

## **ANNEX 17. OPEN SPACE AREAS AND WATER PURVEYORS**

This annex provides background and project matrixes for various open space organizations described below. Separate annexes are provided for Santa Clara County Parks (Annex 18) and the Midpeninsula Regional Open Space District (MROSD) (Annex 16). The countywide Community Wildfire Protection Plan (CWPP) also provides information on open space lands in Sections 2.4.3, 2.4.4, 3.1.4, and 3.1.5. Open space areas are also delineated in Figure 17.1.

### **SANTA CLARA VALLEY OPEN SPACE AUTHORITY**

The Santa Clara Valley Open Space Authority (OSA) maintains multi-use trails for hikers, bicyclists, and equestrians and is committed to opening new lands to visitors as funding allows. The trails are open every day of the year and are free to the public.

The OSA also manages and maintains properties that are currently closed to the public. These areas are closed for various reasons, including habitat protection, land management, user safety, and funding limitations. Occasionally, the OSA opens these areas to visitors on special-activity days.

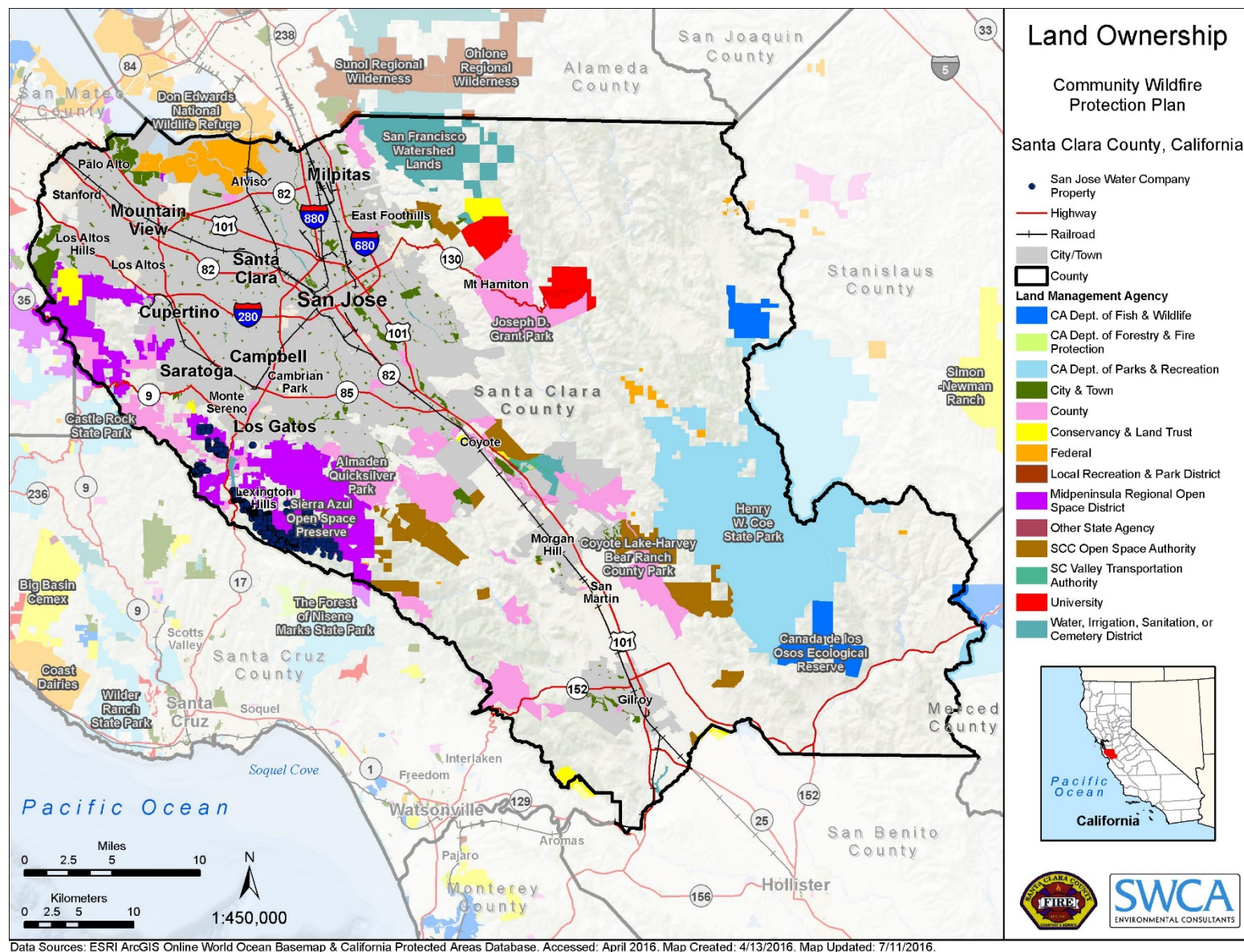
The three preserves open to the public that the OSA manages include:

**Coyote Valley Open Space Preserve** – a 348-acre preserve located at the western edge of Coyote Valley between San Jose and Morgan Hills. The preserve’s many conservation values include a rich cultural history, valuable water resources, exceptional recreational opportunities, farm and ranchland, and a critical wildlife corridor.

