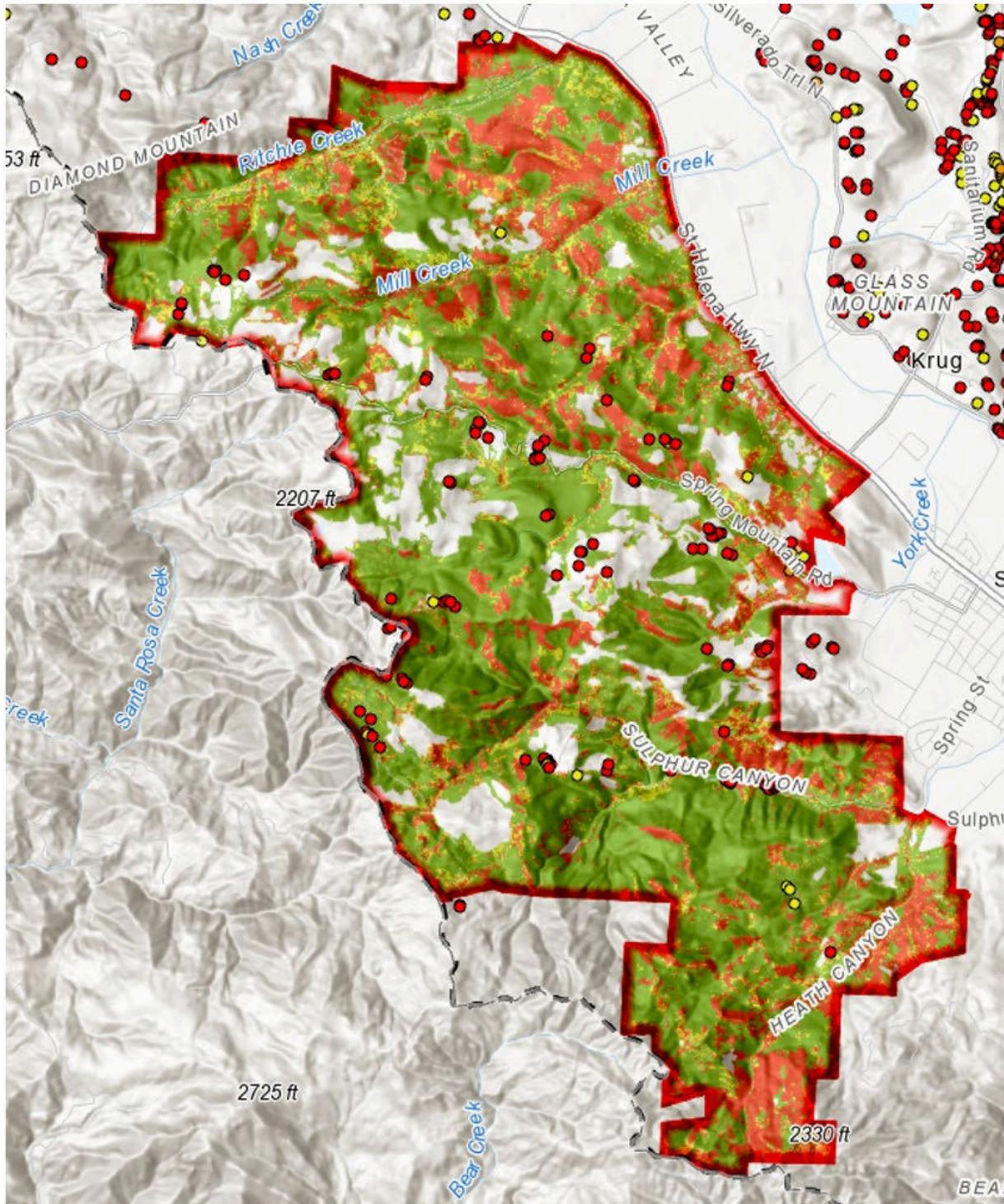


Figure 5b. Predicted flame length (feet) map showing destroyed structures from Glass Fire (indicated with red dots) and partially damaged structures (indicated with yellow dots). This map is post-Glass Fire. The areas showing zero flame length are vineyards, other agricultural parcels, or developed areas, all of which are mapped as unburnable.

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 relatively small area is predicted to have fire spread within the tree canopy (tree-to-tree), which is fairly rare and virtually un-heard of in hardwoods (Figure 6). Wide-spread torching emulates canopy fires, however, this type of crown fire is propelled into the tree canopy by a surface fire. Areas with higher density of coniferous forests are most at risk to torching and to crown fires.

A combination of no predicted fire and surface fire accounts for approximately 73% of the Spring Mountain area (Table 5). These areas are concentrated in the agricultural fields along Spring Mountain as well as in Sulphur Canyon where vineyards dominate.

Of the area predicted to have only a surface fire, we identified those areas with a higher canopy (over 20%) to highlight areas that do not torch but are likely to. These areas only accounted for 3% of the predicted surface fire. However, areas where torching and crown fire are predicted account for 24% of the area. These areas are predominantly on mid-slopes and places where the vegetation is not protected from strong winds. They occur in the south in Heath Canyon, the northern lower portion of Sulphur Canyon, and the lower portions of Mill Creek.

In the Glass Fire, the effects of slope and its role in pre-heating fuels was evident. Areas above long slopes were especially prone to high intensity fire behavior. Another widespread phenomenon observed was the interaction between multiple fires due to widespread spotting. When fires meet localized intensity increased.

Table 5. Predicted crown fire activity (or fire type) by category and area (in acres) within the Spring Mountain area (based on Napa Veg Map-based landscape version 2-2021 with a Northeast wind at 15 mph with low fuel moistures).

Crown Fire Activity	Acres	Percent
Surface fire canopy cover < 20%	6,133.80	58%
Torching fire	2,318.6	22%
No predicted fire	1,607.60	15%
Surface fire with canopy > 20%	337.4	3%
Crown fire	167.1	2%

