

Santa Cruz County San Mateo County

COMMUNITY **W**ILDFIRE **P**ROTECTION **P**LAN



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EXECUTIVE SUMMARY

The risk of significant wildfire exists in both San Mateo and Santa Cruz Counties. The San Mateo - Santa Cruz County Community Wildfire Protection Plan (CWPP) attempts to identify those hazards, as seen across the landscape, and provide strategies to mitigate wildfire risk and restore healthier, more resilient ecosystems while protecting life and property. A CWPP also serves as a tool for the accrual of grant funding to aid in the implementation of wildfire prevention projects. This is a living document that will adapt to a changing landscape with changing priorities. The development of this CWPP began in mid-2008 following the

Summit Fire, which burned over 4,000 acres in Santa Cruz County. Between 2008 and 2009, CAL FIRE, in association with the Santa Cruz and San Mateo Resource Conservation District's (RCD), met with community and agency stakeholders in San Mateo and Santa Cruz Counties regarding their wildfire concerns. Through this process, community-identified hazards, assets at risk, and high priority areas in need of fuel reduction were identified. In 2018, the CWPP was updated by the initial drafting agencies to revise outdated information.

This CWPP is not a legal document and is not intended to be an all-encompassing document in regards to fire planning and management in San Mateo and Santa Cruz Counties.

Additionally, this CWPP does not satisfy any regulatory permitting process, including CEQA analysis for any project proposed within. This plan recommends both general and specific projects, all of which are subject to the appropriate permitting and environmental review for the county in which they are proposed. Any public projects identified or proposed in this CWPP will be done only as funding allows.

There is considerable variation in vegetation, weather conditions, geography and access throughout San Mateo and Santa Cruz Counties. There are also numerous government jurisdictions with differing interests. Because of this, the discussions and recommendations in this CWPP have remained general in nature, as to not conflict with stakeholder interests.

Because this plan is a flexible planning tool, rather than a blueprint, general guidelines allow the project proponent to develop the most appropriate site-specific treatment. Finally, this CWPP should be utilized as the foundation for additional, detailed, site-specific CWPPs to be prepared for communities throughout the region.

PURPOSE

CWPPs are authorized and defined in Title 1 of the Healthy Forests Restoration Act (HRFA) of 2003. The HRFA expedites the preparation and implementation of hazardous fuels reduction projects within the wildland urban interface (WUI) and helps rural communities, states and landowners to restore healthy forests and watershed conditions on state, private, and tribal lands. It also authorizes large-scale silvicultural research, the acquisition of conservation easements and the establishment of monitoring and early warning systems for insects and disease outbreaks. The purpose of this plan is to identify the risks and hazards associated with wildland fires in the wildland urban interface (WUI) areas of San Mateo and Santa Cruz Counties. The plan also identifies recommendations aimed at preventing and reducing both infrastructure and ecosystem damage associated with wildland fires. The San Mateo and Santa Cruz Community Wildfire Protection Plan documents suggested actions intended to reduce the risk to people, property, and the environment. Fuel reduction projects identified in an approved CWPP receive priority for federal funds.

A CWPP must be developed collaboratively, must prioritize fuel reduction areas, and must provide recommendations to reduce the ignitability of structures. This benefits a community in a variety of ways:

- It allows the community to establish their own WUI boundary. Community established WUI boundaries can improve and influence access to funding sources since federal agencies are required to give them high priority.
- It allows the community to conduct wildfire prevention planning across the landscape by recommending projects that benefit the community as a whole and types and methods of treatment to be used.

BACKGROUND & COLLABORATION

As many residents of San Mateo and Santa Cruz Counties have experienced firsthand, wildfire can threaten lives, property, community assets, and natural resources. There are preventive measures that can be taken to help protect communities from the devastating

losses that can result from wildfire. However, individual implementation of such measures can be prohibitive in terms of both cost and time, especially when neighboring properties do not participate. In this respect, CWPPs can be very empowering tools, providing communities with the opportunity to influence where and how fuel reduction projects are implemented.

Communities with CWPPs in place are given priority for funding of hazardous fuels reduction projects. The funding is made available primarily through the California Fires Safe Council's grant clearinghouse, which combines federal and state funding sources into one place. Organizations such as Firesafe Councils and RCDs regularly apply for grant funding on behalf of the community. This plan is the community's opportunity to participate in partnerships and to suggest priority projects that should be addressed. Additionally, CWPPs can help motivate neighborhoods to work together on projects so that individual efforts aren't completed in isolation. By continually contributing unique local knowledge to a CWPP, stakeholders can help create a strong, living, collaborative community plan.

Early stages of development of the CWPP of San Mateo and Santa Cruz Counties began in 2008. After securing limited funding, a core Planning Group convened in June of 2008 to discuss the feasibility for developing a CWPP for Santa Cruz and San Mateo Counties. This group discussed the potential project scope and a rough timeline for the process of developing a CWPP. The Planning Group included the following participants:

- CAL FIRE
- Resource Conservation District of Santa Cruz County (RCDSCC)
- San Mateo Resource Conservation District (SMRCD)
- US Fish and Wildlife Service (USFWS)

Each time a CWPP is created in a given place, a unique and new process ensues for that region. From July to November of 2008, the Planning Group gathered and reviewed available guidance documents and talked to organizations in other areas that had previously developed CWPPs in order to gain from lessons they learned.

Beginning in December of 2008, representatives of CAL FIRE and the RCDs conducted preliminary outreach to Fire Districts in order to compile existing wildfire prevention

information. Through individual meetings with local Fire Districts, this effort harnessed local fire professionals' knowledge in both counties about high-risk areas, WUI boundaries, and priority projects. CAL FIRE compiled this information and represented it graphically on maps.

CAL FIRE and the RCDs began soliciting community input in order to create a draft CWPP in March 2009. State Parks, the Bureau of Land Management (BLM) and the Central Coast Fire Learning Network were invited to advise on how to best develop a process for public input. In May 2009, two public meetings were convened, one in each county, to introduce community members to the CWPP process, solicit self-identified members for a Stakeholder Advisory Committee and conduct breakout sessions to gather a preliminary round of feedback.

- San Mateo County Meeting Tuesday June 2nd at 7:00 p.m. Coastside Fire Protection District Half Moon Bay, CA
- Santa Cruz County Meeting Tuesday June 9th at 7:00 p.m. Zayante Fire Protection District Felton, CA

Participants in these meetings were asked to respond, in geographically representative breakout sessions, to the following prompts:

- Identify critical assets in your community that need to be protected. Indicate preferred treatment method if relevant.
- What are your concerns about access? Can you provide any updates on conditions of access roads?
- Note anything about this map that is inaccurate or incomplete.
- Are there any special hazards in your community with respect to wildfire? Indicate preferred treatment method if relevant.
- Identify key players in your community that should be involved.

An additional pair of meetings targeting agencies and large landowners was scheduled for August of 2009. However, the Lockheed and Loma Fires redirected CAL FIRE staff to wildfire suppression activities, pushing back the CWPP schedule by a couple of months. Consequently, the agency meetings were rescheduled for mid-October 2009.

Throughout the process of public feedback, from May 2009 to March 2010, community members interested in following the CWPP process online were able to access updates and information about how to provide feedback through the CWPP blog (<http://wildfireplan.blogspot.com>).

On February 15, 2010, the public was notified of the first draft of the CWPP. Comments were received for thirty days before a draft was finalized for adoption by the Counties. During this thirty-day period, two additional public meetings were held to solicit feedback from the community. The final draft was completed and published in April 2010.

Maintaining a living plan

A plan becomes outdated the moment it is published, unless there is an established protocol to review and update the plan. Soliciting future feedback to keep the San Mateo-Santa Cruz CWPP updated and relevant is an important part of maintaining a valuable, living document. This version of the CWPP was updated in 2018 and again in 2022.

THE LANDSCAPE

San Mateo and Santa Cruz Counties cover an area of approximately 894 square miles. Major landowners in the area include local and state government, private timberland, water districts and private landowners. Lands are typically identified as State, Federal, or Local Responsibility areas (SRA, FRA, and LRA respectively). In general, CAL FIRE has the responsibility for wildland fire protection on SRA lands, and in some instances FRA and LRA. In San Mateo and Santa Cruz Counties, lands outside SRA are typically within the

jurisdiction of local governments. To better facilitate fire management efforts in an environment where many people live outside the urban area, CAL FIRE supports fire management efforts in the LRA and local governments support fire management efforts in the SRA.

San Mateo and Santa Cruz Counties border the Pacific Ocean to the west; San Francisco County to the north; San Francisco Bay and Santa Clara County to the east; and the Pajaro River along San Benito and Monterey Counties to the south. The counties are home to the Santa Cruz Mountains (part of the Coast Range) which runs in a general northwest to southeast direction. The ridgeline travels about 65 miles from just south of San Bruno Mountain in San Mateo County to Mount Madonna in Santa Cruz County. The highest point of the range is Loma Prieta at 3,806 feet (southwest of San Jose). Other notable peaks re: Mount Umunhum (3,442 feet); Castle Rock (3,214 feet); Ben Lomond Mountain (2,600 feet); Eagle Rock (2,488 feet); Kings Mountain (2,315 feet) and Mount Madonna (1,897 feet).

Due to compression from seismic action the Santa Cruz Mountains continue to be molded by the interplay of uplift and erosion which results in moderate to very steep slopes. Abundant rainfall and subsequent runoff on highly erodible soils creates deep canyon streams and creeks. The area has numerous seismographic faults that run throughout the range including the San Andreas Fault.

The San Francisco Bay – Central Coast region was one of the most productive and densely populated areas in pre-contact North America, and that population actively managed the environment with fire to increase its productivity.

Ecosystems are dominated by dense second-growth redwood and mixed conifer forests typically having forest floor accumulations of litter and downed woody material, coastal scrub communities consisting of low vegetation up to six feet in height, typically occurring on coastal hills and bluffs, and wind-swept summits. Scrub vegetation is usually dense and difficult to pass through. Flammable, environmentally sensitive northern maritime chaparral communities, twelve to twenty feet tall and impenetrable at maturity, adapted to and dependent upon periodic crown fires, can be found in isolated areas on southwest facing slopes and at higher elevations. Coastal prairies, thought to have been established and

maintained by pre-contact indigenous burning, occupy coastal valleys along the western slopes of the Santa Cruz Mountains and in the southern end of Santa Cruz County (much of this community has been converted to agriculture or urban development). Grasslands can also be found on the western slopes of the Santa Cruz Mountains in rural San Mateo County, especially in areas of upland grazing.

Over one million residents make up the combined population of San Mateo and Santa Cruz Counties. Additionally, numerous non-residents frequently visit the counties for work, recreation, and tourism. Recreational use of public lands is popular year-round amongst people from local communities, the surrounding the metropolitan Bay Area, and beyond.

Santa Cruz County has an approximate population of 274,000, with the highest population densities occurring in the Cities of Santa Cruz and Watsonville. San Mateo County has much higher population densities than Santa Cruz, with many of the county's 765,000 residents dwelling in the more urban, northeastern portion of the county. The Cities of Daly City, San Mateo, Redwood City, South San Francisco, and San Bruno make up the highest population centers. Except for Half Moon Bay, El Granada, Princeton, Moss Beach, Montara, and Pacifica, coastal San Mateo County is largely undeveloped.

The boundary between residential/commercial development and wildland in both counties is not clearly demarcated. Development of rural residential dwellings is progressing at a moderate to rapid pace. Where there were once scattered rural summer cabins on winding, narrow roads, there are now yearlong residences subdivisions, and an increased density of structures. Much of this intermix zone is within the State Responsibility Area (SRA) in Santa Cruz County and is contiguous to the SRA in San Mateo County.

THE WILDFIRE PROBLEM

Due to local topography, fuels (forest, chaparral, and grasslands vegetation) and certain weather conditions, San Mateo and Santa Cruz Counties are conducive to periodic large wildfire events.

According to a 2010 survey of counties in the western US by the Headwaters Economics Institute, Santa Cruz County has 61 square miles of Wildland Urban Interface area, 59% of which has residences upon it. In the same survey, they show San Mateo County as having 39 square miles of WUI area, with 33% of it having homes. In absolute numbers of homes within the WUI, there are 20,858 homes in Santa Cruz County in the WUI and 14,704 homes in San Mateo County in the WUI. This represents 20% of all residences in Santa Cruz County and 5.4% of all residences in San Mateo County.

Each year, State, local, and volunteer fire departments throughout the region respond to numerous wildfires. The vast majority of these are held to less than one acre. The reasons for this include, but are not limited to: early identification and reporting, large fire suppression response (by both local and state agencies), favorable fuels and fire weather, and air support. Effective fire suppression over the past 100 years has led to uncharacteristically high fuel loads. When ignitions occur during unfavorable weather, in areas with poor access, fires can rapidly increase to an unmanageable size prior to the arrival of fire crews. In 2008 Santa Cruz County experienced three large wildfires resulting in approximately 5,400 acres burned and numerous homes destroyed. Again, in 2009, Santa Cruz County experienced two large wildfires resulting in approximately 8,500 acres burned, damaging and destroying numerous homes and structures. In 2016, the Loma Fire burned 4,500 acres along the crest of the Santa Cruz Mountains adjacent to the Santa Clara/Santa Cruz border. In 2017 the Bear Fire burned under 400 acres, destroyed seven structures and threatened hundreds in communities adjacent to Castle Rock State Park. All of these fires paled in comparison to the 2020 CZU Lightning Complex, which burned over 86,000 acres, destroyed more than 1,000 structures, and caused the loss of life. In three weeks, this fire complex burned as many acres as had previously been consumed in the last 100 years combined. This fire was the epitome of unfavorable weather conditions, poor access, and limited firefighting resources available.



Photo showing Trabing Fire taken from Capitola, Santa Cruz Co. 2008

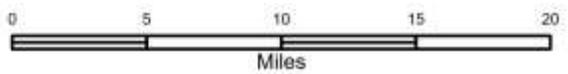
Since the 1970s, there has been increasing public pressure to preserve local natural features. This philosophy has influenced the management of parks, open space, and private land holdings. The result is an ever-increasing land base that is often void of disturbance, whether by wildfire or resource harvesting. In many instances, the resulting landscape is overgrown with a variety of species in a variety of different age classes. The proximity of homes to flammable landscapes can be a potentially dangerous situation in the event of a fire.

CLIMATE CHANGE

Santa Cruz and San Mateo Counties are likely to experience increased temperatures, increased winds, and generally drier conditions in the years to come due to climate change. Moreover, a recent analysis predicts longer, deeper droughts punctuated with rare, but more frequent, extremely wet winters, precisely the setup for longer, more intense fire seasons (Daniel L Swain, 23 April 2018). Increased tree mortality, linked to cyclic drought, and changes in ecological and disease pressures, such as Sudden Oak Death, further contribute to fire risk. An increase in wildfire frequency, duration, and intensity can be expected, making fuels reduction projects imperative for community protection. Changing climate conditions can also be expected to negatively affect aquifer recharge and water supply replenishment, creating even more challenges in wildfire management.

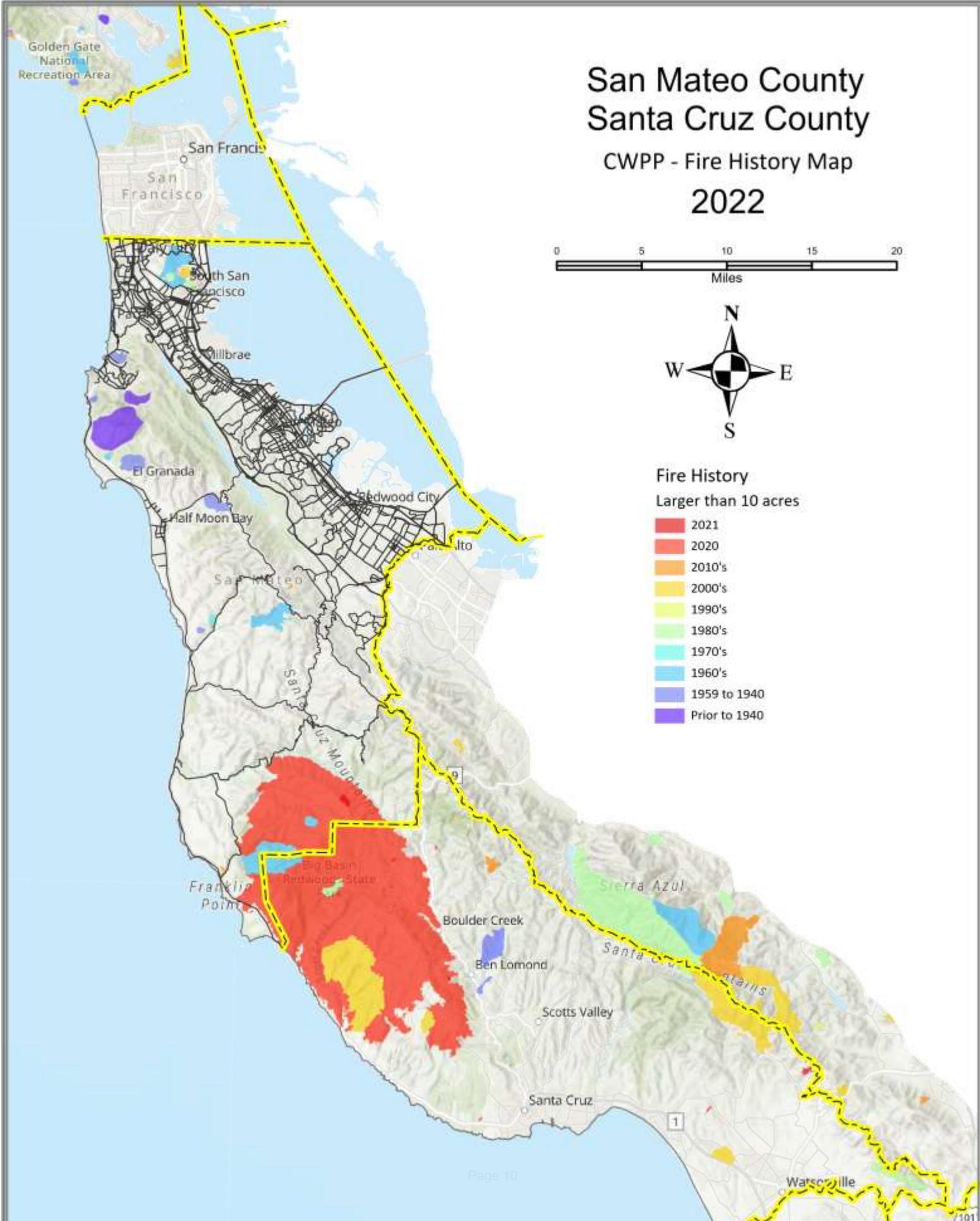
San Mateo County Santa Cruz County

CWPP - Fire History Map 2022



Fire History Larger than 10 acres

- 2021
- 2020
- 2010's
- 2000's
- 1990's
- 1980's
- 1970's
- 1960's
- 1959 to 1940
- Prior to 1940



PRIORITIZING PROJECTS ACROSS THE LANDSCAPE

One of the goals of this CWPP is to prioritize fuel reduction projects across the landscape. Due to the vast diversity of communities and landscapes within the two counties, this plan has divided the two counties into ten CWPP planning areas (discussed in more detail on page 49). Because of geographic and political differences between the counties and between the planning areas, prioritization was considered within each planning area, and not between them. There are, however, instances of interconnectivity between planning areas and between counties.



Crystal Springs Southern Fuel Break in San Mateo County. 2008

There are inherent difficulties in creating a CWPP for two counties, a process rendered more complex by the large number of autonomous fire departments in each county. Although departments work together within each county, efforts to design projects that consider the greater landscape across jurisdictional boundaries are sometimes lacking. Groups such as Fire Safe San Mateo County have brought state and local agencies as well as community members to the table, aiding in the development of fire prevention

projects. In 2016, the Fire Safe Council of Santa Cruz County was formed to facilitate similar collaborations in Santa Cruz County. There are a number of local, partnering Fire Safe groups in Santa Cruz County including, South Skyline Fire Safe Council, Fire Safe Council of Santa Cruz County, and the Bonny Doon Fire Safe Council. These groups work in conjunction with the community, as well as state and local government to address not only individual fire protection needs, but those affecting the greater landscape.

For the purposes of this CWPP, priority areas are defined as those that are located within the wildland urban interface (WUI) and/or adjacent to the WUI in high density, special needs, or disadvantaged communities. Ridges, truck trails, access roads, and evacuation routes are priorities. Areas that pose a considerable threat to water supply, quality, and/or conveyance and storage infrastructure (like pump stations, water tanks, pipelines, reservoirs, and water treatment/recycling plants) and all other utility transmission lines (for gas, electricity, and communication) along with any type of infrastructure such as commercial buildings, homes, and outbuildings may also be deemed a priority. Areas that would release above-average amounts of carbon dioxide if burned (i.e., that have not burned in decades) and locations with dense, highly flammable vegetation, including but not limited to acacia and eucalyptus stands, as well as areas with high percentage of dead or dying trees either through disease, bug kill, or fire damage, also qualify as priority areas. Not all priority areas are reflected in the maps included in this CWPP due to security reasons and private land ownership considerations. Priority should be given to projects that meet any of the above criteria and any identified high priority areas highlighted in the maps. In this document, priority areas are called out either on the maps as a geographic area or listed as a type of project considered a priority in the General Recommendations, Landscape Level Needs, or in the individual planning areas.

REDUCING STRUCTURAL IGNITABILITY

Although the greatest concentration of development is found in the urban centers of San Mateo and Santa Cruz Counties, there is considerable development outside these areas. There are thousands of structures found throughout the wildland areas of San Mateo and Santa Cruz Counties with construction dating back to the 1800's and continuing today.

These structures reflect a wide variety of building materials and construction type. Many homes were built prior to the development of fire resistant home construction techniques. The two counties have always known the threat of wildfire. However, due to current fuel conditions, weather patterns, and increased human activity in wildland areas, wildfire has become more of a danger in recent years. In the event of a large wildfire, we know there are not enough emergency responders and equipment to protect each and every home. In some cases, because of the size, speed and intensity of the fire, or due to home construction materials and surrounding vegetation, homes can ignite and potentially be destroyed before emergency responders can arrive. Often, there are more homes to protect than there are firefighters to respond. Fire prevention efforts cannot be the responsibility of fire-fighting professionals alone; homeowners must consider the possibility that their home may have to stand in the face of a wildland fire without immediate firefighter protection. In order for a home to survive such an emergency, it must be able to avoid ignition.

There are a variety of strategies that can reduce the risk of structural ignition when implemented. Depending on the county and agency jurisdiction, these strategies may be requirements and/or recommendations:

1. Construction methods and materials
2. Education
3. Defensible Space including fire safe landscaping

1. CONSTRUCTION METHODS

While it is always recommended that homeowners build with resistant building materials, the State or Local Fire Marshal should be contacted to determine laws and regulations pertaining to fire-resistant construction.

As part of an effort to provide homeowners, industries, designers, local fire and building officials a list of “Compliance WUI products”, in 2007 the State Fire Marshal (SFM) published a “WUI Products Handbook”:

<https://osfm.fire.ca.gov/media/5e4drz1r/2021-sfm-wui-listed-products-handbook-12-14-2021.pdf>

By the end of 2017, the WUI approved products have been transitioned into the Building Materials Listing (BML) Program, which can be searched for by using the following site:

<https://osfm.fire.ca.gov/divisions/fire-engineering-and-investigations/building-materialslisting/>

All products published in the handbook have been reviewed and verified for their compliance in accordance with the new 2016 California Building Code (CBC) by SFM staff. All products published in the book are approved by the SFM and they are not listed unless a SFM Listing number is attached. It should be noted that not all approved products are listed in the handbook, there may be other building materials that comply with the standards since it is not a requirement for a product to be in the handbook.

The handbook covers five main building product categories:

- Exterior Wall Siding and Sheathing
- Exterior Windows
- Under Eave
- Decking
- Ignition Resistant Material

Roofs and Chimneys

Wind can spread fire and embers from vegetation to the tops of homes. The large surface area of a roof is susceptible to fire embers and is considered the most vulnerable part of your home. A fire-resistant roof can significantly reduce the chances of your home igniting during a wildfire and are a requirement in WUI areas. Additionally, dead leaves and needles should be removed from all roof surfaces and gutters as needed.



Wood shingle roofs are more easily ignitable than fire-resistant synthetic roofing materials.

Decks and Balconies

Decks and balconies are another conduit for fire to ignite your home. By boxing in the undersides of decks and balconies, especially with fire-resistant materials, the chances of ignition are reduced. Adding fire resistant flashing between the home and deck can help reduce the probability that an ignited deck spreads fire to the main structure. Adding foil faced bitumen tape at joints can seal gaps to ensure firebrands or open flame will not have an entry to ignite the structure. You can further reduce chances of ignition by removing flammable materials from balconies and decks.

2. EDUCATION – to reduce structural ignitability

State and local fire agencies, that have jurisdiction within the WUI, continually provide wildland fire prevention education to those living in the WUI, including recommendations to reduce the chances of structure ignition. This is accomplished through in-person contact involving home inspections, representation at public events, and visits to the fire station. Additional outreach is accomplished through mailers. CAL FIRE began sending a tri-fold mailer titled “Are You Prepared?” in 2008, mailing over 2,500 documents to county residents. Another publication supported by local fire officials is “Living with Fire – A guide for Homeowners”. This publication is available to residents and provides numerous recommendations on improving the defensibility of one’s home, including a six-step process on creating defensible space. Also included in the publication is a list of fire-resistant plants recommended for use in landscaping. The

following is a list of recommendations that can be implemented by the community to reduce structural ignitability and improve your chances in the event of a wildfire.

- **Addressing** – Maintain adequate and visible address numbers on structures and driveways. Typically, 4 inch, contrasting lettering on a lighted surface is recommended.
- **Defensible space** - Maintain a minimum 100 foot “defensible space” around your home. Clear dead leaves and branches and leave widely spaced ornamental shrubbery and trees. Single specimens of fire-resistant plants used as ground cover are exempt, provided they do not form a means of rapidly transmitting fire to any structure. It is important for homeowners to be aware of build-up of dead wood within shrubbery.
- **Decking** - Clear combustible vegetation and materials out from under decks. Enclose undersides of elevated decks and eaves with fire-resistive materials. Place 2” to 4” of metal flashing at the contact between decks and houses.
- **Roofs** - Clean all leaves and needles from the base of exterior walls, roofs, eaves, and gutters. When replacing roofing material, consider Class A roofing materials.
- **Limbs** - Trim tree limbs that are within 10 feet of chimneys and/or stove pipes and trim and remove all dead limbs hanging over the house.
- **Chimneys** - Chimney outlets or flues should be protected with 1/2” mesh screen and chimneys should be cleaned by a chimney sweep at least once a year.
- **Ladder fuels** - “Limb up” your trees and maintain a clearance of 3 times the height of the lower fuel layer from the ground to the bottom.
- **Fire Spread** - Clear flammable vegetation and “limb up” trees within 10 feet from the edge of roads/driveways to reduce fire spread. Additionally, clear vegetation 15 feet above the road surface to provide a safer escape route and make fire truck entry and exit easier.

- **Other** - Locate woodpiles and Liquid Petroleum Gas (LPG) tanks or other flammable materials at least 30 feet from structures, fences, and other combustible materials. Avoid using wood mulch immediately adjacent to structures. When wooden fencing meets a structure, replace the last three feet or so with non-flammable material.

3. DEFENSIBLE SPACE

Property owners living in State Responsibility Areas (SRA) are required by Public Resource Code (PRC) 4291 to maintain clearance of flammable vegetation around their property. A property owner's legislated clearance responsibility is limited to 100 feet from his or her structure(s) or to the property line, whichever is closer, and is limited to their lands. However, coordination with adjacent landowners to achieve maximum defensible space is encouraged. Similar constraints have been developed for areas outside the SRA, within and adjacent to the WUI.



Photo showing home with good defensible space. Summit Fire 2008.

Wildland fires can spread out of control and destroy everything in their path, especially when structures and roadways are overgrown with vegetation. This can cause homes to ignite and prevent access by firefighters and fire protection equipment. Overgrown roads delay response time, obstruct efforts to extinguish the fire, and create unsafe conditions for firefighters and evacuating residents. Many homes can be saved during a wildland fire provided there is adequate defensible space near the structure and roads.

Throughout the WUI, state and local fire departments are available to conduct home defensible space inspections. Depending on the policy of the individual department, these inspections are made automatically, when requested, or by complaint. When making an inspection, fire officers evaluate a variety of factors including surrounding vegetation, topography, aspect and location of the structure, type of structure, and roadway access. Recommendations are then provided to the homeowner to reduce the potential of structural ignition and to improve firefighters' access.

Because this CWPP covers a large and varied landscape, it is beyond the scope of this plan to provide in-depth discussion of possible modifications that should be made to these general guidelines to account for site-specific conditions (fuel type, terrain, access, weather patterns, etc.). Furthermore, this summary is not intended to supersede any state, county, or local codes or regulations in regards to defensible space and vegetation removal. Homeowners are advised to seek guidance in making appropriate, site-specific modifications that conform to all applicable rules and regulations. A summary of common practices for creating and maintaining defensible space are provided below:

- Maintain a firebreak by removing and clearing away all flammable vegetation within 30 feet of each structure. Single specimens of trees or other vegetation may be retained provided they are well-spaced and well-pruned, in order to avoid spread of fire to other vegetation or to the structure.
- In the area from 30 to 100 feet from structures, dead and dying woody surface fuels and aerial fuels should be removed. Horizontal and vertical clearance

between fuels should be maintained. Downed logs, when embedded in the soil may be retained.

- An ‘ember-resistant zone’, within 0 to 5 feet of a home is now regulated by the Public Resource Code §4291, as amended by Assembly Bill 3074. This zone should use hardscape like gravel, pavers, concrete, and other noncombustible mulch material. Combustible items should be relocated outside of this zone and combustible structural items, such as fencing, gates, and arbors, should be replaced with noncombustible alternatives.

Residents may consider the removal of large trees when addressing the defensibility of their homes. Before a large tree is removed, the appropriate professionals should be contacted to evaluate the feasibility of removing the tree. Additionally, it is incumbent upon the landowner to ensure that they are following all of the appropriate county ordinances with regard to the removal of any tree. Generally speaking, local native trees include: redwood, Douglas-fir, tanoak, live oak and some pine species. CAL FIRE receives numerous timber harvest permits for thinning of redwood and Douglas-fir for fire hazard reduction. Many consider the retention of large trees as a good defense against wildfire, considering the fire-resistant nature of local large conifers.

Although there is no such thing as a fire-resistant forest, a good defense against wildfire is a healthy and resilient one. There are instances where management of the surrounding forest (thinning, removal, pruning) is appropriate. There are also situations where retention of larger trees, while managing the ground fuels is the best option.

Closed canopy forests, void of large buildup of dead fuel, reduce the amount light hitting the forest floor, maintain ground moisture and limit growth of understory species, potentially reducing the risk of a surface fire transitioning to the canopy. However, when a fire enters and becomes established in the canopy, control is very difficult. This was seen in stands of closed canopy forests during the Summit, Martin, Trabing, Lockheed, and 2020 CZU Lightning Complex fires.

Pertinent websites related to recommendations to reduce structural ignitibility

www.fire.ca.gov

<http://www.firesafecouncil.org/>

<https://www.firesafesantacruz.org/>

<https://www.firesafesanmateo.org/>

Fire-Resistant Landscaping

The presence of flammable vegetation surrounding a residence can be the cause of structural ignition. Complete removal of all vegetation is typically not an option nor desirable. Appropriate plant selection, placement, and maintenance can reduce the threat of wildfire near homes. In order to maintain vegetation around the home, while reducing vulnerability to wildfire, fire-resistant landscaping is recommended. Native plants that are both drought tolerant and fire-resistant are preferred over non-native species. There are many native plants that are naturally drought tolerant and fire-resistant available for landscaping. Information on which native plants are best suited for a particular region can be found through a variety of sources. The Resource Conservation District of Santa Cruz County has an online library with documents and resources for anyone looking for information about appropriate vegetation replacement options.

<https://www.rcdsantacruz.org/fire-protection-resources#fire>

Additionally, through a collaborative effort led by Fire Safe San Mateo, the document “Living with Fire in San Mateo County” provides a list of native shrubs and trees suited to fire-resistant landscaping and can be found here:

<https://www.firesafesanmateo.org/resources/living-with-fire>

Another valuable internet resource on native plants is the California Native Plant Society (CNPS). Their site includes multiple documents pertaining to preservation of native vegetation, including a document titled “Fire Recovery Guide”. The document can be found here: <https://www.cnps.org/give/priority-initiatives/fire-recovery>

The CNPS general website can be found through the following link: <http://cnps.org/>

The goal of any fire-resistant landscaping is to reduce the risk of losing your home to wildfire, while maintaining as much of the surrounding vegetative landscape as possible.

GENERAL RECOMMENDATIONS

One of the goals of the CWPP is to prioritize fuel reduction projects. This plan identifies “high priority” areas, where fuel reduction projects should take precedence. When individual projects are implemented, site specific guidelines shall be developed by the persons/agency responsible for project development. Any proposed project shall conform to all applicable local, county, and state regulations concerning fuel modification projects. The following general recommendations are not intended to be site specific, but rather a tool to aid in the development of appropriate prescriptions.

Reduction of fuel in the roadside right of way

Statewide, over 95% of wildland fires are started by human activity, and of those 90% start within 10’ of a road or trail. Overgrown vegetation on or adjacent to roads makes access difficult for fire-fighters and equipment. Additionally, roadside vegetation, including tree limbs, brush, and grass is the fuel first ignited for numerous fires each year. This is a problem adjacent to all types of roads in both counties. There are many, overgrown, narrow, one-lane road that often make it difficult for emergency vehicles to access a fire area while residents are simultaneously leaving. This document declares that fuel reduction along roadsides is a high priority. Maintaining reduced fuel along roads allows the road to be a safer evacuation route in the event of a fire. Roadside vegetation should be reduced to a level that allows ease of access for emergency response personnel and equipment, reduces the number of roadside fire starts and ensures the safety of firesuppression personnel using roads as fire control lines.

County Public Works and Caltrans routinely conduct roadside clearing for access, visibility, and fire safety. Historically, this work was accomplished through a combination of chemical and mechanical means. In recent years, however, there has been

increasing public pressure to eliminate the use of chemicals as a roadside treatment. Therefore, most of the recent work has been completed with mechanical mowers and masticators.

Santa Cruz County CWPP

Santa Cruz County

Potential Shaded Fuel Break Areas

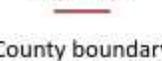
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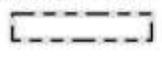
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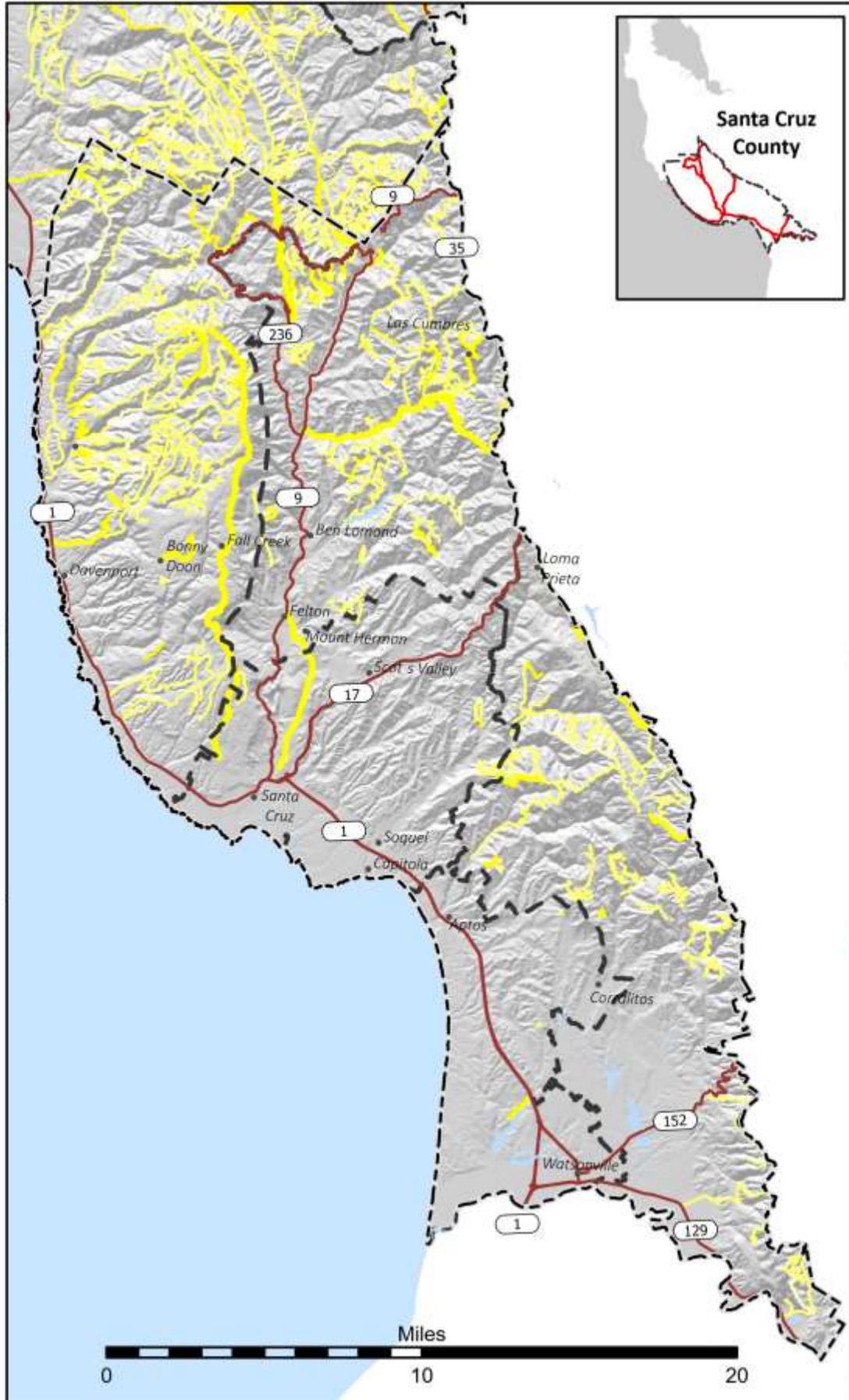
Highways



County boundary



Potential Shaded Fuel Break Areas



San Mateo County CWPP

San Mateo County

Potential Shaded Fuel Break Areas

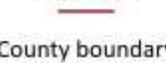
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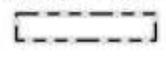
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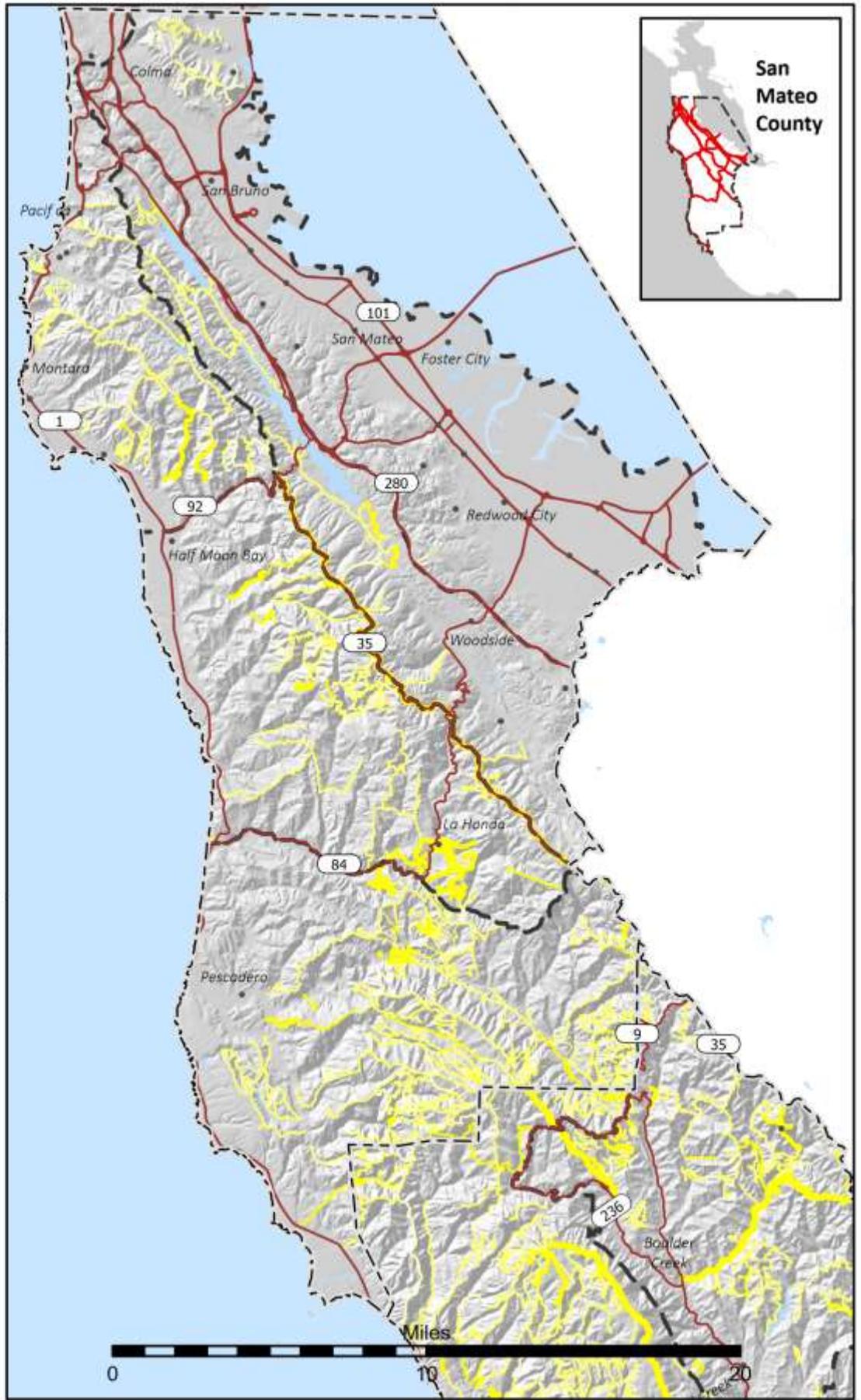
Highways



County boundary



Potential Shaded Fuel Break Areas



Both local and state fire codes specify clearing of at least 10-feet on each side of a road or driveway and up to 15-feet of vertical clearance above. Unfortunately, the specifications are inconsistent across the numerous county jurisdictions. A priority should be set to attempt standardization for these requirements across each county.



