Community Wildfire Protection Plan

SPRINGS FIRE SAFE COUNCIL
2023

This Community Wildfire Protection Plan (CWPP) was developed by the Hollydale/Canyon/Terrace Fire Safe Council with guidance and support from Fire Safe Sonoma, the County of Sonoma, and the California Department of Forestry and Fire Protection. This CWPP supplements the Sonoma County Community Wildfire Protection Plan.

DISCLAIMER

This CWPP is a 'living document' and should continue to be evaluated. Projects included at Appendix B should be reevaluated and updated every year. Additionally, the CWPP document itself should be updated every five (5) years. This document should not be seen as the culminating project of a planning process, but a resource and the starting point from which to pursue future funding and organizing opportunities.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view(s) of any governmental agency, organization, corporation or individual with which the authors may be affiliated.

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

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

While the publisher and authors have used their best efforts in preparing this Plan, they make no representations or warranties with respect to the accuracy or completeness of the contents and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by receiving this publication. The advice and strategies contained herein may not be suitable for your specific situation. The publisher, sponsors and authors shall not be liable for any loss of profit or any other damages, including but not limited to, special incidental and/or consequential damages.

This CWPP is not to be construed as indicative of project "activity" as defined under the "Community Guide to the California Environmental Quality Act, Chapter Three, Projects Subject to CEQA." Any actual project activities undertaken that meet this definition of project activity and are undertaken by the CWPP participants or agencies listed shall meet local, state, and federal environmental compliance requirements.

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

SIGNATORIES

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

Susan Gorin (Jul 16, 2023 15:34 PDT) — 07/16/2023

COUNTY OF SONOMA — **DATE**
District Five Supervisor
Susan Gorin, County Supervisor

Stephen Akre (Jul 20, 2023 13:41 PDT) — 07/20/2023

LOCAL FIRE DEPARTMENT — **DATE**
Sonoma Valley Fire District
Steve Akre, Fire Chief

07/11/2023

STATE AGENCY — **DATE**
(AUTHORIZING ENTITY—REQUIRED FOR FINALIZATION)
California Department of Forestry and Fire Protection (CAL FIRE)
Mike Marcucci, LNU Unit Chief

Roberta MacIntyre (Jul 20, 2023 16:07 PDT) — 07/20/2023

COUNTYWIDE FIRE SAFE COUNCIL — **DATE**
Fire Safe Sonoma
Roberta MacIntyre, President/CEO

Hannah Perot (Jul 20, 2023 18:23 PDT) — 07/20/2023

SPRINGS COMMUNITY REPRESENTATIVE — **DATE**
Hannah Perot / Ray Willett

CONTENTS

Acknowledgements

This document is made possible by a grant from the California Fire Safe Council and with support from WRA Environmental Consultants.

The Springs Fire Safe Council would like to start by thanking the tremendous work done by Fire Safe Sonoma, and in particular, Roberta MacIntyre. The entire team has gone above and beyond to support us, and we'd like to thank Cailin Notch with WRA for her project management skills, Marika Ramsden for jumping right in without missing a beat, and Mason Inumerable for being our tech guru.

We'd like to thank Lucas Patzek and Sarah Szewczyk for getting us off the ground and procuring grants for Spanish language translation. Your expertise is missed.

We'd like to thank After the Fire for funding our grant, with it we are able to provide Spanish language translation as well as translation of our CWPP. We would also like to thank Jordi Vidales, co-owner of J.A.V. Language Solutions, for his translation services which allowed us to run a hybrid, fully bilingual Community Stakeholders Meeting.

Thanks to the Springs MAC for initiating the Fire Safe Council project. We would also like to thank Sonoma County District 1 Supervisor Susan Gorin, Captain Gary Johnson and Chief Steve Akre with Sonoma Valley Fire District for their support, and Laurie Salmas, School Office Manager at El Verano Elementary, for her help getting our first community meeting set up.

Sincerely,

Springs Fire Safe Council

EXECUTIVE SUMMARY

COMMUNITY PROFILE

The geographical footprint of the Plan Area is within Sonoma County in Northern California and mirrors the area represented by the Springs Municipal Advisory Council (MAC), covering 2,366 acres within the Sonoma Valley. The Plan Area encompasses the unincorporated communities of Boyes Hot Springs, Fetters Hot Springs, Agua Caliente, and El Verano, as well as the Donald Street neighborhood.

Using input from statistical data, local government, fire agencies, landowners, and other interested community stakeholders, a wildland fire risk assessment with a focus on the following areas of study was conducted: evacuation, structural ignitability, and wildland fire fuels reduction.

This CWPP supplies a general overview and assessment of wildfire risks to the communities noted in the Plan. Using input from local government, fire agencies, landowners, and other interested community stakeholders, the project team developed a list of priority projects to increase wildfire resiliency within the community. Once carried out, these tasks may reduce the potential loss of human life, property, and natural and cultural resources due to wildfire.

OBSERVATIONS

The Springs area has a predominantly southwestern aspect, with approximately twelve percent (12%) of the area in a 'High' Fire Hazard Severity Zone (FHSZ) and eight percent (8%) in a 'Moderate' FHSZ. Less than one percent (<1%) is within the 'Very High' FHSZ. The majority of the Springs Plan area (79%) does not have a CAL FIRE FHZA designation as a large percentage of the Plan Area is within the Local Responsibility Area (LRA).

The overall risk ranking for the Springs Plan Area is 90, a "Very High Hazard", according to the Fire Safe Sonoma Risk Analysis tool (Low Hazard = 41 or less; Moderate = 41 to 60, High = 61 to 75, Very High = 76 or greater.) Fire behavior in this area is likely to be extreme.

CONCLUSIONS

Working with fire agencies, landowners and other interested community stakeholders, a set of priority project actions have been developed to increase fire resiliency. These actions are intended to reduce the potential loss of human and animal life, structures, and ecosystems due to wildfire.

Areas identified as immediate concerns are evacuation (the ability for vehicles to simultaneously pass on roadways; long roads with one way in and one way out) and a lack of address numbers; the lack of fire safe roofs and siding; unenclosed features, such as decks; and roadside vegetation.

RECOMMENDATIONS

The primary CWPP priorities are evacuation, vegetation management, structural hardening incentives, and education and outreach in all of the priority areas. Based on extensive input from members of the community, the proposed projects will focus on the following:

- **Projects related to Access/Evacuation** should include roadside vegetation removal, improved address signage, and general education about evacuations, including early notifications, evacuating with pets, and projects to assist those requiring assistance evacuating.

- **Projects related to Structural Hardening** should include structural hardening and retrofit resources, particularly for low-income and at-risk populations as well as funding incentives. Because the Springs Plan Area includes a large number of both homeowners and renters, structural hardening information should take into account options that are available to both populations. In cooperation with Fire Safe Sonoma, the Springs Fire Safe Council supports and promotes fire safe activities including public education on ways to reduce structure ignitability, especially through meeting the requirements of the Sonoma County Building Codes, Fire Codes and Fire Safe Standards.

- **Projects related to Defensible Space/Fuels Reduction** should include roadside fuel reduction projects, community fuel breaks, fuels reduction information around power lines, and defensible space resources, especially for low-income and at-risk populations as well as funding incentives.

- **Projects related to Education and Outreach** should include outreach and education projects focusing on wildfire preparedness and evacuations, information to community residents about what home improvements or modifications they should make to structures to reduce ignitability, and information about defensible space and resilient landscaping. Information should be targeted to both homeowners and renters.

