HEALDSBURG CWPP

Community Wildfire Protection Plan

December 2022

PREPARED FOR

City of Healdsburg Fire Department
Healdsburg, CA

PREPARED BY

Healdsburg Fire Department
Wildfire Services Group
Sonoma Technology

HEALDSBURG FIRE DEPT

WILDFIRE SERVICES

STI | Sonoma Technology

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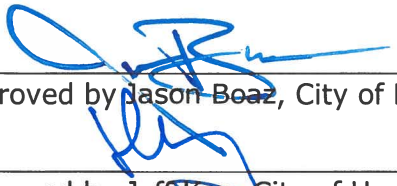
Chief Jason Boaz, City of Healdsburg Fire Department; Division Chief / Fire Marshal Lance Macdonald, City of Healdsburg Fire Department; City of Healdsburg Police Chief Matt Jenkins; former City of Healdsburg Mayor Osvaldo Jimenez; City of Healdsburg Mayor Ariel Kelly; City of Healdsburg Council Member David Hagele; City of Healdsburg Council Member Evelyn Mitchell; City of Healdsburg Manager Jeff Kay; City of Healdsburg Assistant Manager Andrew Sturmfels; City of Healdsburg Community Services Director Mark Themig; City of Healdsburg Parks and Open Space City of Healdsburg Superintendent Jaimie Licea; CAL FIRE Battalion Chief Paul Fleckenstein; CAL FIRE Division Chief Ben Nichols; Northern Sonoma County Fire District Chief Marshall Turbeville; Corazon Healdsburg Non-Profit; Northern Sonoma County Communities Organized to Prepare for Emergencies (COPE); and members of the public who participated in the development of this CWPP.

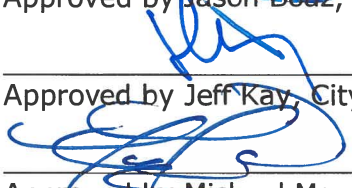
Signature Page

The City of Healdsburg Community Wildfire Protection Plan (CWPP) was developed in accordance with the 2003 Healthy Forests Restoration Act (HFRA). The plan was developed collaboratively among the City of Healdsburg Fire Department, city leaders, and community stakeholders. The plan includes a summary of community input and feedback; actions that land and homeowners can take to reduce structural ignitability and improve defensible space; and a prioritized list of mitigation strategies and actions for which future grant funding may be pursued. The undersigned have reviewed this CWPP and accept this document.



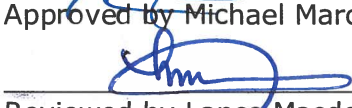
2/10/2023

Approved by Jason Boaz, City of Healdsburg Fire Chief — Date



2/7/2023

Approved by Jeff Kay, City of Healdsburg Manager — Date



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Approved by Michael Marcucci, Unit Chief CAL FIRE — Date

2/10/2023

Reviewed by Lance Macdonald — Date
Division Chief/Fire Marshal, City of Healdsburg Fire Department

Plan Updates

Date	Section(s) Updated	Description of Update	Updated By
December 2022	All Sections	Initial Draft of Complete CWPP	Wildfire Services, Sonoma Technology, City of Healdsburg Fire Department
January 2023	Signature Page	Updated for new Council members	Healdsburg Fire Dept.

Executive Summary

The City of Healdsburg Fire Department, located in Sonoma County, has developed this Community Wildfire Protection Plan (CWPP) to assess and document a strategy to reduce potential wildfire hazard within the City of Healdsburg (COH). The mitigation focus is on home and property hardening[1] to reduce the possibility of structures and neighborhoods igniting during a wildfire. The CWPP process also serves to foster collaboration throughout the COH to support outreach and fire resilient communities. This CWPP is intended to facilitate planning for mitigation action and help procure state and federal grant funding to support these mitigation efforts.

The COH is located along Highway 101 north of the City of Santa Rosa. Healdsburg city limits encompass approximately 2,400 acres, including over 300 acres of city-owned properties outside the city proper; examples include the Healdsburg Municipal Airport, the Healdsburg Corporation Yard, the Magnolia Pump Station, the Fitch Mountain Preserve, and the COH Wastewater Treatment Plant. COH is home to many historic buildings and structures. Further, many of the neighborhoods in Healdsburg have homes that are near one another. Therefore, the focus of this CWPP was to identify outreach and mitigation strategies focused on protecting homes and neighborhoods within the city limits from the threat of wildfire.

As part of the development of this CWPP, the project team—the Healdsburg Fire Department, Wildfire Services Group, and Sonoma Technology—conducted public meetings and a community survey to foster stakeholder and community collaboration and to gather community input (Section 2); performed a hazard assessment focused on protecting structures within the COH (Section 3); developed mitigation strategies focused on reducing structure ignitability (Section 4); developed a priority list of actions and projects (Appendix B); and developed a CWPP monitoring plan to ensure actions and projects move forward and continue in the future (Section 5).

The mitigation strategy and plan developed through this CWPP includes the following elements:

- Public education and outreach focused on community preparedness, home hardening, and defensible space to reduce structural ignitability and support fire resilient neighborhoods.
- The development of a home assessment and inspection program to assist property owners in understanding how to make their homes more fire resilient.

[1] Fire hardened means your home is prepared for wildfire and an ember storm. It does not mean fireproof. Home hardening addresses the most vulnerable components of your house with building materials and installation techniques that increase resistance to heat, flames, and embers that accompany most wildfires. California Fire Safe Council (**https://cafiresafecouncil.org/resources/fire-safety-information-for-residents/**).

- Continue and enhance fuel reduction and vegetation management throughout COH on residential and non-residential properties to protect the community and critical infrastructure.
- Increased partnerships with other COH departments, land managers, and environmental organizations to address fuel treatment and vegetation management.

Using geographic information system (GIS) analyses combined with data from the COH and data available from the Sonoma County CWPP, an online Community Base map[2] was developed that contains multiple map layers of information that were used to form this CWPP. This CWPP is aligned with the California Strategic Fire Plan; the Sonoma County CWPP; the COH Local Hazard Mitigation Plan (LHMP); the COH Emergency Preparedness Guide; the COH Emergency Operations Plan; and Healdsburg Fire Department initiatives.

[2] Sonoma Technology – Healdsburg CWPP Basemap (**https://sonomatech.maps.arcgis.com/apps/dashboards/10a47cfb6a694964bd53cf8d67e5e0e9**)

1. Introduction

The City of Healdsburg Fire Department, located in Sonoma County, has developed this Community Wildfire Protection Plan (CWPP) to assess and document a strategy to reduce potential fire hazard for the City of Healdsburg (COH). The mitigation focus is on home and property hardening[3] to reduce the possibility of structures and neighborhoods igniting during a wildfire. The CWPP process also serves to foster collaboration throughout the COH to support outreach and fire resilient communities. This CWPP is intended to facilitate planning for mitigation action planning and help procure state and federal grant funding to support mitigation efforts.

This CWPP is intended to supplement the Sonoma County CWPP, which was updated in 2022. The county-level CWPP provides a framework that can be used to identify, prioritize, implement, and monitor hazard reduction activities throughout the county. This CWPP for the COH provides a focused, city-specific assessment and mitigation plan specific to the COH. It is based on current maps and data combined with an analysis of structure density, and a wildfire threat assessment performed in 2022 by Wildfire Services Group (WSG), Sonoma Technology, and the Healdsburg Fire Department. Maps and data from the county-level CWPP were used for this assessment wherever possible to create consistency between this CWPP and the county-level CWPP. This CWPP also aligns with the Healdsburg Local Hazard Mitigation Plan (LHMP); the local Emergency Preparedness Guide; the local Emergency Operations Plan; and Healdsburg Fire Department initiatives.

A community base map was created as part of the development of the Healdsburg CWPP, it can be viewed here: **https://sonomatech.maps.arcgis.com/apps/dashboards/10a47cfb6a694964bd53cf8d67e5e0e9**.[4]

1.1 City of Healdsburg Geographic Setting

The COH is located along Highway 101 north of the City of Santa Rosa. Healdsburg city limits encompass approximately 2,400 acres, including over 300 acres of city-owned properties outside the city proper, such as the Healdsburg Municipal Airport, the Healdsburg Corporation Yard, the Magnolia Pump Station, the COH Wastewater Treatment Plant, and Fitch Mountain Park and Open Space Preserve. The Russian River runs through the COH; a town square and park are in the central downtown area. The

[3] Fire hardened means your home is prepared for wildfire and an ember storm. It does not mean fireproof. Home hardening addresses the most vulnerable components of your house, using building materials and installation techniques that increase resistance to heat, flames, and embers that accompany most wildfires. California Fire Safe Council (**https://cafiresafecouncil.org/resources/fire-safety-information-for-residents/**).
[4] Sonoma Technology – Healdsburg CWPP Basemap (**https://sonomatech.maps.arcgis.com/apps/dashboards/10a47cfb6a694964bd53cf8d67e5e0e9**)

town square and park are home to multiple restaurants, hotels, and shops. The south-central portion of the COH is home to many historic buildings and residences. The population of the COH is approximately 11,275. The COH is bordered by Geyserville to the north; Windsor and the Russian River Valley viticultural area to the south; Fitch Mountain and rural areas to the east; Dry Creek to the west; and Alexander Valley viticultural areas to the northeast. **Figure 1** shows a map of the COH and the COH boundary (black line) that defines the scope of work for this CWPP.

