California Department of Forestry and Fire Protection
Santa Clara Unit

Fire Management Plan
2008

"Your Land…..
Your Community…..
Your Decision….."

Education
Engineering
Enforcement
Pre-Fire Planning
Fire Safe Councils
Vegetation
Management
Volunteers In
Prevention

Signature Page

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Introduction Page

The Santa Clara Unit is unique to the Department of Forestry and Fire Protection, located between the east side of the San Francisco Bay and the western Sacramento / San Joaquin valley, encompassing the Counties of Contra Costa, Alameda, Santa Clara, and western portions of Stanislaus and San Joaquin. There are a total of 1.3 million acres of direct protection area within the unit, and a combined population of 5.5 million people and are covered by Valley Air Quality Management and Bay Area Air Quality Management Districts that the Units management staff work closely with to reduce smoke plume impact of our Vegetation Management program and wildland fire activity upon the local population.

The major population centers include the cities of San Jose and the surrounding, "Silicon Valley," Oakland, Berkley, Livermore/Pleasanton, Walnut Creek, Concord, Martinez and Richmond. Numerous major highways run through the unit and daily traffic congestion is a constant within the unit. Technology, manufacturing, heavy industry, three major sea ports, and three major airports all drive a large portion of the 5th largest economy in the world. Given the large population concentration in the unit recreational use and open space preservation issues are constantly being addressed

Vegetation types in the unit range from annual grasses and brush in the eastern areas to large 80 plus year old brush fields and Costal Redwood on the western edge of the unit. Recent large damaging fire's include the Lexington Fire (1985 13,128 ac), the Tunnel Fire (1991 1624 ac, 25 deaths and 3500 structures) the Croy Fire (2002 3007 ac and 300 structures) the Santa Clara Complex (2003 32,000 ac)and the Lick Fire(2007 47,183 ac). With the current population levels in the unit and the intrusion of urban development into wildland, the Santa Clara Unit is taking every opportunity to be pro-active wildland fuels management. The unit is heavily involved in fire protection planning programs with our local cooperators to address existing problems, and identify areas where we can implement changes early in the planning stages. The Santa Clara Unit is located in an active earth quake fault area, as evidenced by the 1989 Loma Prieta earthquake, which the unit was heavily involved in the emergency response to.

Two Fire Safe Council's, Santa Clara Fire Safe, Diablo Fire Safe, and a working group formed after the Tunnel Fire to address projects in the local jurisdictions in the East Bay Hills interface areas, the Hills Emergency Forum are involved with fire safety and planning in the five county area.
With input and cooperation from these groups, and the other stakeholder groups, the Unit managers establish goals and projects in the unit Fire Management plan to reduce the threat of large damaging fires. The document is the units' template for fuels reduction projects to pending, completed, and for general public review, and comment. The units Fire Plan allows us to respond to the needs and concerns of the public and identifies projects to be funded through cooperative grants and donations.

Through the use of this Fire Management Plan the Santa Clara Unit is working to reduce unplanned ignitions within the unit, limit damage caused by uncontrolled fires, through the use of education, pre fire mitigation projects, patrol, and law enforcement to meet the mission statement of the Department of Forestry and Fire Protection.

Executive Summary

The Santa Clara Unit Fire Management Plan documents the assessment of the fire situation in the unit, includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work with the local fire problem.

Responsibility for Pre Fire Engineering and Fire Protection Planning falls under the direction of the Fire Prevention Bureau. Pre Fire Engineering includes GIS mapping of assets at risk, wildland fuel belts, and the maintenance of various other GIS data layers to assess the existing levels of wildland protection services, identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires, rank these areas in terms of priority needs, and prescribe what can be done to reduce future costs and losses.

The assessment system has four components:

- Level of Service (LOS)
- Assets at Risk (AAR)
- Hazardous Fuels
- Historic Fire Weather

This plan will utilize the five strategic objectives and Fire Plan Framework identified in the California Fire Plan and incorporates them into the planning and implementation process. The five objectives and framework components of the Santa Clara Fire Management Plan are as follows:

- Wildfire Protection Zones
  To create wildfire protection zones that reduces the risks to citizens and firefighters.

- Initial Attack Success
  Assess wildfire initial attack successes on lands of similar type. This is measured in terms of a percentage of fires that are successfully controlled before unacceptable costs and losses occur. The analyses can be used to determine the department and unit's level of service.

- Assets Protected
  The plan has utilized a methodology for defining assets protected and their degree of risk from wildfire. The assets addressed in the plan are citizen and firefighter safety, watersheds and water, timber, wildlife and habitat (including rare and endangered species), rural communities, unique areas (scenic, cultural, and historic), recreation, range, structures, and air quality. Stakeholders for each of the assets at risk are identified. The assessment will enable the Unit and other fire service managers to set priorities for fire management project work.

- Fire Management Prescriptions
  The fire management aspect focuses on alternatives to protect assets at risk. Projects include a combination of fuels modification, ignition management, fire-safe engineering activities such as regulation and zoning, educational programs, public information and road accessibility, department infrastructure including fire stations and water systems, alarms, and forest health. Pre Fire management prescriptions designed to protect these assets will also identify those who benefit and who should share in the project costs.

- Fiscal Framework

  The California State Board of Forestry and Fire Protection and CAL-FIRE are developing a fiscal framework for assessing and monitoring annual and long term changes in California's wildland fire protection systems.

- Applications of the Fire Plan Framework

  - Identify for state, federal, local officials and the public those areas of concentrated assets and high risk.
  - Allow the Santa Clara Unit to create a more efficient fire protection system, focused on meaningful solutions for identified problem areas.
  - Give citizens an opportunity to identify public and private assets to design and carry out projects to protect those assets.
  - Identify, before fires start, where the most cost effective pre-fire and fire management investments can be implemented.
  - Encourage an intergovernmental approach to reducing costs plus losses.
  - Enable policy makers and the public to focus on what can be done to reduce future costs plus losses from wildfire.
  - Through the land use and safety element of the Santa Clara, Alameda, Contra Costa, San Joaquin and Stanislaus County's general plan, incorporate elements of the California Fire Plan so that the county plan's support the state plan.

Stakeholders

Stakeholders are defined as any person, agency or organization with a particular interest, a stake, in fire safety and protection of assets from wildfires. The Santa Clara Unit has made a considerable attempt at involving stakeholders and many of their interests in the planning of the Santa Clara Fire Management Plan. The process of identifying stakeholders and their interests is an ongoing process and will be evaluated continuously through the evolution of future pre-fire management plans. It is the goal of the Santa Clara Unit to participate with as many stakeholders as is possible and to continually update planning efforts involving stakeholder input.

There are three primary stakeholder groups within Santa Clara Unit. They are the Santa Clara County Fire Safe Council, Diablo Fire Safe Council and the Hills Emergency Forum, a working group formed after the Tunnel Fire consisting of the communities, public agencies and homeowner groups within or near the East Bay Hills. These groups are instrumental in bringing a conglomeration of stakeholders to “the table”. This helps to shed light on many concerns within communities and expose information relating to the effectiveness of the Santa Clara Units fire safe efforts. The Unit is able to respond and adapt activities to address many of the concerns from the different stakeholders involved with these groups. Through the diversity of the membership Santa Clara Unit and our cooperators have been able to develop pre-fire and fire prevention projects that otherwise may never have developed.

Fire Safe Councils

Diablo Fire Safe Council

www.diablofiresafe.org
Contact: Carol Pranka, Executive Coordinator
C/O Amphion
1404 Franklin Street #300
Oakland, CA 94612
Phone: (877)-725-6803
Fax: (510) 893-9887
Email: diablofiresafecouncil@hotmail.com

Santa Clara County Fire Safe Council

www.sccfiresafe..org
Contact: Jan Cokely
Council Coordinator
15670 Monterey Road
Morgan Hill, CA 95037
Phone: (408) 975-9591

Hills Emergency Forum

www.lbl/ehs/hef
Contact: Cheryl Miller, Staff Support Coordinator
C/O Amphion
1404 Franklin Street # 300
Oakland Ca. 94612
Phone: (510) 893-9888
Fax: (510) 893-9887

Stakeholder Groups

Local and regional fire departments:

- San Jose Fire Department

- Alameda County Fire Department
- California Department of Fire and Forestry
- City of Alameda Fire Department
- Albany Fire Department
- Berkeley Fire Department
- Contra Costa County Fire District
- Emeryville Fire Department
- Fremont Fire Department
- Hayward Fire Department
- Kensington Fire Protection District
- Livermore-Pleasanton Fire Department
- Menlo Park Fire Department
- Moraga-Orinda Fire District
- Mountain View Fire Department
- Newark Fire Department
- Northern California Fire Prevention Officers
- Oakland Fire Department
- Palo Alto Fire Department
- Piedmont Fire Department
- Pinole Fire Department
- Richmond Fire Department
- Rodeo-Hercules Fire Department
- Santa Clara County Fire Department
- San Ramon Valley Fire Protection District
- Saratoga Fire Department
- Sunnyvale Department of Public Safety
- Union City Fire Department
- West Stanislaus County Fire

Fire Professionals:

- Wildland Resource Management
- Safe Solutions
- Shelterbelt Builders
- Bay Area Plant Consultants

Community Colleges

- Merritt College

Political affiliates

- Senator Don Perata
- Congressman Richard Pombo
- Congresswoman Ellen Tauscher

Insurance Organizations

- Safeco Insurance
- Fireman's Fund Insurance
- Insurance Information Network of California

Emergency Services Organizations

- Alameda County Sheriff's OES
- Contra Costa County Sheriff's Office of Emergency

Research Laboratories

- UC Forest Products Lab
- UC Berkley
- Lawrence Berkley Laboratory
- Lawrence Livermore Laboratory

Land Management Agencies

- East Bay Regional Park District
- Mount Diablo State Park
- Contra Costa County Resource Conservation District
- Alameda County Resource Conservation District
- Mid Peninsula Open Space
- East Bay Municipal Utilities District
- Santa Clara Valley Open Space
- Santa Clara Valley Water Agency
- San Jose Parks and Recreation
- Santa Clara County Parks and Recreation
- Contra Costa Water Agency
- California State Parks and Recreation
- Hills Emergency Forum

Community Organizations

- North Hills Phoenix Association
- Claremont Canyon Conservancy
- Hiller Highlands
- Panoramic Hills Association
- Friends of Temescal Creek
- Friends of Sausal Creek
- Montego Road Home Owners Association
- Alum Rock Area Homeowners Group

Others

- Bay Area Quality Management District
- Cal Trans
- North Hills Landscape Committee
- Vegetation Management Video Committee
- U.S. Fish and Wildlife Service
- Pacific Gas and Electric

Assets at Risk

The primary goal of wildland fire protection in the Santa Clara Unit is to safeguard the wide range of assets found within the unit from the effects of wildfire. The assets at risk are the public and private assets that the wildland fire protection system is created and

funded to protect. The following have been identified as assets at risk from wildfires and delineates their economic and non-economic assets: people, structures, timber, watershed, wildlife, unique scenic and recreation areas, range, wildlife, and air quality. The table below provides a description of the assets evaluated.

Asset at Risk	Public Issue Category	Location and ranking methodology
Fire-flood watersheds	Public safety Public welfare	Watersheds with a history of problems or proper conditions for future problems, ranked based on affected downstream population
Soil erosion	Environment	Watersheds ranked based on erosion potential
Water storage	Public welfare	Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility
Water supply	Public health	1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)
Scenic	Public welfare	Four mile view shed around Scenic Highways and 1/4 mile view shed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types)
Timber	Public welfare	Timberlands ranked based on value/susceptibility to damage
Range	Public welfare	Rangeland ranked based on potential replacement feed cost by region/owner/vegetation type
Air quality	Public health Environment Public welfare	Potential damages to health, materials, vegetation, and visibility; ranked based on vegetation type and air basin
Historic buildings	Public welfare	Historic buildings ranked based on fire susceptibility
Recreation	Public welfare	Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility
Structures	Public safety Public welfare	Ranked based on housing density and fire susceptibility
Non-game wildlife	Environment Public welfare	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Game wildlife	Public welfare Environment	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Infrastructure	Public safety Public welfare	Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines)

Ecosystem Health	Environment	Ranking based on vegetation type/fuel characteristics

The assets at risk were evaluated to the 450-acre scale within the Santa Clara Unit. The Department for purposes of manageability has designated the 450-acre scale. The 450-acre cells have been designated as Quad 81st. This designation is based on the sectioning of a USGS 7.5 minute quadrangle map broken down into a 9x9 grid pattern; the result is squares of 450 acres. Fire plan assessments have been made at the Q81st level, for instance, each Q81st in Santa Clara Unit has a ranking applied to it for Level of Service (LOS), Assets at Risk (AAR), fuel hazards, etc. The Santa Clara unit has 5472 of these Q81 cells. While updating the asset values during this planning cycle the unit's staff found approximately three quarters of these cells had not been assigned the base numeric value to allow the calculator to assign the proper values. The unit is working with the Fire and Resource Assessment Program GIS analysts and Sacramento Fire Plan staff to automate this procedure to streamline the entire process. These updates should be available for use in time for the next annual review due in June of 2009.

Fire protection resources are limited, primarily by budget constraints. Therefore, these resources should be allocated, in part, based on the magnitude of the assets. The assets are ranked, high, medium and low, as to their susceptibility to wildfire. The ranking is scaled to the Q81st and transferred to GIS maps. The map overlays have been evaluated by Unit staff through a series of meetings, through which identification of the areas with the highest combined asset values, map overlays and fire risk will be targeted for fire management activities. The scores for the various assets at risk where given a 1 (low) score out of a possible 9.999 (high) except for the following assets: Game wildlife, historical buildings, housing/structures, and ecosystem health were all given scores of 0 as the data is not yet available or in different stages of validation at a state level. Infrastructure, non-game wildlife, range scores were given a score of 2 and timber was given a 3 (See priority areas in the Santa Clara Unit fire plan). Many factors are involved in target area identification, including political climate of the region and suppression cost reductions.

The process of explicitly enumerating assets at risk also helps to identify who benefits from those assets. It is a premise of the California Fire Plan, on which this plan is structured, that those who benefit from the protection of an asset should pay for that protection.

General Description of the Current Fire Problem

The Santa Clara Unit does not fight fire alone. The Unit has local government agreements administered by the Unit. The Unit also cooperates fully with federal and local government firefighting agencies in addition to the Governor's Office of Emergency Services. This cooperation is formally defined and authorized in interagency agreements. These include Federal agencies, the Master Mutual Aid Agreement, and local fire control agencies through mutual aid and cooperative agreements, in the form of mutual threat zones, with all of the city and county fire departments within the five counties. These cooperative efforts of the fire service providers comprise the entire fire protection delivery system within Santa Clara Unit.

Level Of Service Rating

The legislature has charged the Board of Forestry and CAL-FIRE with delivering a fire protection system that provides an equal level of protection to lands of similar type (PRC 4130). To do this, CAL-FIRE needs an analysis process that will define a level of service rating that can be applied to the wildland areas in California to compare to the level of fire protection being provided. The rating is expressed as the percentage of fires that are successfully attacked. Success is defined as those fires that are controlled before unacceptable damage and cost are incurred.