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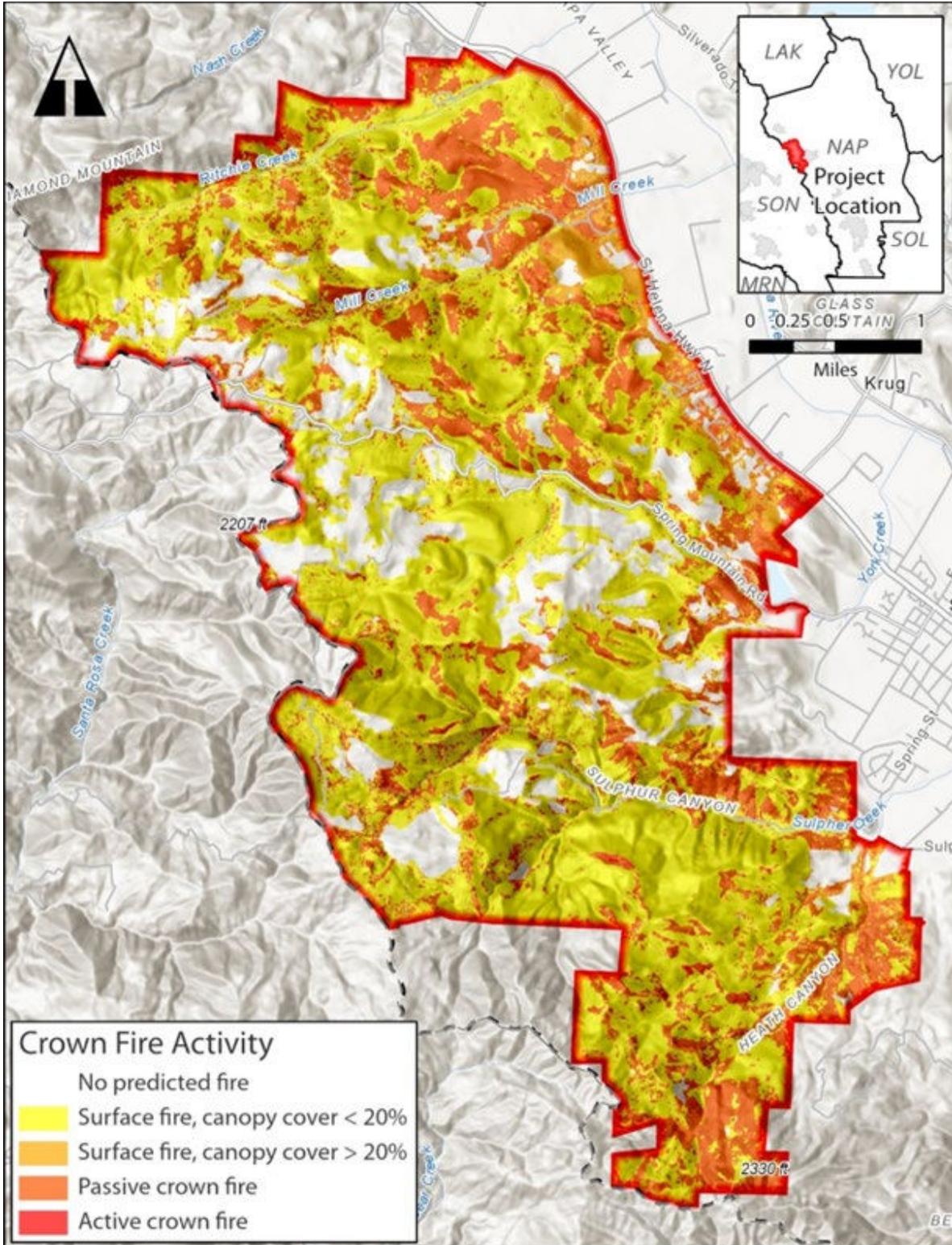


Figure 6. Predicted crown fire activity map (based on LANDFIRE landscape version 2.0 with a Northeast wind at 15 mph with low fuel moistures). Spring Mountain area boundary (shown in red). This map is post-Glass Fire. The areas showing zero flame length are vineyards, other agricultural parcels, or developed areas, which are all mapped as unburnable.

Fire History

In the past sixty years, four fires have been recorded occurring within one mile of the Spring Mountain area. These include a small fire west of the boundary in Sonoma County called PG&E #24 (1994), a tiny fire that occurred in April of 2013 called the SUMMIT fire just north of the boundary at the foot of Diamond Mountain, the 2017 NUNS fire just to the south of the boundary that burned just over 55,000 acres, and then the recent 2020 GLASS fire that burned almost the entirety of the Spring Mountain area and surrounding locations for a total of approximately 67,000 acres. In addition, many more fires have occurred in the surrounding area in both Napa and Sonoma County, including the HENNESSEY, ATLAS PEAK, TUBBS, KINCADE, and more. In addition, numerous other fires preceded the ones mentioned above.

Table 6. List of recorded fires within the Spring Mountain area (CAL FIRE, 2020).

YEAR	MONTH	DATE	FIRE NAME	CAUSE	ACRES	COMMENTS
1939	Unknown	Unknown	Unknown	Unknown	212.78	
1946	Unknown	Unknown	Unknown	Unknown	781.73	
1959	June	6/27/1959	C. SAVIEZ	Unknown/Unidentified	205.40	
1964	June	6/25/1964	ROADSIDE #14	Unknown/Unidentified	230.77	
1964	September	9/19/1964	C. HANLY	Unknown/Unidentified	55,960.70	
1964	September	9/19/1964	NUNS CANYON	Unknown/Unidentified	9,807.69	
1982	September	9/11/1982	SILVERADO	Unknown/Unidentified	6,218.80	
1983			HOWELL MTN. FIRE	Unknown/Unidentified	2,353.55	
1994			PG&E #24	Unknown/Unidentified	1,275.54	
2003	October	10/29/2003	SILVERADO	Power Line	69.32	
2008	May	5/15/2018	TAR	Power Line	56.56	
2008	October	10/10/2008	DEER	Vehicle	233.10	Occurred during strong North Wind Event
2013	April	4/24/2013	SUMMIT	Power Line	2.20	
2016	June	6/17/2016	HILLCREST	Unknown/Unidentified	17.35	
2017	September	9/23/2017	CLOVER	Unknown/Unidentified	13.90	
2017	October	10/8/2017	NUNS	Unknown/Unidentified	55,798.20	Nuns, Partrick, Adobe, Norrbom & Pressley>Nuns
2017	October	10/8/2017	TUBBS	Unknown/Unidentified	36,701.98	
2020	July	7/26/2021	MOBILE	Equipment Use	1.12	
2020	September	9/27/2020	GLASS	Unknown/Unidentified	67,484.30	

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

A recurring history of large fires (over 10,000 acres in size), which typically burn for several days, has been well established in Napa County. The typical period between such large fires is approximately 20-30 years. Like much of California, fires in Napa County are almost entirely caused by human-caused accidental ignitions. With that said, in 2020, several lightning-strike fires burned nearby in Napa County and west in Sonoma County.