**Rancho Cañada del Oro Open Space Preserve** – a 4,685-acre preserve located in the foothills of the Santa Cruz Mountains in south Santa Clara County. The preserve offers a number of paved and unpaved trails open to mountain bikers, hikers, and equestrians.

**Sierra Vista Open Space Preserve** – a 1,676-acre preserve located in the Eastern Foothills perched atop Alum Rock Park. The preserve provides vital watershed protection for Penitencia Creek and is home to a number of protected wildlife species, such as California red-legged frog, tiger salamander, golden eagle, mountain lion, bobcat, and gray fox. A cattle grazing program is in place as part of a plan to reduce invasive plants and restore native species. The preserve has an extensive trail system totaling more than 10 miles and is part of the Bay Area Ridge Trail, a 550-mile regional multi-use trail system planned along the ridge lines that encircle the San Francisco Bay.

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**Figure 17.1. Open space areas throughout Santa Clara County.**

## **ORGANIZATION AND JURISDICTION**

The OSA is an independent special district and is governed by an elected board of directors. Its jurisdiction includes all of Santa Clara County with the exception of lands and communities within the boundaries of the MROSD and the city of Gilroy. The cities of Milpitas, Santa Clara, Campbell, San Jose, and Morgan Hill participate in the OSA.

The OSA was created by the state legislature in 1993 in order to maintain the ecological integrity of the region. A Citizen's Advisory Committee (CAC) serves as a community liaison, informing, engaging, and educating the public on the important role of the OSA and the services it provides.

The OSA is funded through a \$24 a year parcel tax (referred to as Measure Q) and a benefit assessment (referred to as District 1). Grants and gifts are another source of revenue.

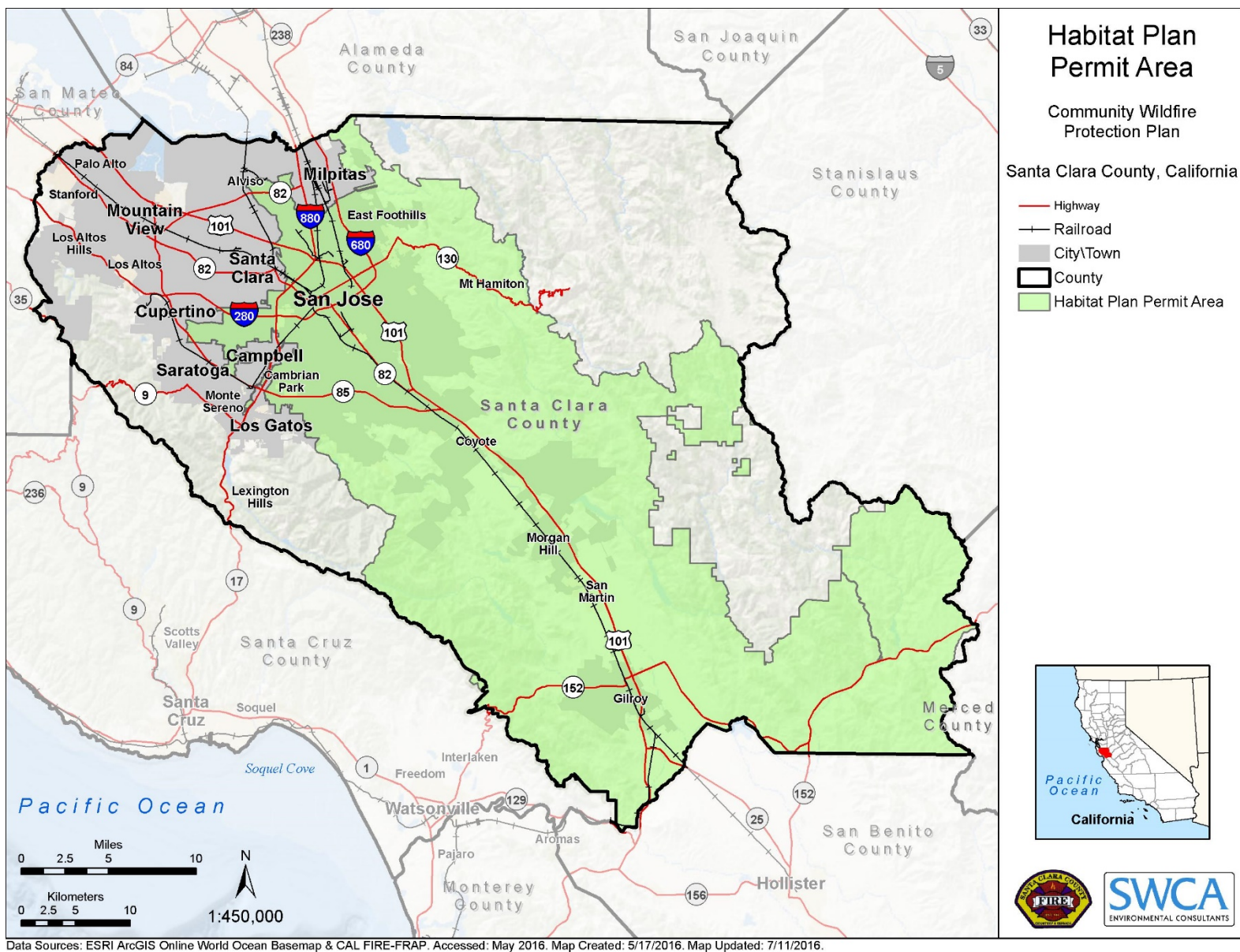
## **PLANNING TEAM PARTICIPATION**

The OSA has actively engaged in the CWPP planning process through attendance at an agency workshop and through outreach to the public.