California has a complex fire environment and CAL-FIRE data on assets at risk to damage from wildfire is incomplete. These factors combine to make it very difficult to develop a true performance-based fire protection planning system. CAL-FIRE has resorted to prescription-based fire protection planning (travel times of firefighting resources to incidents, report times for the detection system, the same acreage goal statewide, etc.) as a way to overcome the complexity of the issues. Prescription-based planning is possible but tends to oversimplify some issues. Prescription standards also make it difficult to integrate the interrelationships of various fire protection programs, such as the value of fuel-reduction programs in reducing the level of fire protection effort required.

The following approximation method is proposed to overcome these shortcomings and allow the unit to proceed with a damage-plus-cost analysis of fire protection performance. This is a relative system, attempting to measure the relative impact of fire on the various assets at risk. At the same time, this process produces a level of service rating (LOS). The rating can be used to describe fire protection services to "civilian stakeholders". The level of service rating also provides a way to

integrate the contribution of various program components (fire prevention, fuels management, engineering and suppression) toward the goal of keeping damage and cost within acceptable limits. It is important to reiterate that this system is relative system and that the ratings are only approximations. In this system, a fire may be considered a failure based on the firefighting resource draw and size of fire, however, the final fire size and assets protected may have been a true success based on firefighting activities in extreme fire weather conditions.

The Level of Service (LOS) rating is a ratio of successful fire suppression efforts to the total fire starts, a method to measure initial attack success and failure rates throughout the Unit and is based on fire sizes. The LOS uses a Geographic Information System (GIS) that overlays a 20-year history of wildfires onto a map and derives the average annual number of fires by size, severity of burning and assets lost from data entered in the Departments Emergency Activity Reporting System. This data provides a LOS rating, in terms of a success and failure calculation.

Success Rate equals the annual number of fires extinguished by initial attack (relatively small sized) divided by the total number of fires. If all the fires in a given fuel type are extinguished in small acreages that is considered a 100% success rate for that fuel type (planning Belt)

The result is an initial attack success rate in percentage of fires by vegetation type and area. Success is defined as those fires that are controlled before unacceptable damage and cost are incurred and where initial attack resources are sufficient to control wildfires.

The Fire Plan Ignition Workload Assessment map is designed to show effectiveness of the suppression organization in meeting the initial attack fire workload. The attempt at controlling fires before they become large and costly is evaluated in this assessment. The underlying assumption is that fires, successfully contained in the initial attack stages, are not the primary problem. Problem fires are the few that are costly to control or exceed suppression organization capabilities and cause damage.

Fires are grouped into "success" and "failure" categories based on various factors. The assessment groups fires by general vegetation or fuel types (planning belts). Within the fuel type, fires are further classified based on final fire size and weather conditions at the time of ignition. Each fire is classified and labeled as either a successful initial attack or a failure.

The initial attack workload assessment is displayed in the maps below and statistical data related to these maps. Initial attack points of origin are plotted and color-coded based on success/failure scores. Some of the successes and failures are not matched with weather readings and are shown on this analysis. Further validation will be conducted to match weather with the ignitions in the future. The workload can be summarized in the Quad 81st grid. Results can also be summarized into a percentage success score and displayed by Quad 81st grid. Combining fire business workload patterns with aggregated assets at risk can be useful in defining target areas for focusing Pre-fire Management project efforts.

Initial Attack Success and Failures

Analyses time period includes January 1981 through December of 2003. The following planning belt vegetation types were analyzed.

Planning Belt	Success Rate	Successful I.A.	I.A. Failure

Coastal Conifer	100%	71	0
Woodland	93%	63	5
Grass	93%	1358	104
Interior Conifer	91%	144	10
Brush	79%	27	7
Unclassified	94%	611	36

Because of changes in the GIS mapping software, better data entry, changes in the fuels layers and severe weather reporting stations and other problems were identified during last years writing and data collection of this document changes were made in those areas and the Initial Attack Success / Failure matrix is.

Fuels

The fuels assessment layer is valuable for explaining much of the local situation. This layer can help focus attention on solutions.

The fuels assessment considers current flammability of wildland fuels, given location on the slope, average bad weather conditions, ladder fuels, and crown density.

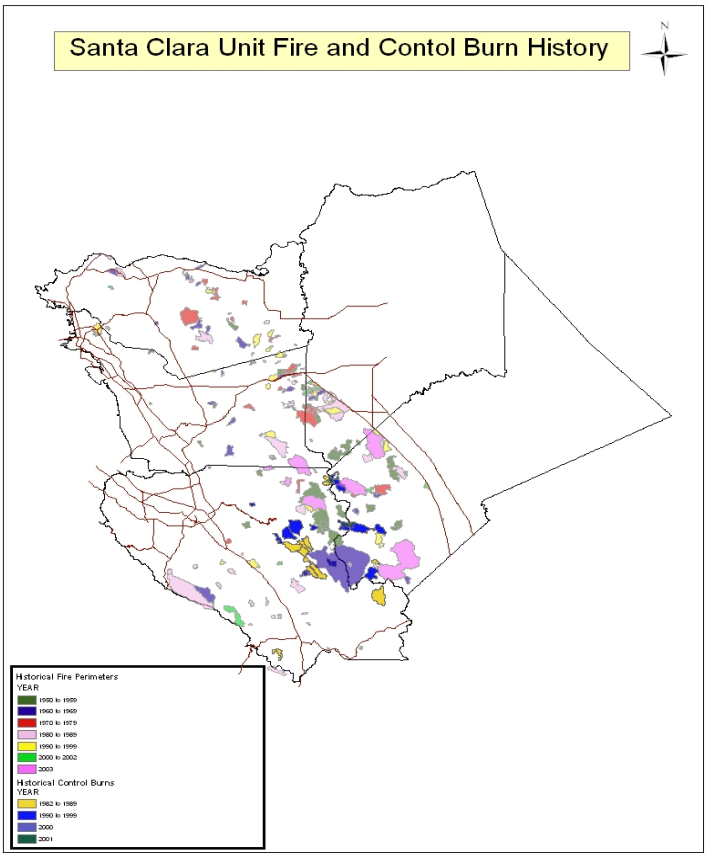
Fuel, in the context of wildland fire, refers to all combustible material available to burn on an area of land. Grass, brush and timber are the most common fuels found in our mountain ecosystem.

Hazardous Fuels Assessment

Arrangement is critical in wildland fire behavior, for it dictates how a fire spreads. Un-compacted fuels, such as grass, spread fire rapidly since more of its surface can be heated at one time. Compacted fuels, such as pine litter, burn slower because heat and air only reaches the top of the fuel. Vertical arrangement refers to a fuel's ability to spread upward into treetops. These are called ladder fuels and are influential factors on fire spread. The ignition of ladder fuels allows the fire to spread from the ground into the treetops. Crown or canopy refers to the tops of trees and is very important in stands of burning timber. A fire once introduced by ladder fuels to the tops of dry conifers can spread as rapidly as a grass fire from treetop to treetop.

The current fuels layer is a product of a GIS mapping project and a fuel survey and cataloging program using aerial photography and ground survey of the areas completed in the mid 1990's. While this data is still somewhat current it is need of updating. Other areas that have been identified within the fuels category are; the lack of a definitive fuel type representing housing or buildings as a fire carrying fuel type, the narrowness of the crown score rankings. When the crown score is factored into the assessments it is only for one fuel type, Interior Conifer (Pine trees), and the percentage of time when that given fuel type will promote and sustain a running crown fire. While this type of fire is very rare in the Santa Clara Unit, as well as much of the rest of the state, the fact remains that while not producing the same visual image as a running timber crown fire other fuel types also can, and do on a much more common basis, a type of crown fire. Given these facts, and the lack of money to accomplish the needed updates of the fuels layers by the Fire and Resource Assessment Program, the unit's Pre Fire Engineer has been trying to secure a stable funding source to accomplish these goals.

Fire History



Wildfire history is a significant factor of the pre-fire management planning process. The fire plan assessment framework incorporates detailed information for determining the most beneficial locations for pre-fire management projects, an idea of the level of service on SRA for the unit and various assets at risk information. Fire history is a piece of the puzzle that allows unit personnel to learn from our past and make an attempt to prepare for future fire behavior. Having knowledge of fire history provides an account of historic fire travel in a particular area. Armed with knowledge of historic fire spreads, fire suppression forces are better equipped to predict fire spread potentials. Identifying where the largest and most damaging fires have occurred is a necessary step in preparing for future wildfire. The most significant aspect of fire history in Santa Clara Unit is that personnel are able to compare the relationship between identified assets at risk and the historic burning patterns of wildfire which allows for a more informed decision making processes when preparing fire planning documents and procedures. Below is the wildfire history for Santa Clara Unit between 1900 and 2008. The maps display significant patterns that are used in pre-fire planning process.

Frequency of Severe Fire Weather

Description of Severe Weather Analysis

Severe fire weather is defined using the Fire Weather Index (FWI) developed by the USDA Forest Service Riverside Fire Lab. The FWI combines air temperature, relative humidity, and wind speed into a one number score. The FWI gives wildland fire managers an index that indicates relative changes in fire behavior due to the weather (fuel and topography conditions are not included in the calculation). Severe fire weather occurs when the FWI, calculated from the hourly weather measurement, exceeds a predetermined threshold. The threshold FWI is derived from average bad fire weather of (approximately) 95° F, 20% relative humidity, and a 7 mph eye-level wind speed. Frequency of Severe Fire Weather is defined as the percent of time during the budgeted fire season that the weather station records severe fire weather. Individual weather stations are ranked as low, medium, or high frequency of severe fire weather. This ranking can then be applied to the area on the ground represented by the weather station. Because of the incredible surge in housing developments in the unit some of our weather stations have been surrounded by houses, decreasing their usefulness as a fire weather reporting station. The ECC, Fire Prevention, and Volunteers in Prevention staff are in the process of moving one station, Livermore, and placing a new station in the Altamont Pass in a cooperative project with the wind generator consortium

Severe Weather Analysis Parameters

FWI CUTOFF	START LOW RANK	START MED RANK	START HIGH RANK
29.725	0%	5%	20%

WXRANK	STATION	OWNER	LAT	LON	ELEV	WXSCORE %	
	Diablo Grande	CDF	37.320	121.290	1850	0.56	Low
	Livermore	CDF	37.710	121.810	800	12.56	Med
	Los Banos	CDF	37.050	121.030	350	6.51	
Med							
	Black Diamond	EBRP	37.950	121.880	1600	11.89	Med
	Briones	EBRP	37.930	121.110	1450	2.50	Low
	Calaveras Road	EBRP	37.440	121.770	1230	4.18	Low
	Las Trampas	EBRP	37.830	122.060	1760	11.74	Med
	Rose Peak	EBRP	37.500	121.730	3060	1.22	Low
	Mallory Ridge	ConWater	37.810	121.770	2040	2.94	Low
	Oakland North	Oakland Fire	37.870	122.210	1300	3.75	Low

Weather Score

The percent of time a weather station is experiencing severe weather. Non-fire season data is thrown out at this point. The assumption is that during winter the fuels aren't ready to burn regardless of the weather.

Weather Rank

The Wx SCORE intensity rating is lumped into three categories to create a severe fire weather frequency ranking

Vegetation Management Program:

Attainment of the fuels reduction goals of the Santa Clara Unit Fire Plan will require on-the-ground effort on the Department's partial use of CAL-FIRE, CDC, CYA and CCC crews and equipment will likely be necessary in many areas where stakeholders do not have the finances or resources to do an effective job individually or as a group. The Vegetation Management program (VMP) is currently in a state of hibernation due to the state budget and financial constraints. While this is a temporary hold on the Program the unit currently has a variety of VMP projects in various stages of preparation, ranging from those with range, water shed and wildlife habitat improvement as the primary goals, i.e.: the Isabel Valley, Mt Mocho, and other eastern Santa Clara County burns. The PL 566 project and Mt. Diablo State Park burns will have a community fire protection goal in addition to wildlife habitat renewal. Santa Clara Unit will make a concerted effort to pursue projects that meet the wide array of demands placed on the Vegetation Management Program in Santa Clara Unit.

Objectives:

The vegetation management program will shift emphasis to:

- Smaller projects closer to new developments
- Alternatives to fire, such as mechanical fuel treatment
- Emphasis on quality over quantity
- In some instances the program may be limited to simply providing wildland safety and protection zones around high value assets.

With the possibility of additional grant funding during the year, additional projects may evolve. VMP projects must be closely tied to the Santa Clara

Unit Fire Management Plan. Since CAL-FIRE's most damaging fires are in urban interface, VMP projects must focus on critical, at-risk community developments or where projects reduce a fires potential to extend into those communities.

Action Plan:

Funding and labor resources are always a challenge to obtain projected project completion dates.

Labor force availability is a limiting factor to achieving project completion. In the Santa Clara Unit the Ben Lomand Adult Conservation and Delta Adult Conservation camps are the main labor forces available to perform project tasks. Ben Lomand is made up of California Youth Authority wards. The camp is located just west of the Santa Cruz county line. Delta Camp is in Solano County on highway 113. Both camps provide a variety of emergency services including wildland fire suppression and rescue capabilities. While the crews are not involved with emergency activities, they are contracted to work on "reimbursable projects" to supplement their existence at the camp. Their cost and availability is an issue to use them on the projects in Santa Clara County. California Department of Corrections camps outside of the Santa Clara Unit have long travel times to consider using them as possible labor.

An additional camp located in or adjacent to the northern sections of the Santa Clara Unit whose population would be made up of the CDC is a possible solution to this labor force deficiency that would also provide better strategic coverage for response to wildland fires. These crews would help implement the proposed projects listed in the Santa Clara Unit Fire Management Plan, thereby reducing Santa Clara Unit's wildland fire problem. The added crews would be valuable in preventing and combating periodic floods and disasters. They could also provide economic stimulus to more remote areas of Santa Clara Unit, and could assist agencies of local, state and federal government in completion of conservation-related work projects.

Projects and Priority Areas

The following pages contain the Field Battalions lists of projects and goals for the implementation of the Santa Clara Units Fire Management Plan, the "Meat and Potatoes." They are complied by the field Battalion Chiefs with input from the units Pre Fire Engineer, Fire Safe Councils, Stakeholders, and the general public through Community outreach. While they reflect an amazing cross section of goals and ideas, they are not inflexible or cast in stone, nor are they the only options available to mitigate a problem. These are suggestions and a starting point for the journey, not the end point.

Battalion One: (Morgan Hill)

Battalion One is located in Santa Clara County's Supervisor District One and lies solely in the State Responsibility Area (SRA) bordering the south side of Bailey

Road in the northwest; east of Uvas Road; then westward on the Redwood Retreat Road; south along the Santa Cruz County line to San Benito County line; then jumps across the South Santa Clara Valley and San Benito County Line at San Felipe Road; to the Henry Coe State Park and private ranches to the west side of The County Line Road, including the Highway 152 corridor- from Dinosaur Point to Dunne Hill; and to the south side of Metcalf Road at the United Technologies Corporation (UTC) property in the northeast. The UTC is beginning a removal and environmental cleansing of their property as they prepare to close down their operations this year. In the open lands of the east side of Battalion One and Henry Coe Park there is a need for state agencies and local citizens to protect mountain Lions, black-tailed deer, ground squirrels, coyotes, raccoons, bobcats, and wild pigs roam. Also, there are golden eagles, California, quail, jays, woodpeckers, red-tailed hawks, turkey vultures, western bluebirds and wild turkeys.

