

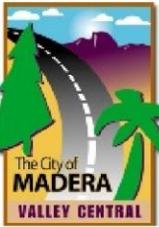


# CAL FIRE

Madera-Mariposa-Merced Unit

Nancy B. Koerperich, Unit Chief

## STRATEGIC FIRE PLAN



MMU - Mission First, Meritorious & Unified

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**SIGNATURES**

**Unit Strategic Fire Plan developed for Madera-Mariposa-Merced:**

This Plan:

- Was collaboratively developed. Interested parties, Federal, State, City, and County agencies within the Unit have been consulted and are listed in the plan.
- Identifies and prioritizes pre fire and post fire management strategies and tactics meant to reduce the loss of values at risk within the Unit.
- Is intended for use as a planning and assessment tool only. It is the responsibility of those implementing the projects to ensure that all environmental compliance and permitting processes are met as necessary.



**Unit Chief**

Nancy B. Koerperich

6.13.12

**Date**



**Pre-Fire Engineer**

Matthew A Watson

**Date**

6.13.12



**Research Analyst - GIS**

Jim Pearce

**Date**

6-13-12

## EXECUTIVE SUMMARY

### EXECUTIVE SUMMARY

The California Fire Plan is the state's road map for reducing the risk of wildfire. The Madera-Mariposa-Merced Unit (MMU) has drafted a comprehensive update of the Unit's Strategic Fire Plan for wildland fire protection in the three counties of Madera, Mariposa and Merced. By placing the emphasis on what needs to be done long before a fire starts, the Fire Plan seeks to reduce fire fighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health.

MMU, with the cooperation of key stakeholders, has designed a plan with the intention of meeting the goals and priorities set by the Unit, stakeholders and the California Fire Plan. This plan identifies strategic targets and goals, specific to each individual Battalion to ensure an appropriate strategic planning process.

Pre-fire management projects are designed to reduce costs and losses, especially during periods of severe fire weather. With the use of fire resistant landscaping, mechanical fuels treatment, prescribed burns, building construction standards, infrastructure, land use planning and pre-fire safety zones and escape plans, the Unit strives to keep what would otherwise be a large, catastrophic fire, to a smaller fire with less intensity, reducing suppression costs and property loss. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildland fire protection providers, allows for public stakeholder involvement and creates a fiscal framework for policy analysis.

The Madera-Mariposa-Merced Unit Management intends to support the Fire Plan and make it successful by meeting the following objectives:

- ✓ Collect, analyze and prepare data to assess communities at risk and in need of fuel reduction or other projects
- ✓ Work with grant writers and stakeholders to secure funds to implement projects.
- ✓ Utilize CAL FIRE personnel and resources in conjunction with other public and private efforts to assist with the project work on the ground.
- ✓ Educate the public on fire prevention and incorporating fire resistant landscaping and construction to their property, as well as hazardous fuel reduction to keep their lives, homes, property and natural resources safe from catastrophic wildfires.

With these goals in mind, the Unit strives to reduce fire suppression costs, property loss and damage to our environment and local ecosystems in the Madera-Mariposa-Merced Unit through our pre-fire work and by protecting life, property and the environment from destructive wildfires.



Nancy B. Koerperich  
Unit Chief  
Madera-Mariposa-Merced Unit

**A: UNIT DESCRIPTION**

The unit is comprised of three counties including Madera, Mariposa and Merced.

Madera County has a population of around 150,000 with a geographic area covering a total area of 2,153.32 square miles. The county includes the cities of Madera and Chowchilla. It also includes the communities of Ahwahnee, Bass Lake, Bonadelle Ranchos, Madera Ranchos, Coarsegold, Knowles, Madera Acres, North Fork, O'Neals, Oakhurst, Parksdale, Parkwood, Raymond, Ripperdan, Sugar Pine and Yosemite lakes. Nationally protected areas in Madera County are Devils Postpile National Monument, Inyo National Forest, Sierra National Forest and Yosemite National Park. Major highways through the county are State Routes 41, 49, 99, 145 and 152.



Mariposa County has a population of around 18,000 with a geographic area of 1,462.79 square miles. Mariposa County is known as the "Mother of Counties" and is located at the southern end of California's Mother Lode region. There are no incorporated cities within Mariposa County. There are numerous communities that are in Wildland Urban Interface that fall into a very high Hazard Severity Zone. The communities in Mariposa County include Bear Valley, Bootjack, Buckmeadows, Cathays Valley, Coulterville, El Portal, Foresta, Greeley Hill, Hornitos, Jerseydale, Lush Meadows, Mariposa, Midpines, Mt. Bullion, Oak Grove Estates, Ponderosa Basin, Wawona, Yosemite West and Yosemite Valley. Mariposa County is home to three protected areas: Sierra National Forest, Stanislaus National Forest and Yosemite National Park. Within this area, along the banks of the Merced River, is the sole habitat for the limestone salamander, a rare species endemic to Mariposa County. The Major highways are State Routes 41, 49, 120, 132 and 140.



Merced County has a population of around 255,000 people covering an area of 1,971.87 square miles. There are six cities in the county including Atwater, Dos Palos, Gustine, Livingston, Los Banos and Merced. The county also includes the communities of Ballico, Cressey, Delhi, Hilmar, Irwin, Le Grand, Planada, Santa Nella, Snelling, South Dos Palos, Stevinson and Winton. Merced County hosts two nationally protected areas: Merced National Wildlife Refuge and the San Luis National Wildlife refuge. The major highways are Interstate 5, State Routes 33, 59, 99, 140, 152 and 165.



The Unit is located in central California between Fresno County, to the south, and Tuolumne County, to the north. The western side of the Unit borders the counties of Santa Clara and San Benito. Yosemite National Park and Mono County lie to the east. The Sierra National Forest and the Stanislaus National Forest also lie along the east side of Madera and Mariposa Counties. The geographic center of the state of California is located in the Unit, between the town of North Fork and the Italian Bar area. The point is about 7.1 miles (11.4 km) driving distance from the United States Forest Service office in North Fork and is marked by a sign and a survey marker. NAD83 coordinates for the exact center of California are 37°09'58"N 119°26'58"W. The Unit consists of 1,211,000 acres of State Responsibility lands located on the western slopes of the Sierra Nevada mountain range and the eastern slope of the Diablo mountain range in central California. Also included are the watershed areas of the San Joaquin River, Merced River, and associated drainages. The topography of the Unit varies from steep and rugged mountains with moderate to heavy vegetative cover to rolling hills used for livestock grazing. Plant species vary by aspect, slope, elevation, soil type. The lower elevations begin with annual grasses and about 1000' elevation change to oak-woodlands. At about 2000' elevation the

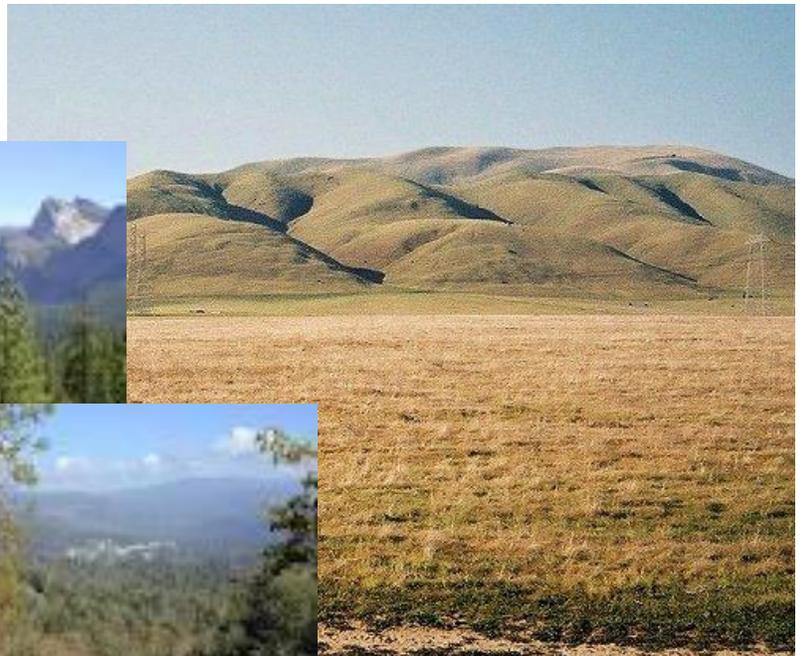


brush fields start intermixing with the oak-woodlands and brush becomes the more prominent natural vegetation as you approach 3000' elevation. From 3000' to 4500', brush and timber become more mixed. Above 4500' the fuel is mixed conifer timber. The fuel loading varies from about 2 tons per acre in grass to over 100 tons per acre in timber fuels.

The weather in the Unit brings hot, dry weather to almost all elevations in the summer. The valley and lower foothill temperatures average close to 100 degrees in the daytime and 65 degrees by night. The average humidity in summer is 15 to 20 percent. The average temperatures lower and the humidity slightly rises as the elevation increases. There is typically no rainfall from May until mid-October except for an occasional thunderstorm. These thunderstorms are more prominent over the higher elevations of the Sierra Mountains. Most of the rainfall occurs in the months of December, January, and February. An average yearly rainfall is 12 inches for the valley and between 20 to 45 inches in the higher elevations. Snowfall begins around 3000 feet, averaging about seven inches. Winds are generally predictable during fire season - diurnal surface winds are up-canyon by day and down-canyon by night. Prevailing upper level winds are out of the west to northwest. These winds are more intense when they surface at the higher elevations and can have a negative impact on fire behavior. Western Merced County has its own microclimate with temperatures ranging from 90-105 degrees with humidity in the low teens to single digits. Strong northwest winds brought on by marine influence in the afternoon bring increased humidity with slightly lower temperatures. The coastal weather influence, together with periods of extreme fire weather conditions, provides a window for extreme wildland fire behavior in this area in the months of May, June and July.

These conditions, combined with the expanding wildland urban interface and population growth, create potential for large, damaging, and costly wildfires.

Primary businesses in the Unit include farming, industry, and tourism.



**B: UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES**

The Madera-Mariposa-Merced Unit is operationally divided into three divisions and further into nineteen battalions, offering a wide variety of programs which include: Automotive, Confined Space, Conservation Camp, Crash Rescue, Emergency Command Center (Communications), Fire Prevention/Law Enforcement, Hazardous Material, Rescue, Resource Management, Safety, and Training.

CAL FIRE Initial Attack resources involve approximately 167 full time employees, 174 state seasonal firefighters operating the Department’s equipment, supplemented by as many as 450 Madera & Merced County paid-call (PCF) and Atwater City reserve firefighters, and 110 state inmate firefighters. CAL FIRE facilities are comprised of 11 CAL FIRE stations, 20 Merced County Fire Stations, 18 Madera County Fire Stations, 2 Atwater City Fire Stations, 2 Madera City Stations, 1 jointly operated Central California Women’s Facility Fire Station, and 1 CAL FIRE Conservation Camp.

