

ANNEX 14. SANTA CLARA COUNTY FIRE SAFE COUNCIL

The Santa Clara County Fire Safe Council (SCFSC) is a non-profit 501(c)(3) organization funded by federal grants; local funding from the county, cities, and fire agencies; contributions from many partners in the community; and donations. Its programs protect thousands of residents and homes and bring together individuals, public and private agencies, and companies that share a common, vested interest in preventing and reducing losses from wildfires.

SCFSC programs and projects are focused on protecting the 14 designated communities at risk for wildfire in Santa Clara County: Stanford, Palo Alto, Los Altos Hills, Cupertino, Saratoga, Monte Sereno, Los Gatos, Lexington Hills, San Jose, Morgan Hill, San Martin, Gilroy, East Foothills, and Milpitas. Homes, schools, businesses, and important infrastructure such as power transmission lines, communication facilities, creeks and reservoirs are all present in these areas.

The SCFSC programs work to create a “Fire Safe” Santa Clara County—protecting lives, homes, and the environment in three main program areas: community outreach and education, hazardous fuel reduction, and planning.

The SCFSC has an aggressive fundraising and grant-writing program and an annual budget of \$450,000. It was established in 2001 and has a dedicated Board of Directors who have contributed more than 40 years of service collectively. It has the support of a wide range of agency stakeholders and community leaders who regularly provide input on SCFSC programs and projects. Staff consists of 12 consultants who help deliver its programs and manage projects throughout the county.

Priority community outreach programs include Smokey Bear story time presentations at schools; general outreach to residents of the wildland urban interface (WUI) at community events; distribution of educational materials via mail, published articles, online content posted to its website, email list, and social media; and signage.

Educational workshops are delivered to community groups to raise awareness and provide practical information on how to make homes and property more resistant to wildfire, and to remind people of the need for evacuation planning and preparedness. SCFSC consultants provide a defensible space and home ignition zone consulting program. A contractor training workshop is being planned to provide comprehensive education to tree contractors, arborists, and landscapers about best practices for defensible space clearing.

The council is active in engaging and partnering with a variety of stakeholders and agencies with an interest in wildfire prevention, and works to provide open communication, information sharing, collaboration on programs and projects, and filling in the gaps where governmental agencies cannot provide every solution. The SCFSC is non-political but does provide information and education about wildfire matters to elected officials to assist in improved policy making relevant to WUI areas.

The SCFSC has an information program to gather, compile, and analyze images and maps; the council maintains a geographic information system and has helped fund and install an early warning camera system to detect smoke and provide images for the Emergency Communications Center. Hazardous fuel reduction projects conducted by the council include community chipping services, subsidized defensible space clearing for low income/disabled residents, neighborhood fuel reduction projects, roadside evacuation route fuel reduction, dead/hazard tree abatement, and coordination, development, and maintenance of landscape-scale fuel breaks as part of implementing local Community Wildfire Protection Plans (CWPPs) and the Santa Clara Unit Fire Plan.

Planning efforts include developing and updating CWPPs, general project planning prior to grant applications, and detailed project planning once funding has been secured. The SCFSC also assists with biotic studies, forest and vegetation analysis, and preparation of California Environmental Quality Act documents. The SCFSC is developing a strategic plan for the council concurrent with the countywide CWPP that will help it deliver its programs more effectively.

California Department of Forestry and Fire Protection (CAL FIRE) staff provides assistance to the SCFSC in all three program areas.

ORGANIZATION AND JURISDICTION

The SCFSC is a non-profit 501(c)(3) organization with a Programs Director, Board of Directors, and Board of Advisors representing various organizations throughout the county. The SCFSC coordinates with adjoining Fire Safe councils in Alameda, Santa Cruz, San Mateo, San Benito, and Monterey Counties (www.sccfiresafe.org/) as well as the South Skyline Fire Safe Council (Annex 15). The SCFSC is currently working with Santa Cruz partners to establish a Santa Cruz Fire Safe Council to facilitate further coordination for fire prevention activities along the shared boundary.

Organizations currently represented on Board of Directors:

- San Jose Water Company
- Spring Valley Volunteer Fire Company
- Pacific Gas & Electric Company (PG&E)
- Saratoga Fire District
- San Jose Fire Department
- Santa Clara Open Space Authority
- State Farm Insurance
- Private citizens

Organizations currently represented on Board of Advisors:

- Redwood Estates Services Association
- City of Saratoga
- Midpeninsula Regional Open Space District
- Santa Clara Valley Water District

- Palo Alto Fire Department
- Chemeketa Park Mutual Water Company
- Santa Clara County Fire Department
- CAL FIRE

PLANNING TEAM PARTICIPATION

The SCFSC is represented on the Core Team by several representatives. The SCFSC representatives have been engaged in the CWPP planning process through two rounds of community workshops and multiple Core Team workshops.

SUMMARY

Public education/outreach and hazardous fuel reduction programs throughout the county are the focus of the SCFSC. Several strategic goals and associated tasks fall under the purview of the SCFSC. All of the strategic goals are included.

WILDLAND URBAN INTERFACE AREA DESCRIPTION

WILDLAND URBAN INTERFACE AREA DEFINED

The SCFSC conducts its operations using area project managers, designated project areas include:

- Lexington Hills area
- South County areaPalo Alto area
- Saratoga area
- East Foothills area
- Countywide Education Coordinator

Through mutual agreement, the SCFSC manages projects in a portion of Santa Cruz County in the Lexington Hills area, primarily Santa Cruz County areas in the 95033 postal area code along Summit Road and Old San Jose-Soquel Road areas.

Figure 14.1 provides a Risk/Hazard Assessment for Santa Clara County. For more information on the development of this assessment please refer to Chapter 4 in the countywide CWPP.

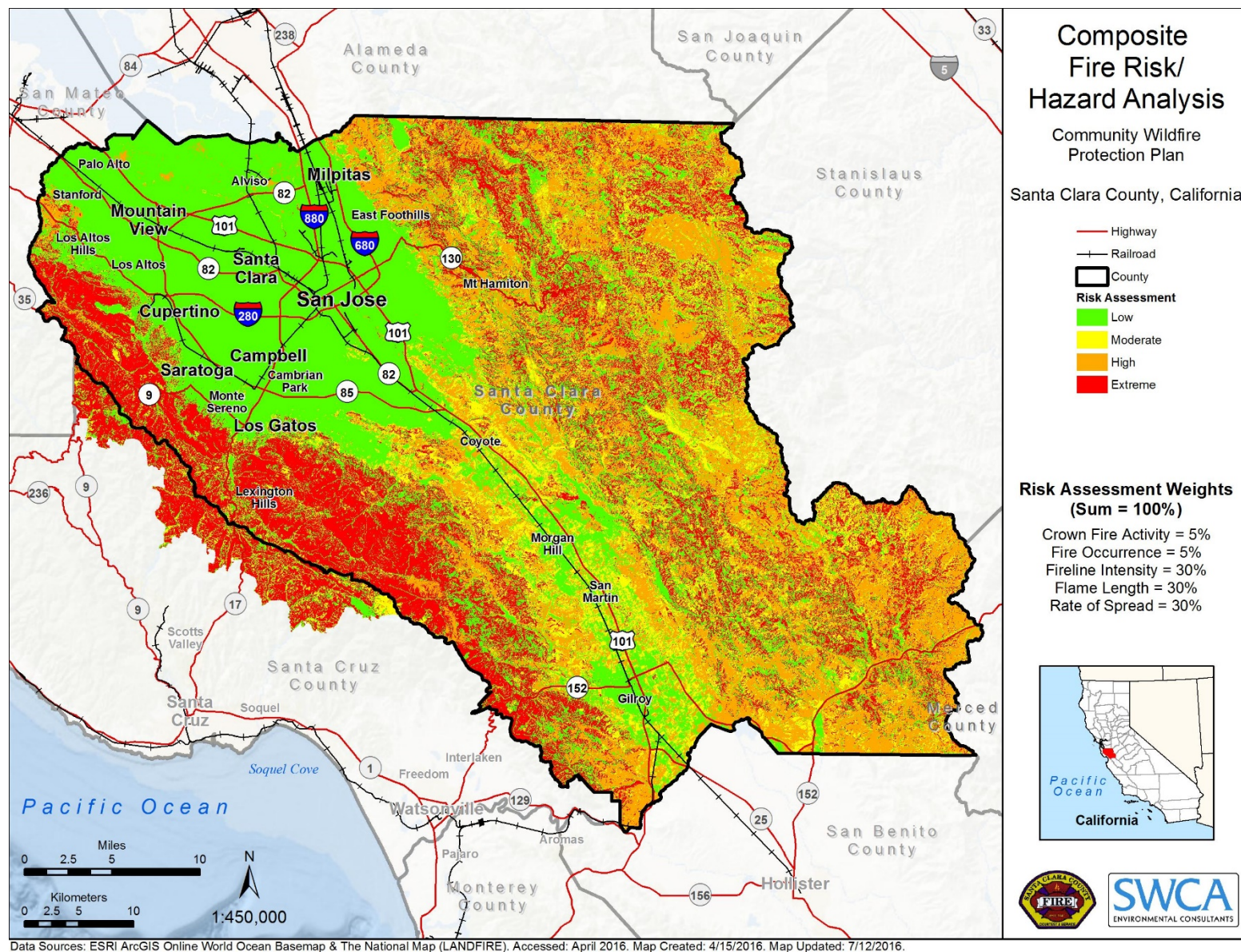


Figure 14.1. Santa Clara County Risk Assessment including portions of Santa Cruz County.