Historically, the major wildland fire occurrence has been in the remote and sparsely populated eastern portion of the Battalion One, the 1936 Fire, the 1961 Bollinger Ridge Fire, and most recently, the 2007 Lick Fire are the largest fires recorded in the Santa Clara Unit. The 2007 Fire Cause Statistics are consistent with previous years with equipment use being the leading cause for preventable wildland fires. The 2007 Fire Season (May through October) statistics for Battalion One are: 1 Battalion Chief; 6 permanent and 1 seasonal Fire Captains; 2 permanent and 1 seasonal Fire Apparatus Engineers; and 22 seasonal firefighters answered the calls with one utilities and four fire engines and 1 reserve fire engine responded to 445 incidents within the Battalion.

The California Department of Forestry and Fire Protection (CAL FIRE) has identified (SRA) Fire Hazard Severity Zones as Moderate, High, & Very High - based on homogeneous lands and their fuel loading, slope, and fire weather. In Battalion One they are located by vertically dividing into three sections: the West section is a Very High (Redwood Retreat Area), the center section is Moderate (South Santa Valley Foothills), and the East section is High (Hwy 152 and the Henry Coe State Park).

Battalion One, because of its unique combination of vegetation, topography, climate and population, has one of the most severe wildland problems in the San Francisco Bay Area. Wildland and urban interface, rugged terrain and highly flammable vegetation coupled with high winds make the South Santa Clara County foothills especially unsafe for development unless adequate fire safe measures are taken. Without regard for wildland fire protection and water sources, continued development in the SRA will heavily impact fire protection and emergency medical services. Solutions center on designing an acceptable level of risks for firefighters and residents that measure all elements of that risk. Pre-fire planning, mutual aid agreements, standard response plans and high fire

behavior warnings are necessary elements to measure the risks to reduce losses from wildfires.

Duke Energy Moss Landing LLC (1206 mega watts), Monterey County supplies two separate, aerial transmission lines entering Battalion One near Hector Pass Hwy at the Santa Cruz County line. One 250 KVW transmission line travels towards Gilroy City and the other 250KVW travels to Morgan Hill City through heavy redwood timbered area with noticeable dead oaks related to the Sudden Oak Disease.

The Calaveras Fault zone created by the meeting of two distinct geological structural blocks (Foothill and Mountain Blocks) that bisect and underlie the foundation of Anderson and Coyote Lake Dams. Anderson Reservoir is the largest man-made lake in Santa Clara County and can store 90,373 acre-feet (~29.45 billion gallons) of water. On the west side of San Luis Reservoir, the powerful Pacheco Pumping Plant pulls water from the reservoir and sends it flowing by gravity through 36 miles of the San Felipe Project's underground tunnels and pipelines to the base of Anderson Dam. Coyote Dam was one of the six original reservoirs approved for construction by voters in May 1934 and can store 23,244 acre-feet (~7.57 billion gallons) of water. In case of an earthquake that would result in a dam failure, Coyote Reservoir would flow directly into the Anderson Reservoir. However, if Anderson reservoir should fail, it would inundate Morgan Hill City, Gilroy City, and the South Santa Clara Valley. If Chesbro Dam, which can store 7,945 acre-feet (~2.59 billion gallons), would fail: water would follow Llagas Creek down Oak Glen Avenue; cross Sycamore Avenue; continue down along Watsonville Road; into south end of Morgan Hill City; and then through the center of South Santa Clara Valley towards Gilroy City. Uvas Dam would inundate along the lowest elevations of Uvas Road and south of Watsonville Road. The Uvas Dam can store 9,835 acre-feet (~3.2 billion gallons) of water and is located in the Sergeants Fault zone. Uvas Dam was competed in 1957 as a part of the South Santa Clara Valley Water Conservation District.

Mission Statements:

Primarily:
To protect and enhance South Santa Clara County's open areas and all who abide in it, their property, and the public lands in it. And, to respond "Code 3" safely to all types of emergencies and to respond to all local city and county fire jurisdictions requesting our assistance. Also, to educate South Santa Clara County's residences to improve individual awareness on how the Public Resource Code affects them, including burn permits requirements, vegetation fuel hazard reduction inspections, and new building requirements in the SRA lands.

Secondarily:

To protect all California's open lands between local responsibility and federal lands to reduce costs and losses due to wildland fires. Additionally, to be prepared for and major emergencies and natural disasters throughout California to the best of our abilities and train for implementing the Incident Command System to assist local agencies during earthquakes, floods, landslides, hazardous materials spills and possible terrorist acts.

Objectives:

1. Improve awareness and involvement between the Santa Clara Fire Safe Council and south Santa Clara County communities by personnel at the fire station and the available "Living with Fire" in Santa Clara County handouts.
2. Continue hazard reduction inspections (LE100 Inspections) for structures with Volunteers In Prevention (VIP) and Engine Companies.
3. Continue input on all new construction and developments with the Santa Clara County Fire Marshall's office.
4. Install and maintain a Remote Fire Weather Station (RAWS) in the foothills east of South Santa Clara County basin when funding becomes available.
5. Participate in all local community activities (i.e. Back Country Event, Renaissance Fair, Indian POW WOW, and Tarantella Festival)
6. Continue assistance for Henry Coe State Park, United Technologies Corporation and private ranchers in fuel modification projects.
7. Continue 3.0 staffing on all state funded ICS Type III fire engines during fire season (June through October) and seek 4.0 staffing in the future initial attack responses to further reduce the costs and losses due to wildland fires.
8. Train and pre-plan to assist local government for the possibility of Weapons of Mass Destruction (WMD) and terrorist acts.

2008 Vegetation Fuel Reduction Inspections Areas:

1. Armsby Lane
2. Tohara Way
3. Hardy Way
4. Sleepy Valley Road
5. Griffis Way

2008 Projects

The Croy Fire Area Defensible Space Chipping Program is a targeted program for four Communities at Risk to provide education and assistance to property owners to create Defensible Space around their homes. Property owners in Wildland Urban Interface (WUI) areas prepare brush and other material for chipping and this program pays the cost for contracted, professional chipping crews to chip the prepared material. A second part of the program also funds the preparation work for seniors or disabled residents who cannot do this work themselves or pay for it to be done. The Community Outreach and Education part of this program will educate property owners to create and maintain Defensible Space.

2008 Action Plan:

1. Continue staffing the first Advanced Life Support (ALS) engine at a state funded wildland station located at Pacheco Pass on Hwy 152.
2. Vegetation fuel inspections on Armsby Lane, Tohara Way, Hardy Way, Sleepy Valley Road, and Griffis Way as the 2008 Hazard Reduction target areas for Volunteers In Prevention (VIP) inspections and collection of data related to:
    A. Roof Types
    B. Water Sources and capacities
    C. Wildland Fuel Types near residences
    D. Address Numbers
3. Provide general fire prevention contacts and prevention materials to local groups and schools.
4. Maintain the Fuel Break Clearance and road maintenance along the County Line Road and establish a Fuel Break along Bollinger Ridge and Castle Ridge to the County Line Road.
5. Annually pre-fire planning of Henry Coe State Park (the second largest state park in California), Santa Clara County Parks, Indian POW WOW, and the Renaissance Fair.
6. Assist CAL-TRANS in emergency response time changes affecting the planned westbound overpass connection at Hwy 152 and Hwy 156 junction. (Ongoing)
7. Abide by the agreement between CDF and Henry Coe State Park's Wildfire Management Plan to create a Local Operation Plan and prepare as a template for other public lands requiring fire protection agreements.
8. Obtain and install Fire Safe Signs to be located on eastbound Hwy 152 near Casa De Fruita community were the Indian POW WOW (estimated 2,000 people daily) and Renaissance Fair (estimated 6,500 people per weekend day) are occurring during the peak fire season. And, year-round routine eastbound traffic has been estimated by CHP as 2,500 vehicles per hour.
9. Continue fire engine replacement with fire engines that have enclosed passenger protection, and air conditioning to meet the arduous demands of firefighting in the urban interface, rugged terrain, highly flammable vegetation, and associated high dry winds in the South Santa Clara County to minimize mileage accumulation of equipment.
10. Request for additional firefighters available to staff 4.0 fire engines to reduce excessive amount of engaged work hours and enhance personnel safety.

Battalion Two: (San Jose)

Description

The San Jose Battalion encompasses approximately 250 square miles of SRA lands in the northern and eastern portions of Santa Clara County and the SRA lands in the Almaden Valley. Mutual threat zones are primarily located on the outskirts of San Jose and Milpitas. The wildland urban interface areas are adjacent to the Almaden Valley and the eastern edges of Milpitas and San Jose.

The city of San Jose has annexed large parcels of land over the last 15 years increasing the number of fires in the Wildland Urban Interface (WUI) in the western and eastern foothills. The automatic aid and cooperative working relationship has allowed most fires to be contained in the initial attack stage. Potential for a major fire in the remote areas of the battalion are high, but wildland urban interface is not a major issue.

An issue identified is that Unit personnel, whom possess the local knowledge of the remote portion of the Battalion, will be retiring; Therefore, a goal of the Battalion is to develop concise plans that will provide new personnel with the location of strategic control points and access into the vast area of SRA lands.

2007 Project Report

Vegetation Management Projects (VMP)

- The Grant Ranch VMP was a cooperative prescribed burn with Santa Clara County Park. A total of 300 acres was burned in fuel model 1, annual grasses. An analysis of the burn effects shows a substantial decrease in the non-native annual grasses and the return of various native perennials.

- The Ledeit VMP was a 1460 acre prescribed burn in chamise dominated chaparral near Mt. Isabel. The burn was conducted with helitorch operations and the consumption rate of 60-80% was realized.

- The Lick Observatory defensible space project was started in the fall of 2007 and will be completed by the spring of 2008. The University of California contracted with North Tree Fire to develop a 100’ defensible space around all buildings and improvements, including the state look out tower. A field inspection indicated the work to be of high quality and a very efficient operation.

Training

- The “Wildfire 2007” drill was conducted at the Grant Ranch County Park in June of 2007. This 2 day event provided extensive live fire wildland training for most of the local fire departments in Santa Clara County.

- The Loma Prieta Training drill was set up by the South Division Battalion Chiefs with the objective to monitor the skill and fitness level of the engine and helitack crews and reinforce the importance of wildland fundamentals.

Prevention

- Defensible space inspections and education were conducted with the engine crews as time permitted. The focus was on homeowner education regarding the new Public Resource Code requiring 100’ of defensible space.

2008 projects

- **Blue Oak VMP**

  This is a 500 acre prescribed burn in grass and oak woodland with the objective to reduce invasive non-native grasses and re-introduce fire into the oak woodland ecosystem. The 3000 acre ranch was purchased by UC Berkeley in the fall of 2007, and the long term plan is to burn 500 acres a year.

- **Eagle Ridge VMP Burn Plan.**

  Cal Fire and UC Berkeley will develop the burn plan for this 500 acre project tentatively scheduled for the spring of 2009.

- **Grant Ranch VMP**

  This will be a 300 acre burn scheduled for late spring of 2008.
  The burn will take place at Grant Ranch County Park.

- **Brushy Mtn.Vmp**

  This 350 acre prescribed burn is scheduled for the fall of 2008. Location of the project is in the Isabel Valley.

Prevention

- The Almaden and Smith Creek Crews will conduct LE-100 inspections.

- Brush and maintain the Smith Creek Truck Trail.

Interagency Cooperation

- Work closely with the Santa Clara Valley Habitat Conservation Plan stakeholders group to assist in public land agency fire plans and provide technical information regarding fire suppression.

- Attend the Santa Clara Fire Safe Council Meetings to provide input from Cal Fire.

- Work with Open Space Authority and Mid Peninsula Open Space on fuel modification projects, training burns, and prescribed burn projects.

- Review Mutual Threat Zones and wildland pre-plans with San Jose and Milpitas Fire. Conduct on site visits with the assigned local government Battalion Chiefs in the high fire danger areas of the interface.

Pre-Plans for Extended Attack and Major Fire Strategy in Battalion 2

- Develop perimeter control areas by identifying strategic roads, ridges and drainages.

- Utilize the Universal Transverse Mercator Grid System on the maps included with the described location of strategic perimeter locations.

- Field verify proposed perimeter locations.

- Pre-plan a major fire in the Alum Rock Falls Road area. This will serve as a pilot template that will eventually be used throughout the battalion.

Battalion Three: (Los Gatos)

Battalion Three is located in Santa Clara County and lies solely in the State Responsibility Area (SRA) bordering the north of Highway 152; west of the Almaden Valley; then east of the Santa Cruz County line; South from the San Mateo County Line. The Battalion includes watershed for local communities, as this watershed flows in to many lakes and streams managed by both the Santa Clara Valley Water District and the San Jose Water Company. The Battalion also is home to a large amount of Coastal Redwoods protected from development by open space districts along with County parks. The Battalion also has a number of small rural communities that have little or no governmental services.

Historically, the major wild land fire occurrence has been in the remote and sparsely populated South western portion of the Battalion Three, the 1987 Lexington Fire and the 1994 Croy Fire were large structure loss incidents in the Santa Clara Unit. The 2004 Fire Cause Statistics are consistent with previous years equipment use being the leading cause for preventable wild land fires. The 2004 Fire Season (May through October) statistics for Battalion Three are: 1 Battalion Chief; 7 permanent and 2 seasonal Fire Captains; 2 Fire Pilots and 2 seasonal Fire Apparatus Engineers; and 25 seasonal firefighters answered the calls with one utility (circa 1986) two fire engines (circa 1985, 1991) one helicopter (circa 1968) and one helicopter service unit (circa 1996) responded to 488 separate incidents,

The California Department of Forestry and Fire Protection has identified (SRA) Fire Hazard Severity Zones as Moderate, High, & Very High - based on homogeneous lands and their fuel loading, slope, and fire weather. In Battalion Three they are located by vertically dividing into three sections: the South section is a Very High (Loma Preita area), the center section is Moderate (West Santa Clara Valley Foothills), and the North section is High (Hwy 85 and Interstate 280)

Battalion Three, because of its unique combination of vegetation, topography, climate and population, has one of the most severe wild land problems in the San Francisco Bay Area. Wild land and urban interface, rugged terrain and highly flammable vegetation coupled with high winds make the South West Santa Clara County foothills especially unsafe for development unless adequate fire safe measures are taken. Without regard for wild land fire protection and water sources, continued development in the SRA will heavily impact fire protection and emergency medic services. Solutions center on designing an acceptable level of risks for firefighters and residents that measure all elements of that risk. Pre-fire planning, mutual aid agreements, standard response plans, Mutual threat zones and high fire behavior warnings are necessary elements to measure the risks to reduce losses from wildfires.

Mission Statements:

Primarily:
Purpose Statement of the Battalion

1. **Battalion Three of the Santa Clara Unit incorporates the western portion of Santa Clara County. There are many structures located through out the Battalion. The large population centers, Cupertino, Los Gatos, Saratoga, are within Local Responsibility Area but are in Mutual Threat Zones. The fuels are redwood and mature pine trees on the eastern aspects and brush fields on the Western aspects. The Battalion has grass oak woodland on the lower elevations. There is recent large fire history, The Lexington fire, The Croy fire of which each destroyed numerous homes and valuable watershed.**

E. General Description of the Current Fire Situation

1. Ignition Workload Assessment (Level of Service)

Ignition workload assessment focuses on identifying areas with the potential of experiencing unacceptable loss and high suppression cost fires. In this assessment unit staff analyze ignition data by damage, cause, intensity, vegetation type, and initial attack success or failure. Workload patterns can be used to infer areas in the unit with a higher potential for costly damaging fires. Appropriate workload management strategies and tactical actions (including prevention and suppression) can be developed and included in the Unit Fire Management Plan.