## **SANTA CLARA VALLEY HABITAT AGENCY**

The Santa Clara Valley Habitat Agency is responsible for administering and implementing the Santa Clara Valley Habitat Plan, a federally approved Habitat Conservation Plan and state approved Natural Communities Conservation Plan. The Habitat Plan provides for the protection and recovery of 18 plant and animal species of special conservation concern, e.g., species listed by the federal or state government as threatened or endangered. The jurisdictions participating in the Habitat Plan include the cities of Gilroy, Morgan Hill and San Jose; Santa Clara County; the Santa Clara Valley Transportation Authority; and the Santa Clara Valley Water District. Permits are required for discretionary projects affecting habitat and species covered by the Habitat Plan. Fees are collected to compensate for impacts on covered species and habitats. The fees, in turn, are used to acquire properties with equivalent habitat to compensate for the losses. These properties become part of the conservation reserve system that will eventually encompass over 46,000 acres of oak woodland, serpentine grassland, annual grassland, and other habitat types. Figure 17.2 delineates the Habitat Plan Permit Area.





**Figure 17.2. Habitat Plan permit area.**

## ***ORGANIZATION AND JURISDICTION***

The Habitat Agency is a Joint Powers Authority (JPA) composed of the cities of Gilroy, Morgan Hill, and San Jose, and Santa Clara County. The JPA is limited to the four participating jurisdictions because the Joint Exercise of Powers Act requires that a JPA can only exercise powers held by all the participating agencies. Of the participating agencies, only the four jurisdictions have the authority to adopt the Habitat Plan fees. Because all of the permittees are responsible for implementing the Habitat Plan, they have a role in the Habitat Agency. The Habitat Agency has two decision-making bodies, a Governing Board and an Implementation Board.

## ***PLANNING TEAM PARTICIPATION***

The Habitat Agency has actively engaged in the CWPP planning process through attendance at an Agency Workshop and contributions to the document.

## **WATER PURVEYORS**

### ***SAN JOSE WATER COMPANY***

Founded in 1866, the San Jose Water Company is an investor-owned public utility, serving over one million people in the San Jose metropolitan area. It provides groundwater from more than 100 wells for 40% of its supply and purchases treated water from the Santa Clara Valley Water District for 50% of its supply. An additional 10% of its supply comes from its watershed in the Santa Cruz Mountains, treated at two water treatment plants.

## ***PLANNING TEAM PARTICIPATION***

San Jose Water Company has been actively engaged in the planning process through attendance on the Core Team and at community workshops.

### ***SANTA CLARA VALLEY WATER DISTRICT***

Founded in 1929, the Santa Clara Valley Water District contains 10 reservoirs that impound water from storm runoff, as well importing water from the Sierra Nevada and pumping water from aquifers. The water district manages about 275 miles of creeks in Santa Clara County, or about one-third of the county's 800 miles of creeks and rivers. In partnership with cities and Santa Clara County, the water district also provides open space and recreational opportunities at many of its reservoirs and creeks. The Santa Clara Valley Water District Board of Directors comprises seven members each elected from equally divided districts drawn through a formal process.

## **WILDLAND URBAN INTERFACE AREA DEFINED**

Wildland urban interface (WUI) refers to areas where residential development, from a few scattered houses to larger subdivisions or communities, exists immediately adjacent to or nearby parks, open space preserves, or other relatively undeveloped "wildlands." Important issues within this interface include defensible space around residential structures, emergency vehicle access, and

residential fire improvements such as water tanks, fire hydrants, sprinklers, and fire-resistant construction techniques.

### ***FIRE HISTORY***

Many of the vegetation communities on open space lands evolved with the occurrence of periodic fire and have acquired unique adaptations to withstand and regenerate after a fire. Without periodic fire, these plant communities build abnormally high and dangerous fuel levels and are susceptible to large-scale destructive fire events.

For additional fire history information countywide, please see Figure 3.5 in the countywide CWPP document.