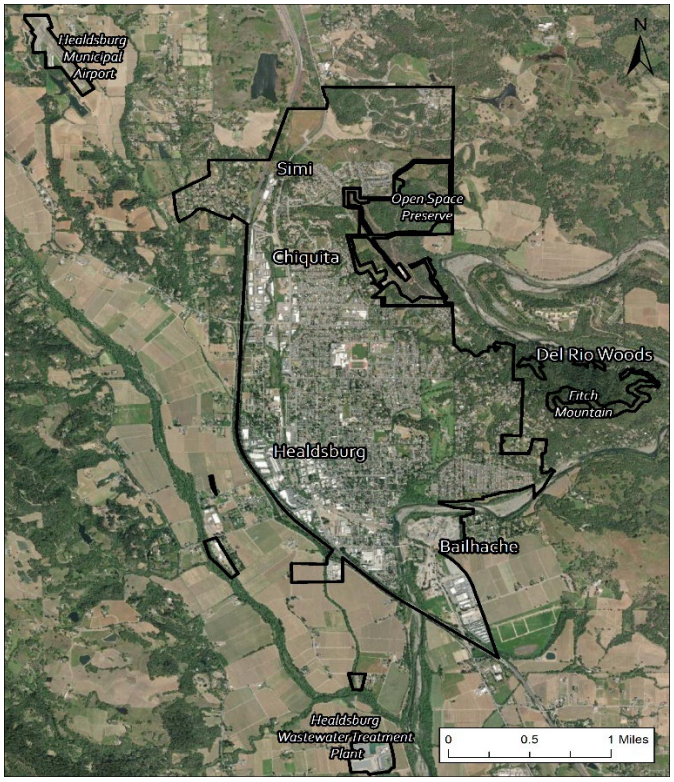

Figure 1. Map of the City of Healdsburg and the city boundary (black line) that defines the scope of work for this CWPP.

Historically, Healdsburg served as an agricultural service center and a milling and distribution center for north coast lumber. More recently, the development of tourist-related businesses such as overnight accommodations, specialty retail, restaurants, and wine tasting have diversified the local economy. Healdsburg is a tourist destination and wine region. The COH lies at the intersection of three rich agricultural valleys—the Russian River Valley, the Dry Creek Valley and the Alexander Valley.[5]

[5] Healdsburg General Plan (**https://www.ci.healdsburg.ca.us/354/General-Plan**).

1.1.1 Wildland Urban Interface

In the past two decades, wildland-urban interface (WUI) fires have grown in number and severity. The WUI is described as the zone where structures and other human development meet and intermingle with undeveloped wildland or vegetative fuels. In WUI areas, urban "fuels" (homes and other structures) are directly adjacent to wildland "fuels" (vegetation). When wildfires occur in the WUI, they pose tremendous risks to life, property, and infrastructure, and can create dangerous and complicated situations for firefighters and residents alike. The structures destroyed by WUI fires have devastated communities and cost billions of dollars. Structure losses are attributed to exposure from both embers (firebrands) and fire (radiation and/or convection).[6]

Large, wind-driven fires have impacted northern California over the past five years (i.e., the Valley, Tubbs, Nuns, Glass, Kincade, and LNU Lightning fires). These fires can cast embers far ahead of the fire front, sometimes as far as miles ahead, and can ignite structures in neighborhoods that do not resemble "typical" WUI environments. New research findings from the National Institute of Standards and Technology (NIST) suggest that the spatial relationships between fuels, exposure potential, and hardening at the structure and parcel levels are key for developing effective mitigation strategies for the WUI and surrounding areas identified as having high-to-moderate fire hazard.

Figure 2 shows a map of the areas in the COH that are identified as having moderate-to-high wildfire hazard.[7] The majority of the high-to-moderate wildfire hazard areas within the COH boundary are to the east and northeast. Mitigation work is underway in the Healdsburg Ridge Open Space Preserve, which is northeast of the COH limits. The area of Fitch Mountain has also been designated as an area of high hazard, and the communities of Fitch Mountain and Mill Creek have developed their own CWPPs which are complementary to this CWPP. The work that the communities of Fitch Mountain and Mill Creek complete will have a positive impact on their communities and the COH. When possible and mutually beneficial, the Healdsburg Fire Department will pursue opportunities to work collaboratively with these communities.

[6] NIST Technical Note 2205: WUI Structure/Parcel/Community Fire Hazard Mitigation Methodology (https://nvlpubs.nist.gov/nistpubs/TechnicalNotes/NIST.TN.2205.pdf)
[7] 2025 Healdsburg General Plan (**https://ci.healdsburg.ca.us/DocumentCenter/View/435/General-Plan-WUI-Map-PDF**).

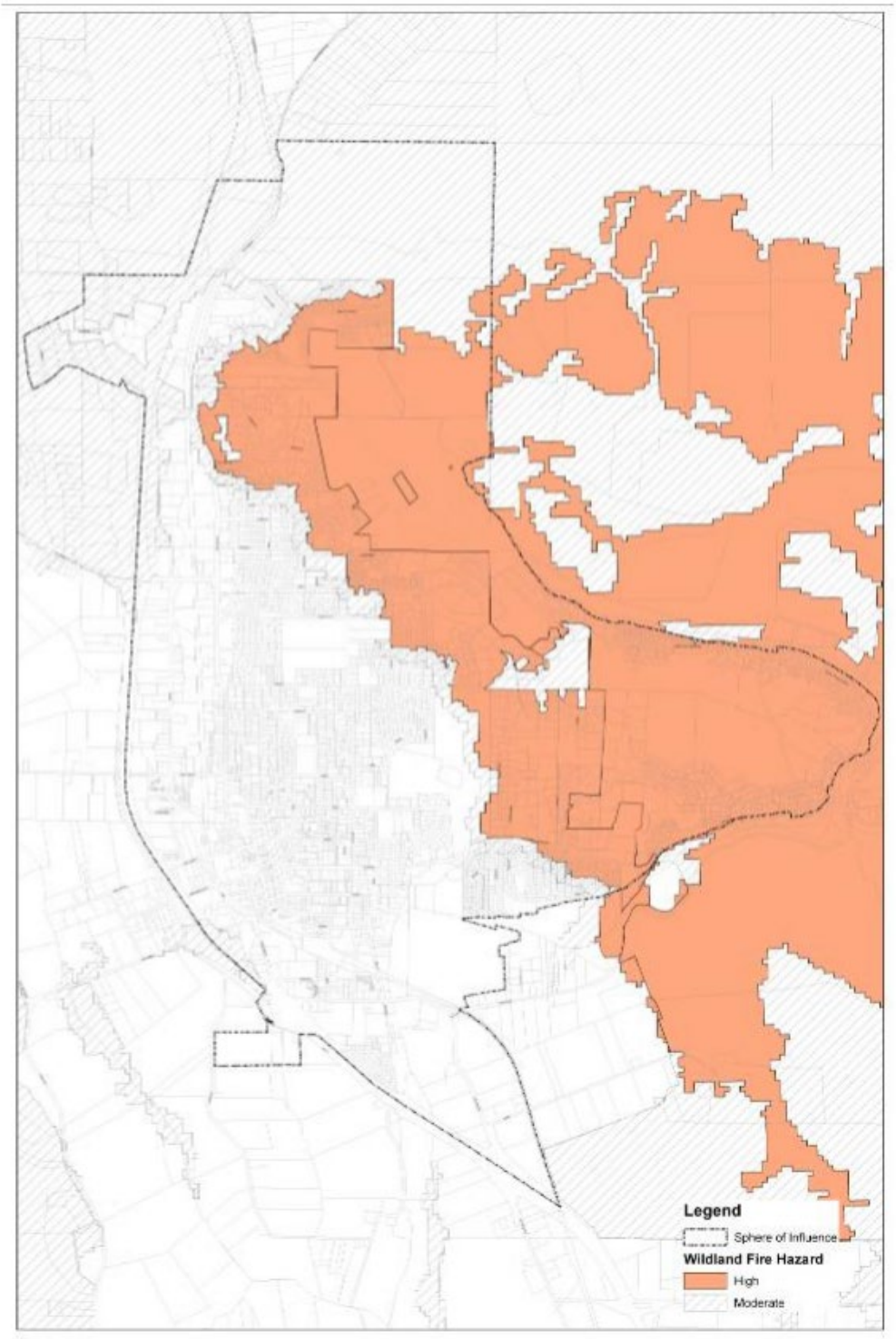

Figure 2. Map of areas identified as high-to-moderate wildland fire hazard in and around the City of Healdsburg.

1.2 Fire Environment

California's Mediterranean climate, with annual cycles of lush vegetative growth during mild, wet winters and springs, followed by extended warm, dry summers and falls, fires have periodically reshaped the landscape and vegetation for millennia. Landscapes are now significantly altered due to fire suppression and fire prevention efforts and the lack of large-scale fires, resulting in overgrown vegetation. As more people move into the region, urban development into the wildlands has increased and further exacerbated WUI fire issues.