MMU Protection Areas	
State Responsibility Areas	
Areas where CAL-FIRE has responsibility for emergency services.....	1,211,000
Total project area of MMU.....	3,570,000+
Total square miles of the Unit.....	5,580+
Total population.....	284,000+
Local Responsibility through Local Government Contracts Areas where MMU provides some type of emergency services to local government via contract.....	3 counties & 5 cities
Personnel (numbers approximate)	
Permanent.....	167
Seasonal.....	174
Local Government Volunteer Firefighters (organized by MMU).....	450
Volunteers in Prevention (VIPs).....	177
Fire Fighting Inmates.....	110

Facilities and Equipment	
CAL FIRE Fire Stations.....	11
Local Government Fire Stations (operated by CAL FIRE via contract).....	41
CAL FIRE Fire Engines.....	20
Local Government Fire Engines (operated by CAL FIRE via contract).....	50
Water Tenders.....	23
Bulldozers.....	2
Aerial Ladder Trucks.....	2
Rescue Squads (swift water rescues, jaws of life, defibrillators, ECT.).....	17
Air Craft Crash Trucks.....	2
Hazmat Units.....	2
Mass Decon Units (ability to decontaminate 15,000 people).....	3
Foam Unit.....	1
Conservation Camps.....	1
Hand Crews.....	5

Fire and Emergency Responses (average)	
Wildland Fires.....	300
Non-Wildland Fire Emergencies (structure fires, medical aids, hazardous material spills, etc.).....	<19,000

Timber Harvesting Plan (THP) Reviews (averages)	
Acres of Timberland CAL FIRE has THP Review Jurisdiction	
Timber Harvesting Plans CAL FIRE Reviews Yearly.....	2 to 5

## COOPERATIVE FIRE PROTECTION AGREEMENTS

- Atwater City Fire Department
- Madera City Fire Department
- Madera County Fire Department
- Merced County Fire Department



CAL FIRE also maintains several Automatic and Mutual Aid Agreements itself and through the Cooperative Fire Protection agreements in the Unit. The Unit maintains Automatic Aid Agreements with neighboring jurisdictions such as:

### Dispatch Agreements

- Dos Palos City Fire Department
- Gustine Fire Department
- Livingston City Fire Department
- Mariposa County Fire Department
- Mariposa Public Utility District
- Mercy Ambulance

### Automatic/Mutual Aid Agreements

Local fire departments that the Unit has Mutual or Automatic Aid Agreements with are:

- Chowchilla City Fire
- Dos Palos City Fire Department
- Los Banos City Fire
- Fresno Fire
- Fresno County Fire District
- Gustine Fire Department
- Livingston City Fire Department
- Mariposa County Fire Department
- Mariposa Public Utility District Fire Department
- Merced City Fire
- Newman City Fire
- City of Turlock
- Turlock Rural Fire Protection District
- West Stanislaus County Fire Protection District

[www.atwater.org](http://www.atwater.org)

[www.ci.chowchilla.ca.us](http://www.ci.chowchilla.ca.us)

[www.losbanos.org](http://www.losbanos.org)

[www.co.fresno.ca.us](http://www.co.fresno.ca.us)

[www.fresno.gov/](http://www.fresno.gov/)

[www.fresnocountyfire.org](http://www.fresnocountyfire.org)

[www.cityofgustine.com](http://www.cityofgustine.com)

[www.livingstoncity.com](http://www.livingstoncity.com)

[www.cityofmadera.org](http://www.cityofmadera.org)

[www.madera-county.com](http://www.madera-county.com)

[www.mariposacounty.org](http://www.mariposacounty.org)

[www.mariposapud.org](http://www.mariposapud.org)

[www.co.merced.ca.us](http://www.co.merced.ca.us)

[www.mercyambulanceservice.com](http://www.mercyambulanceservice.com)

[www.cityofmerced.org](http://www.cityofmerced.org)

[www.cityofnewman.com/](http://www.cityofnewman.com/)

[www.ci.turlock.ca.us](http://www.ci.turlock.ca.us)

[www.turlockruralfire.com](http://www.turlockruralfire.com)

[www.weststanfire.org](http://www.weststanfire.org)

**SECTION II: COLLABORATION**

**COMMUNITY / AGENCIES / FIRE SAFE COUNCILS**

Representatives involved in the development of the Unit Strategic Fire Plan are included in the following table. Their organization and title are indicated below:

**Development Team:**

Organization	Representative (title)
Mariposa County Fire Safe Council	Executive Director <a href="http://www.mariposafiresafe.net">www.mariposafiresafe.net</a>
Eastern Madera County Fire Safe Council	Chairperson <a href="http://www.maderafsc.org">www.maderafsc.org</a>
Central Sierra Watershed Committee	Watershed Coordinator <a href="http://www.crcd.org">www.crcd.org</a>
Yosemite/Sequoia Resource, Conservation & Development Council	Chairperson <a href="http://ysrcandd.org/">ysrcandd.org/</a>
U.S. Forest Service, Sierra National Forest	FM <a href="http://www.fs.usda.gov/sierra/">www.fs.usda.gov/sierra/</a>
U.S. Forest Service, Stanislaus National Forest	FMO <a href="http://www.fs.usda.gov/stanislaus/">www.fs.usda.gov/stanislaus/</a>
Bureau of Land Management, Folsom District	Assist Chief <a href="http://www.blm.gov/ca/st/en/fo/folsom.html/">www.blm.gov/ca/st/en/fo/folsom.html/</a>
U.S. Fish and Wildlife Service	Assist Chief <a href="http://www.fws.gov/">www.fws.gov/</a>
Yosemite National Park, National Park Service	Deputy Fire Chief <a href="http://www.nps.gov/yose">www.nps.gov/yose</a>
National Resource Conservation Service	District Conservationist <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>
California Department Of Forestry and Fire Protection (Cal Fire)	Unit Chief <a href="http://www.fire.ca.gov/">www.fire.ca.gov/</a>
Mariposa Resource Conservation District	Director <a href="http://www.mcrcd.net/">www.mcrcd.net/</a>
Coarsegold Resource Conservation District	Chair <a href="http://www.crcd.org/">www.crcd.org/</a>

Madera County Fire Department	Division Chief <a href="http://www.madera-county.com">www.madera-county.com</a>
Madera County Sheriffs Department	Sheriff <a href="http://www.madera-county.com">www.madera-county.com</a>
Merced County Fire Department	Division Chief <a href="http://www.co.merced.ca.us">www.co.merced.ca.us</a>
Mariposa County Fire	Fire Chief <a href="http://Mariposacounty.org/">Mariposacounty.org/</a>
Mariposa County Sheriffs Department	Sheriff <a href="http://mariposacounty.org/">mariposacounty.org/</a>
Mariposa Public Utility District	Fire Chief <a href="http://www.mariposapud.org">www.mariposapud.org</a>
	Executive Director <a href="http://www.mariposafiresafe.org">www.mariposafiresafe.org</a>  Director <a href="http://www.mariposacounty.org">www.mariposacounty.org</a>
Mariposa County Fire Safe Council	
South West Inter Face SWIFT	

**A: ASSETS AT RISK**

Assets susceptible to fire damage are identified in the Fire Plan as air quality, rangelands, recreation, agriculture, structures, timber, water and watersheds, wildlife and habitat, and other resources (cultural, historical and scenic). The focus of this plan and relative importance of each Asset has been determined by reviewing input from local stakeholders and CAL FIRE managers. The Madera-Mariposa-Merced Unit Fire Plan has been engineered with these issues in mind.

The priority Assets at Risk in the Madera-Mariposa-Merced Unit are tourism, recreation and rangelands. Yosemite National Park is on the border of Mariposa and Madera County attracting visitors all year long. The many communities surrounding the lakes in all three counties thrive on tourism during the spring and summer months. Bass Lake, Lake McClure, and Badger Pass are three of the most popular leisure venues housed within the Unit. The Mariposa Fairgrounds is a popular recreational facility, hosting several large events throughout the year.

Agriculture is a big industry in the Unit. Cattle ranches encompass hundreds of thousands of acres of rangelands in the Unit. Madera, Mariposa and Merced Counties are home to numerous dairies and farms. Local produce includes almonds, milk, tomatoes, alfalfa, corn, cotton and grapes.



**B: COMMUNITIES AT RISK**

- Madera County

• Ahwahnee *	• Indian Lakes	• Raymond
• Arnold Meadow	• John West Road	• Road 620
• Bass Lake *	• Leisure Acres	• Sierra Highlands
• Bass Lake Annex	• Marina View	• Sierra lakes
• Bass Lake Heights	• Meadow Springs Ranch	• Sky Acres
• Beasore Meadows	• Miami Highlands	• Sugar Pine
• Cascadel Woods	• Mudge Ranch	• Teaford Meadows
• Cedar Valley	• Nipinnawasee *	• Wells/Trabucco
• Central Camp	• North Fork *	• Wishon
• Coarsegold	• Oakhurst *	• Yosemite Forks
• Goldside	• O'Neals	• Yosemite Lakes Park *
• Hidden Valley Estates	• Quartz Mountain	

- Mariposa County

• Bear Valley	• Fish Camp *	• Midpines *
• Bootjack	• Greeley Hill *	• Morman Bar *
• Bridgeport	• Hornitos	• Mt. Bullion
• Cathey's Valley	• Hunter's Valley *	• Ponderosa Basin
• Coulterville *	• Jerseydale *	• Yosemite West
• Don Pedro	• Lush Meadows *	• Yosemite Village *
• El Portal *	• Mariposa *	• Wawona *

- Merced County

• Dos Palos	• Gustine *	• Santa Nella
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For more information on Communities at Risk and the California Fire Alliance go to <http://www.cafirealliance.org>

\* Communities listed as Communities at Risk on the California Fire Alliance website

Madera County Community Wildfire Protection Plan:

[http://www.madera-county.com/rma/archives/uploads/1221781245\\_Document\\_upload\\_mccwppfinaldocument.pdf](http://www.madera-county.com/rma/archives/uploads/1221781245_Document_upload_mccwppfinaldocument.pdf)

Mariposa County Community Wildfire Protection Plan: <http://www.mariposafiresafe.org/>

Yosemite West Homeowners Organization: <http://www.yosemitewest.org/ywcwpp.pdf>

Foresta Community Wildfire Protection Plan: <http://www.wildlandfireassociates.com>

## SECTION IV: PRE FIRE MANAGEMENT STRATEGIES

### A: FIRE PREVENTION



#### Battalion 4220 Program Plan

Currently assigned to the Prevention Bureau is a Battalion Chief, four Fire Captains, a Fire Prevention Specialist II and an Office Technician. In the Unit there are currently nine full-time peace officers. The Unit has three Range Masters and qualification shoots are held monthly.

Following department policy, MMU Prevention staff actively and aggressively investigates fires within the Unit and pursues criminal and civil action against violators of forest and fire laws. The Unit responds to an average of 1,500 fires annually. Of these 1,500 fires an average of 300 wildland fires start in the state responsibility areas. The state legislature has determined that if a person causes a fire through willfulness, negligence, or violation of Law, that person is responsible for their actions and may be liable for the fire suppression costs. Each year the Unit bills hundreds of people for fire suppression costs. Once the investigation is completed and the cost of fire suppression is determined, the responsible person is sent a "Letter of Demand" which outlines the act of negligence or violation of law that occurred and demands repayment of costs that were spent suppressing the fire. If the person responsible ignores the demand or denies responsibility, civil litigation is initiated and the matter is settled through the courts. It is the policy of the Department to actively and aggressively pursue those cases in order to recover those costs. The Unit also pursues local civil cost recovery cases for its Cooperative Fire Protection contracts.

The Madera-Mariposa-Merced Unit over a ten year average conducted over 10,000 PRC4291/LE-100 defensible space inspections. It also bears noting that in the last 10 years the Unit averaged over 800 hours of public education.

The Madera-Mariposa-Merced Unit Fire Prevention Bureau will build on past successes while seeking ways to improve upon deficiencies identified throughout the past years. We will continue identifying ways to reduce unwanted wildland fires within our Unit. The Fire Prevention Bureau will maintain relationships with our co-operators such as the Eastern Madera County and Mariposa Fire Safe Councils, South West Interface Team (SWIFT), Madera and Mariposa County Resource Conservation Districts, as well as many other local government and Federal agencies in land use planning and policy decisions. Through training it is a goal of the Bureau to enhance the law enforcement skills of all of its officers. Public contact and perception is important to Fire Prevention staff and we will continue to seek opportunities to increase the visibility of CAL FIRE.

## B: FIRE CAUSE ANALYSIS

With the Unit averaging 1,500 fires per year, the goal of the Fire Prevention Bureau is to reduce fire causes through prevention, intervention, and enforcement. We hope to accomplish this through public education by the FPS II, intervention by the engine companies with LE 100 inspections, and enforcement conducted by the Prevention Bureau's law enforcement officers.

