

## **Hollydale/Canyon/Terrace Communities**

COMMUNITY WILDFIRE PROTECTION PLAN 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.

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## 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 (CWPP) 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.

However, if and once grant funding is received from local, state, or federal agencies and prior to work performed, 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 decides that the proposed activity is a project to CEQA or NEPA, the lead agency must perform environmental review pursuant to CEQA or NEPA.

## SIGNATORIES

This Plan:

- was collaboratively developed. Interested parties, Federal, State, and County agencies have been consulted and are listed in the Fire Plan.
- identifies and prioritizes projects meant to reduce the loss of values at risk within the Plan Area.
- is intended for use as a planning and assessment tool only. It is the responsibility of those implementing the projects to ensure that all environmental compliance and permitting processes are met as necessary.

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:

unda Hopkins Hopkins (May 12, 2023 08:00 PDT)

COUNTY OF SONOMA District Five Supervisor Lynda Hopkins, County Supervisor

LOCAL FIRE AGENCY Sonoma County Fire District Mark Hine, Fire Chief

05/11/2023

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DATE

DATE

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HOLLYDALE/CANYON/TERRACE FIRE SAFE COUNCIL | Community Wildfire Protection Plan 2023

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## FOREWORD

Some years ago, C.P. Butler first coined the term "urban/wildland" as "a wildfire moving from a wildland environment, consuming vegetation for fuel, into an urban environment where structure and buildings are fueling the fire." Over the years since, there have been many terms used to describe the area between two incompatible fuels—forested areas and the built environment. Such terms attempted to label various geographical representations of this relationship, including wildland/urban interface, wildland/urban intermix, and wildland/urban intermingle, along with qualifiers such as classic interface, mixed interface and occluded interface areas.

Training Officer Jim Bishop, who worked with the California Department of Forestry and Fire Protection in Butte County, has since coined the term "the I-Zone" to simplify all this terminology. The "I-Zone" is defined as a generic term whose exact definition would be, "where wildland fuels threaten, or are being threatened by, structural fuels." This definition includes single structures, subdivisions, and entire communities in any variety of fuel types and fuel loads. The I-Zone concept is the common thread that holds together all the ideas and opinions of the authors, and as such, the authors are using the generic I-Zone definition/concept in this analysis in place of the more cumbersome term, "the wildland/urban interface," with all its deviations and variations.

The purpose of this document is to offer a professional opinion and perspective about the Hollydale/Canyon/Terrace community's I-Zone, such that the Hollydale/Canyon/Terrace Fire Safe Council, local elected officials, and fire planning and building administrators can make informed decisions about this communities particular I-Zone problem. The information presented in this document may be used to formulate or support an action plan consisting of projects specifically targeted at the outlined recommendations.

This document in no way tries to answer all questions, nor is it a how-to guide. It is presented in such a way that the Hollydale/Canyon/Terrace Fire Safe Council, local government officials, and fire administrators have enough information about the problem to form an argument in favor of wildfire risk reduction.

The development of this analysis and final document occurred between January and December of 2022. Moreover, the development of this document included input from several subject-matter experts, including CAL FIRE; the California Department of Fish and Wildlife; the Sonoma County Fire District; the Sonoma County Supervisor's Office; the Sonoma County Sheriff's Office; the County of Sonoma's Community Development Department: Permit Sonoma, Sonoma County Transportation and Public Works; Sonoma County Emergency Management, and Sonoma County Ag and Open Space.

(Ref. California's I-Zone; State of California, various authors, edited by Rodney Slaughter; 1996)

## ACKNOWLEDGEMENTS

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

The Hollydale/Canyon/Terrace area is located on the unceded land of the Southern Pomo people. The <u>Federated Indians of Graton Rancheria</u> community is a federally recognized tribe and represents Southern Pomo, as well as Coast Miwok groups. We intend our work to be a continuation of a respectful cultural relationship with fire and each other that has been a tradition on the lands in which the present-day Hollydale/Canyon/Terrace community resides.

We must acknowledge that the development of this document occurred on the heels of the community of Hollydale/Canyon/Terrace forming a local Fire Safe Council, and it is expected that the Hollydale/Canyon/Terrace Fire Safe Council will move forward with the recommendations in this document.

Specific organizations we would like to recognize include CAL FIRE, the Sonoma County Fire District, WRA Environmental Consultants, the Sonoma County Library, the Press Democrat, the Graton Rancheria, and the Forestville Historical Society for their assistance in bringing this plan to fruition.

Specific governmental stakeholders we would like to recognize include Chief Mark Hine of the Sonoma County Fire District, Division Chief Ben Nicholls of CAL FIRE, Sonoma County Supervisor Lynda Hopkins, Caerleon Safford from Permit Sonoma, Fire Marshal Cyndi Forman of the Sonoma County Fire District, Misty Harris from the Sonoma County Sheriff's Office, Sam Wallis from the Sonoma County Emergency Management Department, Kim Batchelder of Sonoma County Ag & Open Space, Joe Horak of Pacific Gas and Electric Public Affairs, Johannes Hoevertsz of County of Sonoma Transportation and Public Works, and Robynn Swan from the California Department Fish and Wildlife.

Additionally, we would like to thank July Atwood from the Halter Project (<u>www.halterproject.org</u>) for her subject matter expertise related to large animal and companion animal evacuation information.

Locally we would like to thank; Deb Coy, Sharon Smith, Erika Lutz, Calvin Sandeen, Stephen Finnegan, and John McClain. These individuals acted as the Hollydale/Canyon/Terrace community representatives and served as the development team leadership throughout the process. Deb Coy and Sharon Smith served as the conduit between Fire Safe Sonoma and the Hollydale/Canyon/Terrace leadership team. Without this collaboration, this plan would not have been possible.

Moreover, we would like to specifically thank Erika Lutz for the body of work she created that detailed the individual character of the community, neighborhoods, and unique places within the

Hollydale/Canyon/Terrace area. Her contribution helped to bring those places to life for a reader unfamiliar with the area.

We would also like to thank the Sonoma County Library, the Press Democrat, the Graton Rancheria, the Forestville Historical Society, Penny Hutten, John C. Schubert, and Valerie A. Munthe. These organizations and individuals were instrumental in making sure the character of the community was accurately represented in this plan.

And finally, we are grateful to the late Hardy Fox, whose community research on <u>www.rr-reach.com</u> and <u>www.hacienda-cosmo.com</u> provided a majority of the historical perspective of the communities that are referenced in this plan.

## **EXECUTIVE SUMMARY**

### DEVELOPMENT

This document shall be known as the Hollydale/Canyon/Terrace Fire Safe Council Community Wildfire Protection Plan. This Community Wildfire Protection Plan (CWPP), created by the Hollydale/Canyon/Terrace Fire Safe Council, with assistance from Fire Safe Sonoma and funding from the California Fire Safe Council, was collaboratively developed with input from Federal, State, and local governments, community-based groups, landowners, and other interested persons. The Hollydale/Canyon/Terrace Fire Safe Council is comprised of community volunteers—its officers and directors are the decision makers for the Hollydale/Canyon/Terrace Fire Safe Council.

