1 OVERVIEW OF COMMUNITY WILDFIRE PROTECTION PLAN

1.1 NEED FOR COMMUNITY WILDLIFE PROTECTION PLAN/UNIT PLAN

Fire has been a component of California's natural history for millennia, with fires caused by both lightning and by Native Americans a common occurrence in most parts of the state. In some vegetation types, frequent fires resulted in a mosaic of burned areas of various ages, with the more recently burned areas tending to impede the spread of new fires, (Stephens and Sugihara, 2006),. Many native plant species have adapted to periodic fires. Fire was used by Native Americans for a variety of purposes, as well as by settlers, ranchers, and loggers. There are very few areas in the state that were not, and continue to be, affected by fire.

The influence and effects of fire have changed as attempts were made to suppress it, with the consequent accumulation of more continuous and dense wildland fuels as historic burn mosaics were lost. More continuous fuels have led to larger, more intense wildfires, which are increasingly difficult and expensive to suppress, especially during periods of very dry and/or windy fire weather or episodes of widespread lightning activity, such as those that occurred in northern California in 2008, which started many fires in Santa Clara County. Either condition can quickly overwhelm local, state, and federal firefighting resources.

The combination of increasing development in or near wildlands, the accumulation of wildland fuels, dry fire seasons, and rugged terrain has resulted in significant risk due to wildfire to communities located in or near the wildland urban interface (WUI). Such destructive wildfires may be very large, such as the 273,246-acre Cedar fire in San Diego County that destroyed 2,820 structures with 15 fatalities in 2003. Others can be relatively small, such as the 1,520-acre Tunnel fire (Oakland Hills) in Alameda County, which destroyed 3,380 homes with 25 fatalities in 1991, or the 3,007-acre Croy fire in Santa Clara County, which burned 300 structures in 2002.

California has experienced a WUI fire problem for nearly a century. The 1923 Berkeley Hills fire and 1961 Bel Air fire clarified the disastrous role poorly designed communities with flammable construction and especially wooden shake shingle roofs play in fire losses in developed areas. Localized efforts to address WUI fires met with mixed success. In 1991 the California legislature passed FIRE SAFE legislation that established the first combined land use, construction, and defensible space standards that applied statewide. Ironically, shortly after the FIRE SAFE legislation was law, California experienced the Oakland Hills Tunnel fire, the most devastating WUI fire in state history.

Wildfires can also damage watersheds and cause significant erosion and loss of water quality. Sensitive species habitat can be damaged or destroyed, or overrun with invasive species. The economic loss can be enormous as tourism and recreational values are impacted. Social sense of well-being is affected by concern of impact of WUI fires in neighborhoods. Smoke can cause significant safety and health issues, with many sensitive individuals requiring medical treatment.

It has become increasingly apparent that the mitigation of wildfire risk requires much more than a simple reliance on suppression response. Thoughtful planning, conducted as a collaborative effort

by the many people and organizations affected by wildfire, is required to develop and implement short- and long-term solutions and strategies. The Community Wildfire Protection Plan (CWPP) process is a means by which many individuals and organizations can come together in a structured format to do this.

While several communities in Santa Clara County have already developed such plans, this is the first effort to develop a CWPP at the county level. It is expected this CWPP will facilitate even broader involvement from many stakeholders in the development of strategies to mitigate common wildfire risk. These strategies can be used by other communities as they develop their own CWPPs in the future, as well as by local governments as they plan for future development through land use planning or promulgate new codes and ordinances for greater resilience to the impact of wildfire.

1.1.1 Components of Community Wildfire Protection Plan/Unit Plan

Nationally, the 2000 fire season triggered great interest by the federal government in the wildfire issue. In 2003 the U.S. Congress recognized widespread declining forest health and increased wildfire risk nationwide by passing the Healthy Forests Restoration Act (HFRA), and President Bush signed the act into law (Public Law 108–148, 2003). The HFRA was revised in 2009 to address changes to funding and provide a renewed focus on wildfire mitigation (H.R. 4233 - Healthy Forest Restoration Amendments Act of 2009). The HFRA expedites the development and implementation of hazardous fuels reduction projects on federal land and emphasizes the need for federal agencies to work collaboratively with communities. A key component of the HFRA is the development of CWPPs, which facilitates the collaboration between federal agencies and communities in order to develop hazardous fuels reduction projects and place priority on treatment areas identified by communities in a CWPP. A CWPP also allows communities to establish their own definition of the WUI. In addition, communities with an established CWPP are given priority for funding of hazardous fuels reduction projects carried out in accordance with the HFRA.

CWPPs are composed of three minimum requirements, which are intended to foster communication among the public, government entities, and private organizations as they work towards a common vision of wildfire risk mitigation. These requirements are:

1. **Collaboration**: Local and state government representatives, in consultation with federal agencies or other interested groups, must collaboratively develop a CWPP.
2. **Prioritized Fuel Reduction**: A CWPP must identify and prioritize areas for hazardous fuels reduction and treatments; furthermore, the plan must recommend the types and methods of treatment that will protect at-risk communities and their essential infrastructures.
3. **Treatments of Structural Ignitability**: A CWPP must recommend measures that communities and homeowners can take to reduce the ignitability of structures throughout the area addressed by the plan.

The area covered by a CWPP usually includes communities or parts of communities. This CWPP is developed at the Santa Clara County level and therefore addresses these requirements with a greater variety of participants than the community plans that have been previously completed. As a result, information associated with these requirements will be accessible to other communities

in the county as they prepare their CWPPs, as well as providing a higher overview of wildfire issues, concerns, and risk reduction solutions throughout the county. The expectation is a set of common countywide strategic goals accompanied with specific target projects at the community level to achieve those goals.