Before and after photograph showing fuel reduction next to the road.

Strategically placed fuel breaks (including shaded fuel breaks)

The primary goal of a fuel break or shaded fuel break project is to change the behavior of a fire entering the fuel-altered zone in order to reduce large flame lengths and high energy outputs. Changing fire behavior may be the key to allowing fire crews to protect people and property from wildland fire. Effective fuel breaks may:

- Act as a point of anchor for indirect attack on wildland fires.
- Allow for fire-fighters to use fire as an operational tool (firing out).
- Support safer ingress/egress for emergency responders and the general public.

With reduced fuel adjacent to roadways and structures, flame lengths, fire activity, and heat production will be reduced, making it safer for firefighters to access the area and protect structures in the community.



Photo showing strategically placed shaded fuel break used as an anchor point for backfiring operations. Butte County, CA, 2008.

A fuel break typically refers to the removal of all or the majority of vegetation in a strategic area. A shaded fuel break refers to “thinning” of vegetation in a specific area with the remaining vegetation shading the ground. Non-shaded fuel breaks are typically used in non-residential, less visible areas. For the purposes of large-scale wildland firefighting, fuel breaks are preferable to shaded fuel breaks because they make little to no fuel available for combustion. However, shaded fuel breaks are often implemented because they are cheaper and easier to maintain, less detrimental to sensitive habitat, and often have more support from adjacent property owners.

The type and size of fuel reduction projects should be determined on a project-by-project basis. The widths of roadside shaded fuel breaks generally range from 10 feet up to 50 feet, with 75 to 100 feet a more effective, but less popular target prescription. Strategic fuel breaks can be as wide as 400 feet. The responsible fire agency as well as the community should collaboratively develop projects that meet the needs of stakeholders.

Shaded fuel breaks can be placed around individual structures, communities or neighborhoods identified to be at risk. For example, after a community has developed defensible space out to 100 feet from structures, they may wish to augment that with an

extended fuel break, depending on their topographical location. There is no specific prescription for this type of project. It should be developed in collaboration with the community and the responsible fire agency, and should be adapted to local environmental constraints.



Fuel break on midslope road in Las Cumbres, Santa Cruz County.

Roadside Fuel Breaks

There are many communities and neighborhoods identified as priority areas in this document where a roadside fuel break would be beneficial. Stakeholders in both counties consistently agreed that reducing fuel loading adjacent to roads is of highest priority. There is no standard distance recommended from a road's edge, other than more is often better. Extended fuel reduction projects may be reduced in some areas with continued maintenance and treatment of roadside grass and continued trimming of vegetation. Roadside fuel breaks are typically between 10 and 40 feet wide. The exact distance should be based on fuel type, slope, aspect, and environmental feasibility.

There are a variety of methods used to create a fuel break or shaded fuel break, however, the primary method is manual labor using chainsaws. Locally, many fuel reduction projects are completed by CAL FIRE inmate fire crews, residents, and private contractors. Although chainsaws are the primary vegetation removal tool, other methods

include livestock grazing, mowing or other mechanical means (such as masticators), or prescribed fire. Treatment of the removed vegetation can be accomplished by a variety of methods, listed below.

- **Chipping** – Various different chippers are available for use in both counties. The Santa Cruz County Fire Chiefs Association offers a chipping program, utilized through local agencies. Chipping programs have also been developed through Firesafe San Mateo County and the Fire Safe Council of Santa Cruz County. Independent contractors with chippers are available for hire in both counties. When a fuel reduction project requires use of a chipper, vegetation to be treated should be placed in a location easily accessible to a chipping crew, arranged in a manner to allow for efficient chipping. Such specifications are determined during project planning according to the size of the chipper. Depending on the location and project goals, the chips will be either left on site or taken away for proper disposal.
- **Pile burning** – Vegetation can be placed in manageable piles to be burned by qualified personnel at a later date. Though this is a very effective means of fuel treatment, vegetation piles can become an increased fire hazard if left unburned. Other factors to consider are the risk of escape, smoke management and air quality restrictions. The agency having jurisdictional authority should be contacted prior to burning for information on all applicable fire and air quality rules and regulations. In general, guidelines for pile burning include:
 - Burn only during daylight hours.
 - Have adequate fire tools and water onsite.
 - Always have an adult in attendance.
 - Piles shall be no larger than 4-feet x 4-feet and no taller than 4-feet.
 - 10-foot clearance around each pile.

Additionally, burning should only occur on “burn days” set by:

- **Santa Cruz County** – Monterey Bay Air Resources District
831-647-9411
- **San Mateo and Santa Clara Counties** – Bay Area Air Quality Management District 1-800-435-7247
- **Lop and Scatter** – This method of fuel treatment involves the cutting and spreading of cut material, so that it does not extend above a predetermined height above the ground. This can be between 12 and 24 inches. Material is spread out to prevent continuous fuels and to allow for quicker decomposition. Care should be taken to not spread cut material in sensitive locations, as identified during the planning process. This method may be used in an area removed from roadways and homes, and in projects with low amounts of cut vegetation.
- **Removal to off-site location** – If there are no feasible on-site treatment options, vegetation can be removed to an appropriate off-site location.

Masticators - Another option for reducing fuel involves the use of a masticator. Masticators are a mechanical means of vegetation removal, in which spinning blades “masticate” or “chew” vegetation. The masticator head can be attached to the end of an excavator arm or to the front of a tracked or wheeled vehicle such as a dozer or loader. They are primarily used in fuel break situations, rather than shaded fuel breaks, due in part, to the large swath of vegetation they remove. Masticators cut, as well as treat the vegetation they remove, pulverizing the vegetation into a loose “chip like” material, obviating the need for a chipper. Masticators are very effective in roadside and ridgetop fuel breaks. Smaller masticators are now being used for some shaded fuel breaks.

Prescribed Herbivory – This is also known as targeted grazing. It is using domestic livestock, typically goats, sheep, or cows, to browse or graze vegetated landscape with the intent of reducing the overall density and abundance of vegetation. Prescribed herbivory operations often involve the use of mobile fencing material to confine

livestock to specific locations, as well as the guidance of skilled livestock managers and dogs.

There is added ecological benefits using this method with the reincorporation of nutrients via feces and aeration of the soil from hooved animals.

Controlled / Broadcast / Prescribed Burns involve the burning of surface fuels in a predetermined area, under the supervision of trained fire personnel. Prescribed burns are planned in detail, occurring only when predetermined weather and fuel conditions exist. Other factors affecting prescribed burning include resource availability and atmospheric conditions favorable for adequate smoke dispersion. Prescribed burns have been implemented on State Parks, Peninsula Open Space Trust, Midpeninsula Regional Open Space District lands, the San Vicente Redwoods, and several private ranches for the purpose of fuel reduction and habitat improvement. While prescribed fire is an effective means of reducing fuels in the wildlands, it has not been widely used as treatment locally for a variety of reasons including: narrow weather windows for burning, limited resources available for burning management, smoke management, negative public perception of burning, and the potential threat of escape. CAL FIRE will cooperate with interested landowners to determine opportunities for the appropriate use of controlled burning.

Stakeholders interested in working with CAL FIRE to implement controlled burning can contact the local Unit Resource Management office at (831)335-6740 and speak with a state Forester. The CAL FIRE Forester will be able to explain the details of the California Vegetation Treatment Program ([Cal VTP](#)) and the CAL FIRE Vegetation Management Program ([Cal VMP](#)) and how these program may be able to collaboratively help land owners reduce their wildland fire fuel hazards.

LANDSCAPE-LEVEL NEEDS

Road data - Whether private, dirt, rock or paved, there is agreement between stakeholders that proper mapping and identification of road systems throughout the counties is a high priority. Complete and accurate road mapping is vital during a wildland fire incident. Proper mapping allows emergency responders to locate and manage an incident. In many instances, emergency responders from out of the county do not know the local road systems in the vicinity of the wildfire. The Counties of San Mateo and Santa Cruz both have Geographic Information Systems (GIS) personnel who maintain county data. Although the county roads data is accurate, there are areas where data is lacking. These omissions primarily occur in the more rural areas of the counties and on large private and public landholdings such as parks or preserves, and managed timberland. Over the past several years, CAL FIRE has been compiling roads data, utilizing a variety of sources. This data was helpful during the large wildfires of 2008, 2009, 2017, and 2020

- This process should continue into the future. Collaboration between stakeholders to prepare a comprehensive map and inter-operable system is a priority.
- Since 2018, Cal Fire has been in collaboration with the Santa Cruz Mountain Stewardship Network and the Golden Gate National Parks Conservancy on a Lidar mapping project that identifies road surfaces and vegetation types in both counties. This data is available to the public at the website <https://pacificvegmag.org>.

Roads, Bridges and Water in the WUI – In terms of new construction within the WUI, there are many common standards in terms of access, road width, water supply, and bridge specifications. These standards take into consideration the risk of wildland fire and the needs of responding fire agencies. There was, however, considerable construction in the WUI prior to modern fire code. There are, throughout both counties,

numerous residences accessed by narrow, unmaintained roads, sometimes by inadequate bridges.

This, coupled with a limited water supply, can result in disaster during a wildfire. The following issues should be strategically addressed:

- Identify inadequate bridges and plan for fixes.
- Identify existing water supplies in the wildland.
- Identify locations for additional wildland water supplies.
- Identify, prioritize, and mitigate high risk roads in the WUI.

Truck Trails/Fire Roads - There are numerous “truck trails” or “fire roads” located throughout both counties, most of which are historic logging roads, referred to as truck trails for the purpose of this plan. The current conditions of truck trails are varied. Many are maintained at minimal levels, while others are neglected, often because of insufficient resources. Some have been abandoned due to poor initial location, improper construction methods, or failure due to landslides or washouts. Truck trails often bisect public and private property. The importance of these roads in the event of a wildfire cannot be overstated. For example, the Warrenella truck trail and shaded fuel break provided critical ingress and egress access to the Lockheed Fire in 2009. In northern Santa Cruz and most of San Mateo County, numerous truck trails provide access to the primarily road-less areas between the coast and Hwy 35. When a wildland fire affects these parts of San Mateo and Santa Cruz Counties, the truck trails will be of vital importance. Accurate mapping, appropriate maintenance, and consideration of abandoning failed sections is needed on all truck trails throughout both counties.

Structure Protection Planning – One of the common difficulties during the wildfire season in California is when fire crews respond to regions they are unfamiliar with. This problem is compounded when responders have limited information on roads, number of structures, evacuation routes, water supply, and other hazards. The Santa Cruz County Fire Chiefs have been working on a project identifying pre-determined protection planning zones. The zones have been identified by local fire officials and include

prepackaged information, which will be provided to first responders in the event of an emergency. This is an ongoing project.

Infrastructure – All planning areas have some level of infrastructure that is a priority of the residents to have protected. The primary responsibility for protecting the infrastructure falls on the agency that owns, has constructed, or maintains the asset. However, just as a neighborhood can accomplish more by working together on fuel reduction projects, utility companies can benefit from partnering with other stakeholders to increase the size and scope of projects that will help protect everyone in the area. The following types of infrastructure were identified as being high priority for the stakeholders of this CWPP.

Communication facilities

This includes facilities like communication towers administered by the FAA, CHP, or County Government as well as privately owned cellular communication towers and lines. Often towers are located at high points in areas that are either wildland or wildland urban interface zones. Having enough vegetation clearance around these structures is important to ensure their survival in the event of a fire. Projects designed to protect communications infrastructure are a priority in this CWPP.

Power lines

Locally, PG&E is the sole owner of the power distribution network. For the majority of this network, that means above-ground power lines. Additionally, there are a number of substations scattered about the two counties that allows power to reach all of the consumers at the appropriate voltage. While the utility company already has an internal program designed to maintain reduced vegetation around their assets, stakeholders are encouraged to collaborate with the company if they wish to work on a project within or adjacent to the PG&E right of way. Any project designed to protect or complement the existing protection of power transmission infrastructure is a priority in this CWPP.

Water Infrastructure

Water quality, storage and treatment are vital to the health of all residents of San Mateo and Santa Cruz Counties. Due to the nature of the Mediterranean climate in which we

live, it is necessary to have water storage infrastructure, like Loch Lomond Reservoir and Crystal Springs Reservoir, in order to ensure a continuous supply of drinking water. It is also necessary to protect the water storage from contamination. Wildfires can compromise water quality, both during active burning and for months and years after the fire has been contained. During active burning, ash can settle on lakes and reservoirs used for drinking water, which can compromise water quality. Burned areas are prone to greater rates of erosion, increasing the accumulation of sediment in streams and reservoirs, which can negatively affect salmonid habitat and decrease water quality and storage capacity. Thus, fire risk reduction projects around water storage, water treatment facilities, pump stations, and pipelines can be vital to keep fires from negatively affecting water supplies. Any project that can either protect water infrastructure directly or protect the watershed from fire shall be considered a priority project in this CWPP.

Water Sources

Access to and availability of adequate amounts of water are critical during a wildland fire. Water is obtained through a variety of sources including: hydrants, springs, ponds, streams, lakes, rivers, pools, reservoirs, and the Pacific Ocean. A common problem for fire suppression personnel is that there are limited water sources and water supplies, especially in rural wildland areas. Water to fight fires in these areas must be either stored on site or trucked into the area.

Water is trucked into an active fire zone on fire engines (usually 500 gallons at a time) or water tenders (1,500 to 3,000 gallons at a time). Local fire units are constantly reevaluating the number of water tenders needed in fire suppression fleets. Additional water tenders are desirable but expensive.

A program by CAL FIRE to install “Initial Attack Water Tanks” in strategic locations in the remote portions of the counties was started in the 1970’s and continues through the present day. The intent is to pre-stage approximately 5,000 gallons of water in areas that would experience trucking delays. The presence of these storage tanks would likely allow initial attack units access to large amounts of water during the critical initial stages of a fire suppression action. This would allow the unit to keep fires small instead of facing larger fires due to lack of water.

Projects to increase the amount of both on site water and locally staffed water tenders available to suppress wildland fires are a high priority of this plan.

Waste and Recycling Facilities

Landfills, along with waste and recycling facilities, have been identified as priority assets deserving protection from wildfires. Projects that have the effect of protecting these assets are a priority in this CWPP.

Vegetation Removal: Types and Locations – This plan discusses areas where fuel reduction projects, such as fuel breaks, shaded fuel breaks, and roadside fuel breaks, should take place. There is a need to further investigate environmentally and socially acceptable landscape level fuel breaks. Part of the benefit of bringing multiple parties to the table, is that priority areas and assets at risk have become identified. This allows planners to consider not only community or neighborhood-specific projects but also landscape level projects.

Eucalyptus

Eucalyptus was introduced in California in the mid 1800's, both as a windbreak and for fiber production. It has thrived in California's climate and has since spread throughout the state. Eucalyptus is responsible for the displacement of numerous native species; the aromatic oils in Eucalyptus will eventually kill off all native understory vegetation and macro-decomposers, leading to dangerous accumulations of extremely flammable litter to a depth of several feet.

Because of its invasive nature and proclivity to burn rapidly and violently, eucalyptus has been identified as one of the highest-priority tree species recommended for fuel modification or removal. Eucalyptus as a wildland fuel was observed in Santa Cruz County during the 2008 Trabing Fire and prior to that, the Oakland Hills Fire in 1991. Both fires resulted in losses of property and residential structures and in the case of Oakland, loss of life. Historically, there have been eucalyptus fires adjacent to the community of El Granada (Wicklows Property) which involved loss of life and property.

Reports of observed embers travelling two to five miles downwind illustrates the danger of large Eucalyptus stands.

Eucalyptus was imported into the local area in the early 1900's for several uses, including fuel for powering locomotives. Numerous hedgerows were planted in the area and the species was quickly found to exhibit strong adaptation and rapid growth. What was planted over 100 years ago as single or double-wide tree rows has expanded to large extended stands. Recent estimates of eucalyptus grove expansion are 3 lineal feet per year. Eucalyptus is so successful in colonizing new ground, to the exclusion of native species, that a common comment during scoping sessions for this CWPP was to request that the species be declared a noxious weed or an invasive pest, and be eradicated.

Eucalyptus stands frequently grow in excess of 80 feet tall and have a propensity to generate copious amounts of ground litter. Vertical ground litter accumulations of 3 feet or more of dry leaves, branches and bark are not uncommon. Because of peeling bark, small branches and sprouts, many eucalyptus stands exhibit fuels from the ground to canopy. Fire behavior in these stands can become extreme.

Flame length one and a half times the height of the stand is frequent in large stand replacement fires. Other examples of these conditions can be found in southern Australia in frequent, large, catastrophic fires. This becomes a huge factor in fire control when residential and other structures are built within and adjacent to these stands.

There are several locations throughout San Mateo and Santa Cruz Counties where residents live in close proximity to large eucalyptus stands. Addressing the potential risk to lives and property where this situation exists should be considered. Several projects have been completed as pilot projects to thin or remove stands in San Mateo County, including thinning in the Quarry Park area of El Granada and clearing along Highway 84 in the Woodside area. Other projects include the Wicklow Project by Peninsula Open Space Trust and the Coral Reef project by the RCD, CALFIRE and Cabrillo Unified School District.

Potential projects needed across the landscape include:

- Identify and map eucalyptus stands in both counties.
- Identify risks to lives and property.
- Mitigate risk to lives and property through appropriate vegetation management projects (thinning, removal and pruning).

Acacia

Acacia dealbata or silver wattle is another highly flammable noxious invasive from Australia. Unlike Eucalyptus, which form the uppermost canopy in their native habitat, acacia is natively a mid-story tree, but is quick to invade disturbed areas along roadsides. Its rapid, dense growth shades out understory vegetation and out-competes native oaks which would otherwise colonize roadsides. Similar to Eucalyptus, acacia accumulates substantial flammable litter.

Acacia is rhizomatous, making it difficult to eradicate. Nonetheless, in 2016, a multi-year project was initiated along the Graham Hill Road corridor where Acacia was cut and stumps immediately painted with herbicide by State-licensed applicators.

The elimination of Acacia along roadsides is a high priority in both San Mateo and Santa Cruz Counties.

SENSITIVE HABITATS AND PERMITTING

It is widely recognized that wildfires are a natural and vital force in maintaining biological diversity. It plays an important regenerative role for species, habitats, watersheds, and nutrient cycles and helps diversify landscape patterns. However, highseverity wildfires, like those experienced within the last decade on the Central Coast, can result in considerable habitat damage and wildlife mortality. Thus, the state-mandated defensible space guidelines have become increasingly important to implement not only for public safety, but for environmental protection as well. It is important to recognize that there is a balance between habitat protection and degradation with regards to highseverity wildfires. This chapter aims to provide guidance on natural resource protection in conjunction with fuel load management.

Natural Resources

From the shoreline of the beautiful Monterey Bay National Marine Sanctuary to the interior redwoods, San Mateo and Santa Cruz Counties are rich in terms of biological diversity and uniqueness. Hundreds of miles of waterways – creeks, streams, and rivers – are found in both counties. Sensitive habitats host a variety of threatened and endangered species. Scattered wetlands provide vital ecosystem services. Many of our communities that are at risk of wildfire have been built adjacent to these valuable natural resources. We can work to increase human safety while also maintaining biological diversity on a landscape prone to wildfire by considering the natural resources surrounding homes and other structures and modifying fuel load management activities accordingly

Santa Cruz Long-toed Salamander

If you are within one mile to the ocean side or three miles to the mountain side of Highway 1, between Rio Del Mar and Buena Vista Drive in Santa Cruz County, you are probably in Santa Cruz Long-toed Salamander (*Ambystoma macrodactylum croceum*) habitat. The salamander inhabits upland scrub and woodland areas, particularly coast live oak (*Quercus agrifolia*) and Monterey Pine (*Pinus radiata*) forest, during the nonbreeding season (early November to April).

This state and federally protected species was historically found in montane regions from Santa Cruz County to Baja California, Mexico. Today, only seven populations are known within Santa Cruz and Monterey Counties. The entire extent of this species has been proposed as critical habitat (specific areas that have been found to be essential to the conservation of the species and which may require special management considerations or protection). Loss of native habitat and invasion of exotic plant species are the primary reasons for decline of the species. To minimize fuel reduction project impacts, follow these guidelines:

- Leave as much native vegetation on site as possible.
- Control invasion and spread of non-native plants, which can colonize disturbed areas, particularly French broom (*Genista monspessulana*), eucalyptus (*Eucalyptus* spp.), and ice plant (*Carpobrotus* spp.).
- Avoid soil disturbance, as salamanders spend much of their life underground.
- Try to maintain a 12 to 18 inch tall understory of native vegetation and separate it from the canopy by limbing trees 10 feet above ground level.
- Leave damp logs in place.

San Francisco Garter Snake

If you live within the following area: the northern boundary of San Mateo County south along the eastern and western bases of the Santa Cruz Mountains, to the Upper Crystal Springs Reservoir, and along the Pacific coast south to Waddell Creek, your activities may impact the San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*).

There are only six known populations of the San Francisco garter snake remaining, and at least four of these populations have declined in recent decades. The preferred habitat of this state and federally protected species is densely vegetated ponds near grassy uplands with brushy cover. They are threatened by loss and adverse modification of wetlands and adjacent upland habitat, as well as loss of prey, particularly the California red-legged frog. To minimize while achieving fuel reduction, follow these guidelines:

- Leave as much native vegetation on site as possible.

- Control invasion and spread of non-native plants, which can colonize disturbed areas, particularly French broom (*Genista monspessulana*), eucalyptus (*Eucalyptus* spp.) and ice plant (*Carpobrotus* spp.).
- Avoid soil disturbance and maintain leaf litter.
- Try to maintain a 12 to 18 inch tall understory of native vegetation and separate it from the canopy by limbing trees 10 feet above ground level.

California Red-legged Frog

The California red-legged frog can be found in both aquatic and upland habitats. If you live adjacent to a riparian corridor or a pond, your activities may impact this type of frog. During the winter season, the species may travel a few miles to return to a breeding pond. Extirpated from 24 of the 46 counties once occupied, the species is threatened by loss and adverse modification of wetlands and riparian habitat.

To minimize your impacts, follow the guidance measures provided for the Santa Cruz Long-toed Salamanders and for work near a riparian corridor and wetlands.

Marbled Murrelet

If you live in certain stands of redwood and Douglas-fir forests, your activities may impact the marbled murrelet, a species which is generally restricted to old-growth redwood forests but are sometimes found in mature and second-growth forests in areas where residual older trees remain.

The major cause of decline for the marbled murrelets has been the destruction and fragmentation of coastal, old growth conifer forests. Remnant murrelet populations are dependent on this habitat for reproduction. To minimize your impact to this federally and state-protected species, while achieving fuel reduction, follow these guidelines:

- Avoid critical habitat, if possible.
- Maintain old growth trees for murrelet habitat.
- Limit limbing to the lower 10 feet of old growth trees, as the birds nest on the limbs.

- Perform activities after September 15th to avoid the nesting season which occurs between late March and September.

San Francisco Dusky-footed Woodrat

The San Francisco dusky-footed wood rat, which inhabits scrub, chaparral, woodlands, open forest, and riparian woodlands, is a species of special concern as defined by the California Fish & Wildlife Department and can be affected by human activity. Fuel load reduction projects could cause impacts to this species (like destruction of nests or stick houses) unless conducted in the appropriate (non-nesting) season. There may be other mitigation measures necessary for this species, including avoidance of disturbance altogether.

Coastal Zone

If you live within the Coastal Zone in Santa Cruz County, which is roughly designated as west of Highway 1 south of the city of Santa Cruz and west of the summit of the Santa Cruz mountains north of the city of Santa Cruz, there may be limitations and restriction for vegetation removal. In Santa Cruz County, large, significant and heritage trees are protected by the Santa Cruz Significant Trees Protection Ordinance. The San Mateo County Heritage Tree Ordinance protects significant trees throughout the county, not just in the Coastal Zone.

Vegetation removal along the coast may also impact Coastal Terrace Prairie habitat, which has a number of rare and endangered plants. If you live in the coastal fog zone (approximately 700-1000 feet in elevation) and have tall grassy vegetation, limit your activities in this area.

Programmatic permitting assistance for CEQA and Coastal Act Compliance (when necessary) may be available through the Forest Health and Fire Resiliency Public Works Plans (PWP) for San Mateo and Santa Cruz Counties, led by the RCD's in each county.

Sandhills Habitat

If you live in Bonny Doon, Ben Lomond, or anywhere in the hills west of Soquel-San Jose Road and the soils look like beach sand, you could be in the rare sandhills habitat, a unique community of plants and animals found only on outcrops of Zayante sand soil. The sandhills support two endemic [communities](#); 1) [Sand chaparral](#), dominated by shrub species including manzanita, and 2) [Sand parkland](#), characterized by sparse stands of towering [ponderosa pines](#) with a dense and diverse understory of native wildflowers. The habitat also hosts the Zayante Band-winged Grasshopper and Mount Hermon June Beetle, two federally endangered species.

With fewer than 4,000 acres of sandhills left, it is important to protect the four plant and three animal species, which are found nowhere else in the world. The greatest cause of extirpation of such populations is the [loss](#), [fragmentation](#), and [degradation](#) of habitat. To minimize your impact, while achieving fuel reduction, follow these guidelines:

- Leave as much native vegetation in place as possible.
- Control invasion and spread of non-native plants on newly disturbed areas.
- Revegetate, if applicable, with native Sandhills plants obtained from local seed sources.
- If the project involves removing woody vegetation (i.e. non-native shrubs or trees), material should not be chipped and distributed on Zayante sand soils as it may smother existing native plants or inhibit germination of natives which require bare soils.
- Never use sod-forming grasses (i.e. turf) or thick ground cover (i.e. mulch), as it may smother existing native plants or inhibit germination of natives which require bare soils.
- Avoid clearing, burying, or trampling herbaceous material and avoid soil disturbance to protect insect larva which live underground.

- Leave the roots of removed vegetation in place to protect larva which live underground.
- Avoid clearing around dusk in the summer months (May 15 to August 15) to avoid the flight season of sensitive species.
- Avoid stockpiling vegetation (tree and shrub cuttings, etc.), as it might bury larva and harm herbaceous plants.

Maritime Chaparral

While large areas of California's central coast were covered with dense chaparral at the end of the nineteenth century, today, only small, isolated fragments of northern and central maritime chaparral can be found along ridgelines and on coastal terraces between Sonoma and Santa Barbara counties (Holland 1986). Maritime chaparral, which is dominated by manzanita (*Arctostaphylos* spp.), is considered a threatened habitat type, and is protected by many agencies along the coast of California.

A number of rare manzanita species can be found in this habitat, as well as other rare plant and animal species. Most maritime chaparral species benefit from 'renewal' of the habitat by fire. Deviation from the natural fire frequency may alter the relative proportions of shrubs in the chaparral canopy by favoring seeding species over crown sprouters (Keeley and Zedler 1978). To minimize your impact, while achieving fuel reduction, follow these guidelines.

- Control invasion and spread of non-native plants, which can colonize disturbed areas, particularly jubata grass (*Cortaderia jubata*), ice plant (*Carpobrotus edulis* and *C. chilense*), French broom (*Genista monspessulana*), and blue gum eucalyptus (*Eucalyptus globulus*).
- If you are altering manzanitas, ensure that it is not rare or protected and allow the manzanita to seed before trimming or leave the first few branches if there is no burl at the ground level of the stem.

Oak Woodlands

Oak Woodlands are dominated by [Coast Live Oak](#) (*Quercus agrifolia*), but also include [Valley Oak](#) (*Q. lobata*), [California Black Oak](#) (*Q. kelloggii*), [Canyon live oak](#) (*Q. chrysolepis*) and other California oaks. The understory may consist of [California Blackberry](#) (*Rubus ursinus*), [California hedgenettle](#) (*Stachys bullata*), [snowberry](#) (*Symphoricarpos mollis*) and [poison oak](#) (*Toxicodendron diversilobum*). Many acres of

this plant community have been cleared for development or degraded due to exotic species. To minimize your impact, while achieving fuel reduction, follow these guidelines. Retain as many healthy trees as possible:

- Retain as much native understory as possible.
- Separate the canopy from the understory by limbing up branches.
Leave islands of shrubs where it won't form a fuel ladder to trees when possible.

Riparian Corridors and Wetlands

A wetland is an area of land where the [soil](#) is [saturated](#) either permanently or seasonally. Wetlands are considered the most [biologically diverse](#) of all [ecosystems](#), comparable to rain forests and coral reefs. They provide habitat for many different [amphibians](#), [reptiles](#), [birds](#), and mammals.

A riparian corridor is a unique plant community consisting of the vegetation growing along or near a river, stream, lake, lagoon or other natural body of water. It serves a variety of functions including protecting stream banks from erosion, providing food and habitat for fish and wildlife and providing protection from flooding. Clearing of riparian vegetation can adversely impact federally threatened steelhead and federally endangered Coho salmon by increasing water temperature, reducing food supply, and increasing predation. All work should be avoided in these areas, if possible. If it is vital for safety to modify vegetation, follow these guidelines:

- Leave all the mature vegetation within 100 feet of standing water, 50 feet of a year-round stream, and 20-30 feet of a stream that goes dry regularly.

- Retain as many native trees and understory species as possible.
- Separate the canopy from the understory by limbing up branches.
- Leave island of shrubs where it won't form a fuel ladder when possible.
- Minimize your noise and plan your activities around sensitive life stages of aquatic species.

Sudden Oak Death (SOD)

Sudden Oak Death (SOD) is a tree disease caused by the fungus-like plant pathogen *Phytophthora ramorum*. Santa Cruz and San Mateo Counties are within the zone of infestation of Sudden Oak Death. Host plants for SOD occur in many of the vegetation types within our counties and tree mortality fluctuates with location and seasonal conditions. Pockets of higher mortality contribute to hazardous fuel loads and may increase fire intensity. Movement of SOD infected material or host plants is regulated by the county Agricultural Commissioners, the California Department of Food and Agriculture (CDFA) and the Animal and Plant Health Inspection Service (APHIS). The California Oak Mortality Task Force Website contains the most up-to-date information regarding the status of the disease, treatment and management guidance, current regulations, current events, and monthly newsletters. Visit the website at <https://www.suddenoakdeath.org/> to read and download information.

Permitting / Ordinances

According to state guidelines regarding defensible space, homeowners engaging in fuel load reduction activities are required to comply with all federal, state and local laws and ordinances. To ensure compliance, contact the appropriate agencies for guidance.

The following list provides a few general items to assist in regulation compliance:

- Maintain some vegetative cover or apply appropriate mulch, such as rice straw. Clearing to bare soils may result in erosion and hillside destabilization.

Santa Cruz Erosion Control Ordinance 16.22

Santa Cruz County Water Quality Control 16.24

- Minimize clearing mature vegetation.

Santa Cruz Riparian Corridor and Wetland Protection Ordinance 16.30

Santa Cruz Sensitive Habitat Ordinance 16.32

California Department of Fish and Game

Regional Water Quality Control Board

United States Fish and Wildlife Service

National Marine Fisheries Service

- Retain significant and heritage trees.

Santa Cruz Significant Trees Protection Ordinance 16.34

Santa Cruz Land Clearing Permit

Santa Cruz Coastal Development Permit (if you are in the Coastal Zone)

San Mateo County Ordinance 2427 Santa

Cruz Sensitive Habitat Ordinance 16.32

- Avoid impact to rare habitat and protected species.

US Fish and Wildlife Service

California Department of Fish and Game

National Marine Fisheries Service

If you need additional assistance to determine the impacts of fuel load management, please contact your local RCD office or the Natural Resource Conservation Service.

RCD of Santa Cruz County & NRCS Service Center

820 Bay Avenue, Suite 136

Capitola, CA 95010

(831) 464-2950

Email: info@rcdsantacruz.org <https://www.rcdsantacruz.org/>

San Mateo County RCD & NRCS Service Center

80 Stone Pine Road, Suite 100

Half Moon Bay, CA 94019

(650) 712-7765

Email: info@sanmateorcd.org

<http://www.sanmateorcd.org/>

PLANNING AREAS

During the initial phases of CWPP development, it was determined that due to the large geographic area included in the plan, there needed to be smaller planning areas to account for the wide variety of agencies, fuel loads, landscapes, etc. For planning purposes, CAL FIRE planners broke San Mateo and Santa Cruz Counties into ten separate CWPP planning areas. These smaller planning areas allow for more efficient local planning; the idea being that San Mateo County projects should not be compared to nor compete with those in Santa Cruz County. The planning areas were roughly based on the following factors, but planning area boundaries could change based on future stakeholder input:

- Geographic Location
- Agency Jurisdiction
- Dominant Fuel Types
- Practical/Common Boundary (County Line / Major Roadway)

This CWPP encompasses the following ten planning areas:

- San Mateo County
 - San Mateo North – Coastal
 - San Mateo Bayside
 - San Mateo Central – Coastal
 - San Mateo Interior
 - San Mateo South
- Santa Cruz County
 - Santa Cruz North – Interior
 - Santa Cruz North – Coastal
 - Santa Cruz South – Interior
 - Santa Cruz Central
 - Santa Cruz South – Coastal

The following section contains a brief description of each planning area followed by maps showing each planning area boundary and WUI boundary. Additionally, a list of fire protection agencies, volunteer companies, and other agencies with jurisdictional influence are included. Each section then identifies assets at risk as determined through

stakeholder meetings. These are separated into three sections including communities/neighborhoods, environmental, and non-environmental. Priority project areas are identified on a map, highlighted in green. These maps are by no means all-encompassing. Priority projects could exist that are not explicitly drawn on the map. Fuels reduction projects of highest priority include:

- Roadside fuel reduction
 - Improved ingress/egress for emergency responders
 - Improved ingress/egress for citizens
 - Strategic fuel breaks for fire fighting
- Shaded fuel breaks
 - Defensible space for communities
 - Strategic placement for wildland fire operations
- Fuel reduction around homes
 - Creation/Improvement/Maintenance of defensible space

Finally, in an effort to show hazard areas from a technical standpoint, the plan includes a Fuel Rank Hazard Assessment for each planning area, created from data prepared by the CALFIRE Fire and Resource Assessment Program (FRAP).

Hazard Assessments

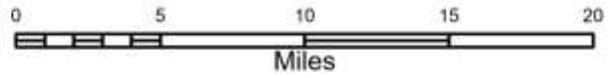
The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) provide a variety of products including extensive technical and public information for statewide fire threat and fire hazard. Much of this information involves Geographic Information System (GIS) analysis, tables, maps, data and calculation tools that are available on the FRAP website. For more information about FRAP, please visit <https://frap.fire.ca.gov/>

The included Fire Threat Class maps indicates low, moderate, high, very high, and extreme fire threat rankings based on inputs such as fuel, slope, brush density and tree density. CALFIRE has developed a Fire Threat assessment methodology for the [California Fire Plan](#) to identify and prioritize pre-fire projects that reduce the potential for large catastrophic fires. The fuel ranking methodology assigns ranks based on expected

fire behavior for unique combinations of topography and vegetative fuels under a given severe weather condition (wind speed, humidity, and temperature). The procedure makes an initial assessment of rank based on an assigned fuel model and slope.