### **COMMUNITY PROFILE**

The geographical footprint of the Plan Area is within Northern California and begins at the south side of the Russian River, just east of the Hacienda Bridge. Extending from Forestville River Access Beach (Mother's Beach), a Sonoma County Regional Park across River Road to the top of Pocket Canyon Ridge.

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: wildfire 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 fire 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 Plan Area has a predominantly southern aspect, with approximately 42% of the area in a High Fire Severity Zone (FHSZ) and 58% in a Moderate FHSZ. (Ref. CAL FIRE FRAP)

According to the Sonoma County CWPP Hubsite Wildfire Risk Index (WRI), the average WRI for the area is 4. (1= Low; 2 = Moderate; 3 = High; 4 = Very High and 5 = Extreme.)

The overall risk ranking for the area is 110, 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.)

### SUMMARY & 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.

**Evacuation** data shows that within the Plan Area, roadside vegetation ranked as inadequate. Data also shows that the primary roads out, primary roadway width, and primary roadway slope all ranked as moderate. However, the secondary roadway width and terminus both ranked as inadequate. Secondary roadway slope and surface ranked as moderate. Street signage ranked as moderate and address numbers ranked as inadequate.

**Structural ignitability** data shows that within the Plan Area, roofing, siding, and unenclosed features all ranked as inadequate.

**Fuels reduction** data shows that within the Plan Area, overall *Slope* ranked as **steep**; *Predominant Aspect* ranked as **extreme**; *Fuels* ranked as **extreme**, *Fire Behavior* ranked as **extreme**, and *Defensible Space* ranked as **moderate**.

#### 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, emergency communication networks, and general education about early notifications and evacuations, evacuating with pets, and projects to aid those needing assistance evacuating.
- **Projects related to Defensible Space/Fuels Reduction** should include roadside fuel reduction projects, community fuel breaks, information about powerlines, and defensible space resources for low-income and at-risk populations, as well as funding incentives.
- **Projects related to Structural Hardening** should include structural hardening and retrofit resources 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.

## **SECTION I: DEVELOPMENT**

### COLLABORATION

This Community Wildfire Protection Plan (CWPP) describes a general overview and assessment of wildfire risks to the Hollydale/Canyon/Terrace communities. This CWPP was created using the publication, *Preparing a Community Wildfire Protection Plan – A Handbook for Wildland-Urban Interface Communities,* as a guide for its development.

The "core decision-making team" consisted of members from the Hollydale/Canyon/Terrace Fire Safe Council and Fire Safe Sonoma and included engagement with key governmental stakeholders as well as community members throughout the process.

Once an overall community risk assessment was complete, the core team met to discuss the results and their implications for local protection and hazard mitigation needs and developed prioritized recommendations for fuel treatment projects in the Plan Area. Recommendations about actions that individuals and the community can take to reduce the ignitability of homes and other structures in the community are included in the prioritized recommendations (Appendix-B).



Hollydale/Canyon/Terrace Fire Safe Council Community Meeting

This CWPP as developed for the Hollydale/Canyon/Terrace Fire Safe Council:

- 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.
- consulted interested parties and governmental agencies in the vicinity of this CWPP as part of the collaboration 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				
Organization	Name	Role		
HCT Fire Safe Council	Sharon Smith	Team Leader		
	Deborah Coy	Team Leader		
	Calvin Sandeen	Team Member		
	Stephen Finnegan	Team Member		
	John McClain	Team Member		
	Erika Lutz	Team Member		
Fire Safe Sonoma	Roberta MacIntyre	Project Development & Management		
	Marika Ramsden	Project Development & Management		
	Mason Inumerable	Project Development & Management		
	Cailin Notch (consultant)	Project Oversight & Facilitation		

CWPP GOVERNMENTAL STAKEHOLDERS					
Organization	Name / Title	Role			
CAL FIRE	Ben Nicholls, Division Chief	Concepts feedback, review, feedback & approve			
County of Sonoma	Linda Hopkins, County Supervisor	Concepts feedback, review, & approve			
Sonoma County Fire District	Mark Heine, Fire Chief	Concepts feedback, review, & approve			
Sonoma County Sheriff's Office	Misti Harris, Community Engagement Liaison	Concepts feedback & information			
PG&E	David Hotchkiss, Senior Public Safety Specialist	Concepts feedback & Information			
Sonoma County Emergency Management	Nancy Brown, PhD	Concepts feedback & Information			
Sonoma County Emergency Management	Sam Wallis	Concepts feedback & Information			
County of Sonoma Permit Sonoma	Caerleon Safford, Wildland Fire Safety Specialist	Concepts feedback & Information			
County of Sonoma	Steve Mosiurchak, County Fire Warden	Concepts feedback & Information			
		Concepts feedback & Information			
California Department of Fish & Wildlife	Robynn Swan	Concepts feedback & Information			
County of Sonoma Ag & Open Space	Kim Batchelder	Concepts feedback & Information			
Sonoma County Fire District	Cyndi Foreman, Fire Marshal	Concepts feedback & Information			

## **SECTION II: COMMUNITY PROFILE**

### COMMUNITY OVERVIEW

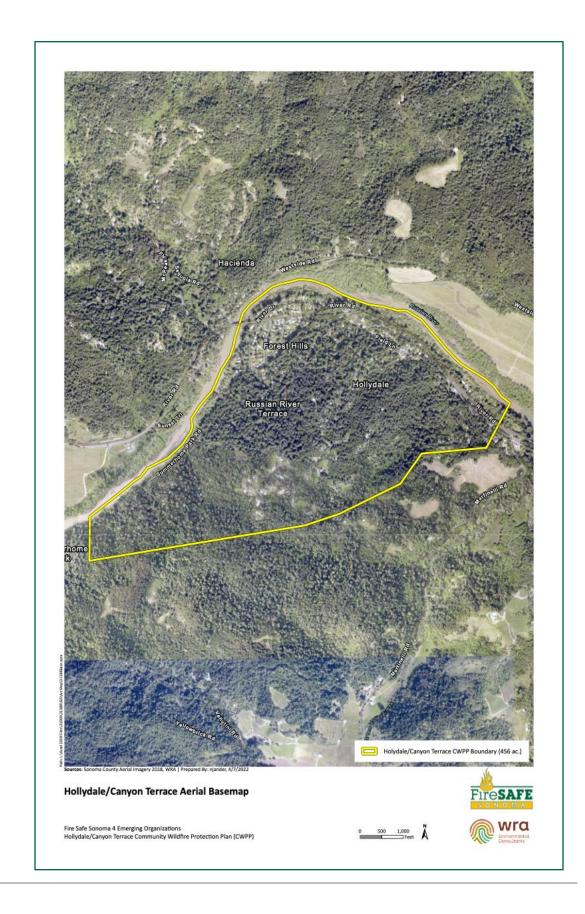
#### **Sonoma County**

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 effects of climate change, fire season is longer, and fires can occur at any time of year in the county.

#### Hollydale/Canyon/Terrace Plan Area

The Hollydale/Canyon/Terrace Plan Area is situated in the "East Reach" of the Russian River Valley – its name derived from the saying "the place where the redwoods appear, and you have reached the river."