FIRE HISTORY

Figure 14.2 provides fire history and ignition history for the County. For more fire history information please see Figure 3.5 in the main Santa Clara County CWPP document.

HAZARDOUS FUEL CHARACTERISTICS

Santa Clara County includes a range of vegetation communities that differ depending upon elevation, precipitation, and slope. Chaparral vegetation is often found on south-facing slopes, where winter precipitation is relatively high, but dry summers are common. The chaparral will have long flame lengths under either moderate or extreme weather scenarios. The nature of these fuels is to burn quickly and intensely. Oak woodlands, comprising a variety of oak species, are also interspersed throughout, as well as mixed conifer comprising knob cone pine and gray pine. A fire in either the mixed conifer or hardwood would likely be a surface fire with patches of active behavior and fairly low rates of spread. However, active fire behavior is possible in this vegetation type under extreme weather conditions, especially where there is high surface loading. Coastal coniferous forest communities such as redwoods and Douglas-fir are located at lower elevations where precipitation is high, fog is common, and temperatures are moderate. Fire spread is generally limited in this fuel type; however, given the right combination of weather conditions, surface fire can be expected to burn uphill. Areas with increased fuel loading from dead and down materials may experience crowning under the right conditions. The varied vegetation composition can result in a range of wildfire hazard.

For fuel model information, please refer to Section 4.6.3 and Figure 4.3 in Chapter 4 of the main Santa Clara County CWPP document.

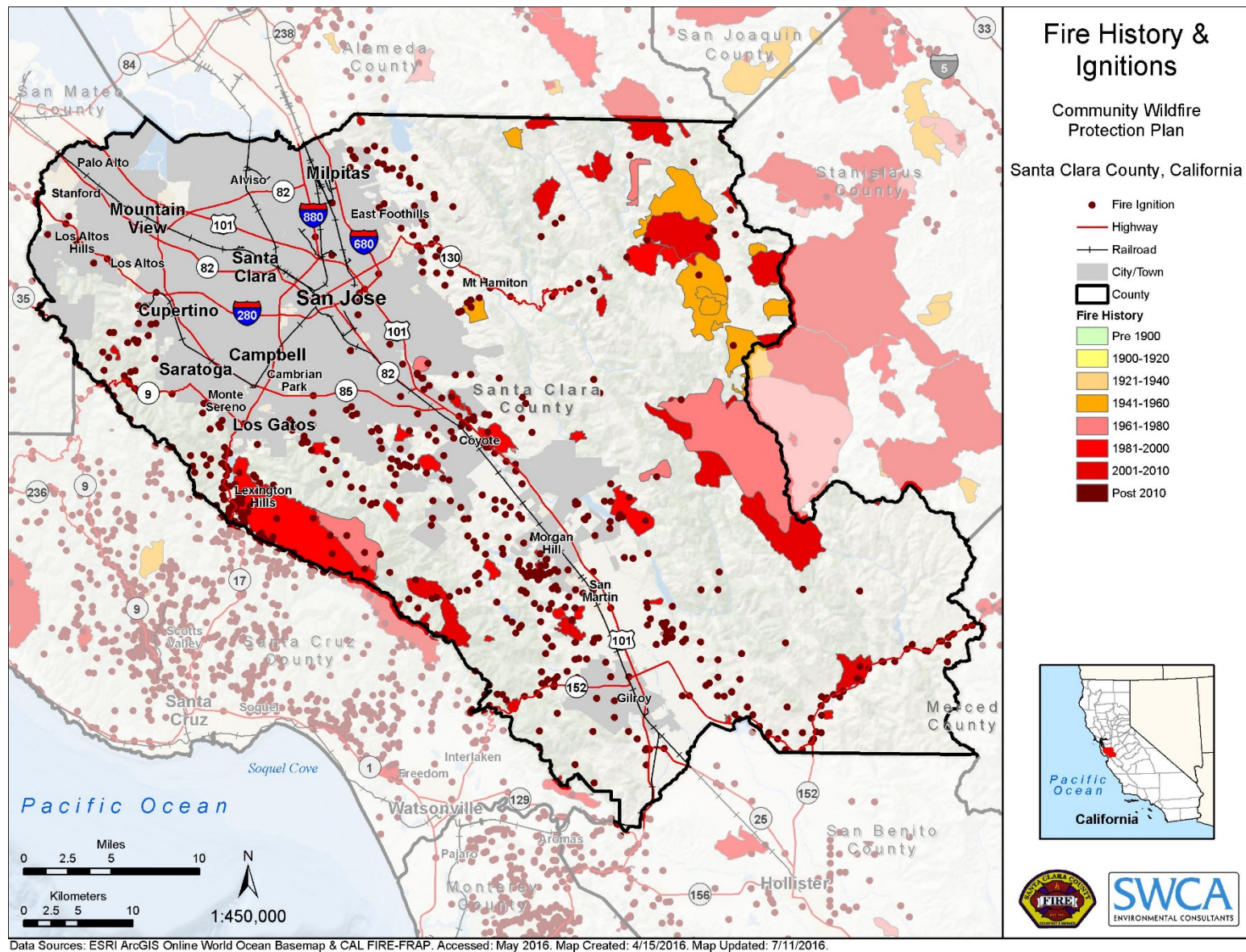


Figure 14.2. Fire history and ignitions in the wildland urban interface planning area.

NEIGHBORHOOD AND STRUCTURAL CHARACTERISTICS

Access: The wildland urban interface (WUI) areas of Santa Clara County are characterized by steep, windy, and narrow roads that pose potential ingress and egress problems for emergency response and evacuations. Some areas may be subject to slow response times for emergency response due to the distance from the nearest fire station and road conditions.

There are many private roads with locked gates behind which are a number of large homes with extensive property (Figure 14.3). Some homes have minimal turnaround space, posing a concern to emergency responders due to potential entrapment. There are a number of dead end roads and narrow driveways (Figure 14.4).



Figure 14.3. Gated areas and private dead end roads create access concerns for emergency responders.



Figure 14.4. Narrow one-lane roads are common.

Structural Characteristics: Most homes have moderate defensible space (at least 30 feet), but some homes do not meet the necessary 70- to 100-foot space recommendation. Homes may have non-combustible siding, but the majority have combustible decks and fencing that comes into contact with wildland fuels. Some homes have wood shake roofs, which put the property and neighborhood at extreme risk. Many subdivisions are managed by homeowner associations (HOAs) that provides a conduit for fire prevention and public education and outreach messages regarding structural ignitability and defensible space. A number of Building Code Chapter 7A compliant new build properties are interspersed with older properties.

Fuels: Many homes are located upslope from thick scrub fuels, with continuous canopies (Figure 14.5). Homes are located on steep slopes with often minimal setback from the slope. Topography is a concern due to the influence steep slopes have on potential fire behavior.

Water Supply: Water availability is a concern in areas higher in the foothills. There are no hydrants in some areas and people are dependent upon water from wells and storage tanks, which may become depleted during periods of drought.



Figure 14.5. WUI showing variety of fuels and varied topography.

EMERGENCY RESPONSE CAPACITY

Fire suppression for the Santa Clara County WUI areas is provided by:

- Santa Clara County Central Fire Protection District (Local Responsibility Area [LRA])
- Santa Clara Unit CAL FIRE (State Responsibility Area [SRA])
- San Jose Fire Department
- South Santa Clara County Fire Protection District
- Morgan Hill Fire Department

- Gilroy Fire Department
- Palo Alto Fire Department
- Spring Valley Volunteer Fire Company
- Casa Loma Volunteer Fire Company
- Uvas Volunteer Fire Company

PUBLIC EDUCATION AND OUTREACH PROGRAMS

The SCFSC (<http://www.SCCFireSafe.org>) is very active in public education and outreach. This organization provides information regarding chipping programs, defensible space mitigation, forest health issues, and much more. It also offers public meetings and forums to support wildfire awareness.

IDENTIFY CRITICAL INFRASTRUCTURE AND COMMUNITY VALUES AT RISK

Critical utility infrastructure, such as electric power supply lines, substations, and natural gas lines, is essential to supply residents and businesses with services that are in some cases critical to health and life safety. In many parts of the study area, electric power is needed to power pumps for the domestic water supply and to provide heating and lighting. Wildfire is a significant threat to the electric utility supply.

The county has several watersheds that are Community Values at Risk. Watersheds need to be protected and maintained from catastrophic wildfire damage in order to prevent erosion, sedimentation, and water contamination (Taylor et al. 1993). Long-term issues resulting from damage to watersheds would be increased runoff, poor soil retention, and decreased water quality. Increased soil erosion and decreased soil stability as a result of removal of trees due to wildfire can cause soil creep, which is destructive to structure foundations.

Much of the planning area is composed of Midpeninsula Regional Open Space Preserves, Open Space Authority, water purveyor watershed lands, and state parks. Great opportunity exists to coordinate these open space agencies to include fire department access and fire ignition risk reduction in their parks.

Other Community Values at Risk include life safety, homes and property values, infrastructure, recreation and lifestyle, wildlife habitat, watershed protection, and environmental resources.