2. Fuels

The fuels assessment layer is valuable for explaining much of the local fire situation. This layer can help focus attention on fuels management related solutions. Appropriate fuels management strategies and tactical actions (including vegetation management, resource management, assistance to landowners, prevention, and more) can be developed and included in the Unit Fire Management Plan.

3. Frequency of Severe Fire Weather

Frequency of severe fire weather (for example Santa Anna wind corridors) may influence the unit staff's choice of appropriate strategic solutions. The underlying weather data can also be useful for developing tactical prescriptions for prescribed burns and other pre-fire management actions.

F. Priority Areas

1. **The watershed areas of western Santa Clara County including Saratoga, Los Gatos, Summit road, Croy road areas, these areas are becoming more populated. These areas have heavy fuel loading and require fuel modification.**

2. **with the on going fuel modification and working toward a Western Santa Clara County Fuel Break. This will provide an ability to manage fire with a high success rate and keep both the Stakeholders and the Watershed safe.**

Potential Prescriptions

1. Continue with School and special event Fire Prevention Programs in the
   Target areas
2. Aggressively enforce and inspect under Public resources code 4290 and 4291.
3. Support Stakeholder participation in fuels reduction and fire defense activities.
4. Support landowner fuel breaks in conjunction with the Santa Clara Fire Safe council.
5. Continue to support the Community wildfire prevention plans for the Uvas and Lexington basin watersheds.

F. Action Plan

1. Support the ongoing shaded fuel break in conjunction with the Santa Clara
   Valley Water District.

2. Assist both Mid Peninsula and the Santa Clara Open Space Districts in planning and implementing fuels reduction on lands they manage in the public trust.
3. Continue to expand the Lexington Basin chipper program to include stakeholders in the Croy Ridge area.
4. Continue to assist and gain stakeholder support of the western Santa Clara County fuel break.

5. Continue with the hazard fuels reduction burning program in the rural western Santa Clara County in conjunction of the Bay Area Air Quality Management District.
6. Continue to assist with the Community wildfire prevention plans in western Santa Clara County

G. Institutional Issues

1. Strive to insure minimum level of training and protective clothing for all non CAL-FIRE. wild land first responders, this includes the following agencies

Mid Peninsula Open Space District, Santa Clara Open Space Authority, Santa Clara Valley Water District, California Stare Parks, Santa Clara County Parks and Recreation, Pacific Gas and Electric.

Battalion Four (Alameda County)

Battalion four covers the entire county of Alameda. Alameda County has a population of 1.5 million people. It is geographically located on the eastern side of the San Francisco Bay and stretches eastward from Oakland into the greater San Joaquin valley near Tracy. Contra Costa County borders it to the north while Santa Clara and San Joaquin border it to the south and east.

Topography ranges from hilly near the bay to mountainous elevations up to 4000 feet with steep canyon drainages south of Livermore. Fuel types are generally grass (50%), Chaparral (30%) and Oak Woodland (20%). Weather during fire season is temperate near the bay and hotter and drier further inland approaching the inland valleys. The most significant weather factor in Alameda County is wind. Wind patterns are predominately east to west during fire season due to the cooler marine air flowing into the Livermore and San Joaquin valleys. Wind speeds vary but on most summer days the winds near the bay are 10 to 20 m.p.h. In the eastern portion of the county on those same days wind velocities will be 15 to 25 m.p.h. Wind velocities of 40 to 50 mph in the eastern portion of the battalion are not uncommon under normal weather patterns. Even though relative humidity's are tempered by the marine influence the higher wind speeds adversely affect fire behavior. Any fire starts with sustained fuel continuity downwind quickly progress into moderate to rapid rates of spread at the fires head. Quick initial attack by fire suppression forces is critical in these conditions.

Operationally, Battalion four is a complex environment for CAL-FIRE. There are fourteen local government fire agencies operating in Alameda County. Nine of these cities border CAL-FIRE. state responsibility areas (SRA). There are approximately 70 miles of wildland-urban interface separating local government responsibility areas (LRA) from the 286,000 acres of CAL-FIRE jurisdiction. The interface area is densely populated with homes that easily exceed one million dollars each. The high values at risk in Battalion four and the windy conditions have combined to create high damage loss fires historically. One 2 acre fire in the Oakland Berkeley hills destroyed two homes and damaged a third for a total damage loss of four million dollars. The 1991 Tunnel Fire destroyed 3000 homes for a loss of 1.8 billion dollars. Life safety at wildland fires is also a major concern. There have been 28 fire fatalities in Alameda County going back to 1968 including citizens, police and firefighters. Coordination during wildland fire evacuations in the densely populated interface areas is a major challenge. Coordination with local government fire resources is critical to fire response in Alameda County. An extensive cooperative effort over the past five years to create and manage mutual threat zones and responses to fires has dramatically increased CAL-FIRE's initial attack capability in this area. That coupled with CAL-FIRE moving additional fire engines and helicopters into the East Bay during times of high fire danger increases the probability of keeping fires small and therefore reducing the need for evacuations and reducing dollar loss.

The main focus for fire prevention in Battalion Four is public education, information and fuel reduction in prioritized areas. This focus includes a strong relationship with stakeholders to maximize limited resources to accomplish prioritized objectives. CAL-

FIRE is partnered with local government fire agencies, the Diablo Fire Safe Council and the East Bay Hills Emergency Forum. This partnership is designed to reach beyond the fire service to involve homeowners, community leaders, planners, developers, insurance companies, public utilities and others to reduce the risk of wildfire -- before a fire starts.

Objectives:

1. Reduce the size and threat of wildfires in the interface by fuel reduction.
2. Utilize fuel modification in the form of shaded fuel breaks to enhance evacuation corridors and tactical positions for firefighting operations.
3. Establish and maintain strong relationships with local government fire agencies for coordination and cooperation.
4. Coordinate with the Alameda County Fire Marshall to maximize the use of fire codes, ordinances, PRC 4290 and 4291 on all new developments in the SRA.
5. Continue to update and administer mutual threat zone agreements in the SRA-LRA interface areas.
6. Participate in interagency training including disaster services and law enforcement.
7. Continue to maximize media contacts to educate the public on ways to prevent fires and preserve life safety.
8. Reduce the threat of hostile fires escaping from known fire start hazard areas such as roadside and wind power generation.

Priority Areas:

1. SRA-LRA wildland urban interface areas.

Oakland-Berkeley hills
San Leandro-Castro Valley hills
Hayward hills
Union City-Fremont hills
Pleasanton Ridge-Kilcare Woods
Palomares-Niles Canyon

2. Eastern county wind generating area

3. Mines Road drainages including Del Valle recreational area

Action Plan:

1. Continue and enhance the fuel modification and fuel reduction projects in the wildland-urban interface areas. Coordinate resources with the Hills Emergency Forum and the Diablo Fire Safe Council. Projects include but are not limited to:

Berkeley upper Strawberry Canyon fuel reduction project.
Diablo FireSafe East Bay roadside clearance project.
East Bay Regional Park Claremont Canyon fuel reduction project.
Tilden Park Eucalyptus removal project.
Oakland-Berkeley hills 15 mile fuel break project.
Oakland Shepherd Canyon shaded fuel break project
Chabot Park fuel reduction project.
Highway 24 Caldecott Tunnel fuel reduction project.

2. Obtain language changes in the conditions of approval for wind generators use permits requiring numbering and marking gates and road access utilizing the standards of PRC 4290 with regard to signage.

3. GIS / GPS mapping and marking of wind farm gates and road system

4. Conduct public information and education programs at local schools.

5. Distribute FireSafe educational materials at public gatherings and public venues.

6. Utilize Volunteers in Prevention for targeted inspections of dwellings and buildings for compliance with PRC 4291.

7. Utilize Volunteers in Prevention to conduct bulk mailing of self inspection and fire safe guides to postal customers in high hazard areas.

8. Whenever dealing with the media suggest fire prevention messages to be included and integrated into their story.

9. Conduct meetings with agricultural groups such as the Cattleman's Association, and Farm Bureau to provide information and encourage the use of firebreaks and clearance around all improvements such as dwellings, barns, out buildings and wells.

10. Conduct training exercises and pre-fire season briefings with cooperating fire agencies and share pre-fire plans for special target hazards.

Battalion Five: (Stanislaus)

Battalion Five covers all of western Stanislaus County west of Interstate Five and bordered by San Joaquin County to the north and Merced County to the South. The Battalion includes a portion of eastern Santa Clara County which includes the San Antone valley and is bordered by the top of the China Grade on Mount Hamilton Road to the west of the San Antone Valley.

The vegetation and topography in Battalion Five transition from annual grass rangelands along the Interstate Five corridor to remote, steep, brush and pine covered mountains to the west. The area includes over 230,000 acres of watershed critical to maintaining downstream water quality. All runoff flows into the San Joaquin river, a valuable fisheries and source of agricultural and domestic water supply.

The Battalion includes sparsely populated rural and ranch properties and a planned upscale residential resort community in the Salado Creek area, being developed under the Diablo Grande Specific Plan. The Battalion includes wilderness areas of Coe State Park and the Frank Raines Off-Highway Vehicle Park located in Del Puerto Canyon.

The area has a significant history of large damaging wild land fires. While the majority of fires start along the Interstate Five corridor, the majority of large damaging fires have occurred in more remote areas of the Battalion. The primary factors contributing to difficulty of control have been the steep, inaccessible terrain, the extreme burning conditions from decadent brush and pine trees, and the prolonged response time for fire suppression resources to the remote areas of the Battalion.

The number of wild land fires and other emergency incidents has been steadily increasing over the last decade. This is primarily because of the increase in population and the corresponding increase of human risk factors from increased travel, recreational use, and other activities in wild land areas.

Objectives:

1. Improve local operational efficiency and effectiveness by improving mutual and auto aid agreements between CDF and West Stanislaus Fire Protection District, City of Patterson, and City of Newman. This will include improving communications systems and dispatch procedures.

2. Review all development projects for compliance with PRC 4290 and make recommendations for fire defense improvements. This will include: review of first phase development plans for Diablo Grande Development and major infrastructure projects related to it, planning green belts and fuel breaks, and fuel reduction projects in advance of development.

3. Participate as a voting member member of the Stanislaus County Fire Authority in developing improved local fir codes and ordinances and fire prevention processes.

4. Complete approximately 250 acre Biel VMP project.

5. Participate in planning fire safe requirements for expansion of Frank Raines ORV Park.

6. Work with Caltrans on mowing and fuel reduction projects along I-5 corridor.

Priority Areas:

1. Frank Raines ORV County Park
2. Diablo Grande Subdivision
3. I-5 corridor

Action Plan:

1. Work closely with local fire officials (the Chief and Fire District Board of Directors for West Stanislaus Fire Protection District, The City Manager and City Council for the cities of Patterson and Newman) to improve mutual aid and auto aid agreements in the Battalion. This will include improving communications capabilities (interoperability) and dispatch procedures.

2. Work closely with Stanislaus County Community Development Department staff and West Stanislaus County Fire Protection District on developing fire safe conditions for the second phase of the Diablo Grande Development.

3. Request hand crews for brush abatement along the Stanislaus /Santa Clara County Road. Coordinate project work with Coe State Park staff. Brush abatement should include obtaining clearance in the Red Creek drainage of the Coe State Park Wilderness area.

4. Complete the Biel VMP project contract and burn by the winter of 2009.

5. Work with West Stanislaus County Fire Protection District and Stanislaus County Parks on improving fire safety conditions in Frank Raines OHV Park.

6. Develop safe operating procedures for annual Caltrans mowing project along the center divider of I-5. Work with local media through press releases to encourage adjacent landowners to disc along the right of way to help prevent large wind driven fires along the corridor.

Battalion Six: (Contra Costa / Tracy)

The Contra Costa battalion covers all of Contra Costa, a small sliver of northwestern Alameda, and western San Joaquin Counties. There are several large landowners in the battalion. Three of the largest are Mt Diablo State Park, Contra Costa Water District and the wind power consortium near the Altamont Pass. Mt Diablo State Park encompasses approximately 30,000 acres of open space in the middle of the battalion. The Contra Costa Water District includes the Los Vaqueros Reservoir and is a large stakeholder in overall watershed protection with close to 80,000 acres under management. The Los Vaqueros Reservoir and watershed incorporates some 20,000 acres and provides a domestic water supply to over 450,000 people. While many fire safety steps have been taken by the wind power consortium, wind farms continue to be an ignition source for vegetation fires. A new generation of wind turbines has been installed and are an unknown factor and may lead to a new learning curve on reducing fire starts.

The population of Contra Costa County is now over one million people. The continuing growth in the population further increases the pressure on areas of wildland urban interface. Top on the list of projects for the battalion are the cooperative agreements with other fire agencies. These include the staffing of Sunshine Forest Fire Station though the non-fire season months under an Amador plan with East Contra Costa Fire District and updating and improving the Mutual Threat Zone response plans. The Diablo Fire Safe Council has been very successful in obtaining grant money to further fire safety and fuels management projects in Alameda and Contra Costa Counties. Battalion Six personnel will continue to support these projects in anyway possible. In October of 2003 the Diablo Fire Safe Council and Hills Emergency Forum hosted a Fire Wise Workshop at the San Ramon Convention Center. This workshop brought together city and county managers, planners, building officials, contractors and emergency services personnel from across the country to illustrate the wildland fire problem and mitigation steps that can be taken to decrease the amount of damage a fire can cause in our communities.

Objectives:

1. Continue fuel modification, 4291 inspections and look at access and egress issues within and around the Community of Canyon.

2. Implement a fuel modification zone around Mt Diablo State Park boundaries.

3. Identify funding sources for Alameda Whip Snake habitat recovery research.

4. Continue working with Mt. Diablo State Park and US Fish and Wildlife to study the effects of fire on the Alameda Whip Snake due to wildfires and controlled burning.

5. Draft and implement a 20 to 25 year control burn cycle within the state park.
Santa Clara Unit Fire Management Plan, 2008

6. Maintain Wind Farm fire plans and continue the inspections of the re-powering projects.

7. Begin focused enforcement of the 4291 code in the Alhambra Valley and Wildcat Canyon areas.

8. Begin groundwork for 4291 program in the San Pablo Watershed.

9. Continue working with Contra Costa Water District to protect and enhance the Los Vaqueros watershed and nature area.

10. Upkeep, maintenance and mapping of the Contra Costa County fire trails.

11. Remain active in the Diablo Fire Safe Council.

12. Educate the public on equipment caused fires.

13. Reduce arson fires.

14. Review/update Mt. Diablo Sate Park pre-fire management plan with State Parks and other local agency cooperators.

15. Secure property in the Altamont Wind Resource Area to establish remote automated weather station.

Action Plan:

1. Canyon

A. Continue community meetings to assess the overall progress of fire safety and fuels modification projects in the community.