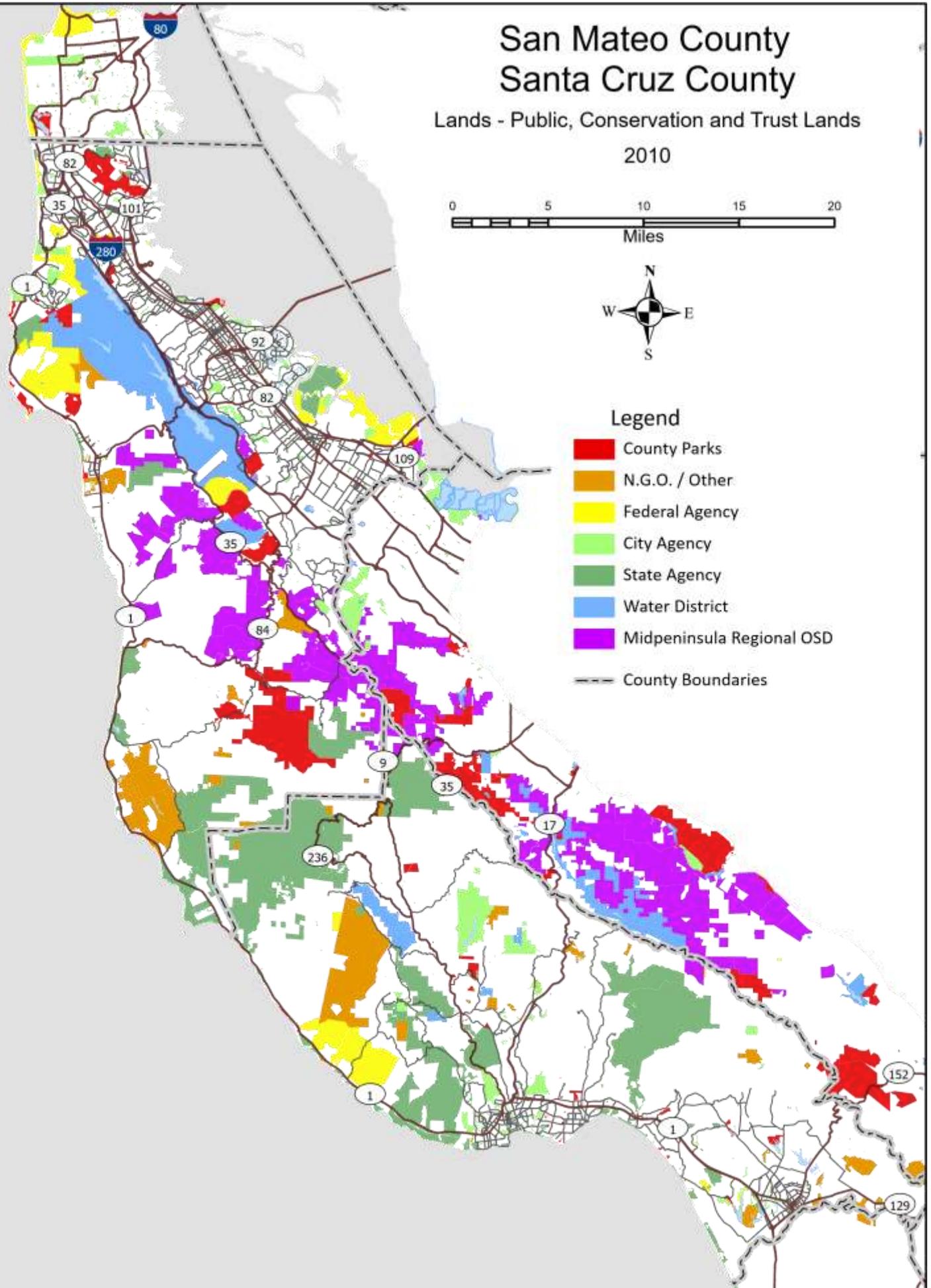
San Mateo County Santa Cruz County

Lands - Public, Conservation and Trust Lands
2010



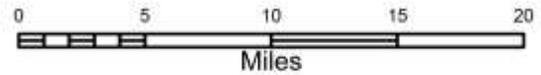
Legend

- County Parks
- N.G.O. / Other
- Federal Agency
- City Agency
- State Agency
- Water District
- Midpeninsula Regional OSD
- County Boundaries

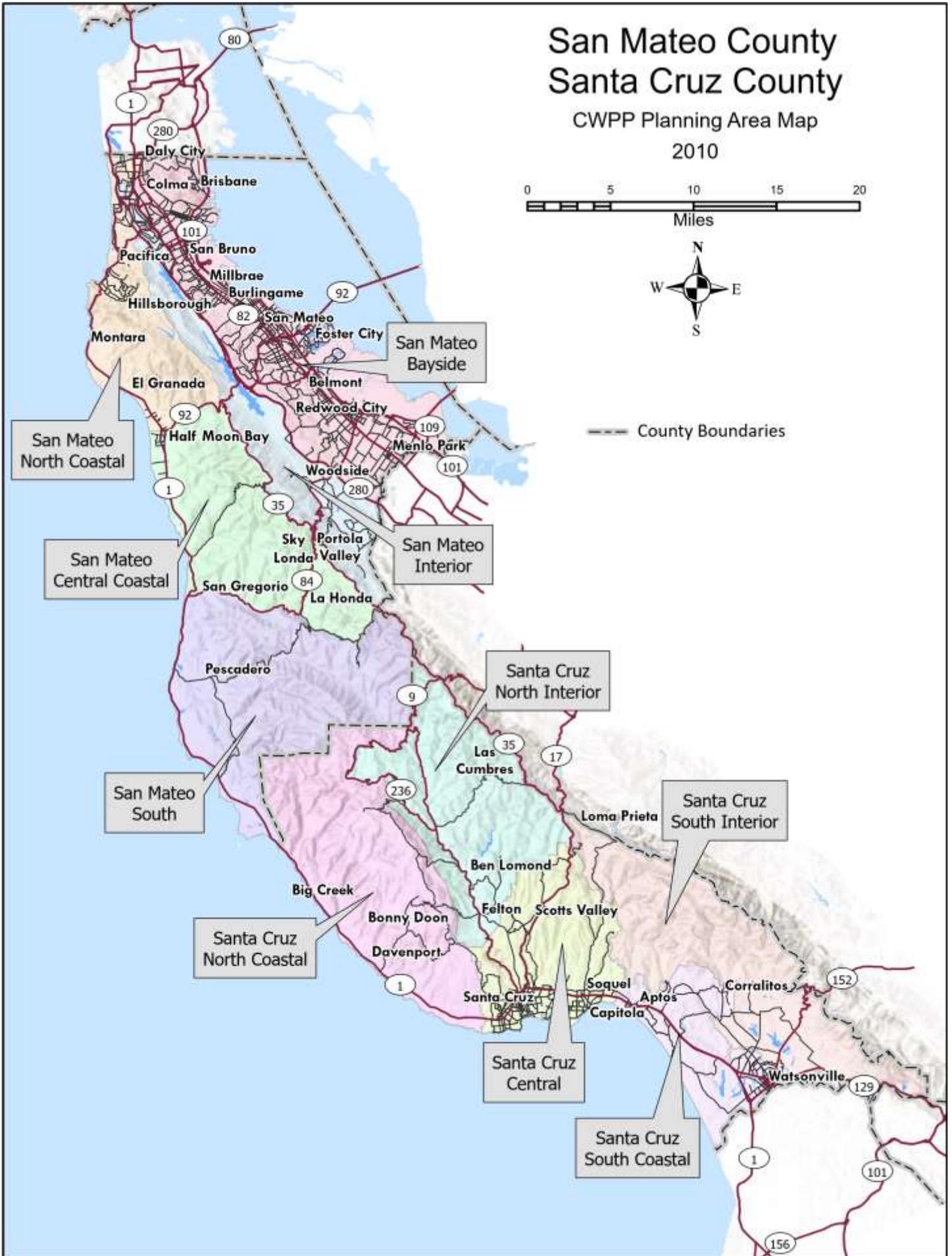


San Mateo County Santa Cruz County

CWPP Planning Area Map
2010



--- County Boundaries



San Mateo North - Coastal

The San Mateo North Coastal planning area covers the northwest portion of San Mateo County outside the City of Half Moon Bay and unincorporated communities of El Granada, Moss Beach, Princeton, and Montara. The northern boundary of this planning area is the San Francisco County line, the eastern boundary is the major ridgeline between the coast and the San Francisco Bay, the southern boundary is Highway 92, and the western boundary is the coastline.

While the only true urban sectors in this planning area are in the northern most part of this planning area, there are many WUI communities, residences and important infrastructure found throughout. With the exception of the coastal areas north of Pacifica, the majority of the planning area is classified as WUI. Major roadways include Hwy 1 on the coast and Hwy 35 and 92 near the boundaries. The few roads bisecting the interior of the planning area are primarily truck trails. There is no recent (within 50 years) major fire history within the planning area.

The vegetative fuel type within the planning area is primarily composed of mixed brush species on the western side of the area and timber (redwood and Douglas fir) on the bayside. Overall, about 48% of the area is identified as a shrub/brush model, about 9% is redwood/Douglas fir, about 5% is herbaceous grasses, about 5% is Eucalyptus, and about 5% is pine or cypress timber. The developed areas of this planning zone make up approximately 17% of the land area and the planted agriculture makes up less than 2% of the area.

San Mateo County CWPP

San Mateo North - Coastal
Wildland Urban Interface Area
2010



San Mateo
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads

Highways



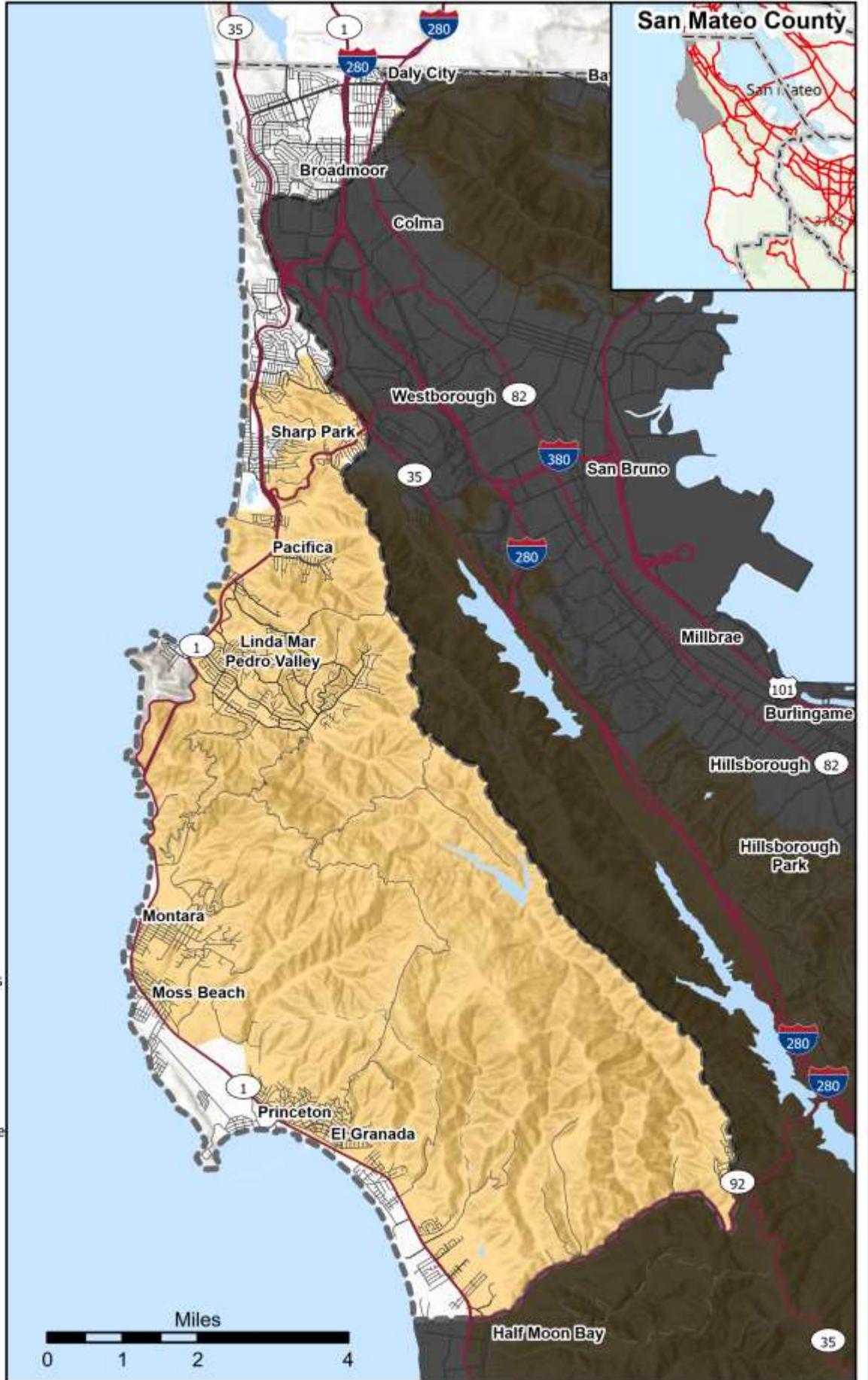
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- San Mateo County Fire / CAL FIRE
- Coastside Fire Protection District
- North County Fire Authority
- Colma Fire Protection District
- South San Francisco Fire Department
- San Bruno Fire Department

The following volunteer companies respond to emergencies within the planning area: •

Coastside Fire Protection District Volunteer Division

Other agencies with large properties within the planning area include:

- California Department of Parks and Recreation
- San Mateo County Parks
- National Park Service
- Central Coast Water Dist.
- City/County Lands
- San Francisco Water Department
- Midpeninsula Regional Open Space District
- Peninsula Open Space Trust

Additional landowners within the planning area include:

- Private residences
- Undeveloped private ownerships
- Ranchland
- Agriculture
- Ox Mountain Dump
- Pilarcito Quarry
- Skylawn Cemetery

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- The areas outside of Half Moon Bay, El Granada, Princeton, Miramar, Moss Beach, and Montara.

Other – Non-environmental

- Equestrian Facilities
- Communications Facility
- PG&E transmission lines

Environmental

- Protection of open space and parkland (all agencies)
- Watershed Protection
- Wildlife

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas that stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person has submitted a project proposal for this planning area:

The San Mateo County Coastside Large Animal Evac Unit (CLAEvac).

San Mateo County CWPP

San Mateo North Coastal Project Priority Area Map 2010



San Mateo
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Highways

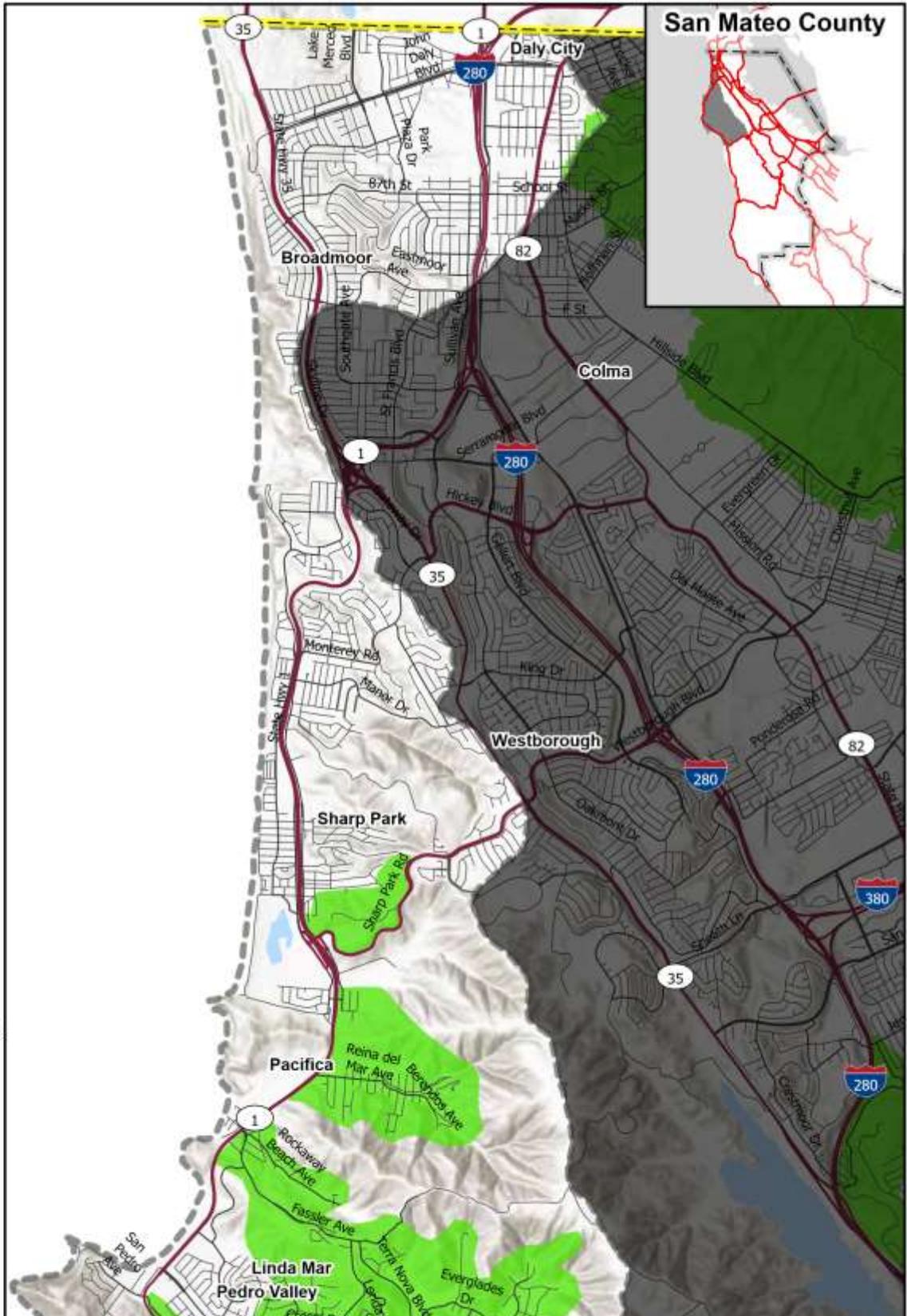


Roads

High Priority Area



Lower Priority



San Mateo County



San Mateo County CWPP

San Mateo North Coastal
Project Priority Area Map
2010



San Mateo
North Coastal
CWPP Planning Area



Adjacent Planning Areas



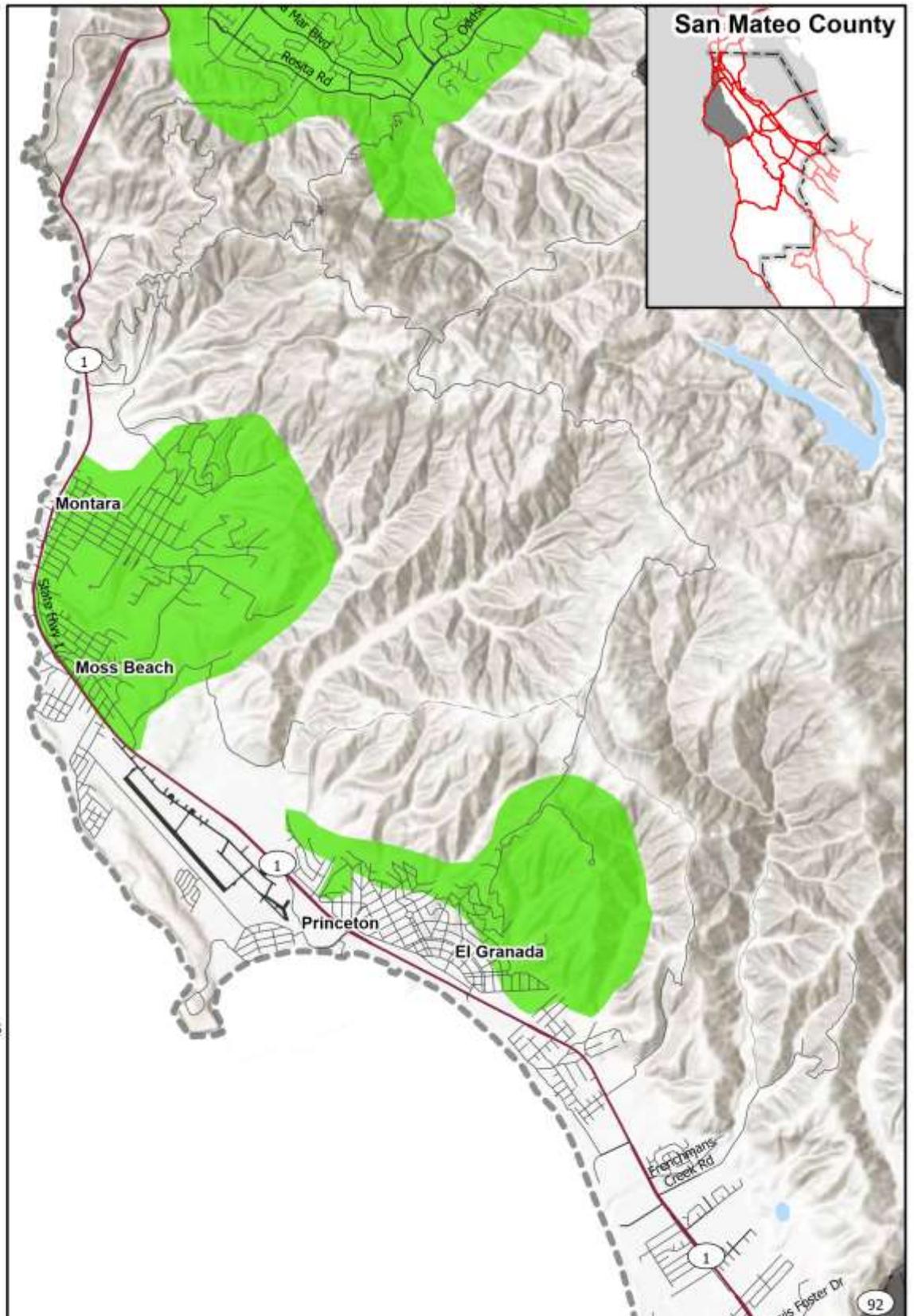
Highways

Roads

High Priority Area



Lower Priority



San Mateo County

San Mateo County CWPP

San Mateo North Coastal
Project Priority Area Map
2010



San Mateo
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Highways



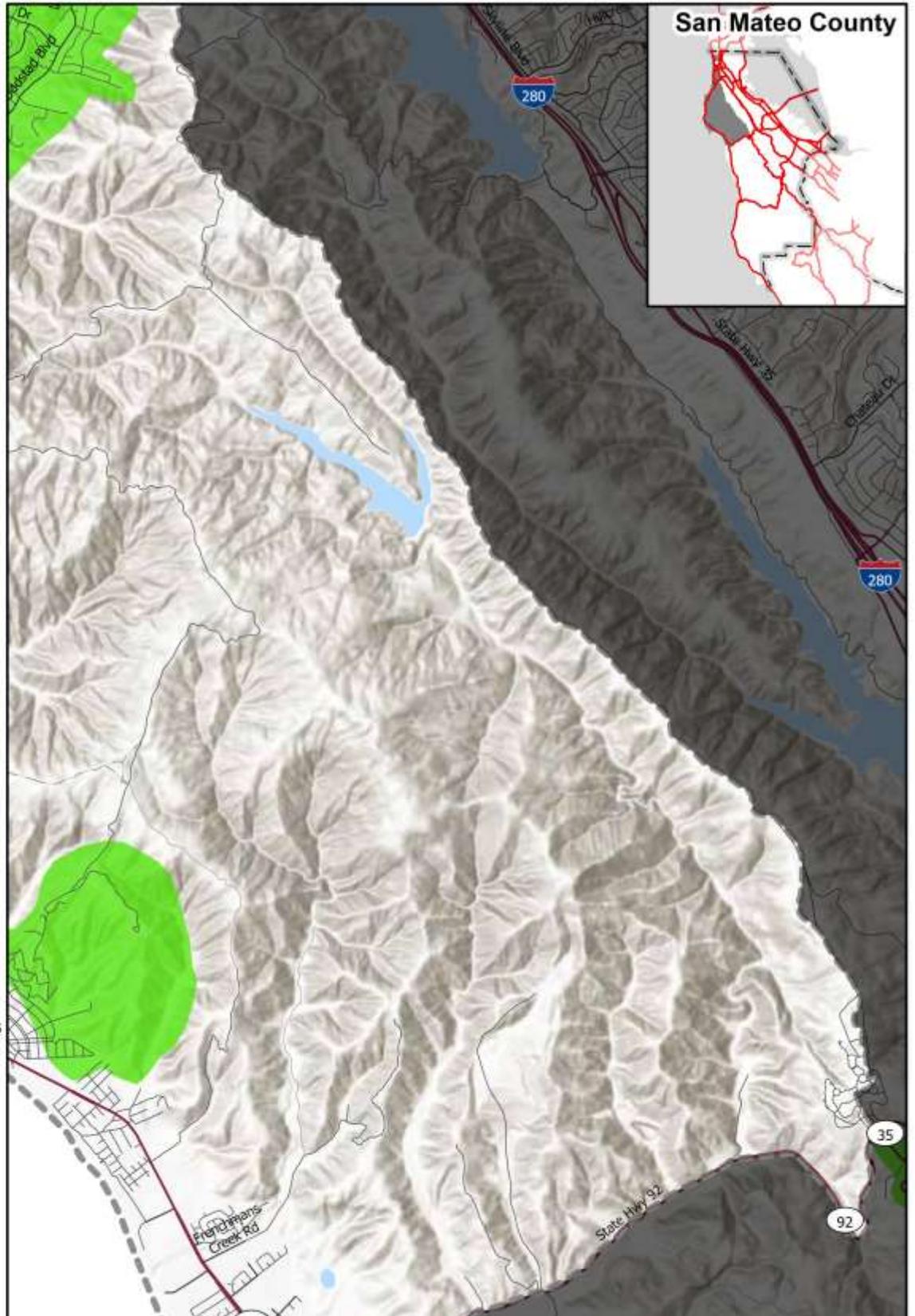
Roads



High Priority Area



Lower Priority



San Mateo County



San Mateo County CWPP

San Mateo North Coastal

Fire Threat Class

2022



San Mateo North Coastal CWPP Planning Area



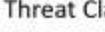
Adjacent Planning Areas



Highways



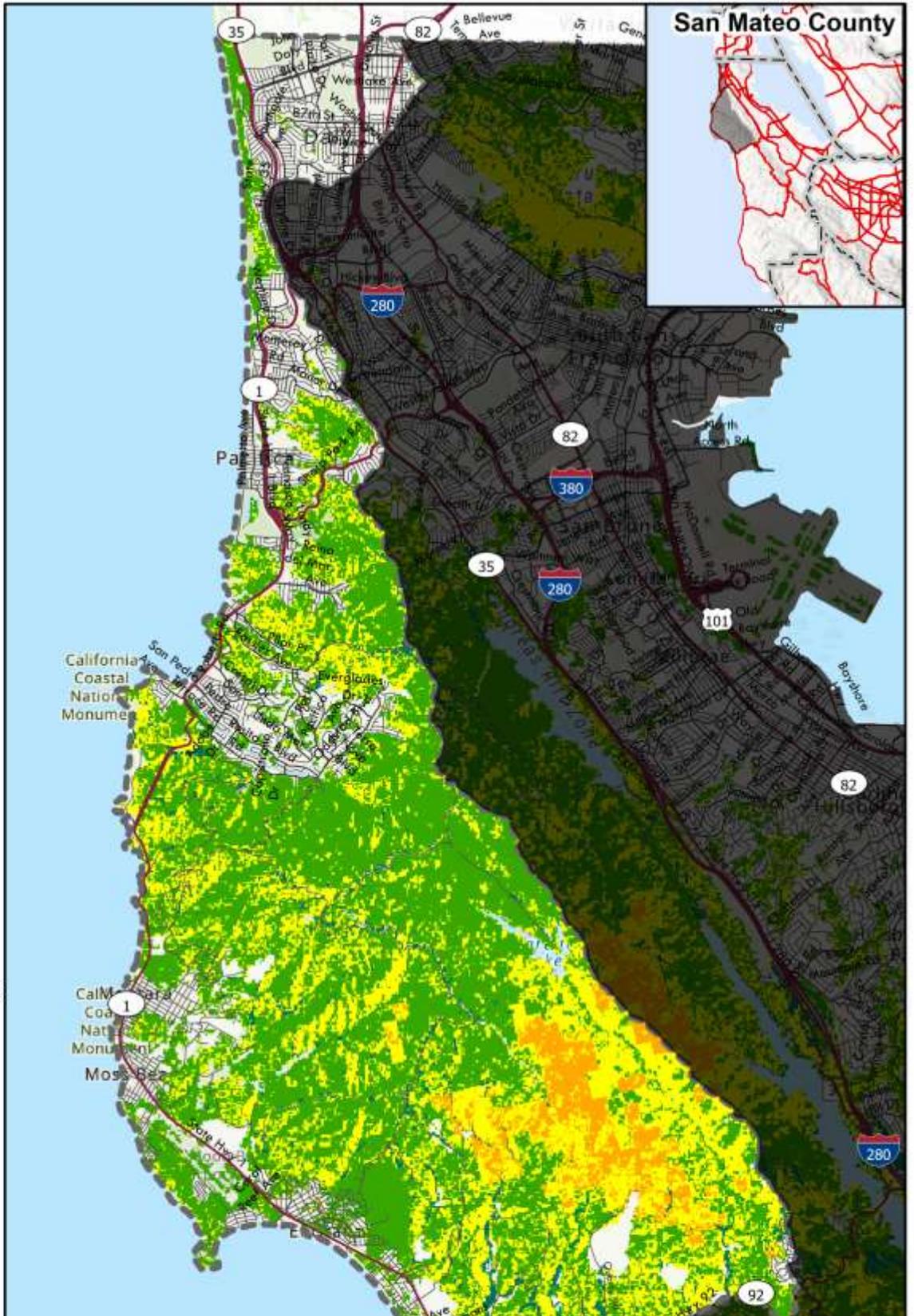
Roads



Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

Fire Threat is the combination of the expected fire



San Mateo Bayside

The San Mateo Bayside planning area covers all areas in San Mateo County east of the Hwy 280 corridor. The communities east of the Hwy 280 corridor are moderately to heavily developed, with over 60% of the planning area designated as developed. While most of this planning area has a moderate amount of urbanization, the landscape east of Hwy 82 (El Camino Real) is where the most heavily developed urban centers are located.

The large swaths of urbanization within this zone are generally thought to protect most of it from wildland fire. The area including and adjacent to San Bruno Mountain has large areas of WUI, which includes both Wildland Urban Interface and Wildland Urban Influence zones. The section of the planning area from Hillsborough to Woodside, generally within 2 miles from Interstate Highway 280, is the other concentration of WUI.

The vegetative fuel sources in this planning area cover less than a quarter of the total area, with urban forests, evergreen hardwoods, herbaceous grasses, and shrub/brush mixtures being the most common fuel types.

The only documented major wildfires in the Bayside planning have been on San Bruno Mountain. The mountain has a history of six wildfires larger than 100 acres since 1962, the most recent in 2008.

San Mateo County CWPP

San Mateo Bayside
Wildland Urban Interface Area
2010



San Mateo
Bayside
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways

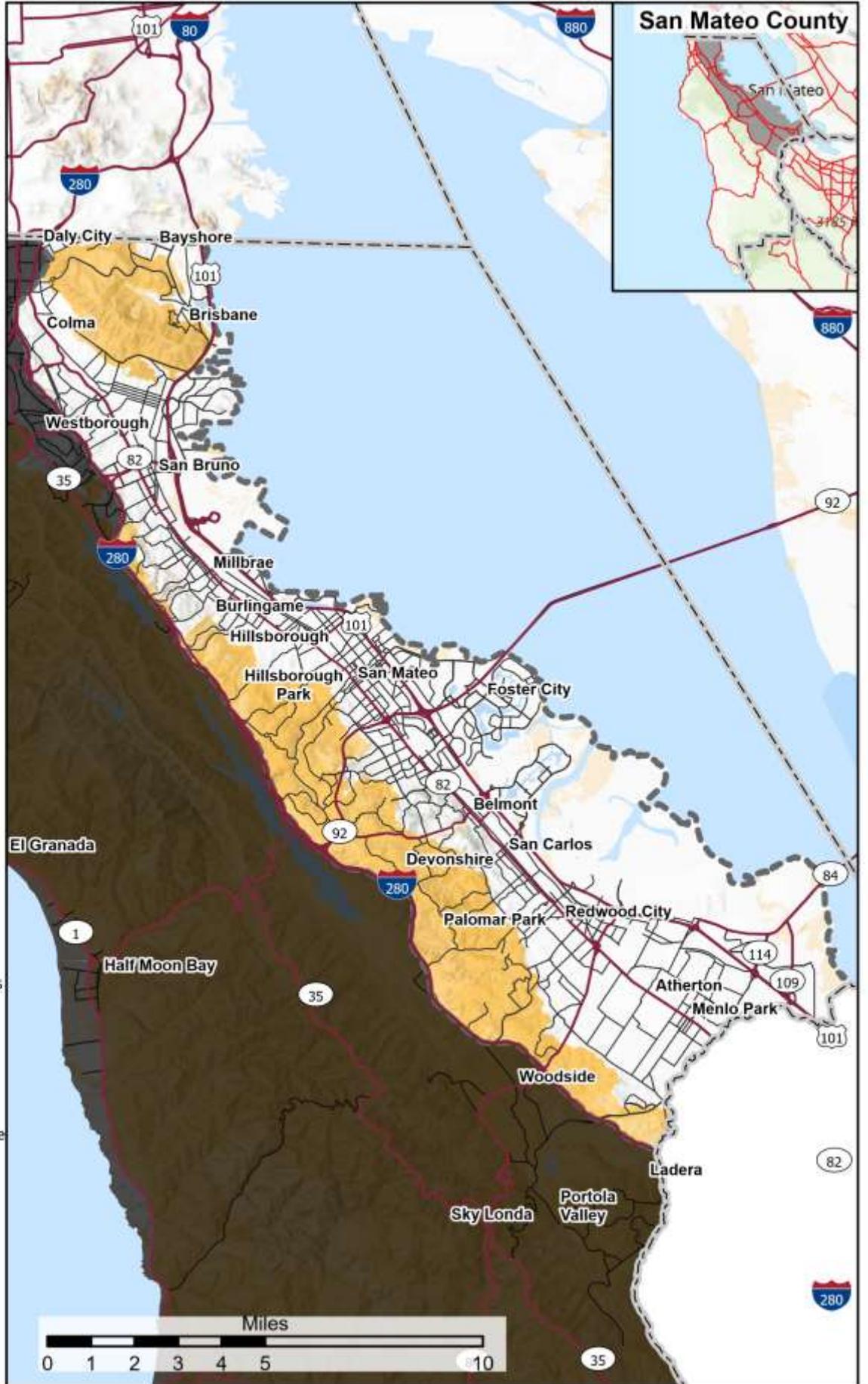
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- San Mateo County Fire / CAL FIRE
- Menlo Park Fire Department
- Redwood City Fire Department
- San Mateo Consolidated Fire Department
- Central County Fire Protection District
- San Bruno Fire Department
- South San Francisco Fire Department
- Colma Fire Department
- North County Fire Authority

The following volunteer companies respond to emergencies within the planning area:

- There are no stand-alone volunteer companies in this planning area; all volunteers here are associated with one of the agencies listed above.