MITIGATION PROJECTS AND PRIORITIZATIONS

The following project matrixes have been developed by the community and Core Team to direct specific project implementation for all communities in the WUI (Table 14.1–Table 14.5). The matrixes below are tiered to the strategic goals presented in the body of the Santa Clara County CWPP through project IDs in the first column of each matrix. The matrixes are broken down into projects for addressing:

- Hazardous Fuels Reduction
- Public Education and Outreach
- Fire Response Capability
- Structural Ignitability

The Fire Safe Council has been integral in developing fuel treatment projects with public and private stakeholders throughout the County. Figure 14.6 illustrates the numerous projects that have been developed throughout the County. More detailed representations of these treatments can be found in the relevant annexes. Figure 14.7, Figure 14.8, Figure 14.9 and Figure 14.10 illustrate treatments proposed under various funding sources, respectively, Green House Gas mitigations, U.S. Forest Service (USFS)-funded projects and WUI grant mitigations, and a series of Highway 17 projects that have been led by the SCFSC and the community. The SCFSC works closely with residents living in communities adjacent to Santa Clara County. Figure 14.11 illustrate mitigation projects proposed in San Mateo County.

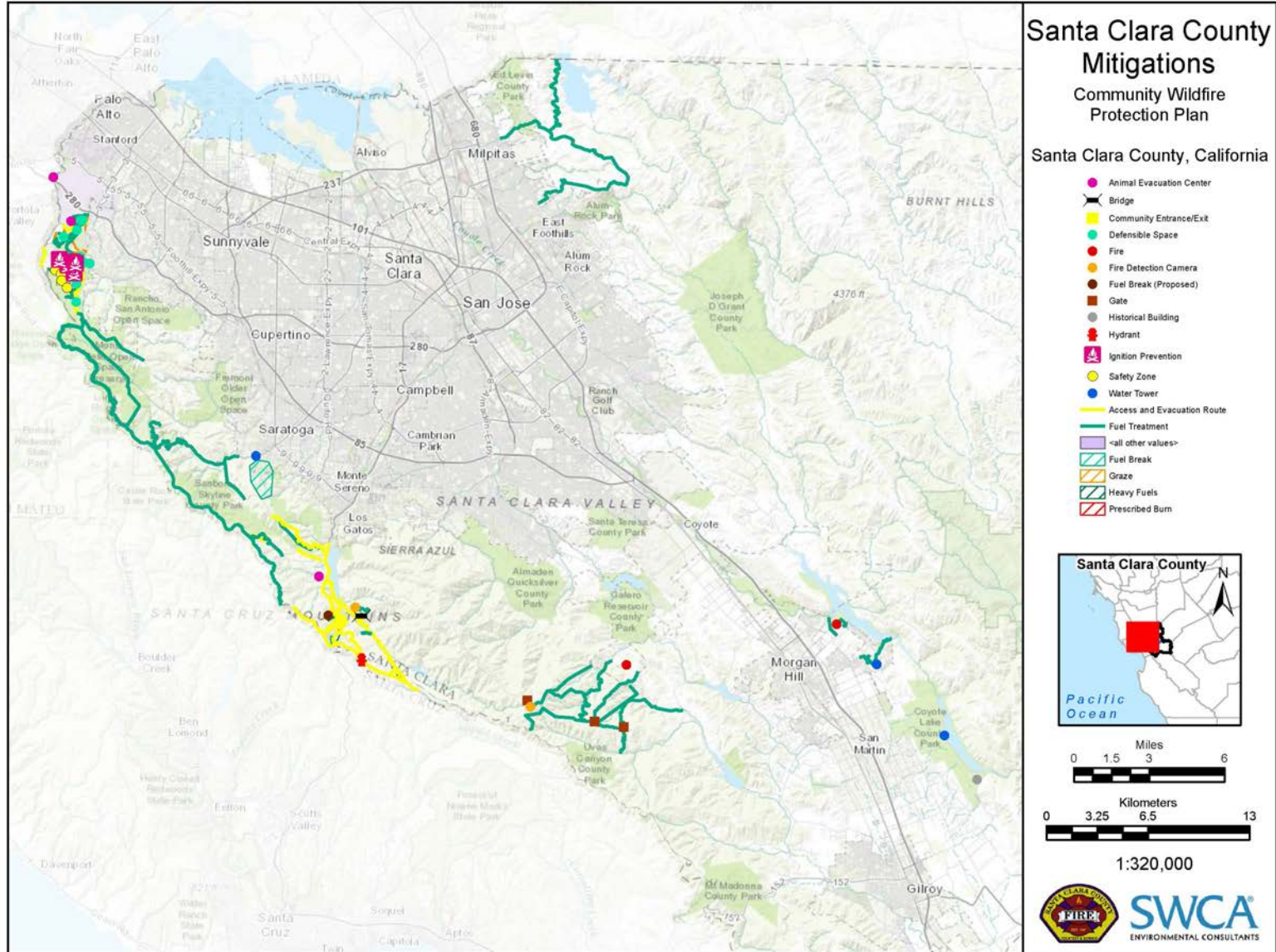


Figure 14.6. All Santa Clara County projects proposed or planned by the SCFSC.

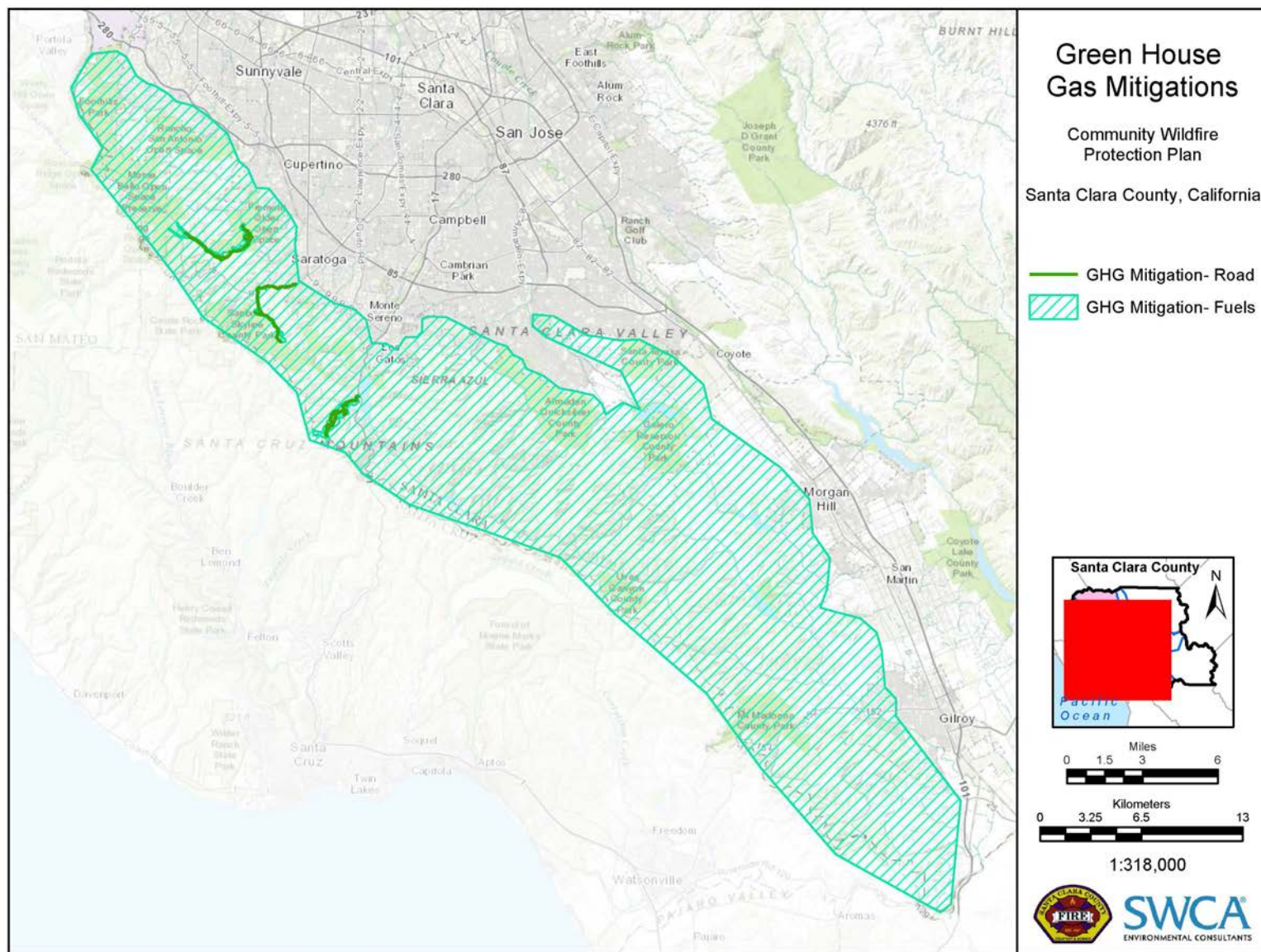


Figure 14.7. Greenhouse gas mitigations.