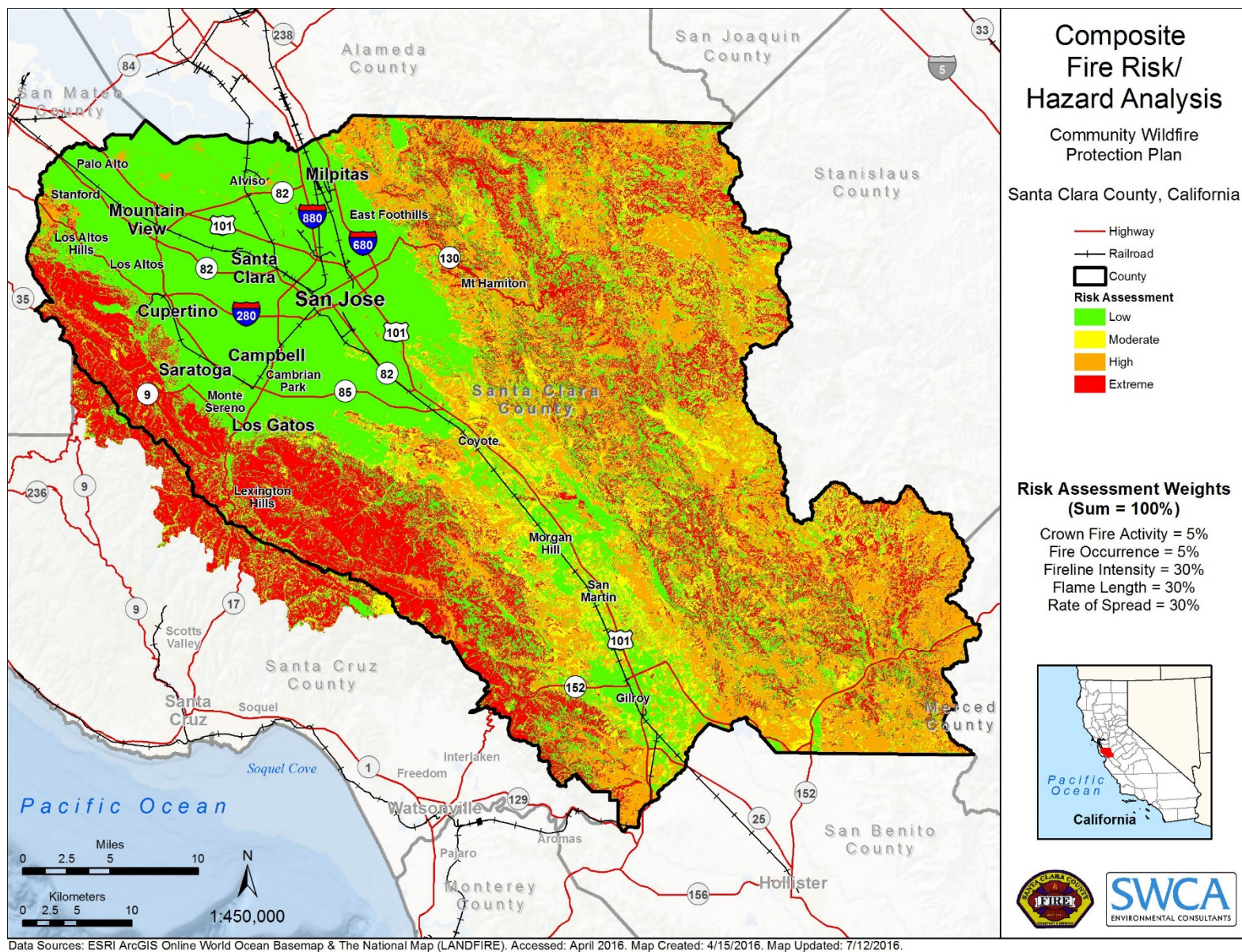
### ***HAZARDOUS FUEL CHARACTERISTICS***

For fuel model information for the county, please refer to Section 4.6.3 and Figure 4.3 in Chapter 4 of the countywide CWPP.

### **RISK/HAZARD ASSESSMENT**

The countywide CWPP includes a Composite Fire Risk/Hazard Assessment that uses fire behavior modeling to determine potential fire behavior and is based on fuel characteristics, topography, weather, and fire history. The Composite Risk/Hazard Assessment for the planning area is shown in Figure 17.3. For more information on the methodology for this assessment please refer to Section 4.6.1 in Chapter 4 of the countywide CWPP.





**Figure 17.3. Composite Risk/Hazard Assessment for Santa Clara County.**

## **IDENTIFY CRITICAL INFRASTRUCTURE AND COMMUNITY VALUES AT RISK**

Protecting critical infrastructure is of highest priority. Losses are not just the cost of replacing physical facility, but the cost associated with loss of the service, which can be significantly more than the facility costs. Loss of services from infrastructure sites can also be far reaching and affect people and operations at considerable distance from the fire itself.

Critical infrastructure is defined as electrical substations and transmission facilities; cellular, television, radio, and other telecommunication sites; railroad structures; highway structures; navigation and coordination facilities; and other sites that are crucial to providing and coordinating essential and business services.

Open space lands provide recreational opportunities to the public and are therefore important community values that are at risk from wildfire. Many open space lands have trails for hikers, bikers, runners, equestrians, and dog walkers. Some open space lands are more or less developed with varying degrees of facilities, garbage cans, parking, restrooms, and water. These recreational facilities are valued by the public and as such prioritized for protection. Open space properties also provide critical protection to watersheds, wildlife and sensitive species habitat, all of which are recognized community values at risk.

## **MITIGATION PROJECTS AND PRIORITIZATIONS**

The following project matrixes have been developed by the community and Core Team to direct strategic level project planning across the county (Table 17.1–Table 17.5). The matrixes are broken down into projects for addressing public education and outreach, reducing structural ignitability, improving fire response capability, and reducing hazardous fuels. Where specific projects have been identified for a particular open space organization, they are noted as tiered projects. It is expected that the matrixes will evolve as additional projects are added by the open space organizations throughout the county.