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

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

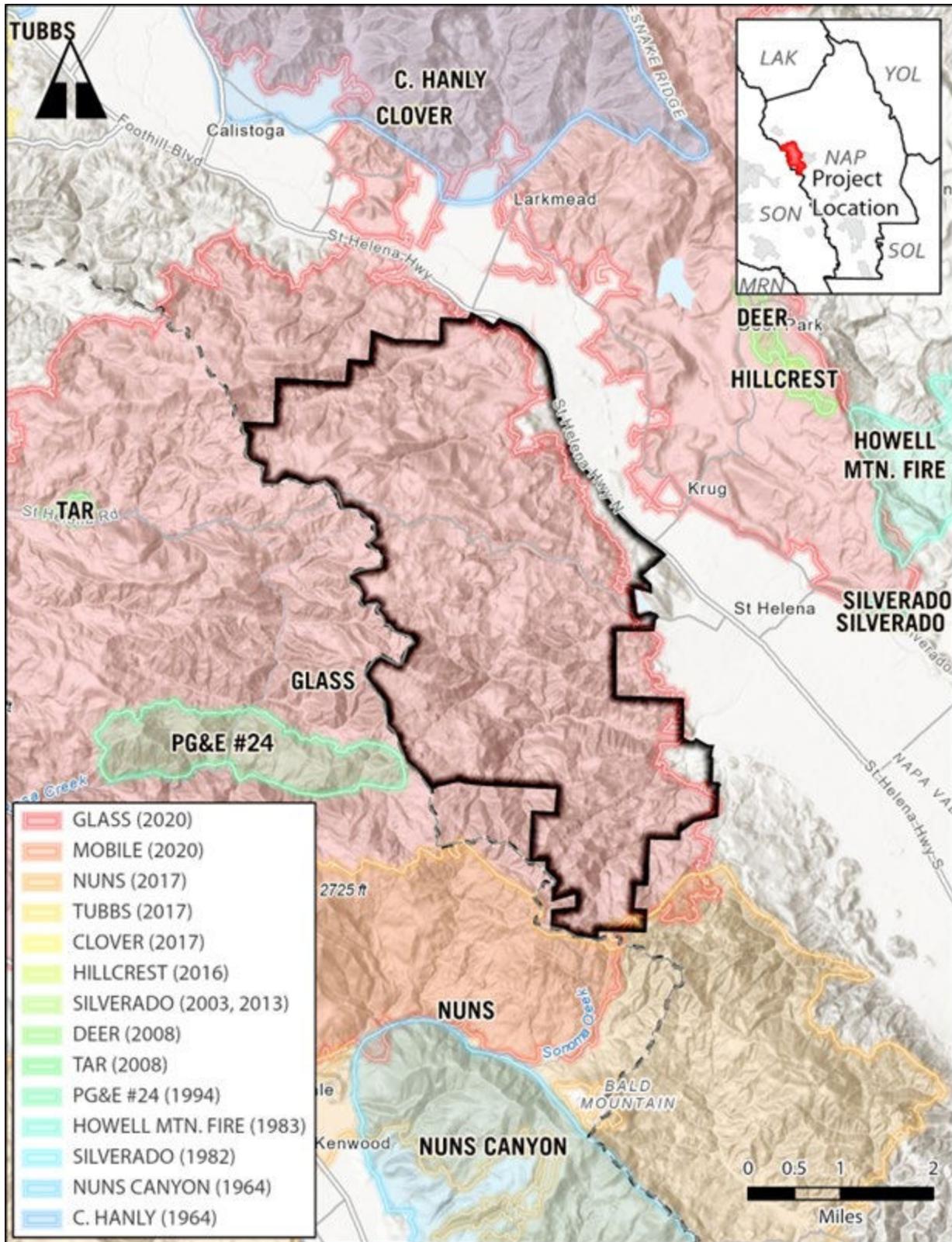


Figure 7. Fire perimeters/fire history map of Spring Mountain area (CALFIRE FRAP, 2019).

Access

Spring Mountain Road travels east to west through the central portion of the area, turning into St. Helena Rd in Sonoma County. Langtry Rd forks off Spring Mountain Road and turns into Timberline Drive in Sonoma County, offering another means of egress. However, to the south and north of the area, access is very limited and is a concern. To the south, White Sulphur Springs Road has no outlet. And in the north, there is only a short park road into the Bothe Napa Valley State Park and only driveways into the Mill Creek area. All residential areas are mainly accessed from Highway 29 or the roads mentioned previously.

Most lengths of road are barely two lanes with no shoulders. Pavement (road surface) is generally in good shape, some curves are simultaneously sharp and steep. Driveways 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. (we have Stockton and Mill Creek bridges—some general statement should be reworked here)

Regardless of the condition of the roadbed, access can be blocked by roadside vegetation. Trees can fall, blocking passage or vegetation can burn with such intensity that emergency response and evacuation cannot occur. Roadside vegetation along Spring Mountain Rd has been thinned, but is poised to regrow to abundance.

Other 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 not been maintained on many of the roads within the Spring Mountain area and could prove significant in the event of another fire.

See map on next page.