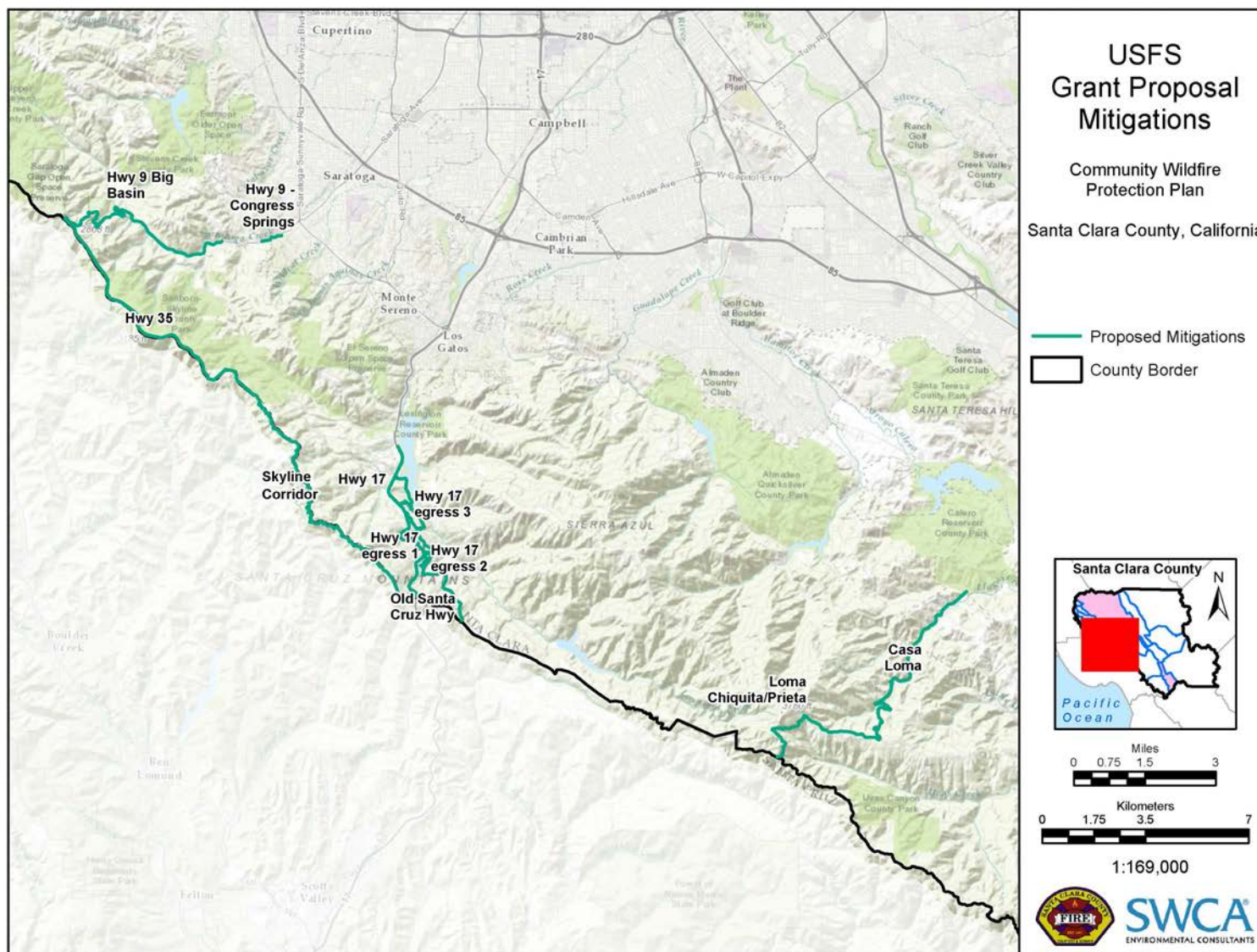


Figure 14.8. USFS-funded project proposals.

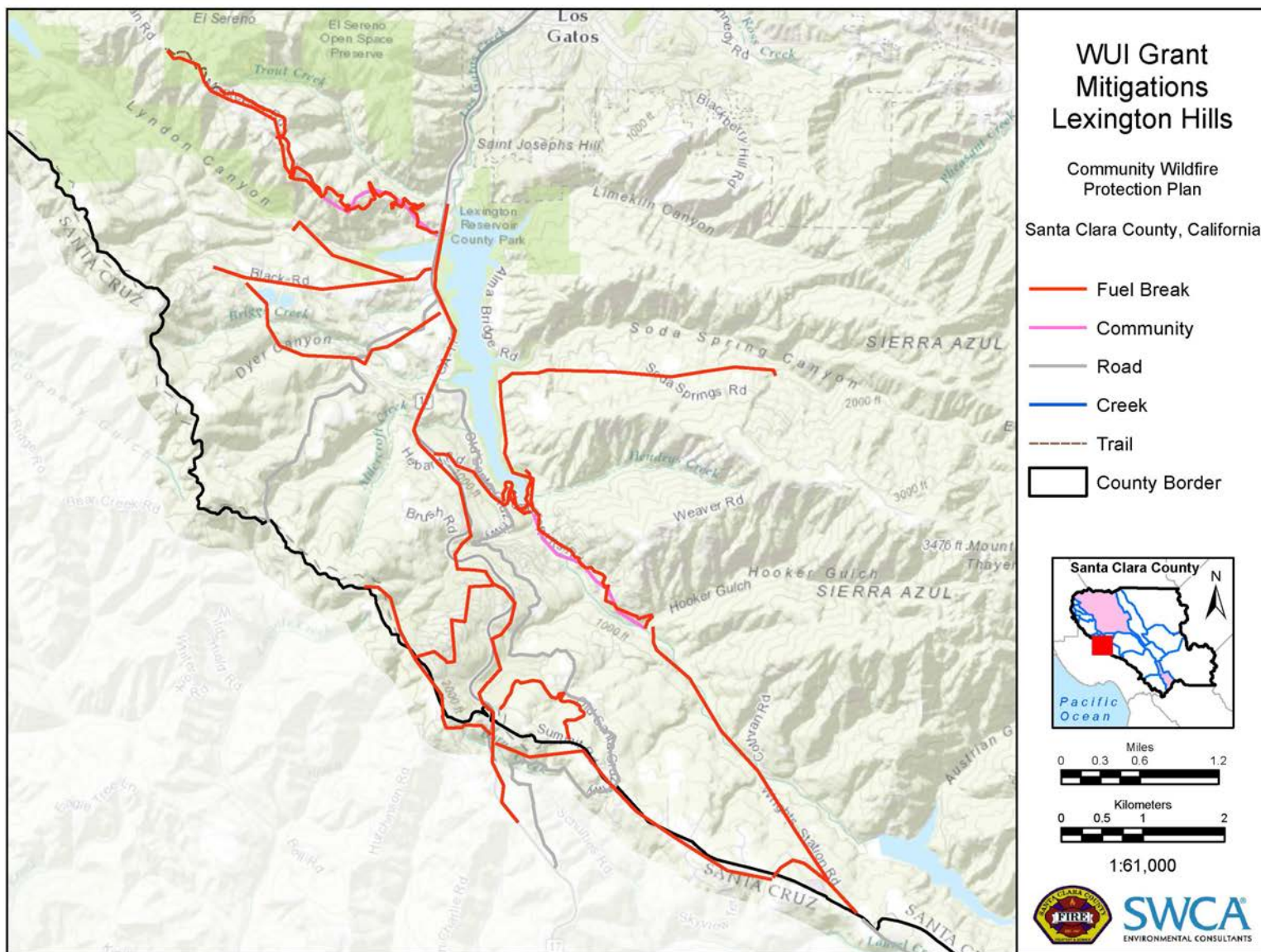


Figure 14.9. WUI grant mitigation project proposals.