B. Start a 5-year phase-in of 4291 code inspections.

C. Address the access / egress issues with county planning, transportation and building officials.

D. Using GIS based products and a fire behavior-modeling program such as Far Site or Behave conduct a series of fire scenarios in the Canyon area before fuel modification projects and after. Take this data and perform cost suppression estimates of fires before and after projected fuel modification efforts.

E. Phase in enforcement of 4290 Driveway and Water Supply requirements.

F. Explore the possibility of placing utilities present in Canyon underground with the responsible agencies.

2. Mt Diablo State Park

A. Implement a fuel modification zone along the park boundaries to limit the spread of fires from the park into the urban interface and vice versa.

B. Work with park management, US Fish and Wildlife and adjacent local governments to draft and implement a 20-year fire reduction plan in the park.

C. This project would start at or near the top of Mt Diablo and proceed down slope and return to the top at the completion of a cycle.

D. These burns would be limtied to approximately 500 acres per year as conditions allow.

3. Alhambra Valley, Wild Cat Canyon and West Contra Costa County
   A. Begin a focused, phased 4291 code enforcement program.
   B. Assess the region for fuel modification projects and secure contracts with local landowners.

4. Bollinger Canyon and Las Trampas Ridge
   A. Working with East Bay Regional Parks, San Ramon Valley Fire Department and local landowners begin fuel modification on Las Trampas Ridge running north
   B. Continue 4291 and local weed abatement enforcement in the LRA and SRA areas.

5. Los Vaqueros Watershed and Mallory Ridge
   A. Continue assisting Contra Costa Water District with fuel modification projects and control burns in the Los Vaqueros watershed sensitive areas.
   B. Assist Contra Costa Water District with weed abatement projects on Mallory Ridge.

Battalion Seven: (South Santa Clara county Fire District):

The South Santa Clara County Fire District, known as Battalion Seven, is located in the southern San Francisco Bay Area. Battalion Seven provides fire control and advanced emergency medical services to 40,000 customers in the unincorporated areas of Morgan Hill, Gilroy, and the community of San Martin. The Battalion has 3 fire stations that cover approximately 300 square miles. The boundaries are: San Jose city limits to the North along highway 101 at Metcalf road; to the Santa Cruz County Line; to the West Hecker Pass Highway; East to Bell Station on the Pacheco Pass Highway; South to the San Benito County Line at Pajaro River.

Battalion Seven protects: residential, commercial and light industrial occupancies; the wildland urban interface communities; 10 wildland Mutual Treat Zones, 450 miles of State Highways 152, 156, 25, and 101; 45 miles of two separate rail lines owned by Southern and Union Pacific Railroads, also used by Cal Train Commuter and Amtrak trains.

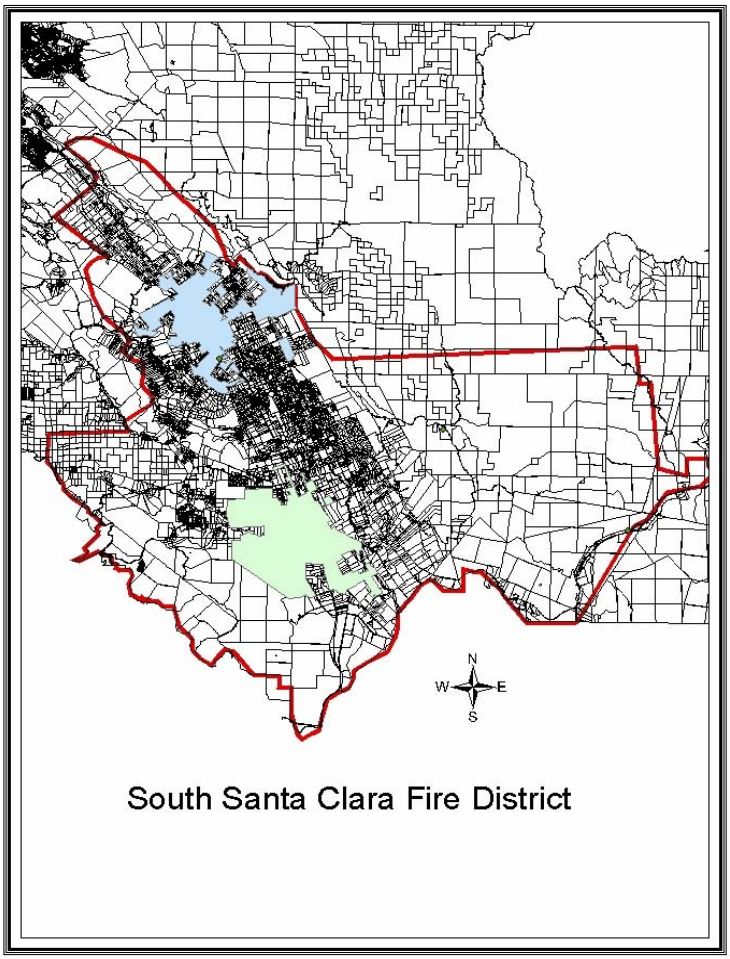
The San Andrea's, Hayward, and Sergeants Faults Zones run through Battalion Seven. One large major water supply from San Luis Reservoir and a gas pipeline run through the battalion.

Since 1997, the Fire District has provided advanced life support (paramedic) services for all members of the community. The Fire District works closely with the local ambulance provider (American Medical Response), Santa Clara County EMS. Along with fire suppression and emergency medical service, the fire district personnel are trained in many other aspects of emergency responses. These include: vehicle extrication, swift water rescue, hazardous material response, earthquake, and flood preparedness. The Fire District also provides fire prevention and education, code enforcement, and engineering services to the public. The Fire District staff includes 1 Battalion Chief, 4 Fire Captains/Paramedics, 2 Fire Captains,8 Fire Apparatus Engineers/Paramedics, 4 Fire Apparatus Engineers, 3 Firefighters, 1 Mechanic, 2 Communication Operators and 1 Staff Service Analyst. The fire district operates 4 type 1 Fire Engines, 1 75" Truck, 1 OES Fire Engine, 2 3,000 Gallon Water Tenders, 3 Utility Vehicles, a Chief Officer's Vehicle, Mobile Air Support Unit and a Technical Rescue Unit. The Fire District is supported by its' 20 paid call firefighters. In addition to emergency response, the Paid Call Firefighters are frequently utilized to staff stations when front line engines are on other emergencies. The Paid Call Firefighters are also involved in numerous charitable activities and fund raisers.

The South Santa Clara County Fire District participates actively in automatic aid agreements, with the Gilroy City Fire Department, Santa Clara County Fire Department (Morgan Hill City), California Department of Forestry and Fire Protection (CAL FIRE), Pajaro Valley Fire District, San Benito County Fire, and San Jose City Fire Departments. We are an active participant in the Santa Clara County and State of California Mutual Aid Plans responding to disasters in the County and throughout California

The Insurance Service Rating (ISO) rating for the South Santa Clara County Fire District is 5 and 10. The ISO rating of 5 is with in 5 miles of any Fire District station or a fire department we currently have an auto aid agreement with.

Battalion Seven: (South Santa Clara county Fire District):



The South Santa Clara County Fire District was established in 1980 when the Gilroy Rural Fire District merged with the Morgan Hill Rural Fire District. The South Santa Clara County Fire District contracts for personnel and administration with the California Department of Forestry and Fire Protection (CAL-FIRE). This is the largest multi-purpose emergency service and resource protection agency within the United States. The Santa Clara Unit (SCU) of CDF is responsible for over 1.35 million acres of State Responsibility Area (SRA), as well as Local Responsibility Area (LRA).

A seven-member board of Fire Commissioners oversees the South Santa Clara County Fire District They are appointed by the Santa Clara County Board of Supervisors. They live in different areas of the Fire District and represent the views of the community. They provide community input, oversight, and budget management, while representing the Santa Clara County Board of Supervisors.

The South Santa Clara County Fire District is an all risk emergency response battalion. Responding to approximately 4,500 incidents per year which include various assists to other fire departments, emergency medical services, structure, vehicle, and wildland fires, hazardous materials spills, water rescues, and public service assists as listed below:

INCTYPE	SUBTYPE	Count Of SUBTYPE
FIRE	Structure	128
FIRE	Wildfire	152
FIRE	Other	714
Medical	Minor Life Threatening Vehicle accident w/ injuries Vehicle accident w/ rescue	1886
FMS	Hazardous Condition Hazardous Materials Power Lines Down	1671
PSA	MSC	11
Total		4562

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<u>Mission Statement</u>:

Santa Clara County Mission Statement

Our mission is to provide quality public services with measurable outcomes for the residents of the County of Santa Clara, in order to meet their needs for a healthy, safe, and prosperous environment and help them develop a community rich in both natural beauty and economic opportunity where diverse people come together to celebrate a higher quality of life. The South Santa Clara County Fire District is dedicated to provide professional customer service through performance and accountability.
We provide fire and emergency medical services to protect life and property and we strive to reduce emergencies through fire prevention and public education.

The South Santa Clara County Fire District Mission Statement

The South Santa Clara County Fire District is dedicated to provide professional customer service through performance and accountability. We provide fire and emergency medical services to protect life and property and we strive to reduce emergencies through fire prevention and public education.

South Santa Clara County Fire District Board of Commissioners Strategy

We will advise responsibly and in accordance with all Federal, State, and Local laws, codes, and ordinances. We will ethically represent the residents of the Fire District at all times with Respect, Leadership, and Integrity. We will be fiscally responsible, while providing the Fire District residents with highly trained and properly equipped personnel, meeting and exceeding industry standards

Battalion Seven: (South Santa Clara County Fire District):

Objectives:

1. To keep structure fires to the floor of origin.
2. To treat, package, and transport patients to definitive care within 1 hour.
3. To meet designated EMS response times 95% or above
4. To adopt new fire code
5. To minimize the interface fire threat.
6. To identify high fire severity zones and complete pre-response and evacuation plans.
7. To identify fuel reduction and fuel modification projects in the high fire severity zones.
8. To establish a Community Emergency Response Team (CERT) in San Martin.
9. To increase staffing at all Fire District Stations
10. To attempt to locate funding using all grant resources

Battalion Seven: (South Santa Clara County Fire District):

2008 Vegetation Fuel Reduction Inspections Areas:

1. Holiday Lake Estates
2. El Matador Drive
3. Redwood Retreat Road
4. Developed areas East of New Ave.
5. Day Road
6. Burchell road

2008 Action Plan:

1. Maintain pre fire plans.
2. Educate the public about the Santa Clara County Fire Safe Council.

3. Maintain school and special event programs.
4. Assist Unit VIPs with LE 100 program for PRC 4291.
5. Continue to recruit and retain Paid Call Firefighters.
6. Continue plans reviews and enforcement of PRC 4290
7. To provide employees with the latest Fire and EMS training to support objective 1 and 2.

To continue to work with and support all of our cooperators.

Battalion 9: (Emergency Command Center) Descriptive:

The Santa Clara Unit Emergency Command Center (SCU ECC) is one of 21 Units in California, providing command and control services for Twelve Forest Fire Stations, (Schedule B), positioned to protect the State Responsibility Areas, (SRA), of Alameda, Contra Costa, Santa Clara, Western San Joaquin, and Western Stanislaus Counties. The SCU ECC also provides Command and Control for the South Santa Clara County Fire District and the Local Government Cooperative Agreement, (Schedule A Contract) with Alameda County at the Sunol Fire Station and two Amador Contracts. One Amador Contract at the Pacheco Fire Station in Santa Clara County, and the other is at Sunshine Fire Station in Contra Costa County.

The SCU ECC is staffed by 4 Fire Captains, 3 Communication Operators, and 1 Battalion Chief. The shifts are staggered to maintain a Fire Captain, and 1 to 2 dispatchers on during the daytime hours, and 1 Fire Captain for night coverage. The Battalion Chief provides oversight 3 days per week in the winter and extended oversight during peak season when needed.
An SCU ECC Fire Captain also fills the role of the Duty Officer to assist the SCU Duty Chief in any all command and control functions. SCU ECC Duty Officer is maintained year round, 24 hrs per day. In addition, the SCU ECC has access to 72 Santa Clara Unit VIPs to assist as needed for any and all large incidents. The VIPs are cross trained to assist in answering phones, tracking of incidents, assisting in radio communications, staffing of the SCU Expanded Dispatch Center, and staffing the Communications Van.

The SCU ECC provides Command and Control, Logistics, and CAL-FIRE Resources to assist the various Local Governments and Cities, to mitigate wildfires, floods, and earthquake damage in the Local Government Responsibility Areas, (LRA), of Alameda, Contra Costa, and Santa Clara Counties. The lands are protected by means of the Mutual Threat Zone Agreements, (MTZs), with the various Cities, and Local Governments within the Santa Clara Unit.

The Santa Clara Unit has 110 MTZs. These MTZs are located in Alameda, Contra Costa, and Santa Clara Counties. The MTZs are divided into manageable portions dictated by geography, and structure density. At which time infrastructure is developed in Western portions of San Joaquin, and Stanislaus Counties, additional Mutual Threat Zone Agreements will be established to protect the various assets in these areas.

The SCU ECC has the ability to access, and deploys any and all CAL-FIRE Resources throughout the state to mitigate a given incident within the Santa Clara Unit by means of the Statewide Command, and Control Structure. The Statewide Command and Control Structure are divided into two areas. The Northern Region, which is controlled by the Northern Operational Center(NOPS), and the Southern Region, which is controlled Southern Operational Center(SOPS). The SCU ECC is located in the Northern Region. The SCU ECC processes requests for additional CDF Resources through NOPS by means of an electronic data terminal called the ROSS(Resource Ordering

The ROSS system is linked statewide. The SCU ECC has 4 terminals on the main floor, and 5 terminals in the Expanded Dispatch Center. All SCU ECC personnel are cross trained to dispatch and utilize ROSS. In the case of large fires, flooding, or earthquake, or other Natural Disaster, the SCU ECC can rapidly access the available resources throughout the state by means of the ROSS system via NOPS. NOPS then coordinates and tracks the resources fills to monitor drawdown, and track resource commitments. NOPS coordinates with SOPS to then reassign the remaining CDF resources that have not been committed to Santa Clara's Incident(s) as to provide ample coverage throughout the state. This system gives the SCU ECC the ability to assist any of the 52 Cooperating Fire Agencies.(Cooperators) within the Santa Clara Unit in a timely manner. Rapid augmentation has proven to be the foundation for success when dealing with large, damaging, and/ or multiple Incidents.

The ROSS system is enhanced by a microwave link called the NOPS and SOPS intercoms. The intercom system allows all 21 ECCs in the state to talk to each other, and allows for critically needed aircraft to be ordered prior to placing the order in ROSS, thus reducing lag time for both ordering, and cancellation of aircraft.

The SCU ECC works hand in hand with its Cooperators by means of Mutual Aid, and Auto Aid. On a day to day basis the SCU ECC provides assistance to adjoining jurisdictions by means of our Auto Aid Agreements. These agreements allow CAL-FIRE and its Cooperators to respond the closest available resource to any given incident. On a broader scale, if a given entity determines the incident they are responding to will exceed, or has exceeded their capabilities, CAL-FIRE will assist as needed to mitigate the incident.