The mix of weather, diverse vegetation and fuel characteristics, complex topography, and land development patterns in Sonoma County and northern California are important contributors to the fire environment. Strong, northeasterly, offshore winds combined with high temperatures and low relative humidity (RH) create the weather regime in the north bay area that is commonly associated with the largest and most destructive wildfires. It is under these conditions that Red Flag warnings[8] are typically issued and, in some cases, Pacific Gas & Electric (PG&E) may issue a Public Safety Power Shutoff (PSPS).[9]

1.2.1 Fire History

Fire history is important for predicting potential future fire locations, frequency, behaviors, and ignition sources. Since 1960, hundreds of fires have burned in Sonoma County, but five of the top twenty most destructive fires have burned in Sonoma County since 2015: the Valley, Tubbs, Nuns, Glass, and LNU Lightning fires. **Figure 3** shows a map of fire history for the area around Healdsburg.[10] Based on the fire history data, three of the largest fires that have threatened the COH have occurred in the past 6 years – Walbridge fire in 2020, the Kincade Fire in 2019, and the Tubbs Fire in 2017. The Tubbs Fire resulted in emergency evacuations and evacuation warnings for thousands of COH residents, and the Kincade Fire resulted in a citywide evacuation of Healdsburg's more than 11,000 citizens.

[8] Red Flag Warnings are issued by the National Weather Service (NWS) to notify fire agencies and the public in advance of critical weather patterns that may contribute to extreme fire danger and/or extreme fire behavior (**https://www.weather.gov/mqt/redflagtips**).

[9] High winds can bring tree branches and debris into contact with energized electrical lines, damage equipment, and ignite a wildfire. As a result, Pacific Gas & Electric may turn off power during severe weather to help prevent wildfires. This is called a Public Safety Power Shutoff (**https://www.pge.com/en_US/residential/outages/public-safety-power-shuttoff/learn-about-psps.page**).

[10] CAL FIRE GIS Data (**https://frap.fire.ca.gov/mapping/gis-data/**)

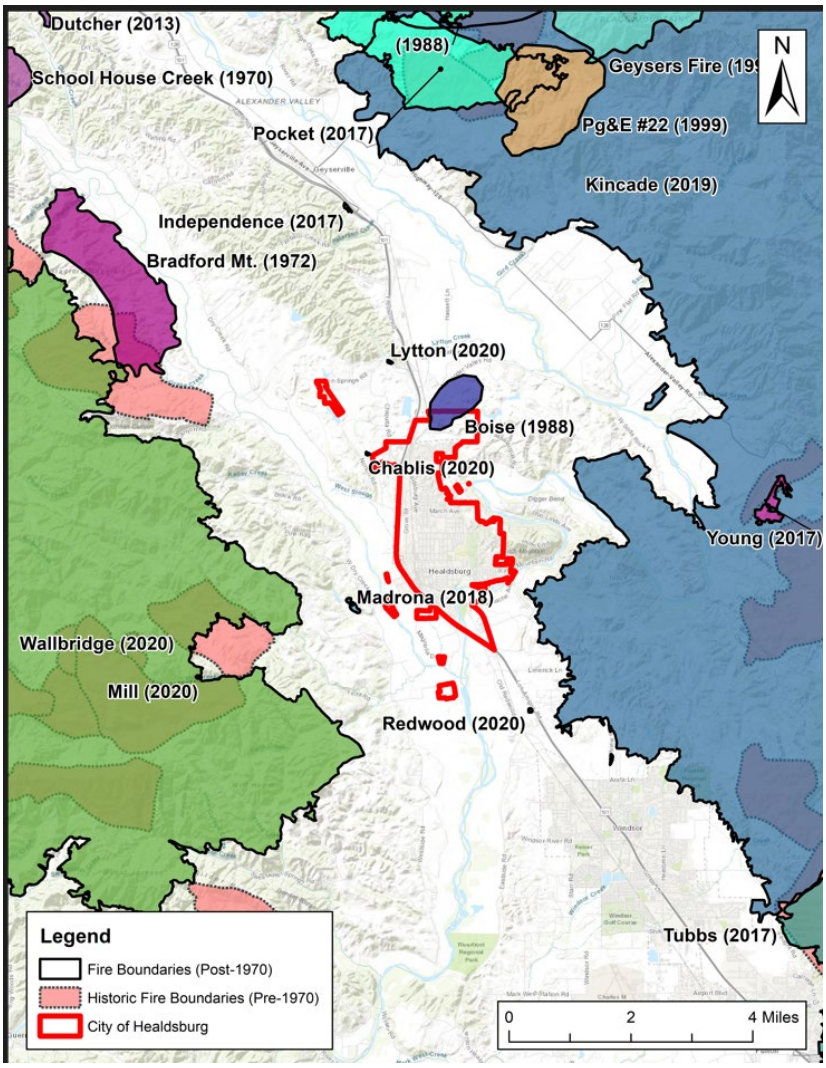

Figure 3. Fire history data for the area surrounding the City of Healdsburg.

The native vegetation in Sonoma County has evolved and adapted to wildfires, and periodic fires are important for many native species to reproduce. Wildfires are essential for biodiversity and the different types of habitats present within the county. Excess fuels can accumulate and create high wildfire hazard in areas without active vegetation management. This can contribute to larger and more destructive wildfires that may threaten buildings and homes near wildlands.[11]

1.2.2 Climate and Topography

The COH has cool, wet winters and warm-to-hot, dry summers. The COH and surrounding area include cold-winter valley floors, canyons, and land troughs that are

[11] Sonoma Open Space (**https://www.sonomaopenspace.org/news-and-features/2018/12/working-with-partners-to-reduce-fire-risk-in-sonomavalley/?locale=en**).

characteristic of the California coastal ranges. Marine air moderates the coastal range, which, without the marine influence, would otherwise be colder in the winter and hotter in summer. Fall afternoon winds are common, with strong drying winds observed from summer to late fall. Lowland valley areas and surrounding ridges and hilltops experience colder winters. The average annual low temperature is 47 degrees Fahrenheit, and the average annual high temperatures is 74 degrees Fahrenheit. Annual average precipitation is approximately 42 inches.[12]

Topography characterizes the land surface features of an area in terms of elevation, aspect, and slope. Aspect is the compass direction that a slope faces, which can have a strong influence on surface temperature and, more importantly, on fuel moistures. Both elevation and aspect play an important role in the type of vegetation that is present in an area, the length of the growing season, and the amount of sunlight absorbed by vegetation. Generally, southern aspects receive more solar radiation than northern aspects; the result is that soil and vegetation on southern aspects is warmer and dryer than soil and vegetation on northern aspects. Slope is a measure of land steepness and can significantly influence fire behavior as fire tends to spread more rapidly on steeper slopes. For example, as slope increases from 20% to 40%, flame heights can double and rates of fire spread can increase fourfold; from 40% to 60%, flame heights can become three times higher, and rates of spread can increase eightfold.[13]

The COH lies on the Russian River and has generally flat topography at approximately 106 feet above sea level. Foss Creek traverses the COH from north to south, flowing into Dry Creek near the Highway 101 Central Healdsburg interchange. The COH is in the Alexander Valley, surrounded by gradually sloping terrain to the east and west. The COH is bordered by mountains to the north and east, with elevations of approximately 700-1,000 feet above sea level. Further from the COH, the terrain is topographically diverse, with networks of river valleys and mountain peaks.

Recent research on climate change strongly suggests that the threat of wildfire is likely to increase in coming years due to California's ongoing drought situation, excessive heat, accumulation of fuels, and the occurrence of wind-driven fires. The damage from wildfires extends beyond the immediate cost of structures lost and can include damage to water and drainage systems, as well as long-term health effects from smoke exposure, smoke damage to crops (particularly wine grapes), and damage to the health of forests. As a result of ongoing drought conditions and reduced water availability, the COH has implemented a water conservation program to reduce water usage citywide by 20% (based on an average of 2017-2019 usage) to maintain a sufficient water supply to sustain public health and safety needs.[14]

[12] Climate Healdsburg - California and Weather averages Healdsburg (**www.usclimatedata.com**).
[13] Adapted from the S-290 Intermediate Wildland Fire Behavior course material; National Wildfire Coordinating Group (**http://training.nwcg.gov/courses/s290.html**).
[14] City of Healdsburg Water Conservation and Drought Information (**https://ci.healdsburg.ca.us/714/Water-Conservation-Drought-Information**).

1.2.3 Vegetation and Fuels

In the context of wildland fire, vegetation is also referred to as fuel, and plays a major role in potential fire hazard and fire behavior. A fuel's composition (including moisture level, chemical makeup, and density) determines its degree of flammability. Of these, fuel moisture is the most important consideration. The moisture content and distribution of fuels determine how quickly a fire can spread and how intense or hot it may become. High moisture content slows the burning process since heat from the fire must first eliminate moisture. In addition to moisture, a fuel's chemical makeup determines how readily it will burn. Plants, shrubs, and trees such as Chamise, Eucalyptus, Bay Laurel, and others found in Sonoma County contain oils or resins that promote combustion, causing them to burn more easily, quickly, and intensely.

As part of the Sonoma County Vegetation Mapping and LiDAR Program (Sonoma Veg Map),[15] a 5-meter spatial resolution fuel model map was developed for Sonoma County in February 2021. The fuel model map represents surface vegetation and structure locations according to Scott and Burgan's fuel model classification scheme.[16] Fuel model data are used as input to fire behavior models and provide a simplified means for estimating fire behavior given the mix of vegetation in a specific area. Fire behavior modeling is performed to identify areas of potential fire hazard based on vegetation, topography, fuel moisture, and weather. **Figure 4** shows the Sonoma Veg Map 5-meter surface fuel model data for the COH and surrounding area.