THIS PAGE LEFT INTENTIONALLY BLANK.

Section I: Development

COLLABORATION

This Community Wildfire Protection Plan (CWPP) provides a general overview and assessment of wildfire risks to the communities of the Springs, an unincorporated community in Eastern Sonoma County within Sonoma Valley. Using input from local government, fire agencies, landowners, and other interested community stakeholders a set of priority tasks were developed to increase fire resiliency (Appendix B).

The purpose of the activities and projects listed herein is to reduce the potential loss of human life, property, and natural and cultural resources due to wildfire.

This CWPP as developed for the Springs:

- was collaboratively developed and is intended to meet the intent of the Healthy Forest Restoration Act (HFRA) in emphasizing the need for agencies to work collaboratively with communities in developing wildland fire reduction projects.
- interested parties and governmental agencies in the vicinity of this CWPP have been consulted as part of the collaborative process.
- identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect areas within this CWPP.
- identifies and prioritizes measures to reduce ignitability of structures throughout the area addressed by the plan.
- identifies and prioritizes educational and outreach priorities throughout the area addressed by the plan.
- identifies and prioritizes personal preparedness and evacuation priorities throughout the area addressed by the plan.

Is intended for use as a planning and assessment tool only, utilizing a compilation of community issues/goals and projected fire mitigation strategies and is not to be construed as indicative of project "activity" as defined under the "Community Guide to the California Environmental Quality Act, Chapter Three, Projects Subject to CEQA." Per the Community Guide, Section 3.1.1, "CEQA only applies to public agency decisions to approve, or actions to carry out, a discretionary project." Any actual project activities meeting this definition of project activity and undertaken by the CWPP participants or agencies listed shall meet with local, state, and federal environmental compliance requirements.

Collaborators

Representatives directly involved in the development of this CWPP are included in the following tables.

CWPP DEVELOPMENT TEAM		
NAME	**ORGANIZATION**	**ROLES**
Hannah Perot	Springs Fire Safe Council	Team Leader
Ray Willet	Springs Fire Safe Council	Team Leader
Roberta MacIntyre	Fire Safe Sonoma	Project development & management
Marika Ramsden	Fire Safe Sonoma	Project development & management
Mason Inumerable	Fire Safe Sonoma	Project development & management
Cailin Notch	Fire Safe Sonoma, WRA Environmental Consultants	Project oversight & facilitation

Community / Agencies / Fire Safe Councils

Representatives directly involved in the development of the Springs CWPP are included in the following table. Each team member had a specific role and is identified in the table. Many team members contributed significantly throughout the development process.

CWPP GOVERNMENTAL STAKEHOLDERS			
NAME	**ORGANIZATION**	**POSITION**	**ROLE**
Ben Nicholls	CAL FIRE, Sonoma-Lake-Napa Unit	Division Chief	Concepts feedback, review, feedback & approve
Sean Jerry	CAL FIRE Sonoma-Lake-Napa Unit	Division Chief	Concepts feedback, review, feedback & approve
Susan Gorin	County of Sonoma	County Supervisor (District 1)	Concepts feedback, review, & approve
Arielle Kube-Jones	County of Sonoma	District 1 County Supervisor Aid	Concepts feedback & review
Gary Johnson	Sonoma Valley Fire District	Fire Captain	Concepts feedback & review
Steve Akre	Sonoma Valley Fire District	Fire Chief	Concepts feedback, review & approve
Misti Wood	Sonoma County Sheriff's Office	Community Engagement Liaison	Concepts feedback & information
Nancy Brown, PhD	Sonoma County Emergency Management	Community Preparedness Manager	Concepts feedback & Information
Caerleon Safford	County of Sonoma Permit Sonoma	Wildland Fire Safety Specialist	Concepts feedback & Information
Johannes Hoevertsz	Permit Sonoma, Transportation and Public Works	Director	Concepts feedback & Information
Kim Batchelder	County of Sonoma Ag & Open Space	Vegetation Management Coordinator	Concepts feedback & Information
Robynn Swan	California Fish and Wildlife	Senior Environmental Scientist	Concepts feedback & Information

THIS PAGE LEFT INTENTIONALLY BLANK.

Section II: Community Profile

COMMUNITY OVERVIEW

Sonoma County

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

The Springs Community

The Springs Fire Safe Council covers Boyes Hot Springs, Fetters Hot Springs, Agua Caliente, and El Verano, as well as the Donald Street neighborhood within the Sonoma Valley. It mirrors the area represented by the Springs Municipal Advisory Council (MAC), covering 2,366 acres. The Springs Plan Area (Plan Area) includes three CAL FIRE designated Communities at Risk, which are state-designated communities that are identified within the wildland-urban interface, and which are at high-risk of damage from wildfire ("Communities at Risk"). These communities are Agua Caliente, Boyes Hot Springs, and El Verano.

HISTORY

Image courtesy of Michael Acker, springsmuseum.org.

This area was originally settled by indigenous people who came here for the hot springs. Then, under Mexican rule in 1840, 50,000 acres of this area was sold off as "Rancho Agua Caliente." In 1895, Henry Ernest Boyes discovered the hot springs in the area, and built the Boyes Hot Springs Hotel (which later became the Fairmont). The hotel and springs became popular with tourists, with 70,000 people coming each year. There was a train that serviced the area. The depression stopped tourism, but after the 1930s, tourism yet again was the area's main driver, as it is today.

Because many of the homes in the area were built as second homes for blue collar workers from the city, they were built in a very modest, cottage style, often from odds and ends. Most of the area does not have sidewalks or curb cuts. The homes in El Verano are on larger lots, but the homes in Boyes Hot Springs are on smaller lots.

