

## **ANNEX 2**

### **CHAPTER 2 ALMADEN VALLEY**

#### ***WILDLAND URBAN INTERFACE AREA DEFINED***

The WUI planning area for the Almaden Valley is in Figure 2.2-1.

#### **NEIGHBORHOOD AND STRUCTURAL CHARACTERISTICS**

The Almaden Valley is bounded by the City of San Jose area and Santa Clara Central Fire Protection District. The area is SRA in high and very high FHSZ with fire fuels that can produce rapidly spreading fires.

**Building Characteristics:** Similar to other areas outside the urban core of the county, this area has rural ranchette properties and several small older homes. Many of the homes and buildings are historical and still have wooden roofs and wooden siding. The greatest risk is ignition from flying embers. Replacing the very flammable wood roof with non-combustible roofing will compromise the historical characteristics of the buildings, but reduces their vulnerability to fire loss.

**Water Supply:** There are little to no fire hydrants in this area and water supplies are very limited except for the reservoirs in the area. However, many property owners recognize this danger and have private water tanks with fittings for use by fire engines. CAL FIRE helicopters use the reservoirs as a source of water to fight fires in this area.

**Road Access:** Homes in this planning area are remote and not easy to access resulting in slow response times for emergency vehicles and evacuation concerns for residents. There are many private roads that are narrow, windy, and unsurfaced and are prone to damage from rainfall, landslides, and erosion. Many are already in need of extensive maintenance.

Telecommunication sites are located in this planning area on McQueens Ridge and Tomita Hill.

Primary concern is to improve access/egress for public to safely evacuate and firefighters to respond in this planning area.

#### **EMERGENCY RESPONSE CAPACITY**

SCCFPD/CAL FIRE initial response to the planning area would be primarily from Almaden, Morgan Hill, Coyote, Masten, and Alma fire stations. The San Jose Fire Department will also respond mutual aid.

The area is SRA and receives a full wildland fire response from CAL FIRE during fire season. Normal CAL FIRE wildland response includes chief officers, fire engines, air tankers (Hollister Air Attack Base), helicopter (Alma Heli Base), fire dozers, and hand crews (Ben Lomond Camp).