The highest causes of fires were "Undetermined/Unknown" averaging over 500 or 34% per year. The Prevention Bureau is working with responding engines to provide better education in fire investigation and report writing in an attempt to lower the number of undetermined fires. The Bureau also audits and tracks all fire reports in an attempt to capture all fire information. The second highest category was "Vehicle caused Fires" with an average of 270 or 19% of the ignitions. The third highest was "Arson" with an average of 240 fires or 17%. Through the Fire Investigation training and education process the Bureau is trying to lower the number of fires that are being listed as intentionally human caused. The Bureau is responding to an increasing number of fires to help eliminate this cause. The fourth highest category was "Electrical" with averages totaling 160 or 11%. The fifth is "Equipment Use" which averaged 90 fires or 6%. A larger number of these fires occur when people are trying to do the right thing the wrong way. The Unit has focused on this cause through public education; inspections and cost recovery to those who are not using the appropriate methods for equipment use. The sixth highest cause was "Debris Burning" at 70 fires per year or 4%. The Unit is trying to curtail this with education and citations. Playing with fire historically has been a large cause of fire. The average for the Unit is 26 fires a year or 3%. The Unit is very active in educating children about fire safety and uses the Firesetter program when a problem is identified. The eighth highest cause of fire is "Smoking" with an average of 31 fires or 2% a year. The second to lowest cause of fire is railroad with an average of 10 fires a year or less than one percent. There are no railroads in the SRA within the Unit. The railroads have also been maintaining the railroad right of way more over the past few years. The lowest cause of fire in the Unit is "Lightning" with an average of 6 fires, which is less than half of a percent.



## **C: ENGINEERING & STRUCTURE IGNITABILITY**

The Madera County Fire Marshal's Office (Department of Fire Prevention for Development) provides plan review and inspection services to all unincorporated areas of Madera County in order to implement the fire and life safety regulations and building standards established and adopted by the State Fire Marshal and County Board of Supervisors. In addition, the department performs fire and life safety clearance inspections in State Licensed facilities and is charged with annual inspections of schools, motel/hotels, and apartment buildings as well as regular inspections of public assembly buildings and facilities using or storing acutely hazardous materials. The Fire Marshal also serves as the appointed "County Fire Warden" and is responsible for ensuring that the regulations stipulated in the California Public Resources Code 4290 are applied to new developments and structures in the State Responsibility Areas of Madera County. <http://www.madera-county.com/firemarshal>

Mariposa County CAL-FIRE Fire Prevention has the responsibility for enforcing Public Resources Code 4290, 4291 and California Fire Code on all use permits, minor use permits, and commercial building permits, lot line adjustments, grading permits, parcel splits, subdivisions, general plan amendments, administrative permits, and rezones countywide. This processed is done alongside Mariposa County Building Department and Public Works with Mariposa County Building Department enforcing Chapter 7A of the building code. <http://www.mariposacounty.org> Chapter 7A Building code Link: [http://www.fire.ca.gov/fire\\_prevention/fire\\_prevention\\_wildland\\_codes.php](http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_codes.php)

Merced County Fire Prevention Bureau is a division of the Fire Department. It provides services and support for education, building construction, facilities inspection, daycare inspections, hazard abatement, and Fire Code enforcement. <http://www.co.merced.ca.us>

### **Public Resources Code 4290**

These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in State Responsibility Areas (SRAs). The future design and construction of structures, subdivisions, and developments in State Responsibility Area (SRA) shall provide for basic emergency access and perimeter wildfire protection measures as specified in PRC 4290. These measures shall provide for emergency access; signing and building numbering; and vegetation modification. The fire protection standards contained within PRC 4290 shall specify the minimums for such measures.

Click here to view PCR 4290: [http://www.fire.ca.gov/fire\\_prevention/downloads/Title\\_14.pdf](http://www.fire.ca.gov/fire_prevention/downloads/Title_14.pdf)

### **Public Resources Code 4291**

To ensure continued maintenance of properties in conformance with the defensible space requirements outlined in PRC 4290 and to assure continued availability, access, and utilization of the defensible space provided during a wildfire, provisions for annual maintenance shall be included in the development plans and/or shall be provided as a condition of the permit, parcel, or map approval. PRC 4291 is the law requiring annual defensible space be provided around all structures in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material.

Click here to view PCR 4291:

[http://www.fire.ca.gov/communications/communications\\_firesafety\\_publiccode4291.php](http://www.fire.ca.gov/communications/communications_firesafety_publiccode4291.php)

### **Fire Hazard Severity Zone**

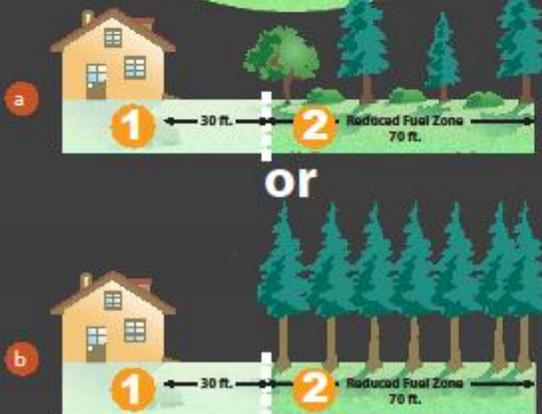
Fire Hazard Severity Zones are geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code Sections 51175 through 51189.

The California Code of Regulations, Title 14, section 1280 designates the maps of these geographical areas as "Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California."

Click here to view:

[http://www.fire.ca.gov/communications/communications\\_firesafety\\_publiccode4291.php](http://www.fire.ca.gov/communications/communications_firesafety_publiccode4291.php)

# 100' DEFENSIBLE SPACE Make Your Home FIRE SAFE



Contact your local CAL FIRE office, fire department,  
or Fire Safe Council for tips and assistance.  
[www.fire.ca.gov](http://www.fire.ca.gov)

## Why 100 Feet?

Following these simple steps can dramatically increase the chance of your home surviving a wildfire!

A Defensible Space of 100 feet around your home is required by law.<sup>1</sup> The goal is to protect your home while providing a safe area for firefighters.

### 1 "Lean, Clean and Green Zone."

– Clearing an area of 30 feet immediately surrounding your home is critical. This area requires the greatest reduction in flammable vegetation.

### 2 "Reduced Fuel Zone."

– The fuel reduction zone in the remaining 70 feet (or to property line) will depend on the steepness of your property and the vegetation.

Spacing between plants improves the chance of stopping a wildfire before it destroys your home. You have two options in this area:

**a** Create horizontal and vertical spacing between plants. The amount of space will depend on how steep the slope is and the size of the plants.

**b** Large trees do not have to be cut and removed as long as all of the plants beneath them are removed. This eliminates a vertical "fire ladder."

When clearing vegetation, use care when operating equipment such as lawnmowers. One small spark may start a fire; a string trimmer is much safer.

Remove all build-up of needles and leaves from your roof and gutters. Keep tree limbs trimmed at least 10 feet from any chimneys and remove dead limbs that hang over your home or garage. The law also requires a screen over your chimney outlet of not more than 1/2 inch mesh.

<sup>1</sup> These regulations affect most of the grass, brush, and timber-covered private lands in the State. Some fire department/jurisdictions may have additional requirements. Some activities may require permits for tree removal. Also, some activities may require special procedures for: 1) threatened and endangered species, 2) avoiding erosion, and 3) protection of water quality. Check with local officials if in doubt. Current regulations allow an insurance company to require additional clearance. The area to be treated does not extend beyond your property. The State Board of Forestry and Fire Protection has approved Guidelines to assist you in complying with the new law. Contact your local CAL FIRE office for more details.



April 2007

## D: INFORMATION AND EDUCATION

The Fire Prevention Specialist II for the Madera-Mariposa-Merced Unit, under the general direction of the Fire Prevention Bureau Chief, has program responsibility for the following:

- School Programs
- Career Day Events
- Fairs
- Exhibits and Displays
- Public Information - News Releases and Interviews
- Juvenile Firesetter Intervention Program Manager
- Juvenile Firesetter Intervention Team Coordinator
- Volunteer In Prevention Coordinator
- Roadside Sign Production
- Parades
- Public Officer
- Public Presentations
- Develop Corporate Sponsorships
- Smokey Bear - Fire Safety Programs
- Sparky the Fire Dog- Fire and Life Safety Programs
- Smokey Bear 10K Race
- Order, stock, store, and disseminate fire prevention and public safety materials and supplies
- Develop/create, purchase, stock, and utilize fire and life safety displays
- Vehicle care and maintenance
- Management of Assigned Budget



### SCHOOL PROGRAMS

School Programs consist of various portions and/or options including “Team Teaching”, “Flannel Board”, “9-1-1”, “Stop/Drop and Roll”, “EDITH and DAN”, “Poster Contests”, “Friendly Firefighter”, “7th and 8th Grade Presentation” and “Station Tours” to be utilized for the proper audience. A minimum of 25 schools are visited by the FPS II each year with a total of 1600 to 1800 children in Madera and Mariposa Counties.

The basic fire safety program that teaches children not to play with matches, lighters or fire is the “Team Teaching” program. Team Teaching targets preschool through second grade.

Team Teaching is a highly professional program developed by teachers, CAL FIRE personnel, and child psychologists. This program utilizes Smokey Bear, an internationally recognized fire prevention symbol to teach children not to play with matches, lighters, or fire. Pre-planning is the most important factor for a successful team teaching program. Historically the program has been presented to school children in cooperation with local government and/or county fire departments, Fire Safe Councils, and the United States Forest Service.

The FPS II (Fire Prevention Specialist II) is responsible for contacting every organized preschool and elementary school within Madera and Mariposa counties. Each spring a phone call is made to each school to schedule the annual “Team Teaching” program. It has become increasingly difficult to schedule all cooperating parties and the schools due to scheduling conflicts, winter staffing levels, budgetary issues, and testing policies at each school.

The first planning meeting the FPS II must schedule is with the U.S. Forest Service and local government representatives to create a calendar of potential dates for the program. Then each school is called to place them on the schedule. When the schedule is complete the program materials are gathered, counted, and prepared. The FPS II then coordinates the Team Teaching calendar with all of CAL FIRE and County Fire Station personnel, Chief Officers, each school, and the Volunteers in Prevention. A request is formulated and each VIP is contacted by letter, email, and by telephone to request assistance for the program.

The Flannel Board Program is designed specifically for preschool children but it can be used for kindergarten also. This program has been met with great success. Teachers have stated that the flannel board story held the children’s attention and that, beyond enjoying the lesson, the children retained the information from the presentation. The flannel board is the story of Smokey

Bear and a family that drove to the wildland to enjoy the day. The “Don’t play with matches, lighters, or fire” theme is introduced to the students and they are told what to do with them if they find them. Each class of students at this age is different so the amount of information that is provided is tailored to their ability to understand and absorb the information. If appropriate, a demonstration of smoke detectors and exit drills in the home occurs. Occasionally personnel from an engine company will don their personal safety gear to show the children what they could expect to see if/when coming into contact with a firefighter. An entire dialogue occurs during this time explaining the firefighters’ role for the children during an emergency; what each piece of clothing, gear, and equipment is used for; and why it is important. Questions and answers are allowed if time permits. A packet containing a CAL FIRE sticker; a stop, drop and roll pencil; a Smokey Bear comic book; and a Smokey Bear coloring book are left with the teacher for each student. Smokey Bear comes into the classroom and the FPS II helps the children tell Smokey what they have learned. Smokey is pleased to accept them in his club as “Smokey’s Helpers”. The FPS II wishes everyone a safe summer and Smokey and the crew leave.

Kindergarten through second grade is the target audience for Team Teaching. This program takes 35 minutes to present per classroom. When the “team” arrives at the school, the FPS II checks in with the office to get the schedule for the day and to make arrangements for a safe and secure changing area for Smokey Bear. One team member will play Smokey and one will be Smokey’s escort. Additional team members will be responsible for presenting fire safety messages to the students; counting and distributing handout materials; demonstrating and assisting with stop, drop and roll; friendly firefighter; 9-1-1; smoke detector training; and EDITH and DAN information, etc. When the program presentation is complete the class receives a visit from Smokey Bear. The students are quizzed about what they have learned and Smokey is happy to welcome them as “Smokey’s Helpers”. A follow-up packet of materials are left for each student with the teacher containing the following materials: The True Story of Smokey Bear comic book; Smokey Bear coloring book; CAL FIRE sticker; pencil with stop, drop, and roll message; Fire Prevention bookmark; and a large poster for the classroom. The second grade students receive the “Discover Fire Safety Book” and the teacher receives the Smokey Bear Thematic Teacher’s Guide. The FPS II must make sure to schedule the Smokey Bear costume, SCBA with shroud and mask, a set of turnouts with structure boots, a smoke detector, props that look like a lighter, a book of matches and enough qualified volunteers.