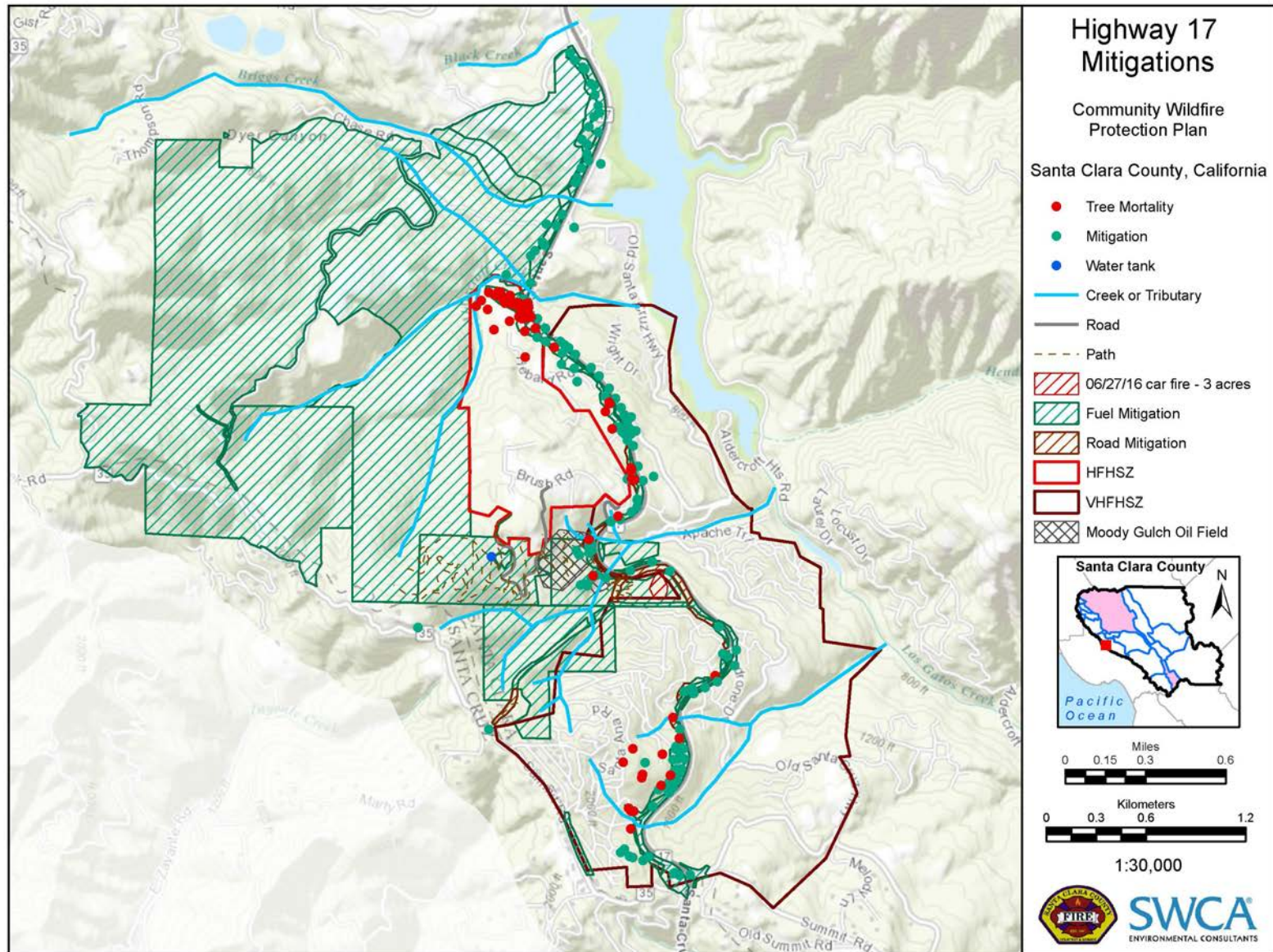


Figure 14.10. Highway 17 projects.

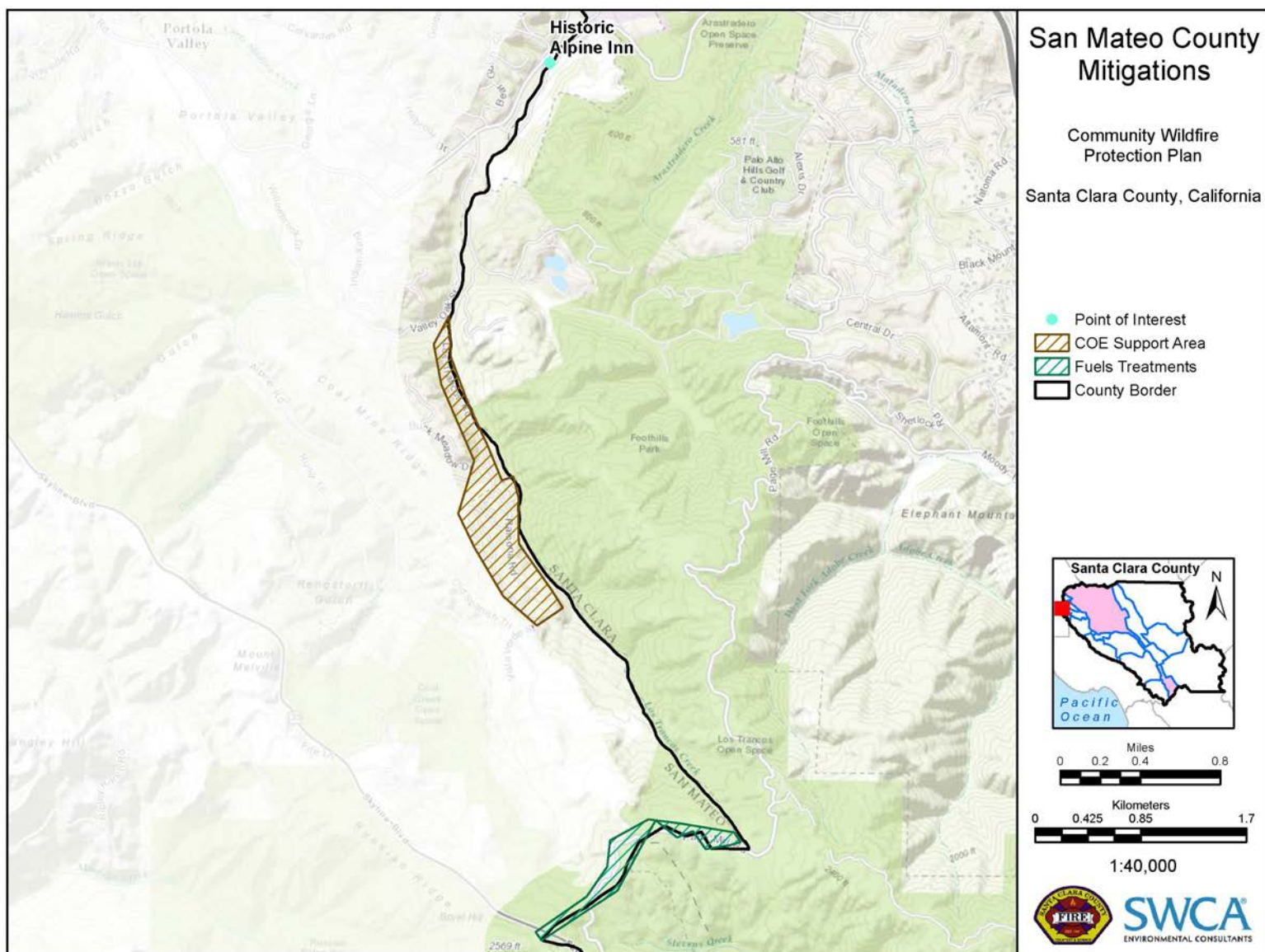


Figure 14.11. San Mateo County mitigations.

Table 14.1. Recommended Fuel Reduction Projects

ID	Project Description	Location and Responsible Party	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/Funding Sources Available
FR1	Incorporate trails into fire defense system where practical and effective.	Santa Clara County and other San Francisco Bay area counties, Midpeninsula Regional Open Space District, County Parks, Open Space Authority, California State Parks, Palo Alto Parks, San Jose Parks, and other municipal park agencies, Bay Area Ridge Trail Council	Strategic plan to incorporate fire defense improvements in trail networks Detailed analysis would be needed in development of treatment location to ensure protection of natural resources. Incorporate a map component and use the Earthquake Clearinghouse exchange core to facilitate project development.	Provide access when fires occur to reduce spread. Enhance community fire defense.	Ongoing, long range	1	Regular monitoring to determine project success in reducing fuel loading and enhanced access.	Grants: SRA (only on SRA lands), California Fire Safe Council, California Forest Improvement Program (CFIP), Natural Resources Conservation Service (NRCS), Federal Emergency Management Agency (FEMA), Green House Gas Reduction Fund (GHGRF). Fund sustainability efforts through the property owner/ manager, or local/ state agency that is the responsible party.
FR2	Work with parks and open space agencies to have some road width trails for better access where appropriate.	Open Space Authority, MROSD, State Parks, County Parks, Palo Alto Parks, San Jose Parks, and other municipal parks that bound up to the WUI.	Maintain road width trails for fire and park patrol vehicles where possible to facilitate access. Use trails to anchor fuel breaks. Incorporate a map component and use the Earthquake Clearinghouse exchange core to facilitate project development.	Protect life and property by improving access for emergency vehicles to open space areas and WUI areas adjacent to open space.	Within 2 years	1	Regular maintenance schedule should be implemented to ensure clearance levels are maintained.	
FR3	Encourage continued grazing in parks and open space for grass/light fuel maintenance.	County Parks, MROSD, Open Space Authority, State Parks, water company/district properties.	Utilize browsing as fuel reduction and maintenance technique, especially adjacent to WUI areas.	Reduce fuel loading of fine fuels that could increase wildfire spread to WUI areas.	Ongoing	2	Regular monitoring needed to ensure against environmental damage and invasive species.	Grants: SRA (only on SRA lands), California Fire Safe Council, CFIP, NRCS, FEMA, GHGRF

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ID	Project Description	Location and Responsible Party	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/Funding Sources Available
FR4	Encourage use of prescribed fires where ecologically sound and feasible.	All jurisdictions where appropriate.	Utilize prescribed burn planning that follows agency and regulator protocols. Closely follow plan prescriptions.	Reduce fuel loading of fine fuels and understory species to mitigate potential for intense fire behavior in the event of an unplanned ignition.	Ongoing	1	Regular monitoring needed to ensure against environmental damage and invasive species into burned areas.	Grants: CAL FIRE vegetation management program, SRA (only on SRA lands), California Fire Safe Council, CFIP, NRCS
FR5	Land management agencies partner for clarity of prescribed fire use that is complementary to Greenhouse Gas Reduction Plan of California Air Resources Board.	MROSD, County Parks, Open Space Authority, California State Parks, Palo Alto Parks, San Jose Parks, and other municipal park agencies; private rangeland owners.	Establish prescribed burning program in partnership with Bay Area Air Quality Management District. Develop prescribed burning community of interest/council.	Open dialogue with Air Pollution Control District. Educate public. Encourage landowners. Provide expertise.	Ongoing	3	Regular monitoring to determine project success in reducing fuel loading through prescribed burning.	Grants: CAL FIRE vegetation management program, SRA (only on SRA lands), California Fire Safe Council, CFIP, NRCS
FR6	Adopt common power line clearance standards for WUI in LRA and SRA.	County in conjunction with utility companies.	Compare power line clearance ordinances in all local WUI jurisdictions. Coordinate with power utility providers to understand impacts and legal pathways. Where necessary adopt local ordinances consistent with intent of California Public Resources Code sections. Utilize Earthquake clearinghouse exchange core to facilitate project development.	Reduce fuel loading around critical utility infrastructure. Reduce potential for fire starts from downed lines and line strikes.	Within 2 years	1	Regular maintenance schedule should be implemented to ensure clearance levels are maintained.	California Public Resources Code and Office of Administrative Law for guidance Funding needs to be determined after impact assessment