The geographical footprint of the Plan Area begins at the south side of the Russian River, just east of the Hacienda Bridge. Extending from Forestville River Access Beach (Mother's Beach), a Sonoma County Regional Park across River Road to the top of Pocket Canyon Ridge. It is flanked to the east by Martinelli Road and to the west by Summerhome Park. The neighboring community of Hacienda is across the river to the north, Rio Dell is to the east, Pocket Canyon is south, and Summerhome Park is west of the community's footprint.



A remnant of the early 20th century resort boom, the Plan Area footprint was historically considered Hollydale, named after the Hollydale Park resort. As the areas became more populated, they became micro-neighborhoods, taking on more specific names aligning to a road name, geographic feature, or landmark, including the neighborhoods of **Hollydale** (Old River Rd, Fort Cook, Cook's Beach, Woodside Dr, Cozy Ct, Field Lane, lower Terrace Dr), **Lower Forest Hills** (Forest Hills Rd, Gray's Ct, Ogburn Ln), and **Mother's Beach** (River Dr, Buena Vista Ln, Old River Rd), **Scenic** (Scenic Dr, Hillside Dr, Elizabeth Way), **Canyon Loop** (Canyon Rd, Canyon Rd loop, and the south side of Pocket Canyon Ridge), **Russian River Terrace** (upper and middle Terrace Dr, Terrace Extension, Hillside Ln, Esther Dr, and the start of Summerhome Park Rd), and **Icebox Canyon** (Icebox Canyon Rd).



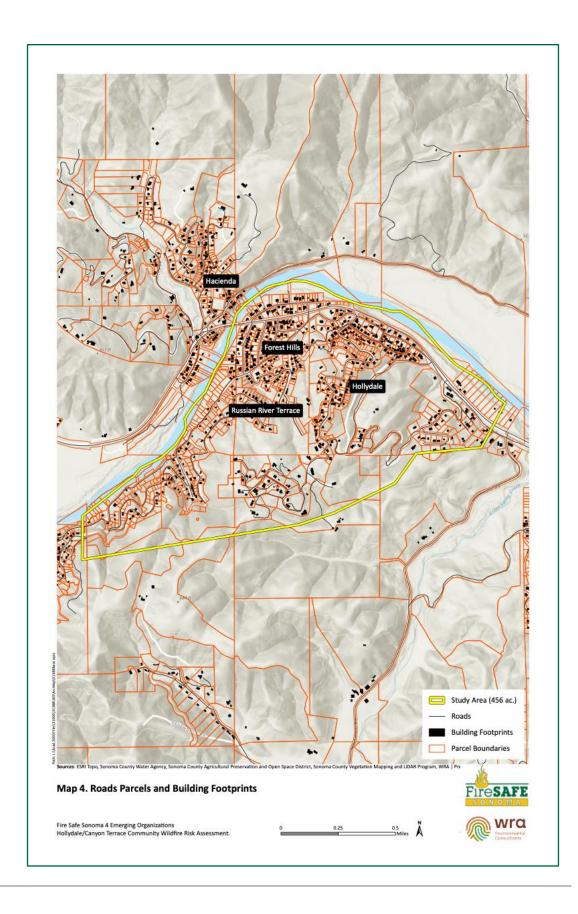
The number of parcels in the survey area is estimated to be 480 with an average lot size of less than one acre. According to the Sonoma County CWPP Hub Site, the population of the Plan Area is 974. As reported in the Community Survey, the average parcel size is less than one acre (82.2%) and the average number of people per household is 3.5 (this differs slightly from Sonoma County CWPP Hub Site data).

POPULATION STATS (SONOMA COUNTY CWPP HUB SITE)		
2021 Total Population	974	
2021 Senior Pop Average %	15.58	
2021 Average Diversity Index	29.3	
2021 Hispanic Pop Average %	8.09	
2019 Below Poverty Average %	8.72	
Parcels Impacted (includes nearby parcels)	714	
Number of Structures	412	

#### ACCESS & EVACUATION

Many of the roads within the Hollydale/Canyon/Terrace area are narrow, steep, and overgrown with vegetation making emergency vehicle access and resident egress (evacuations) challenging. One of the goals of this CWPP process is to identify and prioritize projects in these areas to improve safety for residents and first responders.

Though Terrace Drive is currently fragmented into three long dead-end roads, at one time it was one continuous road that allowed two exit routes available by car. The historical road began near the Hollydale Club and continued up-slope of Summerhome Park Road, gaining elevation, and terminating past Icebox Canyon. During the floods of 1978, a portion of Terrace along the Icebox Canyon drainage severely washed out. A second washout on Terrace exists north of Ogburn Lane, leaving two portions of Terrace closed to vehicles and resulting in over 40 homes restricted to a single exit route. Access to "Lower Terrace" is now limited to Woodside Drive, "Middle Terrace" limited to Ogburn Lane, and "Upper Terrace" limited to Icebox Canyon Road.

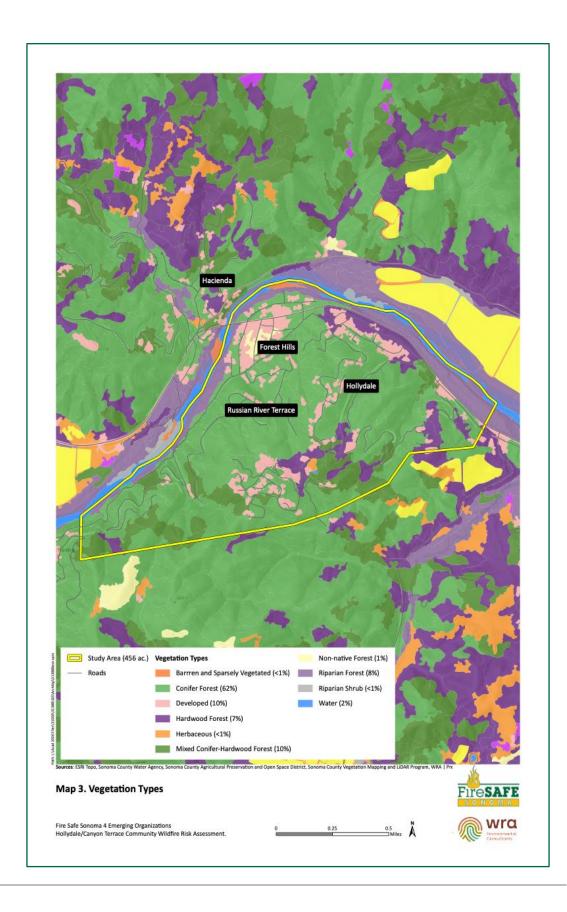


Most survey respondents stated that there is grass, brush and trees that border and overhang the roadways, and if a motor home and fire engine were traveling in opposite directions on the road leading to their parcel, the motor home and fire engine could not pass, or would have difficulty passing.

About two-thirds of the parcels surveyed do not have gates. Of those that have gates, most gates are not locked (71% unlocked and 18% locked) and some allow for first responder access (11%). Only 21% of survey respondents have identified a second means of egress and 7.5% of the population will require evacuation assistance.