#### 7th and 8th Grade Presentation

This presentation is given in an assembly at the school by the FPS II. The focus is Juvenile Fire setting behaviors and is presented with discussion under the following categories: Introduction; Icebreaker questions; Explanation of who, what, when, where and why juveniles set fires. The talk includes who becomes involved when a fire is set, a critical thinking portion is explored, and then it moves into consequences for poor choices; economics of fire setting; how fire is represented by the media, by peers, and by teachers; accidental fires, cry for help fires and arson fires. A review of basic fire safety principals is typically included. Then a discussion of how juvenile fire setting can be prevented in the community starts, which generally leads to a discussion on parenting and bullying issues. This program is provided to 11 elementary schools in Madera and Mariposa counties.

The FPS II assists in the training of Unit personnel in public fire prevention education programs.

#### CAREER DAYS

These programs are provided by request only. The FPS II coordinates, plans, and provides the display and/or presentation materials to station personnel appropriate to the age level of the audience and confirms dates, times, locations, and materials requested. The FPS II attends the event to provide a table top display, information and job bulletins. Furthermore the FPS II must notify the Battalion Chief and Station personnel and place requests for engines and staff to assist.

#### FAIRS

The FPS II plans, coordinates, constructs, staffs and manages the Mariposa and Madera County fairs. They provide support, staff and materials for the Los Banos Fair and the Merced County Fair.

They are the responsible party for contract agreements, display location, display theme, duration, staff, set up and removal for Mariposa and Madera County Fair. Additionally the FPS II must notify the Battalion Chief and Station personnel and place requests for engines and staff.

#### EXHIBITS AND DISPLAYS

The FPS II responds to requests to provide exhibits and displays. They determines the theme, recruits VIPs to assist with staffing, and notifies the Battalion Chief and Station personnel of the request. They also constructs displays and puts exhibits together for Fire Prevention Week; Station Open House; Poster Contests; Wildfire Awareness Week; Mt. Heritage Days; Town Hall Meetings; Fairs; Fire Safe Council events; and other community requests. The FPS II oversees and ensures departmental policies and procedures for consistency in fire prevention, education, information and the dissemination for forest fire laws in the Unit's exhibits and displays.

#### PUBLIC INFORMATION

Under the direction of the Unit Prevention Bureau Chief or Incident Commander, the FPS II functions as a Public Information Officer for the Unit, or statewide as a Field PIO, PIO Center Manager, PIO in JIC, PIO on unified command incidents, etc), to provide information regarding events of public interest, public safety, evacuations conditions, and emergency response situations, etc. by issuing Public Service Announcements, news releases, media briefings, television, radio and print interviews, verbal and other written communication. The FPS II preplans the public service announcements; writes and reviews news releases, and prepares articles for newsletters. They provides, conducts, or arranges for appropriate CAL FIRE personnel to provide live and pre-recorded radio and TV interviews according to departmental guidelines and procedures and the format prescribed by the Communications Section of CAL FIRE. The FPS II ensures that accurate information is expended to the media and works with local PIOs to assist in dissemination of information. They should work to create and maintain good relationships with the media, the public, and other agencies to ensure adequate distribution of accurate information to the public. The PFE II writes articles or reports for various publications (Departmental or otherwise) to advertise or inform the public, the Department or other agencies of activities, issues or other pertinent information. They distributes news releases to the media and elected officials on various topics such as information relating to an arson arrest, media event, preparedness levels, etc. Furthermore the FPS II plans, designs and coordinates, in cooperation with the Sierra Star newspaper, the annual fire safety and home clearance section. The FPS II participates as an instructor for the Emergency Command Center Academy Course at the CAL FIRE Academy in Lone to provide departmental guidelines, policies and procedures to assure Departmental compliance with state Policies in the ECC.

#### JUVENILE FIRESETTER INTERVENTION SPECIALIST

Under the direction of the Fire Prevention Bureau Chief, the FPS II is responsible for developing and maintaining the Units Juvenile Firesetter Intervention Program (JFS). They develops the program for the Unit and compiles materials, videos, and programs to educate Juvenile Firesetters of the dangers of playing with fire. The FPS II should be certified at a Juvenile Firesetter Intervention Specialist I and II. They will respond to requests for intervention interviews assessments from the Madera, Mariposa and Merced County Sheriffs Office, the Madera, Mariposa and Merced County Probation Office, local school administrators, concerned parents and referrals from station personnel and/or Fire Prevention Bureau Staff.

The FPS II will develop a Juvenile Firesetter Intervention Program Team and recruit personnel from the Unit to join the team. As the JFS team coordinator, the FPS II provides them with the initial Juvenile Firesetter Intervention Specialist I training. They will coordinate interview requests for the team and monitor their interview techniques and reports. Additionally they will supply the team with updates in the JFS field. It is vital to supply the team members with the JFIS II training. Unfortunately this class has not been offered locally in recent years.

#### VIP COORDINATOR

The Volunteers In Prevention (VIP) of the California Department of Forestry and Fire Protection (CAL FIRE) is an efficient fire prevention and loss reduction education force for California. Each year wildfires burn thousands of acres of California's watershed, timber, and grasslands. As a result, millions of dollars in damage are done to the environment; homes are destroyed; lives are threatened and sometimes lost. With 95 percent of the wildland fires CAL FIRE responds to each year being the product of negligence, fire prevention and public life safety education are

key to reducing losses from fires in California. The VIP program is a vital part of providing this service to the Madera-Mariposa-Merced Unit. The following is a list of activities that VIPs are asked to provide support.

1. Fire and Life Safety Education Programs
2. Public Information Education.
3. LE 100 Inspection Program under PRC 4291
4. Red Flag, Holiday, and Arson Patrols
5. Communications

The FPS II coordinates and manages the Unit's VIP program. This includes recruitment and training of VIPs, identification and tracking of the Units VIP activities and maintenance of the Unit's VIP database. The FPS II will maintain and file records to track all VIP hours, miles driven, events attended and training provided. They provides letters of proof of service on demand for VIPs. Upon request the FPS II will provide a potential VIP the CAL FIRE 670 form. When it is completed and returned, they will process the form, supply the new VIP with a welcome packet, and add the individual to the VIP database. The welcome packet includes information on the VIP identification card, a VIP Orientation Guide, VIP Activity Sheet, AO 448 and AO 449 forms and a list of contact information.

There is no mandatory number of hours required of a volunteer, but the FPS II may require at least one program per year for a VIP to stay active. If that requirement is not met the FPS II will send out a letter of inactivity to the VIP and place them on an inactive list for one year. After that year if the VIP has not responded, they are deleted from the system. All VIPs work under the direction of the FPS II and they is responsible for their performance. If necessary, the FPS II shall follow the Departmental Progressive Discipline Policy for all inappropriate behavior. They shall provide annual training classes for the VIPs which includes PIO and Defensive Driving. The FPS II is responsible for tracking the VIP hours donated, miles driven, meal costs, and related expenses. The FPS II may also track some certificates and training records in addition to completing all VIP Performance Evaluations. They will process all CALATERs forms for each VIP and is responsible for keeping VIP uniform shirts in stock and delivering them to each VIP. If a VIP becomes injured while volunteering, the FPS II is also responsible for processing their IAPS forms, as they are covered under workers' compensation insurance.

The FPS II assists the Unit LE 100 inspection process by recruiting VIPs to perform first and second home clearance inspections. The FPS II provides annual LE 100 training for VIPs that are interested in helping with this process and conducts inspections upon request.

The FPS II is responsible for recruitment and retention of VIPs. This has become increasingly difficult over the past decade due to a decline in support and funding for the VIP program. The VIP program is in competition with programs supported by AmeriCorps. This program provides funding for uniforms, awards, certificates, vehicles, training and advertisements. The FPS II may attempt to incorporate Citizen Emergency Response Team (CERT) training into the VIP program.

#### ROAD SIDE SIGNS

The FPS II will plan and construct road side signs for the entire Unit. They shall purchase the materials, deliver them to a vendor or a conservation camp for construction of all signs, pick the signs up when completed, and deliver them to the appropriate stations for display. The FPS II will track all signs in a database and contact station personnel four times each year to remind them to change out their roadside signs, to check on locations, and assist with any problems.

#### POSTER CONTEST

Every other year the FPS II will coordinate a poster contest within school programs. The FPS II will advertise the contest and collect and judge the entries. During the school programs the FPS II will present each winner with an award. The overall winner in each category will have a roadside sign constructed from their poster.

#### PARADES

The FPS II receives the requests for and processes all documents and entry certificates for all parades in the Unit. They plans and coordinates with the Fire Prevention Bureau Chief, the Battalion Chief and station personnel to ensure equipment, staff, and VIPs are available to participate. The FPS II will collect, deliver, and supply all necessary handouts, materials, and

Smokey Bear or Sparky the Fire Dog. The FPS II may occasionally participate in the parades as time and workload permit.

#### **PUBLIC OFFICER**

As a public officer, the FPS II is responsible for keeping current on all relevant training. The FPS II will assist the Unit when necessary in issuing citations. After responding to a request, the FPS II completes a citation package; delivers it to all appropriate parties, including the local District Attorney; and keeps all necessary documentation in a secure file cabinet.

#### **PUBLIC PRESENTATION**

Upon request the FPS II shall provide fire and life safety presentation to the public, local businesses, group, clubs, and organizations. Each request is different in nature and requires research of the topic, construction of displays, development of a PowerPoint presentation, and preparation of handout materials. If necessary the FPS II arranges for an expert guest speaker for a specific topic of request.

#### **CORPORATE SPONSORSHIP**

The FPS II shall seek corporate sponsorship for programs and purchase of materials. One example of this would be the annual Smokey Bear Color Contest. This program is sponsored by Sierra Telephone and the Sierra Star newspaper. The coverage area for this contest includes Madera and Mariposa counties.

The FPS II will work with Pacific Gas and Electric, Smokey Bear Race Committee, Home Depot, Mariposa Feed Store, Sierra Telephone Company, ABC Channel 30 Television, Intermountain Nursery, Western Sierra Nursery, Chukchansi Resort and Casino and ACE Hardware.

Each sponsorship attempt requires the preparation of a proposal, presentation of the proposal, and follow-up with each potential sponsor. If the proposal is accepted, the FPS II will facilitate the purchase, construction, delivery, creation and implementation of the request.

#### **SMOKEY BEAR**

The FPS II is responsible for the purchase, maintenance, appearance and security of the Unit's Smokey Bear costumes. There are specific federal and state requirements and regulations to the use, care, and security of the Smokey Bear costume and image. Smokey Bear is a widely recognized fire prevention symbol and his success and longevity are directly related to the standards that have been identified for use and all aspects of the Smokey image, public appearances and care of the costume. The FPS II will utilize Smokey Bear in the majority of all fire prevention programs in the Unit. The FPS II will ship or deliver Smokey to approved events, recruit VIPs to be Smokey Bear or his escort, receive the Smokey costume when it is returned from events, and store the Smokey Bear costume. Occasionally the FPS II will dress up as Smokey Bear when necessary.

#### **SPARKY THE FIRE DOG**

The FPS II is responsible for the purchase, maintenance, appearance, and security of the Unit's Sparky the Fire Dog costumes. There are specific state requirements and regulations to the use, care, and security of the Sparky the Fire Dog costume and image. The FPS II will utilize Sparky in many fire prevention programs in the Unit. They will ship or deliver Sparky to approved events, recruit VIPs to be Sparky or his escort at events, receive the Sparky costume when it is returned from events, and store Sparky. Occasionally the FPS II will dress up as Sparky when necessary.

#### **SMOKEY BEAR 10 K RACE**

As a member of the Smokey Bear Race committee, the FPS II shall attend monthly committee meetings as a representative of CAL FIRE. As such they is responsible for assisting with race planning, advertisements, registration, food, raffle prizes, t-shirts, trophies, announcer equipment, water stations, radio communicators, award ceremonies, banners, corporate sponsorships, and donations. The FPS II will also assist with publicity, all race day functions, and recruitment of runners. Each year the committee votes on the distribution of the proceeds from the event. They must benefit eastern Madera County citizens. The 2010 race proceeds facilitated the purchase of school program materials and smoke and carbon monoxide detectors for eastern Madera County along with new ball caps for the Unit's VIP program.