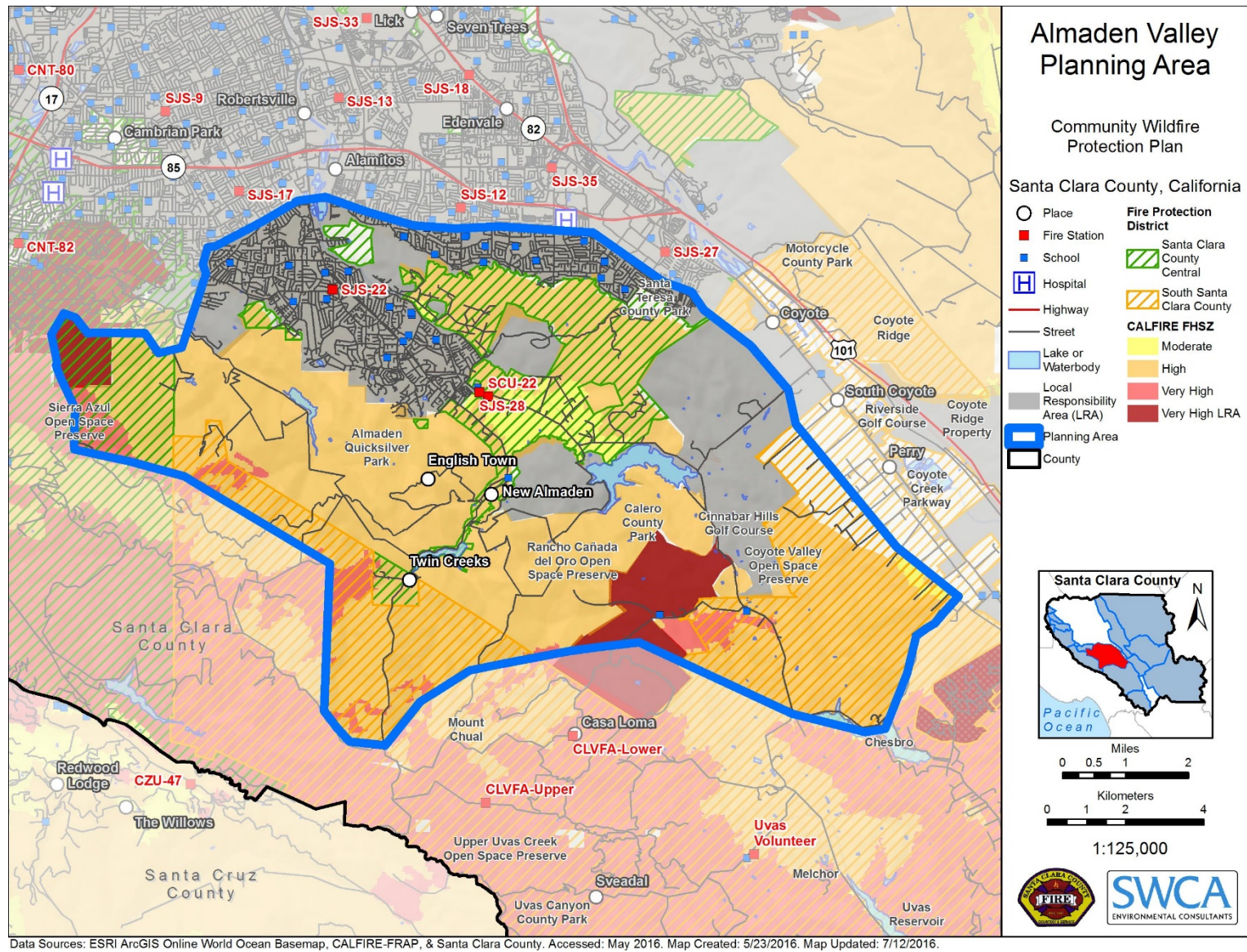


Figure 2.2-1. Almaden Valley WUI planning area.

## **RISK/HAZARD ASSESSMENT**

Community hazard assessments include ratings of community conditions compared to best practices for WUI fire mitigation. Community Hazard ratings include consideration of applicable state codes, local ordinances, and recognized best practices guidelines.