ACCESS AND EVACUATION

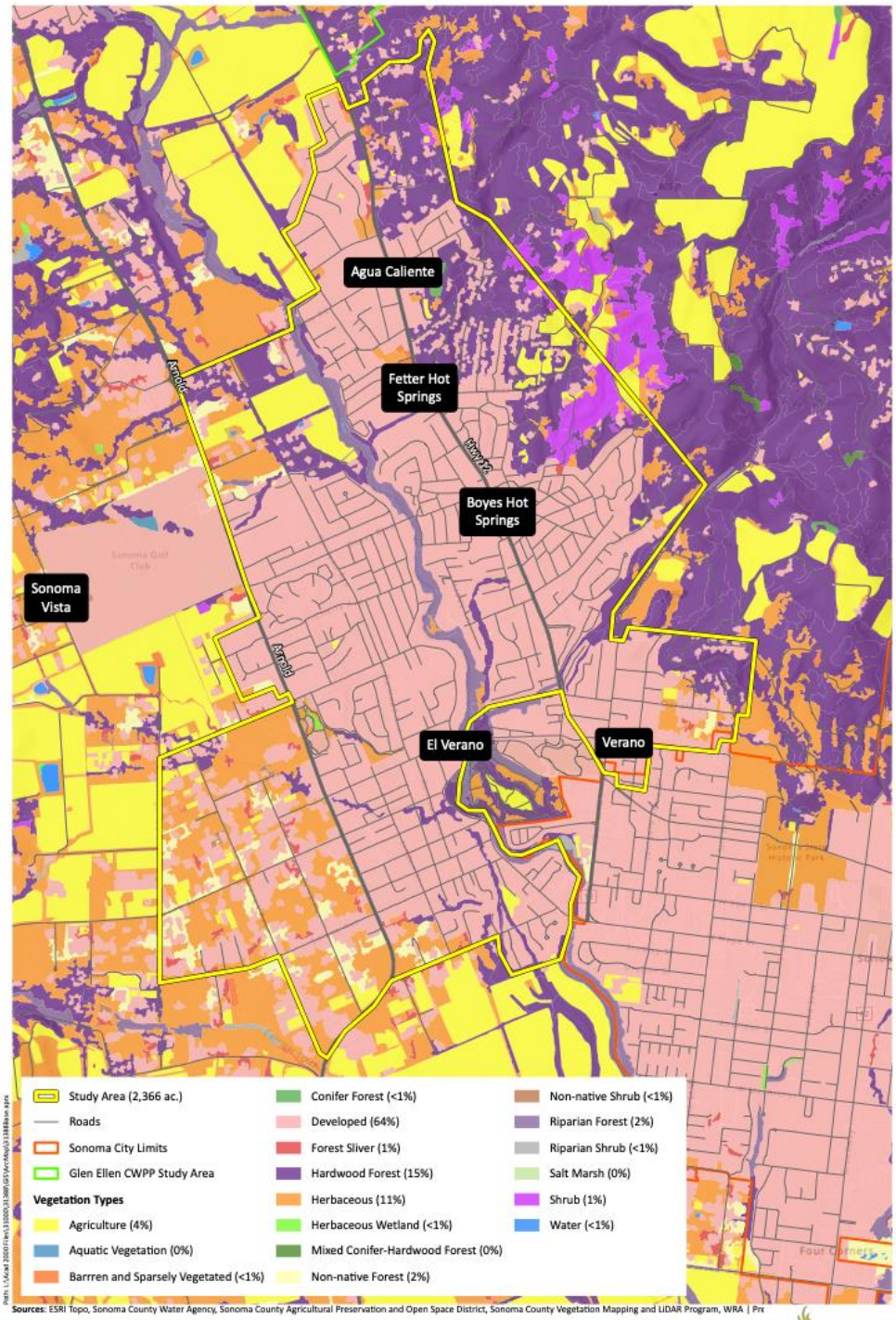
Highway 12 is the major thoroughfare, and four roads roughly define the boundaries of the Springs Fire Safe Council area: Highway 12 to the east (although there are a number of homes included in the Council that are east of 12), Arnold Drive to the west, Agua Caliente Road to the North, and Verano Avenue to the south. To the east of Highway 12, there is a network of streets and homes in the foothills, and this area is a particular concern for fire danger. The Sonoma Valley Fire District, in collaboration with the County of Sonoma, enforce County fire safe standard ordinance and State regulations through a hazardous vegetation inspection and abatement program in this area referred to as “The Maze” to provide for a safer community. The rest of the Fire Safe Council is on the floor of Sonoma Valley and is much flatter and more open.

VEGETATION

With the exception of residences on the hillsides east of Highway 12, the Springs Plan Area is largely urban. The majority of the 2,366 acres in the Springs Fire Safe Council area is developed (64%). The largest vegetation type is ‘Hardwood Forest’ (15%), which is primarily located at the northwest corner of the plan area near the crossing of Arnold Drive and Agua Caliente Road, as well as on the eastern side of the plan area boundary in the hills.

The next most prevalent vegetation type is ‘Herbaceous’ (11%), which is interspersed around the Plan Area, but is predominantly located in the southwest corner. The third most prevalent vegetation type is ‘Agriculture’ (4%), which is scattered in different sized parcels around the Plan Area. Both

‘Riparian Forest’ and ‘Non-native Forest’ amount to two percent (2%) of the Plan Area each for a total of four percent (4%). All other vegetation types are less or equal to one percent.



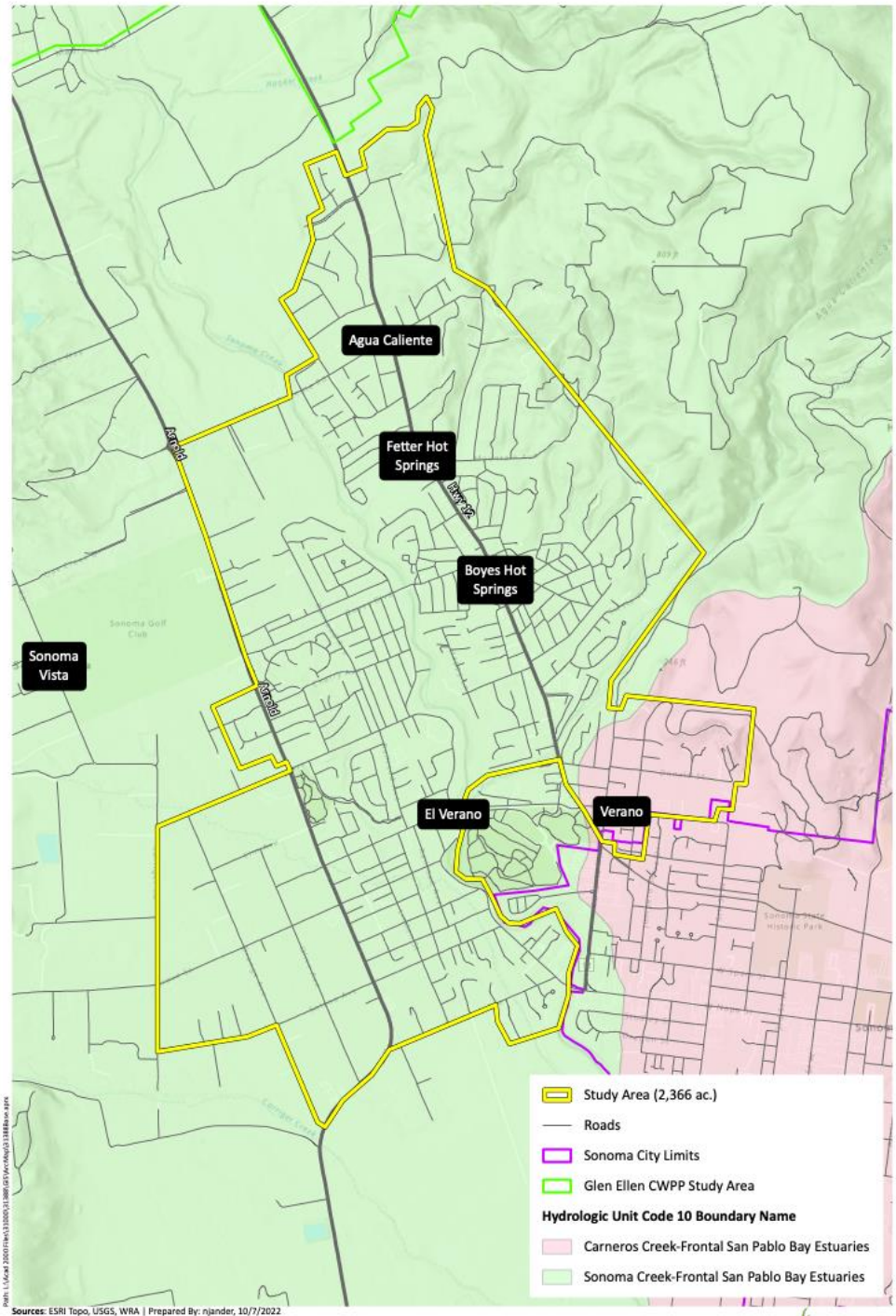
Map 3. Vegetation Types

Fire Safe Sonoma 4 Emerging Organizations
Springs Community Wildfire Risk Assessment.