## E: VEGETATION MANAGEMENT

Resource Management in MMU involves administration and enforcement of the Forest Practice Act, administration of the California Forest Improvement Program (CFIP), administration of the Prop 40 fuel reduction fund, administration and supervision of the Hazard Fuels Treatment Grants (HFT), conducting California Environmental Quality Act (CEQA) compliance for Unit projects, and general service forestry.

1. The Forest Practice Act and the Forest Practice Rules govern the harvest of timber from private lands in California. The Rules require a landowner who harvests timber for commercial purposes (i.e. selling, bartering or trading logs or milled lumber to another party) to submit an exemption notice or timber harvesting plan document with the California Department of Forestry and Fire Protection. Some of the notices or plans that are required may require the services of a Registered Professional Forester. Listed below are the most common documents required by the state and the conditions under which each is appropriate.
  - a. Less than 3 acre Conversion Exemption – This conversion exemption is to harvest trees while doing a one time conversion to a non-timber growing use (i.e. orchard, house site, pasture.) on parcels less than 3 acres. The conversion requires that 100% of the slash be removed. These strict slash removal requirements were designed to minimize fuels in and around residences.
  - b. Emergency Notice of Operations - This emergency allows for the harvest of dead and dying trees to capture fire salvage and insect- and disease-killed trees.
  - c. Fuel Hazard Reduction Emergency - This emergency, adopted in 2004, allows for the immediate harvest of trees where high, very high or extreme fuel hazard conditions and the combination combustible fuel quantity, type, condition, configuration and terrain positioning, pose a significant fire threat on private timberlands. Cutting and removal of hazardous fuels, including trees, shrubs and other woody material, is needed to eliminate the vertical and horizontal continuity of understory fuels and surface fuels for the purpose of reducing the rate of fire spread, fire duration and intensity, fuel ignitability and to achieve a flame length under average severe fire weather conditions that is less than 4 feet in the treated areas.
  - d. 10% Dead & Dying Exemption - This exemption allows for the immediate harvest of dead, dying, or diseased trees of any size, fuel wood or split wood products, in amounts less than 10% of the average volume per acre.
  - e. Fire Safe Exemption - This exemption allows for the removal of ladder fuels and thinning of trees within 150 feet of a permitted structure. All slash is to be treated within 45 days. This activity is encouraged to further the intent of Public Resources Code (PRC) 4290.
  - f. Modified Timber Harvest Plan - This plan allows for the harvest of trees on an ownership of 100 acres or less.
  - g. Timber Harvest Plan (THP) - This plan addresses the harvest of timber on more than 3 acres and is beyond the scope of a modified THP. An approved THP acts as the functional equivalent of an Environmental Impact Report as required by the California Environmental Quality Act (CEQA).
  - h. Non-industrial Timber Management Plan (NTMP) - The long-term timber harvest plan has no termination date and is designed to be utilized by a timberland owner with less than 2,500 acres.
  - i. In 2011, there were 4 active THPs and a total of 1,679 acres under harvest. There are 10 NTMPs and a total of 5,052 acres under active management. A total of 14 exemptions occurred for a total of 203 acres. There is one pending forest practice enforcement action that has been referred to Civil Penalties adjudication. To achieve compliance with the Forest Practice Act, public education is the primary tool and enforcement action is the secondary tool.
2. California Forest Improvement Project (CFIP)
3. There were two CFIP projects funded in 2011. The Unit encourages fuel reduction CFIP projects. There are 2 CFIP projects waiting funding.
4. PROPOSITION 40

There were two Prop 40 projects waiting funding in the Unit:

- a. MMU Shaded Fuel Break Maintenance
- b. Lushmeadows Shaded Fuel Break Phase II.

5. HFT Grants

There were five HFT grants pending in the Unit: Stumpfield-Watts Fuel Break, Lush Meadows Shaded Fuel Break, Greeley Hill VMP, Kinsman Flat VMP and Miami Mountain-Salts Spring Shaded Fuel Break. Stumpfield-Watts Fuel Break is now complete. Lush Meadows Shaded Fuel Break is active and scheduled for completion in the fall of 2012. The Greeley Hill VMP and Kinsman Flat VMP are in the environmental planning stage and are scheduled for completion in the fall of 2012 and winter of 2012, respectively. The Miami Mountain-Salts Spring Shaded Fuel Break is currently inactive.

6. California Environmental Quality Act (CEQA) Compliance

The Unit seeks 100% CEQA compliance on all projects.

7. Service Forestry and Urban Forestry

The Unit Forester is also required to provide forestry advice upon request to private landowners. This advice includes, but is not limited to recommendations for fuel management and fire safe activities that can be applied to residences. Often times, service forestry calls are related to bark beetle activity in pine trees. Landowners are encouraged to immediately remove the bark beetle killed trees and treat the slash. Urban Forestry activities within the Unit include annual Arbor Day presentations at the cities of Los Banos and Merced.



## SECTION V: PRE FIRE MANAGEMENT TACTICS

### DIVISION / BATTALION / PROGRAM PLANS

#### TRAINING BUREAU

##### 1. Overview:

The Madera Mariposa Merced Training Bureau is responsible for training 350 CAL FIRE career firefighting personnel and 450 Madera and Merced county paid call firefighters. The training provided serves to educate firefighters from their first day on the job for the extent of their career. Additionally the Training Bureau is responsible for identifying the Unit's training needs. This includes CAL FIRE training; federal, state and OSHA mandates; and other fire-related service training. The training is accomplished through various methods: formalized classes at the CAL FIRE academy in Lone, multi-company drills, exercises of the Joint Apprentice Committee program, Firefighter I Returnee academies, HFEO proficiency training, Spring Training Preparedness exercises, and Continuing Professional Training courses.

Training is divided into 3 operational areas – Madera, Mariposa, and Merced. Madera training is overseen by an administrative battalion chief assigned to the Madera division. The paid call firefighters receive monthly training from the career firefighting personnel. The training headquarters is located within the Mariposa division. Mariposa tracks all of the training records and schedules yearly training for career staff. Additionally they are responsible for the returnee firefighter academies, spring preparedness exercise, and Continuing Professional Training courses. In charge of this task are a battalion chief and an office technician. Merced training is conducted at the former Castle Air Force Base, which is overseen by a fire captain. Merced training hosts its own academy for new paid call firefighters and provides Continuing Professional Training courses for career staff within Merced County.

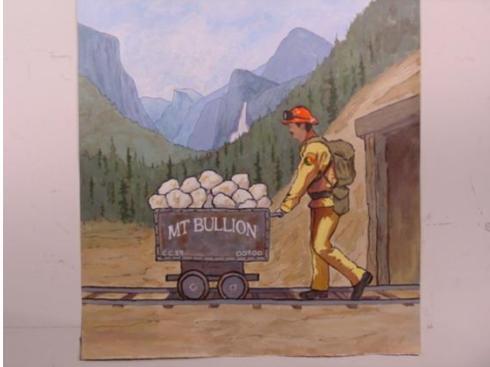
##### 2. Goals

The Training Bureau has set several goals to improve firefighting operation efficiency and safety for the Unit.

- a. Provide educational courses (Continuing Professional Training courses) as appropriate to meet recertification needs and reviews expiration dates to schedule division CPTs accordingly.
- b. Improve employee performance in their current position through non-mandated, job enhancement training (We provide as many additional classes through our Unit as needed and as possible each year.)
- c. Produce a training calendar prior to the start of each year, and send it out to the Unit quarterly.
- d. Ensure that Training Requests have been submitted prior to October 1<sup>st</sup> of each year.
- e. Have the Unit's training needs assessment completed prior to February 1<sup>st</sup> of each year per the Needs Assessment Process as cited in CAL FIRE Handbook 4022
- f. Review the minimum Incident Command System (ICS) Qualifications Matrix (7700 Handbook) yearly and compare it to the Emergency Response Directory (ERD), to identify any lack of ICS qualified personnel within the Unit.
- g. Have training prepared for Amador Firefighters; usually takes place the second week of February. Approximately 10 employees are hired.
- h. Prepare training and preparation of spring transition for the first Firefighter hiring. This usually takes place mid-May and provides training for approximately 25 returning firefighters.
- i. Prepare training and preparation of second Firefighter hiring. This will bring the Unit to peak staffing levels around mid-June, training approximately 35 additional firefighters.
- j. Plan Spring Preparedness Exercise. All Schedule "B" engines and personnel participate in a skills and physical fitness evaluation. Usually takes place in June.
- k. Assist with 4036 training as needed

- l. Work with individual employees to develop individual training plans.
- m. Develop Record Retention Plan (Target Safety)
- n. Identify Unit classes and develop cadres

**MOUNT BULLION CAMP CC#39**



*Mount Bullion Camp is located 6 miles north of the town of Mariposa off of HWY 49 at an elevation of 3200 feet and on the east side of Mount Bullion . It is the only fire camp in the CAL FIRE Madera, Mariposa and Merced Unit. The camp's maximum population is 110 low risk inmates that operate under the direction of the California Department of Corrections and Rehabilitation (CDCR) and CAL FIRE. CAL FIRE operates five hand crews in addition to an emergency response, small engine and chainsaw repair trailer that are all available to respond to all types of emergencies and disasters year round within the state of California.*

**1. CAMP HISTORY**

Mount Bullion Camp opened as a California Youth Authority fire camp in 1958. In October of 2004 Mount Bullion was converted to an Adult Conservation Camp. Many modifications were made to existing structures to accommodate the one hundred and ten (110) inmate capacity population. Mt. Bullion's fire protection responsibilities fall within the Cal Fire MMU Unit, which includes Mariposa, Merced and Madera Counties. In 2008 there were two major fires within the Unit, the Oliver Fire and the Telegraph Fire. The Oliver Fire started June 25, 2008 consuming 2789 acres, and the Telegraph Fire started August 02, 2008 consuming 34,091 acres. The Telegraph Fire came within three hundred yards of the camp and although evacuation plans were in place but not activated, the camp did not suffer any damage. Cal Fire and the Department of Corrections and Rehabilitation have an excellent working relationship and have a lot of pride in the camp. Cal Fire and CDCR meet twice a week for an open discussion on safety and other issues concerning the smooth operation of the camp.

**2. INMATE PROGRAMS**

The Hobby Program runs at capacity with eighteen inmates involved. Our educational programs consist of the GED Program, Inmate sponsored Small Business Class, and Coastline Community College courses. The GED Program meets three times a week and had approximately 10 inmates enrolled with a completion rate of 85% in 2011. Currently there are approximately eight inmates enrolled in this semester's classes. They will be taking the GED test sometime in May 2012. We have an ongoing inmate sponsored Small Business Class designed to help inmates start their own business when they reach parole. This class is conducted two to three times a year. Currently there are ten inmates enrolled. We have Coastline Community College courses with a variety of classes offered. College classes are usually offered in the fall and spring semesters. There were twenty inmates enrolled in the 2011 winter semester. Final exams were taken in April / May 2012.

**3. WORK PROJECTS**

- a. Federal Forest Projects: Forest Restoration, Fire Breaks, Weed Abatement
- b. County Projects: Fire Breaks, Water Shed Management, Utility District Brush Clearing, Weed Abatement, Parks and Recreation restoration, School Clean Up, Roadside Clearing, Tree Clearing and Trimming.
- c. City Projects: Fire Breaks, Water Shed Management, Utility District Brush Clearing, Weed Abatement, Parks and Recreation restoration, School Clean Up
- d. National Park Projects: Forest Restoration, Fire



- Breaks, Weed Abatement.
- e. State Projects: Fire Breaks, Water Shed Management, Utility District Brush Clearing, Weed Abatement, Parks and Recreation restoration, School Clean Up, Roadside Clearing, and Tree Clearing.
- f. The camp also provides fire wood to senior citizens and low income families through the Mariposa County Department of Community Services.