Information from the Santa Clara County CWPP will also assist Santa Clara County and cities in the development of their General Plans and Local Hazard Mitigation Plans. The mandatory Safety Element found in the General Plan, for example, can draw information and guidance directly from the Santa Clara County CWPP. Land use planning that incorporates provisions for fire-resilient design in WUI areas has been shown to dramatically improve public safety and reduce fire losses[1]. Guidance on this planning process is described in the 2003 edition of *Fire Hazard Planning* (State of California, Governor's Office of Planning and Research, General Plan Technical Advice Series, November 2003, 21pp.).

CWPPs alone provide no authority to enforce findings and conclusions; their value is in the collaboratively developed information and recommendations that can identify and guide activities that mitigate wildfire risk and hazard. The Santa Clara County CWPP can be used by government entities as a reference to guide land use planning and promulgate codes and ordinances in response to its recommendations.

1.1.2 COMMUNITIES AT RISK

The California Fire Alliance and federal list of communities at risk from wildfires include 14 communities in Santa Clara County: Cupertino, East Foothills, Gilroy, Lexington Hills, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Palo Alto, San Jose, San Martin, Saratoga and Stanford. Some of these communities have developed a CWPP or Fire Management Plan, such as Lexington Hills, East Foothills, and Palo Alto. The Croy Fire Area CWPP includes parts of Gilroy, Morgan Hill, and San Martin.

Wildland Urban Interface Fire Hazard and Environment

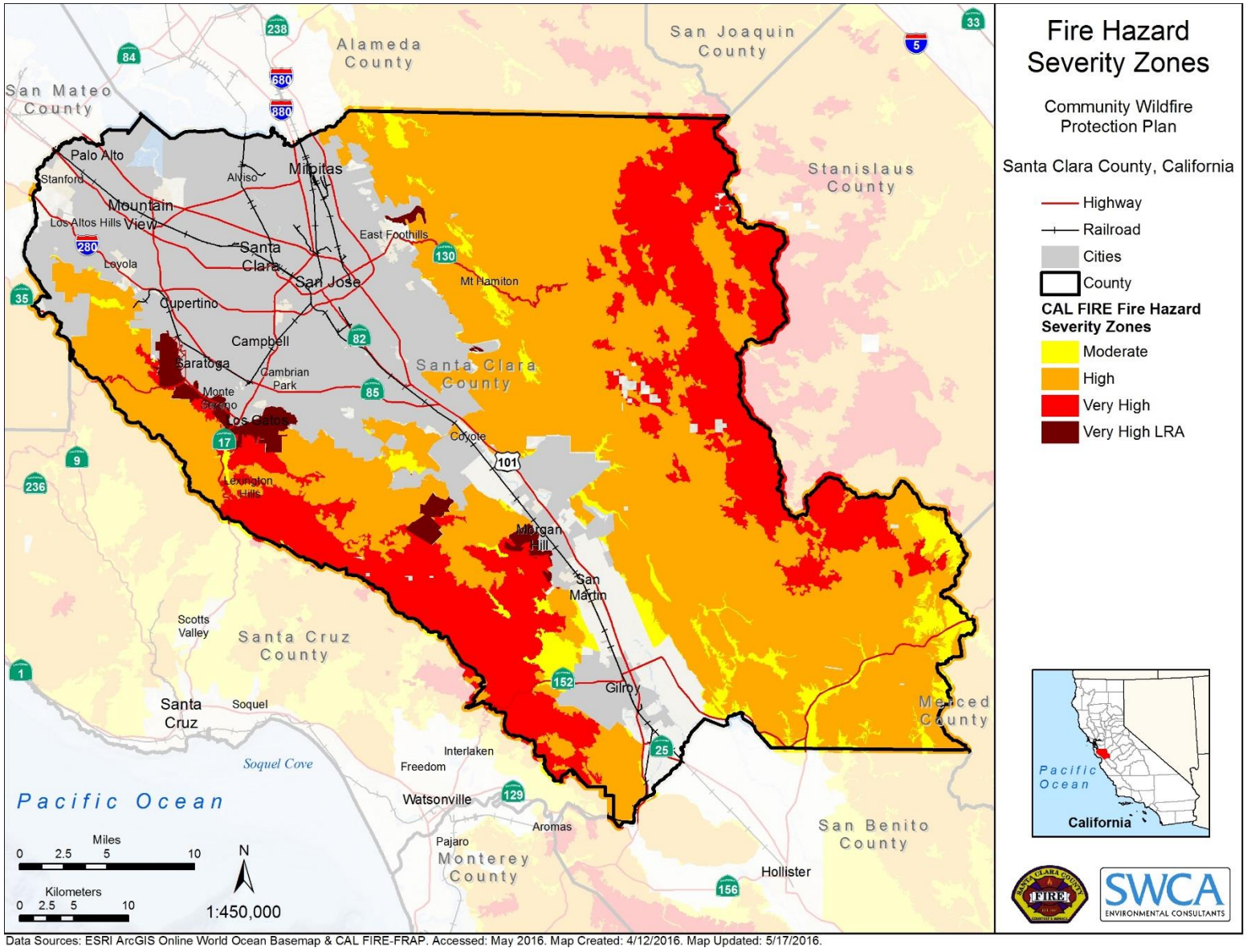
On the national level, following the establishment of the National Fire Plan via Executive Order due to the 2000 national wildfire season, work throughout the country was undertaken to identify areas at high risk from wildfire; this work would be used to identify the location of hazardous fuel reduction projects designed to reduce this risk. Communities across the nation that are considered to have a WUI have been identified; this list was subsequently published in the *Federal Register*.