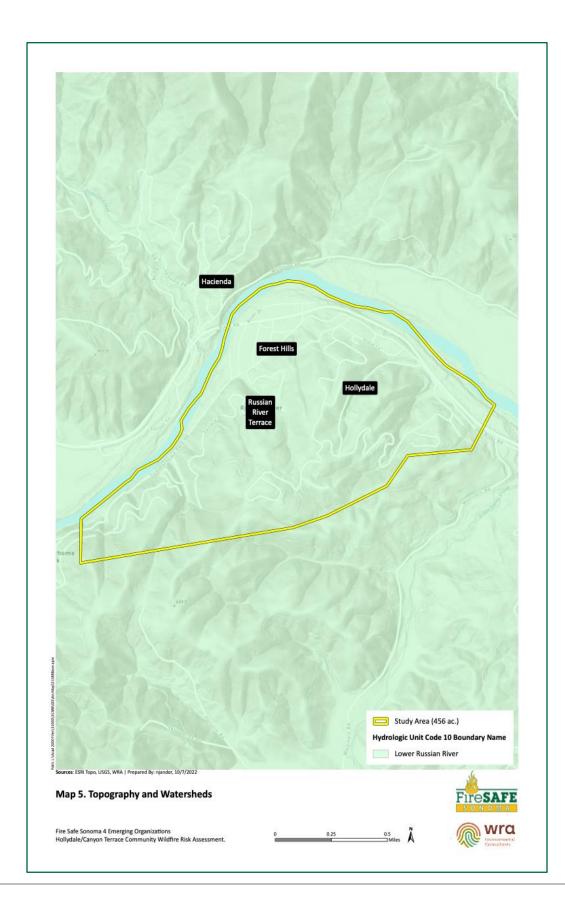
#### VEGETATION

The Plan Area is covered by trees (87%) and shrubs. The Plan Area is mostly comprised of Conifer Forest (62%), mixed Conifer-Hardwood Forest (10%), Riparian Forest (8%), and Hardwood Forest (7%).



#### TOPOGRAPHY

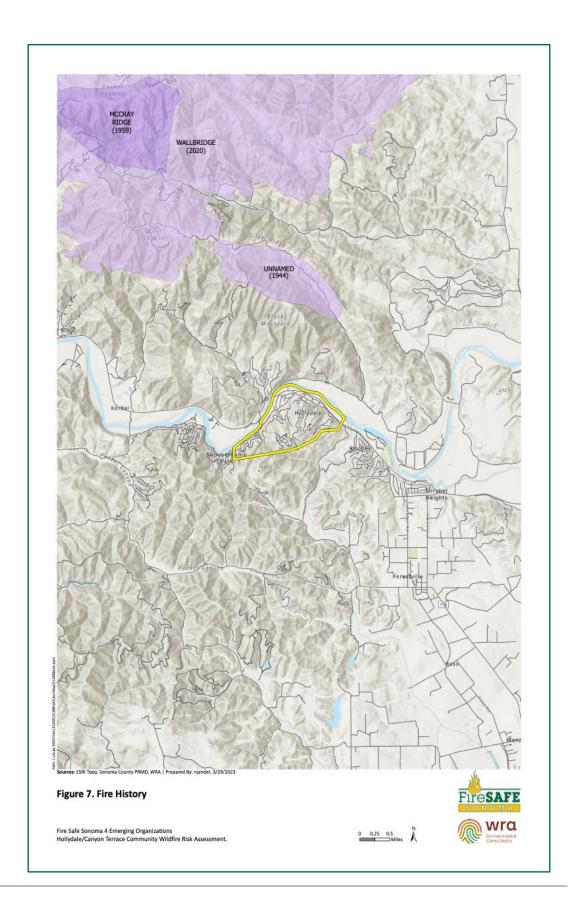
The topography within five miles of the Plan Area contains very significant variations in elevation, with a maximum elevation change of about 1,073 feet and an average elevation above sea level of about 271 feet. Within 10 miles contains very significant variations in elevation (2,126 feet). Within 50 miles contains large variations in elevation (4,774 feet).



#### FIRE HISTORY

The Plan Area is situated between two Sonoma County communities identified as "at risk" according to CAL FIRE (2015 Communities at Risk FRAP Map). While the Plan Area is not itself identified as at-risk, it shares the wildland fire hazard characteristics of its neighboring at-risk communities.

Although there are no significant fires in recent history within the Plan Area, the Roadside #44 fire in 1961 and the more recent Walbridge Fire of 2020 came dangerously close to the area. The absence of fire in this area and the corresponding buildup of fuels increases the wildland fire hazard in the Plan Area.



#### WEATHER

In the Plan Area, the 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 37°F to 79°F and is rarely below 29°F or above 89°F. The wetter season lasts 5.6 months, from October 28 to April 14, with a greater than 17% chance of a given day being a wet day. The month with the most wet days is February, with an average of 9.2 days with at least 0.04 inches of precipitation.

The drier season lasts 6.4 months, from April 14 to October 28. The month with the fewest wet days is July, with an average of 0.1 days with at least 0.04 inches of precipitation. The month with the most days of rain alone is February, with an average of 9.2 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 35% on February 20.

The average hourly wind speed in the Plan Area experiences mild seasonal variation over the course of the year. The windier part of the year lasts for 4.1 months, from March 12 to July 16, with average wind speeds of more than 8.0 miles per hour. The windiest month of the year is June, with an average hourly wind speed of 9.1 miles per hour. The calmer time of year lasts for 7.9 months, from July 16 to March 12. The calmest month of the year is October, with an average hourly wind speed of 6.9 miles per hour.

#### **Firefighting Capability**

Fire protection services in the Plan Area are provided by CAL FIRE and the Sonoma County Fire Protection District.

#### THE SONOMA COUNTY FIRE DISTRICT

The Sonoma County Fire District is an all-risk combination fire department (career and volunteer staff) providing fire and emergency medical services. The Sonoma County Fire District response to the Plan Area exceeds the National Fire Protection Association Standard 1720 criteria for a rural response of at least four staff in over 14 minutes from time of alarm 90% of the time.

Not counting the CAL FIRE response, the minimum number of apparatuses that will respond to the Plan Area as part of a first alarm wildland fire assignment include: two Type-1 fire engines with four personnel each, two Type-3 fire engines with two personnel each, one water-tender with one person, and a battalion chief.

The fire department can provide 500 gallons per minute, or more, uninterrupted, within the base map area for a period of two hours using hydrants, tender/tanker shuttle operations and/or large diameter hose relays.

The staff are trained to the California State Fire Marshal's office Firefighter-2 and Wildland Firefighter standards.

The department routinely conducts residential inspections to determine compliance with local, and/or California Fire Safe Regulations, related to structural hardening and defensible space.

#### CAL FIRE

Hollydale/Canyon/Terrace 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, 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		

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## **SECTION III: OBSERVATIONS**

### **RISK ASSESSMENT METHODOLOGY**

Given its highly fire-prone environment, a wildfire hazard risk assessment has been completed to help identify and prioritize the most at-risk and vulnerable sections of the Plan Area with a focus on an evaluation of the following:

- Fire Department access
- Public egress
- Structural ignition potential
- Fire Department capabilities (including firefighting water supply)
- Weather influences
- Wildland fire history
- Other risk factors

The risk assessment(s) 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 and communities at risk exercise, and a Community Wildfire Risk Assessment tool developed by Fire Safe Sonoma.