TOPOGRAPHY

The topography of the Plan Area is a narrow valley that runs north / northwest. The foothills on the east side of Highway 12 eventually become the Mayacamas Mountains. To the west is Sonoma Mountain. The valley is less than three miles wide at its widest spots to the south, and gradually narrows as it moves north.

There is a considerable change in elevation from the valley floor to the mountainous area on the east side of the Plan Area. The lowest elevation is around 80 feet on the southeast corner of the Plan Area. The highest portions of the area are approximately 400 feet in certain areas of the Plan Area's eastern boundary. This equates to an approximate elevation change of 320 feet.



Map 5. Topography and Watersheds

Fire Safe Sonoma 4 Emerging Organizations
Springs Community Wildfire Risk Assessment.

FIRE HISTORY

Fires have come over the ridge into the Springs area over the Maycamas multiple times. There were fires in 1923 and 1964, and then in 2017 and 2020. The 1964 fire was stopped directly behind Sonoma Cinemas, which is in the Springs Fire Safe Council area. The 2017 fire was also stopped in a similar area. History proves that focusing our efforts on preventative measures in this area is our best bet for preventing spread into the homes in the foothills and the valley floor.

DEMOGRAPHICS

Using the three available Census Designated Places (CDP) for the Springs FSC area (Fetters and Agua Caliente are combined as one and the Donald Street neighborhood doesn't have a CDP), the table below shows Census 2020 data. The totals shown are weighted based on population size of each CDP. There are distinct differences between the three CDPs—the Boyes Hot Springs CDP is the youngest, earns the least per household, has the highest percentage of language other than English spoken at home, and has a substantially higher poverty rate than the other two tracts. It also has the lowest rate of homeownership. Fetters/Aqua Caliente has the highest proportion of Hispanic or Latino residents.

CENSUS DESIGNATED PLACES (CDP)					
	BOYES HOT SPRINGS	FETTERS / AGUA CALIENTE	EL VERANO	TOTALS (WEIGHTED)	CALIFORNIA MEDIAN
Population	6,215	4,233	3,867	14,315	
Median Household Income	$62,261	$82,260	$101,813	$78,600	$84,907
% Hispanic or Latino	48%	52%	40%	47%	39%
Language other than English Spoken at Home	50.9%	43.6%	13.7%	38.48%	43.9%
Employment Rate	63.8%	66.2%	58.1%	62.70%	57.6%
Bachelor's Degree or Higher	26.7%	30%	28.9%	28.16%	36.2%
Median Age	35.8	42.5	50.7	41.7	37.6
Population over 65	13.9%	14.4%	17.3%	14.9%	15.2%
Poverty	9.3%	2.8%	2.4%	5.5%	12.3%
Homeownership Rate	48.1%	57.8%	56.3%	53%	55.9%

The following table includes population statistics taken from the Sonoma County CWPP Hubsite for the Springs Plan Area.

SPRINGS PLAN AREA POPULATION STATISTICS	
2021 Total Population	19,102
2021 Senior Population Average	20.37%
2021 Average Diversity Index	56.3%
2021 Hispanic Population Average	31.36%
2019 Below Poverty Average	4.14%

Today, there are many businesses along Highway 12, including many independent Mexican markets and taquerias. We also have multiple schools in our area: El Verano and Flower elementary, a charter K-8 school, Woodland Star (a Waldorf-based elementary school), and Altimira Middle School. We are a small town with a population that largely services the wealthier parts of Sonoma Valley and surrounding areas. Because of low income levels and the high number of rentals, a primary concern will be home hardening as well as fuel reduction work.

WEATHER

The Springs enjoys a hot-summer Mediterranean climate. July brings the highest average temperature of 89 degrees (with an average low of 52 degrees). The weather patterns for Sonoma, California, which is the closest jurisdiction and a good proxy for the Springs Plan Area, include historically mild winters, moderately hot summers, and warm autumns. Summers are long, warm, dry, and mostly clear and the winters are short, cold, wet, and partly cloudy.

Over the course of the year, the temperature typically varies from an average low of 41.4°F in winter to an average high of 82.9°F in summer. Historically, rain falls for 73.3 days out of the year and collects up to 15.47 inches of precipitation. The month with the most rainfall is February, which brings an average of 3.23 inches of precipitation. The driest months are July and August, which experience an average precipitation of 0.04 inches each.

Spring and early summer experience the fastest average wind speeds. May is the windiest month on average with an average wind speed of 6.2 miles per hour (mph). The month with the lowest average wind speed is November at an average of 4.4 mph (*Weather-US.com)*. However, September and October bring Diablo winds (dry, hot, high-speed easterly winds) that have contributed to numerous fires in the area.

FIREFIGHTING CAPABILITY

Fire protection services in the Springs Plan Area are provided by the Sonoma Valley Fire District (SVFD) and CAL FIRE.

Sonoma Valley Fire District

The Springs is served by the Sonoma Valley Fire District. SVFD is an all-risk combination fire department including career and volunteer firefighters. There are two (2) fire stations within The Springs CWPP Plan Area: one in El Verano (SVFD #2) and one in Agua Caliente (SVFD #3). SVFD conducts residential inspections to determine compliance with local and state fire safe regulations related to structural hardening and defensible space.

SVFD's initial capacity and equipment for addressing a vegetation fire in the CWPP area on initial alarm consists of a Type-1 engine manned by three (3) crew members, three (3) Type-3 engines each staffed with three (3) personnel, a pair of water tenders operated by two (2) individuals, and a single Battalion Chief. In terms of reacting to a vegetation fire within the designated base map zone, SVFD's response adheres to the National Fire Protection Association (NFPA)'s 1720 standards for urban scenarios, as they deploy 15 crew members within a 10-minute timeframe. Water tenders and supplementary resources will also arrive shortly after.

Regarding water supply, over 80% of the Springs Study Area has water supply available that can supply responding forces with 500 gallons per minute (gpm) or more. SVFD is capable of delivering an uninterrupted fire flow of 200 gpm for 20 minutes within 5 minutes of the first arriving engine company. Additionally, SVFD is capable of providing 500 gpm of uninterrupted flow for a period of two (2) hours using hydrants, tender/tanker shuttle operations and/or large diameter hose relays.

In 2021, the SVFD established a fuels reduction crew funded by the County Board of Supervisors through the hazardous vegetation management program and received a truck and chipper from the County of Sonoma through a grant. The fuels crew reduces fuel loading in the project area by hand and mechanical fuel reduction and roadside fuels management.

CAL FIRE

The Springs is also served by CAL FIRE’s Sonoma- Lake-Napa (LNU) Unit, which includes Colusa, Lake, Napa, Solano, Sonoma, and Yolo counties. The Plan Area is within the Unit’s West Division, which is defined by the boundaries of Sonoma County and consists of four field battalions.

During peak fire season, LNU suppression resources include approximately 260 permanent personnel and 250 seasonal personnel, including several battalion chiefs (BC) staffing 21 fire stations, 31 engines (ENG CDF), six (6) bulldozers (DOZ), two conservation camps, one (1) fuel reduction crew, one (1) Firefighter Hand crew (FIRE CREW), one (1) Helicopter (HEL), one (1) air attack base (AT) and many other support-staff positions.