California law established a classification of fire hazard severity zones (FHSZs) for wildland areas in the 1980s. FHSZ ratings include factors for weather, vegetation type, topography, predicted fire behavior, ember production, and other factors to rank areas for potential likelihood and severity of wildland fires. The FHSZ rating impacts the nature of community design and building construction in State Responsibility Areas (SRAs) (areas that receive wildland fire protection directly by the California Department of Forestry and Fire Protection [CAL FIRE]). As a result of the 1991 Oakland Hills Tunnel fire, the legislature also required applying the FHSZ rating system to cities in California with WUI fire areas.

[1] *Megafires: The Case for Mitigation*, Institute for Business and Home Safety, 2008.

In response, CAL FIRE developed a state list of communities at risk. This work included ranking fuel hazard based on vegetation types and associated fire behavior; assessing the probability of a large, damaging fire; and defining areas with sufficient housing density to create a WUI protection situation. This facilitates the identification of locations most at risk from wildfire and therefore in greatest need of hazardous fuels reduction projects, public education on wildfire risk and fire prevention, and improvements in the ignition resistance of structures.

From this work, as previously noted, 14 communities at risk have been identified. Very high wildfire risk conditions are particularly evident along the eastern side of the county, as well as along the southwestern portion from Los Gatos to Gilroy. Current conditions and patterns of fuels, fire behavior, fire weather, and density of structures indicate that these communities are at a significant risk from damaging wildfire, even during relatively short periods of high fire danger (Figure 1.1). The CWPP process is designed to focus on these areas within the county most at risk from wildfire. Figure 1.2 shows the Local Responsibility Areas (LRA) and State Responsibility Areas (SRA's) within the County.



Data Sources: ESRI ArcGIS Online World Ocean Basemap & CAL FIRE-FRAP. Accessed: May 2016. Map Created: 4/12/2016. Map Updated: 5/17/2016.

Figure 1.1. Fire Hazard Severity Zones

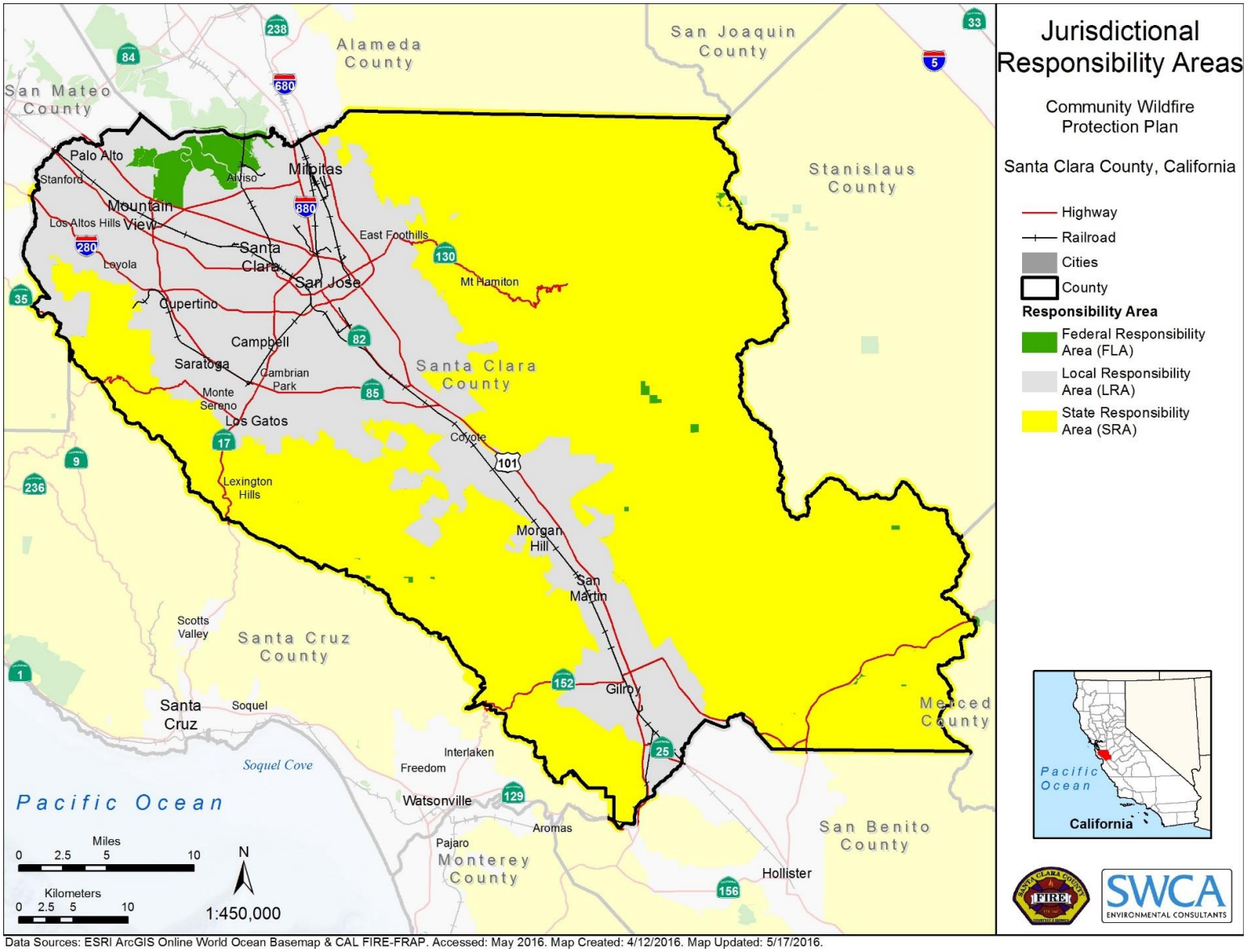


Figure 1.2. County Jurisdictions

1.1.3 POLICIES, LAWS, ORDINANCES, CODES, PLANS, AND PROGRAMS IN PLACE

The complex nature of wildfire management, and the mitigation of risk associated with it, is reflected in the many policies, plans, and laws that have been developed in response.