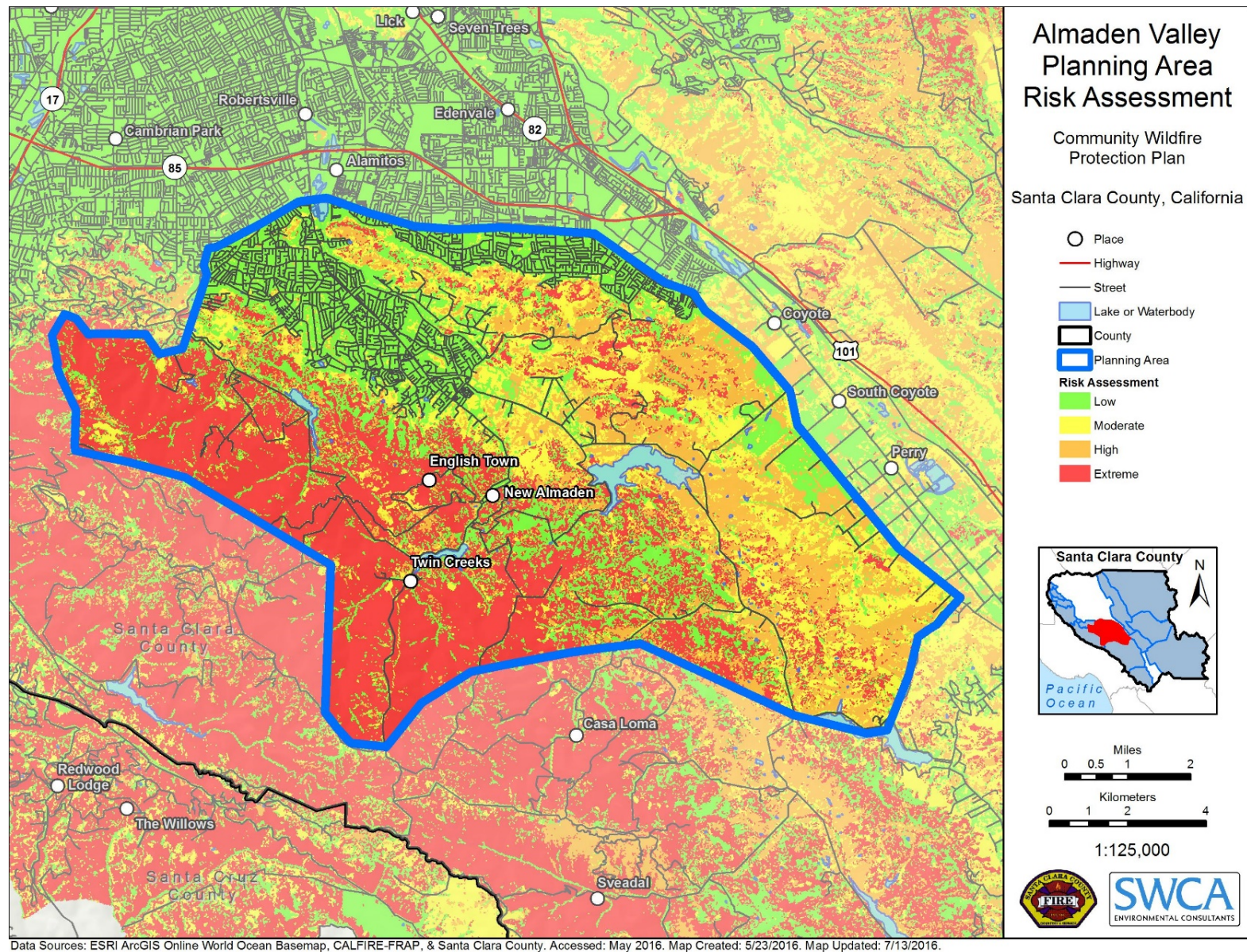
The National Fire Protection Association Standard 1144 (NFPA 1144) defines WUI hazards and risks at the community and parcel level. This plan utilizes components of NFPA 1144, California laws and local ordinances to evaluate neighborhood WUI hazard and risk. CA PRC 4290 and 4291 sections address WUI community design and defensible space standards.

An on-the-ground hazard assessment was completed for the Almaden Valley. The following ratings are based on the NFPA 1144 structural hazard assessment form. Scores are rated as follows: (<40 = low, >40 = moderate, >70 = High, >112 = Extreme). Factors that contributed to the assessment are illustrated in tabular format below. Averages are taken across the community to give a rating for each parameters (individual parameter numerical ratings are not shown here, but instead are shown as a +, - or +/-). For more information on the methodology for the hazard assessment please see Section 4.6.6 in Chapter 4 of the countywide CWPP.

In addition to the on-the-ground hazard assessment, the CWPP also includes a Composite Fire Risk/Hazard Assessment which 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 2.2-2. The western portion of the planning area is the highest rated part. For more information on the methodology for this assessment please refer to Section 4.6.1 in Chapter 4 of the CWPP.