[15] Sonoma Veg Map (**https://sonomavegmap.org/**).
[16] Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model: (**https://www.fs.usda.gov/rm/pubs_series/rmrs/gtr/rmrs_gtr153.pdf**)

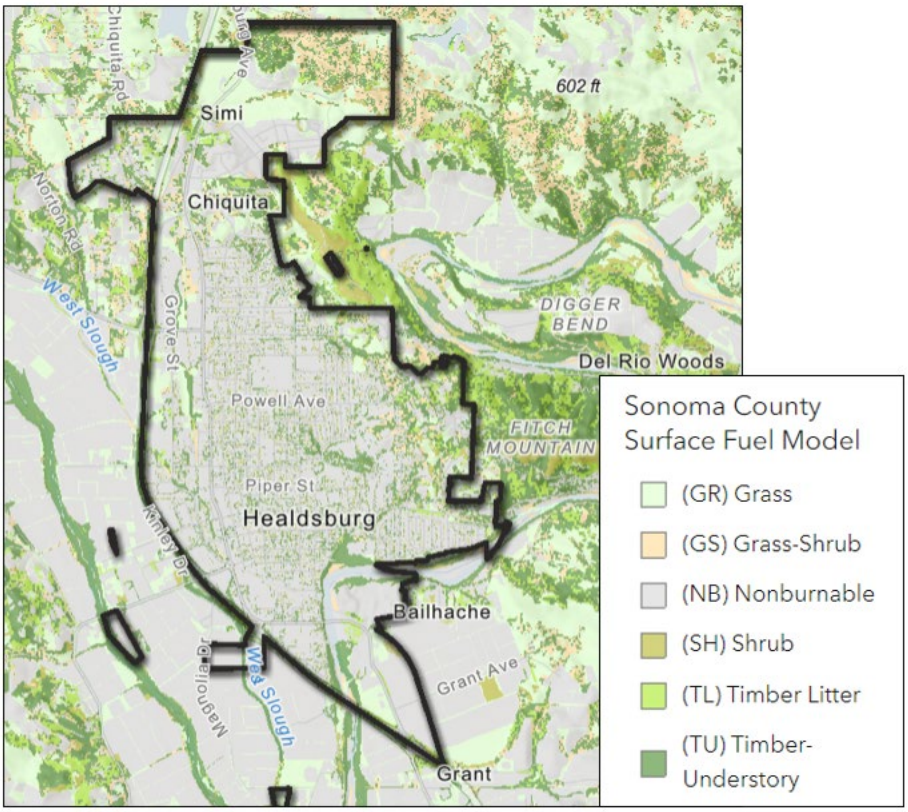

Figure 4. Surface fuel model data (5-meter) for the City of Healdsburg and surrounding area.

The 5-meter surface fuel model data was used during the development of the Sonoma County CWPP to model fire behavior and develop a data layer showing fire hazard index. It is important to note that current fuel model data only exists for natural vegetation and does not account for structures or other fabricated burnable material. As shown in Figure 4, much of the COH is classified as "Nonburnable;" however, if a fire were to occur and if embers or radiant heat were to ignite vegetation or structures within the COH, they would burn. Therefore, from a fire resilience and home hardening perspective at the city level, it is important to identify the areas with the highest potential for ignition and combustion and determine strategies to mitigate fire hazard in those areas.

1.3 Fire Hazard

The Sonoma County Wildfire Hazard Index (hazard index) was created as part of the development of the Sonoma County CWPP. The hazard index is a model that predicts relative wildfire hazard on the landscape. Higher index values represent a higher relative hazard. The index is based on inputs that inform potential fire behavior under extreme weather conditions (such as those present during the Tubbs and Nuns fires of

October 2017); inputs that represent fire probability occurrence; and a model of wildfire suppression difficulty.[17] **Figure 5** shows a map of the fire hazard index for the COH and the surrounding area. As shown in Figure 5, the areas to the north and east of the COH show the highest relative hazard. However, much of the area within the COH boundary is indicated as very-low-to-moderate hazard. Due to the age of structures and structure density within the COH, particularly in the historic areas and neighborhoods, a hazard assessment was performed that focused on structures and structure density within the COH (Section 3).

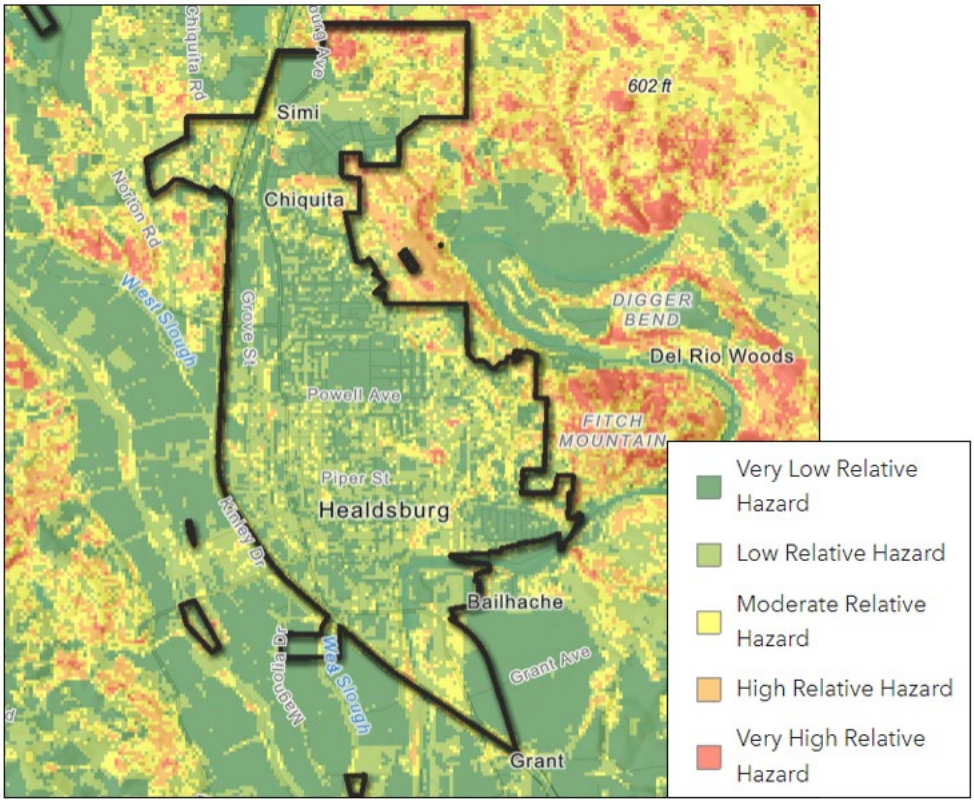

Figure 5. Map of the Sonoma County Fire Hazard Index for the City of Healdsburg and surrounding area.

1.4 Values and Assets at Risk

Values and assets at risk are defined as structures and resources that can be damaged or destroyed by wildland fire. Values and assets in Healdsburg include real estate (homes and businesses), emergency communication facilities, transportation and utility infrastructure, watersheds, protected wildlands, tourist and recreation areas, and agricultural lands. In addition to providing a framework for protecting citizens and

[17] Sonoma County Wildfire Hazard Index (**https://sonoma-county-cwpp-hub-site-sonomacounty.hub.arcgis.com/apps/sonoma-county-wildfire-hazard-index/explore**).

providing for firefighter safety, the California Fire Plan[18] identifies the following assets as warranting consideration in pre-fire planning: watersheds and water; wildlife; wildlife habitats; special status plants and animals; scenic, cultural and historic areas; recreation areas; rangeland; structures; infrastructure; and air quality.

1.4.1 Road Network and Power Infrastructure

The road network within the COH includes Highway 101 that runs north/south adjacent to the west of the COH, which serves as the primary highway. Highway 101 is a major trucking route to the north, and high-pressure gas lines, managed by PG&E, run along the highway. Within the COH, there is a dense network of primary and secondary roads, with some narrow, winding roads on the north and eastern edges of the COH.

The COH's Electric Department provides electric service to 5,793 meters. The Electric Department maintains the Badger substation, as well as 28 miles of underground and 28.3 miles of overhead high voltage lines. The power infrastructure also consists of 1,220 power poles, 1,320 streetlights, and over 800 transformers.[19]

1.4.2 Schools and Hospitals

The Healdsburg Unified School District (HUSD) operates five school campuses, including Healdsburg Elementary, Fitch Mountain Elementary, Healdsburg Junior High School, Healdsburg High School, and Marce Becerra. There are four additional schools that are not part of the HUSD, but whose students attend the district's junior high and high school. Alexander Valley Elementary School and the Westside Elementary school are public schools, while St. John the Baptist Catholic School and the Healdsburg School are both private schools. Additionally, there are several pre-schools that operate within the COH limits. There is one hospital in Healdsburg—the Healdsburg District Hospital, which was established in 1905.[18]

1.4.3 Historic Buildings

The COH is home to many historic buildings representing a broad range of architectural styles, including Queen Anne, Italianate, Homestead, Greek Revival, and Neo-classical. In 1983, an extensive Cultural Resource Survey was published, documenting approximately 350 potentially historic properties and sites in the COH. While many structures are well kept, all efforts to reduce structural ignitability using home hardening guidelines and defensible space will be critical during wildfire preparation to reduce home to home ignitions.[18]

[18] California Strategic Fire Plan (**https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/fire-plan/**).
[19] City of Healdsburg General Plan (**https://www.ci.healdsburg.ca.us/354/General-Plan**).