#### **Community Survey**

Fire Safe Sonoma and the Hollydale/Canyon/Terrace Fire Safe Council jointly developed the Community Survey. The survey, which was fielded in English only, was developed using generally accepted standards of measurements of wildfire risk.

The survey was distributed both digitally via email as well as physically mailed by U.S. Post. The digital version was emailed as a Google Forms survey, through the Hollydale/Canyon/Terrace Fire Safe Council listserv. The paper mode was mailed directly to the 480 addresses in the Plan Area. This survey yielded 135 results (28% of the residential population).

#### The Fire Department Capabilities Survey

Fire Safe Sonoma developed the Fire Department Capabilities Survey, and it is 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 instrument was a Google Forms survey sent as a link directly to Chief Mark Hine of the Sonoma County 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 Hollydale/Canyon/Terrace Fire Safe Council, in collaboration with Fire Safe Sonoma and WRA, created a 'Study Area' to evaluate which is the Hollydale/Canyon/Terrace boundary. From there, WRA created the following maps used in the overall analysis, which are available in Appendix C.

- Basemap Aerial
- Basemap Topography
- Community Areas
- Fire Hazard Severity Zones (2023 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

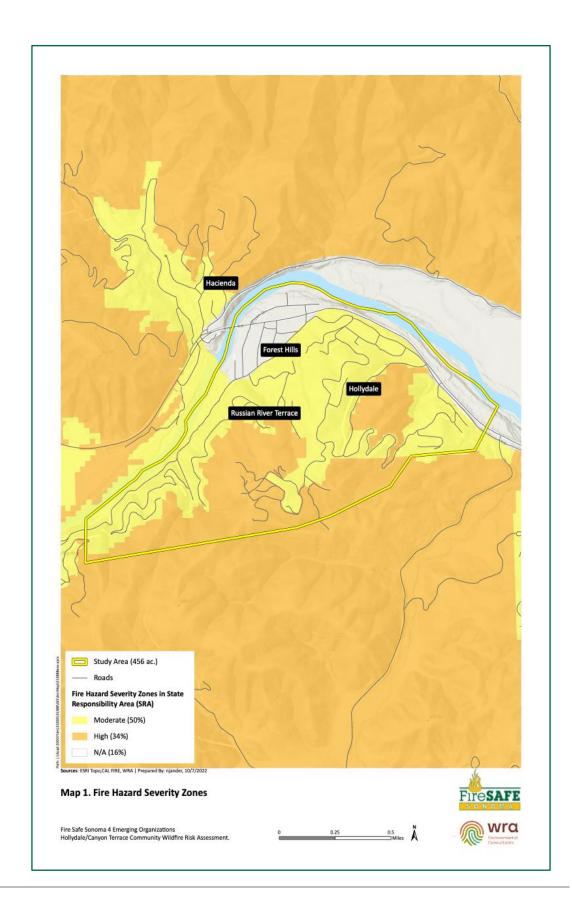
#### CAL Fire's Fire and Resource Assessment Program (FRAP)

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.

#### CAL FIRE FIRE HAZARD SEVERITY ZONE (FHSZ) MAP UPDATE

The last approved update to the CAL FIRE Fire Hazard Severity Zone (FHSZ) for the entire State Responsibility Area (SRA) was last updated 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 the time of preparing this document.

The Draft 2022 FHSZ maps indicate that a higher percentage of the Study Area has been classified as Very High FHSZ (92 percent in 2022 compared to 58 percent in 2007), but the overall risk ranking 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 Study Area was conducted based on FHSZs data from the 2007 FHSZ maps. A map showing the 2022 FHSZ Update of the Study Area was prepared by Esther Mandeno of Digital Mapping Solutions and has been included in the map set at **Appendix C**.

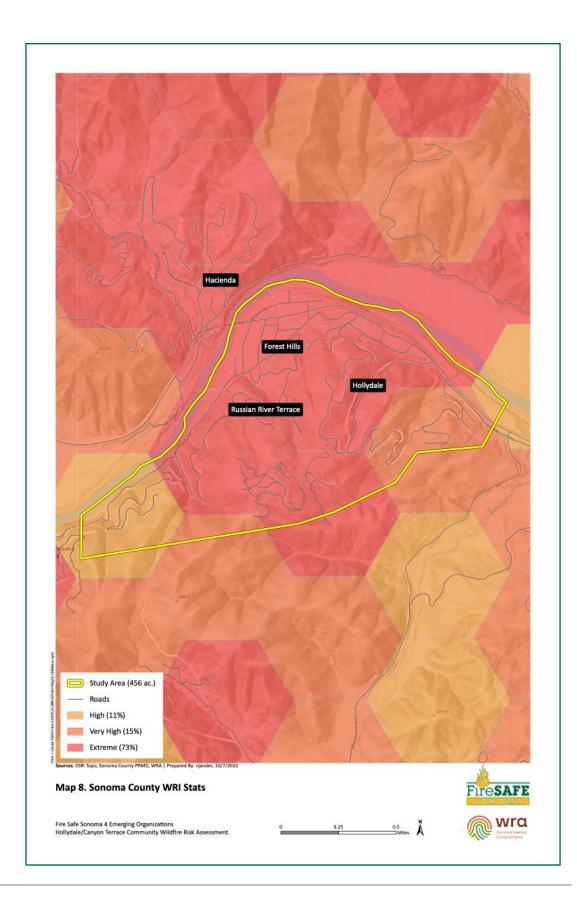


#### Sonoma County Wildfire Risk Index (WRI)

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 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.

HCT WRI AREA STATS*				
Average WRI (risk)	4	Very High		
Average WRI (1-mile buffer)	4	Very High		
Average WRI (hazard)	age WRI (hazard) 2 Moder			
Average Ember Load Index	2	Moderate		
Number of Structures	412	-		
Average Road Rank	5	Extreme		
FHSZ in SRA Stats**				
Average CAL FIRE Hazard	1	Low		
*For all Sonoma County indices reported: 1=Low; 2=Moderate; 3=High; 4=Very High; and 5=Extreme. ** For the CAL FIRE indices: 1=Moderate; 2-High; and 3=Very High.				



#### **Community Values at Risk Exercise**

As part of the CWPP planning process, a community meeting was held on Wednesday, June 22, 2022, at the Hollydale Community Clubhouse. The meeting drew at least 20 attendees. As part of the collaborative process, attendees supplied a list of what they considered community values at risk from wildfire. These are tabulated below with their corresponding risks as assessed.

CWPP COMMUNITY VALUES AT RISK				
Community Asset	Type of Community Asset	Impact		
Humans and animals	Life	Community value		
Homes	Property	Community value		
Hollydale Clubhouse	Property	Community value		
Sam's Market	Property	Community value		
Water system utilities	Property	Essential infrastructure		
Logging Roads	Property	Essential infrastructure		
Historic Cabins	Property	Community value		
Electrical system utility	Property	Essential infrastructure		
Old Growth Redwood	Environment	Community value		
Local Pub	Property	Community value		

### **Community 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.

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.