**Table 17.1. General Planning Project Recommendations**

ID	Project Description	Method	Timeline for Action	Priority (1,2,3)	Monitoring/Sustainability	Resources/Funding Sources Available
<b>GP1</b>	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.	Refer to Appendix D
<b>GP2</b>	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.	Refer to Appendix D
<b>GP3</b>	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.	Refer to Appendix D
<b>GP4</b>	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. Work with Santa Cruz County to establish a Santa Cruz County FireSafe Council. Increase partnerships with Santa Cruz agencies and other adjacent county agencies, and use existing relationships with the Santa Clara County FireSafe 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	Refer to Appendix D
<b>GP5</b>	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, Department of Homeland Security SRA (only on SRA lands), GHGR

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ID	Project Description	Method	Timeline for Action	Priority (1,2,3)	Monitoring/Sustainability	Resources/Funding Sources Available
<b>GP6</b>	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 homeowner associations
<b>GP7</b>	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.	Refer to Appendix D
<b>Non-tiered General Projects for OSA</b>						
<b>OSA GP1</b>	OSA Board adopts a fuels reduction policy	Create overarching policy for OSA to grow fire reduction program	2016	1		OSA
<b>OSA GP2</b>	OSA develops a vegetation management plan	Identify areas of risk on OSA Preserves to prioritize treatment, identify treatment options, and standardize treatment methods/ processes. Includes mapping component.	2016-18	1		OSA , outside grants
<b>OSAGP3</b>	OSA Board develops a no smoking policy for OSA Preserves	Through Board consultation/planning	2016	1		OSA
<b>OSA GP4</b>	OSA develops a visitor and cattle evacuation plan	Identify safe evacuation routes to provide for safety of visitors and livestock on OSA Preserves	2021	2		OSA, outside grants
<b>OSA GP5</b>	Wildfire risk reduction projects	Identify and apply for outside funding to plan and implement wildfire risk reduction projects and strategies	ongoing	3	Augment limited funding available	OSA, outside grants
<b>OSA GP6</b>	OSA participates as Core Team member in for SCCCWPP	Engage with Core Team and attend CWPP update meetings. Strengthen communication and partnership between agencies	2016/Ongoing	1		OSA

**Table 17.2. Recommendations for Public Outreach and Education**

ID	Project	Presented by	Target Date	Priority (1,2,3)	Resources Needed	Serves to
<b>EO1</b>	Educate citizens on how to achieve contemporary WUI code compliance in retrofits/cost: benefit ratio. Provide workshops and/or demonstration site.	FireSafe Councils, County Fire, CAL FIRE	Within 2 years	1	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.	Increase compliance with County code.  Reduce fire risk level for individual parcels and community as a whole.
<b>EO2</b>	Analyze playing with fire ignitions and focus education programs at vicinity schools.	County Fire, CAL FIRE, municipal fire departments, FireSafe Council	Within 1 year	1	School liaison Materials for presentations Personnel Video processing, could utilize You Tube platform Could be a college student project	Adds to existing programs provided by County Fire and FireSafe Council targeted at school age children.  Reduces number of ignitions.
<b>EO3</b>	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.  Possibility to coordinate actual implementation of defensible space and slash clear-up with the local Eagle Scout group or high school volunteers.	FireSafe Council, fire departments, local residents, Eagle Scouts, High School Community Volunteer Program	Within a year	1	Funding to help cover costs of materials (green waste removal or chipper) and participation. People trained in defensible space practices.	Engage diverse stakeholders in reaching out to community members and encourage defensible space practices.  Empower homeowners to make affordable and effective changes to reduce the vulnerability of individual homes.
<b>EO4</b>	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	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.

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ID	Project	Presented by	Target Date	Priority (1,2,3)	Resources Needed	Serves to
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, FireSafe Council	Within 1 year	1	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	Funds for sign installing and maintenance	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	GIS software or maps- coordinate with EQ Clearing House- GIS sharing.	Protect communities, livestock and infrastructure through increased awareness.
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	Workshop expenses Personnel Workshop venues Video processing Could be a college student project	Increase reach for public education and outreach.  Provide access to information to residents who don't typically attend in-person meetings or workshops.  Provide a consistent and standard message to residents.  Improve individual adoption of action sot reduce structural ignitability.
EO9	Targeted wildfire info workshops  Review existing programs (Ready, Set, Go!; Firewise) for suitability of existing fire prevention materials and where necessary fund development of unique adapted materials and presentations to highlight how a fire might affect particular groups in the community.	Active local residents, Fire Safe Council	Within 2 years	2	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.	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.



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ID	Project	Presented by	Target Date	Priority (1,2,3)	Resources Needed	Serves to
<b>EO9.1</b>	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, FireSafe Council	Within 1 year	1	<ul style="list-style-type: none"> <li>Flyers could be sent out with utility bills or other community mailings.</li> </ul> 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.
<b>EO10</b>	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	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.
<b>EO11</b>	Increase signage/replace or augment existing signage.  Use existing signage to spread fire prevention message along highways and in public open space areas (trailheads, info kiosks) to reduce human ignitions.  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.	County Fire	Within 2 years	2	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.
<b>EO12</b>	Promote and increase the use of prescribed burning as a fuels reduction method.  Gain public support for using prescribed burns to reduce fuel loads and to improve ecosystem health through a pilot burn project and demonstration site.  Consider developing informational material for distribution at natural areas or via email distribution lists.	CAL FIRE/Midpeninsula/ County Open Space	Within 2 years	2	Prescribed burn prescription, type-6 engines, hand crews, equipment. Research and costs of producing, printing, and distributing paper informational flyer.	Protect communities and infrastructure by reducing fuel loads.