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

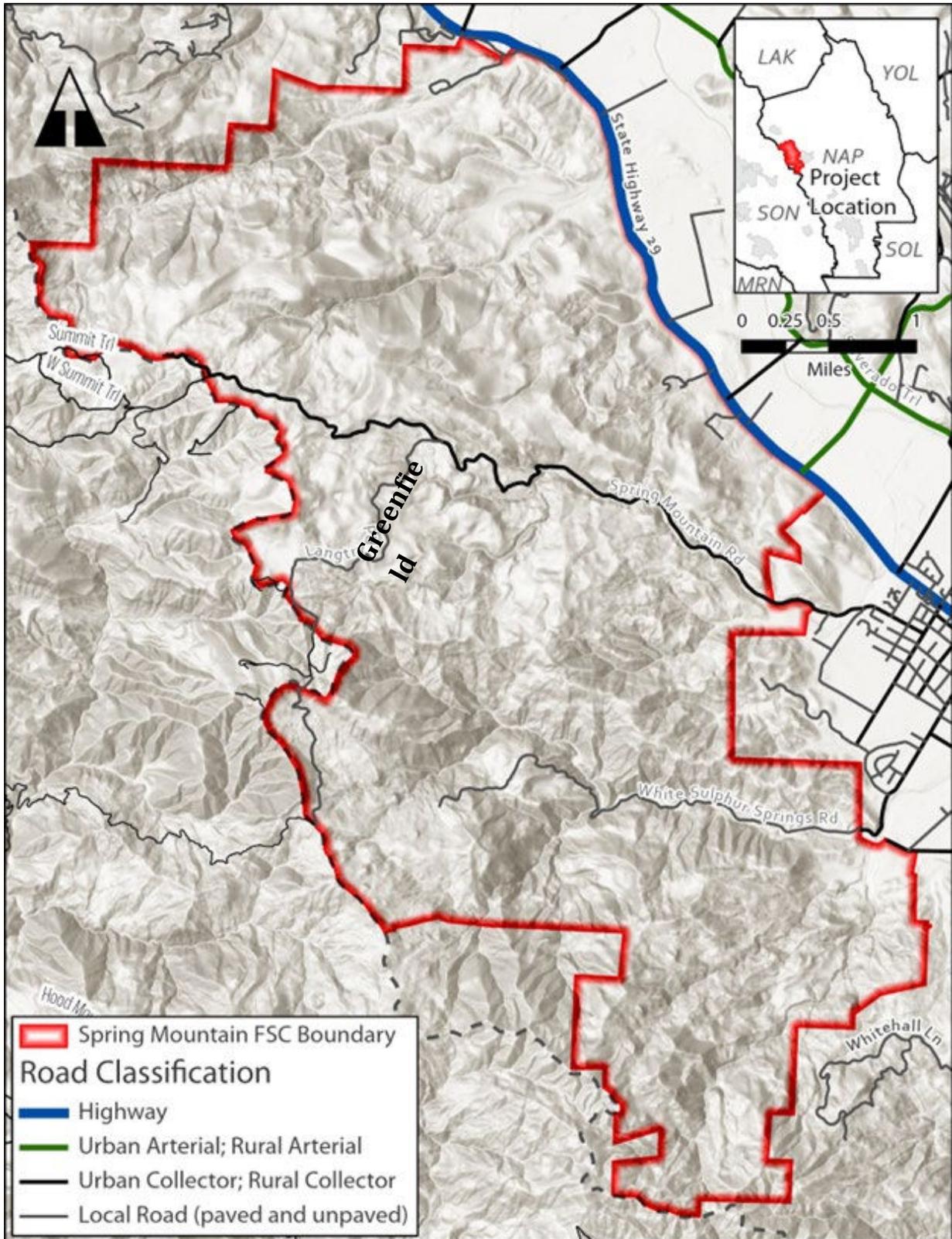


Figure 8. Access and street map of Spring Mountain area (shown with red outline).

Hazard Ranking

Almost the entirety of the Spring Mountain area is within CAL FIRE’s State Responsibility Area (SRA). Only 1% is not within the SRA.

For the SRA portions of the Spring Mountain area where CAL FIRE determined a fire hazard assessment, they show 26% of the area is categorized as a **Very High Fire Hazard Severity Zone**. Much of the area was classified as High (68%) with small sections along Spring Mountain Road categorized as Moderate (5%). For Spring Mountain, 94% of the area is classified as High and Very High fire hazard severity.

Table 7. Fire hazard severity zone by area (acres) within Spring Mountain area boundary (CAL FIRE, 2007 – current version).

Fire Hazard Severity Zone (CAL FIRE)	Acres	Percent
Moderate	498.50	5%
High	7,204.23	68%
Very High	2,788.90	26%
Non-SRA	79.38	1%

Currently, the categorization of fire hazard severity zones is being updated. A comparison of the current and proposed distribution of these zones as of 2022 is available at <https://osfm.fire.ca.gov/fire-hazard-severity-zone-maps-2022/>. *In short, the **more** of the SRA lands in the Spring Mountain FSC is categorized as a Very High Fire Hazard Severity Zone.*

See map on next page.

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

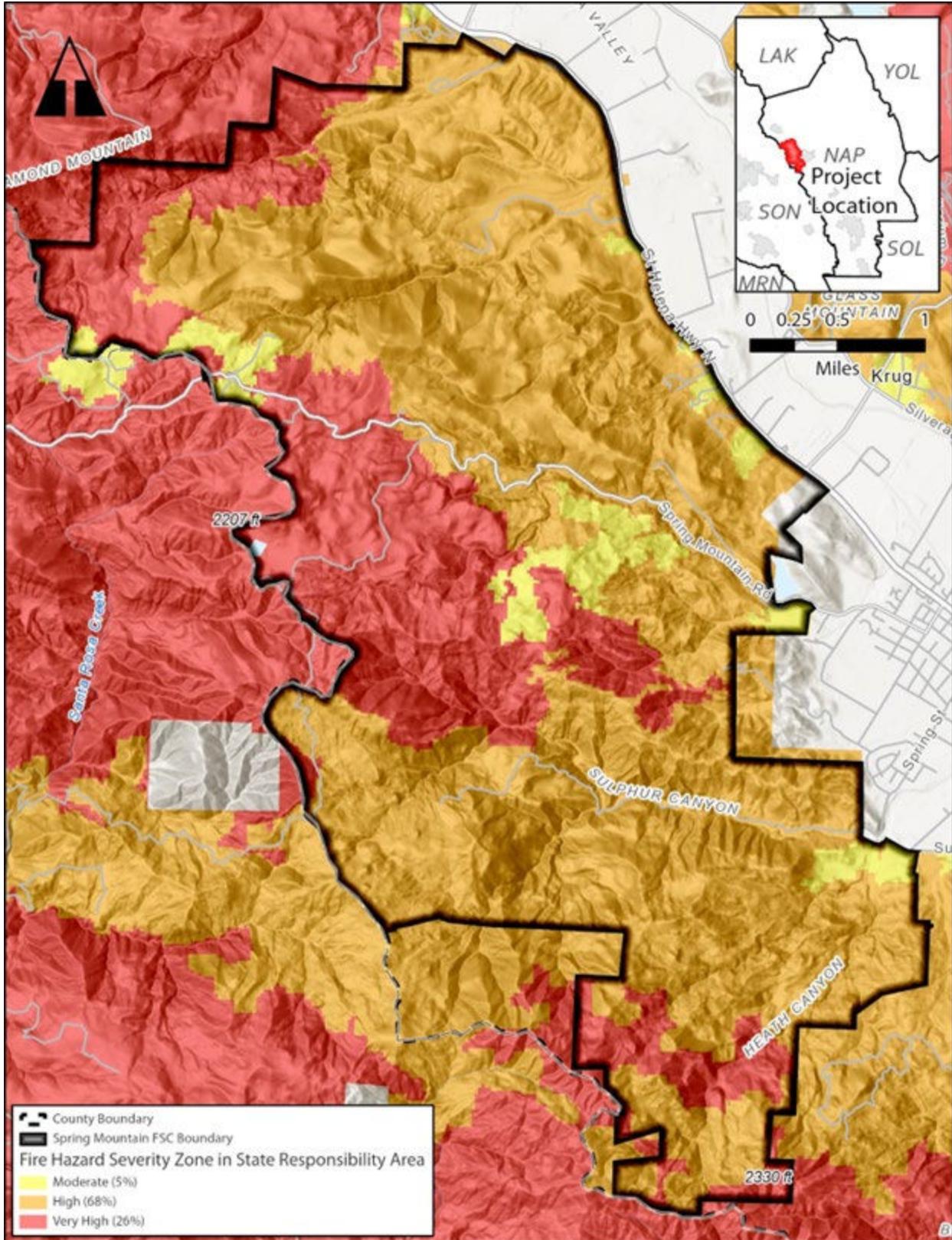


Figure 9. Distribution of Fire Hazard Severity Zones (CALFIRE, 2007).