California state laws and local ordinances at county, city, and district levels address the WUI fire problem. Laws address land use planning and wildfires through various codes. State law related to wildfire, WUI fires, and model building and fire codes are primarily found in the Public Resources Code (PRC), the Health and Safety Code and the Government Code

State law[2] defines areas in California that are wildland and the responsibility for fire protection related to those lands. Additionally, the probable fire severity of these areas is defined and determined by building codes and fire-resistant design standards that were in place at the time of construction.

Land use planning contains the ultimate long range solution to the WUI fire problem. New communities can be designed to be resilient to the impact of wildland fire when Fire Safe community[3] components are factored into design. Fire agencies and other stakeholders input into the General Plan process can establish a strong blueprint for a fire-resilient community.

State legislation passed in 2012[4] directs CAL FIRE to review all proposed subdivisions and amendments to local General Plans and Safety Elements.

1.1.4 FEDERAL MEASURES TO FACILITATE WILDFIRE PLANNING AND PREPARATION

The National Fire Plan established the collaborative approach to be used at all levels to develop risk reduction solution. It was followed by *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A 10-Year Comprehensive Strategy*, with updates in 2002 and 2006. In 2003, the HFRA was passed into law, which emphasized the development of CWPPs and the implementation of hazardous fuel reduction projects.

In 2014, the final stage of a national strategy for wildfire was issued, entitled *The National Strategy: The Final Phase in the Development of the National Cohesive Wildland Fire Management Strategy*. California is in the Western Region of this plan, which notes that steep terrain, invasive species, access limitations, climate change, heavy fuel loads, and an expanding WUI underlie four broad areas of risk: risk to firefighters and civilian safety, ecological risks, social risks, and economic risks. The solution requires a collaborative effort with many stakeholders to improve landscape resiliency and community adaptation to wildfire.

[2] Public Resources Code 4125.
[3] FireSafe Community Design Standards (Public Resources Code 4290).
[4] California Government Code Sections 66474.02, 65302, and 65302.5.

1.1.5 State of California Measures to Facilitate Wildfire Planning and Preparation

In similar acknowledgement of the escalating risk of wildfire, the State of California also issued several documents to assist in wildfire planning and preparation, detailed in the following sections.

Statewide Hazard Mitigation Plan

The State of California Multi-Hazard Mitigation Plan, revised in 2013, considers wildfire along with floods and earthquakes to be the three primary hazards faced by California (California Governor's Office of Emergency Services 2013). Chapter 5.4 describes wildfire hazards, vulnerabilities, and risk assessment. The document in particular notes the importance of Senate Bill 1241, which was passed in 2012, and mandates wildfire planning responsibilities by local agencies through requirements regarding:

1. wildfire updates to General Plans;
2. mandatory findings for subdivision approvals in SRAs and very high FHSZs; and
3. California Environmental Quality Act (CEQA) checklist updates for wildfire safety.

As a result, local General Plans must contain a review of local fire hazards; goals, policies, and objectives for protection of the community from wildfire; implementation measures; and reference to any previously adopted fire safety plan that meets Senate Bill 1241's goals.

California Strategic Fire Plan

In 2010, the State Board of Forestry and Fire Protection issued the California Strategic Fire Plan, a statewide fire plan developed in concert between the State Board of Forestry and Fire Protection and CAL FIRE. Goals included improved availability and use of information on hazard and risk assessment, land use planning, development of shared vision in plans such as CWPPs, establishment of fire resistance in assets at risk, shared vision among fire protection jurisdictions and agencies, levels of suppression, and post-fire recovery.

In support of this plan, several policies are noted, including creation of defensible space, improving home fire resistance, fuel hazard reduction that creates resilient landscapes and protects wildland and natural resources, adequate and appropriate fire suppression, and commitment by individuals and communities to wildfire prevention and protection through local planning.

The California Strategic Fire Plan's several objectives are as follows: the state will produce tools such as updates to the CAL FIRE very high FHSZ maps, fire history, and data on values and assets at risk; assist government bodies in the development of a comprehensive set of wildland and WUI protection policies; identify minimum key components necessary to achieve a fire safe community; coordinate unit fire plans with CWPPs; improve regulatory effectiveness, compliance monitoring, and reporting pursuant to PRC 4290 and 4291; and participate in public education efforts concerning regulation, prevention measures, and preplanning.

Santa Clara Unit Strategic Fire Management Plan

The Santa Clara Unit of CAL FIRE provides fire protection to many areas within Santa Clara County, as well as to Contra Costa, Alameda, and the western portions of San Joaquin and Stanislaus counties. The 2015 Santa Clara Unit Fire Management Plan uses the Seven Strategic Goals and Fire Plan Framework identified in the California Strategic Fire Plan and translates them into work to be done within its area of responsibility. Tactically, the Santa Clara Unit has an objective of keeping all wildland fires to 10 acres or less. Strategically, the primary goal of wildland fire protection in the unit is to safeguard the wide ranges of values found within the unit from the effects of wildfire.

The Santa Clara Unit employs multiple programs to accomplish this goal, including development of pre-fire management tactics, fire prevention, a defensible space inspection (LE-100) program for fire safe clearance around structures, information and education programs, and the Vegetation Management Program (VMP) to reduce hazardous fuels and achieve natural resource management goals with within an SRA.

Local Hazard Mitigation Plan

In 2005, the Association of Bay Area Governments adopted *Taming Natural Disasters: A Multi-Jurisdictional Local Government Hazard Mitigation Plan for the San Francisco Bay Area*. This plan addresses methods to mitigate the risk from several types of hazards on eight commitment areas (infrastructure, health, housing, economy, government services, education, environment, and land use). In response, Association of Bay Area Governments counties, including Santa Clara County, have developed a Local Hazard Mitigation Plan (LHMP) as an annex to the Association of Bay Area Governments plan. The LHMP also has mitigation strategies for several of these commitment areas.