<b>Parameter</b>	<b>Condition</b>	<b>Rating</b>
Access	One road in and out	-
	Narrow road width	-
	Unsurfaced road with greater than 5% grade	-
	Poor fire access, dead end spurs, lack turnaround	-
	Street signs are present, some are non-reflective	+/-
Vegetation	Adjacent fuels: Moderate with high flammability	-
	Defensible space: >30 feet and < 70 feet around structure	+/-
Topography within 300 feet of structure	41%	-
Topographic features	High concern	-
History of high fire occurrence	Moderate	+/-
Severe fire weather potential	Moderate	+/-
Separation of adjacent structures	Good separation	+
Roofing assembly	Unrated flammable and Class B	+/-
Building construction	Non-combustible siding, combustible deck	+/-
	Building set back <30 feet to slope	-
Available fire protection	Water unavailable	-
	Response: Station >5 miles from structure	-
	Internal sprinklers: for new build properties	+/-
Utilities	Both above ground	-
<b>Risk Rating - High (90)</b>		





**Figure 2.2-2. Composite Risk Assessment for Almaden Valley.**

## ***PARCEL LEVEL RISK ASSESSMENT***

A model for determining parcel level risk and effect of mitigations has been developed through this CWPP project. The model can use information available through public record for basic analysis but can be further refined with a site visit with property owner for a thorough analysis of risk score. The County will be seeking funding to fully implement this parcel level assessment in the future. The goal is for the property owner to be able to use this analysis to determine the most effective steps they can take to take to reduce their risk. For more information refer to Chapter 4 in the countywide CWPP document.

## **MITIGATION PROJECTS AND PRIORITIZATIONS**

The following project matrixes have been developed by the community and Core Team to direct specific project implementation for SCCFPD (Table 2.2-1–Table 2.2-4). These project include those that are relevant to the Almaden Valley. 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 to address:

- Hazardous Fuel Reduction
- Firefighting Capability
- Public Education and Outreach
- Structural Ignitability

**Table 2.2-1. Relevant Recommendations for Fuel Reduction Projects in Almaden Valley**

ID	Project Description	Location and land ownership	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/funding sources available
<b>Strategic Goal: FR7: Develop roadside fuel treatment program, including suite of methods available and sustainability mechanism</b>								
<b>SCC-FR7.1</b>	Improve ingress/egress capabilities through installation of fuel breaks and brushing.	SCC WUI areas. Public and privately owned/maintained road systems.	Limb trees and remove brush along roadways to at least reclaim full original width and height. Goal: minimum 20' clear width and 15' clear height.	Ensure the safe and rapid evacuation of residents during fire response and suppression activities.	Fall 2016	1	Regular maintenance needed to ensure the fuel break remains clear of vegetation. Monitor for erosion and invasive species.	County General Fund Budget. CAL FIRE crews – County Public Works budget. Local community groups - donations and grant funding.  USDA-NRCS
<b>SCC-FR7.2</b>	Install roadway buffers and cut grass earlier in the season	All WUI areas, Public and privately owned/maintained road systems.	Limb trees and remove brush along roadways to at least reclaim full original width and height. Goal: minimum 20' clear width and 15' clear height.  Cut grass earlier.	Ensure the safe and rapid evacuation of residents during fire response and suppression activities and reduce potential for fire spread across roadways.	Fall 2016	1	Regular maintenance needed to ensure the fuel break remains clear of vegetation. Monitor for erosion and invasive species.	CAL FIRE crews - Public Works budget. Local community groups - donations and grant funding.
<b>SCC-FR7.3</b>	Improve man-made fuel breaks around individual structures or groups of residences	All WUI areas. Public and privately owned/maintained road systems.	Clear brush, limb trees, and remove dead woody materials, located within 10' of road edges.	Ensure the safe and rapid evacuation of residents during fire response and suppression activities.	Spring 2017	H	Regular maintenance needed to ensure the fuel break remains clear of vegetation. Monitor for erosion and invasive species.	CAL FIRE crews - Public Works budget. Local community groups - donations and grant funding.