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

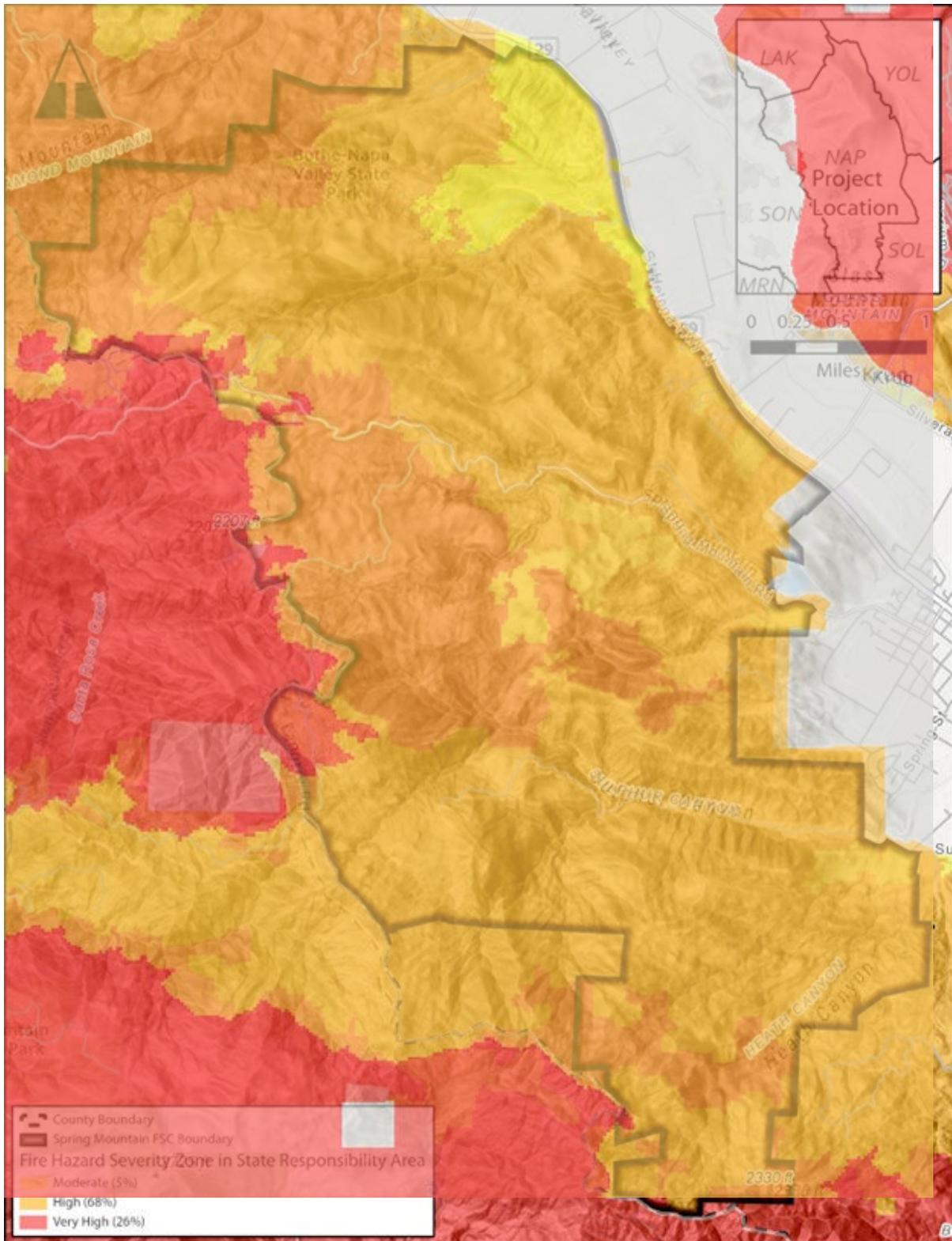


Figure 10. Approximate distribution of proposed Fire Hazard Severity Zones (CALFIRE, 2022). The 2007 designations are under the proposed designations, which are semi-transparent.

Neighborhood Risks

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.

Projects

Completed Projects

Owing to NCCFF funding sources, some fuel management projects, including expanded roadside projects on Spring Mountain Road, Langtry Road, and White Sulphur Springs Road, have been accomplished.

Proposed Projects

PUBLIC EDUCATION and COMMUNICATION PROJECTS	
Project EC1	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, assist with fire infrastructure signage design
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire
Area	Throughout area including vacation rental properties.
Goal	Provide residents knowledge about how to retrofit structures to be more ignition-resistant , develop database for outreach, update fire response and evacuation plan
Actions	Revise existing evaluation databases, 'train the trainer', designate volunteer/staff to conduct evaluations, enter into database, transfer data to fire departments, update as needed
Who?	1-3 volunteers or paid staff if grant-funded
Schedule	Now, any time
Project EC2	Establish Neighbors-in-Need defensible space program
	Evac & Access Ignition Prevention X Reduce Property Damage X Contain Fire
Area	Selected residences
	a. Ruston/Huff large woodland clearing project (co-share with SHFSC)
	b. Tychson Hill along highway
	c. Byrd Hill
	d. North Mill TBD
Goal	Notice of call-to-action re burn permits, broom removal, meetings
Actions	a. Nominate homeowners
	b. block captains to contact homeowner, arrange contractor to perform treatments
	c. tbd cost-shares expenses
	d. use social media for communications plan
	e. use social gathering for fundraiser for these projects
Who?	Landowner OK needed, coordination by SMFSC
Schedule	Now, any time