1.4.4 Natural Resources, Parks, and Open Space

Watersheds are land areas that channel rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean. The main watershed in the Healdsburg area is the Lower Dry Creek Watershed. Other smaller watersheds include the Gird Creek Watershed, the Brooks Creek Watershed, and the Adam and Eve Redwoods Watershed. Approximately 80% of the COH's water comes from the upper Russian River.[20]

The Russian River, streams, and creeks that flow through the COH provide important wildlife habitats and contribute to the aesthetic of the neighborhoods and the quality of life of residents. Because of its natural resources and recreational activities, Healdsburg is a tourist destination. The Russian River is an important recreational resource within the COH, with scenic overlooks, boating, and swimming opportunities. There are numerous parks and open space preserves within and surrounding the COH. The Healdsburg Ridge Open Space Preserve is north of the COH and consists of approximately 150 acres. The Fitch Mountain Park and Open Space Preserve is located to the east of the COH and consists of 170 acres. Both preserves protect the natural resources for wildlife habitats and provide outdoor recreation opportunities. Within the Healdsburg General Plan, there are policies to protect the natural resources and wildlife habitat.[21]

The Healdsburg Parks and Recreation Department houses all functions related to public parks and community recreation. The department manages over 220 acres of parks and open space. The COH's Community Services Department (CSD) operates and maintains a variety of parks and recreational facilities throughout the regional area. In addition to the Healdsburg Plaza and West Plaza Parks, Villa Chanticleer, the Tayman Park Golf Course, the Municipal Pool, and the Senior Center, there are seven neighborhood and community parks within the COH.[22]

Open space makes up a significant portion of the wooded ridges and hillsides along the COH's eastern boundary, and are protected from development by public ownership or conservation easements over the privately owned land. The Healdsburg Ridge Open Space Preserve includes 152 acres managed by Sonoma County Agricultural and Open Space District, which controls development on the open space preserve through conservation easements. The COH and the Agricultural and Open Space District work together to provide public access to trails through the preserve.[21]

[20] City of Healdsburg Water (**https://ci.healdsburg.ca.us/420/Water**)
[21] City of Healdsburg Open Space (**https://www.ci.healdsburg.ca.us/741/Open-Space**).
[22] City of Healdsburg General Plan (**https://www.ci.healdsburg.ca.us/354/General-Plan**).

1.5 City of Healdsburg Fire Department

The City of Healdsburg Fire Department is responsible for the protection of communities within the boundaries of the COH. The Healdsburg Fire Department also provides emergency first aid response to medical emergencies. The department supports and maintains programs in fire prevention, disaster preparedness, hazardous materials management, public education, and weed abatement.

The Healdsburg Fire Department maintains a staff of 13 personnel and 22 reserve firefighters, including the following:

- The Fire Chief
- 1 Division Chief / Fire Marshal
- 3 Captains
- 3 Engineers
- 1 Fire Engineer / Fire Inspector
- 1 Office Assistant
- 3 Firefighters
- 22 Reserve Firefighters

In addition to staffing resources, the Healdsburg Fire Department has the following equipment:

- 2 type 1 fire engines
- 1 ladder truck
- 1 type 3 engine
- 1 type 1 / water tender
- 1 type 6 engine
- 1 water tender
- 3 utility pick-up trucks

Wildfires threats outside the COH would most likely be under the jurisdictional authority of CAL FIRE and include additional support from the California Mutual Aid System. The California Office of Emergency Services (OES) Fire and Rescue Division coordinates the California Fire and Rescue Mutual Aid System, which moves local government resources across the state to support emergency response on behalf of local, state, and federal government fire organizations.

2. Stakeholders and Collaboration

A key requirement when developing a CWPP is stakeholder and community involvement and collaboration. A CWPP provides a mechanism for obtaining community input and identifying potential fire hazards, public concerns, and a prioritized list of potential projects intended to mitigate areas of concern and fire hazard.

One of the first steps in developing a CWPP is to form a stakeholder group of individuals representing the Healdsburg Fire Department, state and private landowners, local decision-makers, and public representatives. Stakeholders and decision-makers participate in the CWPP process to help establish community priorities, recommendations, and provide input and feedback on mitigation strategies and action plans.

During the development of this CWPP, public meetings were conducted in-person and virtually, and a survey was disseminated in English and Spanish to capture the issues and concerns of private land and homeowners, neighborhood groups, civic organizations, professional organizations, and environmental groups.

In August of 2022, the CWPP project team held two public meetings. One at the Healdsburg Community Center, and one for members of the River's Bend, Riverview and Riverside Communities. The meetings included the Healdsburg Fire Department, the Healdsburg Police Chief, and other local COH and community leaders. The project team discussed the CWPP process and received valuable feedback from community members.

The project team launched the community survey at the public meetings and continued to receive responses through early October of 2022. The survey was shared through the social media outlets of the COH, the Healdsburg Fire Department, and the project team. Consultants attended soccer games in Healdsburg and mass at a local church to share the survey with members of the English and Spanish speaking communities. Surveys were also shared through Corazon Healdsburg, the Healdsburg Unified School District, and the local tribal community.

The concerns and ideas expressed from these surveys, public meetings, and workshops were captured online and in meeting notes. Public concerns regarding fire hazards were consistent and generally included:

- Increased public education and outreach related to community and individual preparedness planning, response, defensible space, and structural ignitability
- Improvement and enforcement of defensible space
- Increased support for vegetation management

- Increased support for defensible space and home hardening efforts in the WUI
- Continued and increased organization and participation in Communities Organized to Prepare for Emergencies (COPE) groups
- Firewise Communities designation
- Protection of values at risk
- Education and information on defensible space and fire resilient landscaping
- Requests for public workshops on home hardening, vegetation management, evacuations, and overall strategy in the event of a wildfire.

3. Hazard Assessment and Structure Ignitability

Structures can ignite during wildfires from ember (also called firebrand) penetration, direct flame contact, and/or radiant heat. Many wind-driven wildfires spread through firebrands, which are burning materials that are blown by wind from one place to another. Winds can blow firebrands more than a mile away from their source, starting new fires where they land. Flames often occur within columns of heat known as convection columns and can ignite anything flammable that they come into contact with. Radiation is the process by which wildfires heat up the surrounding area. Radiant heat from a wildfire can ignite combustible materials from distances of 100 feet or more.[23]

To help improve assessment of homes in WUI and high hazard areas and determine more effective mitigation strategies, in March 2022, NIST, CAL FIRE, and the Insurance Institute for Business & Home Safety (IBHS) released a report documenting the Hazard Mitigation Methodology (HMM).[24] The HMM represents the most current and applied science for home and property mitigation. The HMM considers the spatial relationships between fuels, potential exposure, and hardening at the structure and parcel levels to structure loss by wildfires. HMM identifies structure separation distance (SSD) and building density as major factors in structures destroyed by wildfires in the WUI. To better understand structure vulnerability to wildfires and inform mitigation strategies, our team used the HMM methodology to develop structure separation distance and building density maps for the COH. These maps were used in conjunction with fire modeling and the fire hazard index developed as part of the Sonoma County CWPP to further assess potential fire hazard and areas of increased structure vulnerability for the COH.

3.1 Assessment of Hazard and Structure Ignitability

To better understand structure vulnerability to wildfires and inform mitigation strategies, our team developed SSD and building density maps to complement other identified risk information in Healdsburg. The project team began this effort by reviewing and processing building footprint data and parcel boundaries provided by Sonoma County. The project team preserved the building footprint and parcel data in the area outside of the COH to best capture SSD and building density along the boundary of the COH. To account for negligible distances between structures, any

[23] Federal Emergency Management Agency (**https://emilms.fema.gov/IS320/WM0102020text.htm**).
[24] WUI Structure/Parcel/Community Fire Hazard Mitigation Methodology, NIST 2022 (**https://www.nist.gov/publications/wui-structureparcelcommunity-fire-hazard-mitigation-methodology**).

building footprints that were within three feet of one another were merged and considered to be a single building footprint. The minimum distance between building footprints was calculated using the "Near" tool in ESRI's ArcMap geospatial analysis software; the minimum distance represents SSD. SSD information for each building footprint was averaged and assigned to the parcel that encompassed the building footprints. Parcels that do not have overlaid building footprint data do not have an SSD value.

To create structure density data, the project team converted the building footprint data to points, where the point represents the center location of the building footprint. Structure density, quantified as structures per acre, was calculated using the "Kernel Density" tool in ESRI's ArcMap software. The resultant data was represented as a grid overlaid onto the COH and the surrounding area. **Figures 6 and 7** show the SSD and structure density maps, respectively.