For a first alarm vegetation fire assignment, CAL FIRE’s response capabilities are dictated by weather, and how the dispatch event is categorized: High / Medium / Low / Winter. The table below shows the CAL FIRE response plans by Computer Aided Dispatch (CAD) event types.

CAL FIRE RESPONSE CAPABILITIES								
CAD Event Types	Response Plan Description	BC	AA	AT	HEL	ENG CDF	DOZ	FIRE CREW
HIGH FIRE	WILDLAND – High – LNU Standard	1	1	3	1	8	3	2
MED FIRE	WILDLAND – Med – LNU Standard	1	1	2	1	4	2	2
LOW FIRE	WILDLAND – Low – LNU Standard	1			1	2		
WINTER FIRE	WILDLAND – Winter – LNU Standard	1				1		

In January 2020, LNU administratively took over a CAL FIRE Region Fuels Reduction Crew. This resource is Unit-funded and staffed to help with vegetation management and fuel reduction projects in support of the Unit Fire Plan. The fuels restoration crew reduces fuel loading in the project areas by prescribed burning, hand and mechanical fuel reduction, fire planning and fire prevention education, with an emphasis on improving public health and safety, while reducing wildfire potential to California communities and forests (“Sonoma-Lake-Napa Unit 2021 Strategic Fire Plan”).

THIS PAGE LEFT INTENTIONALLY BLANK.

Section III: Observations

PROJECT METHODOLOGY

The methodology used to craft this CWPP included team meetings, site evaluations, historical research, community meetings, wildfire risk mapping, objective risk assessments and community surveys to establish risk priorities and reduction treatments. The development team made a significant effort to reduce subjective bias to a minimum. The following text describes each data source which went into the analysis behind this CWPP.

SURVEYS

COMMUNITY SURVEY

The Community Survey was developed jointly by Fire Safe Sonoma, WRA, and the Springs Fire Safe Council. The survey, which was distributed in English and Spanish, was developed using generally accepted standards of measurements of wildfire risk. The survey was distributed digitally via email as a Google Forms survey through email listservs, flyers, and other outreach.

To encourage participation, all survey respondents were entered into a drawing to win a $100 Visa gift card. As a result, over 100 survey responses were received. However, upon review of the entries, some of the responses were clearly erroneous and illogical, including entries with incomplete words and/or addresses that did not exist. To avoid corrupting the data, survey responses that included erroneous responses were removed. As a result, there were a remaining 31 responses in English and 12 responses in Spanish for a total of 43 responses.

THE FIRE DEPARTMENT CAPABILITIES SURVEY

The Fire Department Capabilities Survey was developed by Fire Safe Sonoma and was based on the National Fire Protection Association (NFPA) Standard 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments. This questionnaire was sent via a Google Forms survey sent directly to Chief Steve Akre of the Sonoma Valley Fire District, which provides initial attack response to the Plan Area.

COMMUNITY WILDFIRE RISK MAPPING

Additionally, a series of wildfire risk maps were prepared by WRA GIS Analysts. Prior to creating these maps, the Springs Fire Safe Council, in collaboration with Fire Safe Sonoma and WRA, created a ‘Study Area’ to evaluate, which is the Springs MAC boundary. From there, WRA created the following maps, which are available at **Appendix C**.

- Basemap Aerial
- Basemap Topography

- Fire Hazard Severity Zones (FHSZs)
- California Public Utility Commission (CPUC) Fire Threat Tier
- Vegetation Types
- Roads, Parcels and Building Footprints
- Topography and Watersheds
- Modeled Fuel Break Treatment Areas
- Fire History
- Sonoma County WRI Statistics
- Infrastructure

CAL FIRE's Fire and Resource Assessment Program (FRAP)

CAL FIRE's Fire and Resource Assessment Program (FRAP) assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. This plan analysis considers the FRAP Fire Hazard Severity Zones and Fire Threats within the Plan Area.

Sonoma County Wildfire Risk Index (WRI)

To further quantify and assess the hazard and risk posed by wildfire, newer data sources available through the Sonoma County Wildfire Hazard Index (WHI) and Wildfire Risk Index (WRI) were integrated into the overall assessment. The WRI statistics for the Springs Plan Area are included in the table below. A more detailed description of the WRI statistics is included at **Appendix D.** The WHI quantifies the relative wildfire hazard, which is the inherent wildfire hazard on the landscape due to available fuels, weather patterns, potential ignition sources, and suppression difficulty. The WRI adds to the WHI three additional components:

1. The likely areas embers will accumulate in the event of a wildfire,
2. The presence of structural assets,
3. And the relative usability of the road network in Sonoma County.

SPRINGS WRI AREA STATISTICS		
Average WRI (risk)	4	Very High
Average WRI (1-mile buffer)	4	Very High
Average WRI (hazard)	3	High
Average Ember Load Index	1	Low
Number of Structures	7,351	-
Average Road Rank	4	Very High
FHSZ in SRA Stats		
Average CAL FIRE Hazard	2	High
For all Sonoma County indices reported, 1= Low; 2 = Moderate; 3 = High; 4 = Very High and 5 = Extreme. For the CAL FIRE Hazard IFHSZ): 1= Moderate, 2 = High, and 3 = Very High.		

IDENTIFICATION OF COMMUNITY VALUES AT RISK

Community Meetings and Values at Risk Exercise

As part of the CWPP planning process, a hybrid community meeting was held on May 21, 2022 at the El Verano Elementary School Multipurpose Building. The meeting drew at least 20 in-person attendees and 12 virtual attendees. This meeting was translated into Spanish live both in person and virtually over Zoom by Jordi Vidales of J.A.V. Language Solutions.

During the meeting Springs residents were asked to share what they considered community values at risk from wildfire. These assets were recorded live by Fire Safe Sonoma Staff and are tabulated below.

CWPP COMMUNITY VALUES AT RISK		
COMMUNITY ASSET	**TYPE OF ASSET**	**IMPACT**
Grange Hall	Property	Community Value/Economic
Residents' Lives	Life	Community Value
Shopping Centers	Property	Community Value/Economic
Schools	Property	Community Value/Economic
Fire Department Stations	Property	Essential Infrastructure
Health Center	Property	Essential infrastructure
La Luz Center	Property	Community Value/Economic
Retirement Community (next to Fetter Springs)	Life	Community Value
Hanna Boys Center	Property	Community Value/Economic
Sonoma Greens FSC	Life	Community Value/Environment
Restaurants	Property	Community Value/Economic
Valley of the Moon Water District	Property	Essential Infrastructure
Emergency Food Infrastructure	Property	Essential Infrastructure
Bridges and Roads	Property	Essential Infrastructure
Water Center Tanks	Property	Essential Infrastructure
Churches	Property	Community Value/Economic
Low Income Housing	Property	Essential Infrastructure
Mobile Home Parks	Property	Essential Infrastructure
Cell Towers	Property	Essential Infrastructure
Wildlife	Life	Community Value/Environment
Small Businesses	Property	Community Value/Economic
Watershed and Pumps	Property	Essential Infrastructure
Power Substation	Property	Essential Infrastructure
Parks (in addition to Maxwell)	Property	Community Value/Environment
Springs Fire Safe Council	Life	Community Value/Environment
Friends In Sonoma Helping (FISH)	Life	Community Value/Economic
"Rich" Colorful History	Life	Community Value
Bus Depot	Property	Essential Infrastructure
Sonoma Valley Unified School District (SVUSD) Headquarters	Property	Essential Infrastructure
Connex Container at Altamira (Emergency medical supplies)	Life	Essential Infrastructure
Projects under development	Property	Community Value/Economic
Sheriff Substation	Property	Essential Infrastructure
Work Trucks	Property	Community Value/Economic