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ID	Project Description	Location and Responsible Party	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/Funding Sources Available
FR7	Develop roadside fuel treatment program, including suite of methods available and sustainability mechanism.	All jurisdictions where appropriate; Caltrans, county and city road agencies, private road associations, PG&E, cable and phone companies.	Determine suite of treatment methods allowed and restriction for roadside hazard reduction including mowing, mastication, chemical, plantings, mulching, etc. Develop treatment plan and rotation schedule for roadside treatments, focusing of primary evacuation or access/egress corridors. Track with the Earthquake Clearinghouse Exchange Core.	Reduce fuel loading around roads and highways to ensure safe passage of vehicles in event of evacuation and reduce unplanned ignitions from vehicles and highway users.	Within 2 years	1	Regular maintenance schedule should be implemented to ensure clearance levels are maintained. Develop standards for road crews.	Grants: SRA (only on SRA lands), California Fire Safe Council; CFIP; NRCS, FEMA, GHGRF
FR8	Develop list of fuel treatment methodologies with cost per acre/day (other metric) that can be used for hazardous fuel treatment.	Fire Safe Council.	Educational tool for land/property owners regarding various methods, techniques, and cost for various fuel treatments. Cost estimator for project management and grant applications. Pros/cons/restrictions on use of various techniques.	Provide residents with a usable list that helps them to prioritize treatments and plan their defensible space projects.	Within 1 year	1	Monitor effectiveness of different treatment approaches and implement adaptive approach for updating the list depending on uptake of various methods.	National Park Service, U.S. Forest Service, CAL FIRE, PG&E resources of techniques in use and cost/benefit
FR9	Establish assistance program for hazardous fuel reduction for physically or fiscally challenged parcels.	Throughout all jurisdictions in the county.	Identify barriers to achieving parcel-level defensible space and establish assistance program of resources: education, consulting, guidance, people, and funding. Establish subsidy or other assistance programs.	Ensure that individual properties with poor property hygiene do not put adjoining properties at risk in event of wildfire. For residents who are not capable of implementing good property hygiene.	Within 2 years	2	Establish levels of participation by assistance type	Grants: SRA (only on SRA lands), California Fire Safe Council, CFIP, NRCS, FEMA, GHGRF

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ID	Project Description	Location and Responsible Party	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/Funding Sources Available
FR10	Develop agency partnership to establish creation of hand crew for fire hazard reduction (need not be a fire crew).	County Fire, CAL FIRE, County Sheriff, California Conservation Corps.	Establish a local crew for use in fire defense improvement work throughout the county. Can be through private resources, contract with California Conservation Corps or Sheriff.	Primary purpose is to carry out CWPP objectives.	Within 3 years	2	Monitor cost effectiveness through benefit cost ratio approach.	Grants: SRA (only on SRA lands), California Fire Safe Council, CFIP, NRCS, FEMA, GHGRF
FR11	Create Sustainable programs for creating defensible space at the parcel level.	Homeowner, Fire Safe Councils, HOAs, local fire departments, administrators for SRA fee distributions, etc.	Example projects - curbside green waste pickup programs, community chipping piles, drive-up chipping, on-site chipping.	Ensure that defensible space actions are sustained in all communities.	Within 1 year	1	Regular maintenance schedule should be implemented to ensure clearance levels are maintained.	Grants: SRA (only on SRA lands), California Fire Safe Council, CFIP, NRCS, FEMA, GHGRF

Table 14.2. Recommended Public Education and Outreach Projects

ID	Project	Presented by	Target Date	Priority	Resources Needed	Serves to
EO1	Educate citizens on how to achieve contemporary WUI code compliance in retrofits/cost: benefit ratio. Provide workshops and/or demonstration site.	Fire Safe Councils, County Fire, CAL FIRE	Within 2 years	1	<ul style="list-style-type: none"> Workshop expenses, personnel Workshop venues Demonstration site Strategize on avenues for engaging the public. Be opportunistic- engage residents following a local wildfire or at existing well-attended events- i.e. annual BBQ, Pancake Breakfasts, Open days offered by Fire Departments. 	<p>Increase compliance with County code.</p> <p>Reduce fire risk level for individual parcels and community as a whole.</p>
EO2	Analyze playing with fire ignitions and focus education programs at vicinity schools.	County Fire, CAL FIRE, municipal fire departments , Fire Safe Council	Within 1 year	1	<ul style="list-style-type: none"> School liaison Materials for presentations Personnel Video processing, could utilize You Tube platform Could be a college student project 	<p>Adds to existing programs provided by County Fire and Fire Safe Council targeted at school age children.</p> <p>Reduces number of ignitions.</p>
EO3	<p>Organize a community group made up of residents and agency personnel to develop materials and communicate relevant defensible space messages. Could coordinate with fire departments or Fire Safe Council.</p> <p>Possibility to coordinate actual implementation of defensible space and slash clear-up with the local Eagle Scout group or high school volunteers.</p>	Fire Safe Council, fire departments , local residents, Eagle Scouts, High School Community Volunteer Program	Within a year	1	<ul style="list-style-type: none"> Funding to help cover costs of materials (green waste removal or chipper) and participation. People trained in defensible space practices. 	<p>Engage diverse stakeholders in reaching out to community members and encourage defensible space practices.</p> <p>Empower homeowners to make affordable and effective changes to reduce the vulnerability of individual homes.</p>

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ID	Project	Presented by	Target Date	Priority	Resources Needed	Serves to
EO4	Media involvement. Develop a local newspaper column that provides fire safety information, promotional information for volunteer fire departments, fire announcements, and emergency planning.	Agency Public Information Officers, Emergency Manager, Commission	Within 1 year	1	<ul style="list-style-type: none"> Columns, information, and articles to be provided by fire departments, city, county, state representatives. 	Protect communities and infrastructure through increasing public awareness and providing a channel for information regarding emergency fire response.
EO5	Emergency preparedness meetings. Use American Red Cross volunteers and other preparedness experts. Attend community functions and hold special meetings to provide guidance for creating household emergency plans. Use Ready, Set, Go! program.	American Red Cross, city, county, state personnel, Fire Safe Council	Within 1 year	1	<ul style="list-style-type: none"> Written materials- could use existing literature. 	Improve preparedness by facilitating the communication between family members and neighbors about what procedures to follow in the event of a wildfire.
EO6	Work with Caltrans to install or utilize existing electronic message signs on major highways to notify public of extreme fire danger.	County, Caltrans	Within 1 year	1	<ul style="list-style-type: none"> Funds for new sign installing and/or maintenance of existing signs. 	Inform residents, commuters and tourists of extreme fire danger in order to reduce accidental ignitions and encourage pre-planning.
EO7	Plan livestock evacuation routes and inform communities. Work with emergency management officials to plan evacuation routes for residents with livestock and then hold community meetings to disseminate to the public.	Emergency management officials, livestock agencies/ civic groups	Within 2 years	1	<ul style="list-style-type: none"> GIS software or maps- coordinate with EQ Clearing House- GIS sharing. 	Protect communities, livestock and infrastructure through increased awareness.

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ID	Project	Presented by	Target Date	Priority	Resources Needed	Serves to
EO8	Provide webinars for homeowners to learn about Fire Safe communities and property.	County Fire, CAL FIRE, municipal fire departments, Fire Safe Councils	Within 2 years	2	<ul style="list-style-type: none"> Workshop expenses Personnel Workshop venues Video processing Could be a college student project 	<p>Increase reach for public education and outreach.</p> <p>Provide access to information to residents who don't typically attend in-person meetings or workshops.</p> <p>Provide a consistent and standard message to residents.</p> <p>Improve individual adoption of action to reduce structural ignitability.</p>
EO9	Targeted wildfire info workshops. Review existing programs (Ready, Set, Go!; Firewise) for suitability of existing fire prevention workshops and where necessary fund development of unique adapted presentations to highlight how a fire might affect particular groups in the community.	Active local residents, Fire Safe Council	Within 1 year	1	<ul style="list-style-type: none"> Funding for research, writing, and presentation of detailed information on how large-scale wildfire would affect the target audience and the measures that could be taken to reduce the threat. 	
EO9.1	Targeted wildfire education materials. Review existing programs (Ready, Set, Go!; Firewise) for suitability of existing fire prevention materials and where necessary fund development of unique adapted materials to highlight how a fire might affect particular groups in the community.	Active local residents, Fire Safe Council	Within 1 year	1	<ul style="list-style-type: none"> Flyers could be sent out with utility bills or other community mailings. Consider "Simtable" use for visualizing various emergency scenarios for residents/HOA leaders and agency personnel. 	Deliver a clear and consistent message that impacts of wildfire are far-reaching and that it is in the best interest of a diverse set of stakeholders to become involved in planning and preparing for fire.
EO10	Insurance Service Office informational meetings: Invite Insurance Services Office representatives to speak to groups regarding ways to improve insurance ratings in the community.	Insurance Services Office in conjunction with local volunteer fire departments	Within 2 years	2	<ul style="list-style-type: none"> Resources provided by Insurance Services Office. Venue provided by fire department. 	Communities can learn how to improve their insurance ratings, which will reduce insurance costs in their community by implementing wildfire prevention measures.