Many of the mitigation strategies identified have been, or can be, used in CWPPs, and the responsible entities are also identified. Items include ensuring reliable sources of water for existing and new developments, developing defensible space programs, providing adequate access roads that meet California Fire Code standards, tying public education on defensible space with a defensible space ordinance and field enforcement, adopting or amending California Building and Fire Codes, and expanding VMPs.

1.1.6 COLLABORATION

The underlying theme of these various plans, and in particular CWPPs, is collaboration among the many stakeholders affected by wildfire. Chief among the components of collaboration is public education to provide not only information concerning the risk of wildfire but also to let stakeholders know about opportunities to participate in the management and mitigation of wildfire risk. CWPPs are often referred to as "living documents" because of the importance of revisiting and updating these documents periodically as new issues arise and results from recommendations in the CWPP, such as hazard reduction projects, develop. The value of the CWPP is ultimately to provide a framework within which the public, governments, agencies, and other entities affected by wildfire can discuss and jointly develop solutions and strategies for its management and mitigation.

Risk Assessment

The purpose of developing the risk assessment model described in this document in Section 4 is to create a unique tool for evaluating the risk of wildland fires to communities within the WUI areas of the planning area. Although many definitions exist for hazard and risk, for the purpose of this document these definitions that are consistent with state hazard mitigation planning and state standards:

- **Risk = Hazard – Mitigations**
- **Risk** is essentially a measurement of the potential consequences of the hazard occurring, in this case a wildfire burning through the WUI community.
- **Hazards** are those existing bio-physical factors that, when combined, present a threat.
- **Mitigations** are actions taken to reduce the hazard or risk in order to reduce the unwanted consequences of the WUI fire.

The risk assessment is twofold and combines a geographic information system (GIS) model of hazard and risk (Composite Risk/Hazard Assessment) and an on-the-ground assessment of community hazards and values at risk.

From these assessments, land use managers, fire officials, planners, and others can begin to prepare strategies and methods for reducing the threat of wildfire, as well as work with community members to educate them about methods for reducing the damaging consequences of fire. The fuels reduction treatments can be implemented on both private and public land, so community members have the opportunity to actively apply the treatments on their properties, as well as recommend treatments on public land and private land that they use or care about.

Insurance Implications in Wildland Urban Interface Areas

Insurance companies are reducing their exposure to catastrophic losses. It is commonplace for California property owners in WUI areas being denied insurance coverage from their preferred provider, including renewals of existing policies. Property owners are left with a search for a willing insurance company or at last resort turning to the California FAIR Plan[5], which will assure coverage, but at extraordinary premiums.

Insurance companies often rely upon organizations such as Insurance Services Office, Inc. (ISO) to assist in the evaluation of risk, such as from wildfire. For example, ISO/Verisk Analytics uses a program called FireLine to provide scores used to analyze wildfire risk at the individual address level. Scores are derived from three components: fuel, slope, and firefighter access.

There are a number of important implications for homeowners in WUI areas in the County:

Fire insurance policies will be issued or denied based on factors evaluated by insurance companies, evidenced by the fact that many insurance companies in the County are denying coverage in WUI areas. The result of this action by the major insurance have reduced the capacity of the industry to accommodate the market demand and the price of coverage is rising as a direct result. There are

[5] California FAIR Plan Property Insurance: cfpnet.com.

insurance companies that are taking on this risk by charging higher rates, reducing fire peril coverage, and or increasing the deductibles. This results in the consumer taking on more risk by paying more and having higher deductibles.

Fuel and access can be modified as a result of projects identified in a CWPP and therefore affect insurance policies and premiums. Properties currently insured in the WUI are inspected periodically for defensible space, site hygiene and maintenance. Upon inspection if there are issues raised, the policyholder is informed and required to make changes prior to the next renewal. Because many insurance companies are no longer taking on new business in these WUI areas, a lapse in policy as a result of a failed insurance inspection can be a significant loss to homeowners, providing motivation for good property hygiene, defensible space and structural maintenance.

Areas identified by insurance companies as exposed to wildfire risk should be noted by stakeholders as another source of information, which can also be used to identify and prioritize risk reduction work.

Mitigation Strategies

The CWPP process identifies many types of mitigation strategies, including hazardous fuel modification, defensible space, signage, public education prevention messages, improved road access, water supply, and building materials and design. It should be noted that while all mitigation strategies will be useful, some will be a more important factor in preventing destruction of a home.

An examination of the factors leading to an assignment of extreme risk to a parcel or area can help identify which ones provided the most weight to the rating and, therefore, which factors are in most need of mitigation strategies. For example, the presence or absence of a wood roof is often a determining factor in home survivorship during wildfire incidents, and therefore this factor is given much weight in the development of risk score ratings.

Policies, Codes, and Ordinance Changes

Mitigation strategies must include monitoring and follow-up, and often require the development of codes, ordinances, and enforcement. Codes and ordinances help define the type and level of work needed to mitigate wildfire risk. A policy of creation of defensible space needs to have a definition of the amount of vegetation clearance. As noted in the state's General Guidelines for Creating Defensible Space (2006), this definition can change periodically, as was the case with the revision of PRC 4291, which increased the defensible space distance from 30 to 100 feet.

Outreach and Education

The CWPP process is designed to enhance outreach and education on the wildfire situation to the general public, local governments and agencies that may be unaware of the steps they can take to mitigate the risk of wildfire. The collaborative effort encouraged during the construction, review, and approval of a CWPP continues into the future as lessons learned from activities identified in the Santa Clara County CWPP are translated into more specific activities at the community and city level. Outreach increases the number of partners in this work; education promotes a more common understanding of the causes and nature of wildfire risk and increases general knowledge of the best practices to mitigate it.