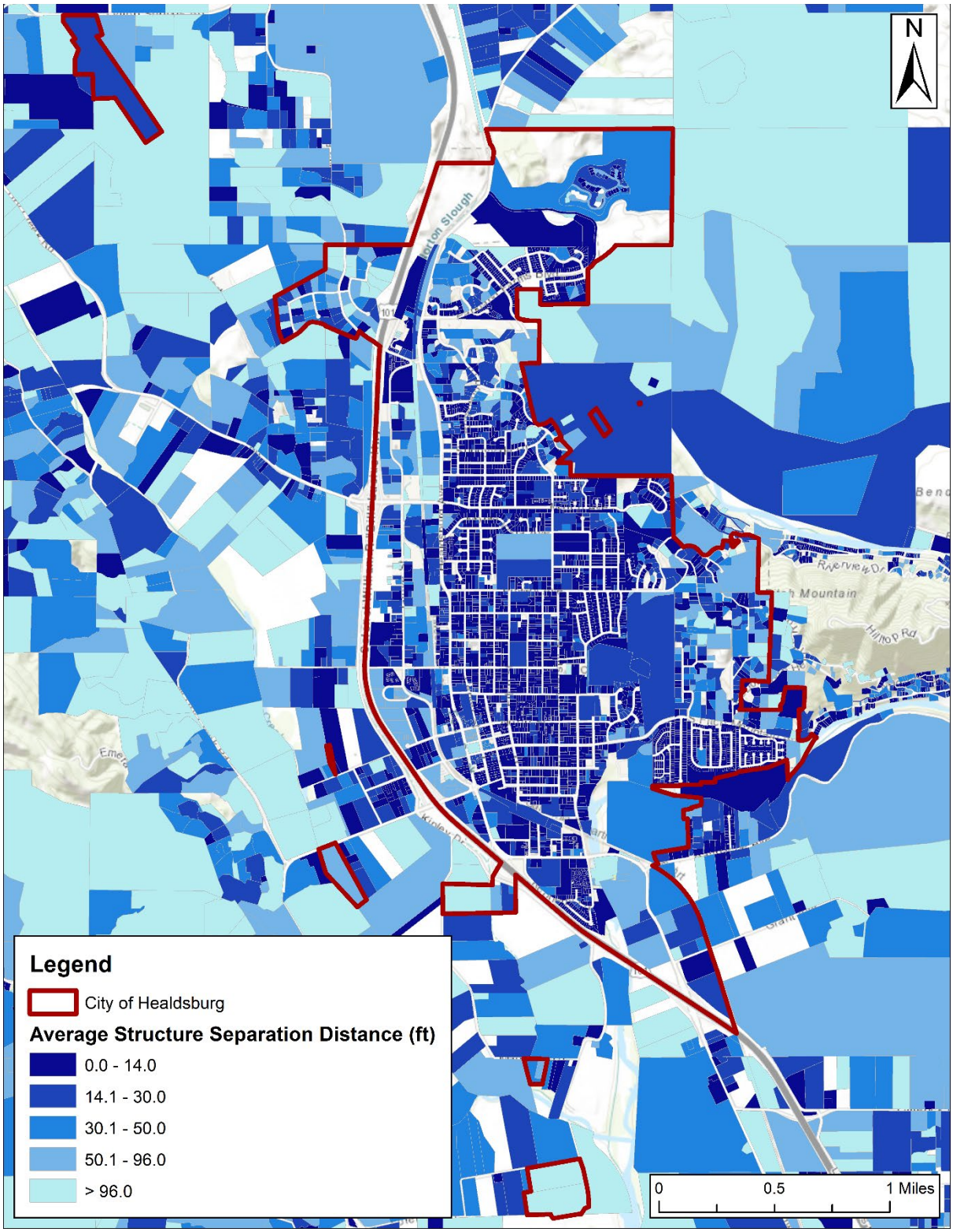

Figure 6. Structure separation distance (SSD) for parcels and structures in the City of Healdsburg and surrounding area.

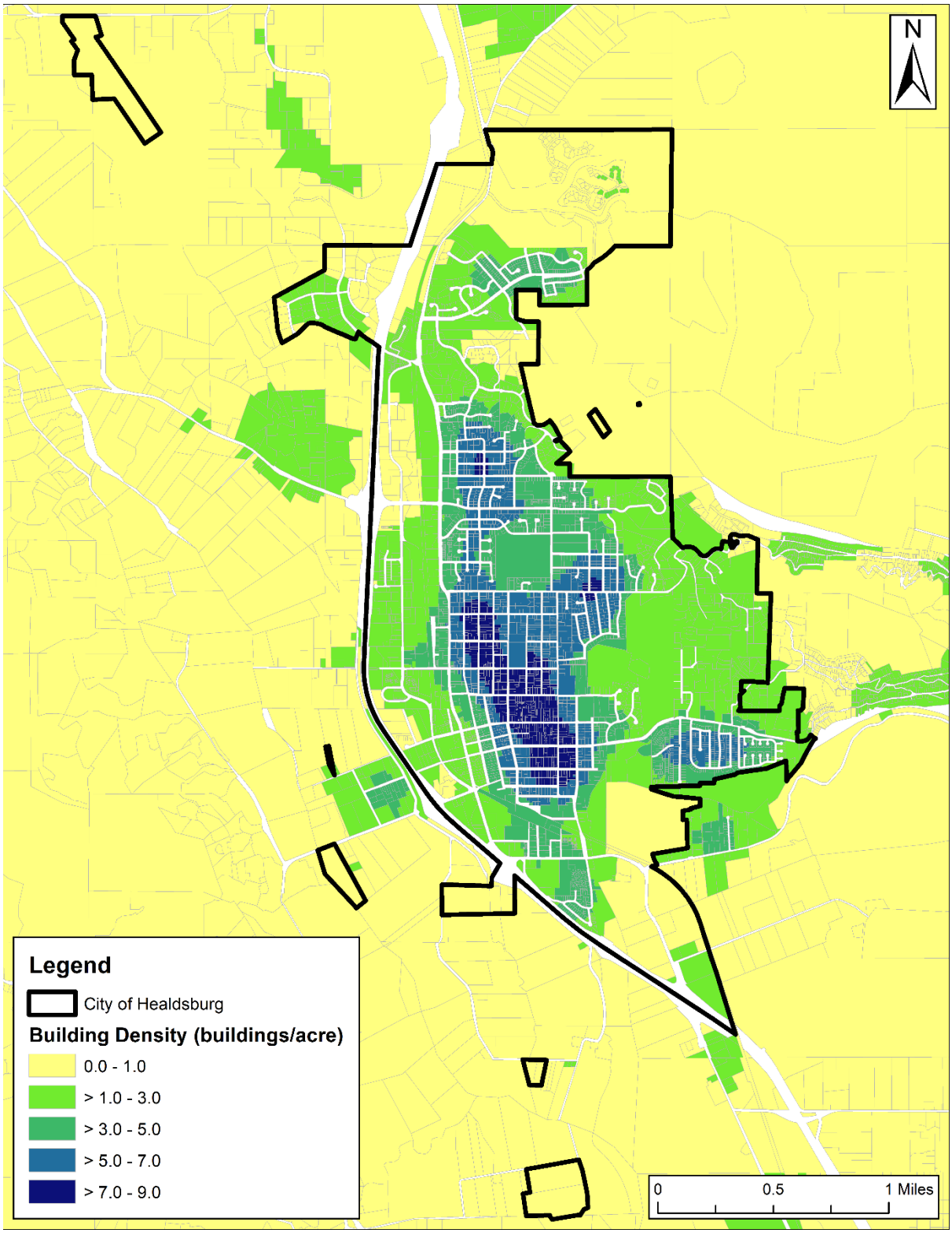

Figure 7. Building density for parcels and structures in the City of Healdsburg and surrounding areas.

The SSD data can be used in conjunction with the NIST report to develop mitigation strategies for parcels with high-to-low SSD values. The report provides specific guidance on mitigation strategies for different types of parcels. The building density data shows where within the COH to prioritize and focus mitigation efforts and outreach. As shown in the structure density data in Figure 7, the highest structure densities are in the south-central part of the COH, in the historic parts of town where structures are both older and close together.

When the SSD and building density data layers are used with other data layers (e.g., fuels, fire hazard index, fire history, ignition locations, weather), they can help in fire prevention, public outreach efforts, and mitigation prioritization. In short, these data layers help to identify where to focus efforts that can reduce the potential of a wildfire impacting the community; identify areas within the community susceptible to structure-to-structure fire spread; and develop planned actions and emergency responses to mitigate these vulnerabilities.

3.2 Implications for Mitigation

There are four areas that the SSD and building density assessment of hazard and structure ignitability can be used to inform approaches to mitigate risk from wildfires to homes, businesses, structures, and infrastructure:

1. Public outreach for community education and awareness.

    a. The fire hazard index can be used to visually show, within the community, potential areas of wildfire spread and ember cast.

    b. The fire hazard index, when combined with the SSD and building density maps, can be used to communicate where mitigation efforts (e.g., fuels treatments and home hardening) can make a difference for the individual homeowners, neighborhoods, and the larger community by limiting fire spread and ember cast potential.

    c. The SSD and structure density data can be used to identify neighborhoods where mitigation opportunities are limited because of structure age and separation distance (e.g., the structures are older and built close together).

    d. The maps and data can help the community better understand the limitations or feasibility of keeping fire out of the community.

2. Visual analyses to help prioritize mitigation efforts.

    a. Prioritize areas near the COH's edge and beyond the COH's boundary where treatment and mitigation efforts will limit wildfire spread potential. In short, collaborating with adjacent communities to decrease fire spread in priority areas.

b. Prioritize treatment of wildland fuels within the COH limits and on COH owned properties.

c. Prioritize home hardening efforts that will have the highest probability of being effectively implemented and have the broadest impact to individual homeowners, neighborhoods, and the COH.

d. Identify areas where mitigation will have a marginal impact.

e. Create scenarios to inform midterm and long-term planning efforts.

3. Visual analyses to help prioritize fire prevention efforts.

   a. Use data layers and analyses to target fire prevention efforts. For example, show the potential impact of human-caused fires to specific areas of the communities and how to limit how these fires would start.

   b. Work with PG&E to target specific areas to decrease powerline starts.

   c. Identify key infrastructure that may warrant fuels treatments or other fire protection measures.

   d. Potential to use insights from the analysis to develop a data reporting template for homeowner self-reporting, fire department inspection reporting, and/or to possibly assist insurance companies.