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ID	Project	Presented by	Target Date	Priority (1,2,3)	Resources Needed	Serves to
<b>EO13</b>	Implement Firewise Communities programs.  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.	Fire Safe Council, CAL FIRE, County Fire	Within 2 years	2	Firewise Communities educational materials.	Protect communities and infrastructure through increased awareness and defensible space.
<b>EO14</b>	Fire agencies establish partnership with San Jose State University (or other colleges) for student intern programs for GIS, plans, weather, environmental reviews, etc.  GIS work should be in conjunction with the EQ Clearinghouse and Exchange Core.	County Fire Department	Within 2 years	3	Admin costs Liaison	Provides resources for agencies to implement projects in the CWPP.  Improves technical capabilities of Agencies to run fire modelling programs and train staff in modelling protocols.  Engages students in real-life training opportunities.
<b>Non-Tiered Public Education and Outreach Projects for OSA</b>						
<b>OSAE O 1</b>	Increase wildfire reduction outreach materials for OSA visitors.	OSA	2018	2	OSA and grant funding to support project.	Inform OSA constituents of wildfire hazards through signage, brochure and/or website.

**Table 17.3. Recommendations for Reducing Structural Ignitability**

ID	Project	Presented by	Programs Available	Description	Priority (1,2,3)	Timeline
SI1	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
SI2	Identify all WUI areas (including FHSZ VH, H, and M in LRA and SRA); 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 EQ Clearinghouse and Exchange Core	2	2020
SI3	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
SI4	Adopt common defensible space standards throughout the county	County Fire, CAL FIRE, Municipal FDs		Make all WUI building codes, defensible space and other prevention regulations standard across all jurisdictions	1	Next 3 years
SI5	Adopt landscape standards for recommended plant landscape materials  Standards or Guidelines. Standards usually have force of law behind them.	FireSafe Councils to lead	Research Firewise plants suitable for the region.  Develop plant list, poster materials and research demonstration site.  Firewise Communities USA: <a href="http://www.firewise.org">www.firewise.org</a>	Educate property owners, landscape firms and landscape architects in appropriate ornamental plantings, mulches, and landscape design/ maintenance in WUI areas.	3	Next 2 years
SI6	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.	FireSafe Councils to lead	Firewise Communities USA: <a href="http://www.firewise.org">www.firewise.org</a>	Educate property owners, landscape firms and landscape architects in appropriate ornamental plantings, mulches, and landscape design/ maintenance in WUI areas.	2	Next 2 years

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ID	Project	Presented by	Programs Available	Description	Priority (1,2,3)	Timeline
SI7	Promote Firewise Community recognition program countywide; consider SCL amendments to Fire wise; partner with CERT and Neighborhood Watch.  NOTE: Linked to EO 13	FireSafe Councils to lead in conjunction with Santa Clara County Fire Department , Municipal FDs	Firewise Communities USA: <a href="http://www.firewise.org">www.firewise.org</a>	Educate and outreach to bring communities into Firewise recognition programs	2	Next 3 years
SI8	Interactive tool for citizens to use on line, ID 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 You Tube informational video	1	Next 3 years
SI9	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 FDs, 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
SI10	Public education program for embers and problems associated with embers, property hygiene, defensible space	County Fire, Municipal FDs, CAL FIRE, FireSafe Councils	Ready, Set, Go! Program: <a href="http://www.wildlandfirersg.org">www.wildlandfirersg.org</a> .  Institute for Business and Home Safety  NFPA: <a href="http://www.nfpa.org">www.nfpa.org</a> ,  Fire Adapted Communities	Educate property owners on best methods to reduce ember intrusion  Could utilize you tube informational video of college student project.	1	Next 2 years
SI11	Implement spring community yard clean-up days.  In combination with FireSafe Council chipper program.	County Fire, Municipal FDs, CAL FIRE, FireSafe Councils	FireSafe 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
SI12	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