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

Project EC3	PG&E stakeholder communication plan
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire
Area	All properties with PG&E power lines
Goal	a. Develop map of existing power lines
	b. Investigate whether power line clearances can be used for possible escape routes
	c. Communication with PG&E on York Creek power line clearance standards
	i. Other creeks w/ power lines?
	d. Communication/meeting with PG&E on White Sulphur Springs lines into St Helena
	e. Evaluate potential escape route along permanently cleared transmission lines
	i. White Sulphur Springs route
	f. Set up community outreach tools on PG&E support information, specifically vegetation management
Actions	Develop map of existing PG&E power lines; investigate with Cal Fire whether to educate neighbors on evac access routes
Who?	All property owners with PG&E power lines and immediate neighbors
Schedule	Now, any time
Project EC4	Educate homeowners of government cost-share programs regarding:
	a. Retrofitting older homes
	b. Forest management cost-shares
	c. Creation of water supply via tax incentives
	Evac & Access Ignition Prevention X Reduce Property Damage X Contain Fire
Area	All property owners
Goal	Inform residents of programs that defray costs of management, so that vegetation management is performed
Actions	Gather information, summarize and produce brochures, web content for distribution
Who?	Willing volunteer to gather and package information
Schedule	Now, any time
Project EC5	Evaluate applicability/Communicate guidelines from Firewise and CalFire for residents to shelter in place/safe-to-stay places on properties might be, as a last resort
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire
Area	White Sulphur Springs; Sulphur Creek; Upper Spring Mountain; Bale Mill adjacent landowners
Goal	Provide residents knowledge about where places may be safer if evacuation is not possible; HIGHWAY 29 PROCEDURES OUTLINED
Actions	Gather knowledge of large areas of low-fuel conditions, and situations that bolster life safety
Who?	1-3 volunteers
Schedule	Now, any time
Project EC6	Establish communication means via 1- Block Captain text chains, 2-w/o cell (assume no cell phone communications): Call 'Em All or radio or Ham Operators, cellphone boosters, Google groups
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire
Area	Throughout area
Goal	Alert community members of emergencies, and communicate disconcerting non-emergencies
Actions	Obtain phone numbers of volunteers, subscribe to service
Who?	Every resident
Schedule	Now, any time
Project EC7	Develop a set of best management practices for wildland fire and train vineyard workers on those practices
	Evac & Access Ignition Prevention Reduce Property Damage X Contain Fire X

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

Area	Vineyard owners
Goal	Protect vineyards workers during wildfire, minimize ignition risk
Actions	a. Determine operation changes during times of high fire danger, b. Support efforts to improve notification/communication between vineyard workers, c. Establish evacuation protocols for workers
Who?	Vineyard owners
Schedule	Now, any time
Project EC8	Share funding opportunities for removal of dead trees and shrubs, or active forest/woodland management.
	Evac & Access Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Property owners with burned vegetation (most of SMFSC)
Goal	Remove dead trees and shrubs, actively manage forest/woodland to reduce fuel load
Actions	Develop a "cheat-sheet" of cost-share opportunities
Who?	Property owners with burned vegetation (most of SMFSC)
Schedule	Now, any time
Project EC9	Community outreach with government agencies
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Any property owners impacted by overlap with government agencies for fire preparedness work
Goal	Improve SMFSC communications and paths for problem resolution to complete fire preparedness projects on lands adjacent to govt agencies
Actions	PG&E-Establish direct communication for vegetation management project improvements
	Vine Trail-Establish communication with executive director to request "No Smoking" signs installed along trail
	Cal Trans-Determine best point of contact for Hwy 29 road clearance/setback rule understanding, procedures
	Napa Co streets-Steve Lederer-review plans for Highway 29 evacuation procedures to educate neighbors
Who?	All of SMFSC
Schedule	Now, any time
Project EC10	Community outreach event tied to fundraising for project specific goal
	Evac & Access Ignition Prevention Reduce Property Damage Contain Fire
Area	SMFSC
Goal	Socially focused fundraising opportunity to gather everyone in SMFSC to improve information flow across large FSC
Actions	Organize and execute social gathering
	Select fundraising opportunity to rally around (Beacon Box-develop fire infrastructure database)
Who?	All of SMFSC
Schedule	Late summer or fall after harvest season
Project EC11	Communication tools shared with SMFSC members
	Evac & Access Ignition Prevention Reduce Property Damage Contain Fire
Area	SMFSC
Goal	Provide communication tools available to the community--Nixl, Watch Duty, Twitter, PulsePoint Respond app, others to be identified
Actions	Draft email describing purpose of each communication tool; provide links to apps
Who?	All of SMFSC
Schedule	Now, any time

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

SUPPRESSION SUPPORT PROJECTS	
Project S1	Compile beacon box or knox-box QR codes (linking to electronic database) at base of roads, using Diamond Mountain and Pritchard Hill as examples
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire
Goal	Allow emergency responders to respond and follow directions using aerial observations
Area	At base of Spring Mountain Road, White Sulphur Springs Road, Bale Mill; county line at Spring Mountain Road
Actions	SMFSC to develop information in electronic binder, purchase box and knox-box QR code sign, and deliver electronically to fire department
	a. Pre-attack plan for emergency responders, possibly posted at beginning of spur roads
	 i. locations of water supply (noting the capacity and hook-up options)
	 ii. access points (roadways, peripheral vineyard connectors, legacy fire roads)
	 iii. condition of the road (the roadbed type, and whether any has excessive grades or tight turns) should be indicated.
	 iv. gates should be mapped and numbered/named, with numbers/names conveyed to the local fire departments.
	 v. Support additional connections between properties; establish “only in emergency” protocols, or other arrangements
Who?	Willing members of community on the above roads
Schedule	Now, any time
Project S2	Install Green Signs: , addresses, access
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Goal	Inform responders of features that encourage entry and successful response
Area	Entire area
Actions	a. Complete neighborhood signage via individual outreach/donation
	b. Determine funding for Neighbors in Need signage not completed through individual outreach
Who?	All parcels done by neighborhood block captain. Small group to install signs (volunteer resident, 4-H, Boy Scouts)
Schedule	Now, any time
Project S3	Communications Plan
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Entire area
Goal	Inform residents and fire agencies of emergencies & resources
Actions	Continue evaluations, communications with CAL FIRE
	a. Phone tree by neighborhood
	b. Knox box QR scans at heavy spur locations:
	 i. White Sulphur Springs knox box project
	 ii. Spring Mountain Road (where to locate?)
	 iii. Langtry Road
	 iv. North Mill knox box
	 v. Byrd Hill knox box
	 vi. Bale Mill knox box
	 vii. Bea Lane knox box
	 viii. (Martin/Skilling/Croshaw?)
	 ix. Tychson Hill knox box
	 x. (others?)
Who?	All residents within SMFSC boundary
Schedule	Now, any time
Project S4	Develop pre-attack plan of access and water supply conditions
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