The SCU ECC is well versed as it applies to the utilization the OES Fire, and Rescue System. The Santa Clara Unit has three counties that lie within OES Region II (Alameda, Contra Costa, and Santa Clara). The Santa Clara Unit also has portions of Western San Joaquin and Western Stanislaus Counties, which lie within the boundaries of OES Region IV. Requests for resources to mitigate the given incident are processed through the Operational Area Coordinators (OAC) for the county in which the incident is taking place. Great care must be taken to insure the correct ordering process is followed to insure the integrity of the system and the ability of the OAC's to track resources. During the declared Fire Season the SCU ECC works closely with the OAC's to maintain these ordering processes and to further strengthen our working relationships. With the abundance of MTZs within the Santa Clara Unit and the eminent structure threat in these MTZs, it is imperative that the SCU ECC provides leadership to the OACs. This is accomplished by joint training, site visits by the SCU ECC Battalion Chief, open dialog, and consistent ordering processes by SCU ECC personnel.

The SCU ECC provides a leadership role in the monitoring of fire weather conditions within the Santa Clara Unit. The issuing of Red Flag Warnings and Fire Weather Watches are the foundation for success. The SCU ECC works closely with the Monterey Fire Weather Office to anticipate such weather events, which allows the SCU ECC to augment staffing prior to the barrage of fire activity that accompanies these weather events. The SCU ECC also works closely with the SCU Duty Chief and the

NOPS Duty Chief as it pertains to pre-positioning of CAL-FIRE resources in the critical areas of the Santa Clara Unit and tracking of costs associated with these augmentations. The SCU ECC strives to be ever prudent, but still be ever ready. Always keeping in mind the needs of our neighboring CAL-FIRE Units.

The SCU ECC maintains 3 Remote Weather Stations(RAWS) and monitors 5(2 of which are properties of State Parks and San Francisco Water) stations on a daily basis to set the appropriate dispatch level. A Standard Response Level is pre-determined for each dispatch level for timely activation in the event of a wildfire, or other type fire which is threatening to burn the wildland.

The SCU ECC maintains an electronic Emergency Resource Directory(ERD) which allows us to support any given incident within the Santa Clara Unit. The SCU ERD contains information such as the ICS qualifications for SCU personnel, supplies, vendors, private resources available for hire, call when needed rosters,(Dozers, Helicopters, Watertenders,etc), Local Government Cooperator information., and much, much more. The SCU ERD is linked to ROSS and has everything needed to support a given incident. The SCU ERD is updated yearly.

The final piece of the puzzle lies with the SCU ECC Expanded Operation (SCU Expanded). The SCU ECC Expanded building is a state of the art resource ordering operation with 5 ROSS terminals, 3 printers, of which two are linked to ROSS, fax phone, 14 additional computer terminals, 20 phone jacks, and ample space for 30 people. The SCU Expanded Operation is fully functionalized (Crews, Equipment, Overhead, Supplies, and General Information). When an Initial Attack Incident occurs that has the potential to become an Extended Attack, or Major Incident, the SCU ECC immediately staffs SCU Expanded with a VIP, and a Fire Captain. Once SCU Expanded is up and running, all ordering for the given incident takes place within this building. The only exception is the ordering and control of aircraft which stays on the main ECC Floor. The given incident is assigned a separate Command Frequency to allow the SCU ECC to go back to processing any new incidents, thus freeing up the SCU ECC main floor for business as usual. If the given incident continues to grow additional personnel are assigned from within SCU, or an order is placed in ROSS for fill. The properly staffed Expanded Operation allows for timely resource ordering, cancellation, or reassignment, of resources, overhead, and equipment while taking the load of supporting the incident off the SCU ECC main floor.

- In 2007, the SCU ECC processed 7200 Incidents.
- The call volume for the SCU ECC increased by 13% from the previous year.
- The SCU ECC dispatches year round, 24 hrs/ day to process Medical Aids, Vehicle Accidents, Structure Fires, Hazardous Material Incidents, Law Enforcement Activities,(For the CAL-FIRE Peace Officers), Wildland Fires, Flooding, Earthquakes, Cliff Rescues, River Rescues, Trench Rescues, Helicopter Rescues, Evacuations, Fire Prevention Activities, Terrorist Threats, Industrial Accidents, Other Natural Disasters, and Public Service Requests.

Mission Statement:

The mission of the SCU ECC is to provide professional, consistent, accurate, timely, and coordinated command and control functions to all who depend on our services.

The secondary mission is to pursue all avenues of funding to maintain the proper staffing levels in the SCU ECC in relation to the increasing call volume in the Santa Clara Unit.

Objectives:

- To provide accurate, and timely dispatching services to the population served by the Santa Clara Unit.
- To provide aggressive dispatching of CAL-FIRE resources to all wildfires in the Santa Clara Unit, upon the first receiving the call, regardless of the size of the fire.
- To provide the proper dispatch level based upon current weather conditions.
- To provide the proper response level for the call at hand.
- To maintain a positive working relationship with all Fire Agencies within the Santa Clara Unit.
- To maintain a positive working relationship with all Public Service Agencies we encounter.
- To maintain a staffing level within the SCU ECC, which will allow for timely processing of calls, accurate tracking of resources, and professional radio edicate.
- To hold public, and fire service personnel safety as the number one priority when dispatching calls.
- To maintain a professional demeanor with all persons we encounter.
- To pursue the newest technology which will enable the SCU ECC to better serve the public, and carry out our command and control objectives.
- To attend, and maintain the training needed to effectively carry out all command, and control functions.
- To stay proficient at all tasks required, and perform them in a timely manner.

To learn, and maintain proficiency in the use of the new Altaris Computer Aided Dispatch System,(Altaris CAD).

- To achieve the needed compliance level, as it pertains to the Altaris CAD Geo layer, so we can proceed to the Dynamic Mode by May 2007.
- To upgrade our phone system to provide a user friendly environment at the main floor dispatch panel, and pursue all avenues of funding to achieve this objective.
- To maintain a clean healthy environment in the SCU ECC.
- To maintain a positive attitude towards all personnel working in the SCU ECC, and to always treat each other with respect, no matter how trying the situation may be.

- To continue our leadership role in the early recognition of Extreme Fire Weather Conditions within the Santa Clara Unit, and to pass this information to our Cooperators in a timely manner.
- To aggressively initiate the FMAG process in the first hour of a given wildland fire which is damaging, or threatening to damage infrastructure within the Santa Clara Unit.
- To continue our leadership role in the aggressive mitigation of wildfires in the Santa Clara Unit.
- To provide communications services which are ever vigilant of Fire Department Personnel scene safety.
- To provide communication services which are ever vigilant of the public's safety.

Action Plan 2008:

- To customize the Altaris CAD to fully meet the needs of the SCU ECC. This includes both upgrading new GIS technology and information and also linking up CAD to CAD for sharing of information.
- To achieve 80 % compliance as it pertains to the GEO Layer so we can be functioning in the Dynamic Mode by May 2008.
- To establish 24 hour Wide-Awake Dispatch Capability at Morgan Hill ECC.
- To pursue all avenues of funding to upgrade the SCU ECC phone system which is 15 years old.
- To develop a pool of personnel for filling necessitated roles during Peak Fire Season in order for the SCU ECC to meet the Unit's Goals and Objectives
- Seek outside funding- on going.

Battalion Twenty: (Fire Prevention Bureau)

The Santa Clara Fire Prevention Bureau falls under the direction and supervision of the Unit Chief. The Bureau is staffed by a Battalion Chief, one Fire Captain Specialist, one Pre-Fire Engineer who also doubles as a fire Captain Specialist, and a Fire Prevention Specialist II. The Bureau is involved in all areas of prevention and is broken down into three separate, but related functions handled by the individuals assigned to the Bureau, education, engineering and enforcement.

The Volunteers in Prevention program is administered and coordinated by the FPS II. The VIP's currently have 92 members and in 2007 conducted 352 public outreach and education program making 406,590 personal contacts, 45 news releases, 1965 PRC- 4291-6 inspections, and when combined with other projects donated a total of 8900 hours of personnel time to fire prevention engineering and education to the unit.

Law Enforcement branch of the Bureau includes; fire investigation, issuing citations, processing criminal complaints with local District Attorneys, and civil cost collections, which are returned to the States General Fund. The Bureau maintains membership in the Santa Clara and Alameda County Fire Prevention Officers, and Fire Investigation groups, and is currently working to establish an interdisciplinary fire investigation team in Contra Costa County. In addition to these groups the Bureau is actively fostering working relationships with the over 40 other Law Enforcement agencies within the units boundaries.

Pre Fire Engineering and Fire Protection Planning are also handled by the Bureau. The bulk of the Public Resources Code 4290 inspections are conducted by the counties in cooperation with the local CAL-FIRE Battalion Chief. Pre Fire Engineering includes GIS mapping of assets at risk, wildland fuel belts, and the maintenance of various other GIS data layers for use in planning and implementing fuel reduction projects. The Bureau also provides technical support to for two Fire Safe Council's active in the unit, Santa Clara Fire Safe, Diablo Fire Safe, and to the Hills Emergency Forum, a working group formed after the Tunnel Fire to address projects in the LRA and interface areas of the East Bay Hills and surrounding communities. With input and cooperation from these groups, and the associated stake holders, the Pre-Fire Engineer establishes goals and projects in the unit Fire Management plan to reduce the threat of large damaging fires. The document is the units' template for fuels reduction projects to pending, completed, and for general public review, and comment. The units Fire Plan allows us to respond to the needs and concerns of the public and identifies projects to be funded through cooperative grants and donations.

Through these three functions the goal of the Santa Clara Fire Prevention Bureau is working to reduce unplanned ignitions within the unit, limit damage caused by uncontrolled fires, through the use of education, pre fire mitigation projects, patrol, and law enforcement to meet the mission statement of the Department of Forestry and Fire Protection.

Training and Safety Battalion

The Santa Clara Unit's sphere of influence includes portions of Santa Clara, Stanislaus, Alameda, San Joaquin and Contra Costa Counties. It shares jurisdictional boundaries with: 35 separate city fire departments and fire protection districts; Mount Diablo and Henry Coe State Parks; East Bay Regional Parks District (EBMD); and Santa Clara County parks. Joint training is held with the: State EMS; the AMR Ambulance Company; 5 different Sheriff Offices; California Highway Patrol and various city police departments.

The SCU Training and Safety Battalion personnel actively participate in the Santa Clara County, Contra Costa, and Alameda Counties Training Officer's Associations. In addition, the SCU Battalion Chiefs participate in regular meetings with the: Santa Clara County Fire Safe Counsel; East Bay Regional Parks District; Mount Diablo and Henry Coe State Parks; Morgan Hill Police Department; Santa Clara County Sheriff's Office and other responding agencies. The battalion chiefs assist these agencies with live-fire, wildland training, and provide the Training and Safety Battalion with a list of training needs so joint operations may take place. This provides for cost effective operations and allows for enhanced interagency partnerships.

The battalion oversees the quarterly Training and Safety Committee meetings: to discuss training issues; review personnel and vehicle accidents; recommend steps to prevent future mishaps: ensure the department's safety requirements and safety programs are being adhered to in the fire stations and on incidents.

To accomplish the Training and Safety Battalion's objectives in 2008, the battalion provided a total of: 3178 hours of training to 71 company officers and administrative staff; 1580 hours of staff time to coordinate students, courses, and instructors; recording and tracking training; and ensuring those newly qualified trainees are listed in the statewide ROSS. The battalion staff provided a total of 8760 hours of dedicated Safety Officer service to the Santa Clara Unit.

The first priority of the Santa Clara Training and Safety Battalion Staff is to provide for the overall safety of the Santa Clara Unit's 100 permanent personnel and 76 seasonal employees. The Training and Safety Battalion's second priority is to: facilitate; ensure coordination for the unit-wide training plan; match training courses with approved personnel training requests; maintain a central location for updated training records for all employees.

The Battalion Staff comprises of: one battalion chief, one fire captain: and two Smith Creek Amador Contract fire captains. The two Smith Creek Amador Contract Fire Captains are funded only for November through May and designated for training Volunteer Fire Company's. The Staff continually strive to provide creative, cost effective, innovative training, and always providing the highest commitment to safety. The state-funded training operations, which are divided into 19 separate program areas, are a seven-day a week operation, and listed below are:

- Fire Prevention Bureau
- Alma Helitack
- SCU Emergency Command Center
- Automotive Fleet Maintenance Administrative and Office staff
- Battalion Chiefs and Company Officers Structure and Wildland Protection
- Schedule A and Schedule B Programs
- Santa Clara and Alameda County's Paramedic Programs
- Training and Safety staff
- Weapons of Mass Destruction Training Homeland Security
- Vegetation Management
- Pre-fire Engineering
- Joint Apprenticeship Program
- Volunteer Fire Departments
- Volunteers-in-Prevention
- Fire Safe Counsels
- Joint-Agency Operations

Mission Statements

Primarily:
The SCU Training and Safety Battalion is to provide the most current national industry standards for training in all mentioned program areas with the highest attention given to providing safety in the work environment. The battalion tracks certification for the Santa Clara Unit employees and ensures that each individual will be able to respond and operate jointly within all mutual aid agencies with their expected minimum level of training.

Secondarily:
The secondary mission of the SCU Training and Safety Battalion is to: enhance fire department operations by seeking creative and alternative training mechanisms; seeking additional funding sources, encouraging each employee to be part of a team and to share their individual areas of expertise by participating as instructors.

Objectives:

1. Provide a 24 hour, seven days a week, Safety Officer on all major incidents in the Santa Clara Unit.

2. Examine, re-evaluate and recommend changes in SCU's Field Accountability Tracking System (FATS). System changes are needed to effectively protect response personnel during a possible terrorist attack.

3. Identify the legal state and federal requirements for training and safety in each program area.

4. Identify training and safety requirements for contract programs.

5. Meet or exceed those training standards identified in the CAL-FIRE State Training handbook.

6. Identify training priorities set by the Unit's senior management.

7. Identify the needs of each of the 19 program areas to meet the training requirements established by the program managers.

8. Identify projected vacancies and the training requirements necessary to help those personnel filling those vacancies function successfully.

9. Identify the needs of each employee to help achieve career development goals.

10. Identify CAL-FIRE'S new training programs in the early stages of development, project their impact and develop an implementation plan.

11. Identify the training needs of our partner agencies.

12. Examine the current tracking and delivery systems. Identify system deficiencies. Implement corrective solutions necessary to meet the goals of the Training Plan.

13. Develop control mechanisms to monitor program efficiency and correct deficiencies.

14. Establish a communication system, using current electronic technologies, to deliver information on training programs available.

15. Seek alternative funding sources in the form of grants, participation with universities and sharing courses with other agencies.

16. Work towards enhancing the knowledge and skill levels necessary for safe and effective response to possible weapons of mass destruction incidents.

17. Compile information derived from objectives listed above. Establish a training priority list. Develop a Training Plan with achievable goals for the Training and Safety Battalion. Set timeframes necessary to meet those goals.

Action Plan – 2008

1. Meet with the senior staff review and receive authorization to implement the updated Training Plan – February 2008.

2. Meet with the supervisors from each program area to provide background information that necessitated the development of the Training Plan. Present the plan and provide for discussion to ensure that implementation is supported, coordinated and unified – March 2008.
3. Present the plan to the field and begin implementation – March 2008.

4. Review and update the Unit's Emergency Resources Directory (ERD).

5. Finalize the review of the 2007 fiscal year budget expenditures. Project the fiscal year 2008 budget. Make recommendations to the senior staff on how best to plan for future training and safety operations, when anticipated contract agreements take effect.