Other agencies with large properties within the planning area include:

- California Department of Parks and Recreation
- San Mateo County Parks
- Department of Defense
- National Park Service
- San Francisco Water Co.
- Midpeninsula Regional Open Space District
- City/County Lands

Additional landowners within the planning area include:

- Private residences
- Undeveloped private ownerships

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods/Cities/Towns

- Life and property are always considered the dominant asset at risk.
- Hillsborough
- Eaton Park
- Devonshire Canyon
- Emerald Hills
- Big Canyon Open Space Park
- Water Dog Lake in Belmont
- San Juan Canyon in Belmont

Environmental

- Watershed Protection
- Protection of open space and parkland (all agencies)

The following groups within this area have successfully formed a Firewise Community:

- Woodside Hills
- Hillsborough South
- Hillsborough North

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas that stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person have submitted a project proposal for this planning area:

Highlands Recreation District



San Mateo County CWPP

San Mateo Bayside
Project Priority Area Map
2010



San Mateo
Bayside
CWPP Planning Area



Adjacent Planning Areas

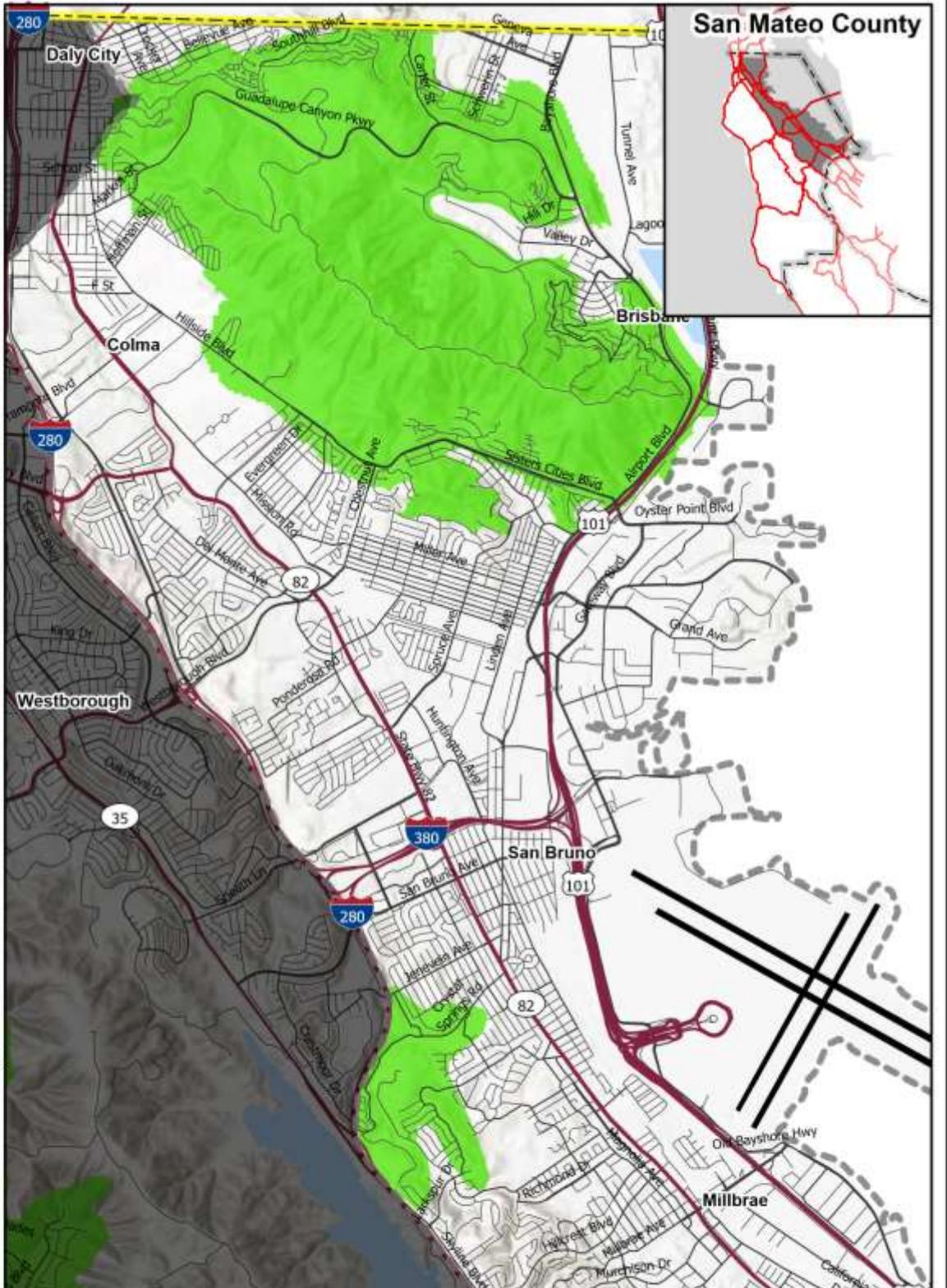


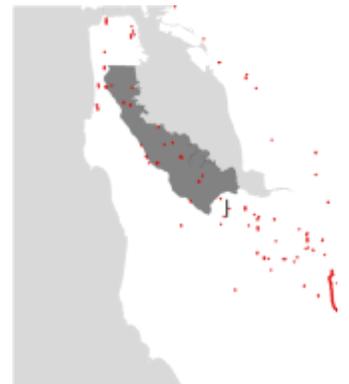
Highways



Roads

High Priority Area





San Mateo County CWPP

San Mateo Bayside
Project Priority Area Map
2010



San Mateo
Bayside
CWPP Planning Area



Adjacent Planning Areas

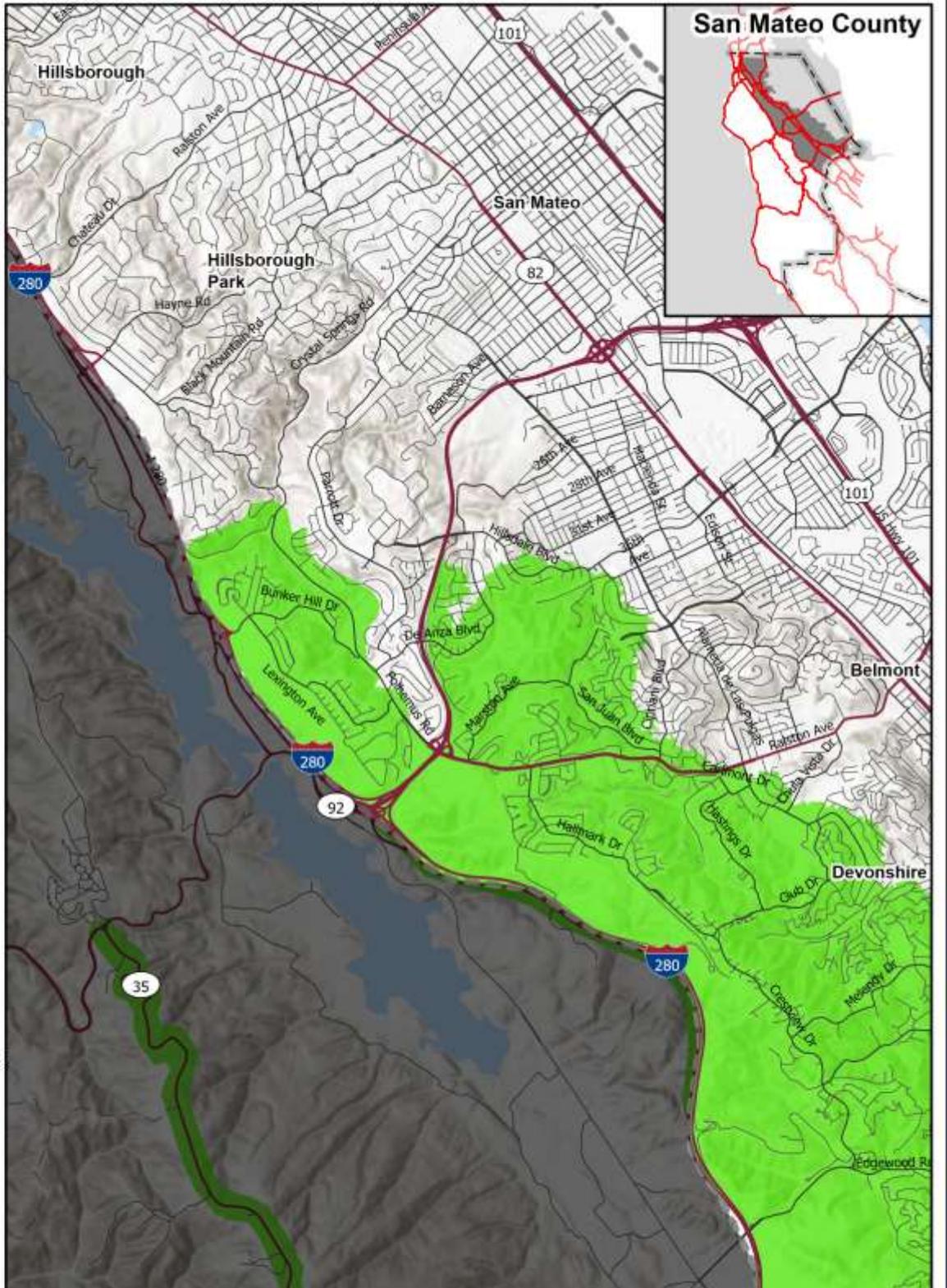


Highways



Roads

High Priority Area





San Mateo County CWPP

San Mateo Bayside
Project Priority Area Map
2010



San Mateo
Bayside
CWPP Planning Area



Adjacent Planning Areas

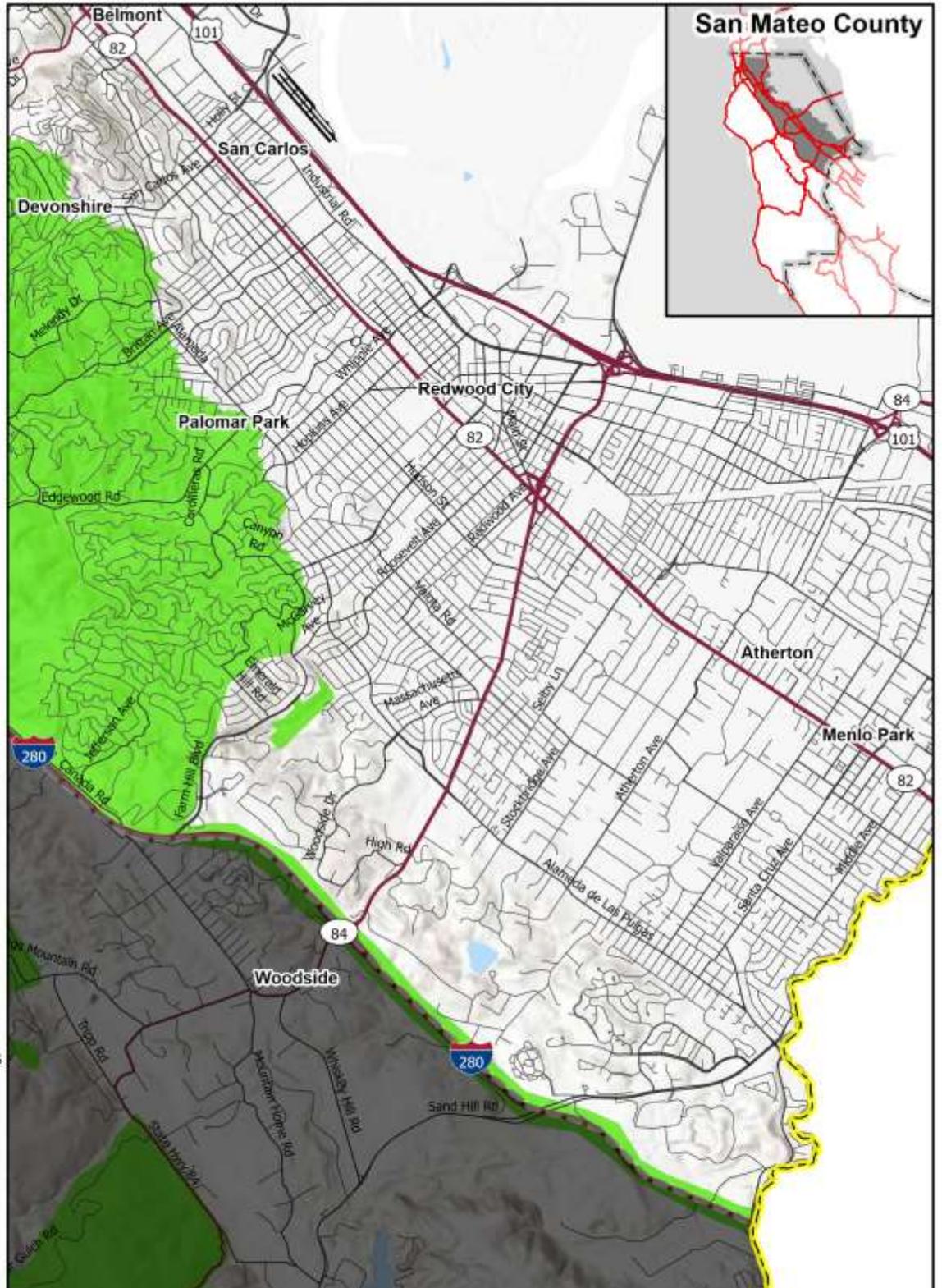


Highways



Roads

High Priority Area



San Mateo County CWPP

San Mateo Bayside

Fire Threat Class

2022



San Mateo Bayside CWPP Planning Area



Adjacent Planning Areas



Highways



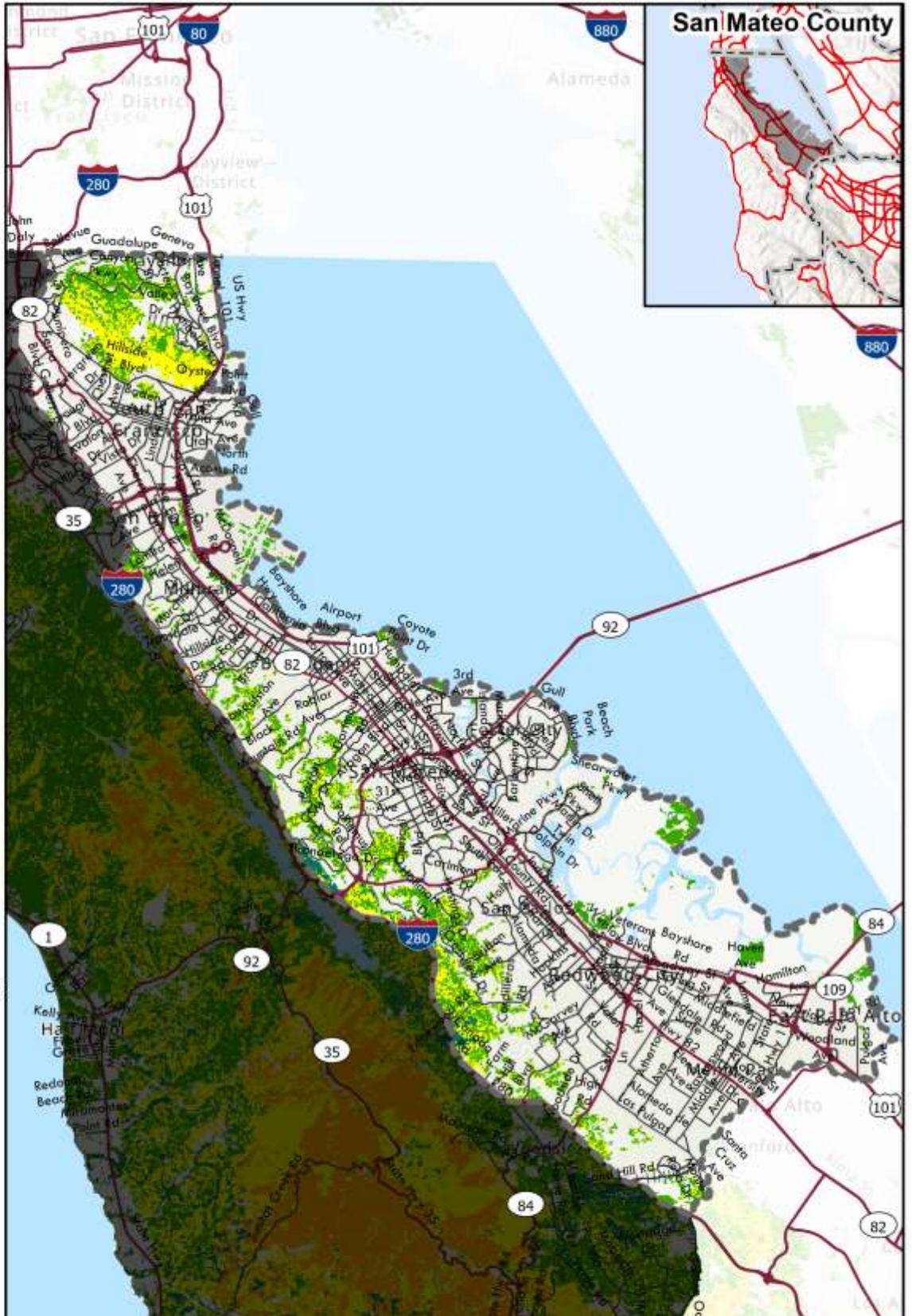
Roads



Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

Fire Threat is the combination of the expected fire



San Mateo Central - Coastal

The San Mateo Central – Coastal planning area covers the central portion of San Mateo County from Highway 84 and La Honda north to Highway 92. The western boundary of the planning area is the coast, while the eastern boundary is Hwy 35.

With the exception of some sections of the City of Half Moon Bay west of highway 1, this planning area is WUI. There are small residential enclaves, such as La Honda and Skylonda, as well as individual residences throughout the planning area. The only largescale development occurs in Half Moon Bay, with no more than 3% of the total planning area classified as developed. Much of this planning area is parkland, timberland, and/or undeveloped wildland. Major roadways include Hwy 1 on the coast, Hwy 84 and Hwy 92 connecting the interior with the coast, and Hwy 35 on the summit. The interior is bisected by private and county-maintained roads, including truck trails. Vegetative fuel types are fairly evenly split between timber, brush, and grass. Timber in this planning area include about 24% of the land as redwood or Douglas-fir, 10% evergreen hardwood, 3.5% riparian forest, 2% Eucalyptus groves, and less than 2% is pine or cypress. Approximately 30% of this area is classified as shrub/brush and about 22% is herbaceous grasses.

There have been four recorded fires greater than 100 acres between 1943 and 1976 in this planning area. The largest fire being approximately 1,300 acres in size, located in the Skylonda area in January of 1962. Since 1976, all fires have been kept less than 20 acres in size.

San Mateo County CWPP

San Mateo Central - Coastal
Wildland Urban Interface Area
2010



San Mateo
Central Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways

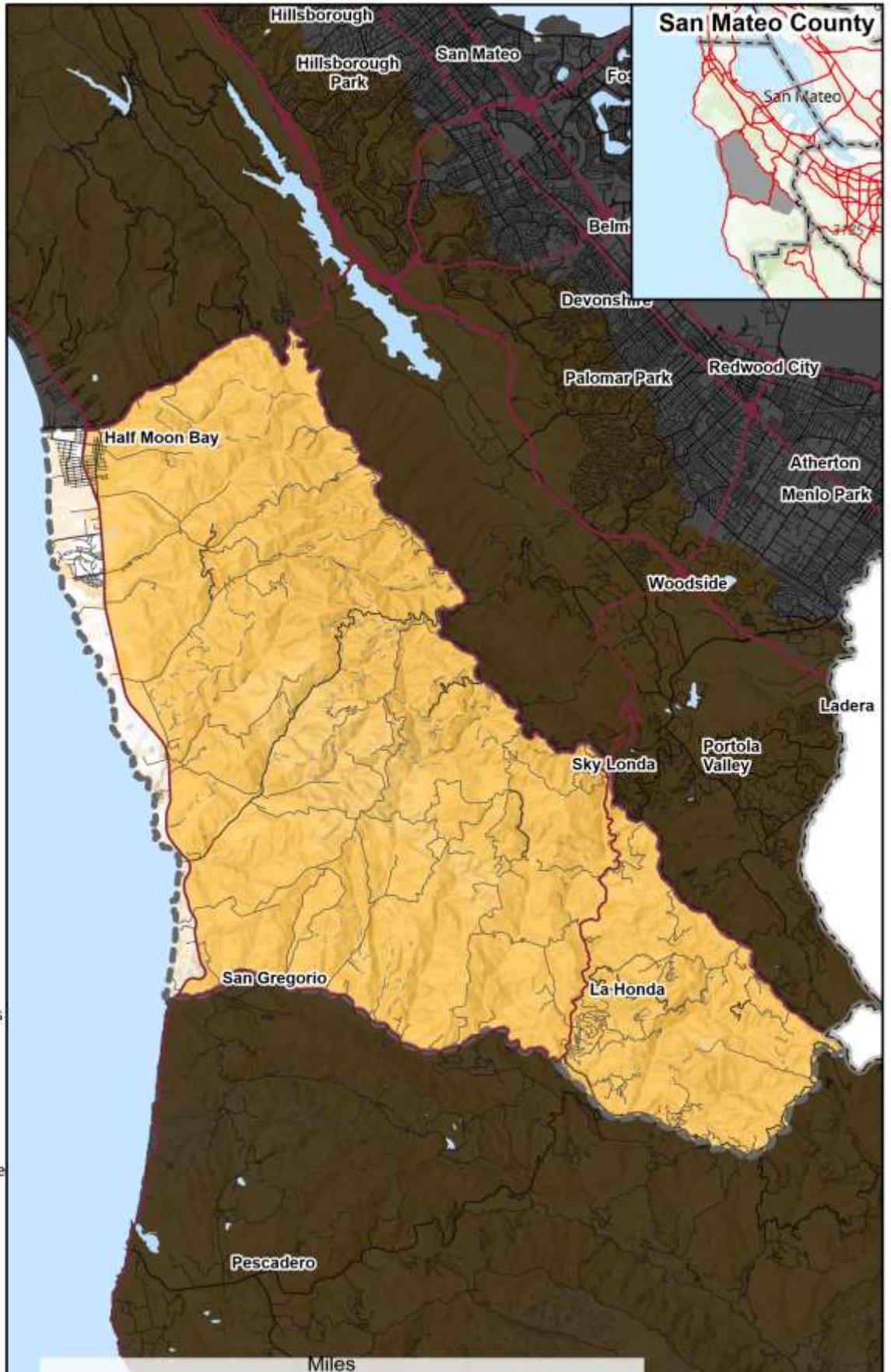
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- San Mateo County Fire / CAL FIRE
- Coastside Fire Protection District

The following volunteer companies respond to emergencies within the planning area:

- La Honda Volunteer Fire Brigade
- Kings Mountain Volunteers Fire Brigade
- Coastside Fire Protection District Volunteer Division

Other agencies with large properties within this planning area include:

- California Department of Parks and Recreation
- San Mateo County Parks
- Midpeninsula Regional Open Space District
- Peninsula Open Space Trust
- Audubon Society
- Cuesta La Honda Guild
- San Francisco Juvenile Court

Additional landowners within the planning area include:

- Private residences
- Managed Timberland
- Undeveloped private ownerships
- Ranchland
- Agriculture

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.

- Half Moon Bay
- San Gregorio
- La Honda
- Skylonda
- Rapley Ranch – Langley Hill Quarry Roads
- Kings Mountain
- Lobitos / Tunitas
- Purisima
- Alpine Creek Tract / Alpine Road corridor
- Redwood Terrace

Other – Non-environmental

- Rural Schools ○ La Honda Elementary School
- Medical Facilities
- Water Supply ○ La Honda Guild reservoir
- Equestrian Facilities
- Infrastructure points ○ La Honda Fire Station ○ La Honda Post Office
 - San Mateo County Roads office and corps yard
- Businesses ○ Alice’s Restaurant ○ Langley Hill Quarry ○ La Honda Country Market ○ Applejacks
- Camping facilities
- Vineyards / Wineries

Environmental

- Protection of open space and parkland (all agencies)
- Protection of Watershed

The following groups within this area have successfully formed a Firewise Community:

- Bear Gulch East

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects. The areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan.

San Mateo County CWPP

San Mateo Central Coastal Project Priority Area Map 2010



San Mateo
Central Coastal
CWPP Planning Area



Adjacent Planning Areas



Highways

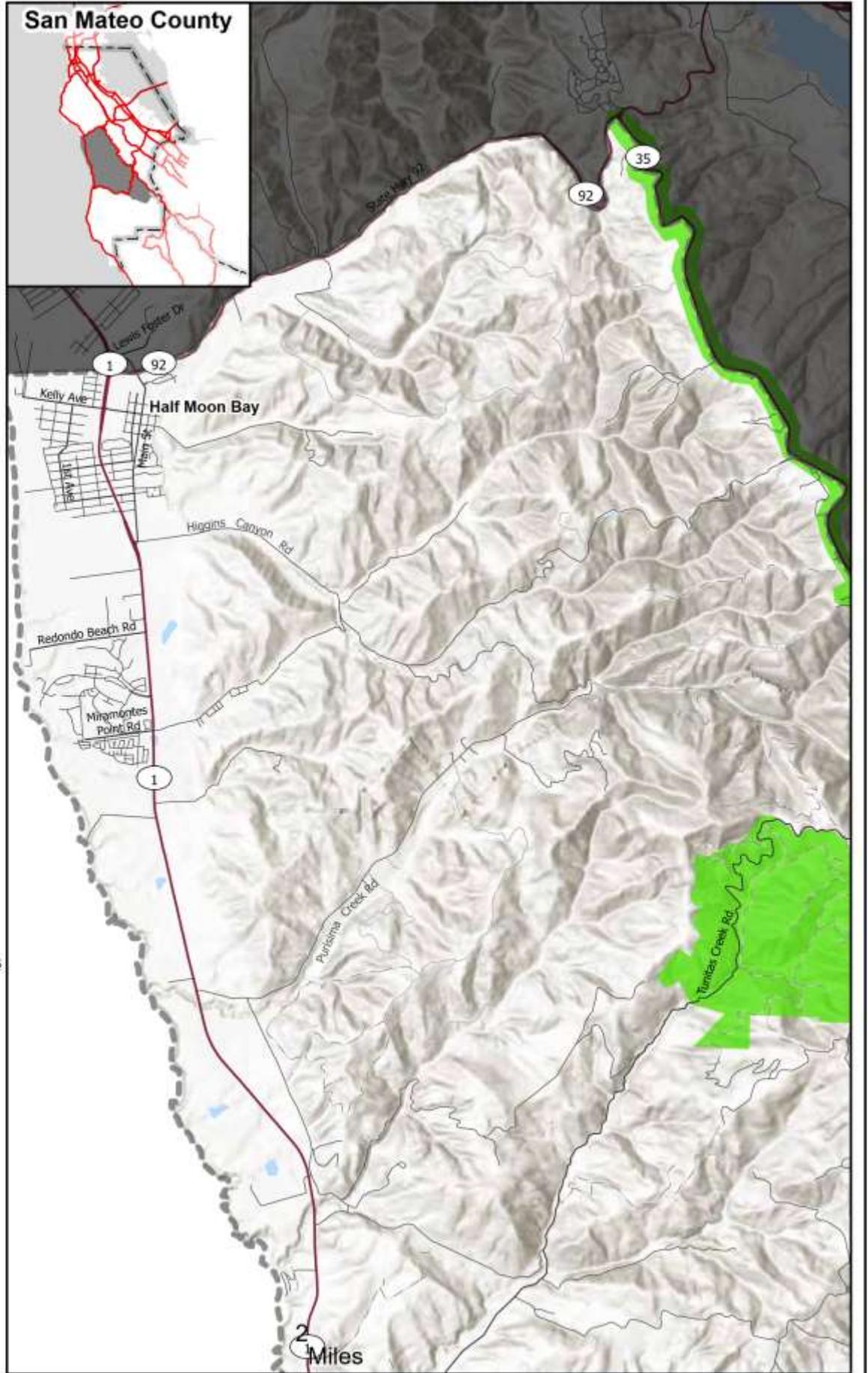


Roads

High Priority Area



Lower Priority



San Mateo County CWPP

San Mateo Central Coastal
Project Priority Area Map
2010



San Mateo
Central Coastal
CWPP Planning Area



Adjacent Planning Areas



Highways

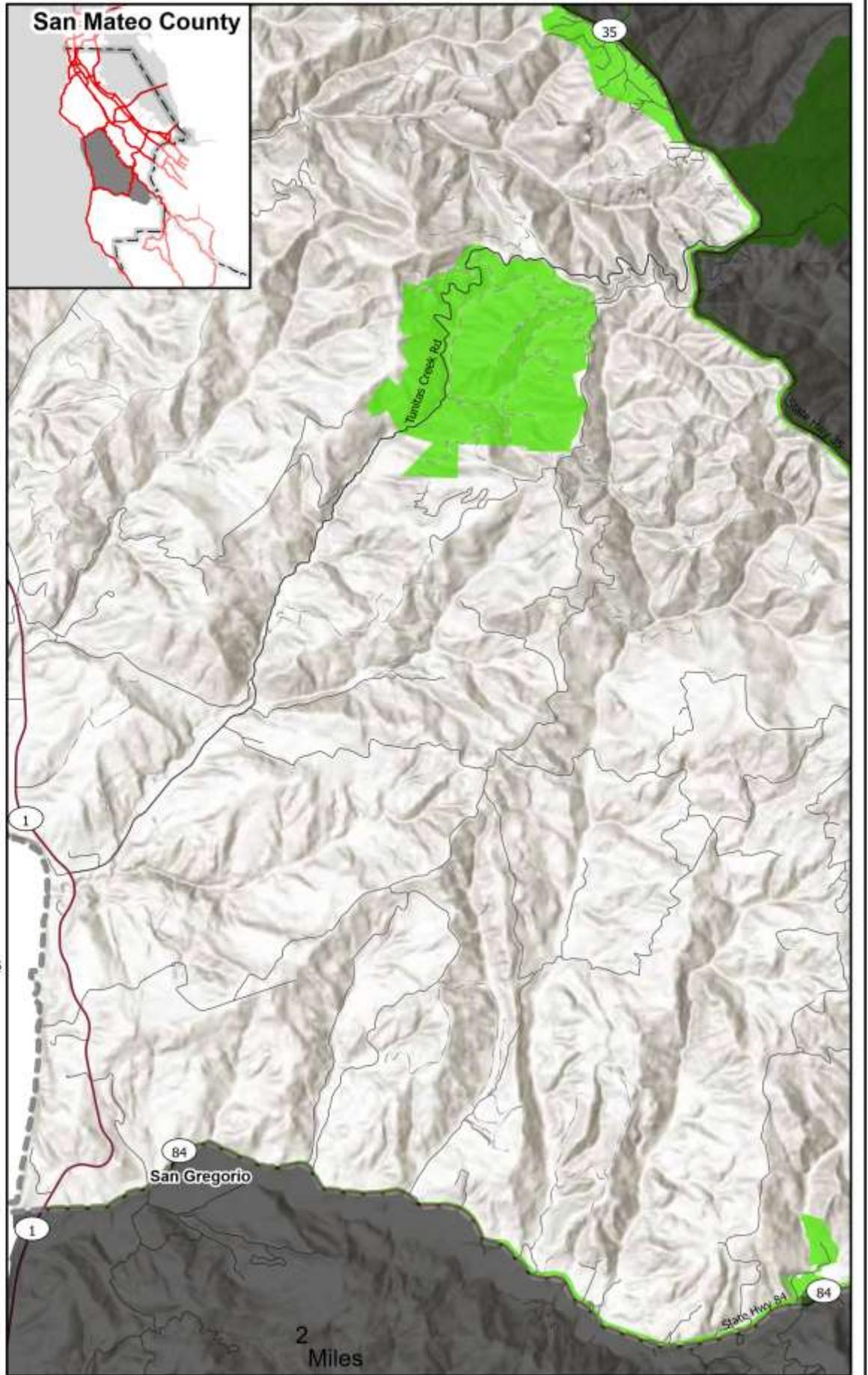


Roads

High Priority Area



Lower Priority



San Mateo County CWPP

San Mateo Central Coastal
Project Priority Area Map
2010



San Mateo
Central Coastal
CWPP Planning Area



Adjacent Planning Areas



Highways



Roads

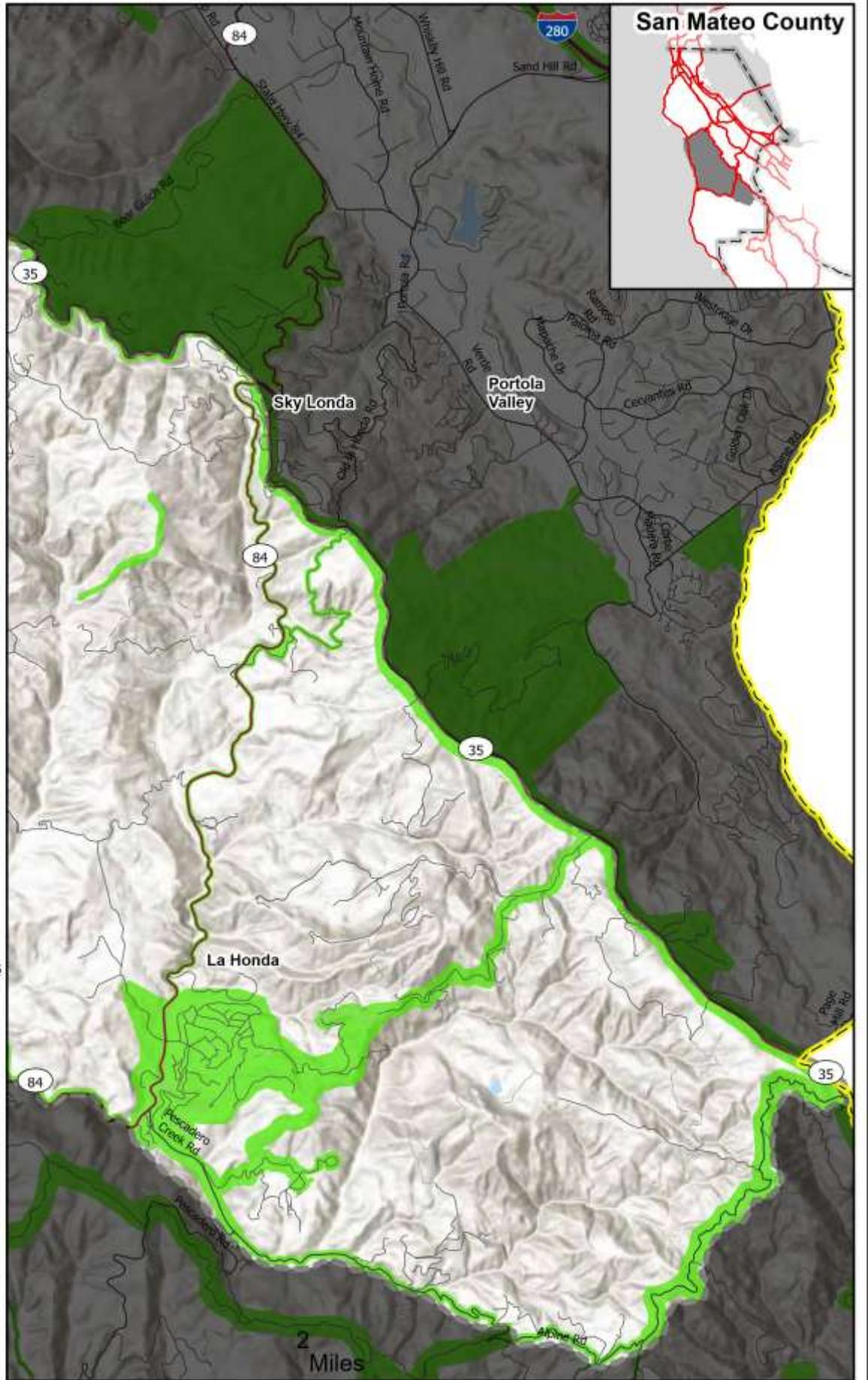
High Priority Area



Lower Priority



County Boundaries



San Mateo County CWPP

San Mateo Central Coastal

Fire Threat Class

2022



San Mateo Central Coastal CWPP Planning Area



Adjacent Planning Areas



Highways

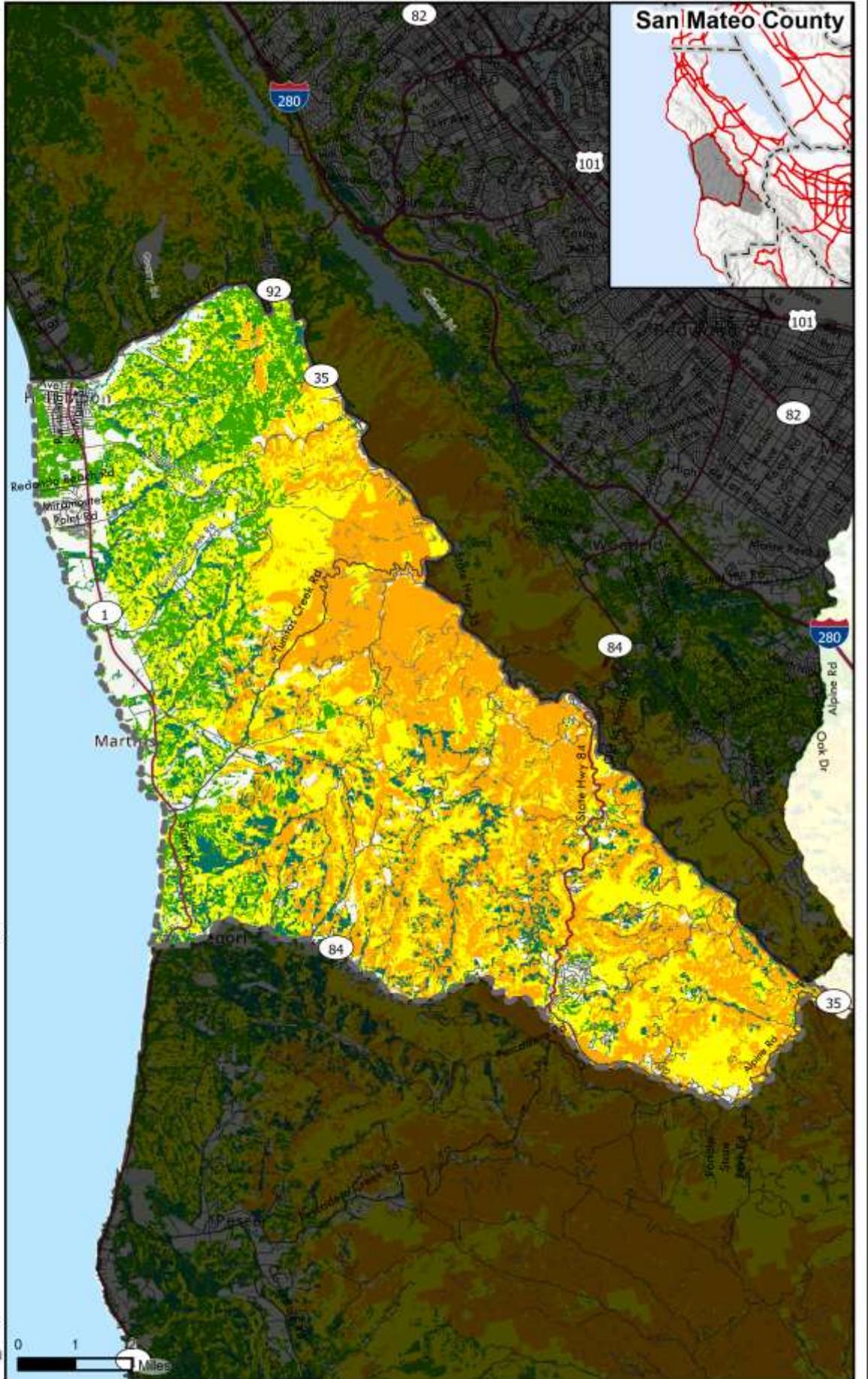


Roads

Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

Fire Threat is the combination of the expected fire probability / frequency (risk) with potential fire behavior (hazard) creating 5 threat classes. Fire threat provides a measure of the relative likelihood of a damaging or difficult to control wildfire occurring.



San Mateo Interior

The San Mateo Interior planning area covers the interior section of San Mateo County between Hwy 35 and Hwy 280. The southern boundary of this planning area is south of Hwy 84, near the community of Los Trancos. The northern boundary reaches the Broadmoor area.

The northern and southern end of this planning area are urbanized, with portions of the cities of Daly City, South San Francisco, San Bruno, and Woodside included in the planning area boundary. Approximately 12% of the planning area is classified as developed and virtually the entire area south of San Bruno is designated as WUI.

The most recent major fire in this planning area was the 2017 Skeggs fire on the Cal Water property adjacent to the Teague Hill Open Space Preserve that burned 34 acres. Prior to that, the last major documented fire was the Leib Fire in 1962. This fire burned approximately 1300 acres in the Skylonda area, primarily on the west side of Highway 35.

The vegetative fuels within this planning area are a mixture of diverse vegetation types. About 32% of the area is evergreen hardwoods, about 20% is a redwood / Douglas-fir mixture, about 15% is scrub/brush, and about 8% is herbaceous grasses. There is a large amount of the area that is surface water (approximately 4%) due to the presence of the reservoirs owned by the San Francisco Water Department. Very little in this area is agricultural; less than 1.5%. The remaining area is a mixture of pine, cypress, and deciduous hardwoods.