Area	Entire area
Goal	Inform responders of features that encourage entry and successful response
Actions	Continue evaluations, communications with CAL FIRE
Who?	Willing homeowners to have evaluations completed and data shared
Schedule	Now, any time
Project S5	Participate in and advocate for Ag Pass
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Entire area
Goal	Allow vineyard workers to maintain critical ag infrastructure, and inform responders of safety features
Actions	Communicate with County Ag Department
Who?	Vineyard owners
Schedule	Now, any time
Project S6	Identify and maintain strategic fire access dozer lines and legacy fire roads
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire X
Area	Properties with prior dozer lines or legacy fire roads
	a. White Sulphur Spring - Spring St Fuelbreak
	i. Ruston parcel-large parcel funding
	ii. White Sulphur Springs Road—roadside clearance, including Sulphur Creek interaction
	b. Mid Spring Mountain Road to Sonoma County
	i. Segment 2 from 30-100ft on Langtry and Spring Mtn Rd
	c. Smith-Madrone to Stony Hill to Bale Mill entrance
	i. Re-establish fire road at Smith Madrone to Stony Hill
	ii. Brush clearance along Stony Hill road from Bale Mill entrance from Stony Hill to Mill Creek bridge
	iii. From Stony Hill to the Legacy fire road
	iv. Roadbed repair from Stony Hill to Bale Mill gate
	d. Mill Creek/Bergman/Highway 29 Glass Fire break
	i. Establish existing firebreak in State Park at Mill Creek to Bergman as permanent shaded fuel break for protection
	ii. Maintain existing shaded fuel break at Bergman two parcels
Goal	Allow access to support fire containment
Actions	Obtain agreement with landowners, work with CAL FIRE for implementation. Locate maps of prior fire roads for restoration
Who?	Landowners of prior dozer lines or legacy fire break locations
Schedule	Now, any time after county-wide CEQA completed
Project S7	Explore water supply enhancement at top of ridges
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire X
Area	Strategic ridgelines
Goal	Allow access to support fire containment
Actions	Obtain agreement with landowners, work with CAL FIRE for implementation
Who?	Landowners of strategic ridgeline locations
Schedule	Now, any time
Project S8	SMFSC western boundary ridgeline fire break hybrid (legacy breaks + vineyards)
	Evac & Access X Ignition Prevention Reduce Property Damage Contain Fire X
Area	a. Spring Mountain Road
	b. PG&E power lines
	c. Water supply on Spring Mountain Road
	d. Cell tower on Croshaw (South Mill area)
	e. White Sulphur Springs to St Helena city limits
	f. Madrona Avenue at Abreu/Newton vineyards

Spring Mountain Firesafe Council Community Wildfire Protection Plan

Goal	Map fire breaks & vineyards for contiguous coverage map at west border			
Actions	a. Identify legacy fire roads and re-establish			
	b. Identify vineyards connecting to fire roads for continuity in break			
	c. Identify vendors needed to complete work, quantify costs to re-establish breaks and vineyard clearances			
	d. Determine maintenance funding needs for ongoing work			
Who?	tbd			
Schedule	tbd			
Project S9	Place high priority on protection of infrastructure, including roads, water sources, communication sites			
	Evac & Access X	Ignition Prevention	Reduce Property Damage	Contain Fire X
Area	a. Spring Mountain Road			
	b. PG&E power lines			
	c. Water supply on Spring Mountain Road			
	d. Cell tower on Croshaw (South Mill area)			
	e. White Sulphur Springs to St Helena city limits			
	f. Madrona Avenue at Abreu/Newton vineyards			
Goal	Map infrastructure, water resources (see Mt Veeder FSC example)			
Actions				
Who?	tbd			
Schedule	tbd			

VEGETATION TREATMENT PROJECTS				
Project VM1	Roadsides treatments for evacuation routes			
	Evac & Access X	Ignition Prevention	Reduce Property Damage X	Contain Fire X
GOAL	Provide safe evacuation and access for emergency response vehicles/ identify last-resort shelter in place roadside area			
Area	Roadside used for ingress/egress for evacuation and emergency vehicle access, where trees could fall and brush under trees is abundant			
	a. White Sulphur Spring - Spring St-Heath Canyon base Fuelbreak			
	i. ¼ mile at St Helena town interface			
	ii. Sulphur Creek bridge			
	iii. Road to Marsten/Arvind--upper White Sulphur Springs			
	b. Heath Canyon/Sulphur Springs Avenue			
	i. Sulphur Springs Avenue			
	ii. Heath Creek meet up point			
	c. Lower Spring Mtn Road roadside Fuel Break			
	d. Upper Spring Mt Road roadside—IN FIREWISE FUNDING -5 YR PLAN			
	e. Langtry-timber harvest and roadside veg management			
	f. Bale Mill entrance/road to Stony Hill/Bergman—re-establish historical annual clearing in park			
	g. Bale Mill/El Molino/Sabin--treat unburned area of Bothe/Bale Mill for vegetation management			
	h. North Mill roadside veg management			
	i. Hwy 29 Bale Mill to Culinary Institute			
	j. Lower Langtry Rd to White Sulphur Springs			
ACTIONS	Encourage / promote vegetation management by County and PG&E to remove hazard trees along roads			

Spring Mountain Firesafe Council Community Wildfire Protection Plan

Who?	Willing members of community, Napa County, State Parks
Schedule	Now, any time
Project VM2	Link evacuation route from Upper Spring Mountain/Stony Hill legacy fire road/Bothe State Park/St Helena Hwy
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	a. Roadside, where trees could fall and brush under trees is abundant
	b. Re-establish legacy fire road between Smith Madrone and Stony Hill
GOAL	Provide safe evacuation and response for Upper Spring Mountain residents if Spring Mtn Rd is not passable
ACTIONS	Encourage / promote vegetation management by State Parks to remove hazard trees along roads
	Encourage road widening in Bothe State Park from Stony Hill to Bale Mill entrance
Who?	Smith Madrone, Stony Hill, Bergman Family Vineyards, Bothe State Park, Bale Mill State Park
Schedule	Now, any time
Project VM3	Create ridgetop fuelbreaks
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	COUNTY LINE--a. Whitehall Lane to Spring Mountain Road
	Ridge lines within boundary:
	a. Spring Mountain Vineyard to Langtry Road
	b. Upper Mill Creek ridge
	c. Ritchie Creek ridge
	d. Heath Canyon ridge
	e. Hirsch Creek ridge (Haney)
	f. Sulphur Creek ridge
	g. York Creek ridge
Goal	Calm fire behavior in strategic location, aid containment
Actions	Request permit from landowners, develop treatment Rx agreeable to all, contract work
Who?	Selected parcel owners along border, access routes
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days
Project VM4	Forest health
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Forest land within boundary
Goal	Create and maintain healthy forest land to enhance redwood groves and oak meadows, reduce douglas fir population
Actions	a. Sulphur Canyon forest management plan developed
	b. Heath Canyon/ Garden forest management plan developed
	c. Bea Lane/Bothe interface/Haney fuel load reduction and fire debris removal
	d. Bale Mill entrance/Mill/El Molino/Bergman/Lyman
	i. Prescribed burn opportunity at Lyman
	e. North Mill/History Trail interface—State Parks—Evaluate for prescribed burn or goat grazing
Who?	Landowners of conifer forest land and/or oak meadows
Schedule	Best in the fall for non-grazing activities, spring for grazing, OK anytime but avoiding nesting season and red flag days
Project VM5	State Parks boundary WUI
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Bothe and Bale Mill State Park:
Neighborhood	a. Natural Resource Management Plan-Bothe/Bale Mill
	b. Wildfire Management Plan-Bothe/Bale Mill