6. Determine the training needs for the northern region training allocations meeting– October 2008.

7. Make student selections to fill the allocated training slots and advise the program managers for their planning purposes – November 2008.

8. Enhance electronic dissemination of training announcements – on going.

9. Seek outside funding sources – on going.

Automotive Battalion:

CAL FIRE Department of Forestry, Santa Clara Unit's (SCU) Automotive Battalion, encompasses portions of five counties: Santa Clara, Contra Costa, Alameda, San Juaquin and Stanislaus. The Automotive Battalion has five program areas that require automotive equipment and maintenance. The five programs are: the South Santa Clara County Fire District Schedule A Program, the Sunol Schedule A Program, the Sunshine Amador Contract, the Pacheco Amador Program and the California State wildland protection funded fire equipment. To maintain the required mobile equipment spread over portions of five counties, there is a great need to have three automotive repair shops. They are located at the Morgan Hill Fire Station, the Sunol Fire Station and the Del Puerto Station. This placement reduces travel times, fuel costs and allows for repairs or maintenance on multiple pieces of mobile equipment simultaneously. The Heavy Fire Equipment Operators (HFEOs) assist the SCU's Heavy Equipment Mechanics (HEM) with automotive repairs, maintain state fire breaks and roads and participate in Vegetation Management Projects (VMP) when not assigned to wildland fire incidents. The Fleet Equipment Manager (FEM) directs and manages the SCU's Automotive Battalion. The FEM manages the automotive budget, assigns repair projects, projects automotive needs of the future and coordinates equipment replacement.

CAL FIRE Santa Clara Unit Automotive Policy

It is the policy of CAL FIRE to maintain each piece of mobile equipment in a condition consistent with the work for which it was designed. This will be accomplished through the uniform application of an effective, preventive maintenance program in accordance with all state automotive and fiscal requirements. Repairs shall be made and parts replaced as necessary to keep the equipment functional, with priority being given to those items contributing to personnel safety. Mobile equipment shall not be altered or modified except, as outlined in the CAL FIRE Mobile Equipment Handbook: 6820 – MODIFICATIONS. Approval for modifications or alteration is granted in writing by the appropriate level.

Regular inspections of all mobile equipment shall be made as outlined in the preventive maintenance procedure and record. Accurate records shall be maintained of maintenance and repairs on all mobile equipment. As much as possible, major repairs shall be scheduled during the time of least expected incident activity. The Type III fire apparatus will have the majority of maintenance preformed during the winter months and construction equipment used in the winter months will be maintained during summer. This will reduce occurrences of breakdown during those times when the equipment is needed most.

Automotive Equipment Statistical Data

Santa Clara Unit has seventy-three pieces of equipment and the majority of the automotive fleet is aging rapidly

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17	Type 3 (Wildland Engines)	3	Fire Suppression Bulldozers
5	Type 1 (Structural Engines)	3	Transports
1	Mobile Breathing Support Unit	2	Low Bed Trailers
1	OES Type 1 Engine	1	Grader
1	1200 gallon Heli-tender (helicopter support vehicle)	1	Front End Loader
1	Helitack Van (personnel transport)	1	Stakeside
1	Helitack Trailer	1	Dump Truck
20	Utility vehicles (four wheel drive)	1	Forklift
2	Service Units (Mobile repair vehicles)	1	Portable Cement Mixer
1	Mobile Communications Unit (VIP)	1	Portable Air Compressor
4	Sedans	2	Water Tenders
1	Supply Van		
2	Dozer Tenders (bulldozer service units)		

Current statistics show:

<u>Fifty nine percent</u> of the fire apparatus are 10 years and older vs. <u>Seventy one percent in 2005</u>
<u>Thirty three percent</u> of the utility vehicles are 10 years and older vs. <u>Fifty percent in 2005</u>
<u>Thirty three percent</u> of the fire suppression bulldozers are 25 years and older vs. <u>Sixty seven percent in 2005.</u>
<u>Zero percent</u> of the transports for hauling heavy equipment are 20 years and older vs. <u>Thirty three percent in 2005.</u>

The combined mileage for the fire equipment and support vehicles assigned to the Santa Clara Unit averages **883,899** miles per year. This is equivalent to traveling around the earth's equator 3.5 times. This exacts a much heavier toll on the equipment than what would normally occur though out the industry due to the type of operating in rough terrain. Each year the ability to purchase parts has become more difficult. Repair parts, average around 1.5% to 2.5% percentage higher than the previous year. This increases equipment down time and hinders efficient shop operations. Replacement of equipment is not keeping pace with the expected wear out dates, although some improvement has occurred during the last three years. The FEM is seeking additional revenue sources to assist with equipment replacement. When automotive equipment

has been replaced with new models, training and enhancing repair skills for this equipment becomes necessary. Certification in these types of repairs is a requirement in order to maintain a cost effective and safe repair program. In addition to repair skills, road maintenance and fire suppression training must also occur.

Statistics indicate that forty five percent of fire suppression equipment that was ten years old or older has been replaced. Automotive Fleet is not the only focus for the Automotive Battalion, the replacement of the forty five year old headquarters shop in Morgan Hill initiated several years ago, has been delayed by design problems and increasing construction costs. The FEM is committed to working with the Department of General Services to construct a professional automotive repair facility.

FIVE-YEAR OBJECTIVES

1. Enhance skills and certifications of the automotive staff in order to stay current with automotive technology changes.

2. Maintain the Unit's emergency response equipment in a safe, incident ready status.

3. Continue to operate a cost effective and efficient automotive operation.

4. Supply automotive staff with lap top computers and programs current with automotive technology.

5. Coordinate with the Unit's Vegetation Management Program manager to maintain fuel breaks and fire roads.

ACCOMPLISHMENTS 2005 – 2008

1. The Unit's Heavy Equipment Mechanics attended the State Fire Marshal's Office Heavy Fire Equipment Mechanics training. The HEMs attended multi-plex electrical chassis class for heavy fire apparatus equipment. Four newly hired Heavy Fire Equipment Operators attended a six week course of Company Officer Training. The automotive staff has become members of the Northern California State Fire Mechanic association.

2. The annual maintenance for the automotive fleet has been completed and all fire suppression engines have been pump tested. The Santa Clara Unit has refurbished three fire engines and a Heli-Tender. Five new fire apparatus were purchased, four State Type 3 4x4's and one Type 1 Pumper for South Santa Clara County Fire District.

3. The construction of the new Morgan Hill Automotive facility is nearing completion and will be utilized before 2008 Fire Season.

   The Pacheco Peak road repair project has been completed. Improvements to the Loma Chiquita and Loma Prieta firebreaks were made during the winter months. The

HFEOs are improving the fuel breaks on the eastern and western boundaries of Henry Coe Park.

Appendix A - East Bay Regional Parks:

Purpose Statement:

The East Bay Regional Park District provides fire services to 96,000 acres of park property in Alameda and Contra Costa Counties. Of these acres approximately 30,000 acres in Alameda County and 35,000 acres in Contra Costa County are in the State Responsibility Area (CAL-FIRE DPA). Three of the parks under management of the district are State Recreation Areas, owned by the State of California, under a contractual agreement. The park district maintains its own police department and dispatch services are provided from the Lake Chabot Public Safety Headquarters in Castro Valley. The Fire Department is a full service fire agency operating out 10 fire stations are; nine type 4 engines, four type 3 engines, and one water tender. In addition the districts two helicopters have water dropping capabilities, are on line as ALS providers on most days, and on high fire danger days are staffed with 3 to 4 fire fighters to form a small helicopter hand crew. EBRPD is a full member of the Hills Emergency Forum and Diablo Fire Safe Council as well as membership on the state wide Fire Safe Council. The District is a full member of the Chiefs association in Alameda and Contra Costa Counties.

Fire Management Objectives:

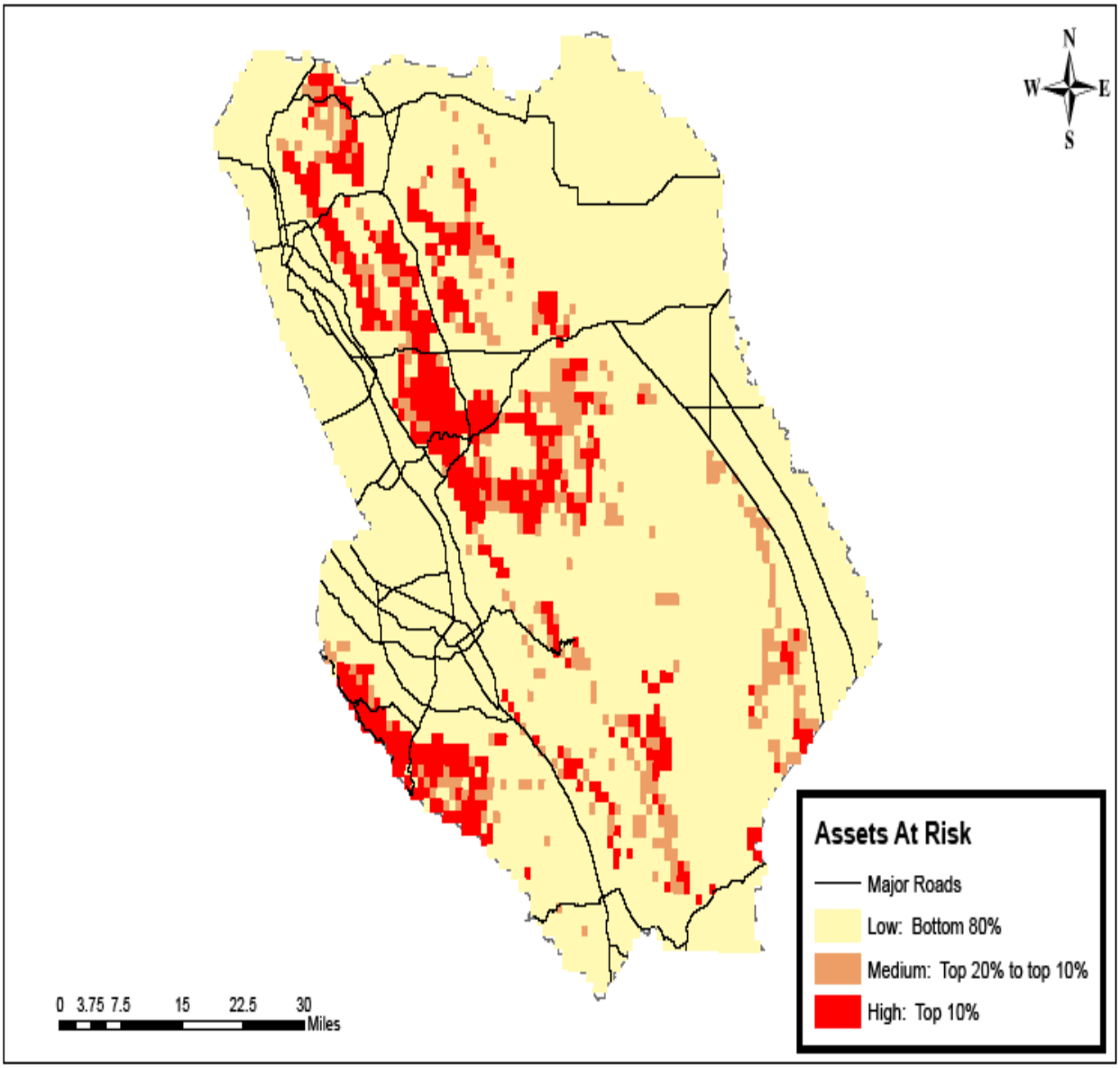
1. Maintain five remote fire weather stations (RAWS). These will be located at Black Diamond, Briones, Las Trampas, Sunol Regional, and Calaveras Road. In addition the District will monitor five other RAWS in Livermore, Oakland South, Oakland North, Mallory Ridge and Mt. Diablo to determine fire restrictions and potential closures in the park system and dispatch levels during fire season.
2. Continue to review and provide input on new construction projects within the Parks
3. Participate in both the Hills Emergency Forum and Diablo Fire Safe Councils
4. Maintain current fuel breaks in the East Bay Hills. This covers approximately 625 acres and stretches 23 miles within and around the cities of Oakland, Berkeley, Richmond, El Cerrito, Kensington, and Castro Valley.

5. Continue to conduct prescribed fire control burns on approximately 1200 acres of park property to control non native plants and reduce hazardous fuel accumulations.
6. Continue the current Goat grazing program on approximately 2000 acres each year.
7. Continue utilizing cattle to graze an additional 60,000 acres of property each year.
8. Current fuel break projects in cooperation with the California Dept. of Forestry and California Department of Corrections are;
    a. Anthony Chabot Regional Park Fuel Break
    b. Tilden Park Fuel Break (Frowning Ridge)
        1. This fuel break is a cooperative effort between UC Berkeley, Lawrence Berkeley Laboratory and the Claremont Canyon Conservancy. By joining together the fuel break is becoming a continuous project on the ridge top between Wildcat Canyon on the East and Strawberry and Claremont Canyons to the west. This area is within one mile of the 1991 "Tunnel" fire with much the same pre fire conditions that were present in the fire area.
    c. Claremont Canyon – Stonewall under story Fuel Break
        1. This project is funded in part by grant monies from the US Fish and Wildlife Service
    d. Claremont Canyon – Panoramic Way Fuel Break
    e. Wildcat Canyon – Camp Herms Fuel Break
    f. Cities of El Cerrito and Kensington Fuel Breaks
9. Utilize the East Bay Conservation Corps to remove brush and mow grass to create Defensible space around structures in the cities of Oakland, Berkeley, El Cerrito and Kensington. This is also a cooperative project to enhance fire safety in the east bay hills. The project was conceptualized during the Hills Emergency Forum meeting and put into reality by the members of that group.
10. FEMA Grant Project – Three year renewing grant for approximately 1million dollars. This project encompasses 37 projects within 7 regional parks in the East Bay Hills. Refer to the grant document for specifics.
11. US Fish and Wildlife Service – This is a $100,000 grant to support the protection of special status species within the East Bay Hills Fuel Break.
12. Mechanical Treatment Projects – Mulching machines (Brontosaurus) and other safe and environmentally friendly vegetation clearing systems are being used and evaluated for expanded uses in the District. The Brontosaurus can cut trees as large as 12 inches in diameter and as tall as 40 feet leaving a ground covering mulch with chips less than 4 inches in size. One of the goals of the study is to determine the effects of the mulch as both a erosion inhibitor and as a barrier for noxious weed regeneration. So far the project covers approximately 400 acres in Anthony Chabot Park and 75 acres in Tilden Regional Park, as part of the cooperative Frowning Ridge Fuel Break.

13. Continue Herbicide treatments of the areas were Eucalyptus removal has taken place. This involves the herbicide being applied directly to the stumps of the removed trees with paint brushes or similar methods to reduce the amount of herbicide that is introduced into the environment.
14. The Parks District has a significant fire road and trail system to reduce fire spread potential from both within and from outside park boundaries. These roads are maintained to permit one way traffic by park employees throughout the year.