Structural Ignitability

As noted in the 2015 Strategic Fire Plan for the CAL FIRE Santa Clara Unit, page 14, "in some instances due to the size, speed, and intensity of the fire, or the building materials and surrounding vegetation, structures can ignite and potentially be destroyed before emergency responders can arrive. In order for a structure to survive it must be able to avoid ignition."

Structural ignitability, and responsibility of property owners in reducing this risk factor, is discussed in detail byCohen (2008). Cohen notes that "the continued focus on fire suppression largely to the exclusion of alternatives that address home ignition potential suggests a persistent inappropriate framing of the WUI fire problem in terms of the fire exclusion paradigm."

Reinhardt et. al (2008) state that "destruction (of homes) in the WUI is primarily a result of the flammability of the residential areas themselves, rather than the flammability of the adjacent wildlands." The dwelling's materials and design within 100 feet determine home ignition potential (also referred to as the home ignition zone.) Therefore, if large flames are not causing home ignition, then the cause is often relatively low intensity flames contacting the base of the home, and/or direct firebrand ignitions. Consequently, Cohen believes that the presence or absence of fuels in the immediate surroundings of the home, and its construction materials, will determine ignition potential. Therefore, the authority and responsibility for reducing structural ignition potential of existing buildings belongs to the property owner. Fire agencies can help educate property owners on the need and methods for reducing structural ignition potential, and the agencies can reduce wildland fuels on public lands to aid in the suppression of wildfires.

Community design and WUI building code standards adopted by local agencies can serve to reduce ignitability of new structures. But the responsibility for reducing structural ignitability rests with the property owner. This is why the public education component of CWPPs is so vital to the mitigation of wildfire risk. An ideal goal to reduce structural ignitability is to educate and facilitate the voluntary modification of existing buildings to comply with current WUI building codes.

Emergency Response and Evacuation

During wildfire events, the routes emergency responders take to the fire are often the same routes being used by residents fleeing from the fire. Other residents may be trying to return to their homes for children or pets. Roads may be too narrow to accommodate two-way traffic of responders and evacuees. Routes may be blocked by fallen trees, spot fires, smoke, downed power lines, or vehicle accidents. Road names and home addresses may be too indistinct to locate, confusing, or missing. Safe areas and evacuation centers may be unknown to residents, or if there are multiple centers, uncertainty within a family separated by the fire may occur over which one should be used.

The possibility of fatal entrapments exists, and therefore planning for the sudden occurrence of a fire under extreme conditions is a vital part of plans develop by local jurisdictions, as well as families. The CWPP will describe many actions that will improve the ability of firefighters to more quickly and efficiently access areas threatened by fire, as well as provide the public with methods for safer evacuation.

Prioritize Fuel Reduction

CWPPs provide stakeholders not only the opportunity to identify fuel reduction projects but also to assign priorities to them. While it is true that communities with an established CWPP are given priority for federal funding of hazardous fuels reduction projects carried out in accordance with the HFRA, a collaboratively developed list of such projects is simply more efficient in terms of planning, funding, and execution given the large amount of fuels reduction that could be done across Santa Clara County. Speaking with one voice will carry more weight in the competitive environment of funding for wildfire hazard and fuel reduction projects; collaboration for projects should include FireSafe Councils at the state, county, and community levels.

The purpose of any fuels reduction treatment is to protect life and property by reducing the potential for catastrophic wildfire, as well as to restore landscapes to a sustainable and healthy condition. Moderating extreme fire behavior, reducing structural ignitability, creating defensible space, providing safe evacuation routes (Figure 1.3), and maintaining all roads for firefighting access are methods of fuels reduction likely to be used around communities located in a WUI zone. Use of multiple treatment methods often magnifies the benefits.

It should be noted this CWPP is a countywide policy level document. Therefore, fuel reduction projects will be described in general detail; more specific projects will be essentially "legs" to the CWPP, as jurisdictions identify and tailor projects to their specific needs over the coming years and as part of the CWPP update process. The protection of sensitive habitats, and the use of CEQA to analyze potential site-specific effects, will be part of the work done within this more specific "leg" of the process.

Figure 1.3. Newly installed evacuation route markers in the Aldercroft Heights neighborhood

1.2 CWPP PLANNING PROCESS

The Society of American Foresters (SAF), in collaboration with the National Association of Counties and the National Association of State Foresters, developed a guide entitled *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities* (SAF 2004) to provide communities with a clear process to use in developing a CWPP. The guide outlines eight steps for developing a CWPP and has been followed in preparing the Santa Clara County CWPP:

Step One: Convene Decision-makers. Form a Core Team made up of representatives from the appropriate local governments, local fire authorities, and state agencies responsible for forest management.

Step Two: Involve Federal Agencies. Identify and engage local federal representatives and contact and involve other land management agencies as appropriate.

Step Three: Engage Interested Parties. Contact and encourage active involvement in plan development from a broad range of interested organizations and stakeholders.

Step Four: Establish a Community Base Map. Work with partners to establish a base map(s) defining the community's WUI and showing inhabited areas at risk, wildland areas that contain critical human infrastructure, and wildland areas at risk for large-scale fire disturbance.

Step Five: Develop a Community Risk Assessment. Work with partners to develop a community risk assessment that considers fuel hazards; risk of wildfire occurrence; homes, businesses, and essential infrastructure at risk; other Community Values at Risk (CVARs); and local preparedness capability. Rate the level of risk for each factor and incorporate this information into the base map as appropriate.

Step Six: Establish Community Priorities and Recommendations. Use the base map and community risk assessment to facilitate a collaborative community discussion that leads to the identification of local priorities for treating fuels, reducing structural ignitability, and other issues of interest, such as improving fire response capability. Clearly indicate whether priority projects are directly related to the protection of communities and essential infrastructure or to reducing wildfire risks to other community values.