Community Wildfire Risk Assessment

As a means objectively to rank wildfire risks in the Springs Area, Springs Fire Safe Council members completed a Wildfire Risk Assessment. The community Wildfire Risk Assessment instrument was developed in 2015 by Fire Safe Sonoma with funding from CAL FIRE and is based on wildland fire risk elements contained in the National Fire Protection Association (NFPA) Standard 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire. This instrument is used to receive and interpret the other datasets and render an overall assessment of wildfire risks in the Plan Area with a focus on an evaluation of the following:

- Fire Department access
- Public egress (i.e., the ability of citizens to evacuate)
- Structural ignition potential
- Fire Department capabilities (including firefighting water supply)
- Weather influences
- Wildland fire history
- Other risk factors.

The data collected was synthesized by the core team, collaborating with Fire Safe Sonoma, WRA staff, fire service professionals, and other subject matter experts. The purpose of this assessment is to provide a framework and basis for prioritizing a range of wildfire mitigation strategies across the Plan Area.

The risk assessment was based on a combination of wildfire research analytical tools and information and maps available to the team including a Community Survey, a Fire Department Capabilities Survey, CAL FIRE's Fire and Resource Assessment Program (FRAP) data, Wildfire Risk Index (WRI) analytical tools available through the County of Sonoma's Community Wildfire Protection Plan Hub Site, a public meeting communities at risk exercise, and a Community Wildfire Risk Assessment tool developed by Fire Safe Sonoma.

THE SPRINGS COMMUNITY ASSESSMENT

The following text synthesizes data collected from the various sources described above, including the Wildfire Risk Maps, Community Survey and the Risk Assessment for the Springs Plan Area. The data is organized by The Springs Community, Access and Evacuation, Structural Ignitability, and Defensible Space and Fuel Reduction.

The following survey results represent 31 responses in English and 12 responses in Spanish for a total of 43 responses.

The Springs Community

The Springs area has a predominantly southwestern aspect, with approximately twelve (12%) of the area in a 'High Fire Hazard Severity Zone' (FHSZ) and eight (8%) in a Moderate FHSZ. Less than one percent (<1%) is within the 'Very High' FHSZ. The majority of the Springs Plan area (79%) does not have a CAL FIRE FHZA designation as a large percentage of the Plan Area is within the Local Responsibility Area (LRA).

The area is largely urban, especially along the Highway 12 corridor and contains many small parcels with buildings that are fairly close to each other. For example, 72.5% of all survey respondents indicated that they live on parcels that are smaller than one acre. Regarding the potential fire behavior situation, the Plan Area experiences moderate slopes, broken moderate fuels including some ladder fuels. The composition of fuels is conducive to torching and spotting. Conditions may lead to moderate suppression success. This area has at least some fire history and/or moderate fire occurrence.

The overall risk ranking for the Springs Plan Area is 90, a “Very High Hazard”, according to the Fire Safe Sonoma Risk Analysis tool. (Low Hazard = 41 or less; Moderate = 41 to 60, High = 61 to 75, Very High = 76 or greater.) **Fire behavior in this area is likely to be extreme.**

The last update to the CAL FIRE Fire Hazard Severity Zone (FHSZ) for the entire State Responsibility Area (SRA) was approved in 2007. CAL FIRE worked with local governments to make recommendations of the Very High FHSZs within Local Responsibility Area (LRA) between 2008 and 2011. Over the past few years, CAL FIRE has been building the new model for a 2022 update. The Draft 2022 FHSZ maps were released for public comments on December 16, 2022. The public comment period will end on April 4, 2023. It is unclear when the Draft 2022 FHSZ maps will be adopted by CAL FIRE at time of preparing this document.

The Draft 2022 FHSZ maps indicate that a higher percentage of the Plan Area has been classified as Very High FHSZ (20 percent in 2022 compared to <1 percent in 2007), but the overall risk ranking score for the area does not change when assessing risk with either the 2007 or 2022 FHSZs data. Because the 2022 FHSZ maps have not yet been adopted by CAL FIRE, the community risk assessment discussed above for the Plan Area was conducted based on FHSZs data from the 2007 FHSZ maps. A map showing the 2022 FHSZ Update of the Plan Area was prepared by Esther Mandeno of Digital Mapping Solutions and has been included in the map set at Appendix E

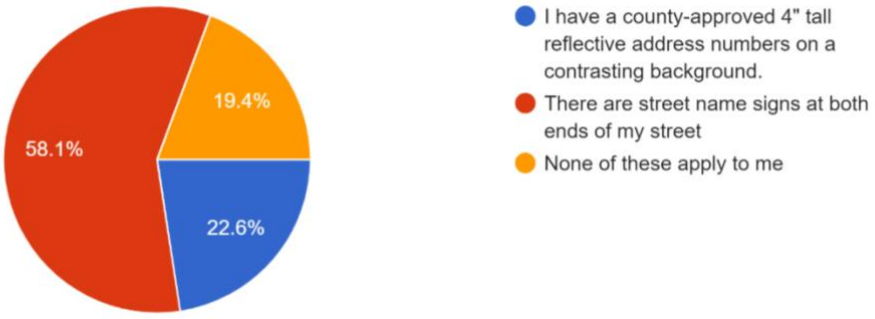
ACCESS/EVACUATION

Secondary access and evacuation routes in this area are primarily narrow, feature roadside vegetation with limited turnarounds. Six (6) out of 31 English-speaking respondents indicated that they only have one way out in case of an emergency. All 12 Spanish-speaking respondents indicated that they live on a public street. Moreover, 20 English-speaking respondents (64.5%) and six (6) Spanish-speaking respondents (50%) stated that they have not identified a secondary evacuation route for their neighborhood. Two (2) 6.5% of English-speaking residents have identified temporary refuge areas. No Spanish-speaking residents responded affirmatively to the same question.

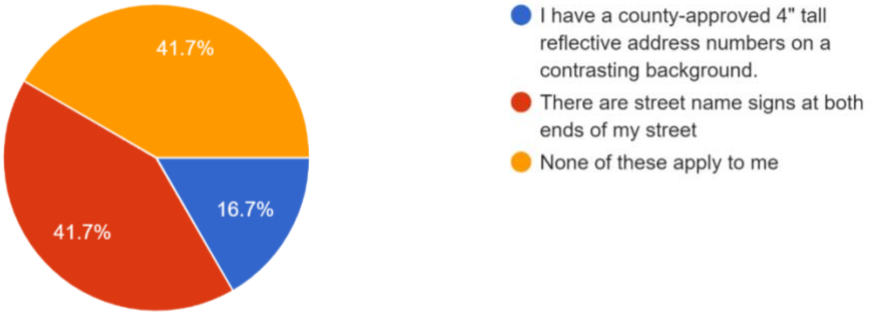
Responding to the prompt “If a motorhome and fire engine were traveling on my road in opposite directions,” 13 English-speaking respondents (41.9%) indicated that they would have difficulty passing each other, and eight (8) (25.8%) indicated that they could not pass at all. Conversely, 10 (83.3%) Spanish-speaking respondents indicated that they could pass easily, and two (2) (16.7%) respondents indicated that they would have difficulty passing.