Spring Mountain Firesafe Council Community Wildfire Protection Plan

	c. North Mill/History Trail
	d. Sugarloaf interface
Goal	Support the preparation of a Natural Resource Management Plan & Wildfire Management Plan by State Parks
Actions	State Parks to establish forest stand structure that is compatible with lower fire hazards and natural fire regimes
	State Parks to include restoration of forests along existing fire breaks from Glass fire
Participants	All State Park border residents, Bothe State Park, Bale Mill State Park
Schedule	As determined by state funding of State Parks actions
Project VM6	Share opportunities for a prescribed burn association; training opportunities
	Evac & Access Ignition Prevention X Reduce Property Damage X Contain Fire X
Area	Large contiguous parcels with heavy growth vegetation (forest, underbrush or grasses)
Neighborhood	a. Lyman/Haney vacant lots from Bale Mill to Hirsch Creek
	b. History Trail/North Mill neighborhood
	c. Upper Spring Mountain
Goal	Share opportunities for a prescribed burn and corresponding training opportunities
Actions	tbd
Participants	Large contiguous parcels with heavily overgrown vegetation (see vacant & large landowner projects)
Schedule	During burn season only
Project VM7	Prioritized vegetation management focus near high-density residential areas
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Interface of boundary to St Helena:
	a. Lyman-Haney: swath in Conifer forest with brush understory - use goats
	b. Haney - Frias swath in conifer forest with brush understory - use goats
	c. Frias to Rockland swath in conifer forest with brush understory - use goats
Goal	Reduce fuel volume and fire debris near city neighborhood interfaces
Actions	tbd
Participants	Landowners at critical interface locations
Schedule	Best in the burn season for ease of brush removal, OK anytime but avoiding red flag days
Project VM8	Best practices for riparian areas: OK to remove all invasives
	Evac & Access X Ignition Prevention Reduce Property Damage X Contain Fire X
Area	Along all riparian corridors
	a. Sulphur Creek
	b. Hirsch Creek/Haney Bergman seasonal creek
	c. York Creek
	d. Bale Mill entrance wetlands
Goal	Reduce fuel volume and rid invasive weeds
Actions	Hand pull invasive plants: arundo, vinca, Himalayan blackberry, etc. chip all dead material (keep chipper out of creek area),
Participants	Hand crews, property owners. No machinery
Schedule	Avoiding nesting season and red flag days
Project VM9	Establish a vacant land defensible space interface program
	Evac & Access Ignition Prevention X Reduce Property Damage X Contain Fire
Area	All vacant land property owners
	a. Haney large gorge timber clearing project
	b. Lyman -Haney timber treatments for fuel reduction
	c. Upper Bea Lane---Harrison/Money/Hansen/Heinemeyer/Cooper
	d. Mid mountain forested deep canyon lands---Petewill/Herne/Bieneman
Goal	Assist absentee landowners (20% of SMFSC boundary) in creating/maintaining defensible space along interface with neighbors/structures/vineyards/roads/infrastructure

Spring Mountain Firesafe Council Community Wildfire Protection Plan

Actions	Establish communication with offsite owners, arrange contractors to perform treatments
Who?	Landowner OK needed, coordination by SMFSC
Schedule	Now, any time
Project VM10	Large landholder forestry management coverage and clean-up of fire debris
	Evac & Access Ignition Prevention X Reduce Property Damage X Contain Fire
Area	All large landholders with significant forestry acreage (40 acres or more)
	a. Heath Canyon—Garden/(Varozza?)
	b. White Sulphur Springs--Ethel Wild (Stockton family) Kim Foot contact
	c. Newton Vineyards
	d. Langtry Road—Langtry Rd LLC, York Creek Vineyards - ID unfunded projects
	e. Spring Mountain Rd—Spring Mountain Vineyard - ID any unfunded projects
	f. Bothe State Park/Bale Grist Mill State Park---see separate project
	g. Upper Spring Mtn Road
Goal	Assist large landowners (xx% of SMFSC boundary) in maintaining healthy forests and fire debris removal
Actions	Establish communication with large landowners to assess need, arrange contractors to perform treatments
Who?	Landowner OK needed, coordination by SMFSC
Schedule	Now, any time
Project VM11	Shaded fuel breaks
	Evac & Access Ignition Prevention X Reduce Property Damage X Contain Fire X
Area	a. Bale Mill/Bergman/Sodhani/Croshaw Glass Fire fuel break conversion to 'restoration' project in park; permanently maintained shaded fuel break on private lands
Goal	
Actions	
Who?	
Schedule	

Approval Signatures

The Spring Mountain 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 Spring Mountain community.

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

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

Agreed: _____ Date: _____
Anne Cottrelle, Supervisor, Napa County District 3

Agreed: _____ Date: _____
Mike Marcucci, Unit Chief, CAL FIRE and Fire Chief, Napa County Fire Department

Agreed: _____ Date: _____
Christopher Thompson, President, Napa Communities Firewise Foundation

Agreed: _____ Date: _____
Pam Berman, Co-Lead, Spring Mountain Fire Safe Council

Agreed: _____ Date: _____
Vanessa Von Hessert, Co-Lead, Spring Mountain Fire Safe Council

Spring Mountain Fire Safe Council Community Wildfire Protection Plan

Approval Signatures

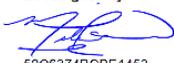
The Spring Mountain Community Wildfire Protection Plan was developed collaboratively and in consultation with interested parties, including Napa Communities Firewise Foundation, Napa County Fire Department, CAL FIRE, and the residents of the Spring Mountain community.

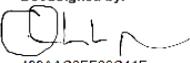
The Plan identifies and prioritizes areas for hazardous fuel reduction treatments and recommends other types and methods of treatments that will protect the Spring Mountain Community.

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

DocuSigned by:

 Agreed: _____ Date: 6/10/2024
 Anne Cottrell, Supervisor, Napa County District 3

DocuSigned by:

 Agreed: _____ Date: 6/12/2024
 Mike Marcucci, Unit Chief, CAL FIRE and Fire Chief, Napa County Fire Department

DocuSigned by:

 Agreed: _____ Date: 6/18/2024
 Christopher Thompson, President, Napa Communities Firewise Foundation

DocuSigned by:

 Agreed: _____ Date: 6/19/2024
 Pam Berman, Co-Lead, Spring Mountain Fire Safe Council

DocuSigned by:
 VANESSA VON NESSEPT
 Agreed: _____ Date: 6/19/2024
 Vanessa Von Hessert, Co-Lead, Spring Mountain Fire Safe Council