Step Seven: Develop an Action Plan and Assessment Strategy. Consider developing a detailed implementation strategy to accompany the CWPP, as well as a monitoring plan that will ensure its long-term success.

Step Eight: Finalize Community Wildfire Protection Plan. Finalize the CWPP and communicate the results to community and key partners.

1.2.1 PLANNING TEAM/CORE TEAM

The Core Team reflects the variety of stakeholders affected by wildfire. Members include:

- Ken Kehmna — Fire Chief, Santa Clara County Fire Department
- John Justice — Deputy Chief, Santa Clara County Fire Department
- Tom Lausten — Area Superintendent, Midpeninsula Regional Open Space District
- Mark Roberts — Fire Captain, San Jose Fire Department
- Doug Schenk — GIS Analyst, Santa Clara County
- Ed Orre — Unit Forester, CAL FIRE
- Anne Rosinski — Senior Engineer Geologist, California Geological Survey
- Jim Wollbrinck — Manager Security and Business Resiliency, San Jose Water Company
- Randy Houston — Water Maintenance Manager, San Jose Water Company
- Gary Sanchez — Director, Santa Clara FireSafe Council
- Patty Ciesla — Programs Manager, Santa Clara FireSafe Council
- Derek Neumann — Field Operation Manager, Open Space Authority
- Dwight Good — Fire Marshal, CAL FIRE/Morgan Hill
- Rick Parfitt — Resident, Lexington Hills
- Robert Durr — Lieutenant, Santa Clara County Sheriff's Department
- Jeffrey McCoy — Administrative Sergeant, Santa Clara County Sheriff's Department

1.2.2 RESEARCH CURRENT CONDITIONS

The CWPPs that have been developed in the last few years, such as Lexington Hills, East Foothills, and Croy CWPPs, and the Palo Alto Fire Management Plan, describe in detail the conditions found in these specific areas. The detailed conditions described in these documents can also represent to a significant degree current conditions in other areas within the county that have not developed a CWPP. The CAL FIRE Santa Clara Unit Strategic Fire Plan addresses wildfire conditions, patterns, and suggested mitigations in the SRA of the county.

General findings and recommendations in these plans include:

- Wildfires will reoccur in areas where vulnerable and valuable assets exist.
- Firefighting resources are significant, but access to specialized resources such as hand crews are limited.
- Reliable sources of water for fire suppression need to be ensured.
- Diverse construction types include high hazard residences.
- Narrow roads (Figure 1.4), unmarked dead-ends, and lack of turnarounds are a concern.

- Evacuation of some areas is a concern.
- Fuel reduction is key to reducing risk, with a commitment to long-term maintenance.
- Reducing structural ignitability is key to reducing loss of life, injury, and property damages.
- Community education and outreach about the importance of defensible space and community mitigations is a critical need.

Because these findings and recommendations are present in previous planning documents, an examination of which of these issues have been effectively addressed, and which have tended to be more difficult to resolve, would be a valuable undertaking by the Core Team and others to ensure that this CWPP builds on, and enhances, previous and future wildfire risk mitigation work. This CWPP can also focus on the issues that have been more difficult to resolve, using its broader stakeholder coalition to provide more emphasis and support for resolution of such issues.

Figure 1.4. Narrow windy roads are common throughout the County, which is a concern for emergency response as well as evacuation.

1.2.3 COMMUNITY OUTREACH

Using social media, such as Facebook, and other outreach means, several community workshops were held to make presentations and to discuss the wildfire situation in Santa Clara County and to provide an opportunity for the public and other stakeholders to present their concerns and thoughts on wildfire risk mitigation.

Community Workshops

The first round of workshops occurred in Morgan Hill (February 17, 2016), San Jose East Foothills (February 18, 2016), Cupertino (February 22, 2016), and Redwood Estates (February 23, 2016), followed by a second round of workshops in Milpitas (May 2, 2016), Morgan Hill (May 3, 2016), Redwood Estates (May 4, 2016) (Figure 1.5), and Cupertino (May 10, 2016). These meetings will be followed by a public review period of the draft CWPP from May 2 to 16, 2016.

Figure 1.5. Community Workshop at Redwood Pavilion

Notes from the community workshops are included in Appendix A. The following bulleted list outlines some of the main concerns that residents voiced during the workshops:

- Enforcement of codes are needed to ensure defensible space and weed abatement requirements are followed.
- Narrow roads and poor access putting property at risk
- Improvements to hydrant network and available water supply are needed.
- Pre-attack planning needed to identify evacuation concerns.
- Fuel loading on public lands is too high and more fuel treatments are needed.
- Sustainability of fuel treatment is a problem, need more regular maintenance.
- Evacuation routes for some communities are blocked by locked gates.
- Evacuation routes for some communities are on poorly maintained roads sometimes unpassable without 4 x 4 drive vehicles.

- Prescribed burning is supported and encouraged where ecologically appropriate on public lands.
- Need a central location for wildfire preparedness information/literature that is tailored to the community.
- Building codes are hard to navigate and some place unreasonable restrictions on property development.
- New development is occurring in areas that have limited water supply, putting residents at risk.
- Roads agencies- CALTRANS, County Roads and Airports etc need to be a partner in fuel treatment actions.
- Communities support development of Firewise Communities status.
- Residents support the assertion that roof retrofits are needed throughout the country to remove all woodshake shingle roofs.
- Tree mortality is a significant problem throughout the County and there needs to be an easier way to deal with tree removal.
- Road-side thinning is needed in many neighborhoods in order to improve access and evacuation route viability.
- Public land managers need to work with adjacent private property owners to ensure appropriate defensible space can be implemented across property lines.
- Major highways (i.e. Highway 17) are a source of ignitions and should be a major focus of roadside fuel treatments.
- Engagement of adjacent counties is critical for wildfire preparedness, fuel treatment development and evacuation planning.
- More unified planning by agencies is needed.
- Maintenance and improvements to private roads to improve ingress and egress is a concern throughout the County.
- Defensible space and plant flammability could be tackled through education of landscape companies.
- Insurance companies are pulling out of some WUI areas.