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ID	Project Description	Location and land ownership	Method	Serves to:	Timeline for Action	Priority (1,2,3)	Monitoring	Resources/funding sources available
<b>Strategic Goal: FR4: Encourage use of prescribed fires where ecologically sound and feasible</b>								
<b>SCC-FR4.1</b>	Encourage use of prescribed fires where ecologically sound and feasible	County Parks, State Parks, CAL FIRE, private lands	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>S. Santa Clara County FPD Specific Projects- non tiered</b>								
<b>SCC-3</b>	Establish fuel breaks and maintain existing fuel breaks	WUI private property and County Parks and Open Space Authority.	Create minimum 100ft fuel modifications from top slope structures.	Slow the spread of fire up slope to help address concerns with minimal set-back. Reduce the intensity of possible flame fronts.	Spring 2017	H	Annual maintenance needed to ensure the fuel break remains clear of vegetation. Monitor for erosion and invasive species.	Public Works budget. Local community groups - donations and grant funding.
<b>SCC-4</b>	Utility line clearance projects	Open space properties.	Enforcement of utility clearances will be crucial for minimizing the likelihood that fires are ignited from this potential source.	Reduce potential of ignition from utility lines and reduce potential impact to utility lines in event of wildfire	Spring 2017	H	Annual maintenance needed to ensure the ROW remains clear of vegetation. Monitor for erosion and invasive species.	Utility company funds.



**Table 2.2-2. Recommended Firefighting Capability Projects in Almaden Valley**

ID	Project Description	Fire Department/Agency	Benefits of the Project to the community	Timeline/ Priority (1,2,3)	Resources/funding sources available
<b>Strategic Goal: 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.</b>					
<b>SCC-FC13.1</b>	Improve firefighting water supplies in rural areas.	SCC FPD	Increase available fire flow in these neighborhoods. Provide redundancy in water supply infrastructure Increase capacity of gravity fed water supplies	Fall 2018	General Fund
<b>SCC-FC13.2</b>	Improve firefighting water supplies in areas with inadequate supplies and limited hydrants.	SCFSC CAL FIRE	Increase available fire flow in these neighborhoods. Add fire hydrants to areas dependent of private wells. Provide redundancy in water supply infrastructure Increase capacity of gravity fed water supplies	Fall 2016/1	General Fund
<b>SCC-FC13.3</b>	Mapping of available private water supplies	SCFSC , CAL FIRE	Increase knowledge of available water sources prior to a wildfire event to improve fire response capability.	Fall 2016/1	
<b>Strategic Goal: 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 2 lanes road system over time</b>					
<b>SCC-FC8.1</b>	Improve ingress/egress capabilities. All areas in SCC FPD	SCC FPD and CAL FIRE	Establish secondary access roads in current single access areas  Ensure the safe and rapid evacuation of residents during fire response and suppression activities	Fall 2018/ 2	County General Fund  - Public Works budget.  Local community groups - donations and grant funding
<b>Strategic Goal: Implement County wide program to replace existing house number markers with reflective markers that meet consistent standard.</b>					
<b>SCC-FC12.1</b>	Improve road, street, and address, identification.	WUI areas. Privately owned/maintained road systems.	Repaint, re-letter, or replace road/street signs that do not meet existing standards, install additional road/street signs to ensure identification from either direction of travel. Post community address signs to identify unmarked residences. Ensure the rapid identification of streets, roads, and addresses, during an emergency.	Spring 2017/2	General Fund Budget. Local community groups - donations and grant funding. HOAs - annual d



**Table 2.2-3. Recommended Public Education and Outreach Projects in Almaden Valley**

ID	Project	Presented by	Target Date	Priority (1,2,3)	Resources Needed	Serves to
<b>Strategic Goal: EO3: 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.</b> <b>Possibility to coordinate actual implementation of defensible space and slash clear-up with the local Eagle Scout group or high school volunteers.</b>						
<b>SCC-EO3.1</b>	Encourage retrofit of roofs and measures to “harden” property to wildfire	Fire Safe Councils, SCC 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>SCC-EO3.2</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.	Fire Safe Council, fire departments, local residents, Eagle Scouts, High School Community Volunteer Program	Spring 2017	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>SCC-EO3.3</b>	Homeowner's Guide  Provide copies of an existing guide for homeowners in the WUI to inform them and encourage them to prepare.	SCC FPD/CAL FIRE	Spring 2017	2	Funding to purchase and distribute 5000 copies of the guide.	Give Residents detailed and locally specific tools that they can use to improve preparedness
<b>SCC-EO3.4</b>	Defensible Space Education and outreach	SCC FPD, CAL FIRE, Fire Safe Council	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.