#### **OVERALL 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 Plan Area by the core

team, collaborating with Fire Safe Sonoma, WRA staff, fire service professionals, and other subject matter experts. The data is organized into an overall assessment, as well as each of the three communities within the base Plan Area. Information is provided for each of the three topical study areas: Access and Evacuation, Structural Ignitability, and Defensible Space/Fuel Reduction. 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 Hollydale/Canyon/Terrace Plan Area

The Plan Area has a predominantly southern aspect, with approximately 82% of the area in a High Fire Severity Zone (FHSZ) and 2% in a Moderate FHSZ. (Ref. 2023 CAL FIRE FRAP)

The overall Plan Area includes three Sub-Plan Areas: **Hollydale, Canyon and Terrace**. The **Hollydale** Sub-Plan Area includes the neighborhoods of Hollydale (Old River Rd, Fort Cook, Cook's Beach, Woodside Dr, Cozy Ct, Field Lane, lower Terrace Dr), Lower Forest Hills (Forest Hills Rd, Gray's Ct, Ogburn Ln), and Mother's Beach (River Dr, Buena Vista Ln, Old River Rd).

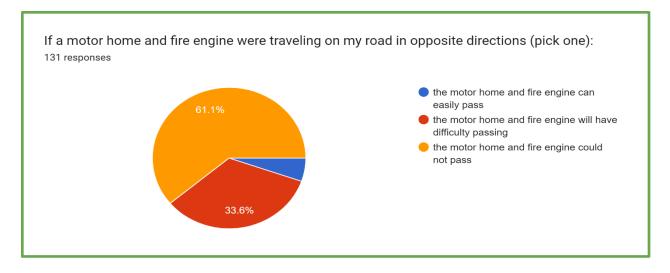
The **Canyon** Sub-Plan Area includes the neighborhoods of Scenic (Scenic Dr, Hillside Dr, Elizabeth Way), and Canyon Loop (Canyon Rd, Canyon Rd loop, and the south side of Pocket Canyon Ridge). And the **Terrace** Sub-Plan Area includes the neighborhoods of Russian River Terrace (upper and middle Terrace Dr, Terrace Extension, Hillside Ln, Esther Dr, and the start of Summerhome Park Rd), and Icebox Canyon (Icebox Canyon Rd).

The Plan Area includes small parcels with medium density continuous fuels near structures; composition of fuels is conducive to crown fires or high intensity surface fires; predominantly south aspects; dense fuels; heavy duff; prevailing wind exposure and/or ladder fuels that may reduce suppression effectiveness.

The overall risk ranking for the area is 123, 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.** 

#### ACCESS/EVACUATION

Primary and secondary access and evacuation routes in this area do not permit fire engines and large vehicles (such as a motor home) to pass simultaneously during an evacuation according to the Fire Safe Sonoma Risk Analysis tool.



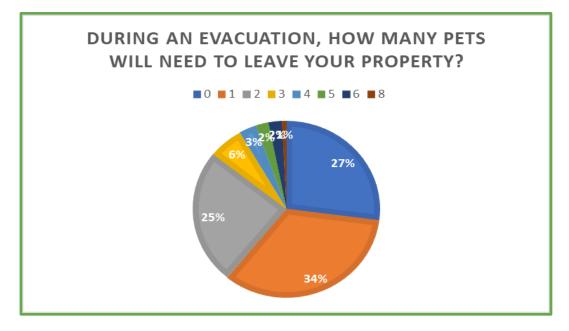
Of those surveyed, 7.5% will require assistance evacuating. Also, of those surveyed, 79% stated that they have not identified a secondary evacuation route.

#### **Evacuating with Pets**

Of those surveyed, 73% will be evacuating with at least one pet. Emergency planning must include plans for pets. Residents must have food, carriers, identification, and supplies for their pets for an extended period. Pre-planning for large and small animals in evacuation is critical.

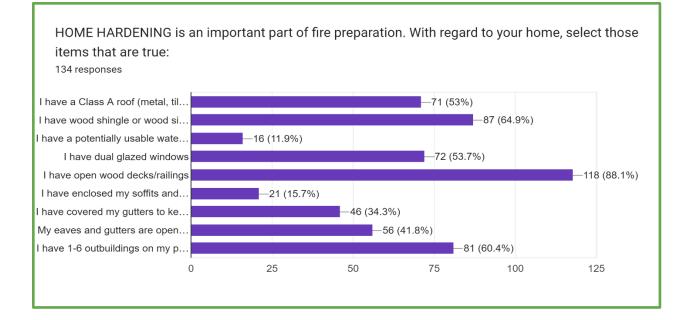
Some suggestions for dealing with this issue include:

- Improve means for people to get correct animal resource information, request help, and procedures during and before incidents.
- Increased training, ability, and coordination for volunteers who help with animal evacuation, and integration of trained, well-equipped volunteers during emergencies.



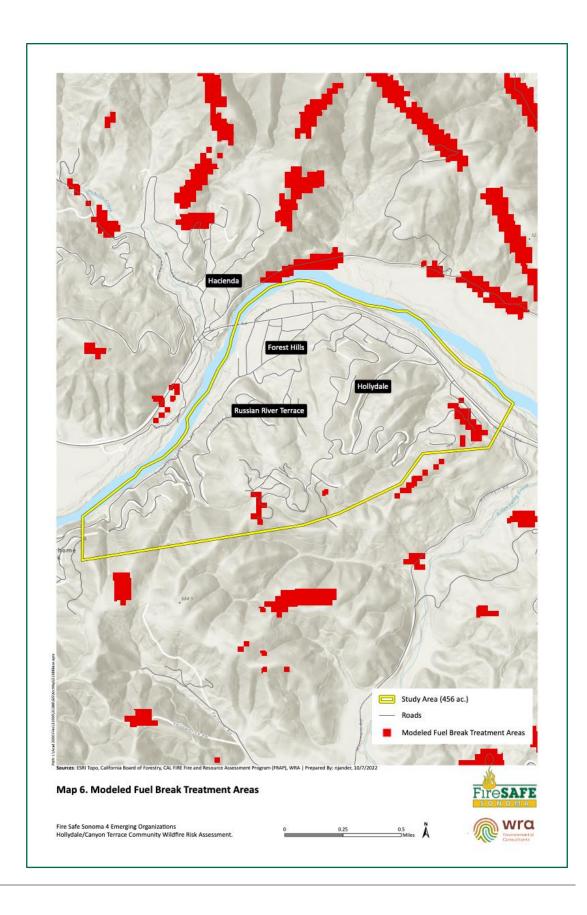
#### STRUCTURAL IGNITABILITY

Most 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, buildings in this area have open wood decks, and lack fire-safe roofs, siding, and enclosed features such as enclosed underdeck areas. Also, 60% of those surveyed indicated that they have outbuildings near their residence. Moreover, several comments from survey respondents suggested the creation of community fuel breaks in surrounding areas as recommended by CAL FIRE. Respondents also noted issues with utility power lines running through trees and branches, etc. According to the Fire Safe Sonoma Risk Analysis tool, the built environment ranked as inadequate.