4. Grant Applications: the data layers and analyses can be used to justify funding priorities in grant applications.

4. Mitigation Strategy and Action Plan

Based on the goals and initiatives of the Healdsburg Fire Department and stakeholder input, the highest priorities for pre-fire planning and mitigation are improving public education and preparedness; improving the fire resiliency of existing homes in the COH; creating a home hardening and defensible space inspection program; and continued vegetation management throughout the COH. The Healdsburg Fire Department plans to implement a multi-phased approach to meeting these priorities.

4.1 Public Education and Outreach

The City of Healdsburg Fire Department plans to develop a website dedicated to public outreach and education for all resources and links related to fire prevention and mitigation. In addition, the development of the website will be followed by a social media campaign, as well as in-person and online workshops, demonstrations, and videos. The website and outreach campaign will, at a minimum, cover the following topics: evacuation preparedness; notification and alerting systems; home hardening; defensible space; fire resilient landscaping; and a home assessment program.

4.1.1 Evacuation Preparedness

The City of Healdsburg Fire Department will continue to work with the Healdsburg Police Department to prepare and educate the public for potential evacuations during emergencies. These efforts will include:

- Improving homeowner evacuation planning and preparedness through programs such as *Ready, Set, Go.*[25]
- Improving awareness and subscriptions to emergency notification systems, including SoCoAlert[26] and Nixle.
- Re-evaluating evacuation zones.
- Conducting evacuation drills.
- Partnering with COH Police in the use of a web-based application to track evacuation status.

[25] Ready, Set, Go program (**https://www.readyforwildfire.org/prepare-for-wildfire/ready-set-go/**).
[26] Sonoma County SoCoAlert (**https://socoemergency.org/get-ready/sign-up/socoalert/**).

4.1.2 Home Hardening to Reduce Structure Ignitability

There are methods for homeowners to prepare their homes to withstand embers and minimize the likelihood of flames or surface fires touching the home or any attachments. Experiments, models, and post-fire studies have shown that homes ignite due to ember intrusions, as well as the condition of the home and everything around it (up to 200 feet from a home's foundation). This is called the Home Ignition Zone (HIZ).[27] When homeowners take action to lessen the ignitability of the HIZ, they dramatically increase the survivability of their home.[28]

Many properties in the COH, especially in the historic areas of the COH, have older homes that are close together (see Figures 6 and 7 in Section 3.1). This can make structure and property hardening more challenging; however, starting with each structure/property and working outward throughout the neighborhoods can improve fire resiliency.

Fire-resistant building materials and designs are extremely effective at reducing structural ignitions. These include a wide variety of materials combined with engineering and design choices for nearly every aspect of home construction. These range from relatively expensive materials such as tempered glass and upgraded roofing, to simple, inexpensive, but effective features such as fine wire mesh covering attic and basement vents; enclosing gutters with 'gutter guards' to keep dry, fire prone debris away from structures; removing flammable debris away from structures; and removing fire prone debris from roofs and decks.

While new construction and remodels are required to use ignition-resistant materials meeting the standards of Chapter 7A of the California Building Code (CBC), owners of existing homes should be encouraged to make simple but effective upgrades. By reducing structural ignitability, in conjunction with improved defensible space and vegetation maintenance in open spaces, the wildfire hazards for the entire community can be dramatically reduced.

State Regulations and Building Codes

- Chapter 7A Building Code
- CA Building Code Chapter 7A (January 2009 Supplement)
- CA Fire Code Chapters 47
- CA Building Code Testing Standards
- 2010 Title 24 California regulations
- City of Healdsburg Ordinances

[27] National Fire Protection Association (**https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire**).
[28] Cohen, Jack. (2000). Preventing Disaster: Home Ignitability in the Wildland-Urban Interface. *Journal of Forestry*. 98. 15-21.

Fire Safe Regulations

- 2006 International Wildland-Urban Interface Code
- Public Resources Code 4290
- Public Resources Code 4291
- California Code of Regulations Title 14
- 2010 California Fire Code
- California Code of Regulations, Title 24, Part 9 Chapter 49: Requirements for Urban-Wildland Interface Areas

Ignition Resistant Roofing to Reduce Structural Ignitability

Disaster examinations reveal that most destroyed homes are not ignited directly by intense wildfires (Mell et al., 2011),[29] but are caused by flame contact from surface fires and direct firebrand (lofted embers) ignitions. Firebrands that result in roof ignitions commonly originate from a fire over half a mile away depending on the fire intensity construction type and available fuels.

For a home, the roof is the most common structural fuel bed for ignition by firebrands or embers. For this reason, roofing material and the physical construction of a roof are of great importance. Homeowners should be aware of the benefits of fire-resistant roof types. All newly constructed homes are required to utilize roof materials of Class-A or better. While roof surfacing is important, what is more important is how the roof assembly is constructed and how roofing is designed and engineered to reduce ember penetration and ignitions. Homeowners should consider assessing their roofing construction, roofing materials, and protection from ember penetration.

Many roofing materials meet the Class-A standard, allowing flexibility in achieving architectural aesthetics while providing fire resistance. Typical Class-A roofing products include (but are not limited to):

- Asphalt shingles
- Metal
- Concrete (standard and lightweight)
- Clay tiles
- Synthetic

[29] Mell W., McNamara D., Maranghides A., McDermott R., Forney G., Hoffman C., and Ginder M. (2011) Computer modelling of wildland-urban interface fires. *Fire & Materials*, January 31 - February 2. Available at **https://www.researchgate.net/profile/William-Mell/publication/298639626_Modeling_wildland_and_wildland-urban_interface_fires/links/56f94c4008ae38d710a2fcf5/Modeling-wildland-and-wildland-urban-interface-fires.pdf**.

- Slate
- Hybrid composites

Construction and Building Material Upgrades

The building design and construction process provides one of the most cost-effective means of addressing wildfire risks.[30] The new construction and remodel process is governed by building codes, design criteria, architecture, soils, and landscaping considerations. Most often code criteria that support risk reductions apply only to new construction, substantial renovations, or renovations to change the type or use of the building. The construction process offers other opportunities to use fire resistant building materials such as stone, tile, and stucco, and incorporate new technologies and design features to help homes resist and survive wildfires. The Fire Safe Sonoma *Living with Fire* brochure[31] provides information on construction design and building materials to reduce structural ignitability.

4.1.3 Defensible Space

Sonoma County property owners are required to comply with Sonoma County's Fire Safety Ordinance, including Chapter 13A. The COH also has a weed abatement ordinance in place to prevent property owners from allowing weeds to grow to the extent of creating a health, fire, or safety hazard.

Defensible space Zones 1 and 2 currently make up the 100 feet of defensible space required by law. Assembly Bill 3074, passed into law in 2020, requires a third zone for defensible space. This law requires CAL FIRE to develop the regulation for a new ember-resistant zone (Zone 0) by January 1, 2023. Zone 0 is defined as the 0 to 5 feet buffer immediately around a structure. Current research and guidance encourage starting at the home, in Zone 0, and working your way out to 100 feet or to your property line, whichever is closer.[32] **Figure 8** shows the three defensible space zones.[33]

Guidelines for defensible space generally include clearing debris and vegetation within Zone 0 such that there is a fire resilient "buffer" immediately around a structure. Moving from Zone 0 to Zone 2 involves managing vegetation and trees to reduce or remove fire-hazardous vegetation such as juniper, cypress, rosemary, bamboo, and other fire prone plants, and creating a fire resilient yard with fire resilient landscaping

[30] Schwab J., Meck S., and Simone J. (2005) *Planning for Wildfires*, APA Planning Advisory Service, (529/530). Available at **https://www.researchgate.net/profile/James-Schwab-3/publication/292405151_Planning_for_wildfires/links/5c24bb6392851c22a3494a62/Planning-for-wildfires.pdf**.
[31] Fire Safe Sonoma *Living with Fire* brochure (**https://www.firesafesonoma.org/wp-content/uploads/living_with_fire.pdf**)
[32] CAL FIRE Defensible Space Zones (**https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/**).
[33] FIRESafe MARIN (**https://firesafemarin.org/create-a-fire-smart-yard/defensible-space/defensible-space-zones/**).

and plants. Guidelines also encourage the removal or maintenance of ladder fuels, or vegetation that can act as a ladder and carry fire from the ground into the canopy of a tree. The Fire Safe Marin website contains information on fire hazardous plants.[34]

Figure 8. Defensible space Zones 0 (0-5 feet), Zone 1 (0-30 feet), and Zone 2 (30-100 feet).

The principles of defensible space should be applied to all structures on a property, including homes, garages, sheds, recreational vehicles, fences, and any other structures. CAL FIRE's defensible space website[35] contains valuable information and resources for developing defensible space. Fire Safe Sonoma's *Living with Fire*[36] brochure also contains information about defensible space.

4.1.4 Support for Communities Organized to Prepare for Emergencies (COPE) Program

The northern Sonoma County Communities Organized to Prepare for Emergencies (COPE) program was formed to help residents, neighbors, and visitors, to become and

[34] Fire Safe Marin, Fire-Hazardous Plants (**https://firesafemarin.org/create-a-fire-smart-yard/plants/fire-hazardous-plants/**)
[35] CAL FIRE Defensible Space Zones (**https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/**).
[36] Fire Safe Sonoma *Living with Fire* brochure (**https://www.firesafesonoma.org/wp-content/uploads/living_with_fire.pdf**)

remain prepared for and recover from emergency situations. COPE leaders and members work together with residents, communities, and local agencies to prepare for emergencies.[37] The COPE program supports several initiatives in northern Sonoma County, including:

- Supporting the California Fire Safe Council.
- Promoting partnership and collaboration with government agencies, public safety organizations, and other organizations.
- Mentoring and collaborating with emerging COPE Leaders.
- Providing education and training to expand the COPE program.
- Identifying, planning, and leading projects that result in increased emergency preparedness, including support for Firewise USA® communities.