4. VMP

- a. CAL FIRE VMPs
  - i. Lushmeadows / Tip Top Fuel Break
  - ii. Ponderosa Fuel Break
  - iii. Watts / Stumpfield Fuel Break
  - iv. Kinsman Flat VMP
- b. Madera County Fire Safe
  - i. John West and Jean Rd AKA Six Mile, brush clearing
  - ii. RD 425 B brush clearing
  - iii. Cascadel Woods Fuel Break
  - iv. RD 620 AKA Stagecoach Rd Fuel Break



**BATTALION PLANS**

**Battalion 1: Battalion Fire Management Plan**

Battalion Overview:

1. Located in the northeast corner of the Madera Mariposa Merced Unit, encompassing 274,462 acres and 426 square miles lies the Coulterville Battalion containing a diverse amount of topography and vegetation. The western half of the battalion is range land with light flashy fuels in rolling hills. Once you progress in elevations you notice the changing topography from rolling hills to steeper slopes and canyons in oak woodland. As you travel above the 2,500' elevation you see the transition from oak woodland to major river drainage topography and fuel. The northern Highway 49 corridor drops into and out of the Merced River Drainage. The fuel transitions into the brush model of chamise, white thorn, and manzanita. As you move eastward to the USFS/CAL FIRE DPA line, the fuel transitions into timber. The battalion has several thousands acres of BLM and a great relationship has been established with the Folsom Office personnel. To the east the battalion is bordered by the Stanislaus National Forest. To the west SRA runs into Merced and Tuolumne counties. TCU borders the battalion to the north. Several communities are based in the battalion and are mostly developed along state highways and county roads. State Highway 140 runs east to west and intersects the community of Catheys Valley. State Highway 49 runs north and south and intersects the communities of Bear Valley and Coulterville. County road J132 intersects the communities of Don Pedro, Coulterville, and Greely Hill. Hornitos Road is a county road that connects Hwy 140 into Road J132. This road intersects the community of Hornitos and runs into Merced county and Tuolumne county. While these communities are fairly spread out due to restrictions on land division, there are pockets of subdivisions that create a Wildland Urban Interface challenge. Whispering Oaks and Whispering Oaks West, in Catheys Valley, is a 640 acre development of high end homes while the Don Pedro subdivision is a 4,500 which is split between Mariposa and Tuolumne counties. Historic assets include the Jeffries Hotel in Coulterville, the Trabucco house and General store of Bear Valley, and the Catholic Church and Manuela's in Hornitos. Interspersed throughout the varied topography and vegetation you will find large cattle ranches, federal forest, parks, and recreation areas and vineyards.

Weather patterns in Battalion 1, during declared fire season, consist mostly of diurnal winds that combine with topography to create a predictable NNW air flow mass. Spring and fall weather

patterns are affected by approaching low pressure systems that generally have a southerly flow. When a high pressure establishes itself over California, dry, warm air from the NNW occurs. Late spring and early fall weather changes between low and high pressure. Such changes drastically increase winds in the western side of the battalion and you can see a spread component index of up to 200.

Fire history in the battalion includes some of the largest fires in the Madera Mariposa Merced Unit: the Hunter Fire of 2000, the Creek Fire of 2001, and the Telegraph Fire of 2008. The potential lies in the fuel and topography of the Merced River drainage. This is major River Drainage Fire Fighting that is found throughout the California foothills. Fires in this country have the time, fuel, and topography to establish themselves due to poor access for suppression resources.



The VMP (Vegetation Management Program) project work that was done in the past never was completed and it is my opinion that it may never get done due to Cal Fire's cumbersome VMP process and the authority that has been given to the Air Pollution Control Districts. Past VMP projects like the Adams 800 acre VMP died on the vine due to a lack of resources and APCD issues. Currently there is hope for the long-awaited Greely Hill VMP. The BLM has funded the project and we are in the process of waiting for the EIR and burn plan to be approved so that we can move forward with our hand crews to start the pile and burning process and to reestablish control lines. Over the past few years we have been maintaining the private portions of the project with Prop 40 dollars and agreements with private land owners on the perimeter of the project. This funding will allow for maintenance of part of the Ponderosa fuel break and a joint effort between CAL FIRE and BLM to get this completed. We are looking at burning this in the fall of 2012.

Sacramento is encouraging us to get as many LE-100 inspections done as possible. This push resulted in the hiring of a FFI specifically for this assignment. Unfortunately for Battalion I, we had an early season FFI injury and our LE-100 FFI was pressed into service on an engine. We

were not allowed to hire behind so our program for the LE-100 FF was scrapped and all three stations, Catheys Valley, Hornitos, and Coulterville, stepped up and completed 100% of their inspections. Catheys Valley and Hornitos completed their entire PRA while Coulterville completed their entire target area of Don Pedro. One reason for this success was the inception of the LE-100 mailers. This program jumpstarts the inspection process and, when inspectors are properly trained, helps the private property owners get started or complete their defensible space.

In conjunction with the Unit's prevention staff to provide a quality school program. Catheys Valley FFS judged and hosted the competition for the best home fire prevention plan. The winners from each class came to the station and were fed hotdogs cooked by the firefighters. Catheys Valley personnel also attended the Fall Festival where fire prevention for kids is the main message.

2. Goals and Objective

The goal of the Battalion Prevention Plan is to prevent unwanted wildfire within the battalion boundaries. With dedicated and committed battalion employees, Prevention Bureau Staff, and Pre-Suppression Staff, this prevention plan will be the leading document that supports our Unit Fire Plan and a model for the protection and safety of the citizens of Battalion 1 and the communities it serves.

3. Measurement of:

The methods used to accomplish our goal will consist of public education, prescribed fire projects, mechanical fuel reduction and modification, range improvement, fire road maintenance, and always an aggressive LE-100 inspection program. The fire station managers will again be the catalyst to carry forth and complete many of the programs. Fire Prevention and Pre-Fire Suppression staff will again be called upon to assist in this year's program.

4. Information Education

a. School Programs:

- i. Through the Unit Prevention Bureau, Battalion 1 personnel prepare and present programs to school children, assist school teachers and administrators, either in or out of classroom, and prepare or present fire prevention or conservation education subjects and materials, with emphasis on K-2 students that reside in State Responsibility Area (SRA) lands.
- ii. Battalion 1 school programs consist of a coordinated effort between cooperating fire agencies known as "TEAM TEACHING".

This allows a great opportunity and potential for stimulating interest in wildfire prevention. The classroom atmosphere makes an ideal place to acquaint children with fire prevention responsibility. Here it is possible to form fire-safe attitudes in children.\*Please see attachment A for a "TEAM TEACHING" schedule

b. Fire Prevention Signs

- i. In 2009 the Fire Prevention Bureau developed new prevention signs for roadways throughout the Unit. In 2010 a complete revitalization and addition of new prevention frames for the signs went into effect in Battalion 1. A new prevention sign was added to the intersection of Greely Hill Road and Ernst Road and a new prevention sign is being installed on the Reddington Ranch on the south side of Highway 140. The new prevention signs are rotated based on the Fire Prevention Bureau rotational schedule. Station managers have been diligent in maintaining that rotation. Currently there are 5 Fire Prevention signs in Battalion 1.
- ii. Catheys Valley:
  1. In cooperation with Company 23 of the Mariposa County Volunteer Fire Department, one prevention sign is located on the south side of Hwy 140 at McCay Community Park.
  2. With appreciated cooperation from the Reddington Ranch, one prevention sign will be installed on the south side of Hwy 140 near the entrance to the ranch.
- iii. Hornitos:
  1. Current sign is located on the southwest corner of CAL FIRE property at the Hornitos FFS and is visible from Bear Valley Rd.

2. One more sign will be added in 2011 in the Hornitos area along Bear Valley Road, east of the town of Hornitos.
- iv. Coulterville:
  1. One sign is located on the southwest corner of CAL FIRE property at the Coulterville FFS and is visible from Hwy 49.
  2. Second sign is located at the intersection of Greely Hill Road and Ernst Rd.
  3. Third sign will be added to the Don Pedro
- c. Public Events
  - i. All on-duty company officers in Battalion 1 will attend public events in the local community they serve. This participation creates an environment that builds trust and friendship between CAL FIRE employees and the residents of the community. A professional, polite, and friendly attitude will be maintained at these events and fire prevention message is encouraged. If a station is invited to a public event that is not listed, it will be the responsibility of the company officer to decide if attending will have an impact on station management. The following events are attended each year by our on-duty personnel.
    1. COULTERVILLE:
      - a. Coyote Howl
      - b. Greely Hill Breakfast
      - c. Coulterville Pancake breakfast
      - d. Ambulance Association Dinner
    2. HORNITOS:
      - a. Hornitos Enchilada Feed
      - b. Flea Market
    3. CATHEYS VALLEY:
      - a. Agri-nature trail
      - b. Coyote Springs Buck-n-Bash
      - c. Coyote Springs Western Carnival
      - d. Catheys Valley Elementary Fun Day
- d. Media
 

Media contact for Battalion 1 has traditionally been through the Unit's Prevention Bureau in the form of a press release or a direct phone call from the Mariposa Division Chief to the editor of the Mariposa Gazette in the event of a specialized training activity. Burn permits are required on May 1<sup>st</sup> of every year (PRC 4423 (b)). The on-duty Battalion Chief, with approval from the Mariposa Division Chief, may restrict burning hours, burning elevations, and burn pile sizes based on fire weather, fuel conditions, and predicted weather based on fire weather reports from the National Weather Service. These changes are communicated to the public through contact with media outlets determined by the Unit's Prevention Bureau.
5. Planning, Engineering & Structure Ignitability
  - a. The VMP (Vegetation Management Program) project work that was done in the past never was completed and it is my opinion that they may never get done due to CAL FIRE's cumbersome VMP process and the authority that has been given to the Air Pollution Control Districts. Past VMP projects, like the Adams 800 acre VMP, died on the vine due to a lack of resources and APCD issues. Currently there is hope for the long-awaited Greely Hill VMP. The BLM has funded the project and we are in the process of waiting for the EIR and burn plan to be approved so we can move forward with our hand crews to start the pile and burning process and to reestablish control lines. Over the past few years we have been maintaining the private portions of the project with Prop 40 dollars and agreements with private landowners on the perimeter of the project. This funding will allow for maintenance of part of the Ponderosa fuel break and a joint effort between CAL FIRE and BLM to get this completed. We are looking at burning this in the fall of 2012.
  - b. Public Resource Code 4291
    - i. Mailers-
 

The CAL FIRE Prevention Bureau mailed self inspection letters to residents in Mariposa County. They were asked to return these mailers to CAL FIRE headquarters when they had completed all tasks to make each residence "in compliance". When each of the battalion stations received the mailer from

headquarters, they would log the address as completed and “in compliance”. Mailers are used as first inspections completed by local owners. Residents of Mariposa County received these mailers by the first week of June.

ii. Inspection Process-

1. Each station within Battalion I starts weed abatement inspections during the month of June. These inspections were conducted by station personnel this year due to limited firefighter staffing eliminating the battalion LE-100 firefighter position. Every station’s company officer and crew drove to each residential structure and visually inspected and handed helpful information out to homeowners. If extra firefighters were available or overtime was authorized we would use these individuals to perform inspections within the 2010 target areas.
2. If a residence was “out of compliance” we would hand a written LE-100 form to the property owner stating each violation along with a second inspection date judging by the amount of work required to become compliant and/or fourteen days after first inspection. If the residents were not home during the inspection and were “out of compliance” station personnel would mail the LE-100 form to residence via certified mail to confirm reception of violations.
3. If during inspections a residence was “out of compliance” and the station had received a mailer, this would be counted as a second inspection. One copy would be given to home owner either in person or certified mail along with a copy to prevention to schedule a third inspection.

iii. Augmented LE-100 Firefighter-

1. The augmented Battalion 1 LE-100 firefighter was not used this year due to limited firefighter staffing within the battalion.
2. Planning with a designated LE-100 firefighter would have started in the Catheys Valley area first and worked toward Hornitos and then to the Don Pedro area. This firefighter’s goal was to provide each station with 100% of only first inspections; second inspections were to be completed by station personnel.

iv. Tracking of inspections-

Each of the three station assigned to Battalion 1 has different means of tracking residences and “compliant”/“out of compliance” structures. The Coulterville fire station uses a County APN listing to identify each property owner within Don Pedro, Coulterville and Greeley Hill. Along with roads and addresses, they have property owner names and mailing addresses if the owner is not presently living at the residence. After completing field inspections they enter all information into the same form and save it on the computer. Catheys Valley and Hornitos use a mapping system that has all residences and mailing addresses within their Initial Attack area.

c. Coulterville’s three target areas-

Coulterville station has three target areas which consist of: Don Pedro, Coulterville and Greeley Hill. When combined between the three are about 180 square mile of area to cover. In the year on 2010 Don Pedro will be the main target area. In 2011 the main target area will be moved to the Coulterville area, and in 2012 the target area will be Greeley Hill. Each of these three target areas will be 100% completed, rotating every year.

d. Fire Safe Council-

The Fire Safe Council is a non-profit 501C3 program which is funded by grants through the state and federal governments to provide weed abatement assistance to disabled, elderly, or low-income families. Throughout the communities of Coulterville, Greeley Hill, Don Pedro, Hornitos, and Catheys Valley approximately 120 people have been helped by the Fire Safe Council program, removing and clearing property to the LE-100 guidelines. About 50 people have called the Fire Safe Council to have trees trimmed, brush removed, or requested a chipper to mitigate larger fuel piles they have cleared but are unable to dispose of.

e. Fire Roads Battalion 1 Fire Road System

- i. Over the last 10 years in Battalion 1 we have been successful in reestablishing fire roads. We have striven to maintain both the roads and the trust and commitment from the private landowners and federal government agencies. This

has been a long process that has been successful due to the fact that equipment and personnel were re-committed to fire road improvements after the "49" fire in 1999 and once again on the "Telegraph" fire of 2008. Re-contacting landowners along the "Buckhorn" and other fire roads and providing road maintenance have provided an enormous safety and operational benefit during fire suppression attempts. This year we will attempt to expand this type of effort and continue to regain the upper hand on fire road improvement. With the development of the "Old Highway" fire road project, the Battalion has tied the Guadalupe Ridge Road to the old highway in the Catheys Valley area. In the past this type of fire road development has not received the type of support needed for completion. We are hoping for a positive change in this thought process by putting motivated personnel in our Pre-Suppression position.