**Table 17.4. Recommendations for Improving Firefighting Capabilities**

ID	Project Description	Fire Department/Agency	Benefits of the Project to the community	Timeline	Priority (1,2,3)	Resources/Funding Sources Available
<b>FC1</b>	Review the minimum requirement of 5,000 gallon of water storage at single parcel developments where no community water system exists  Incorporate map component and utilize EQ Clearing House GIS Exchange Core.	County Fire/CAL FIRE/FireSafe Councils/Municipal FDs	Alleviates public and agency concern for limited water supply in remote areas.  Improve fire-fighting capability.  Enhances firefighter safety.  Enhances protection of life and property.	2 years	2	Requires local fire code and land development amendments
<b>FC2</b>	Define Safe Refuge Areas and establish maintenance program in WUI areas where fire behavior and evacuation timing is problematic.  Incorporate map component and utilize EQ Clearing House GIS Exchange Core.	County Fire/CAL FIRE/FireSafe Councils/Municipal FDs, 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 year	1	Grants: SRA (only on SRA lands), FEMA, CA FSC, DHS
<b>FC3</b>	Identify carless population/evacuation assistance needed locations.  Establish registry in cooperation with Emergency Management agencies.  Incorporate map component and utilize EQ Clearing House GIS Exchange Core.	County Fire/CAL FIRE/FireSafe Councils/Municipal FDs  Emergency Management Agencies	Aids in safe evacuation of residents, those with evacuation assistance needs	2 year	1	FEMA, DHS
<b>FC4</b>	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/FireSafe Councils/Municipal FDs	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
<b>FC5</b>	Develop WUI preplans and accompanying Evac plans for all WUI areas in Santa Clara County using standardized format	County Fire/CAL FIRE/FireSafe Councils/Municipal FDs	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, CA FSC, 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
<b>FC6</b>	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/FireSafe Councils/Municipal FDs  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	Homeowner Associations, Road Associations, County Service Areas
<b>FC7</b>	Obtain additional helicopters / air resources for suppression	County Fire/CAL FIRE/FireSafe Councils/Municipal FDs	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	
<b>FC8</b>	Where road systems are antiquated and do not provide for proper evacuation or two way flow, require removal of obstructions or upgrade to minimum 2 lanes 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	Homeowner Associations, Road Associations, County Service Areas
<b>FC9</b>	Where possible encourage setting up water sources with multiple uses (e.g. fire suppression and wildlife water, cattle water, etc.)	FireSafe Councils working with communities.	Provides for use of livestock and wildlife water tanks that could be utilized for fire protection.	1 year	3	
<b>OSA Tiered Project to FC9</b>						
<b>OSA FC9.1</b>	Where feasible, set up water sources with multiple uses (fire suppression, water for cattle and wildlife).	OSA and other partners (resource agencies)	Increases firefighting capability, ability to use cattle to reduce fuel and achieve other goals (reduction of invasive species), increase wildlife habitat, including for rare species.	When Feasible	1	Grant funding and OSA
<b>FC10</b>	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	

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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
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 i.e.:  Insight Robotics <a href="http://www.insightrobotics.com/solutions/wildfire-detection">http://www.insightrobotics.com/solutions/wildfire-detection</a>  Wildland Detection Systems <a href="http://www.wildlandsystems.com/">http://www.wildlandsystems.com/</a>  Fire Alert MK1 <a href="http://vigilys.com/technology/firealert/">http://vigilys.com/technology/firealert/</a>
FC12	Implement County wide 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	SCCFSC
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, FireSafe Council, San Jose Water	Improve fire-fighting 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 FireSafe Council can provide a catalyst for action.  Example: Loma Prieta Fire Department is providing small grants to home owners 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	Where Open Space and Park Agencies establish trail head parking areas, operating facilities such as horse stables and camping areas that will increase public access add large capacity water tanks and hydrants for wildfire protection	County Fire	Alleviates public and agency concern for limited water supply in remote areas.	Within 5 years	3	County Fire  This could eventually be amended into the building code for Santa Clara County.

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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
<b>Non-tiered OSA projects to improve firefighting capability</b>						
<b>OSA FC1</b>	Enhance capability of OSA staff to respond to wildfire.	OSA, all fire departments in Preserve jurisdiction, other open space agencies	Enhance staff training and purchase equipment. Partner with agencies to participate in training burns.	Ongoing/Fall 2016	1	OSA, CAL FIRE, County Parks.
<b>OSA FC2</b>	Create an incident response folder or digital data for each OSA Preserve	OSA, all fire departments in Preserve jurisdiction	Information will include information about fuels, access points, staging areas, safety zones, visitor evacuation, water resources, sensitive habitat, maps, communication, and resources. Can also include on the ground orientation.	2019	2	OSA and Fire Depts. Other grants.
<b>OSA FC3</b>	Grade designated trails that are road width on an as needed basis	OSA	1)Ensure OSA patrol vehicle access 2)Improve access for Type 3 engines 3) Install rolling drain dips when deemed appropriate. 4) Reduce erosion and sedimentation.	Ongoing	2	OSA