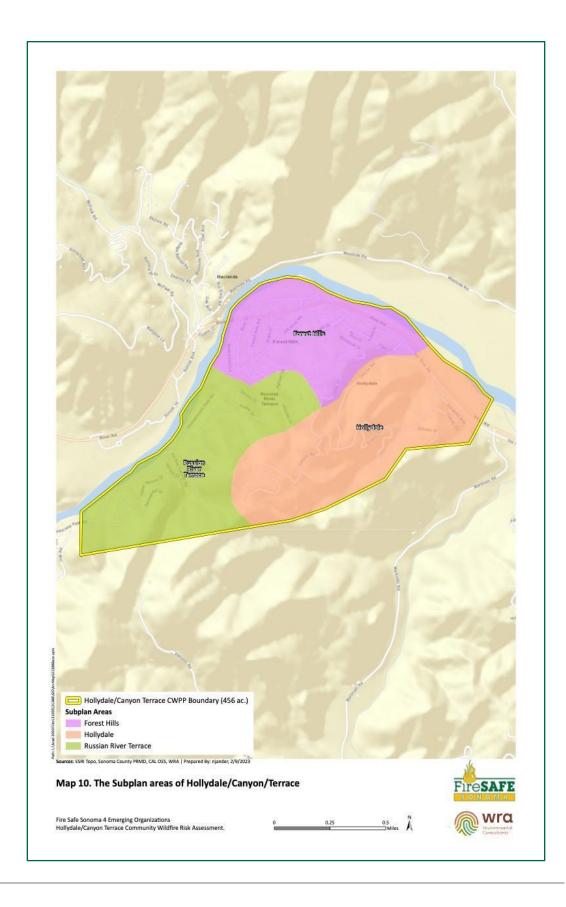
#### DEFENSIBLE SPACE/FUEL REDUCTION

Overall, defensible space around structures in this area is described as moderate. However, while 63% of those surveyed indicated that they have defensible space in the area within five feet of their home, only 38% indicated that they have defensible space out to 30 feet from their home. Additionally, CAL FIRE has recommended at least two community fuel breaks in this area and several throughout neighboring areas. According to the Fire Safe Sonoma Risk Analysis tool, defensible space around structures ranked as moderate.



#### INDIVIDUAL COMMUNITY ASSESSMENTS

As previously mentioned, within the greater Hollydale/Canyon/Terrace area, three unique areas have been identified where individual Sub-Plan Area assessments were completed. These Sub-Plan Areas are Hollydale, Canyon, and Terrace. Each of these Sub-Plan Areas' assessment observations are described in the following sections.



#### The "Hollydale" Sub-Plan Area

The Hollydale Sub-Plan Area is within the whole Plan Area and includes the neighborhoods of **Hollydale** (Old River Rd, Fort Cook, Cook's Beach, Woodside Dr, Cozy Ct, Field Lane, Iower Terrace Dr), **Lower Forest Hills** (Forest Hills Rd, Gray's Ct, Ogburn Ln), and **Mother's Beach** (River Dr, Buena Vista Ln, Old River Rd).

**Hollydale Park** was a Subdivision project by Joe Pohley. 140 acres were purchased from the Druids in 1928. The Hollydale Community Clubhouse was purchased in 1947 with \$100 bonds initiated by Claire Prentiss. The Clubhouse has been a social gathering place for 75 years. It continues to be a social gathering place for meetings and events. It is also a Resilience Center for the Community offering a generator, a place to cook, and Wi-fi.

The **Lower Forest Hills** neighborhood began as the Road's End Farm. The farm was once owned by Charles E. Ogburn and his wife, Gertrude. They developed the farm into what is now known as the Forest Hills neighborhood. Charles died in 1920 and his wife died in 1931.

**Mother's Beach,** Formerly Hollydale Beach, got its name from the local mothers and children who occupied it during the week when the vacationers and visitors were gone. In 1999 the Sonoma County Board of Supervisors acquired the 11 acres, formerly known as Mom's Beach, from James Potter, and inducted it as a Sonoma County Regional Park.

The Hollydale Sub-Plan Area has a predominantly west aspect, with approximately 60% of the area in a High Fire Severity Zone. (Ref. CAL FIRE 2023 FRAP)

The Hollydale Sub-Plan Area includes small parcels with medium density continuous fuels near structures; composition of fuels is conducive to crown fires or high-intensity surface fires; predominantly west aspects; dense fuels; heavy duff; prevailing wind exposure and/or ladder fuels that may reduce suppression effectiveness.

The overall risk ranking for the Hollydale Sub-Plan Area is 94, 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.** 

#### ACCESS/EVACUATION

Primary and secondary access and evacuation routes in this area include steep slopes and do not permit fire engines and large vehicles (such as a motor home) to pass simultaneously during an evacuation. According to the Fire Safe Sonoma Risk Analysis tool, roadside vegetation ranked as inadequate.

Improvements in this area should include roadside vegetation removal, improved address signage, and general education about evacuations, evacuating with pets, projects to assist those requiring assistance evacuating, and roadside fuels reduction projects. Evacuation drills should also be considered.

#### STRUCTURAL IGNITABILITY

Most buildings in this area were constructed prior to 2008 and do not meet modern construction standards for buildings in wildland-urban interface areas. Buildings in this area lack fire-safe roofs, siding, and enclosed features. According to the Fire Safe Sonoma Risk Analysis tool, roofing, siding, and unclosed features all ranked as inadequate.

Improvements in this area should include education about structural hardening and retrofit funding incentives.

#### DEFENSIBLE SPACE/FUEL REDUCTION

According to the Fire Safe Sonoma Risk Analysis tool, defensible space around structures in this area is described as **moderate**.

Improvements in this area should include roadside fuel reduction, education about the benefits of defensible space and defensible space funding incentives.

#### The "Canyon" Sub-Plan Area

The Canyon Sub-Plan Area includes the neighborhoods of **Scenic** (Scenic Dr, Hillside Dr, Elizabeth Way) and **Canyon Loop** (Canyon Rd, Canyon Rd loop, and the south side of Pocket Canyon Ridge).

The neighborhood is accessed by road on Old River Rd or Scenic Dr. Decommissioned logging roads used to connect Summerhome Park, Vellutini Rd, and points along Terrace Dr.

The **Canyon Loop** is approximately 1/3 of a mile with a road that dissects it. There are nineteen properties on the loop. A congenial neighborhood where neighbors watch out for one another, and it seems to have had that history. The area has well-maintained wooded roads with a large wild ravine below where there is a plan for vegetation management late fall. Many of the properties have views all the way to the ocean and redwood groves.

The Canyon Sub-Plan Area includes small parcels with continuous fuels in close proximity to structures; composition of fuels is conducive to crown fires or high intensity surface fires; steep slopes; predominantly south aspects; dense fuels; heavy duff; prevailing wind exposure and/or ladder fuels that may reduce suppression effectiveness; and a history of moderate fire occurrence.

The Canyon Sub-Plan Area has a predominantly southern aspect, with approximately 82% in a High FHSZ. (Ref. 2023 CAL FIRE FRAP)

The overall risk ranking for the Canyon Sub-Plan Area is 92, 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 "Terrace" Sub-Plan Area

The Terrace Sub-Plan Area encompasses the Russian River Terrace community including upper and middle Terrace Dr., Terrace Extension, Hillside Ln, Esther Dr., and the section of Summerhome Park Rd beneath upper and middle Terrace Dr. The community has one access point per section. Ogburn Ln is the access point to middle Terrace Dr., Hillside Ln., and Esther Dr. Icebox Canyon Rd. is the access point to upper Terrace Dr. and Terrace Extension. Summerhome Park Rd is accessed by Forest Hills Rd. or Old River Rd.