San Mateo County CWPP

San Mateo Interior
Wildland Urban Interface Area
2010



San Mateo Interior

CWPP Planning Area



Adjacent Planning Areas



Roads



Highways

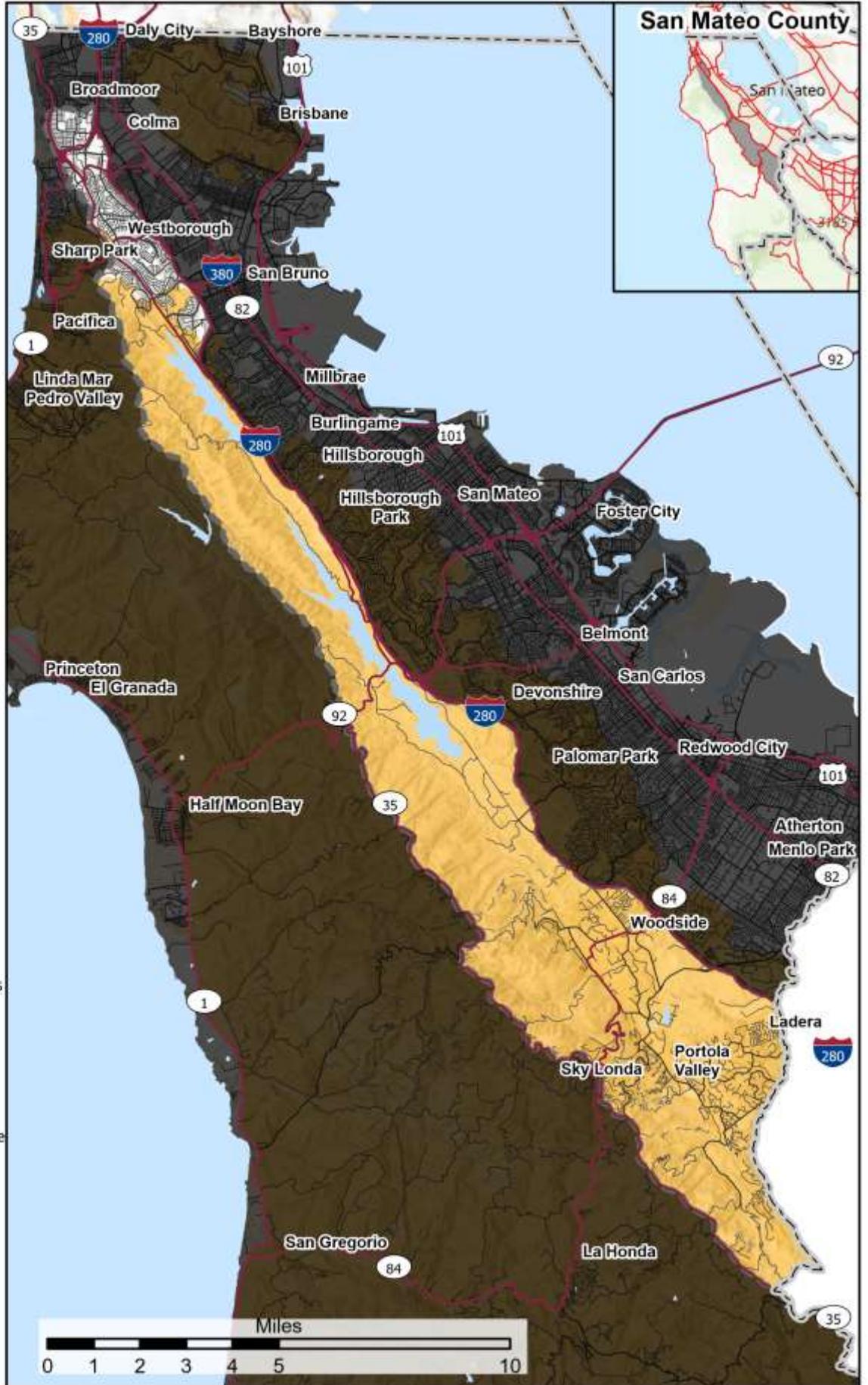
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- San Mateo County Fire / CAL FIRE
- Woodside Fire Protection District
- North County Fire Authority
- San Bruno Fire Department
- South San Francisco Fire Department

The following volunteer companies respond to emergencies within the planning area: •

Kings Mountain Volunteer Fire Brigade

Other agencies with large properties within the planning area include:

- California Department of Parks and Recreation
- San Mateo County Parks
- National Park Service – Golden Gate National Recreation Area, including Phleger Estate
- San Francisco Water Department
- Midpeninsula Regional Open Space District
- City/County Lands – Crestmoor Canyon / Wunderlich & Huddart County Parks •
- National Trust for Historic Preservation – Filoli Center

Additional landowners within the planning area include:

- Private residences
- Undeveloped private ownerships
- Timberland

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.

-
- Woodside
 - Portola Valley

- Skylonda
- Ladera
- Los Trancos Woods
- Vista Verde
- Rocky Creek – Heacocks – Crazy Pete’s Roads Community

Other – Non-environmental

- Equestrian Facilities
- Vineyards/wineries ○ Fogarty Vineyard and Winery
- High density, assisted living facilities within the WUI

Environmental

- Watershed Protection
- Protection of open space and parkland (all agencies)
- Jasper Ridge Biological Preserve
- Wildlife

The following groups within this area have successfully formed a Firewise Community:

- Portola Valley Ranch

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects.

San Mateo County CWPP

San Mateo Interior
Project Priority Area Map
2010



San Mateo Interior
CWPP Planning Area



Adjacent Planning Areas



Highways



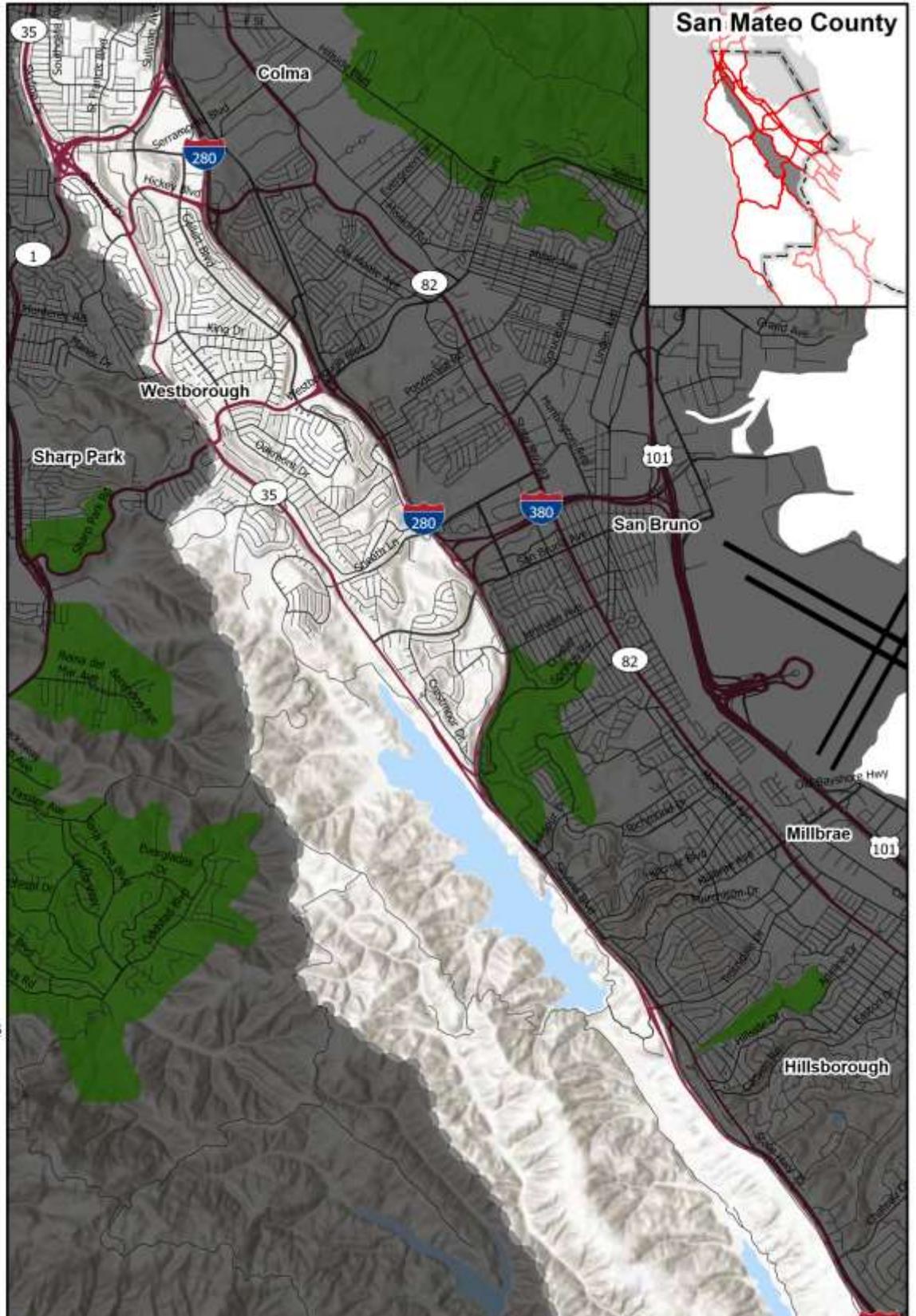
Roads



High Priority Area



Lower Priority



San Mateo County CWPP

San Mateo Interior
Project Priority Area Map
2010



San Mateo
Interior
CWPP Planning Area



Adjacent Planning Areas



Highways

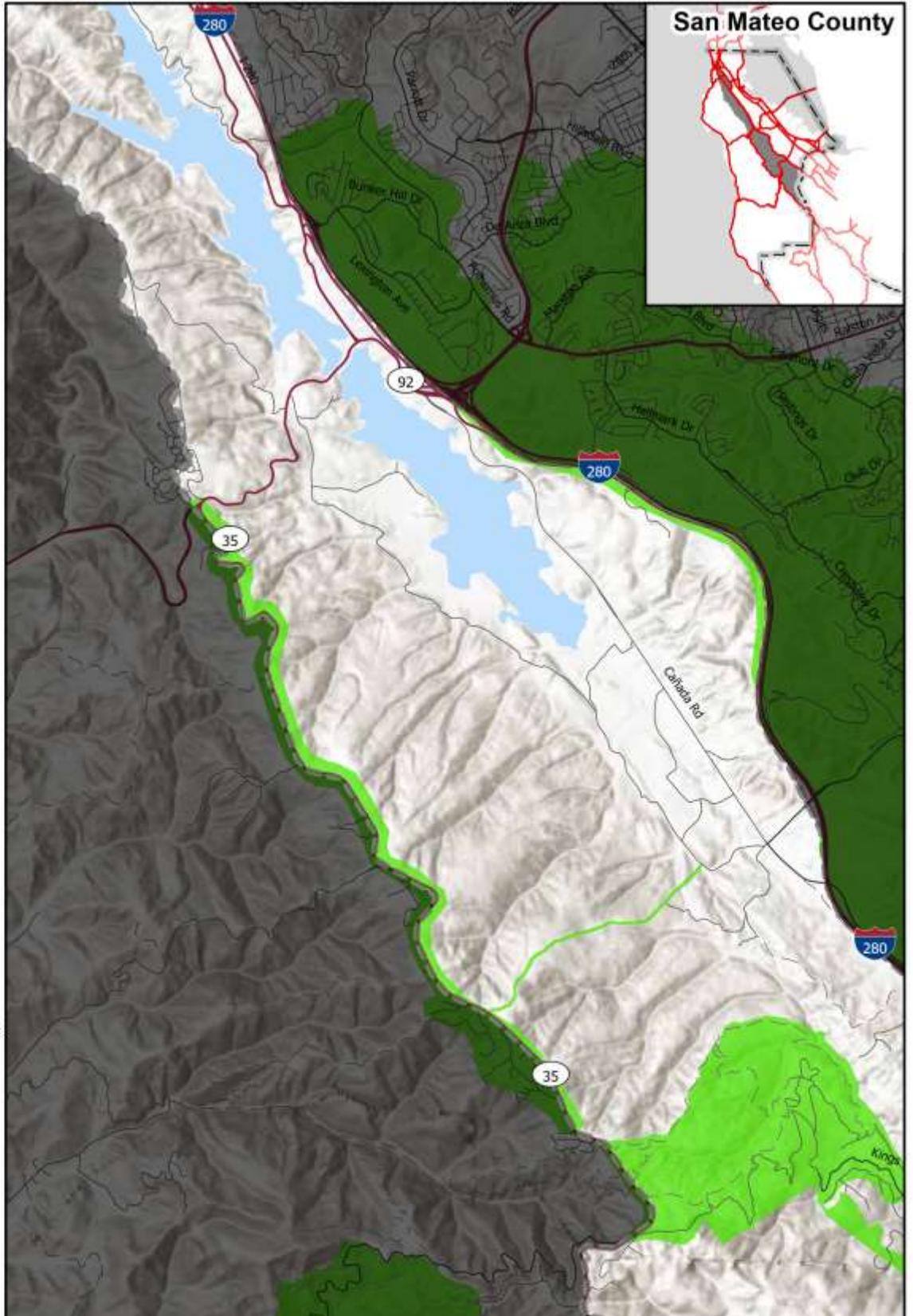


Roads

High Priority Area



Lower Priority



San Mateo County

San Mateo County CWPP

San Mateo Interior

Project Priority Area Map

2010



San Mateo Interior CWPP Planning Area



Adjacent Planning Areas



Highways



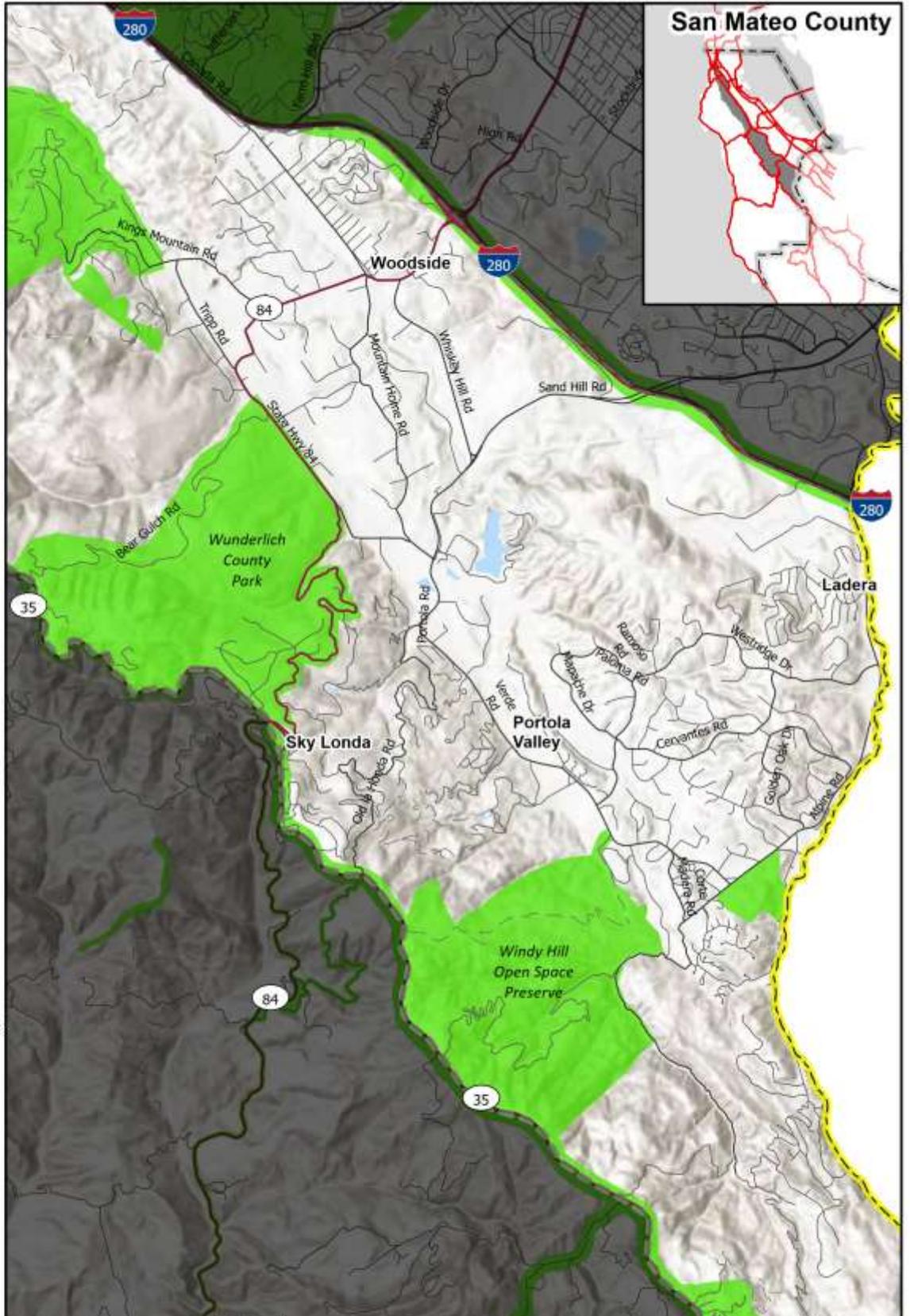
Roads



High Priority Area



Lower Priority



San Mateo County



San Mateo County CWPP

San Mateo Interior
Fire Threat Class
2022



San Mateo Interior
CWPP Planning Area



Adjacent Planning Areas



Highways

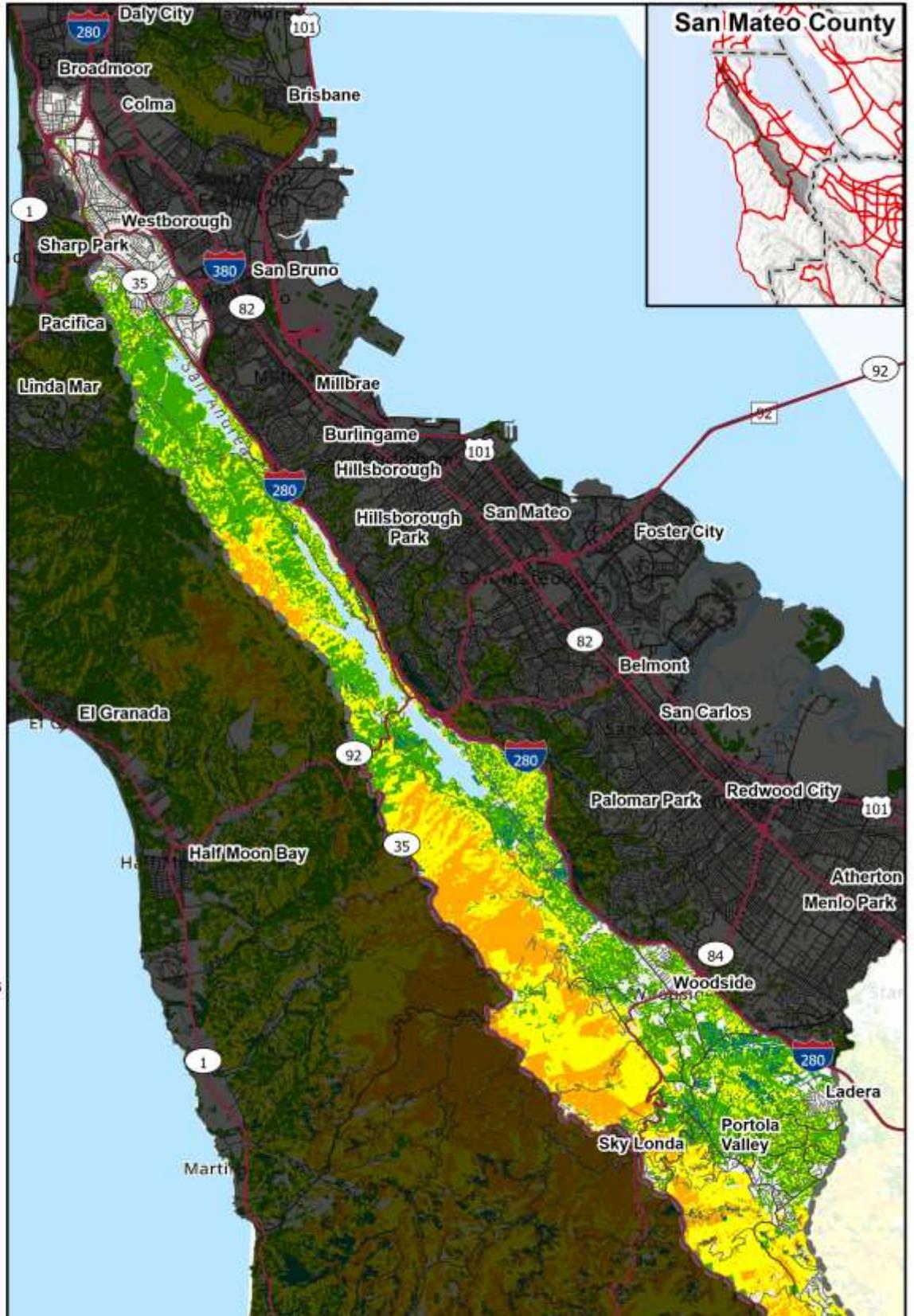


Roads

Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

cities_czu
Fire Threat is the combination of the expected fire



San Mateo South

The San Mateo South planning area covers the southern portion of San Mateo County from the Santa Cruz County line north to Highway 84. The western boundary of the planning area is the coast, and the eastern boundary is Highway 35.

There are no major urban centers within this planning area, however there are communities as well as numerous residences and infrastructure found throughout. The entire planning area is classified as WUI, except for the areas west of Hwy 1. The greatest amount of development occurs in the communities of La Honda, Pescadero, Dearborn Park, Loma Mar, and adjacent the Hwy 35 Corridor. Much of this planning area is parkland, timberland, and undeveloped wildland. Major roadways include Hwy 1 on the coast and Hwy 35 on the summit, Hwy 84 and Pescadero Road. The interior is bisected by county-maintained roads and historic truck trails.

In 2020, the CZU Lightning Complex burned the southern portion of this planning area. That fire totaled 86,509 acres, 22,755 acres of which burned within this planning area. Before that, the most recent significant fire history was in 1962 when two fires totaling 3,440 acres occurred near the southern county line.

Fuel types within the planning area primarily composed of conifer forests in the interior. The western, coastal areas have more grasslands and hardwoods. Overall, over 50% of the land area is either redwood or Douglas-fir timber. Additionally, about 22% of the area is shrub/brush, about 11% is herbaceous grasses, and about 6% is an evergreen hardwood timber coverage. Less than 1% of the land area is developed and about 2% is covered in agriculture.

San Mateo County CWPP

San Mateo South
Wildland Urban Interface Area
2010



San Mateo South
CWPP Planning Area



Adjacent Planning Areas



Roads

Highways



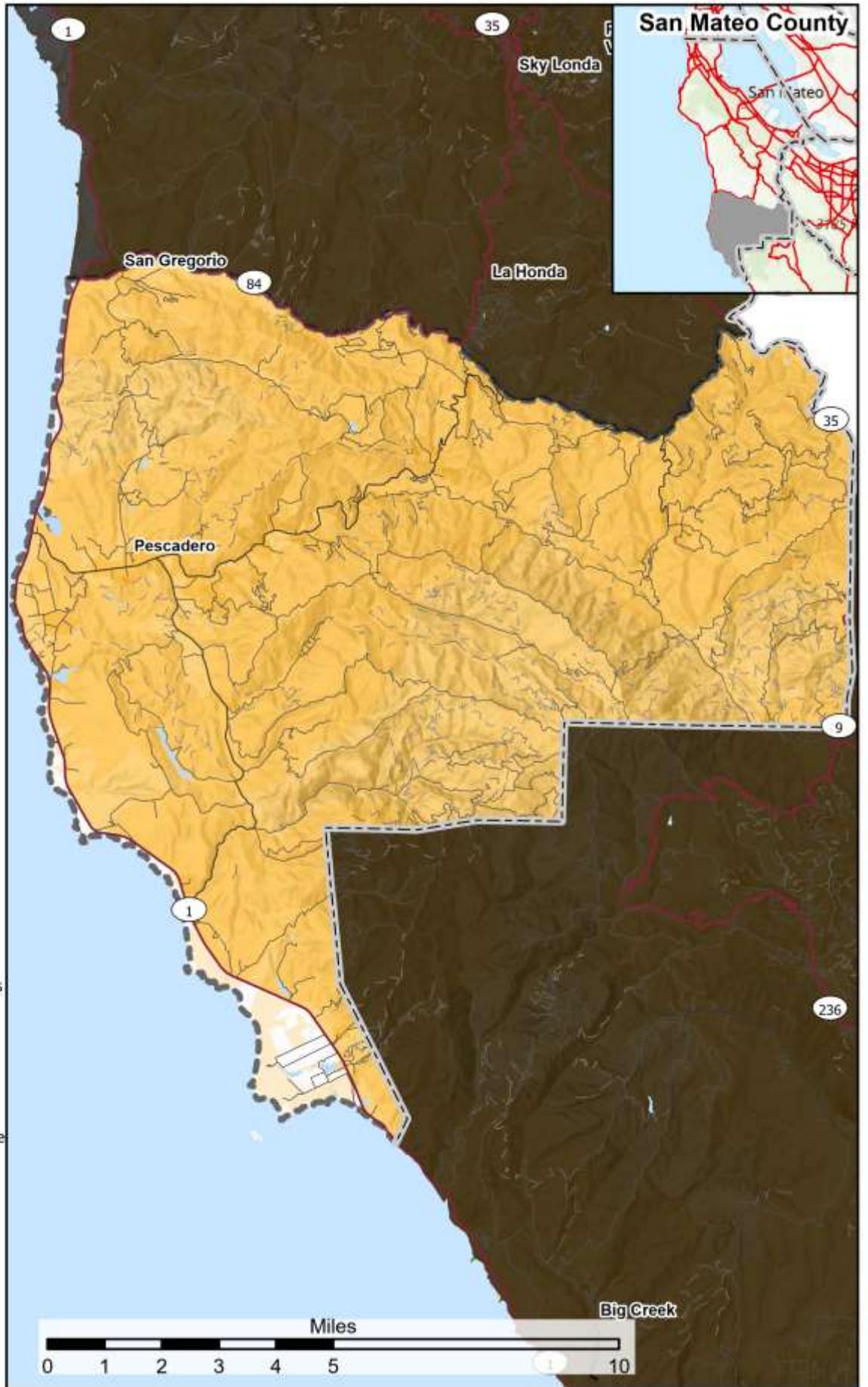
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- San Mateo County Fire / CAL FIRE

The following volunteer companies respond to emergencies within the planning area:

- La Honda Fire Brigade
- San Mateo County Fire Volunteer Company 55 (Loma Mar)
- Santa Cruz County Fire Volunteer Company 29 (South Skyline)

Other agencies with large properties within the planning area include:

- California Department of Parks and Recreation
- San Mateo County Parks
- Department of Defense
- Midpeninsula Regional Open Space District
- Peninsula Open Space Trust
- YMCA – San Francisco / Oakland
- Sempervirens Fund
- Save the Redwoods League

Additional landowners within the planning area include:

- Private residences
- Managed Timberland
- Undeveloped private ownerships
- Ranchland
- Agriculture
- Vineyards / Wineries

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- Whitehouse Canyon
- Ranch Road
- Loma Mar
- Butano Park
- Middleton Tract
- Portola Heights
- Dearborn Park
- Redwood Terrace
- Alpine Creek Tract / Alpine Road corridor
- La Honda / Redwood Properties
- Cloverdale / Root Down Farm / Fifth Crow Farm
- San Gregorio / Blue House Farm
- Pie Ranch

Other – Non-environmental

- Girls and Boy Scout Camps
- YMCA
- San Mateo County Honor Farm (Camp Pomponio)
- Juvenile Correctional Facilities (Camp Glenwood)
- Pescadero Elementary School
- Pescadero Middle / High School
- Businesses / Rural Industries ○ Langley Hill Quarry ○ Jikoji Zen Meditation Center Environmental
- Protection of open spaces and parkland (all agencies)
- Watershed Protection
- Managed timberland
- Wildlife

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person has submitted a project proposal for this planning area:

- South Skyline Fire Safe Council
- San Mateo RCD
- Steve Nichols
- Liz Chapman

pp

San Mateo County



pp

San Mateo County



pp

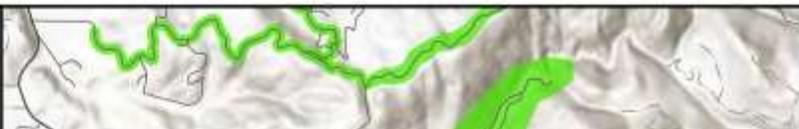


San Mateo County



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San Mateo County



San Mateo County CWPP

San Mateo South Fire Threat Class 2022



San Mateo South
CWPP Planning Area



Adjacent Planning Areas



Highways

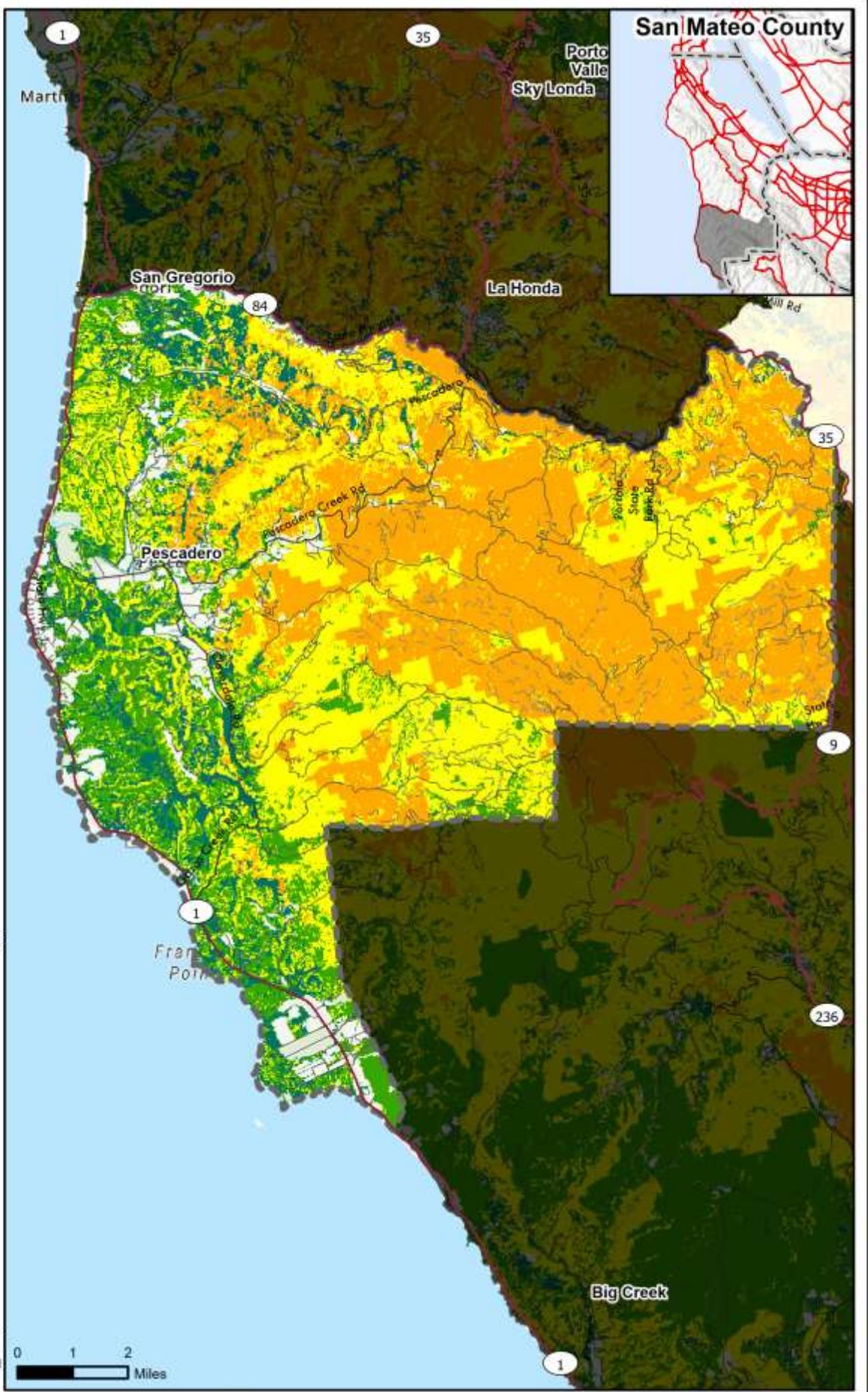


Roads

Fire Threat Class:

- Low
 - Moderate
 - High
 - Very High
 - Extreme
- cities_czu

Fire Threat is the combination of the expected fire probability / frequency (risk) with potential fire behavior (hazard) creating 5 threat classes. Fire threat provides a measure of the relative likelihood of a damaging or difficult to control wildfire occurring



Santa Cruz North – Interior

The Santa Cruz North – Interior planning area includes the area commonly referred to as the San Lorenzo Valley. The greatest amount of development occurs in the communities of Boulder Creek, Ben Lomond, and Felton. There is also considerable residential WUI in the communities of Zayante and Lompico. Indian Trails, Las Cumbres, Deer Creek and homes along the Hwy 35 corridor likewise have a large number of homes in the WUI. Major roadways found in the planning areas include Hwy 9, bisecting the planning area, Hwy 236 in the northwest, and Hwy 35, separating the planning area with Santa Clara County.

There were fires in the Newell Creek watershed during the 1950's and 1960's burning more than 1400 acres. In 2008 a 20 acre, difficult to access fire, occurred within Castle Rock State Park. In 2017, the Bear Fire burned over 300 acres between the Deer Creek and Bear Creek drainages, destroying homes and posing a significant threat to the Las Cumbres neighborhood. The 2020 CZU Lightning Complex effected the western border of this planning area, burning 10,228 acres within this area out of the entire 86,509 acres for the whole fire. Homes and critical infrastructure were destroyed by this fire.

Vegetative fuels within this planning area are dominated by coniferous forest. More than 60% of the area is redwood/Douglas fir, about 27% is evergreen hardwood, about 5% is shrub, and less than 2% is herbaceous grasses. Approximately 3% of the land area is considered developed.

Santa Cruz County CWPP

Santa Cruz North Interior
Wildland Urban Interface Area
2010



Santa Cruz
North Interior
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways

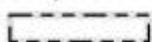
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- Santa Cruz County Fire
- CAL FIRE
- Ben Lomond Fire Protection District
- Boulder Creek Fire Protection District
- Felton Fire Protection District
- Zayante Fire Protection District

The following volunteer companies respond to emergencies within the planning area:

- Santa Cruz County Fire Volunteer Company 29 (South Skyline)
- Las Cumbres Emergency Response Team (LCERT)

Other agencies with large properties within this planning area include:

- California Department of Parks and Recreation
- Santa Cruz County Parks
- Midpeninsula Regional Open Space District
- City of Santa Cruz Water Department
- San Lorenzo Valley Water Department
- Big Basin Water Company
- Las Cumbres Mutual Water Company
- San Jose Water Company

Additional landowners within the planning area include:

- Private residences
- Managed Timberland
- Undeveloped private ownerships
- Agricultural Christmas tree farms
- Sempervirens Fund

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- Indian Trails
- Las Cumbres
- Boulder Creek
- Ben Lomond
- Felton
- Zayante
- Lompico Canyon
- Deer Creek
- Bear Creek Canyon
- Whalebone Gulch
- Harmon Gulch
- Mt Hermon
- Oak Ridge
- Hutchinson Road neighborhood
- ‘Goat Trail’ section of Highway 35
- Green Forest Road neighborhood
- Waterman Gap
- Upper Highway 9

Other – Non-environmental

- Retreat Centers / group recreational facilities
- Schools
- Agricultural / Silvicultural businesses
 - Such as:
 - Christmas Tree Farms
 - Wineries
- Youth Camps
- Historic infrastructure sites
 - Such as:
 - Cal Trans Staging Yard at Saratoga Gap
 - Communications infrastructure
 - Wildfire Alert Cameras
- Fire stations

Environmental

- Protection of open space and parkland (all agencies)
- Watershed Protection
 - Loch Lomond Reservoir
 - City of Santa Cruz Water Supply
 - Big Basin Water Company properties
 - San Lorenzo Valley Water District properties
- Managed timberland
- Wildlife

The following groups within this area have successfully formed a Firewise Community:

- Eagle Tree Lane Community
- Ellen Roads
- Forest Lakes Neighborhood
- Hutchinson Road
- Las Cumbres

- Lost Acre-Valhalla
- Marty Road
- Old Ranch Road
- Riva Ridge HOA
- Sunset Ridge Road
- Upper/Outer Zayante and West Summit
- Alba Road

Project Priority

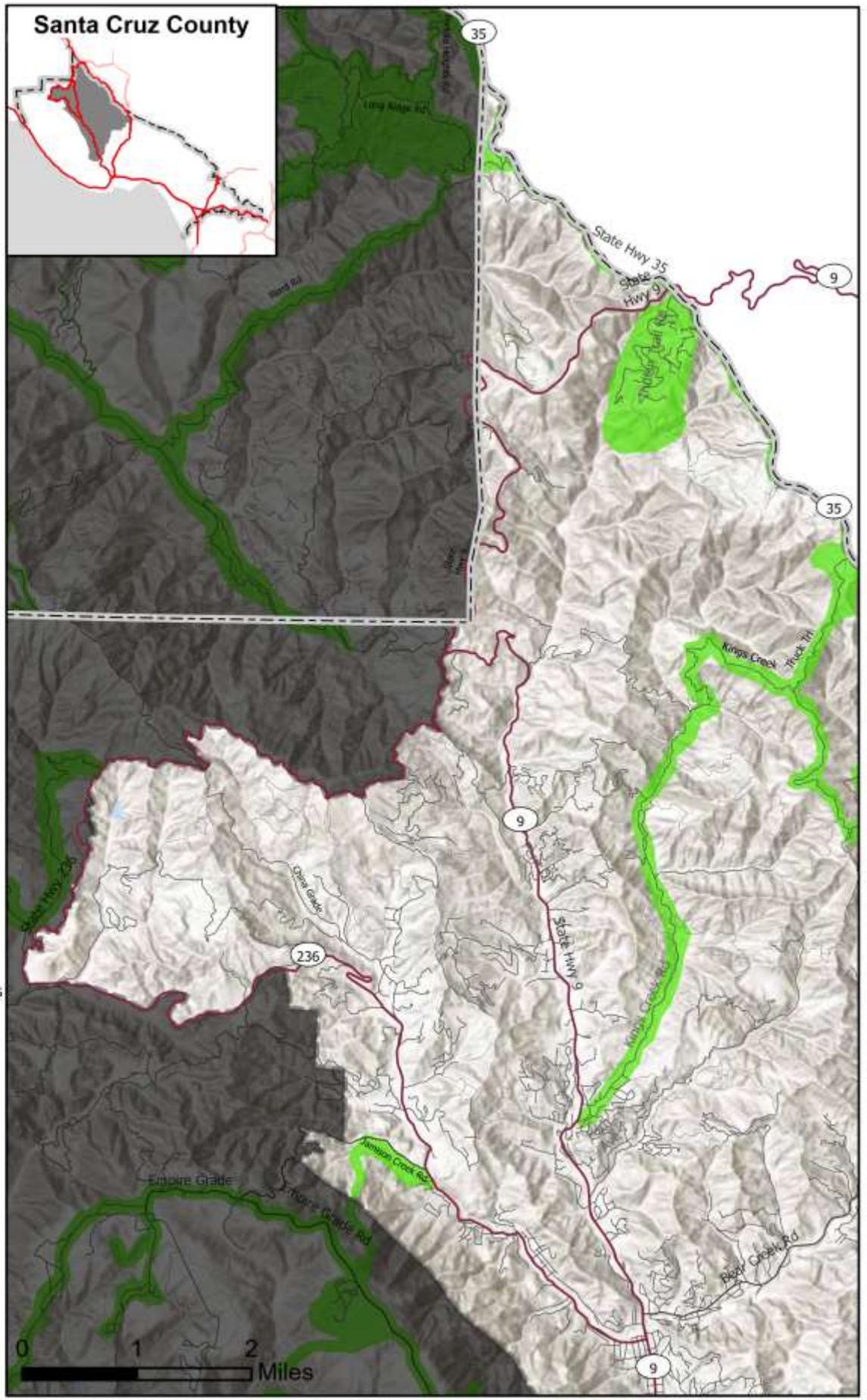
In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person has submitted a project proposal for this planning area:

- Land Trust of Santa Cruz County
- South Skyline Firesafe Council
- Deer Creek Landowner's Inc.
- Las Cumbres Community
- San Lorenzo Valley Water District

Santa Cruz County CWPP

Santa Cruz North Interior
Project Priority Area Map
2010



Santa Cruz North Interior
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways



High Priority Area



Lower Priority



County Boundary



Santa Cruz County CWPP

Santa Cruz North Interior
Project Priority Area Map
2010



Santa Cruz
North Interior
CWPP Planning Area



Adjacent Planning Areas



Roads

Highways



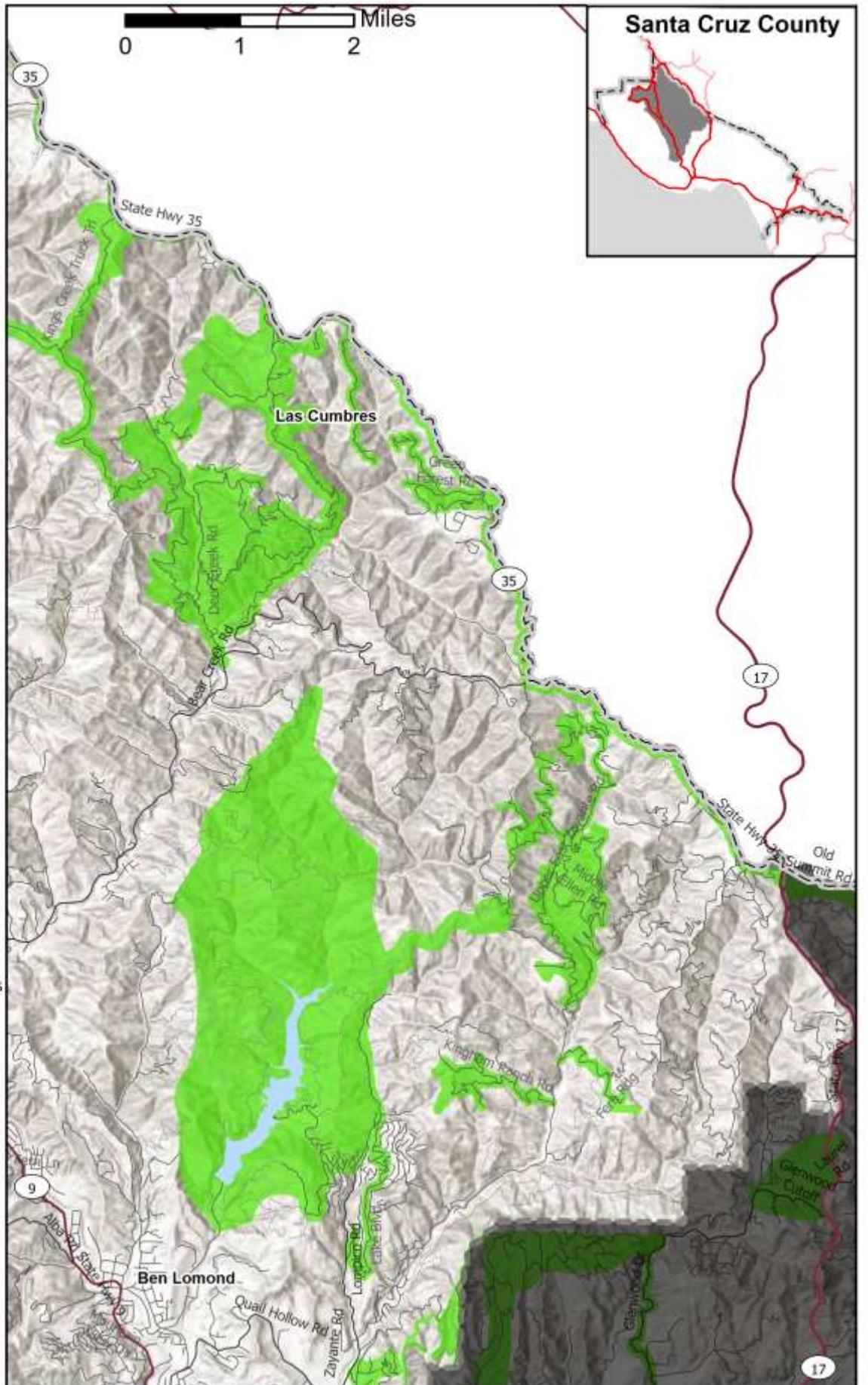
High Priority Area



Lower Priority



County Boundary

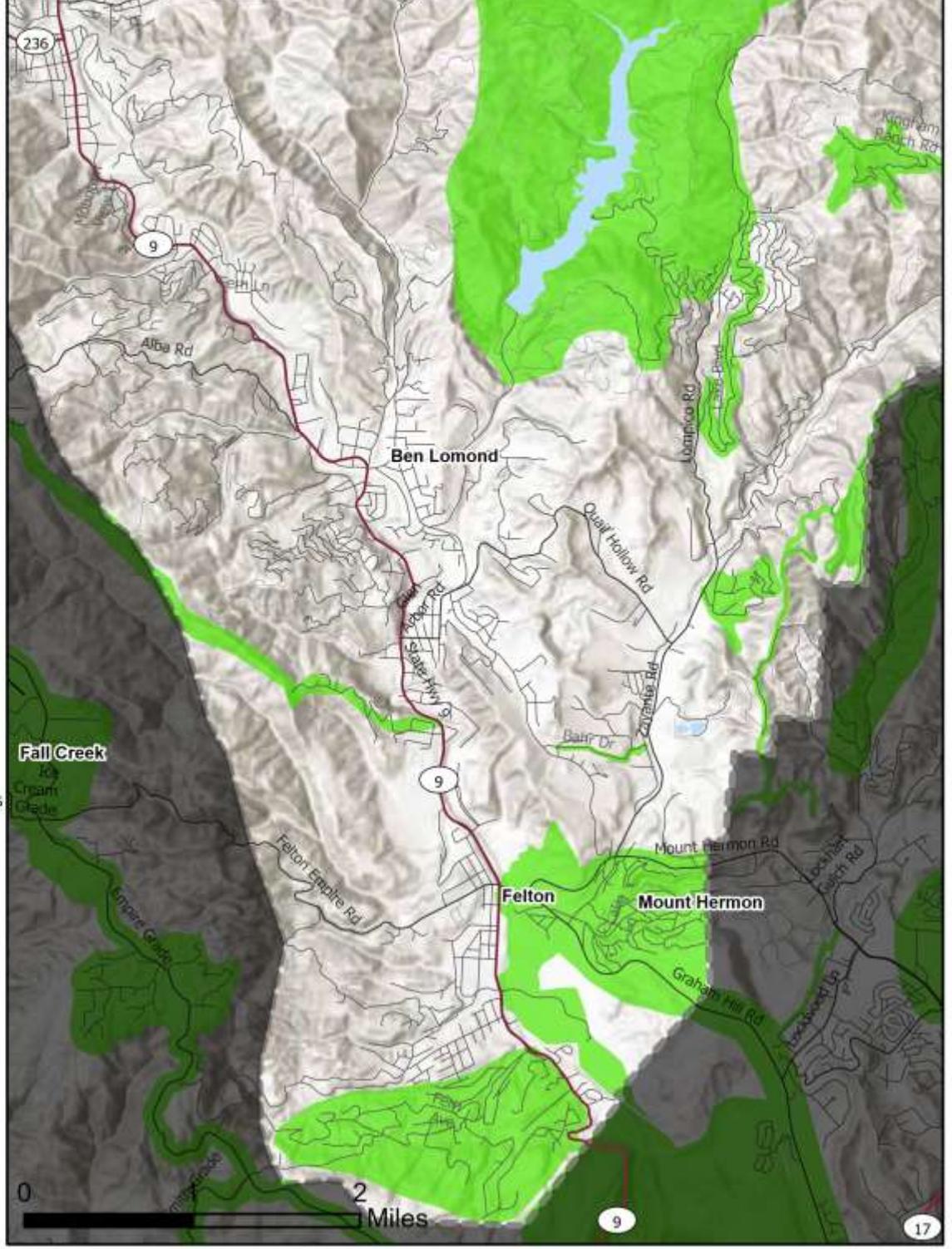


Santa Cruz County CWPP

Santa Cruz North Interior
Project Priority Area Map
2010



- Santa Cruz North Interior CWPP Planning Area
- Adjacent Planning Areas
- Roads
- Highways
- High Priority Area
- Lower Priority
- County Boundary



Santa Cruz County CWPP

Santa Cruz North Interior

Fire Threat Class

2022



Santa Cruz
North Interior
CWPP Planning Area



Adjacent Planning Areas



Highways



Roads

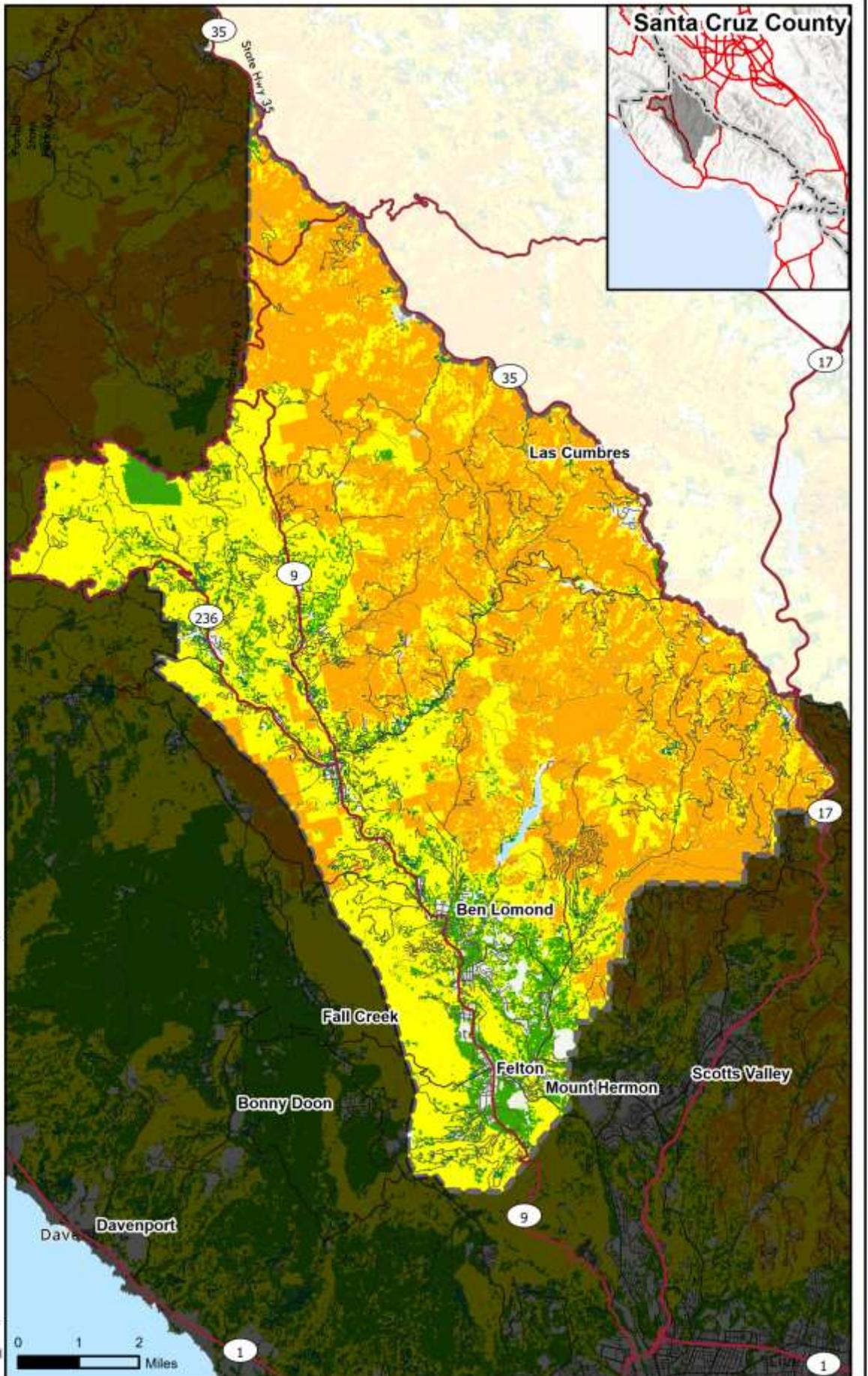
Fire Threat Class:

-  Low
-  Moderate
-  High
-  Very High
-  Extreme

cities_czu

Fire Threat is the combination of the expected fire probability / frequency (risk) with potential fire behavior (hazard) creating 5 threat classes.

Fire threat provides a measure of the relative likelihood of a damaging or difficult to control wildfire occurring



Santa Cruz North - Coastal

Planning Area Description

The Santa Cruz North – Coastal planning area covers the area north from the Santa Cruz City limits to the San Mateo County line. The southeast border of the planning area follows the major ridgeline separating the San Lorenzo Valley from the coast. Although there are no major urban centers in this planning area, there are numerous homes found throughout. The greatest amount of development occurs in the communities of Bonny Doon, Davenport, and Swanton. Major roadways found in the planning areas include Hwy 1 along the coast.

Recent significant fire history in this planning area includes the Martin Fire in 2008 and the Lockheed Fire in 2009. Prior to these fires, the other fires of significance were the Pine Mountain Fire in 1948, the Big Basin Fire in 1980, and the spill over from the 1962 Lincoln Hill Fire that started in the San Mateo South planning area. State Parks have successfully completed prescribed burns in both Big Basin and Wilder Ranch State Parks. In 2020, The CZU Lightning Complex Fires burned 86,509 acres; 53,369 of which were in the Santa Cruz North Coastal planning area. This was the largest, most destructive fire in the county’s history, destroying many homes and much of the water and communication infrastructure that existed in the area.

Vegetative fuels within this planning area are dominated by coniferous forest. More than 51% of the area is redwood/Douglas fir, about 18% is evergreen hardwood, about 4% is pine/cypress forest, about 12% is brush/shrub, and less than 9% is herbaceous grasses. Approximately 1% of the land area is considered developed.

Santa Cruz County CWPP

Santa Cruz North Coastal
Wildland Urban Interface Area
2010



Santa Cruz
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads

Highways



Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- Santa Cruz County Fire
- CAL FIRE
- Santa Cruz City Fire
- Bureau of Land Management

The following volunteer companies respond to emergencies within in the planning area:

- Santa Cruz County Fire Volunteer Company 32 (Bonny Doon)
- Santa Cruz County Fire Volunteer Company 37 (Davenport)

Other agencies with large properties within this planning area include:

- California Department of Parks and Recreation
- Santa Cruz County Parks
- Bureau of Land Management
- California Department of Fish and Wildlife

Additional landowners within the planning area include:

- Private residences
- Managed Timberland
- Industrial Facilities
- Undeveloped private ownerships
- Ranchland
- Agriculture

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- Bonny Doon
- Braemoor

- Pine Ridge
- Ben Lomond Camp
- Davenport
- Swanton
- Last Chance
- Cave Gulch
- Lockheed area

Other – Non-environmental

- Religious / Spiritual ○ Bonny Doon Church ○ Lehi Mormon Camp
- Schools ○ Bonny Doon Elementary School ○ Waldorf School ○ Bosch Baha’i School
- Fire Stations
- Lockheed Martin Missile and Space Company Facilities
- Camps and retreat centers
- Big Creek Mill
- Historic infrastructure sites

Environmental

- Protection of open space and parkland (all agencies) ○ State Parks ○ Bonny Doon Ecological Preserve
 - Cotoni / Coast Dairies National Monument ○ San Vicente Redwoods
- Watershed Protection ○ City of Santa Cruz Water Supply ○ Davenport Water Supply ○ Big Basin Water Supply ○ San Lorenzo Valley Water Supply
- Managed timberland

- Farmland/Agriculture ○ Granite Creek ○ Molino Creek Farm ○ Crest Christmas Tree Farm ○ Bonny Doon Farm ○ Shumei Farm
- Wildlife ○ Big Creek Fish Hatchery

The following groups within this area have successfully formed a Firewise Community:

- Bonnymede Plus
- Bonny Wood Community
- Pineridge Plus
- Bird Streets and Beyond
- Westdale
- Alba Rd

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person has submitted a project proposal for this planning area:

- Bonny Doon Fire Safe Council
- Big Creek Lumber Company
- Bonny Doon Community
- BLM
- San Lorenzo Valley Water District

Santa Cruz County CWPP

Santa Cruz North Coastal Project Priority Area Map 2010



Santa Cruz
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways



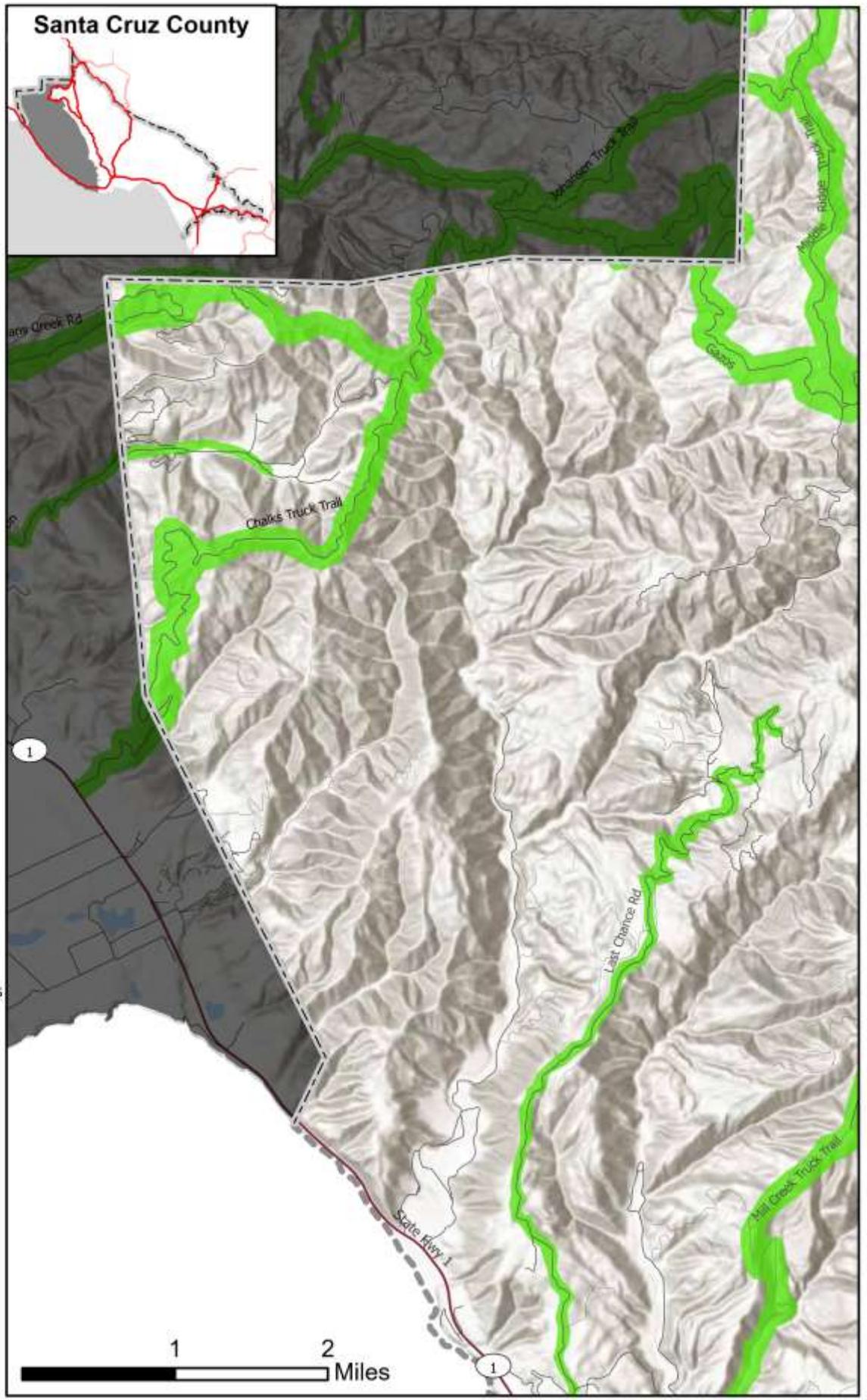
High Priority Area



Lower Priority



County Boundary



Santa Cruz County CWPP

Santa Cruz North Coastal
Project Priority Area Map
2010



Santa Cruz
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads

Highways

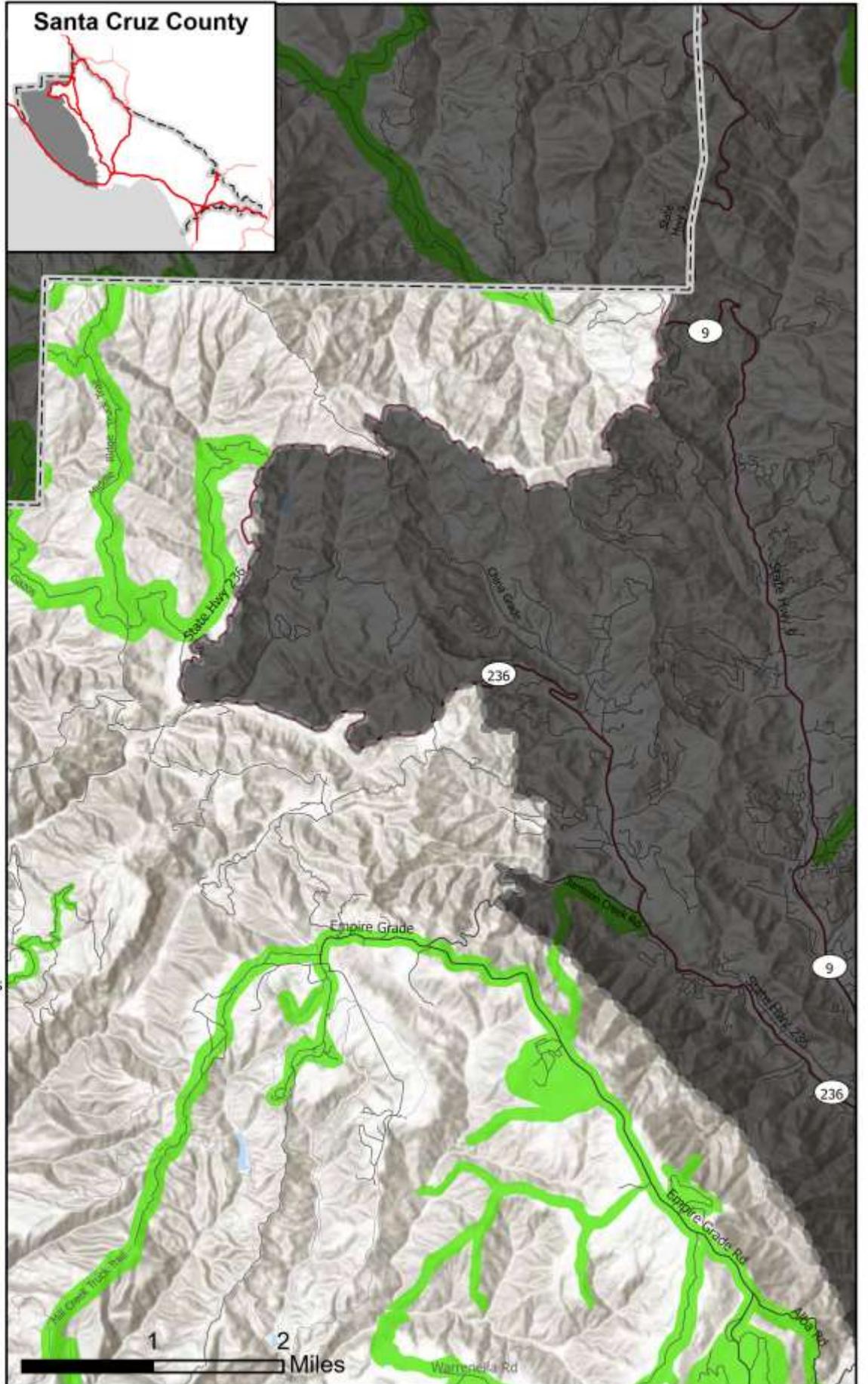
High Priority Area



Lower Priority



County Boundary

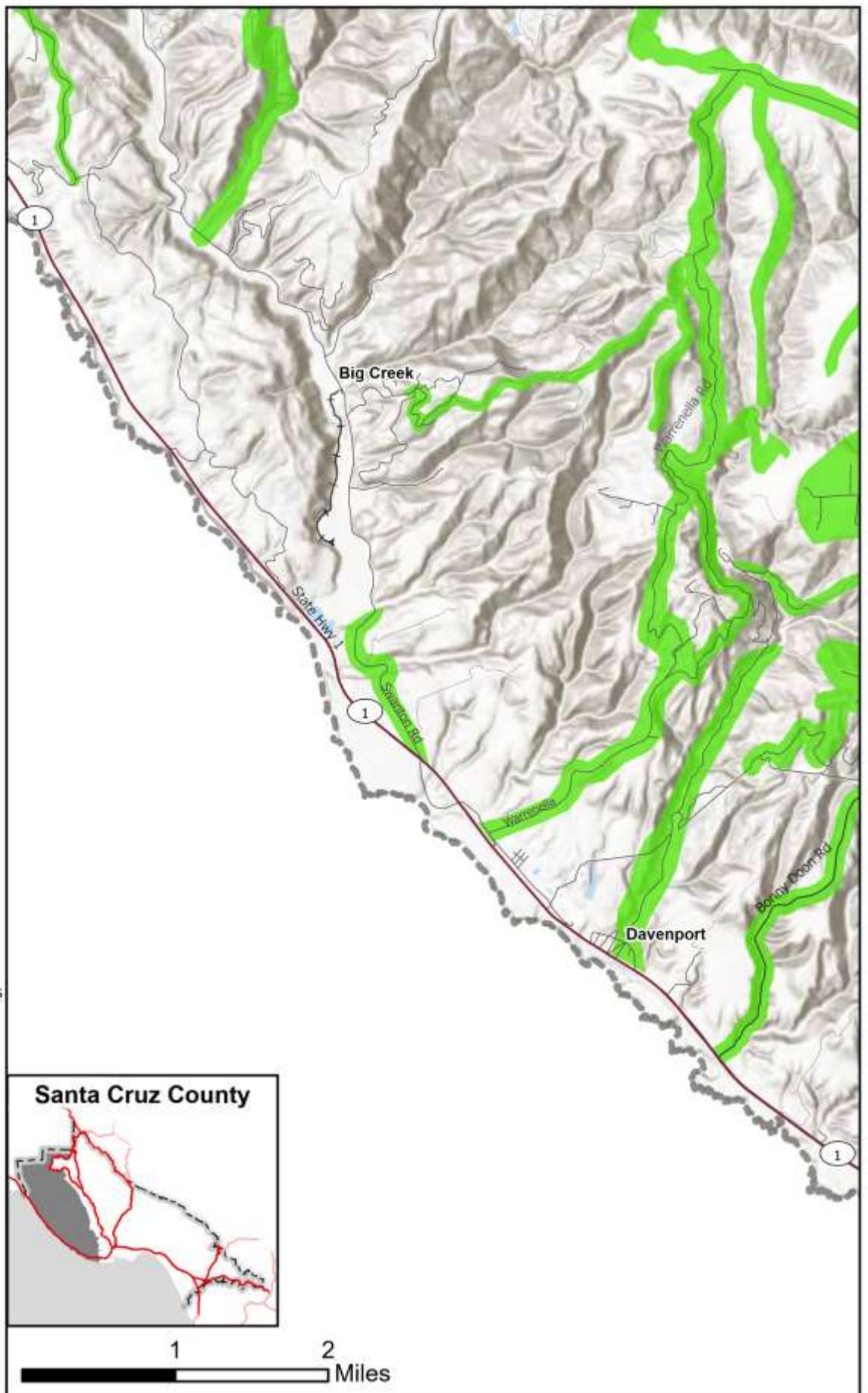


Santa Cruz County CWPP

Santa Cruz North Coastal Project Priority Area Map 2010



- Santa Cruz North Coastal CWPP Planning Area
- Adjacent Planning Areas
- Roads
- Highways
- High Priority Area
- Lower Priority
- County Boundary



Santa Cruz County CWPP

Santa Cruz North Coastal
Project Priority Area Map
2010



Santa Cruz
North Coastal
CWPP Planning Area

Adjacent Planning Areas



Roads

Highways



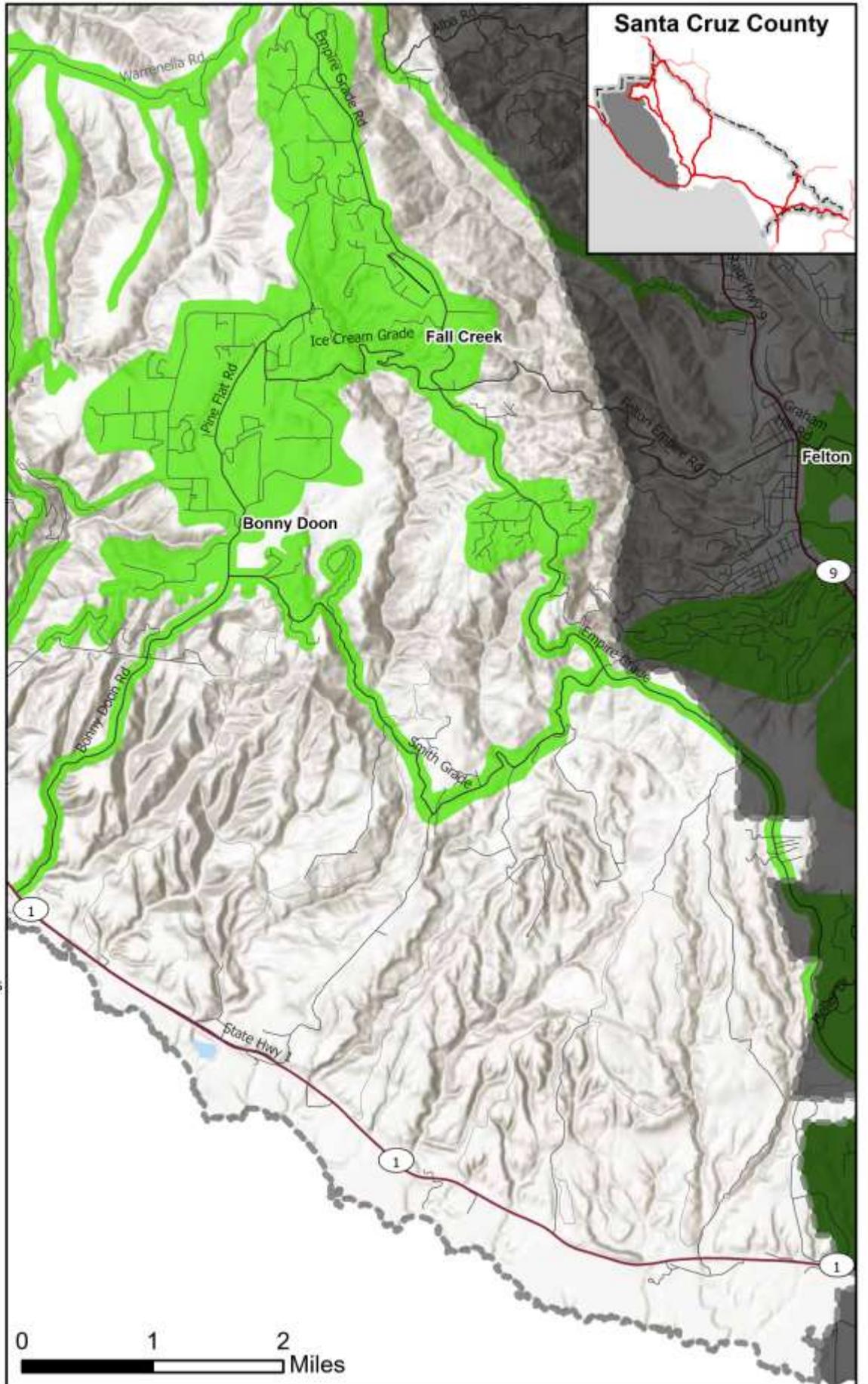
High Priority Area



Lower Priority



County Boundary



Santa Cruz County



Santa Cruz County CWPP

Santa Cruz North Coastal

Fire Threat Class

2022



Santa Cruz
North Coastal
CWPP Planning Area



Adjacent Planning Areas



Highways

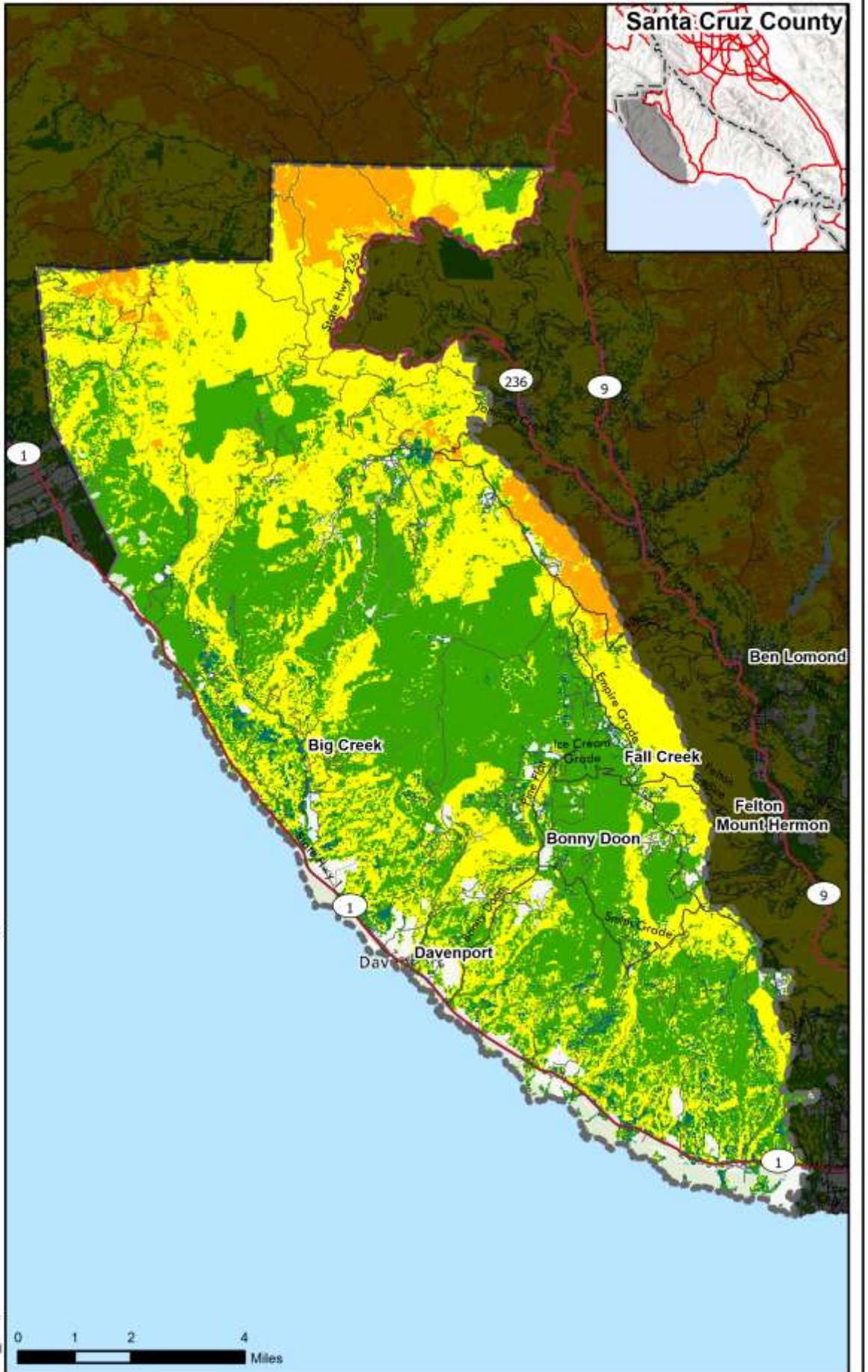


Roads

Fire Threat Class:

-  Low
-  Moderate
-  High
-  Very High
-  Extreme

Fire Threat is the combination of the expected fire probability / frequency (risk) with potential fire behavior (hazard) creating 5 threat classes. Fire threat provides a measure of the relative likelihood of a damaging or difficult to control wildfire occurring.



Santa Cruz South - Interior

The Santa Cruz South – Interior planning area covers the southern interior section of Santa Cruz County, from the Santa Clara County line at Hwy 17 southeast to its boundary with San Benito & Monterey Counties. This planning area borders Santa Clara County to the north. Although most of the planning area has seen residential development, higher population densities are found in communities such as Corralitos, Pajaro Valley, and Redwood Lodge/Summit Road. However, there are also many people residing in homes located along major intersecting roadways such as Soquel-San Jose Road, Freedom Boulevard, and Eureka Canyon Road.

Recent significant fire history in this planning area includes the Roacha VMP Escape in 1984, the Summit Fire in 2008 and the Loma Fire in 2009. Additionally, the Summit Road corridor, running between Santa Cruz and Santa Clara Counties was impacted by the Austrian Gulch Fire in 1961, the Lexington Fire in 1985, the Croy Fire in 2002, and the Loma Fire in 2016. Because of this, the Summit Road corridor is, and continues to be a high priority area for fuel reduction projects.

Fuels within the planning area differ throughout the landscape. In the northern portion of the planning area, fuels are composed primarily of mixed conifer, with a brush component near the ridges. In the southern portion of the planning area, the dominant fuels are hardwoods and grasses, with a smaller mixed conifer component. Overall, about 39% of the planning area is redwood/Douglas fir, about 18% is evergreen hardwood, about 12% is herbaceous grasses, and about 10% is shrub/brush mixture. Slightly less than 4% of this area is considered developed, while slightly more than 13% of the area is agricultural.