- ii. Listed below and supported with topographical maps are the fire roads and their current status that run through Battalion 1.
  - iii. Buckhorn Fire Road verbal agreements have been secured with surrounding landowners to allow for annual maintenance. The A-19 will be updated with the new A-719 as soon as it is available. FC32 documentation for crew work has been completed. This is a critical fire road within the Battalion and this need to get done. It is 9.5 miles in length .See attached map.
  - iv. Crown Lead Fire Road - Because it is has not been properly maintained in years, Crown Lead Fire Road is a CAL FIRE road in dire need of maintenance. It is 4 miles in length. See attached map.
  - v. Van Ness Fire Road - It runs from the end of Cornetts entrance to White Rock Road. Currently the Catheys Valley "RAWS" station is located at the McGonigle Ranch on this fire road of 7 miles in length. See attached map.
  - vi. Tim Brush Fire Road - Annual maintenance for this road is provided by CAL FIRE. It is 4.5 miles in length. Currently we can only maintain on the ridge of this fire road due to the BLM installing a non-opening gate before the fire road runs into wild and scenic habitat. Severe maintenance is needed on the downhill switchback that runs to the North Fork drainage. See attached map.
  - vii. Black Mountain Fire Road - Annual maintenance of this road is provided by CAL FIRE. Road is 4.25 in length. Currently working on a solution to repair the uphill grade, 1.0 mile east of the North Fork of the Merced River, which was washed out the winter after the Telegraph fire. See attached map.
  - viii. Hunters Valley Access Road - Annual maintenance is provided by CAL FIRE. Road is 1.0 miles in length. This fire road received maintenance in 2008 and has held up nicely but continued maintenance is required.
  - ix. Peno Blanco Lookout Road - This road runs from Highway 49 to Granite Springs Road. It provides access to the Peno Blanco lookout and because of its location seconds as a fire road. It is a CAL FIRE maintained road. See attached map.
- f. Fuel Reduction
- i. SWIFT fuel reduction projects in Battalion 1 have been a cooperative effort through state, federal, and local stakeholders. These stakeholders developed a group called SWIFT (SouthWest InterFace Team). SWIFT meets once a month to give updates, progress, and come up with new fuel reduction projects that will create a strategic fire defense system designed to reduce the loss of life, property, and the severity of major fires in the northern section of Mariposa County, the southern section of Tuolumne County, the US Forest Service lands, Bureau of Land Management lands, and National Park Service lands.
  - ii. Local stakeholders include Mariposa County Fire Department, Tuolumne County Fire Department, Groveland Fire Department, Tuolumne County RCD, District, Mariposa Fire Safe Council, Yosemite Foothills Fire Safe Council, Pine Mountain Lake Association, and Hetch Hetchy Water and Power.
  - iii. Currently there are three major shaded fuel break projects, three road corridor hazard reduction treatments, two direct residential area fire protection actions, two forest health and fuel reduction projects, two VMP projects, and a strategic water system support project.

## 6. Fire Prevention

### Reducing Ignition

- a. The purpose of this document is to identify how Battalion 1 educates the public in preventing unwanted fire, how to safely use fire to reduce unwanted fuels in the Wildland Urban Interface, large scale fuel reduction projects, fire road maintenance for access to unpopulated areas, and how unwanted ignitions can be reduced. As the reader examines the ignition statistics it is important to note that the majority of ignitions in the Battalion are related to debris burning, equipment use, and vehicles.
- b. The goal of the battalion is to work through the Unit's Prevention Bureau to address strategies that will reduce these unwanted ignitions. Strategies may include public education by working with local merchants who sell weed- and grass-cutting machines. This should include pamphlets located in their stores that address mowing times, conditions, and maintenance, including spark arresters, to insure a fire safe process to reduce residential fuels.
- c. Debris fires are generally a matter of carelessness on the homeowner's part. Burning permits are issued and the terms of the permit are not only stated on the permit but are reiterated when the public comes to a CAL FIRE station for a permit. Stressing the importance of common sense goes a long way, especially when several unwanted ignitions came from the dumping of fireplace and woodstove ashes. While incinerators (burn barrels) have been banned for almost a decade, there still needs to be a renewed educational process regarding the ban on incinerators.
- d. To reduce unwanted ignitions by vehicles in Battalion 1 an aggressive road corridor hazard reduction treatment needs to happen along the south side of Highway 140 from the Mariposa-Merced County line east to the Lasgoity Ranch. Cooperation from landowners to disk their property adjacent to Hwy 140, cooperation from the Mariposa County Health Department, cooperation from CAL TRANS and CHP could make this possible, thereby creating a defensible fuel break which would benefit landowners, reduce the risk of traffic accidents when a significant fire starts along this corridor, and significantly reduce vehicle caused ignitions.

## Battalion 2: Battalion Fire Management Plan

### Battalion Overview:

1. Battalion 2 stretches through the upper portion of Mariposa County with State Highway 49 and 140 intersecting in the town of Mariposa. The communities of Mariposa, Bootjack, Lushmeadows, Ponderosa Basin, Midpines, Mount Bullion and Mormon Bar are within this Battalion. The most populated areas are the communities located on the Highway 49 corridor. The areas of Mariposa, Bootjack, Lushmeadows, Midpines and Ponderosa Basin have grown in recent years with new residential construction. This rate of development created numerous areas in the Battalion that have a high potential for rapid fire spread and loss of structures.

Areas in Battalion 2 that have communities at risk include Ponderosa Basin, the Woodland area, Bootjack area, the Midpines area and the Mariposa area. The influencing factors involved housing density, timber, fire history, range, and fuel hazard ratings. Most of the Unit's large, damaging fires have originated within these areas. The fires that start in these areas immediately threaten high value/high-risk exposures. The historic ignitions are difficult to manage; therefore, the emphasis of efforts will involve fuel management activities and protection of asset exposures.



2. Goals & Objective statement:
  - a. Support the Mariposa Fire Safe Council on current and future fuel treatment projects and public outreach.
  - b. Complete current projects and identify future targets.

- c. Maintain an aggressive LE-100 program within target areas.
  - d. Support local and Unit fire prevention activities.
  - e. Accomplish the objectives
  - f. Designate personnel to provide winter time support for ongoing fuels treatment projects being conducted within the battalion.
  - g. Educate the community within the battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
  - h. Participate with local stakeholders in annual community public education events.
  - i. Provide monthly statistics to fire prevention on activities.
3. Measurement
- The methods used to accomplish our goal will consist of public education, prescribed fire projects, mechanical fuel reduction and modification, range improvement, fire road maintenance, and always an aggressive LE-100 inspection program. The fire station managers will again be the catalyst to carry forth and complete many of the programs. Fire Prevention and Pre-Fire Suppression staff will again be called upon to assist in this year's program.
4. Information & Education
- a. Both Mariposa and Usona Stations participated, along with the Unit's Prevention staff and V.I.P.s, in our Team Teaching venture at local schools and special events within the community such as the Mariposa County Fair and the Butterfly Parade.
  - b. TEAM TEACHING: Our Team Teaching was conducted alongside the Fire Prevention Specialist and V.I.P.s. Most of the Team Teaching occurred at local elementary schools and preschools. The events drew participation from the Mariposa Station, Usona Station and the United States Forest Service. The program's message focuses on kids not playing with matches, Stop drop and roll, and Stay low and Stay out.
  - c. Static display: During the Mariposa County Fair, engine crews from the Mariposa Division rotated into the Unit's prevention booth to assist with delivering the message to the public about the need for 100 feet of clearance around all structures as well as public awareness of CAL FIRE's role as an all risk department.
5. Planning, Engineering & Structure Ignitability
- LE-100 Program
- a. The LE-100 Program in Battalion Two is quite extensive due to the population density that resides in or around the town of Mariposa, along the Highway 49 South corridor toward the Madera County line, and along Highway 49 North toward the Merced River. Due to the sheer number of structures, each response area is divided into three inspection zones. Both Mariposa and Usona Stations conduct inspections within one zone each year, as depicted in the Battalion Two LE-100 Priority Area map. See attachment.
  - b. The Battalion averages 2,700 inspections, yielding an average of 4,700 structures. One address is considered a single inspection, but the inspection site could have multiple structures such as the residence, detached garages, sheds, barns and pump houses. A detailed inspection matrix is included in the LE-100 section of this report.
    - Inspections were also conducted by the U.S. Forest Service in their Direct Protection Area (DPA) of State land. Attached guidelines illustrate the inspection process for U.S. Forest Service personnel along with the Battalion Two's guidelines.

The LE-100 program continues to bring to light the need for defensible space to the public, specifically in the wake of the Telegraph Fire, where 30 dwellings and 100 outbuildings were destroyed. A common response from the public during LE-100 inspections was, "After the Telegraph fire, I need to get on this..." with respect to cleaning up their property.
  - c. Projects
    - a. There are no prescribed burns being pursued. However, fire road maintenance is progressing with the near completion of the Stumpfield/Watt Road project in the Usona response area. A summary of the fire road projects will be mentioned later in this document.
    - b. Stumpfield Road Fuel Break

- i. A 6 mile long, 300 feet wide, shaded fuel break along Stumpfield Mountain Road South of Mariposa adjacent to the Chowchilla River Drainage.
- ii. Facilitated by the Mariposa Fire Safe Council through funding from Prop 40 Community Action Grant.
- iii. Environmental Compliance review was conducted in spring 2007 and 2008.
- iv. Project was started during spring of 2008 with mastication equipment working in specific areas that were considered suitable for mechanized equipment.

- v. Private hand crews were used to identify and create buffers around endangered elderberry bushes. These crews also achieved fuel reduction in the sensitive riparian areas.