The Russian River Terrace "sub-division" was established in 1921. In 1940 the Russian River Terrace Association, a non-binding social events group, was created to guarantee its members access to recreational swimming and boating opportunities along Summerhome Park Rd. It remains a hub for neighborhood maintenance, neighborhood communications, and resident activities.

The Terrace Sub-Plan Area includes small parcels with continuous fuels in close proximity to structures; composition of fuels is conducive to crown fires or high intensity surface fires; steep slopes; predominantly west aspects; dense fuels; heavy duff; prevailing wind exposure and/or ladder fuels that may reduce suppression effectiveness; and a history of moderate fire occurrence.

The Terrace Sub-Plan Area has a predominantly west aspect, with approximately 82% of the area in a High Fire Severity Zone (FHSZ). (Ref. 2023 CAL FIRE FRAP)

The overall risk ranking for the Terrace Sub-Plan Area is 109, 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.** 

#### ACCESS/EVACUATION

Primary and secondary access and evacuation routes in this area include steep slopes and do not permit fire engines and large vehicles (such as a motor home) to pass simultaneously during an evacuation.

#### STRUCTURAL IGNITABILITY

Most buildings in this area were constructed prior to 2008 and do not meet modern construction standards for buildings in wildland-urban interface areas. Buildings in this area lack fire-safe roofs, siding, and enclosed features.

#### DEFENSIBLE SPACE/FUEL REDUCTION

Defensible space around structures in this area are described as **moderate**.

# SECTION IV: SUMMARY & CONCLUSIONS

This section summarizes findings and observations for each of the following:

- access and evacuation
- structural ignitability/home hardening
- and defensible space/fuel reduction

The general assessment for each focus area is based on the communitywide risk assessment and the percentages presented are from the community survey. Collectively they are meant to show areas for priority focus and treatments that are realistically achievable.

#### ACCESS AND EVACUATION

Data shows that within the Plan Area roadside vegetation ranked as inadequate. Data also shows that the primary roads out, primary roadway width and primary roadway slope all ranked as moderate. However, the secondary roadway width and terminus both ranked as inadequate. Secondary roadway slope and surface ranked as moderate. Street signage ranked as moderate and address numbers ranked as inadequate.

Of those surveyed, 42% say there is only one way out and 48% say they have two ways out; 53% say that tall grass, brush, and trees border and overhang the roadways and 41% say it mostly maintained but some areas require improvement; 61% say a motorhome and fire engine cannot pass and 34% say they would have difficulty passing. Additionally, 58% say they have approved address numbers and 46% say the street signs are at both ends of the street.

Moreover, 79% have not identified an alternate evacuation route and 21% have; 7.5% will require assistance evacuating and 73% will be evacuating with at least one pet.

#### STRUCTURAL IGNITABILITY/HOME HARDENING

Data shows that, within the Plan Area, roofing, siding, and unenclosed features all ranked as inadequate.

Of those surveyed, 88% have open decks; 65% say they have wood siding; 16% (conversely 84%) say they have enclosed eaves/soffits; 42% (Conversely 68%) say they keep rain gutters clean; 54% say they have dual-pane windows, and 53% say they have a class A roof.

#### **DEFENSIBLE SPACE / FUEL REDUCTION**

Data shows that within the Plan Area, overall Slope ranked as **steep**; Predominant Aspect ranked as extreme; Fuels ranked as **extreme**, and Fire Behavior ranked as **extreme**. Defensible Space ranked as **moderate**.

Of those surveyed, 82% are less than one-acre parcels; 63% say they have adequate defensible space in the immediate zone (zero to five feet from house); 38% say they have adequate defensible space in the intermediate zone (5–30-foot zone); and 6% say they have adequate defensible space in the extended zone (up to or beyond the 100 feet).

## **SECTION V: RECOMMENDATIONS**

#### **GENERAL RECOMMENDATIONS**

The partnership that exists between the Hollydale/Canyon/Terrace Fire Safe Council and the citizens in the Plan Area will help the community of Hollydale/Canyon/Terrace 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; long roads with one way in and one way out; a lack of address numbers; the lack of fire-safe roofs and siding; unenclosed features, such as decks; and roadside vegetation.

#### **Access/Evacuation**

Projects in this area should include roadside fuels reduction projects; improved address signage; information about early notifications and evacuations and general education about evacuations; information about evacuating with pets specifically; and projects to assist those requiring assistance evacuating.

#### **Structural Hardening**

Projects in this topical area should include structural hardening and retrofitting resources for lowincome and at-risk populations as well as funding incentives.

#### **Defensible Space/Fuels Reduction**

Based on the information gathered, projects in this topical area should include roadside fuel reduction projects, community fuel breaks (CAL FIRE has recommended at least two community fuel breaks in the area and several throughout neighboring areas), information about power lines, and defensible space resources for low income and at-risk populations as well 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.

## 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
- CAL FIRE's Fire and Resource Assessment Program (FRAP); <u>https://frap.fire.ca.gov/;</u> CAL FIRE
- 3. California Fire Code, 2021; International Code Council Inc.
- 4. California Residential Code, 2021; International Code Council Inc.
- "Communities at Risk." Office of the State Fire Marshal, <u>https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/fire-plan/communities-at-risk/</u>. Accessed 12 December 2022.
- 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
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- 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).
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- 17. Sonoma County CWPP Hub Site; <u>https://sonoma-county-cwpp-hub-site-sonomacounty.hub.arcgis.com/;</u> County of Sonoma.
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- Sonoma-Lake-Napa Unit 2021 Strategic Fire Plan; CAL FIRE, <u>https://osfm.fire.ca.gov/media/lpafffiu/2021 Inu fireplan.pdf</u>. Accessed 9 December 2022.
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- California's I-Zone; State of California; various authors, edited by Rodney Slaughter; 1996
- 24. The Halter Project; Julie Atwood subject-matter expert contributor.
- 25. The Russian River Reach; www.rr-reach.com; Fox, Hardy
- 26. Hacienda... or is it Cosmo?; www.hacienda-cosmo.com; Fox, Hardy
- 27. Hollydale Community Club; https://www.hollydaleclub.org/history.html

## **SECTION VI: LIST OF 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:

- Access/Evacuation
- Structural Ignitability/Structural Hardening
- Defensible Space/Fuel Reduction
- Outreach & Education

#### **APPENDIX C: MAPS**

The entire map-set is 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 maps include:

- Basemap Aerial
- Basemap Topography
- Community Areas
- Fire Hazard Severity Zones (FHSZs)
- Fire Hazard Severity Zones (FHSZs) 2022 Draft Update
- 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
- Subplan Areas

#### APPENDIX D: WILDFIRE RISK INDEX

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

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**Final Audit Report** 

2023-07-18

Created:	2023-05-11
By:	ROBERTA MACINTYRE (inspect2901@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAyrpPGk1RxAKmJbHRanNQwUN0kR7i4RbT

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