Santa Cruz County CWPP

Santa Cruz South Interior
Wildland Urban Interface Area
2010



Santa Cruz South Interior
CWPP Planning Area



Adjacent Planning Areas



Roads

Highways



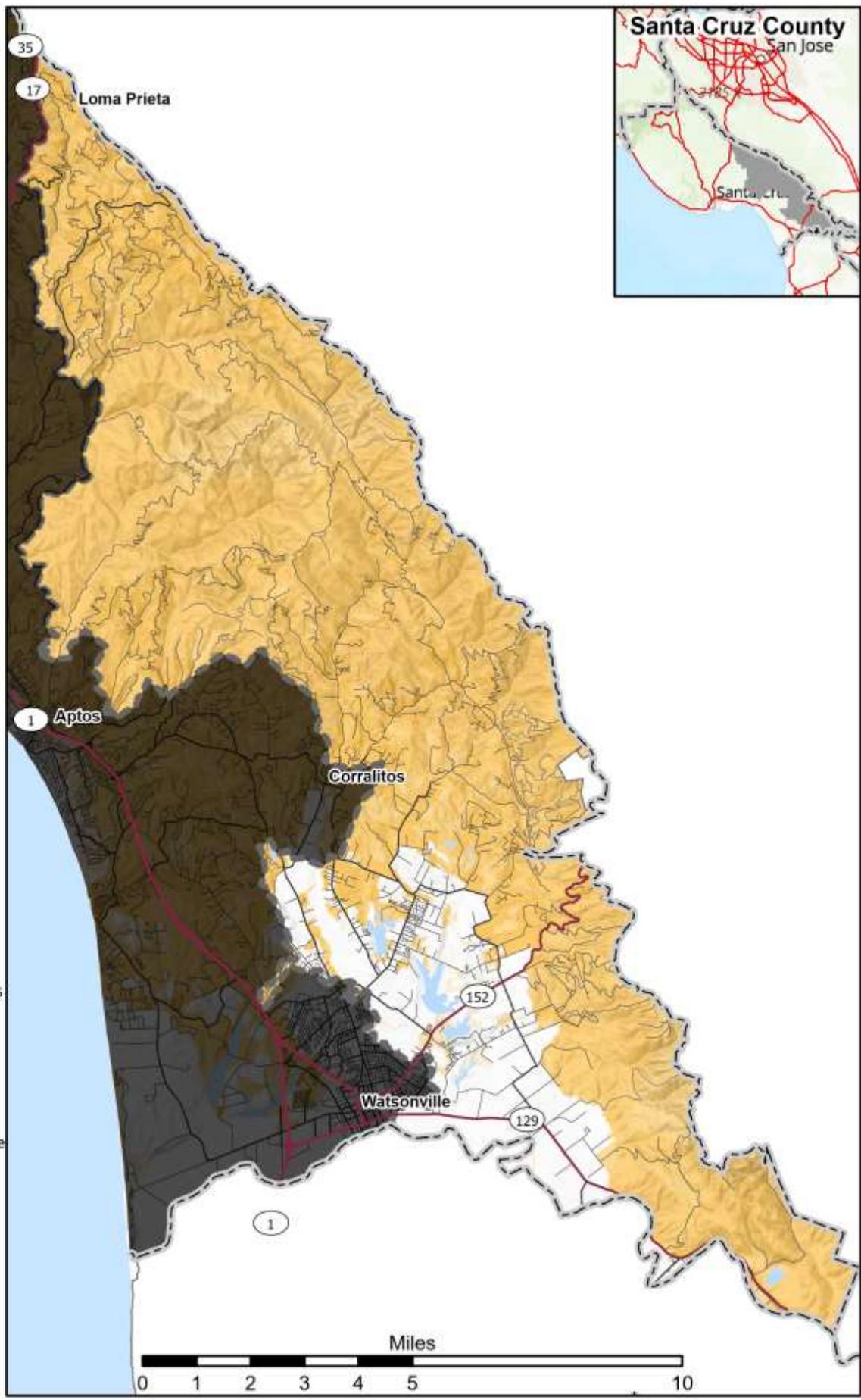
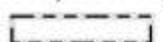
Wildland Urban Interface



Non-WUI



County Boundary



The following fire protection agencies have jurisdiction within the planning area:

- Santa Cruz County Fire
- CAL FIRE
- Pajaro Valley Fire Protection District
- Aromas Fire Protection District

The following volunteer companies respond to emergencies within the planning area:

- Santa Cruz County Fire Volunteer Company 41 (Corralitos)
- Santa Cruz County Fire Volunteer Company 36 (Loma Prieta)
- Ormsby Fire Brigade

Other agencies with large properties within this planning area include:

- California Department of Parks and Recreation
- CAL FIRE – Demonstration State Forest
- Santa Cruz County Parks

Additional landowners within the planning area include:

- Private residences
- Managed timberland
- Undeveloped private ownerships
- Ranchland
- Agriculture

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- Corralitos
- Loma Prieta

- Mount Madonna
- Trout Gulch
- Fern Flat
- Summit Road corridor, from Mount Madonna to Highway 17
- Smith Road corridor
- Redwood Drive
- Olive Springs
- Highway 129 corridor

Other – Non-environmental

- Retreat Centers
- Schools

Environmental

- Protection of open space and parkland (all agencies)
- Watershed Protection
- Managed timberland
- Wildlife

The following groups within this area have successfully formed a Firewise Community:

- Larsen Road Association
- Redwood Drive
- Spanish Ranch Road
- Terrace Grove Road
- Summit Woods Firesafe Community

Project Priority

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Santa Cruz County CWPP

Santa Cruz South Interior
Project Priority Area Map
2010



Santa Cruz
South Interior
CWPP Planning Area



Adjacent Planning Areas



Roads

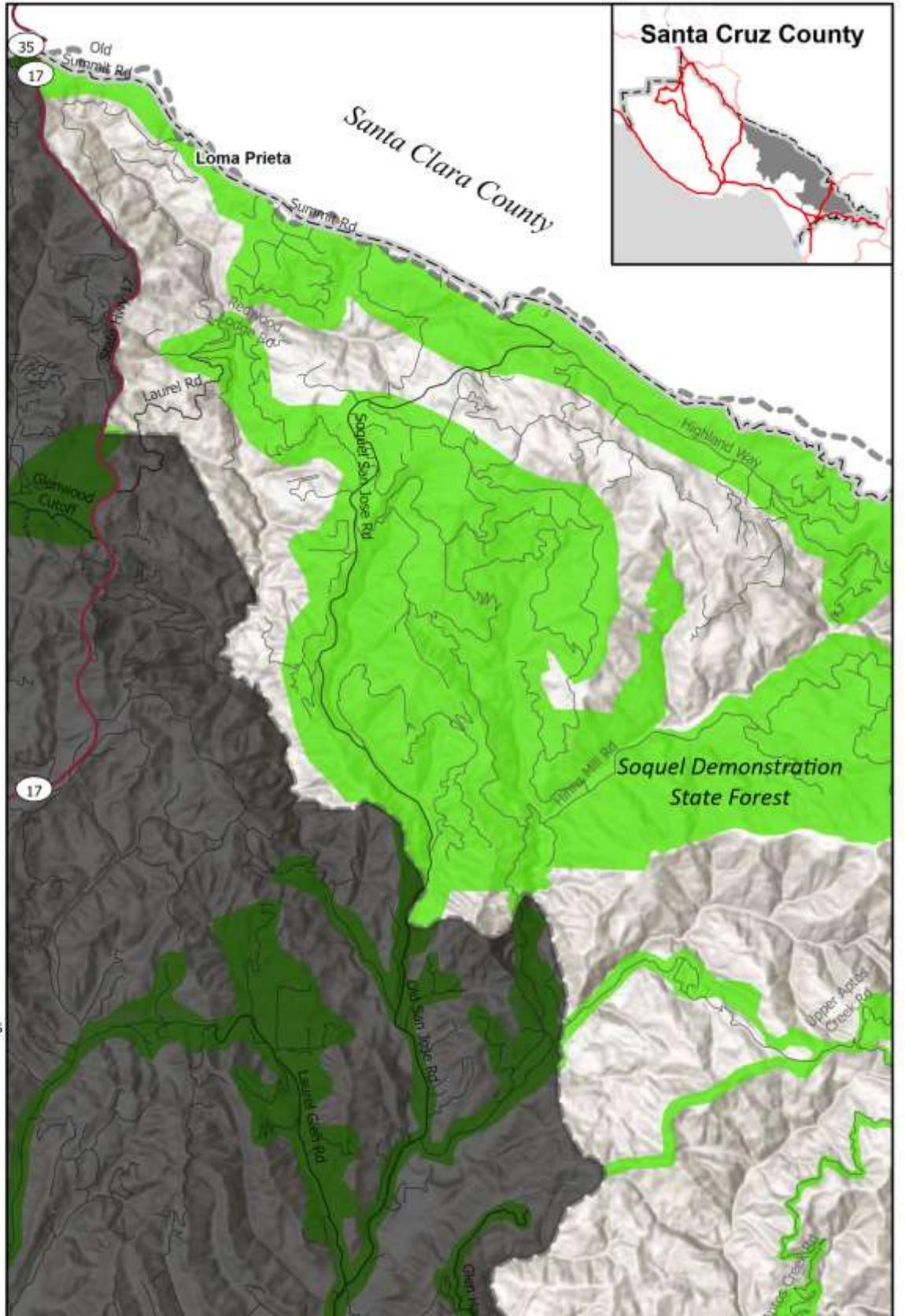
Highways



High Priority Area



Lower Priority



Santa Cruz County

Santa Cruz County CWPP

Santa Cruz South Interior
Project Priority Area Map
2010



Santa Cruz
South Interior
CWPP Planning Area



Adjacent Planning Areas



Roads

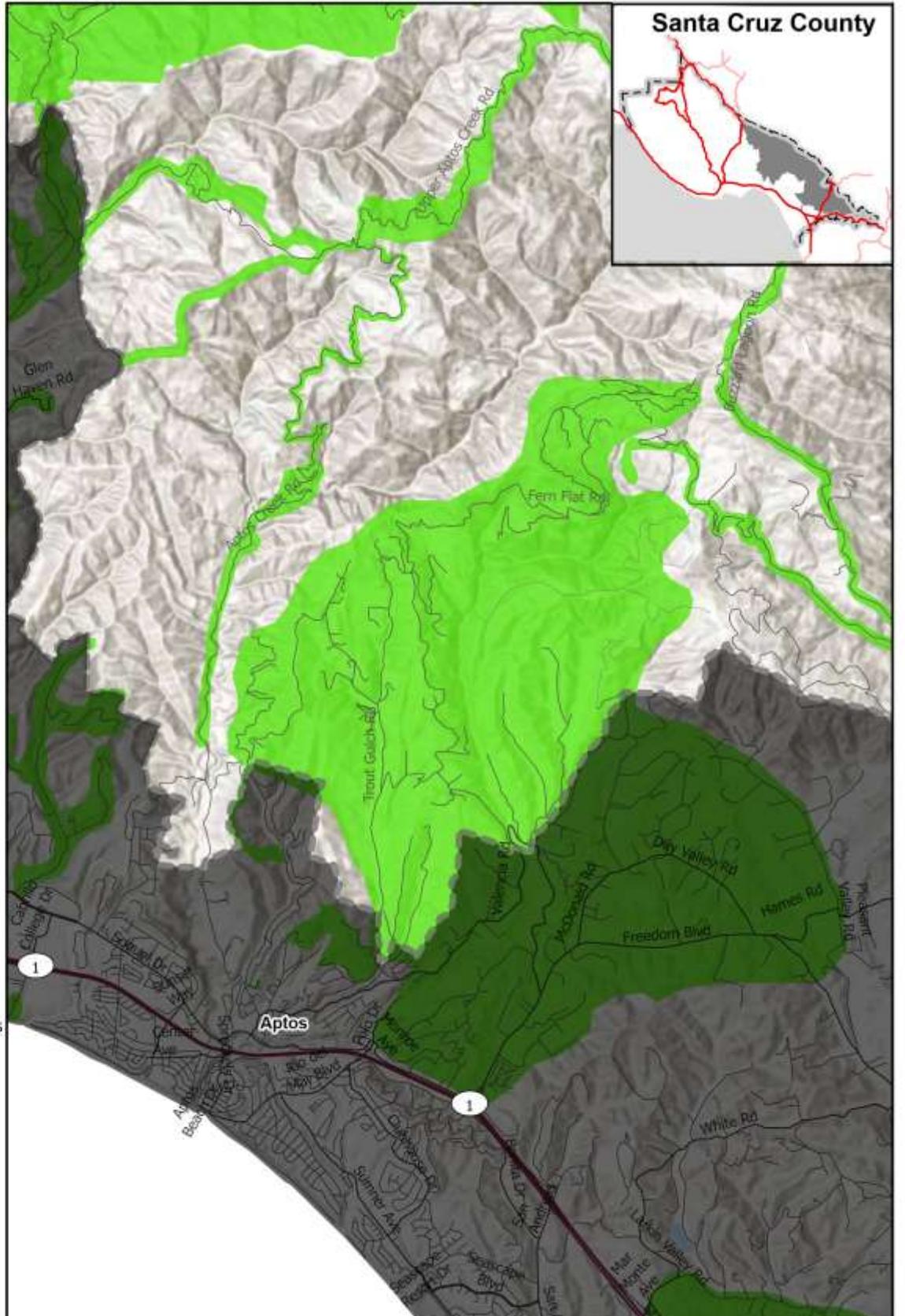
Highways



High Priority Area



Lower Priority



Santa Cruz County CWPP

Santa Cruz South Interior Project Priority Area Map 2010



Santa Cruz
South Interior
CWPP Planning Area



Adjacent Planning Areas



Roads

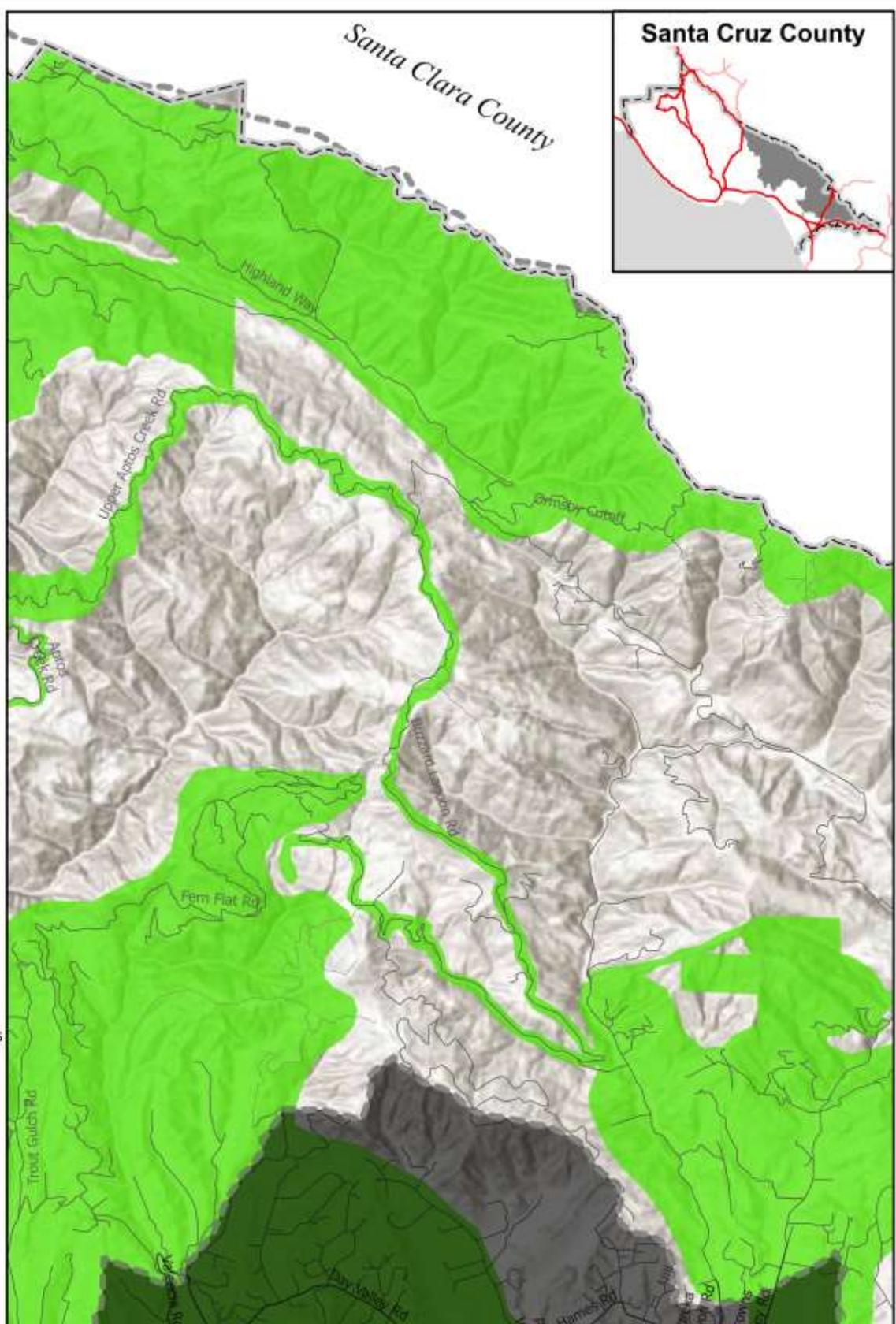


Highways

High Priority Area



Lower Priority



Santa Cruz County CWPP

Santa Cruz South Interior
Project Priority Area Map
2010



Santa Cruz
South Interior
CWPP Planning Area



Adjacent Planning Areas



Roads

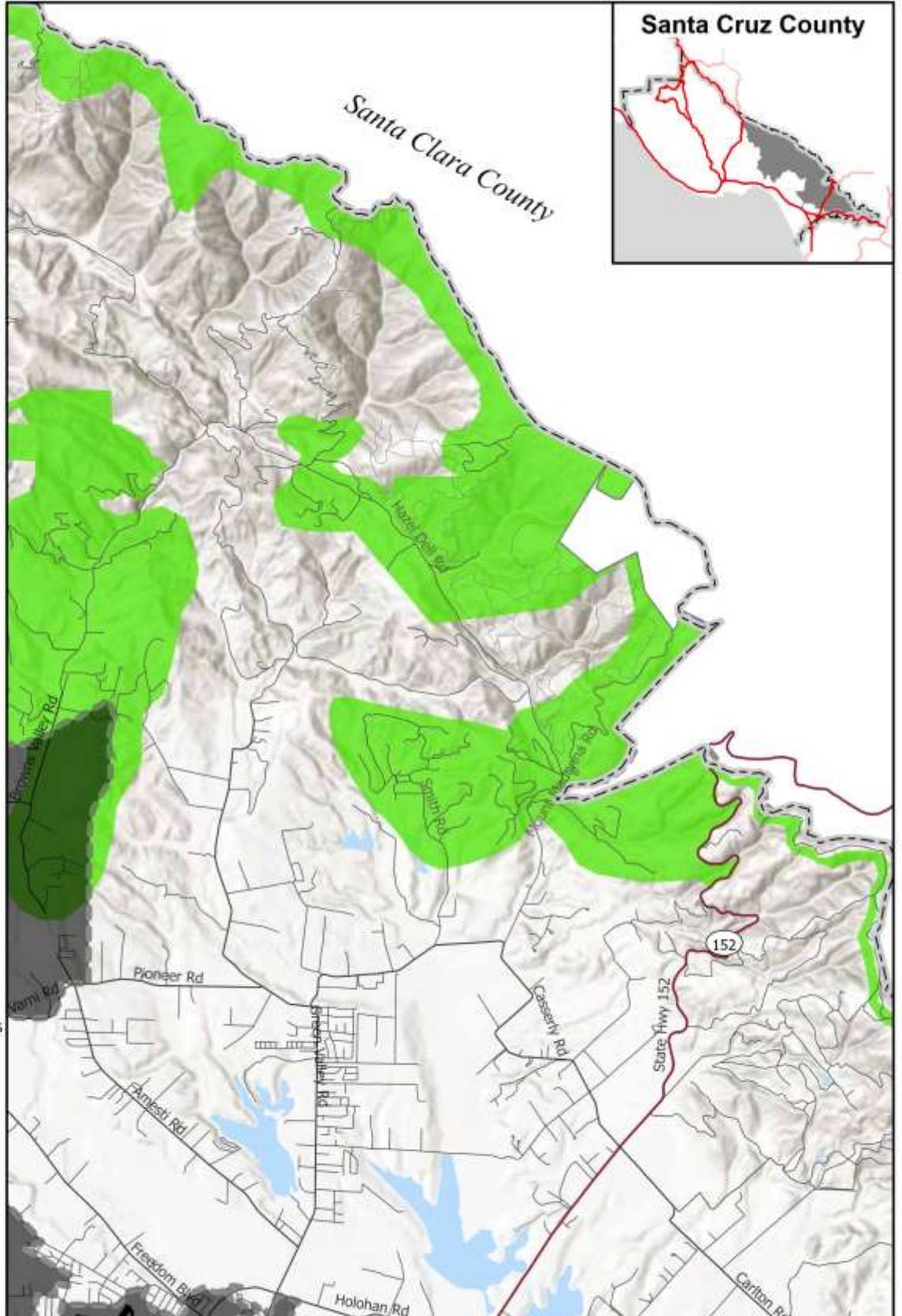
Highways



High Priority Area



Lower Priority



Santa Clara County

Santa Cruz County

Pioneer Valley Rd

Hazel Dell Rd

Smith Rd

Winters Rd

Nami Rd

Pioneer Rd

Cassery Rd

State Hwy 152

152

Arnesti Rd

Holohan Rd

Freedom Blvd

Carlton Rd

Santa Cruz County CWPP

Santa Cruz South Interior
Project Priority Area Map
2010



Santa Cruz
South Interior
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways



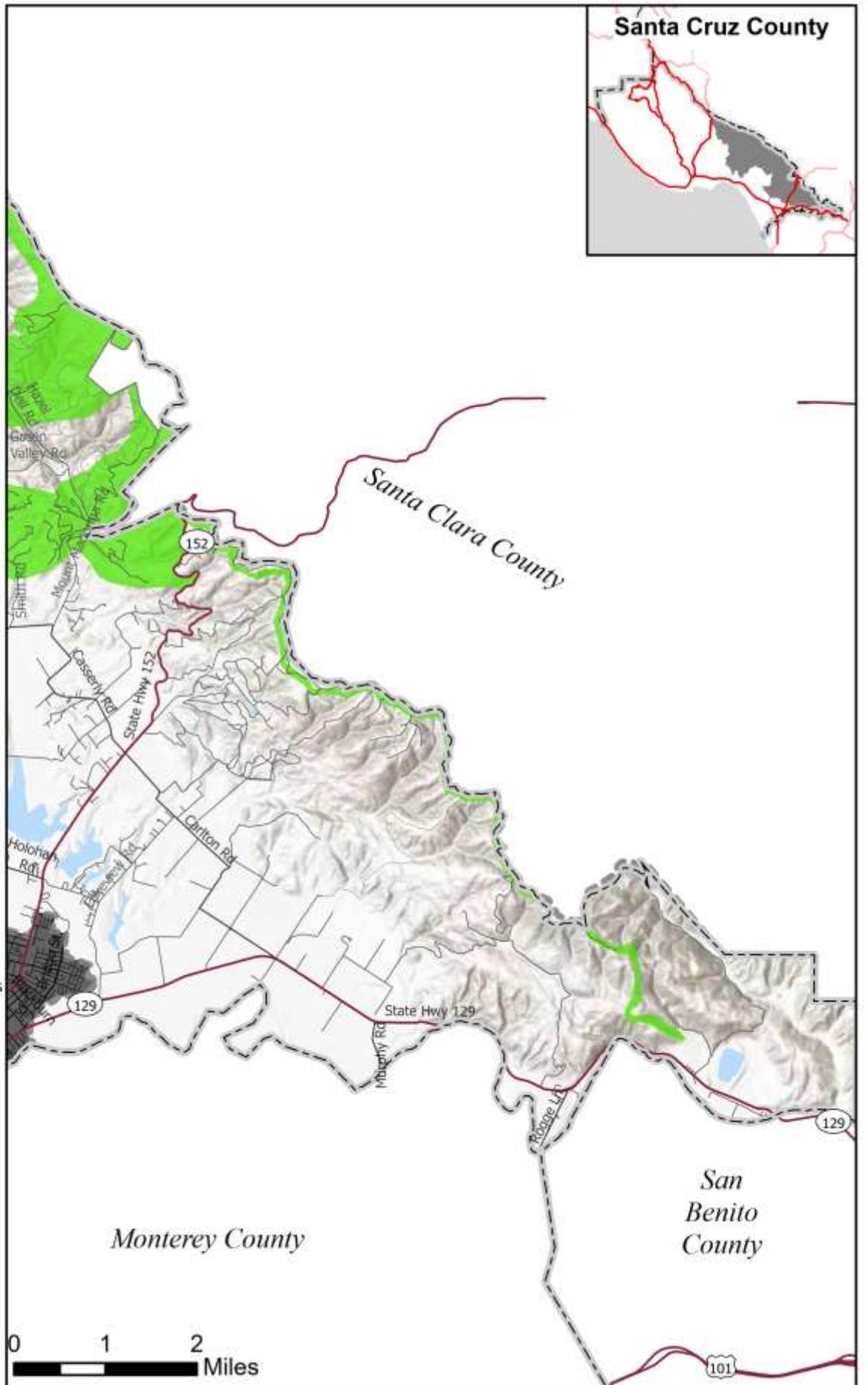
High Priority Area



Lower Priority



County Boundary



Santa Cruz County CWPP

Santa Cruz South Interior

Fire Threat Class

2022



Santa Cruz
South Interior
CWPP Planning Area



Adjacent Planning Areas



Highways

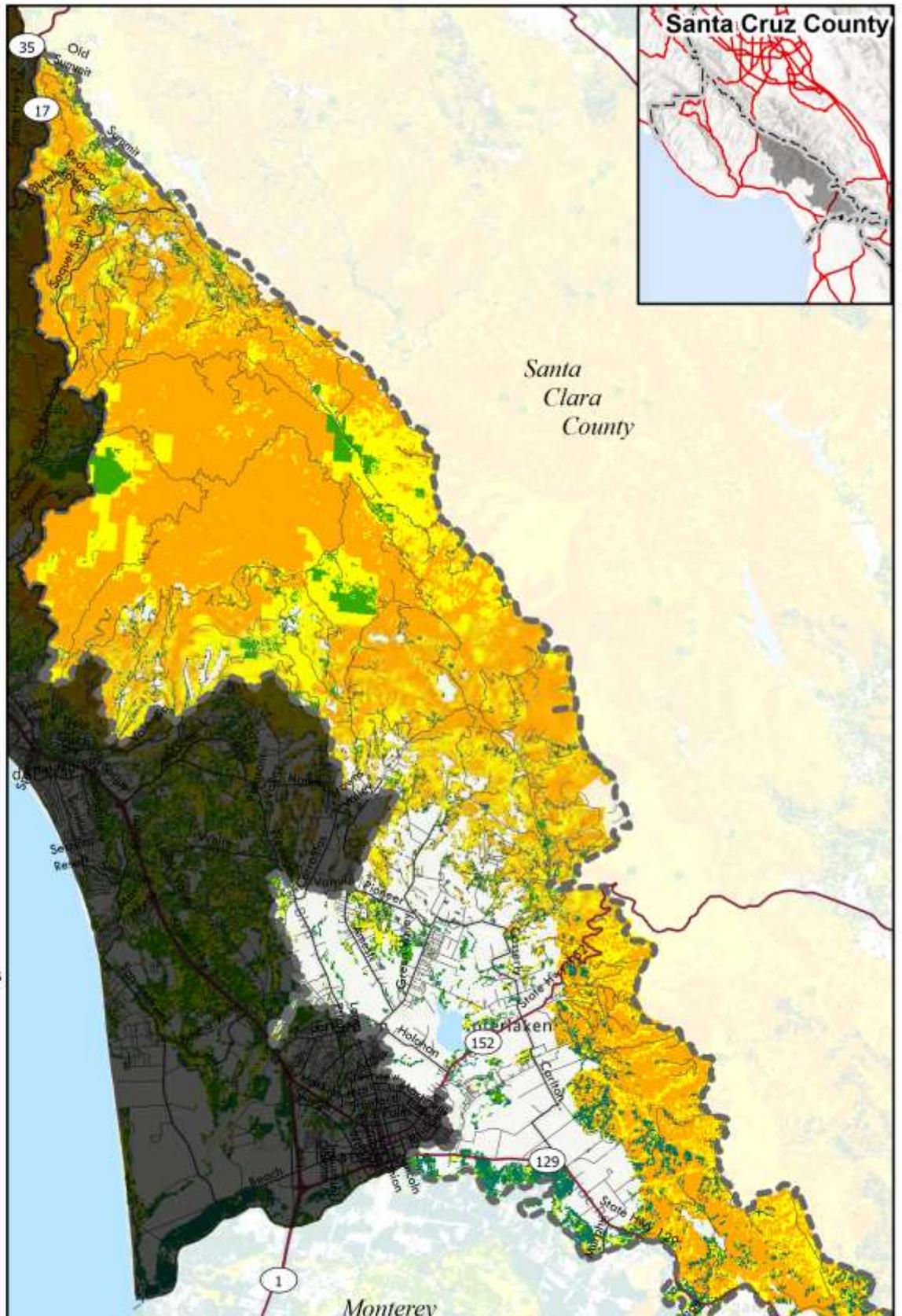


Roads

Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

Fire Threat is the combination of the expected fire probability / frequency



Santa Cruz Central

The Santa Cruz Central planning area covers the central interior section of Santa Cruz County. It encompasses both incorporated and unincorporated areas of Santa Cruz, Scotts Valley, Branciforte, and Soquel. The planning area extends from the coast to Glenwood and from UCSC to the border of Nisene Marks State Park.

Within this planning area, the more developed areas of Santa Cruz and Capitola Cities are not considered WUI, however, outside of the most developed areas, the remainder of the planning area is WUI zone. The three major highways that interconnect across the area include Hwy 1, Hwy 17, and Hwy 9.

Although there has been an absence of large fires in recent history in this planning area, there are numerous roadside and debris fires suppressed each year, including the 15-acre Rincon fire in 2018 located near Paradise Park.

Fuels within the planning area differ throughout the landscape. In the northern portion of the planning area, fuels are composed primarily of mixed conifer, evergreen hardwood, and with a brush component near the ridges. The southern portion of the planning area is highly developed, with a mixture of hardwoods, grasses, and a significant amount of Eucalyptus. Overall, about 30% of this planning area is redwood/Douglas fir, about 23% is hardwood evergreen, about 7% is herbaceous grasses, about 3% is shrub, and about 3% is agriculture. Nearly 25% of the entire area is considered developed.

Santa Cruz County CWPP

Santa Cruz Central
Wildland Urban Interface Area
2010



Santa Cruz
Central

CWPP Planning Area



Adjacent Planning Areas



Roads



Highways

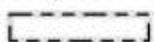
Wildland Urban Interface



Non-WUI



County Boundary



The planning area is home to various fire jurisdictions including:

- Santa Cruz County Fire
- CAL FIRE
- Scotts Valley Fire Protection District
- Branciforte Fire Protection District
- Santa Cruz City Fire Department
- Central Fire District of Santa Cruz County

The following volunteer companies respond to emergencies within the planning area:

- Santa Cruz County Fire Volunteer Company 36 (Loma Prieta)
- Santa Cruz County Fire Volunteer Company 32 (Bonny Doon)

Other agencies with large properties within this planning area include:

- California Department of Parks and Recreation
- City/County Parks
- Land Trust of Santa Cruz County
- University of California Santa Cruz

Additional landowners within the planning area include:

- Private residences
- Managed timberland
- Undeveloped private ownerships

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- City of Scotts Valley
- Paradise Park

- Soquel San Jose corridor
- Glen Canyon Road corridor
- Glenwood Acres
- Lockhart Gulch corridor
- Weston Road corridor
- Graham Hill Road corridor
- Pilkington Road corridor
- Laurel Glen
- Big Redwood Park
- Bean Creek corridor
- Olive Springs Community
- Mountain View Community
- Fairway Drive Community
- Branciforte Drive corridor
- Glen Haven corridor
- Highway 17 corridor
- Porter Gulch Community
- UC Santa Cruz
- Carbonera Community
- Santa Cruz City neighborhoods: ○ DeLaveaga ○ Pogonip / Upper Westside ○ Arroyo Seco ○ Moor Creek Preserve

Other – Non-environmental

- Santa Cruz County Regional 9-1-1 Center
- Santa Cruz County Juvenile Hall
- Campgrounds and retreat centers including:
 - Enchanted Valley Camp ○ Kennolyn Camp

- Seventh Day Adventist
Campground ○ Land of Medicine
Buddha • Wineries / Vineyards
- Schools including:
 - Main Street Elementary ○
Mountain Elementary ○ Soquel
High ○ Harbor High ○ DeLaveaga
Elementary
- Equestrian Facilities
- Assisted living facilities
- Historic infrastructure including:
 - Dominican Hospital ○
DeLaveaga Park infrastructure ○
Santa Cruz Shakespeare Outdoor
Theater ○ Recreational facilities
- Religious centers within or adjacent to the WUI

Environmental

- Protection of open space and parkland (all agencies)
- Watershed protection
- Managed timberland
- Wildlife

The following groups within this area have successfully formed a Firewise Community:

- B40 Firewise Charlie
- Happy Valley
- Highland / Hillcrest Terrace
- Hoover / Brooks Road

- Lions Field Drive
- North Rodeo Gulch
- Paradise Park
- Porter Gulch
- Prospect Heights
- Quail Ridge Road
- Olson Road
- Santa Cruz Gardens
- Tanglewood
- Twin Lanes
- Upper Fairway
- Western Drive

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person has submitted a project proposal for this planning area:

- Arana Gulch Watershed Alliance and the RCD
- UCSC Natural Reserve
- Soquel Fire Safe Council
- Prospect Heights Fire Wise

Santa Cruz County CWPP

Santa Cruz Central
Project Priority Area Map
2010



Santa Cruz
Central
CWPP Planning Area



Adjacent Planning Areas



Roads

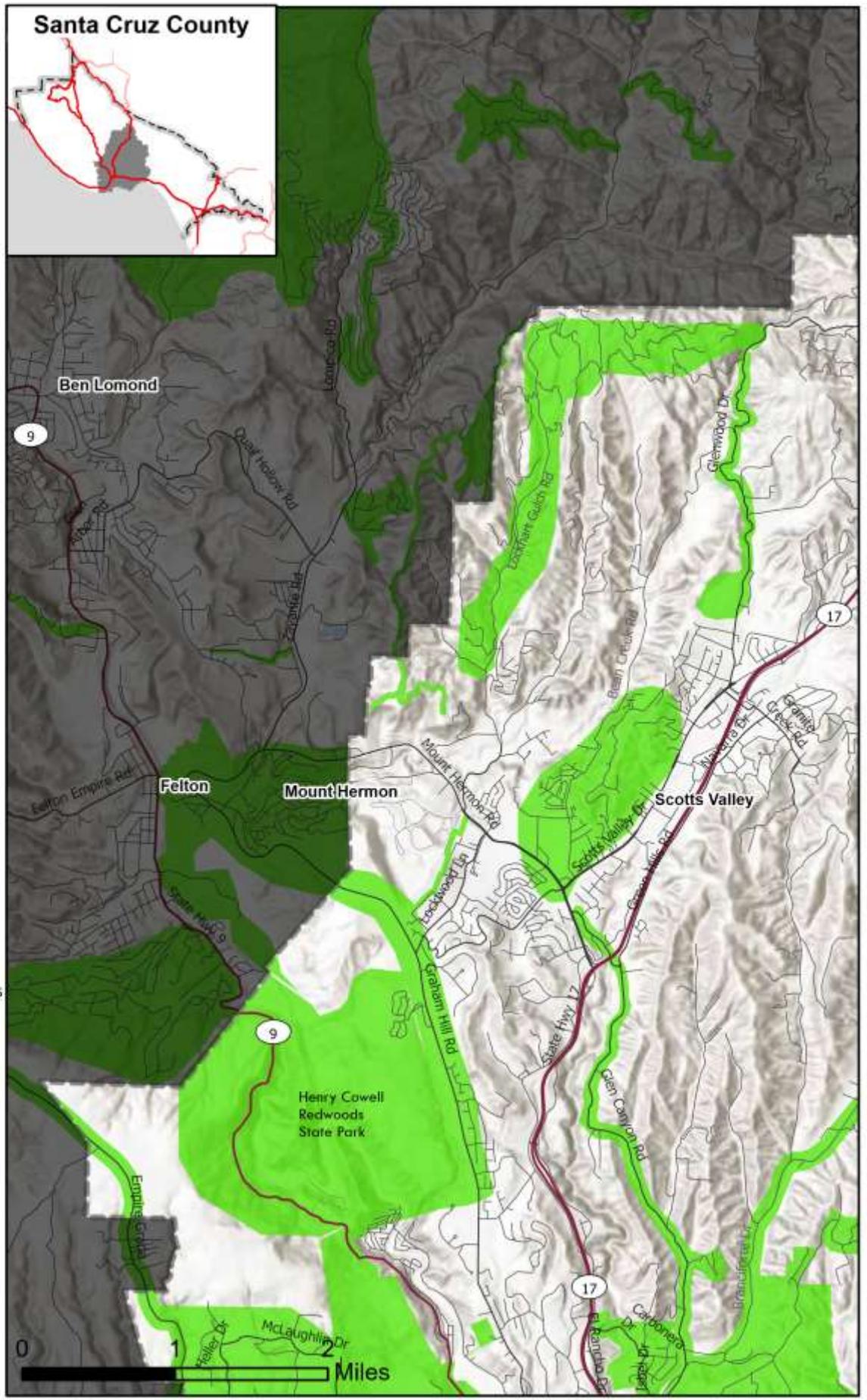


Highways

High Priority Area



Lower Priority



Santa Cruz County CWPP

Santa Cruz Central Project Priority Area Map 2010



Santa Cruz
Central
CWPP Planning Area

Adjacent Planning Areas



Roads

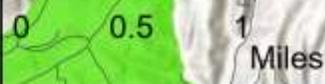
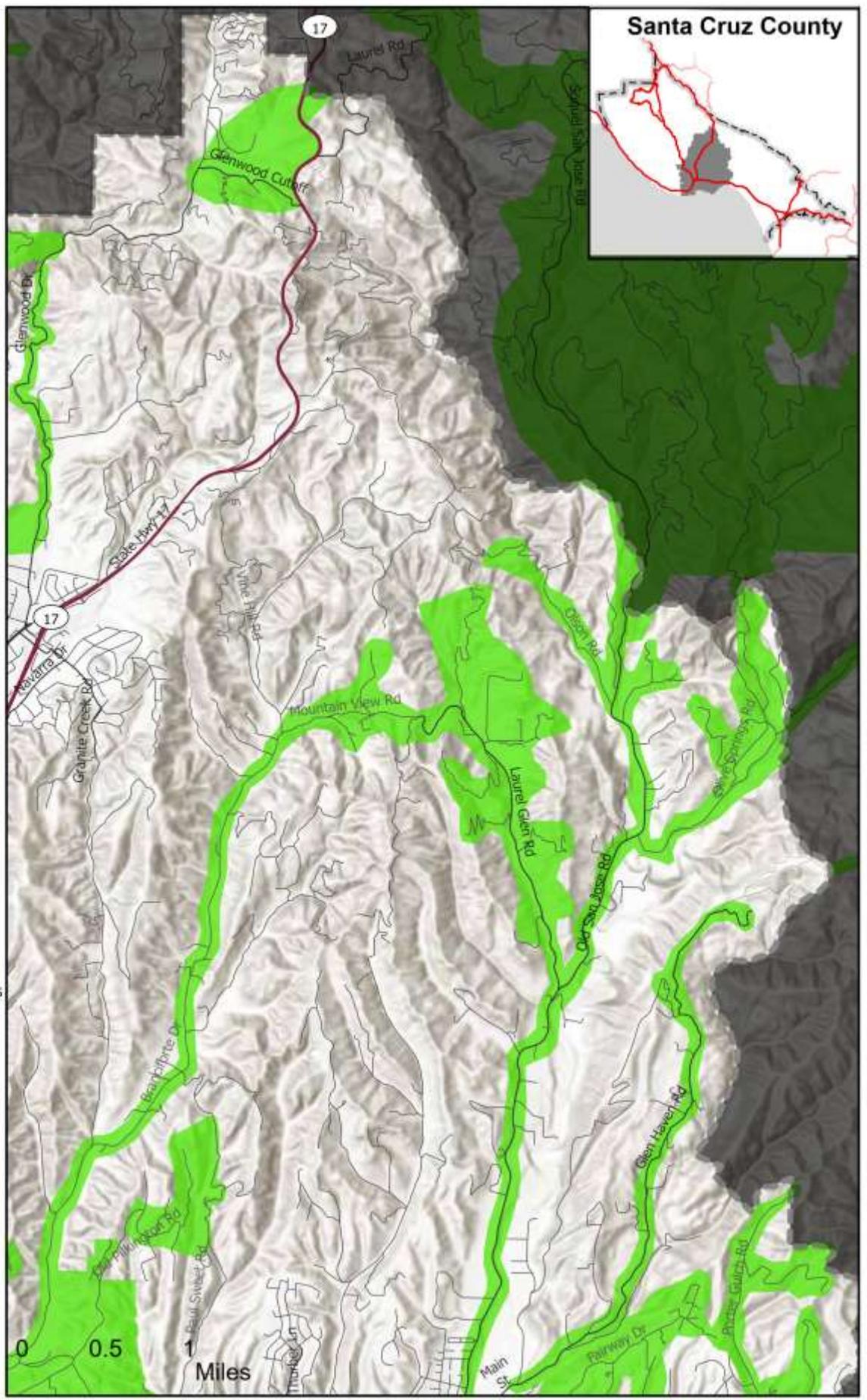
Highways