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ID	Project	Presented by	Target Date	Priority (1,2,3)	Resources Needed	Serves to
<b>Strategic Goal: EO12: Promote and increase the use of prescribed burning as a fuels reduction method.</b>						
<b>SCC-EO12.1</b>	Where appropriate implement Prescribed burning programs on Space Lands within the SCCFPD area.	County Parks, County Open Space Authority, Midpeninsula Region Open Space District	Within 2 years	2	Prescribed burn prescription, Research and costs of producing	Protect communities and infrastructure by reducing fuel loads.
<b>Strategic Goal: 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.</b>						
<b>SCC-EO7.1</b>	Address density of livestock in planning area and provide plan in event of wildfire	Emergency management officials, livestock agencies/ civic groups	Fall 2018	2	GIS software or maps- coordinate with EQ Clearing House- GIS sharing.	Protect communities, livestock and infrastructure through increased awareness.
<b>Strategic Goal: EO13: 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.</b>						
<b>SCC-EO13.1</b>	Encourage the SCC FPD neighborhoods to become certified under Firewise	Fire Safe Council, CAL FIRE, SCC FPD	Fall 2018	2	Firewise Communities educational materials.	Protect communities and infrastructure through increased awareness and defensible space.

**Table 2.2-4. Recommendations for Structural Ignitability Projects in Almaden Valley**

ID	Project	Presented by	Programs Available	Description	Contact	Priority (1,2,3) /Date
<b>Strategic Goal- SI 1: Retrofit/eliminate flammable roofs</b>						
<b>SCC-SI 1-1</b>	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	County Planning	1/ By 2030
<b>Strategic Goal- SI 10: Public education program for embers and problems associated with embers, property hygiene, defensible space</b>						
<b>SCC-SI10.1</b>	WUI Fire Protection Workshops	Local Fire Marshals-  All residents would be encouraged to participate.	Firewise, agency outreach personnel, Ready-Set-Go. Tailor to specific risk/hazards in each community	Offer hands-on workshops to highlight individual home vulnerabilities and how-to techniques to reduce ignitability of common structural elements.	Fire Marshal, Firewise personnel, CAL FIRE	High/Spring 2017
<b>Strategic Goal- SI4: Adopt common defensible space standards throughout the county and Strategic Goal- SI 19: 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.</b>						
<b>SCC-SI4.1 and SCC-SI9.1</b>	Stronger defensible space regulations.	Regional Fire Marshals. To be adopted locally in the 2016 CFC cycle.	Based on existing State laws and standards.	New emphasis on maintenance. Presented in plain language and a logical progression. Eliminate current jurisdictional limitations.	Regional Fire Marshals.	Spring 2017
<b>Strategic Goal SI7: Promote Firewise Community recognition program countywide; consider SCL amendments to Fire wise; partner with CERT and Neighborhood Watch.</b>						
<b>SCC-SI7.1  Links to SCC-EO-13.1</b>	Firewise Communities certification  Establish and support a new Firewise Communities Group	Fire Safe Council, CAL FIRE, SCC FPD	Firewise Communities USA	Fire risk analysis of SCC FPD neighborhoods. Staff hours to facilitate and support.  Give residents ownership of the fire problem, provide resources and information necessary to inform and prepare the community for fire.	SCC FPD/CAL FIRE.	1/ Fall 2018

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