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ID	Project	Presented by	Target Date	Priority	Resources Needed	Serves to
EO1 1	<p>Increase signage/replace or augment existing signage.</p> <p>Use existing signage to spread seasonally adjusted fire prevention message along highways and in public open space areas (trailheads, info kiosks) to reduce human ignitions.</p> <p>Promote the use of existing electronic signs at firehouses and other locales to display fire prevention information, safety messages, and fire danger rating linked to safety actions.</p>	County Fire	Within 2 years	2	<ul style="list-style-type: none"> Mostly existing signs and posting sites, people to post and update signs. Replace, or augment the existing Smokey Bear signs with electronic Fire Danger Warning Signs that are solar powered, LED displays (visible day & night), and accessible and programmable through an internet website. 	Protect communities and infrastructure by raising awareness of local citizens and those traveling in the area about actions that can prevent fire.
EO1 2	<p>Promote and increase the use of prescribed burning as a fuels reduction method.</p> <p>Gain public support for using prescribed burns to reduce fuel loads and to improve ecosystem health through a pilot burn project and demonstration site.</p> <p>Consider developing informational material for distribution at natural areas or via email distribution lists.</p>	CAL FIRE/ MROSD/Open Space Authority	Within 2 years	2	<ul style="list-style-type: none"> Prescribed burn prescription, type-6 engines, hand crews, equipment. Research and costs of producing¹, printing, and distributing paper informational flyer. 	Protect communities and infrastructure by reducing fuel loads.
EO1 3	<p>Implement Firewise Communities programs.</p> <p>Work with communities to participate in Firewise Communities and prepare for fire events. Hold Firewise booths at local events for example during the October Fire Awareness Week each year.</p>	Fire Safe Council, CAL FIRE, County Fire	Within 2 years	2	<ul style="list-style-type: none"> Firewise Communities educational materials. 	Protect communities and infrastructure through increased awareness and defensible space.

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ID	Project	Presented by	Target Date	Priority	Resources Needed	Serves to
EO1 4	<p>Fire agencies establish partnership with San Jose State University (or other colleges) for student intern programs for GIS, plans, weather, environmental reviews, etc.</p> <p>GIS work should be in conjunction with the EQ Clearinghouse and Exchange Core.</p>	County Fire Department	Within 2 years	3	<ul style="list-style-type: none"> • Admin costs • Liaison 	<p>Provides resources for agencies to implement projects in the CWPP.</p> <p>Improves technical capabilities of Agencies to run fire modelling programs and train staff in modelling protocols.</p> <p>Engages students in real-life training opportunities.</p>

Table 14.3. Recommended Firefighting Capability Projects

ID	Project Description	Fire Department/Agency	Benefits of the Project to the Community	Timeline	Priority (1,2,3)	Resources/Funding Sources Available
FC1	Require a minimum of 5,000 gallons of water storage at single parcel developments where no community water system exists. Incorporate map component and use Earthquake Clearinghouse GIS Exchange Core.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments.	Alleviates public and agency concern for limited water supply in remote areas. Improves firefighting capability. Enhances firefighter safety. Enhances protection of life and property.	2 years	2	Requires local fire code and land development amendments
FC2	Define safe refuge areas and establish maintenance program in WUI areas where fire behavior and evacuation timing is problematic. Incorporate map component and use Earthquake Clearinghouse GIS Exchange Core.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments, MERC and other groups that maintain evacuation centers.	Provides safety measure for residents of rural areas in event that evacuation is limited. Provides for firefighter safety by creating escape route.	2 years	1	Grants: SRA (only on SRA lands), FEMA, California Fire Safe Council, Department of Homeland Security (DHS)
FC3	Identify carless population/evacuation assistance needed locations. Establish registry in cooperation with emergency management agencies. Incorporate map component and use Earthquake Clearinghouse GIS Exchange Core.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments. Emergency management agencies.	Aids in safe evacuation of residents, those with evacuation assistance needs.	2 years	1	FEMA, DHS

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ID	Project Description	Fire Department/Agency	Benefits of the Project to the Community	Timeline	Priority (1,2,3)	Resources/Funding Sources Available
FC4	Require evacuation time modeling for all WUI areas. Establish benchmark s time standard for evacuation. Requires amendment to planning conditions and/or land use ordinances.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments.	Helps fire response agencies pre-plan for evacuations. Helps identify areas where mitigation measures are needed to facilitate safe evacuation.	1 year	1	Developers fund studies
FC5	Develop WUI pre-plans and accompanying evacuation plans for all WUI areas in Santa Clara County using standardized format.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments.	Helps fire response agencies pre-plan for evacuations. Helps identify areas where mitigation measures are needed to facilitate safe evacuation. Helps establish consistent model across all agencies.	1 year	1	Grants: SRA (only on SRA lands), FEMA, California Fire Safe Council, DHS
FC6	Create secondary accesses in communities that have single access and poor road systems. Require major coordination with planning agencies and governing bodies for land use changes or retrofit requirements.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments. Land use planning agencies. Governing bodies.	Alleviates evacuation concerns of residents living in areas with poor ingress/egress. Provides for improved response capabilities and reduces risk that responding emergency vehicles will conflict with evacuation of residents.	2 years	1	HOAs, road associations, county service areas
FC7	Obtain additional helicopters/air resources for suppression.	County Fire/CAL FIRE/Fire Safe Councils/municipal fire departments.	Provides back-up to on-the-ground resources. Improves suppression capabilities in inaccessible areas where use of ground resources would threaten firefighter safety. Improves response time to aid in protection of life and property.	5 years	2	See Appendix D

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ID	Project Description	Fire Department/Agency	Benefits of the Project to the Community	Timeline	Priority (1,2,3)	Resources/Funding Sources Available
FC8	Where road systems are antiquated and do not provide for proper evacuation or two-way flow, require removal of obstructions or upgrade to minimum two-lane road system over time.	County Planning.	Alleviates evacuation concerns of residents living in areas with poor ingress/egress. Provides for improved response capabilities and reduces risk that responding emergency vehicles will conflict with evacuation of residents.	2 years	1	HOAs, road associations, county service areas.
FC9	Where possible, encourage setting up water sources with multiple uses (e.g., fire suppression and wildlife water, cattle water, etc.).	Fire Safe Councils working with communities.	Provides for use of livestock and wildlife water tanks that could be utilized for fire protection.	1 year	3	See Appendix D
FC10	Investigate potential for use of drones to assess and monitor wildfire.	County Fire.	Drones could be a useful tool for the monitoring of wildfire in areas with limited access but future research is needed to fully assess their utility and application. The fire departments could launch a pilot study to determine effectiveness of the tool.	Within 3 years	3	See Appendix C
FC11	Investigate and potentially install fire detection robots to alert departments of a fire start in remote areas.	County Fire.	Uses technology for single-tree wildfire detection solution that help forestry agencies and fire protection professionals manage the risks of fire damage cost effectively.	Within 2 years	1	Private companies provide robotic technology, including: Insight Robotics http://www.insightrobotics.com/solutions/wildfire-detection Wildland Detection Systems http://www.wildlandsystems.com/ Fire Alert MK1 http://vigilys.com/technology/firealert/

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ID	Project Description	Fire Department/Agency	Benefits of the Project to the Community	Timeline	Priority (1,2,3)	Resources/Funding Sources Available
FC12	Implement countywide program to replace existing house number markers with reflective markers that meet consistent standard.	County Fire.	Improves fire response times and assists out-of-town responders who are not familiar with the local area, especially at night. Would need funding to implement program. Could consider private contributions.	Within 1 year	1	SCFSC
FC13	Develop a coordinated approach between fire jurisdictions and water supply agencies to identify needed improvements to the water distribution system, initially focusing on areas of highest wildfire hazard.	County Fire, CAL FIRE, Fire Safe Council, San Jose Water.	Improve firefighting response if water is more readily available or closest locations could be identified on a GIS map on a tablet/computer.	Within 2 years	1	County Fire
FC14	Where possible encourage sharing of water sources in areas where residential water supplies may be low or non-existent during periods of drought or when wells/springs have run dry.	Fire agencies, local community organizations, local water purveyors.	Encouragement and assistance from Fire Safe Council can provide a catalyst for action. Example: Loma Prieta Fire Department is providing small grants to homeowners to purchase and install additional water tanks on private residential lots where a reliable supply of water exists. These tanks then provide water for adjacent properties where a well or spring may be seasonal or dry.	1–5 years	1	County Fire
FC15	Add large capacity water storage tanks and hydrants where open space and park agencies establish trail head parking areas, operating facilities such as horse stables and camping areas.	County Fire, CAL FIRE, open space organizations	Alleviates public and agency concern for limited water supply in remote areas.	Within 5 years	3	County Fire NRCS, SRA fees, GHGR grants