Of those surveyed, 26 English-speaking respondents (83.9%) and six (6) Spanish-speaking respondents (50%) would evacuate with at least one pet. In response to the question, “Are there disabled or elderly people on your property who will need assistance during a community emergency (including those registered with PG&E as Medical Baseline Customers)?” five (5) (16.1%) of English-speakers and one (1) (8.3%) of Spanish-speakers answered yes.

In response to the question: “What is true regarding signage for your property and neighborhood?” Seven (7) (22.6%) English-speaking residents responded that they have County-approved address numbers, 18 (58.1%) responded that there are street signs at both ends of the street, and six (6) responded that none of those questions apply. For Spanish-speaking residents, each question received four (4) (33.3%) responses each. The following pie charts shows this breakdown by both English-speaking and Spanish-speaking respondents.



English-speaking responses (out of 31) to the question: “Select what is true regarding SIGNAGE for your property and neighborhood



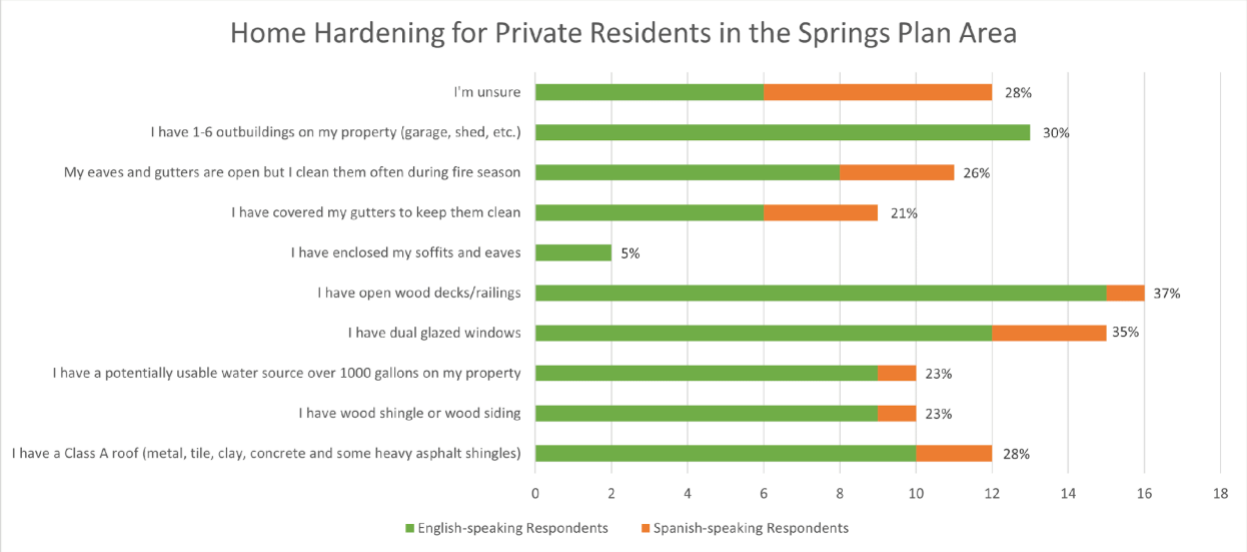
Spanish-speaking responses (out of 12) to the question: "Select what is true regarding SIGNAGE for your property and neighborhood

STRUCTURAL IGNITABILITY

A considerable percentage of buildings in this area were constructed prior to 2008 and do not meet modern construction standards for buildings built in wildland-urban interface areas. In general, a considerable number of buildings in this area have open wood decks, wood shingles or wood siding, and lack fire-safe roofs, siding, and enclosed features such as enclosed under-deck areas. Also, 13 English-speaking respondents (41.9%) indicated that they have outbuildings near their residence.

All utility lines are above ground in the Plan Area. Several comments from survey respondents indicated issues with utility power lines running through trees and branches, etc.

The chart below shows the breakdown of how all respondents (including English and Spanish speakers) answered specific home hardening-related questions.



DEFENSIBLE SPACE/FUEL REDUCTION

Responses pertaining to defensible space around structures in this area show mixed results. Overall, less than 30% of properties have adequate defensible space. This is consistent with SVFD Captain Gary Johnson's data from the hazardous vegetation inspection and abatement program which indicated 70% of properties are not in compliance with Sonoma County's fire safe standards ordinance. However, 20 English-speaking respondents (64.5%) and eight (8) (66.7%) Spanish-speaking respondents indicated that they have defensible space in the area within five feet of their home, and only 10 English-speaking respondents (32.3%) and four (4) Spanish-speaking (33.3%) respondents indicated that they have defensible space out in the five (5) to 30-foot zone. Last, only one English-speaking respondent (3.2%) and no Spanish-speakers indicated they have adequate defensible space up to or beyond the 100 feet or more. This is likely due to the fact that most lots in the Springs Plan Area are small, (less than one acre).

Regarding defensible space along the roadside, nine (9) English-speaking respondents (29%) indicated that tall grass, brush and trees border and overhang the roadways, and 16 (51.6%) answered that it is mostly maintained but some areas require improvement. Three (33.3%) Spanish-speaking respondents answered “yes” to both of those questions.

THIS PAGE LEFT INTENTIONALLY BLANK.

Section IV: Summary & Conclusions

ACCESS AND EVACUATION

The access and evacuation scenario is very different for Springs residents living on the eastern slopes as compared to the residents in the urbanized centers in Sonoma Valley. Some residences, primarily those east of Highway 12 which are located along long one-way roads into the Mayacamas Mountains and only have one way in or out. Conversely, properties in Sonoma Valley are generally within planning developments that are connected to more than one road in or out.

Another feature of the Springs Plan Area is the wide prevalence of narrow streets. In total, 53.5% of all survey respondents indicated that a motorhome and fire engine would have difficulty passing or could not pass on their street. Additionally, according to survey respondents, street signage in the Plan Area could be improved as only approximately a quarter of all respondents replied that they have County-approved address numbers.

A majority of residents would evacuate with pets. While most parcels in the Springs Plan Area are less than one acre, a small percentage of residents own livestock and/or large animals that would need to be evacuated during an emergency.

Last, about 14% of all respondents indicated that someone on their property would need help evacuating during an emergency. Additionally, very few responses to the community survey indicated that they have identified a temporary refuge area.

STRUCTURAL IGNITABILITY/HOME HARDENING

Regarding home hardening and structural ignitability, the survey results also demonstrate that there is necessary room for improvement. According to survey respondents in the Plan Area, the majority of residences lack fire-resilient building features such as a Class A roof, non-combustible siding, dual pane windows, enclosed soffits and eaves, and covered decks and gutters, etc. Additionally, utility lines in the Plan Area are above ground.

DEFENSIBLE SPACE / FUEL REDUCTION

Survey results indicated that less than 30% of properties have adequate defensible space, which is consistent with Sonoma Valley Fire District's data from the hazardous vegetation inspection program.

Because the majority of the Springs Plan Area consists of private lots that are smaller than one acre, defensible space should be considered at the community scale in addition to the private property level. According to the CAL FIRE Fuel Break map prepared by WRA, CAL FIRE has recommended at least two community fuel breaks in this area and several throughout neighboring areas, which would support this effort.