Community Survey

A custom community survey was developed for the CWPP in order to gather the perspectives of Santa Clara County residents on wildfire risk and hazard within their community. The objective of the survey was to ensure that the Core Team had a clear idea of the range and prevalence of activities and concerns across the county. Responses from the survey help identify areas of particular concern to residents, ascertain residents' priorities for actions to reduce wildfire hazard, identify mitigation activities residents are undertaking, and determine what tools residents need in order to undertake further mitigation actions.

The results of the survey are presented in Section 5.1.1.

Social Media

A Facebook profile was developed for the CWPP in order to inform the public about upcoming events, review periods, and announcements, and to provide an avenue through which the public could provide additional input. The Facebook page has 132 followers.

1.2.4 Stakeholder Organization Outreach

The value of any CWPP depends on its identification and outreach to the many stakeholders affected by wildfire. The Core Team represents a broad cross section of such organizations; notification by a variety of means to provide an invitation and opportunity to other stakeholders to become involved in the construction of the CWPP is essential to the value of the document.

Because of the many stakeholders affected by wildfire risk and occurrence, several methods were used to notify them of the opportunity to participate in the Santa Clara County CWPP. The Core Team is itself the nucleus of stakeholder outreach via the many contacts possessed by members of this team, both to inform stakeholders and to bring stakeholder concerns and ideas to the Core Team as it developed the CWPP. In support of this process, the Core Team met on December 1, 2015, and January 28, February 24, April 4, May 10, and June 20th, 2016. In addition, a workshop was convened on May 9, 2016, to provide an opportunity for agency representatives to discuss project ideas and fuel treatment locations with the CWPP Team.

A contact list for Core Team members is included in Appendix B. These Core Team representatives were selected by the Santa Clara County Fire Department and the CWPP Team to represent the key agencies involved in fire management in the county. During the CWPP planning process it was identified that law enforcement involvement was integral to the development of mitigation measures for hazard and risk reduction, particularly evacuation. As such, two sheriff department representatives were encouraged to join the Core Team. Other agencies that were not part of the Core Team but could contribute important information to the document were invited to attend the agency workshop on May 9, 2016.

1.3 Project Area

This CWPP is developed at the Santa Clara County, rather than community or city, level. It integrates information from CAL FIRE's Unit Fire Plan and Santa Clara County community CWPPs developed in the last few years, provides new information on the wildfire situation at the County level, and describes risk reduction strategies identified and prioritized by many community stakeholders, which can be applicable at both a countywide and local scale. The Santa Clara County CWPP can also be used to coordinate risk reduction planning with other neighboring counties threatened by wildfire, such as Santa Cruz, San Mateo, Alameda, Monterey, and other counties, with which Santa Clara County shares contiguous wildland fuels and similar wildfire issue.

1.3.1 WILDLAND URBAN INTERFACE PLANNING ZONES

The WUI is composed of both interface and intermix communities and is defined as areas where human habitation and development meet or intermix with wildland fuels (U.S. Department of the Interior and U.S. Department of Agriculture 2001:752–753). Interface areas include housing developments that meet or are in the vicinity of continuous vegetation and consist of less than 50% vegetation. Intermix areas are those areas where structures are scattered throughout a wildland area of greater than 50% continuous vegetation and fuels and meet or exceed a minimum of one house per 40 acres. Depending on the surrounding fuel conditions, topography, and present structures, wildland areas of up to 1.5 miles from structures may be included in the WUI (Stewart et al. 2007).

The WUI creates an environment in which fire can move readily between structural and vegetative fuels, increasing the potential for wildland fire ignitions and the corresponding potential loss of life and property. Human encroachment upon wildland ecosystems within recent decades is increasing the extent of the WUI in Santa Clara County and is therefore placing people and structures at risk and having a significant influence on wildland fire management practices. Combined with the collective effects of aggressive suppression policies, resource management practices, land use patterns, climate change, invasive species infestation and insect and disease infestations, the expansion of the WUI into areas with high fire risk has created an urgent need to modify land use, fire management practices, and policies and to understand and manage fire risk effectively in the WUI (Pyne 2001; Stephens and Ruth 2005).

A CWPP offers the opportunity for collaboration of policy makers and land managers to establish a definition and a boundary for the local WUI; to better understand the unique resources, fuels, topography, and climatic and structural characteristics of the area; and to prioritize and plan fuels treatments and community mitigations to mitigate for fire risks. At least 50% of all funds appropriated for projects under the HFRA must be used within the WUI area.

1.4 ORGANIZATION INVOLVEMENT

This CWPP is designed to be a strategic policy level document that is signed by designated signatory organizations, with each specific organization's strategies and projects as separate "legs." The CWPP policy level document fosters a long term WUI strategy and describes guiding principles at the county level, while at the same time allowing organizations to do periodic updates and develop policies, ordinances, and fuel projects without requiring all CWPP signatories to sign off on the local plans. A long-term goal of the CWPP is the adoption of strategic goals into the Safety Element of city and county General Plans and LHMPs, giving more weight to the CWPP's recommendations, such as code changes and ordinances.

1.4.1 SIGNATORY ORGANIZATIONS

Signatory organizations and advisory organizations included in project development are listed in Appendix B.

1.4.2 GRANT FUNDING SOURCES

Support for this work comes from a wide variety of sources listed in Appendix C.