Table 14.4. Recommendations for Structural Ignitability Projects

ID	Project	Presented by	Programs Available	Description	Priority (1,2,3)	Timeline
SI 1	Retrofit/eliminate flammable roofs.	County Planning in conjunction with County Fire and municipalities.	FEMA grants	Require elimination of all flammable roofs through attrition or time deadline.	1	By 2030
SI 2	Identify all WUI areas (including very high, high, and moderate FHSZs in LRAs and SRAs); standardize regulations/standards/codes in all WUI areas.	County Planning in conjunction with County Fire and municipalities.		Make all WUI building codes, defensible space and other prevention regulations standard across all jurisdictions. Data should be shared via the Earthquake Clearinghouse and Exchange Core.	2	2020
SI 3	Encourage/require retrofit to achieve contemporary WUI codes when remodeling beyond 50%.	County Planning in conjunction with County Fire and municipalities.		Require or encourage gradual updating of existing structures to the standards identified in the most contemporary WUI codes though remodels or owner interest. Acknowledge that some codes cannot be met on existing parcels.	2	Adopt ordinances by 2020
SI 4	Adopt common defensible space standards throughout the county.	County Fire, CAL FIRE, municipal fire departments.		Make all WUI building codes, defensible space and other prevention regulations standard across all jurisdictions.	1	Next 3 years
SI 5	Adopt landscape standards for recommended plant landscape materials. Standards or guidelines. Standards usually have force of law behind them.	Fire Safe Councils to lead.	Research Firewise plants suitable for the region. Develop plant list, poster materials and research demonstration site. Firewise Communities USA	Educate property owners, landscape firms and landscape architects in appropriate ornamental plantings, mulches, and landscape design/maintenance in WUI areas.	3	Next 2 years

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ID	Project	Presented by	Programs Available	Description	Priority (1,2,3)	Timeline
SI 6	Develop landscape contractor maintenance program for “Right Plant--Right Place” and maintenance. Consider consulting with the California Native Plant Society and wildlife biologists to create an area that is sensitive plant and animal friendly. These practices include no heavy pesticide use, limiting soil erosion, and a focus on using native plants.	Fire Safe Councils to lead.	Firewise Communities USA	Educate property owners, landscape firms and landscape architects in appropriate ornamental plantings, mulches, and landscape design/ maintenance in WUI areas.	2	Next 2 years
SI 7	Promote Firewise Community recognition program countywide; consider SCL amendments to Fire wise; partner with CERT and Neighborhood Watch. NOTE: Linked to EO 13.	Fire Safe Councils to lead in conjunction with Santa Clara County Fire Department, municipal fire departments.	Firewise Communities USA	Educate and outreach to bring communities into Firewise recognition programs.	2	Next 3 years
SI 8	Interactive tool for citizens to use on line, identify their property and what hazard/risks exist and mitigations they can apply to improve their survivability.	Santa Clara County Fire Department with revised Interra contract.	Interra	Pursue funding to increase contract provisions with Interra to provide public facing tool. Simplify tool and provide easy to follow instructions. Could develop YouTube informational video.	1	Next 3 years
SI 9	Create a countywide defensible space ordinance for parcels below certain size acreage (parcel size: i.e., 2 acres?), if not cleared by owner then county will clear. Could be tied to county weed abatement program.	Santa Clara County Fire Department, municipal fire departments, CAL FIRE.		To assure defensible space in WUI will be maintained; require property clear or agencies will clear and assess property owner. Link to enforcement of weed abatement.	1	Next 2 years

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ID	Project	Presented by	Programs Available	Description	Priority (1,2,3)	Timeline
SI 10	Public education program for embers and problems associated with embers, property hygiene, and defensible space.	County Fire, municipal fire departments, CAL FIRE, Fire Safe Councils.	Ready, Set, Go! Program. Institute for Business and Home Safety. NFPA. Fire Adapted Communities.	Educate property owners on best methods to reduce ember intrusion. Could use YouTube informational video of college student project.	1	Next 2 years
SI 11	Implement spring community yard clean-up days. In combination with Fire Safe Council chipper program.	County Fire, municipal fire departments, CAL FIRE, Fire Safe Councils.	Fire Safe Council chipping program Ready, Set, Go! CAL FIRE.	A community-led day of yard clean-up with fire mitigation in mind would encourage large numbers within the community to carry out mitigation measures and implementation of defensible space.	2	Next 2 years
SI 12	Assess and improve accessibility to property. Weekend program to inform homeowners about emergency response access.	Fire departments, Fire Marshal.		Inform homeowners about the importance of keeping driveways accessible to fire trucks and emergency responders.	1	Within 1 year
SI13	Consider and explore potential for development of a certificate of compliance program for homeowners that implement and maintain defensible space. Work with Insurance companies to determine if such a program could be viable.	County Fire, insurance industry	No known existing program.	Insurance companies carry out assessments of policy holder properties to ensure defensible space parameters have been met. There may be a possibility to combine the assessments carried out by County Fire and CAL FIRE with insurance standards in order to incentivize defensible space practices in the WUI.	3	Next 5 years

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ID	Project	Presented by	Programs Available	Description	Priority (1,2,3)	Timeline
SI 14	<p>Develop building/general contractor education program for “Reducing Structural Ignitability.”</p> <p>Consider consulting with Santa Clara County Contractors and CA State Fire Marshal to create an educational program for contractors doing new construction and remodeling on how to reduce structural ignitability.</p>	Fire Safe Councils to lead	<p>CA State Fire Marshal's Office: Firewise Communities USA: www.firewise.org</p>	Educate property owners, architects and contractors in appropriate building designs/ maintenance in WUI areas.	2	Next 2 years

Table 14.5. Recommendations for General Planning Projects

ID	Project Description	Method	Timeline for Action	Priority (1,2,3)	Monitoring/Sustainability	Resources/Funding Sources Available
GP1	Ensure project sustainability.	Have a target date for updating the datasets used in the risk assessment model and re-running the model. Establish trigger points for updating CWPP. Use Mello-Roos Community Facility Districts for new subdivision for sustainable hazardous fuel maintenance.	Annually	1	Establish annual oversight of the CWPP and project status. Get buy-in from Core Team members for long term commitment to CWPP review.	See Appendix D
GP2	Form a task force to do parcel level inspection work to enhance model; utilize portable data collection and ArcGIS as analysis tools.	Must have agency link to be accepted by the public. Agency responsibility would fall to the County Fire Department. Carryout parcel level assessments to enhance risk assessment model components at a finer scale. Add data to model and re-run as necessary.	2 years	1	Set target number of parcels to be assessed each year. Review number of parcels assessed each year at annual CWPP meeting.	See Appendix D
GP3	Use a countywide standard and method for continued data gathering and risk analysis.	Conduct funding to purchase a commercial application such as Fulcrum that provides a standard data collection platform that could be used on a smart phone.	2 years	1	Annual review of progress as part of Core Team.	See Appendix D
GP4	Improve partnerships across county boundaries.	Work with adjacent counties where there are shared risks and shared resources to ensure defensible space requirements and egress routes are both implemented maintained on both sides of the county line. The SCCFSC is currently working to establish a Santa Cruz County Fire Safe Council. Goal will be to increase partnerships with Santa Cruz agencies and other adjacent county agencies, and use existing relationships with the Santa Clara County Fire Safe Council. Provide community workshops that address cross-jurisdictional boundary concerns.	Next 2 years	1	Revisit success within a year by assessing project partnerships established across county boundaries.	See Appendix D
GP5	Add hyperspectral and LiDAR imaging to periodic aerial photography flights.	Work in conjunction with the County Assessor or other agency that acquires aerial photography of county and add additional sensing cameras to flights to acquire analysis data. Hyperspectral and LiDAR can provide in depth identification and analysis of hazards and risks.	1–3 years	1	Periodic new flights to update data sets.	Grants: FEMA, DHS, SRA (only on SRA lands), GHGRF

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ID	Project Description	Method	Timeline for Action	Priority (1,2,3)	Monitoring/Sustainability	Resources/Funding Sources Available
GP6	Continue support for and possible expansion of the Early Warning Wildfire Detection Camera System.	Review current established systems and assess public support. Install additional systems as support increases. Identify highest risk areas and most suitable vegetation and terrain for installation.	1–5 years	1	The technology for early warning detection cameras is continually being developed. All future plans should be adjusted as appropriate based on planned improvements to the system.	Ongoing funding is available from Verizon, CAL FIRE in Sacramento (the Loma Prieta Tower), University of California Lick/Santa Cruz, and several local HOAs
GP7	The CWPP serves as the wildfire component of LHMP and General Plan Safety and other element amendments.	Work with county and city planning to identify timeline for incorporation. Aim to have the CWPP incorporated into the Safety Element of the General Plan when the safety element is next revised. Getting it into the General Plan is equivalent to getting the CWPP adopted.	Next 5 years	2	The Core Group of stakeholders would need to ensure that the document is kept relevant in that time and position it for incorporation.	See Appendix D
GP8	Develop increased fundraising capacity	Identify grants to fund programs in planning, outreach and education, structural ignitability, fuel reduction and other areas relevant to SCCFSC's mission. Secure multi-year local funding agreements from each community at risk. Develop membership and donations program. Consider pursuing an endowment for funding executive and management functions.	1–5 years	1	Review number and value of grants and funding agreements sought. Review success of securing funding.	
GP9	Develop Fire Safe Council Strategic Plan	Review internal systems and resources for capacity to implement and sustain growth of programs. Identify goals for each program area. Develop targeted annual work plan and budget for each program area.	1–2 years	1	Review/update SCCFSC strategic plan within 3 months of each CWPP review and update.	

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