High Priority Area

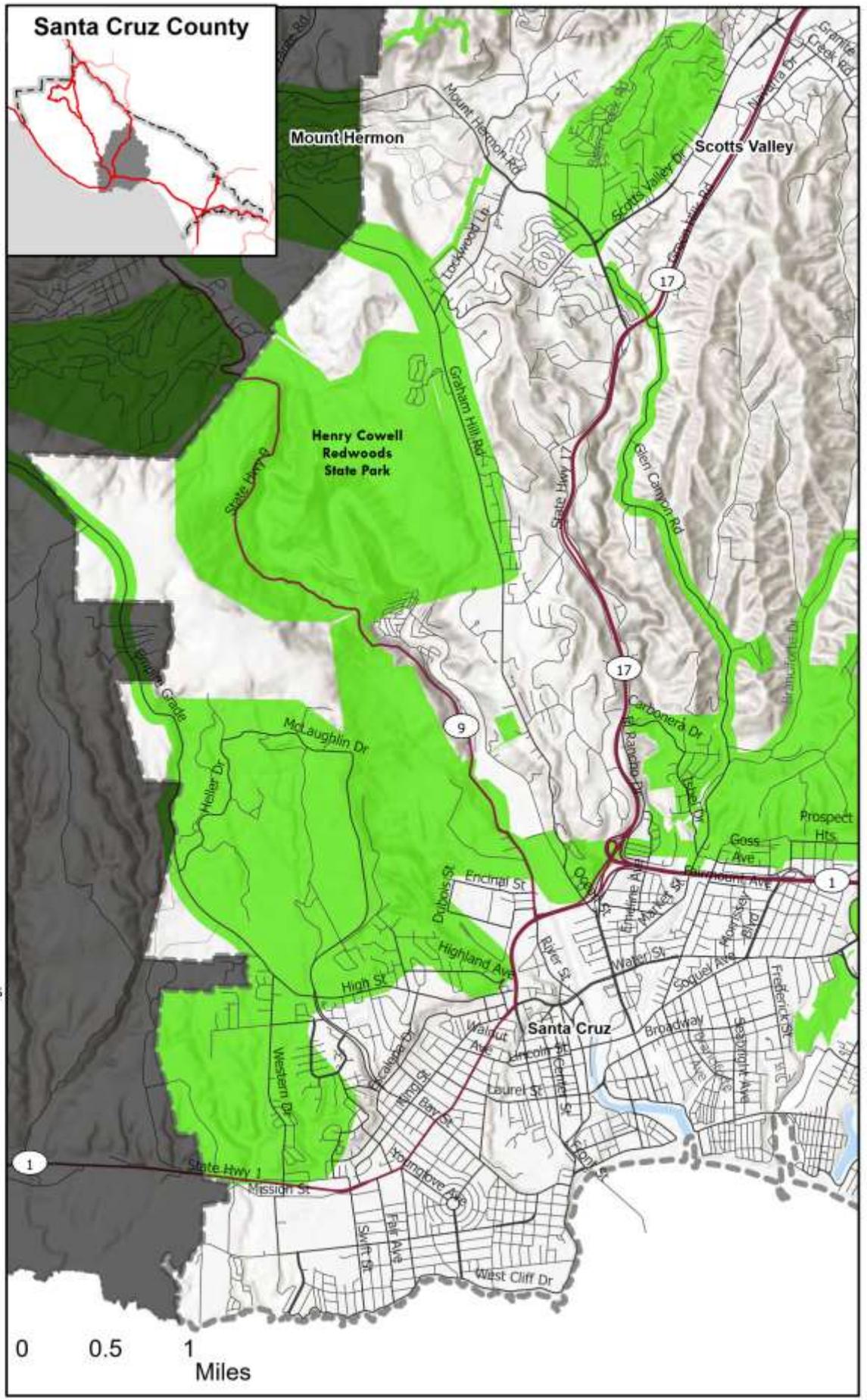


Lower Priority



Santa Cruz County CWPP

Santa Cruz Central
Project Priority Area Map
2010



Legend

- Santa Cruz Central CWPP Planning Area
- Adjacent Planning Areas
- Roads
- Highways
- High Priority Area
- Lower Priority
- County Boundary

0 0.5 1 Miles

Santa Cruz County CWPP

Santa Cruz Central Project Priority Area Map 2010



Santa Cruz Central
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways



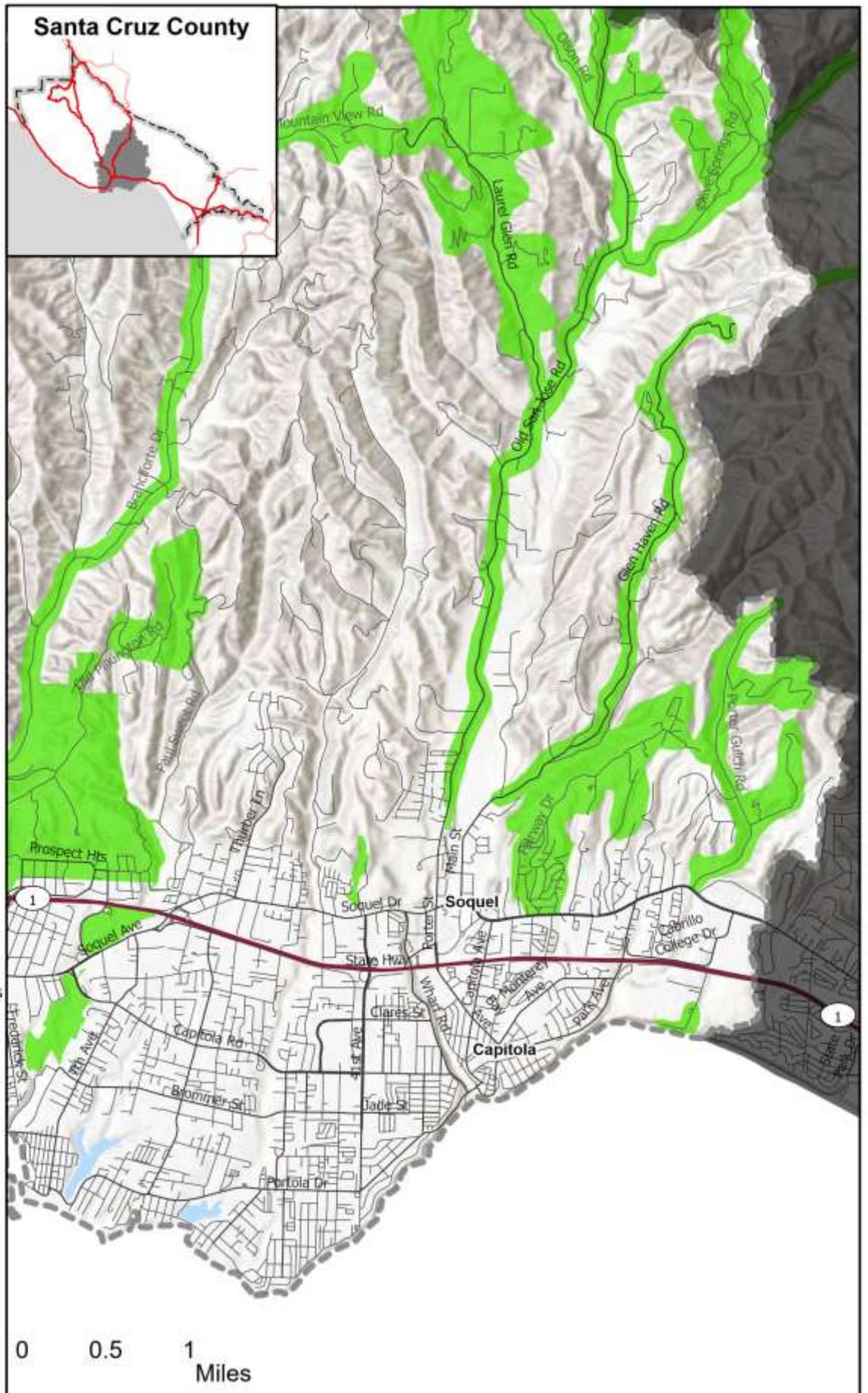
High Priority Area



Lower Priority



County Boundary



Santa Cruz County CWPP

Santa Cruz Central

Fire Threat Class

2022



Santa Cruz
Central
CWPP Planning Area



Adjacent Planning Areas



Highways

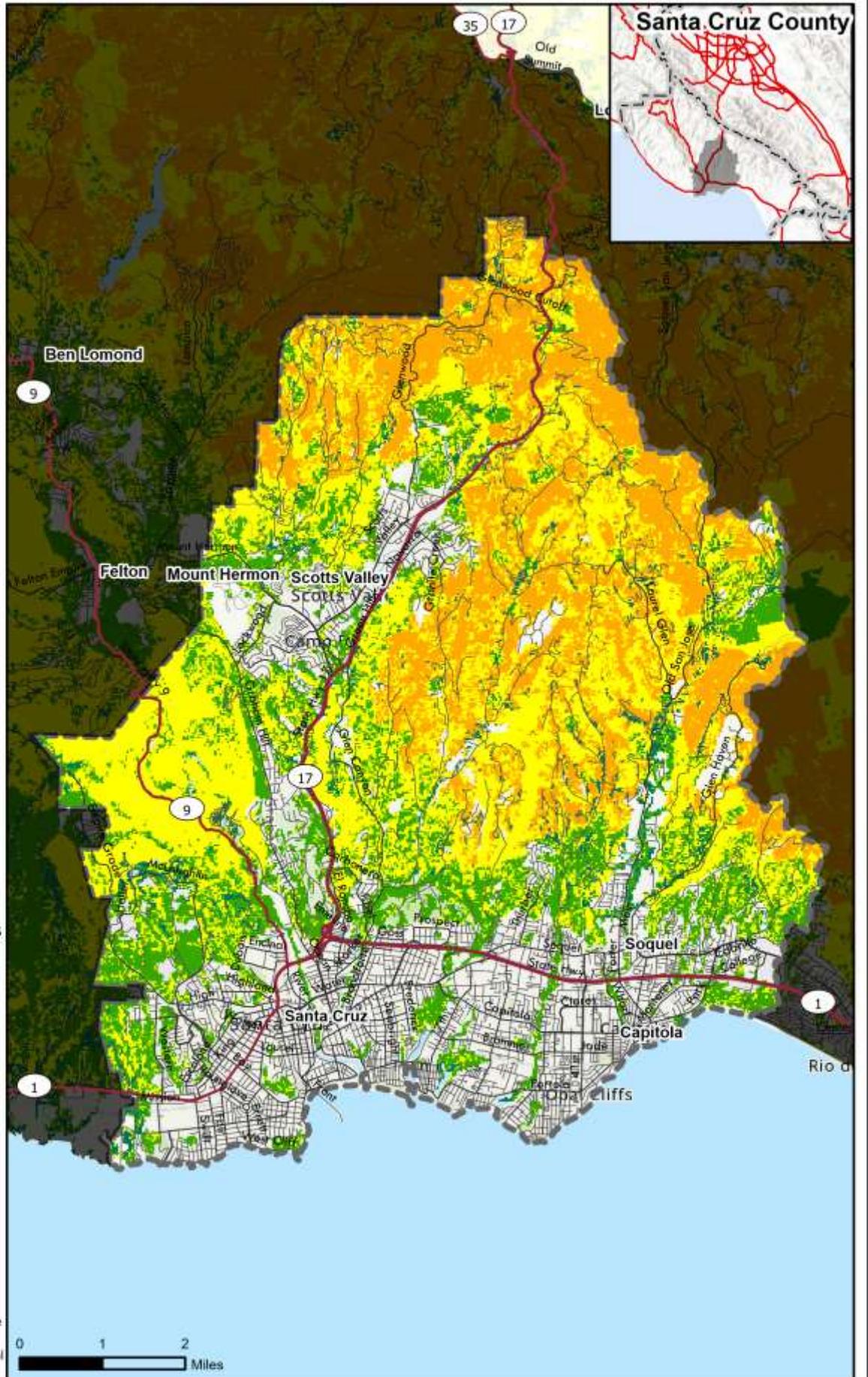


Roads

Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

Fire Threat is the combination of the expected fire probability / frequency (risk) with potential fire behavior (hazard) creating 5 threat classes. Fire threat provides a measure of the relative likelihood of a damaging or difficult to control wildfire occurring



Santa Cruz South - Coastal

The Santa Cruz South – Coastal planning area covers the southwestern most section of Santa Cruz County, from Aptos south to the City of Watsonville and the Monterey County Line. The entire planning area is home to high population densities. The densest populations are found in the developed communities of Aptos, La Selva and the City of Watsonville. There are also many residences located in the unincorporated areas along major intersecting roadways such as Freedom Boulevard, Corralitos and Pleasant Valley Road.

Recent significant fire history in this planning area includes the Trabling fire in June of 2008, in which 630 acres were consumed and 26 residential structures were destroyed. In 2021 a wind event during a January dry spell contributed to the spread of a 33-acre fire in the Aptos/Corralitos area, named the Freedom fire.

This planning area has a large portion (23%) of the landscape identified as developed, which is primarily located in the city of Watsonville as well as areas of Aptos & Rio del Mar. 20% of the planning area is agricultural, which can be row crops, vineyard, orchards, or nurseries. The undeveloped/unimproved areas can be considered as fuels for wildfires and exist within this area in the following concentrations: 18% evergreen hardwoods, 13% herbaceous grasslands, 5% brush/shrub, 4% redwood or Doug fir, and 4% Eucalyptus groves. The remaining area is a small amount of riparian, non-native, open water, or other forested lands.

Santa Cruz County CWPP

Santa Cruz South Coastal
Wildland Urban Interface Area
2010



Santa Cruz
South Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads



Highways

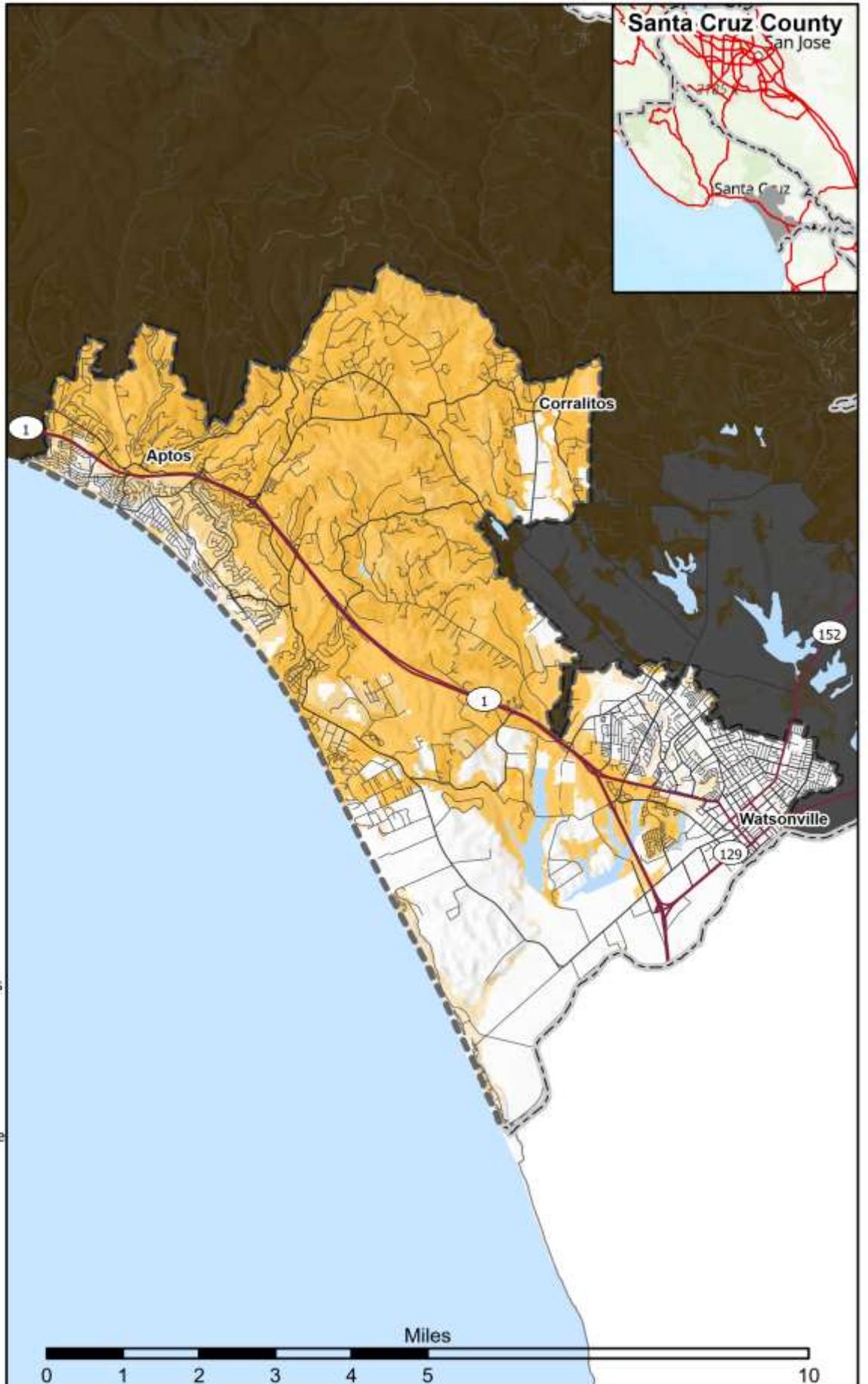
Wildland Urban Interface



Non-WUI



County Boundary



The planning area is home to various fire jurisdictions including:

- Santa Cruz County Fire
- CAL FIRE
- Central Fire District of Santa Cruz County
- Watsonville Fire Department
- Pajaro Valley Fire Protection District

The following volunteer companies respond to emergencies within the planning area:

- Santa Cruz County Fire Volunteer Company (Corralitos)

Other agencies with large properties within this planning area include:

- California Department of Parks and Recreation
- CAL FIRE – Demonstration State Forest
- Santa Cruz County Parks
- Department of Fish and Game
- United States Fish and Wildlife Service

Additional landowners within the planning area include:

- Private residences
- Managed Timberland
- Undeveloped private ownerships
- Ranchland
- Agriculture

Assets at Risk – As identified through stakeholder meetings

Communities/Neighborhoods

- Life and property are always considered the dominant asset at risk.
- La Selva Beach
- Day Valley

- Aptos Hills
- Rodeo Gulch Community
- Trout Gulch Road
- Valencia Road
- Highway 1 corridor between Freedom Boulevard and Buena Vista
- Redwood Drive Community
- Vienna Woods
- Calabasas Road
- White Road
- Larkin Valley
- Larsen Road corridor
- Buena Vista Road corridor
- Whiskey Hill / Peaceful Valley / Ellicott

Other – Non-environmental

- Schools ○ Cabrillo College ○ Aptos High ○ Aptos Junior High ○ Valencia Elementary ○ Orchard ○ Pajaro Valley High ○ Roundtree Medium Security Facility
- Wineries / Vineyards
- Historic infrastructure sites

Environmental

- Protection of open space and parkland (all agencies)
- Watershed protection
- Managed timberland
- Wildlife
- Wildlife refuges

The following groups within this area have successfully formed a Firewise Community:

San Mateo – Santa Cruz Community Wildfire Protection Plan

2022

- Viewpoint Road
- Redwood Drive

Project Priority

In addition to those areas identified above, more specific high priority areas were identified at public and agency meetings. Those areas have been highlighted in green on the following map. Those areas not currently identified as high priority on the map should still be considered priority areas in terms of recommendations proposed by this plan. The highlighted areas are those areas stakeholders consider the priority areas for fuel reduction projects.

The following agency/group/person has submitted a project proposal for this planning area:

- Redwood Drive Community
- Santa Cruz County

Santa Cruz County CWPP

Santa Cruz South Coastal
Project Priority Area Map
2010



Santa Cruz
South Coastal
CWPP Planning Area



Adjacent Planning Areas



Roads



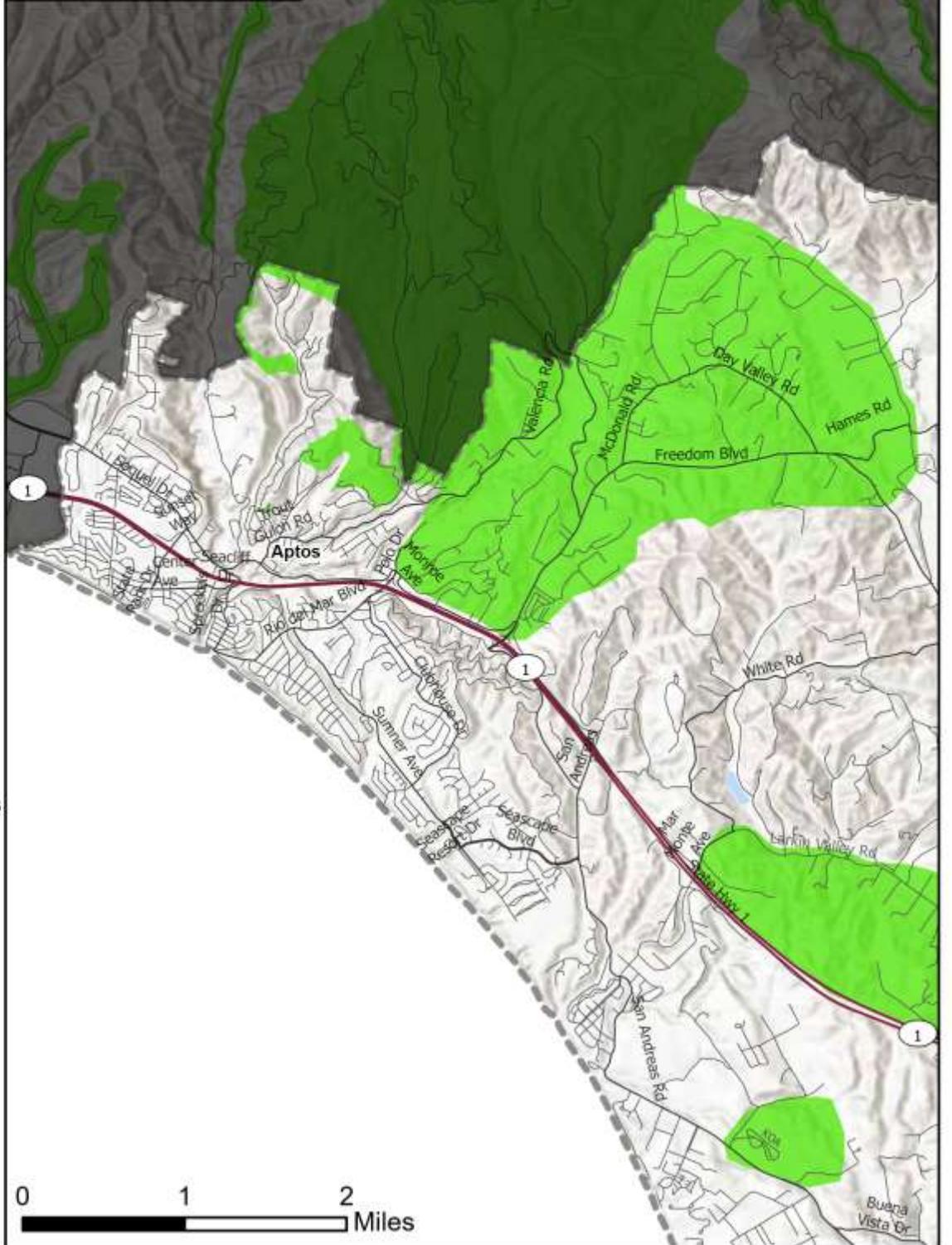
Highways



High Priority Area



Lower Priority

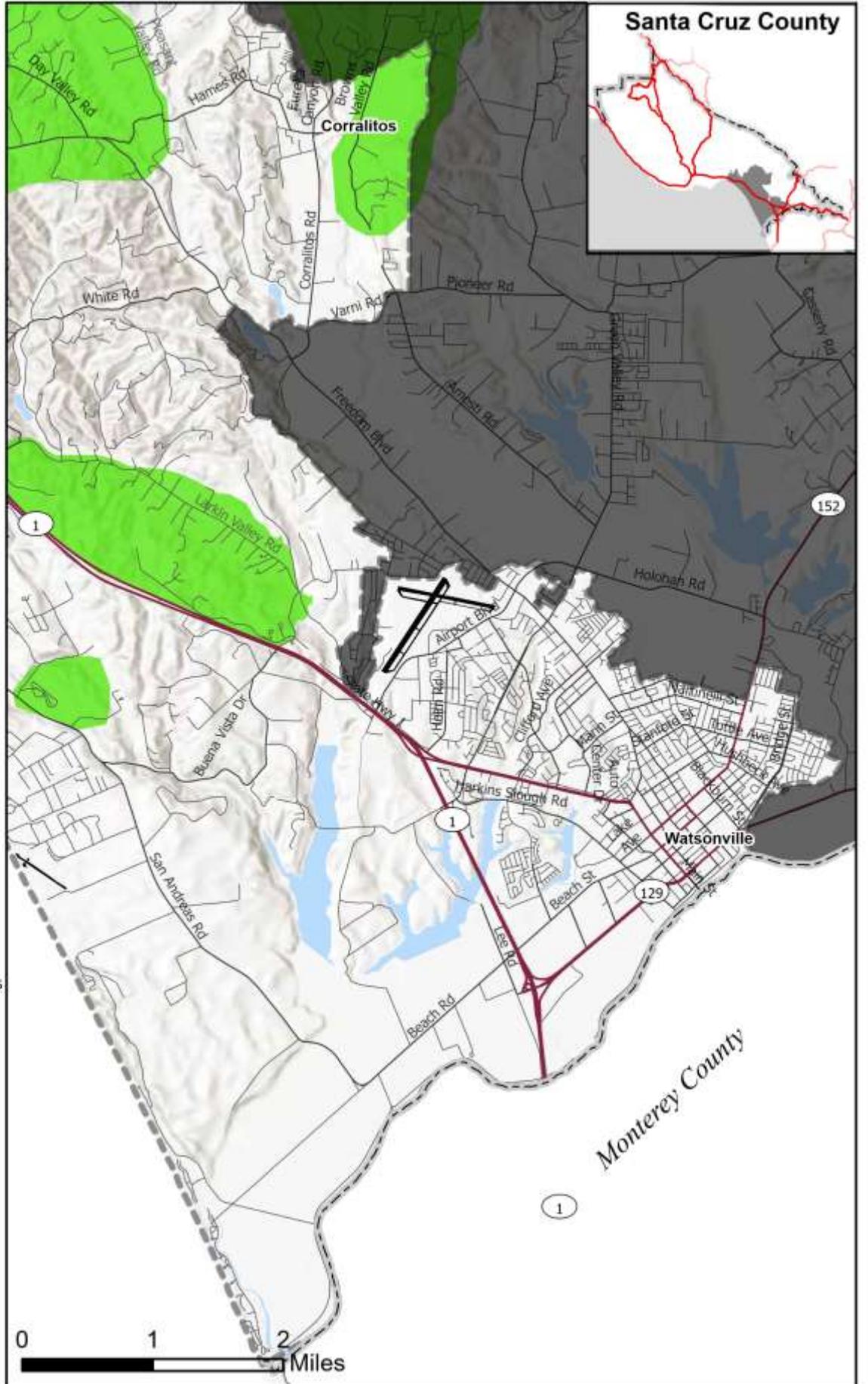


Santa Cruz County CWPP

Santa Cruz South Coastal
Project Priority Area Map
2010



- Santa Cruz South Coastal CWPP Planning Area
- Adjacent Planning Areas
- Roads
- Highways
- High Priority Area
- Lower Priority
- County Boundary



Santa Cruz County CWPP

Santa Cruz South Coastal

Fire Threat Class

2022



Santa Cruz South Coastal CWPP Planning Area



Adjacent Planning Areas



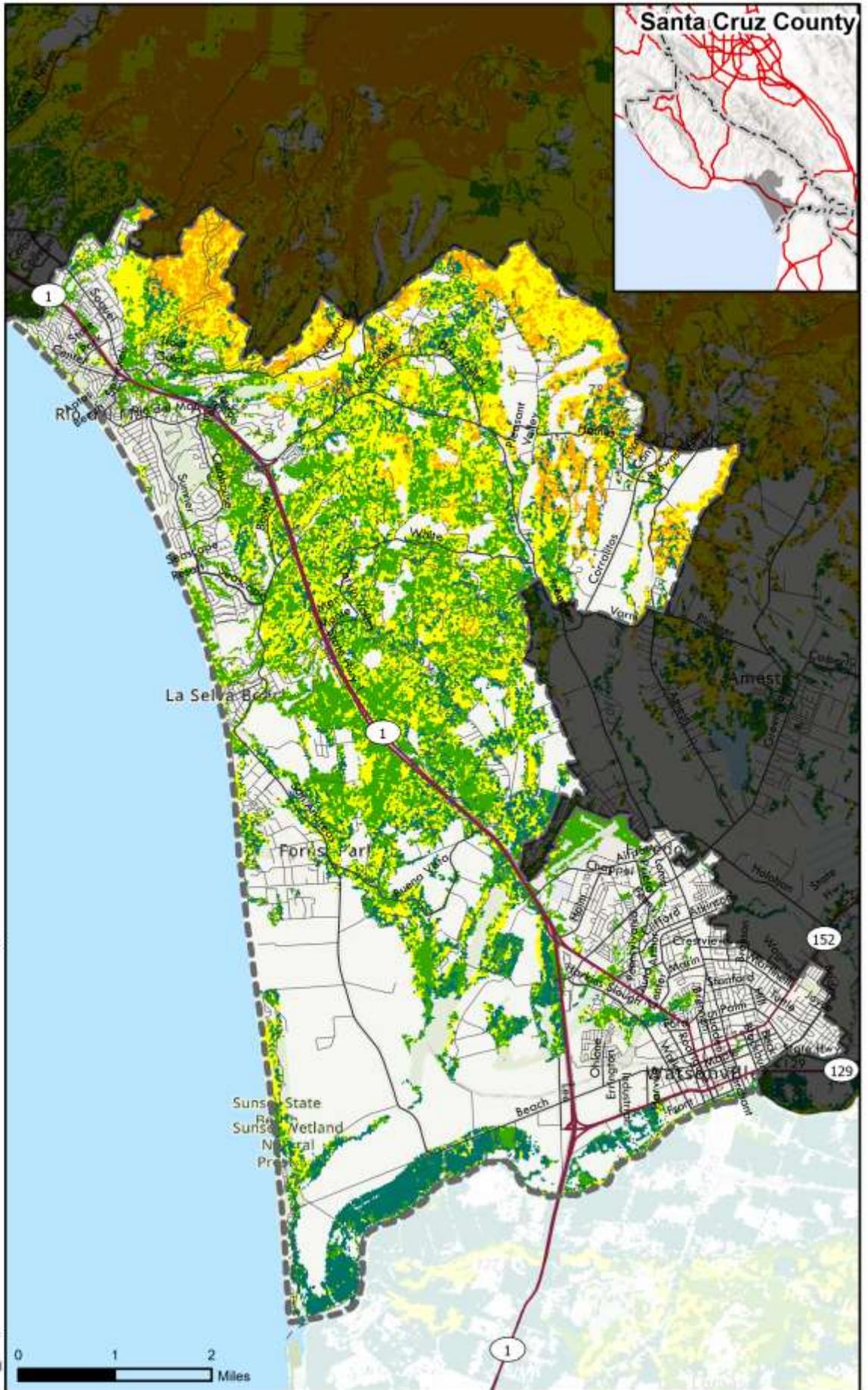
Highways

Roads

Fire Threat Class:

- Low
- Moderate
- High
- Very High
- Extreme

Fire Threat is the combination of the expected fire probability / frequency (risk) with potential fire behavior (hazard) creating 5 threat classes. Fire threat provides a measure of the relative likelihood of a damaging or difficult to control wildfire occurring



Appendix A

A number of stakeholders have submitted project proposals to be included in the CWPP. Their inclusion in the plan does not ensure funding or permitting. The following list shows the project proponent and type. Specific plan details are maintained by CAL FIRE and the RCDs (Requests for project proposals should be directed to CAL FIRE and the RCDs).

Santa Cruz County – Proposed road right of way and fuel reduction project in the Trabing Fire area. (pre-2010)

Big Creek Lumber Company – Proposed roadside shaded fuel breaks on specific truck trails and implementation of a standardized road naming program. (pre-2010)

Pilkington Road Area – Arana Gulch Watershed Alliance and the RCD – Proposed road crossing project restoring access between the Pilkington Road neighborhood and Paul Sweet Road. (pre-2010)

UCSC Natural Reserve – Proposed research alternatives to burning in chaparral habitats. (pre-2010)

BLM – Proposed roadside fuel reduction along Warnella, San Vicente, Swanton, Laguna Creek and Bonny Doon Roads. (pre-2010)

Bonny Doon Community Fire Protection Projects – Proposed roadside and neighborhood shaded fuel breaks in the Bonny Doon area. (pre-2010)

Deer Creek Landowners Inc. – Proposed roadside fuel reduction projects on more than 15 miles of roadways in the Deer Creek Road area. (pre-2010)

Las Cumbres – Roadside fuel reduction throughout the community. (pre-2010)

Highlands Recreation District – Maintain existing and develop new fire breaks. (pre2010)

Steve Nichols – Creating a shaded fuel break along 4.5 miles of roads and around some residential structures in the Gazos Creek Watershed area. (pre-2010)

Land Trust of Santa Cruz County – Fuel reduction and road improvement projects on Land Trust holdings located off of Brown Valley Road and Geyer Road in Santa Cruz County. (pre-2010)

San Mateo County Coastside Large Animal Evac Unit (CLAEvac) – Proposal requesting funding for team training and communication equipment. (pre-2018)

Redwood Drive Community (Aptos area) – Roadside shaded fuel breaks, defensible space improvement, chipping for individual property owners, and improve emergency evacuation routes. (pre-2010)

South Skyline Fire Safe Council – A shaded fuel break along state Highway-35, aka Skyline Blvd., remains the highest level of priority. Collaborative work with Santa Clara Fire Safe and Fire Safe San Mateo have helped extend work along Highway 35 beyond the boundaries of the SSFSC. Similar shaded fuel breaks along state Highway-9 and Alpine Road will allow for safer emergency ingress and egress. Additional priorities include maintaining the existing shaded fuel breaks along Kings Creek Truck Trail and Ward Road. Other priority areas are along the numerous private roads within the SSFSC boundaries that have existing shaded fuel breaks. (pre-2010 to 2022)

Bonny Doon Fire Safe Council – Proposed roadside shaded fuel breaks adjacent to public and private roads. (pre-2010)

Midpeninsula Regional Open Space District – Proposals in San Mateo and Santa Cruz County identifying improved emergency vehicle access and other road improvements.

MROSD has also identified locations in both counties where fire and fuels management projects should occur and where additional planning is needed. (pre-2010)

Resource Conservation District of Santa Cruz County – Maintains and updated project list through the Regional Project Prioritization Plan. Any requests for project proposals and additional project ideas can be directed to the RCDs.

Continued funding for community chipping projects is an ongoing need. A ladder fuel reduction project in the Cliffwood Estates neighborhood has been completed. (2022)

Resource Conservation District of San Mateo County – Proposed project around the community of La Honda to create interconnecting fuel reduction/shaded fuel break areas. Approved for grant funding through the Cal Fire grant process. Collaborative project with many different landowners including Midpeninsula Regional Open Space and the Cuesta La Honda Guild Water District. (2022)

Prospect Heights Firewise Group – Proposal to create a long-term Wildfire Resilience Plan for the City of Santa Cruz, focused on fuel reduction, vegetation management, and protection of critical infrastructure. (2022)

Identified additional critical assets at risk as the following:

- National Guard Armory (Homeless Shelter since 2020)
- County Emergency Response Dispatch Center
- City Water Tower
- DeLaveaga Elementary School
- Harbor High School

- Quaker Center
- Latter Day Saints Church
- Historic DeLaveaga Park infrastructure
- Santa Cruz Shakespeare Outdoor Theater
- Recreational facilities in DeLaveaga Park
- Brookwood evacuation route

Fire Safe San Mateo – Create and maintain a shaded fuel break along Highway 35 / Skyline Blvd, from the junction with Highway 92 to the county line. Coordinate this project with similar projects along Highway 35 south of the San Mateo/Santa Cruz county line to give residents and fire suppression personnel safer ingress and egress to all areas along the summit ridge.

To complement the shaded fuel break along the summit, similar work along Highway 84, west of Skyline Blvd is a priority for Fire Safe San Mateo. The intent is have a safe evacuation route from the summit to the coast. (2022)

Fire Safe Council of Santa Cruz – Continue to maintain previous work on the previously established shaded fuel break projects in Bonny Doon, specifically the Ice Cream Grade project and the Bonny Doon Ecological Reserve project. Expand the two projects so that the treatment areas end up being contiguous. FSCSC has proposed a new project to create a shaded fuel break along Laguna Creek through the central section of Bonny Doon. (2022)

Central Fire District of Santa Cruz County – Identify and prioritize the wildfire risk in the LRA-Urban Service Boundary. Identify target hazards on public and private roadways that create operational challenges to access and egress. (2022)

San Lorenzo Valley Water District – Proposal for shaded fuelbreaks along roadways and along property boundaries adjacent to communities, defensible space around infrastructure, removal of dead and dying hazard trees, infrastructure hardening, and road improvements for emergency access. (2022)

CAL FIRE, GGNRA, Santa Cruz Mountain Network, plus others – Lidar data was collected in ongoing events since 2018 of Santa Cruz, Santa Clara, and San Mateo counties. This data has been interpreted by Tukman Geospatial and made available to agencies and the general public through the pacificvegmap.org website. The deliverable data from the Lidar includes vegetation type, density, canopy height, & fuel model, terrain features such as contour lines, slope, impervious surfaces (roads), hillshade, and imagery. Additionally, the data was combined with historical meteorological data and fire history data, then used to create a risk model that can assist all stakeholders in planning fuel reduction projects. Portions of this data have been used by the stakeholders in updating their priorities and projects within this CWPP.