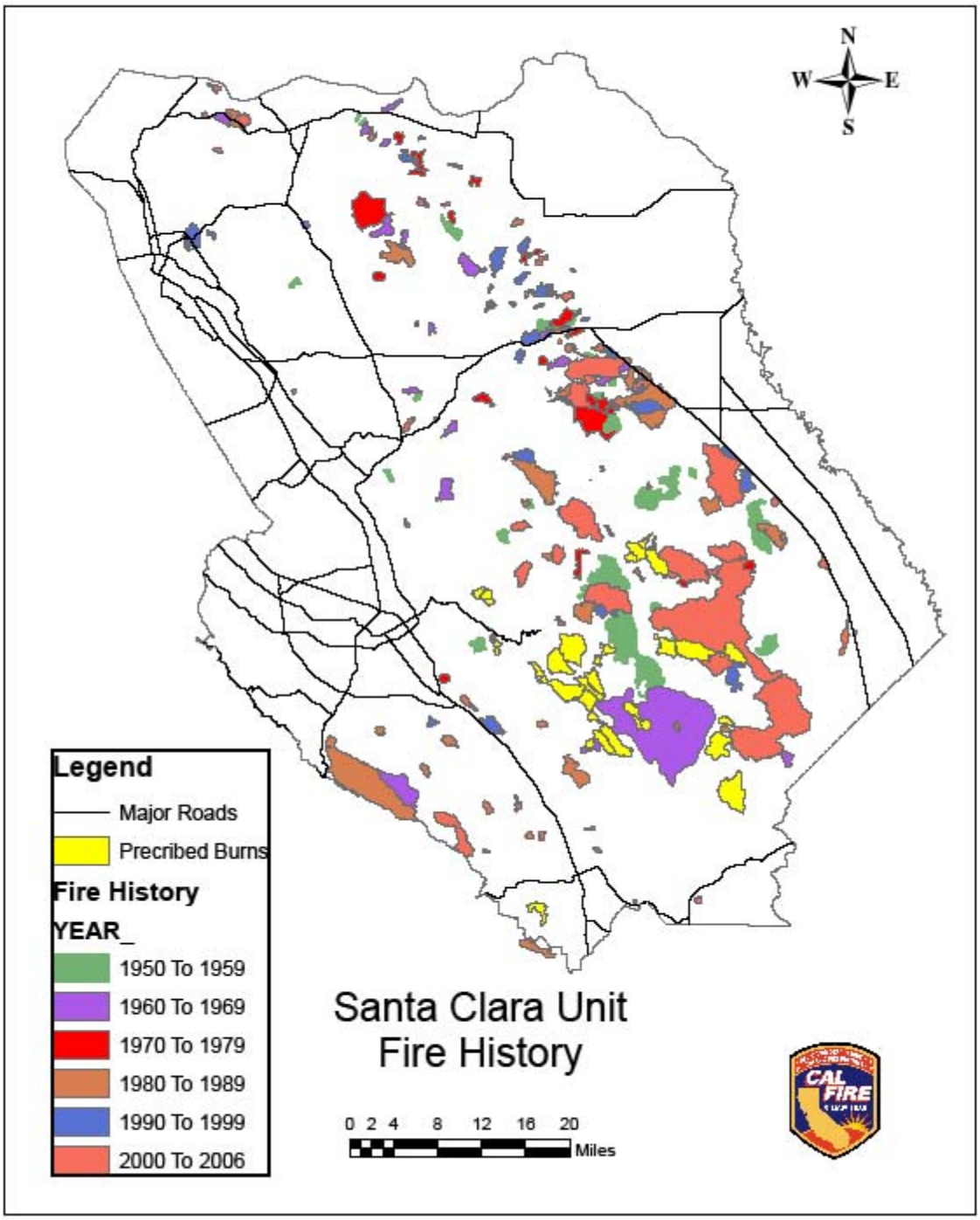
Appendix B – Fire Plan GIS map products

Assets at Risk

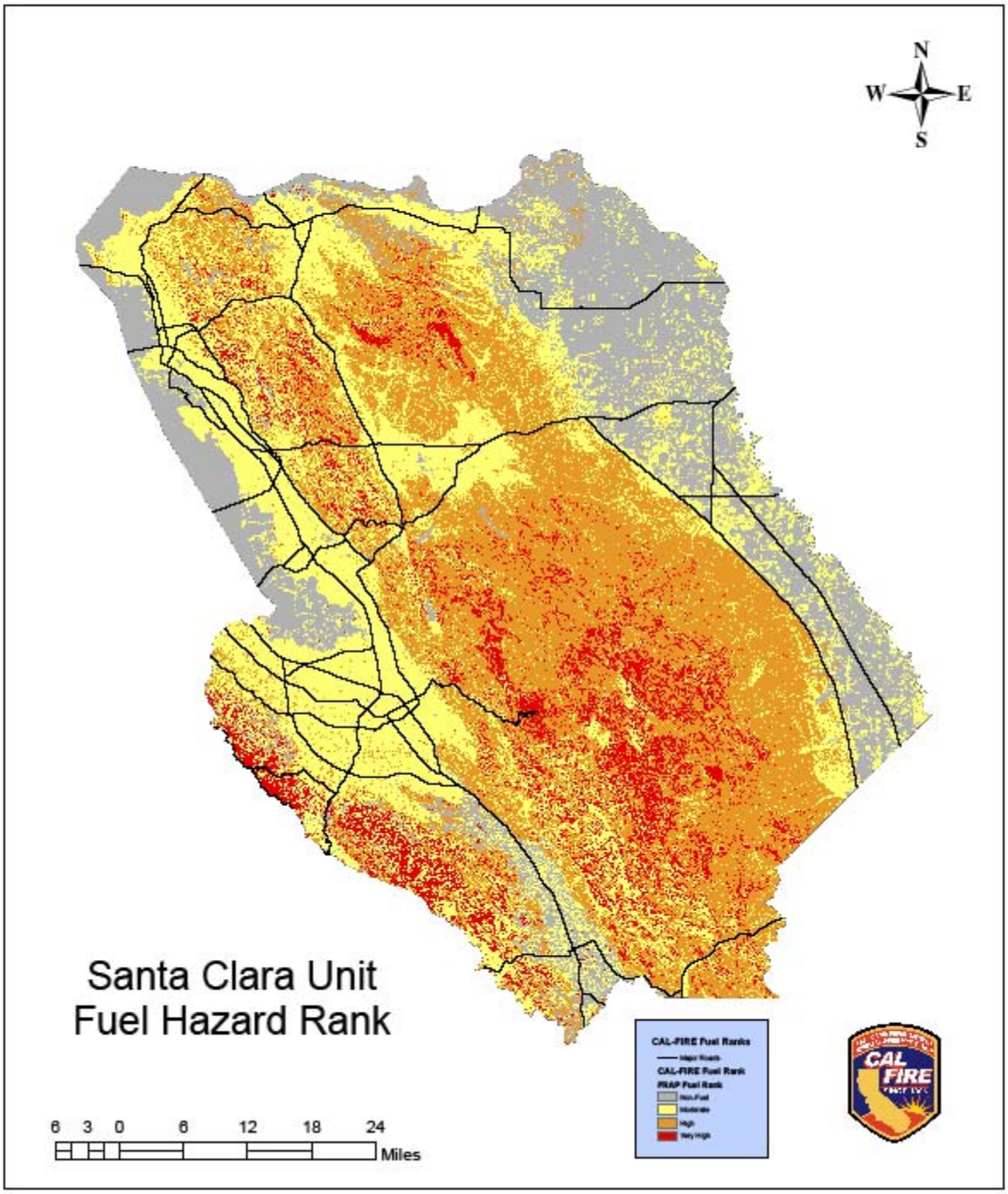


Santa Clara Unit
Assets At Risk by Rank

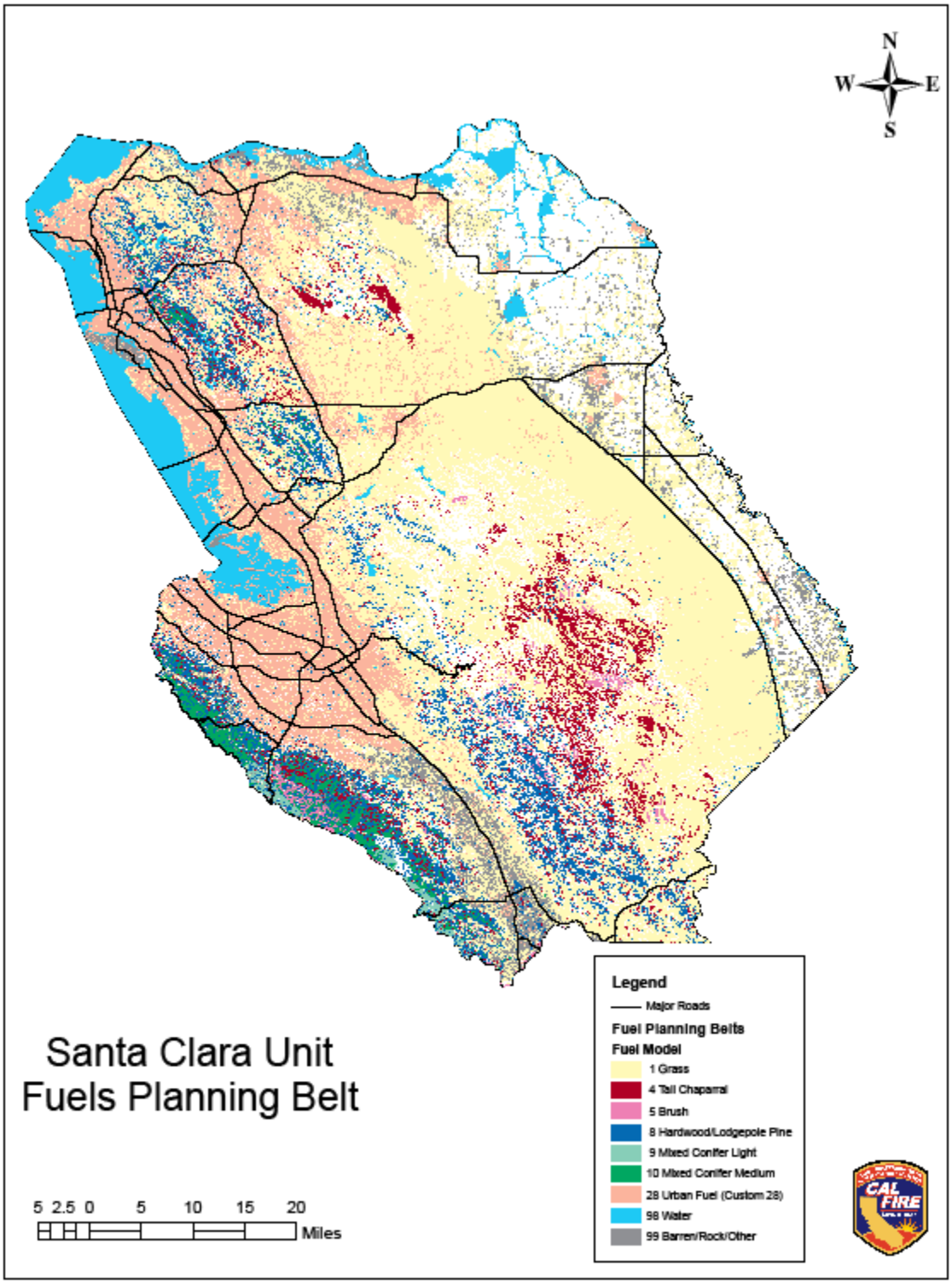
Fire History



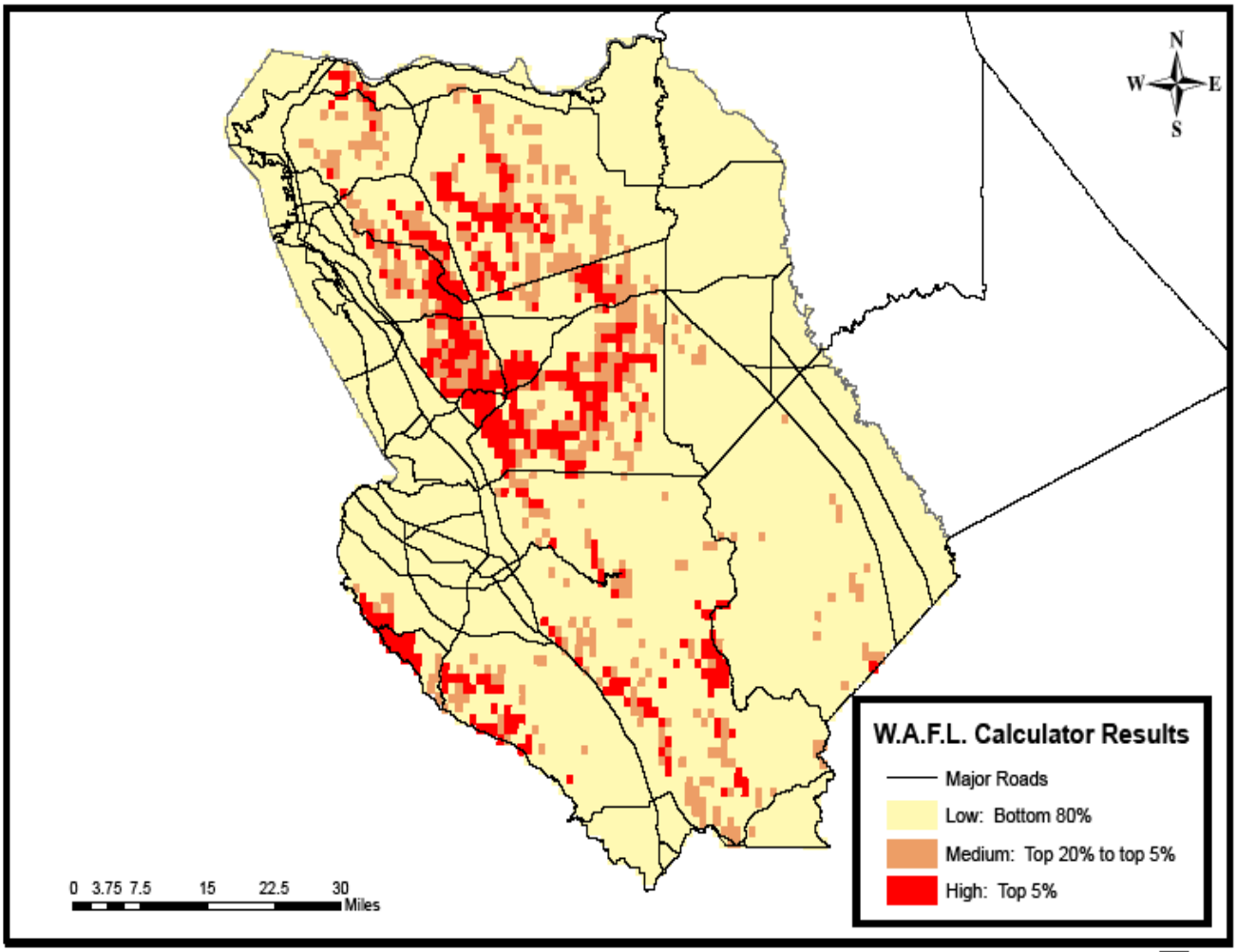
Fuel Ranking



Fuel Planning Belts



Weather, Assets at Risk, Fuel, and Level of Service Calculator results



Weather, Fuels, Assets, and Ignitions Calculator Results
Santa Clara Unit