**Table 17.5. Fuel Reduction Treatment Recommendations**

ID	Project Description	Location and Responsible Party	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/Funding Sources Available
<b>FR1</b>	Incorporate single track trails into fire defense system where practical and effective	Santa Clara County and other SF Bay area counties. MROSD; County Parks, County Open Space, CA State Parks, Palo Alto Parks, San Jose Parks, and other municipal park agencies.	Strategic plan to incorporate fire defense improvements in the Bay Area Ridge Trail project  Detailed analysis would be needed in development of treatment location to ensure protection of natural resources.  Should 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), CA FSC; CFIP; NRCS, FEMA, GHGRF  Fund sustainability efforts through the property owner/manager, or local/state agency that is the responsible party.
<b>FR2</b>	Work with Park and Open space to have some road width trails for better access where appropriate	County 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 as fuel breaks  Should 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.	
<b>FR3</b>	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), CA FSC; 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
<b>Tiered OSA project to FR3</b>								
<b>OSA FR3.1</b>	Use prescribed fire where ecologically sound and feasible	OSA Preserves, beginning with Coyote Valley and Coyote Ridge.	Utilize prescribed burns following plan prescriptions and agency and regulator protocols.	Reduce fuel, reduce, invasive species, increase native species, training opportunities	2016/Ongoing	H	Regular monitoring to determine success	OSA, CAL FIRE, outside grants
<b>FR4</b>	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.  Monitoring to determine project success in reducing fuel loading.	Grants: CAL FIRE VMP program, SRA (only on SRA lands), CA FSC, CFIP, NRCS
<b>Tiered OSA Project to FR4</b>								
<b>OSA FR4.1</b>	Use prescribed fire where ecologically sound and feasible	OSA Preserves, beginning with Coyote Valley and Coyote Ridge.	Utilize prescribed burns following plan prescriptions and agency and regulator protocols.	Reduce fuel, reduce, invasive species, increase native species, training opportunities	2016/Ongoing	1	Regular monitoring to determine success	OSA, CAL FIRE, outside grants
<b>FR5</b>	Land management agencies partner for clarity of prescribed fire use that is complementary to Greenhouse Gas Reduction plan of CA Air Resources Board	MROSD; County Parks, OSA, CA 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 APCD  Educate public  Encourage landowners  Provide expertise	ongoing	3	Regular monitoring to determine project success in reducing fuel loading through prescribed burning.	Grants: CAL FIRE VMP program, SRA (only on SRA lands), CA FSC, CFIP, NRCS

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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
FR6	Adopt common power line clearance standards for WUI in LRA and SRA	County in conjunction with utility companies.	<p>Compare power line clearance ordinances in all local WUI jurisdictions</p> <p>Coordinate with power utility providers to understand impacts and legal pathways</p> <p>Where necessary adopt local ordinances consistent with intent of CA Public Resources Code sections</p> <p>Utilize EQ Clearing House exchange core to facilitate project development.</p>	<p>Reduce fuel loading around critical utility infrastructure.</p> <p>Reduce potential for fire starts from downed lines and line strikes.</p>	Within 2 years	1	Regular maintenance schedule should be implemented to ensure clearance levels are maintained.	<p>CA Public Resources Code and Office of Administrative Law for guidance.</p> <p>Funding needs to be determined after impact assessment</p>
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.	<p>Determine suite of treatment methods allowed and restriction for roadside hazard reduction including mowing, mastication, chemical, plantings, mulching, etc.</p> <p>Develop treatment plan and rotation schedule for roadside treatments, focusing of primary evacuation or access/egress corridors</p> <p>Track with the Earthquake Clearinghouse exchange core</p>	<p>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.</p>	Within 2 years	1	<p>Regular maintenance schedule should be implemented to ensure clearance levels are maintained.</p> <p>Develop standards for road crews.</p>	<p>Grants: SRA (only on SRA lands), CA FSC; CFIP; NRCS, FEMA, GHGRF</p>

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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
<b>FR8</b>	Develop list of fuel treatment methodologies with cost per acre/day/ (other metric) that can be used for hazardous fuel treatment	FireSafe Council	Educational tool for land /property owners re: 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.	NPS, U.S. Forest Service, CAL FIRE, PG&E resources of techniques in use and cost/benefit
<b>FR9</b>	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, 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), CA FSC; CFIP; NRCS, FEMA, GHGRF
<b>FR10</b>	Develop agency partnership to establish creation of hand crew for fire hazard reduction- need not be a fire crew	All agencies	Establish a local based crew for use in fire defense improvement work throughout the county  Can be through private resources, contract with CCC, 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), CA FSC; CFIP; NRCS, FEMA, GHGRF
<b>FR11</b>	Create Sustainable programs for creating Defensible Space at the parcel Level.	Home Owner, FireSafe Councils, Home Owner Associations, 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), CA FSC; 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
<b>Non-tiered fuel reduction projects for OSA</b>								
<b>OSA FR1</b>	Maintain and establish shaded fuel breaks	OSA Preserves. Create and maintain firebreak on Mt. Chual, Upper Uvas, Little Uvas, Rancho Canada del Oro, and Palassou Ridge Open Space Preserves.	Shaded fuel break along existing roads 30' uphill and downhill.	Protect life, property, ecosystems and water quality	Ongoing/Fall	1	Regular maintenance needed to ensure the shaded fuel break remains clear of ladder vegetation. Monitor for erosion and invasive species.	Funding – WUI, other grants, CAL FIRE, and OSA (to both create and maintain fuel breaks).
<b>OSA FR2</b>	Identify and brush designated single track trails annually	OSA Preserves.	Identify key trails that are also used for fire protection. Brush back vegetation from single track trails.	Provides access to properties. MROSD staff can access by foot, or ATV.	Ongoing	1	Annual inspection and maintenance completed when needed.	OSA
<b>OSA FR3</b>	Brush roads	OSA lands in Santa Clara County.	Roadside vegetation is brushed back.	Provide access for OSA patrol vehicles and other emergency service vehicles.	Ongoing	1	Annual Spring inspection and maintenance completed when needed.	OSA



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