The Healdsburg Fire Department will continue to support and collaborate with the COPE program.

4.1.5 Support for Firewise USA® Communities

The national Firewise USA® program[38] grew out of a partnership between the United States Forest Service (USFS), the U.S. Department of the Interior (USDI), and the National Fire Protection Association (NFPA). In 1997, NFPA launched the Firewise USA® website with information on wildfire safety for homes.[39] The Firewise USA® community recognition program started in 2002 and now includes over 1,500 communities across the country.

Firewise USA® incorporates many of the home hardening and defensible space elements discussed in previous sections of this CWPP and extends them to the neighborhood scale. The program encourages neighbors to work together to create fire resilient neighborhoods. Firewise USA® recognition provides direct and indirect benefits to the community. Educational programs may improve awareness and individual accountability, and annual fuel mitigation efforts measurably reduce fire hazards. Financial benefits may include property insurance discounts, while FEMA gives Firewise USA® communities priority in consideration for pre-disaster mitigation planning and project grants.

[37] Communities Organized to Prepare for Emergencies (COPE) program (**https://copenorthernsonomacounty.org/about-us/#neighborhood**).
[38] National Fire Protection Association, Firewise USA®, How to become a Firewise USA® site, (**https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Become-a-Firewise-USA-site**)
[39] Firewise USA, Public Education (**https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA**)

4.2 Home Hardening and Defensible Space Inspection Program

One of the goals of the Healdsburg Fire Department is to acquire and allocate funds to develop a wildfire mitigation and home hardening assessment program. The goal is to provide education on how to reduce the threat from wildfires and improve structural survivability. This program would be largely educational, but as developed, would be able to shift towards enforcement based if needed and as fire codes change.

4.2.1 Create a Matching Grant Program

The Healdsburg Fire Department will work with the COH to create a matching grant program to assist property owners in home hardening and vegetation management treatments. Additionally, the department will strive to create a grant program to assist low income, qualified candidates with home hardening and vegetation management project assistance.

4.3 Fuel Reduction and Vegetation Management Program

It is important to recognize that fire agencies are not landowners and do not have the capacity, funding, or the ability to conduct direct fuel modification treatments without landowner permission and collaboration. All proposed fuel treatments on non-residential land should be achieved through a cooperative process with landowners and the COH. The broad strategy for reducing fuels and managing vegetation on non-residential properties includes the following:

- Continue to manage vegetation in sensitive areas using mastication, herbicides, and hand treatments where appropriate.
- Continue to support on-going work on COH open space projects and adjacent properties.
- Remove and/or manage vegetation around priority COH infrastructure such as water tanks and communication infrastructure.
- Create roadside clearance along identified routes.
- Create strategically located shaded fuel breaks outside of the COH to support fire protection.

- Continue to work on the removal of flammable invasive species; for example, the removal of arundo donax, an invasive and fire prone plant, along the Russian River and other stream zones.

- Develop a strategy to manage vegetation in encampment areas to reduce fire hazard.

- Work to ensure evacuation and emergency access routes are adequate and continuously maintained.

- Continue to foster partnerships and collaboration with other organizations (i.e., Fire Safe Sonoma, the Healdsburg Police Department, Sonoma County Water District, the Russian River Keeper, the Coastal Conservancy, and COPE groups) to increase funding and grants to support fuel reduction and vegetation management initiatives. For example, the Healdsburg Fire Department is currently collaborating with the Russian River Keeper organization to pursue grant funding of approximately $1 million through the Coastal Conservancy to remove Arundo Donax. Additionally, the Healdsburg Fire Department will work to continue efforts in pursuing other funding sources for smaller projects.

4.4 Environmental Considerations

This CWPP is a guiding document prepared in collaboration with stakeholders pursuant to the HFRA. The CWPP development team included stakeholders (or their representatives) and the contents of this CWPP represent the ideas and opinions of these stakeholders. Because this CWPP is a guiding document, it does not legally commit any public agency to a specific course of action or project and thus, is not subject to the California Environmental Quality Act (CEQA) or to the National Environmental Policy Act (NEPA).

However, if funding is received from local, state, or federal agencies to implement a specific project, prior to work being performed, 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 subject to CEQA or NEPA, the lead agency must perform environmental review prior to obtaining permits or other entitlements by any public agencies to which CEQA or NEPA apply.

In addition to CEQA and NEPA, other relevant environmental rules and management plans should also be considered. For example, agency-specific vegetation management plans, state or federal endangered species acts, the Migratory Bird Treaty Act, air district burn permit requirements, the U.S. Army Corps of Engineers (USACE) 404 permits, and Stream Bed Alteration Agreements 1600. Resource surveys for rare and listed species and for archaeological and historic sites should be considered during planning. Treatment areas, schedules, and methods should be adjusted to avoid and protect resources and should be reflected in the CEQA compliance process.

5. CWPP Monitoring Plan

Appendix A contains a list of action items and priority projects based on the key goals and recommendations outlined in Section 4 of this CWPP.

The City of Healdsburg Fire Department, the COH, other land management agencies, and private landowners or non-profit organizations responsible for managing vegetation in and bordering the COH are encouraged to submit project ideas that focus on reducing fire hazards in priority areas.

To ensure continued collaboration and the long-term success of this CWPP effort, the Healdsburg Fire Department, in collaboration with the COH department leaders, will lead the effort to continue to evaluate, update, and maintain this CWPP as needed. The contents of the CWPP will be reviewed and evaluated every three years and the action plan will be reviewed and updated annually. This CWPP will be updated with input from the community and local fire, COH, and land management agencies as necessary. Updates to the CWPP will be documented as plan amendments, as shown in the Plan Updates table at the beginning of this document. The CWPP will be posted for the public and stakeholders and annual accomplishment reports will be posted annually.

Appendix A. List of Priority Projects

Table A-1 provides an initial list of identified areas of concern and potential projects but should be considered a starting point for continued collaboration and coordination.

Table A-1. Priority potential projects identified through the development of the CWPP.

Agency	Geographic Location/Description	Project Goal	Project Description	Status	Target Date
HFD	City of Healdsburg	Fire preparedness education & information	Hold five 1-hour fire preparedness workshops for community members - focused on community preparedness (notifications, evacuation, planning, home hardening)	Planned	Winter-Spring 2023
HFD/HPD	City of Healdsburg/Fitch Mountain Community	Evacuation drills	Conduct multiple evacuation drills for designated areas throughout the city and Fitch Mountain community	Proposed	2023
HFD/Public Works	City Healdsburg Open Space	Fire hazard reduction	Mow, chip and remove all dead vegetation annually	In progress	2023
Russian River Keeper –Coastal Commission Conservancy (Non-profit)	Russian River	Fuel reduction	Arundo removal – invasive fire prone plant Badger Park	In progress	2022
Russian River Keeper – Coastal Commission Conservancy (Non-profit)	Russian River – Badger Park, and area to the east behind Birds Streets	Fuel reduction – river ecology improvement	Remove flammable invasives from the river	Planned	2023
Healdsburg Ridge Open Space Preserve	Fitch Mountain Open Space	Fire hazard reduction	Masticate live and dead vegetation	In progress	2022-2024

Agency	Geographic Location/Description	Project Goal	Project Description	Status	Target Date
Healdsburg Ridge Open Space Preserve	Fitch Mountain Open Space	Fire hazard reduction	Multiple prescribed burns, grazing and mechanical vegetation removal when viable; helping to improve fire safety on the 180-acre preserve	In progress	2022-2027
HFD	City of Healdsburg	Website improvement	Create HFD Fire Prevention webpage with a full suite of resources – one-stop shop for prevention information	Proposed	2023
HFD	City of Healdsburg	Creation of Wildfire Assessment Program. Expanding fire prevention division.	Provide home assessments of every resident in the city limits	Proposed	2023-2025
HFD	City of Healdsburg	Social media campaign	Home hardening, vegetation management, fire safety	In progress	2022 - Cont
HFD	City of Healdsburg	Wildfire Mitigation Assessment (WMA) Program	Establish WMA program and perform wildfire mitigation assessments on every parcel in city limits	Proposed	2023-2025
HFD	City of Healdsburg Open Space	Invasive species removal/ fire fuel reduction	Broom pulling events – manual pulling of broom	Proposed	2024

Agency	Geographic Location/Description	Project Goal	Project Description	Status	Target Date
HFD/Public Works	Fitch Mountain Open Space	Improve access routes	Clear vegetation that is encroaching on access roads	Proposed	2023
Public Works	Fitch Mountain Open Space	Improve access roads	Improve drainage and overall condition of access roads	Proposed	2023
City of Healdsburg HFD	Defensible space updates	Fire safety and public education	Improve defensible space and hardening at all city-owned facilities. Create demonstration garden at Fire Stations.	Proposed	2023-2024
HFD	City of Healdsburg / Open Space Preserves	Fire hazard reduction	Grazing (sheep, goats)	In progress	2022-2025
COH/HFD	City of Healdsburg and Contract Areas	Pre-attack and pre-plan maps	Identify larger or high-risk properties with comprehensive mapping and planning program	Proposed	2023-2024
HFD	City of Healdsburg	Home Hardening Fair/Workshop	Hold a Home Hardening Fair/ Workshop at the firehouse, including vendors and experts on home hardening	Proposed	2023