EXISTING PROJECTS

One project in the Springs Plan Area that has already been identified by the Springs Fire Safe Council is roadside fuels reduction. There has been an established need for this project prior to the writing of this CWPP. The Sonoma Valley Fire District has indicated that they have identified areas within the project area that are priority roadways which need roadside management and are committed to assisting in the fuels management with the use of their fuels crew.

SECTION V: RECOMMENDATIONS

GENERAL RECOMMENDATIONS

The partnership that exists between the Springs Fire Safe Council and the citizens in the Plan Area will help the Springs community to reduce hazardous vegetative fuels that could ignite residences and commercial facilities during a wildfire, reduce the risk of structural ignition, supply evacuation planning, and improve wildfire preparedness through education and outreach in all these areas.

The recommended actions to reduce the risk from wildfire in the Plan Area are based on the findings from the risk analysis observations. Prioritized recommendations focus on the home first to reduce structural ignitability and work their way out into the three home ignition zones based on the potential fire threat to homes, and/or threats to natural resources from a fire occurring from an individual parcel.

FOCUS AREAS

Areas identified as immediate concerns are the ability for vehicles to simultaneously pass on roadways; roadside vegetation (especially vegetation encroaching on utility lines), unidentified secondary access roads for evacuation, narrow streets; inadequate defensible space, the lack of fire safe roofs and siding; unenclosed features, such as decks; and roadside vegetation.

The Springs is a diverse community, with a large Spanish-speaking population, a variety of age groups, income levels, and a mix of homeowners and renters. For all the projects listed below, any educational or outreach materials should cater to the Springs' many diverse audiences, this includes materials that are available in both English and Spanish, wildfire prevention education that is targeted to both homeowners and renters, and outreach strategies that are culturally competent and appropriate for different populations (i.e., radio ads in addition to press releases in print, etc.).

Access/Evacuation

Projects in this area should include roadside vegetation removal, improved address signage, and general education about evacuations, including early notifications, evacuating with pets, and projects to assist those requiring assistance evacuating.

Structural Hardening

Projects in this topical area should include structural hardening and retrofit resources, particularly for low-income and at-risk populations as well as funding incentives. Because the Springs Plan Area includes a large number of both homeowners and renters, structural hardening information should take into account options that are available to both populations. In cooperation with Fire Safe Sonoma, the Springs Fire Safe Council supports and promotes fire safe activities including public education on ways to reduce structure ignitability, especially through meeting the requirements of the Sonoma County Building Codes, Fire Codes and Fire Safe Standards.

Defensible Space/Fuels Reduction

Based on the information gathered, projects in this topical area should include roadside fuel reduction projects, community fuel breaks, fuels reduction information around power lines, and defensible space resources, especially for low-income and at-risk populations as well as funding incentives.

Education and Outreach

Projects in this topical area should include outreach and education projects focusing on wildfire preparedness and evacuations, information to community residents about what home improvements or modifications they should make to structures to reduce ignitability, and information about defensible space and resilient landscaping. Information should be targeted to both homeowners and renters and provided in both English and Spanish based upon population data.

SECTION VI: RESOURCES & REFERENCES

1. *A Fire Service Leader's Guide to Preparing a Community Wildfire Protection Plan*; International Fire Chief's Association; Date Unknown
2. *CAL FIRE's Fire and Resource Assessment Program (FRAP)*; https://frap.fire.ca.gov/; CAL FIRE
3. *California Fire Code, 2021*; International Code Council Inc.
4. *California Residential Code, 2021*; International Code Council Inc.
5. "Communities at Risk." Office of the State Fire Marshal, https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/fire-plan/communities-at-risk/. Accessed 12 December 2022.
6. *Community Guide to Preparing and Implementing a Community Wildfire Protection Plan, a supplemental resource guide to Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities*; Sponsored By: Communities Committee, National Association of Counties, National Association of State Foresters Society of American Foresters, & Western Governors' Association March 2004
7. *Community Wildfire Protection Plan, Leader's Guide Supplement*; International Fire Chief's Association, National Association of State Foresters, The Wilderness Society; Date Unknown
8. *International Wildland Interface Code, 2021*; International Code Council Inc.
9. *Living with Fire in Sonoma County: A Guide for the Homeowner.* Fire Safe Sonoma. https://www.firesafesonoma.org/wp-content/uploads/living_with_fire.pdf.
10. Mayacamas Volunteer Fire Department. "MVFD History Project." MayacamasVFD.org. http://www.mayacamasvfd.org/nuns-fire.html.
11. *National Fire Protection Association Standard 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments*; National Fire Protection Association (NFPA).
12. *National Fire Protection Association Standard 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire*; National Fire Protection Association (NFPA).
13. *National Fire Protection Association Firewise USA®*; https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA.
14. *Pacific Gas & Electric Company Wildfire Fire-Threat Maps*; https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking

15. *Preparing a Community Wildfire Protection Plan - A Handbook for Wildland–Urban Interface Communities;* Society of American Foresters, (2004).

16. *Sonoma County CWPP – 2022 Update Draft*; County of Sonoma.

17. *Sonoma County CWPP Hub Site*; https://sonoma-county-cwpp-hub-site-sonomacounty.hub.arcgis.com/; County of Sonoma.

18. *Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021*; County of Sonoma (2021).

19. *Sonoma-Lake-Napa Unit 2021 Strategic Fire Plan;* CAL FIRE, https://osfm.fire.ca.gov/media/lpafffiu/2021_lnu_fireplan.pdf. Accessed 9 December 2022.

20. U.S. Census Bureau. https://data.census.gov/

21. USGS. *Geosciences and Environmental Change Science Center,* http://wildfire.cr.usgs.gov/fireplanning.

22. *Weather U.S.*; https://www.weather-us.com/en/california-usa/sonoma-climate. Accessed 9 December 2022.

23. Wikipedia. “Boyes Hot Springs, California.” https://en.wikipedia.org/wiki/Boyes_Hot_Springs,_California

SECTION VII: APPENDICES

APPENDIX A: RISK ASSESSMENTS

Summary data based on the raw data collected in chat, graph and worksheet results formats.

APPENDIX B: PRIORITY PROJECTS

Priority ranking scale, along with a list of projects in each of the four topical areas:

- Structural Ignitability/Structural Hardening;
- Defensible Space/Fuel Reduction and
- Outreach & Education.

APPENDIX C: MAPS

The entire map set in large file size PDF format. This allows a more granular examination by a viewer than what is available through the images provided in this document. The map set includes:

- Springs Aerial Basemap
- Springs Topography Basemap
- Map 1. Fire Hazard. Severity Zones
- Map 1a. Fire Hazard Severity Zones in State Responsibility Areas (SRA)
- Map 2. California Public Utility Commission (CPUC) Fire Threat Tier
- Map 3. Vegetation Types
- Map 4. Roads, Parcels and Building Footprints
- Map 5. Topography and Watersheds
- Map 6. Modeled Fuel Break Treatment Areas
- Map 7. Fire History
- Map 8. Sonoma County WRI Statistics
- Map 9. Infrastructure
- Map 10. CAL FIRE PODs

APPENDIX D: WILDFIRE RISK INDEX

Detailed information about the Sonoma County Wildfire Risk Index ranking system which explains how the score is developed.