- vi. Project was temporarily stopped due to a Proposition 40 funding freeze by the State of California.
- vii. Funding Restored fall of 2009.
- viii. Project restarted October 2009 using Cal Fire CDC hand crews.

c. Watt Road Fuel Break

- i. A 1.5 mile long, 300 feet wide, shaded fuel break along Watt Road South of Mariposa and East of the Stumpfield Mountain Road fuels treatment area, adjacent to the Chowchilla River Drainage.
- ii. Facilitated by the Mariposa Fire Safe Council through funding by Prop 40 Community Action Grant. Environmental Compliance review was conducted in spring 2007 and 2008.
- iii. Project was started during spring of 2008 with mastication equipment working in specific areas that were considered suitable for mechanized equipment.
- iv. Private hand crews were used to identify and create buffers around endangered elderberry bushes. These crews also achieved fuel reduction in the sensitive riparian areas.
- v. Project was temporarily stopped due to a Proposition 40 funding freeze by the State of California.
- vi. Funding Restored fall of 2009.
- vii. Project restarted October 2009 using Cal Fire CDC hand crews.

d. Lushmeadows Fuel Break

- i. A 5 mile long, 300 feet wide, shaded fuel break starting at Clouds Rest area of the Lushmeadows Subdivision following the ridge line and ending at Tip Top Road and Highway 49. The project will protect the communities of Lushmeadows, Usona, and Ponderosa Basin.
- ii. Facilitated by the Mariposa Fire Safe Council through funding by Prop 40 Community Action Grant. Environmental Compliance review is being conducted in fall of 2009.
- iii. Project will begin during spring of 2010 with mastication equipment working in specific areas that were considered suitable for mechanized equipment.
- iv. Cal Fire CDC hand crews will be utilized to establish the 300 foot shaded fuel break in areas unsuitable for mastication equipment. These crews will establish the desired fuel reduction in the sensitive riparian areas and in steep terrain.

e. Grist Fire Road

- i. Improvement of existing fire road that runs 2.5 miles along Grist Road, south of Mariposa.
    - ii. Facilitated by local property owners working in conjunction with battalion personnel and Cal Fire Sacramento.
    - iii. Project is approximately 60% complete with additional crew days needed.
    - iv. Project work is ongoing.
  - f. Mount Ophir Fuels Reduction Project
    - i. 1300 acres near Old Toll Road and Hwy. 49 North, northwest of Mariposa.
    - ii. Fuels reduction will be accomplished through mechanized equipment and hand crew work.
    - iii. Cal Fire MMU hand crews and engine crews, under the permission of the property owner, have been utilizing this property for a training area and have contributed to the fuels being reduced within the area.
    - iv. Project work is ongoing.
  - g. Colorado Road Fuel Break
    - i. Mariposa Fire Safe Council Project
    - ii. A 300 foot wide shaded fuel break along Colorado Road between Hwy. 140 and Whitlock Road.
    - iii. Treatment types will include mechanical mastication, hand brushing and tree limbing.
    - iv. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
    - v. This project would protect residents along Colorado Road, Rancheria Creek Road, and Davis Road.
    - vi. Awaiting a funding source.
  - h. Dubberke Fuel Reduction Project
    - i. A proposed fuel break on the east side of the town of Mariposa starting at the Stockton Creek Watershed running north to Highway 140.
    - ii. Treatment types will include mechanical mastication, hand brushing and tree limbing.
    - iii. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
    - iv. In the conceptual phase at this time.
  - i. Feliciana Strategic Fuel Treatment
    - i. A proposed fuels break from U.S. Forest Service fuel break on Feliciana Mountain to Highway 140 at Bear Creek Bridge.
    - ii. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
    - iii. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning.
    - iv. The project would protect the east side of Midpines from a fire that is coming up out of the Merced River Canyon and/or Bear Creek drainage.
    - v. Property ownership is almost entirely Bureau of Land Management.
    - vi. Mariposa Fire Safe Council Project
    - vii. Contingent on funding with a Sierra Nevada Conservancy Grant (\$200,000)
  - j. Fish Camp Strategic Fuel Reduction Project
    - i. A proposed fuels reduction project to include State Responsibility Area in and around the community of Fish Camp in Mariposa County.
    - ii. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
    - iii. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning.
    - iv. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements.
    - v. In the conceptual phase at this time.
  - k. Mariposa Fuel Reduction Project
    - i. A proposed fuel break on the west side of the town of Mariposa starting at Highway 140 running north to Highway 49. (Phase 1).
    - ii. A proposed fuel break on the north side of the town of Mariposa starting at Highway 49 running east to Highway 140. (Phase 2).

- iii. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
- iv. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning.
- v. In the conceptual phase at this time.
- I. Midpines / Mt. Bullion Fuel Break
  - i. A 400-500 acre proposed shaded fuel break to follow a path of ridge tops and established fire line from Midpines to Mt. Bullion.
  - ii. Will use fire control and contingency fire lines that were utilized during the Telegraph Fire and were found to be strategically appropriate.
  - iii. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
  - iv. Fuels reduction to be accomplished through the usage of mechanized equipment, hand crews, and winter time pile burning.
  - v. In the conceptual phase at this time.
- m. Midpines Interior Strategic Fuel Reduction Project
  - i. A proposed fuels reduction project bounded by Colorado Road, Rumley Mine Road, Telegraph Road, Sherlock Road, East Whitlock Road, and Highway 140.
  - ii. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
  - iii. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning.
  - iv. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements.
  - v. Use of Fuel Hazard Reduction Emergency funding on parcels meeting requirements.
  - vi. In the conceptual phase at this time.
- n. Silver Bar Fuel Break
  - i. A 120 acre proposed shaded fuel break to follow Silver Bar Road in Mariposa County.
  - ii. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
  - iii. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning.
  - iv. In the conceptual phase at this time.
- o. Vanderau VMP
  - i. A fuels reduction project on 180 acres of a 429 acre parcel located northeast of Mariposa, adjacent to the Stockton Creek Watershed area. This area had a high dead to live fuel ratio present due to chemical treatment from property owner.
  - ii. Fuels reduction completed through mechanized equipment, crew brush clearance, and pile burning.
- p. Wood for Seniors Program established.
- q. Long VMP
  - i. A 4000 acre ranch southwest of Mariposa adjacent to the Stockton Creek Drainage.
  - ii. Several VMP burns have been conducted over the years with the last one in 2004.
- r. Stockton Creek Fuels Reduction
  - i. Several acres of brush clearing and piling along the Stockton Creek Watershed north and east of Mariposa.
  - ii. Project was facilitated by the Mariposa Resource Conservation District (RCD) for \$300,000.
  - iii. Project was completed in 2003 and is in need of maintenance.
- s. Basin VMP
  - i. A 400 acre fuels reduction project in Ponderosa Basin Subdivision south of Mariposa.
  - ii. Fuels reduction was accomplished through crew brush clearance/pile burning.
  - iii. Project was completed in 2003 and is in need of maintenance.

- t. Ponderosa Basin Strategic Fuel Treatment
  - i. A 300 foot shaded fuel break approximately 1 ¼ miles long.
  - ii. Total treatment area is 105 acres.
  - iii. The treatment will be along a strategic ridge line adjacent to the community of Ponderosa Basin.
  - iv. Fuel Break ties in with Cal Fire's Ponderosa Basin VMP and U.S Forest Service Sunny Meadows Project.
  - v. Treatment types will include mechanical mastication, hand brushing, and tree limbing.
  - vi. The Mariposa County Fire Safe Council facilitated work through a 2008 U.S. Forest Service grant of \$131,670.
  - vii. Completed 2009
- u. Guadalupe Fire Road
  - i. A shaded fuel break following Guadalupe Fire Road
  - ii. The treatment is along the strategic ridge line of Guadalupe Mountain. Needs Maintenance.

#### 6. Fire Prevention

Fire cause analysis – To reduce ignitions within the battalion we are working with the public through education programs to keep them informed on the potential causes of fire and working with our stakeholders to complete, improve, and start shaded fuel break projects. We will also continue to conduct LE-100 inspections in the communities most threatened by wildfire.

### **Battalion 4: Battalion Fire Management Plan**

#### Battalion Overview:

1. The 2011 fire season was relatively quiet in Battalion 4. Above normal rainfall levels resulted in relatively high live fuel moistures. The mild summer had the result of the fuels never having the opportunity to dry out to sustain extreme burning characteristics. In contrast, below normal winter (2011/2012) precipitation resulted in several SRA fires during the winter preparedness period. More acres were burned in the winter period than the previous fire season. The below normal precipitation compounded by the snow in lower elevations and blow down damage to the fuels from this winter and previous winter's storms created a considerable fire hazard. The March 21<sup>st</sup> 2011 snow storm damaged a significant number of trees in the Oakhurst and surrounding areas. The damage primarily affected the large oak trees that were not able to accommodate 14" of snowfall in a few, short hours. Nearly 100% of the properties in the Oakhurst Basin, and Ahwahnee community lost trees in this storm.

<http://www.youtube.com/watch?v=NdXcac94VF0>

<http://abclocal.go.com/kfsn/story?section=news/local&id=8025858>

The November 30<sup>th</sup> 2011 and December 3<sup>rd</sup> 2011 wind events resulted in a significant 'blow down' of oak and large pine trees. The wind events were more widespread than the earlier snowstorm, but it resulted in additional significant damage in the Oakhurst and Ahwahnee communities.

<http://abclocal.go.com/kfsn/story?section=news/local&id=8453138>

LE-100 inspections have showed that many properties had not cleared their downed trees. Many homeowners struggled to open up their access roads to achieve 100' clearance around their homes and structures. Due to reductions in personnel (3 person staffing), the LE-100 inspections were only able to inspect a small fraction of the residences in the Oakhurst/Ahwahnee communities. The homes which were inspected still show a large fuel loading of downed trees. Many of these trees have been on the ground since March of 2011.

#### 2. Goals & Objectives

- a. Goal Statement: The goal of the Battalion Prevention Plan is to prevent unwanted wildfire within the battalion boundaries. With dedicated and committed battalion employees,

Prevention Bureau staff, and Pre-Suppression staff, this prevention plan will be the leading document that supports our Unit Fire Plan and a model for the protection and safety of the citizens of Battalion Four and the communities it serves.

- b. Objective Statement: Communities at risk in Battalion Four include the areas of Oakhurst, Nipinnawasee, Ahwahnee, Bass Lake and Raymond. The influencing factors involved in identifying fuel reduction projects include: fire history, housing density, fuel hazard, timber values and range. Fire ignitions have traditionally, not been a problem in these areas. However, these areas are directly threatened by fires starting in the Chowchilla and Fresno River drainages. Past fires that have threatened or in one case destroyed these communities include the Harlow Fire and the Stumpfield Fire. The Harlow Fire devastated the area in 1961. The Stumpfield Fire in 1996 was almost a repeat of the Harlow Fire, but fortunately was stopped in the Chowchilla River drainage by an aggressive firefighting effort.

Additional communities at risk in Battalion four include Cedar Valley, the John West Road area, and Sugar Pine. These areas were identified as having significant asset values with medium and high fuel hazard ranks. Fire prevention efforts will emphasize structure clearance and fuel management to mitigate the wildfire hazard in the area.

### 3. Measurement

- a. Priorities for Fire Management plan will include:
  - i. Support the Eastern Madera Fire Safe Council with current and future fuel treatment projects.
  - ii. Educate the public on fire safety and hazard reduction.
  - iii. Implement an aggressive LE-100 inspection program.
  - iv. Support Unit and local fire prevention activities.
  - v. Establish a pre-suppression plan for fire in the Chowchilla and Fresno River Drainages using the MMU Structure Defense and Evacuation Plan model.

- 4. Information & Education, School Programs, Prevention Signs, Public Events, & Media Events. Battalion personnel actively participate in Information & Education, School Programs, Public and Media Events. Fire Prevention signs are in place at each facility and in high visibility locations.

### 5. Planning, Engineering & Structure Ignitability

- a. VMP – No VMPs are currently planned in Battalion Four.
- b. PRC 4209/4291
- c. Fire Roads
- d. Listed below are the fire roads and their current status for Battalion Four.
  - i. Potter Ridge Fire Rd. - Verbal agreements have been secured with surrounding landowners to allow for annual maintenance. This road was graded by CAL FIRE in the winter of 2011 and is in good condition. An FC32 for crew work has been completed for clearing overgrown sections of the road. This road parallels and is encompassed by the Potter Ridge fuel break in several areas.
  - ii. Metcalf Gap Fire Rd - This road is in need of maintenance and brush clearing. It ties into Bat 2 – Watt Rd fuel break in the Chowchilla River Canyon. An FC32 for crew work has been completed for clearing overgrown sections of the road. This is a critical road for access into the Chowchilla River Canyon.
  - iii. Shannon Fire Rd. – The Raymond Granite Quarry has purchased the majority of the Shannon Fire Rd, and they have maintained this road and the surrounding roads at a very high level. CAL FIRE locks are no longer on any of the gates, but quarry personnel are available to allow access. The shallow water crossing at the Fresno River (near Rd 400) is largely impassable to fire equipment.
  - iv. Old Dupzik Fire Rd. – This road has not been maintained in the last 15 – 20 years and the agreements with the property owners have been allowed to lapse. This road runs between Rd 600 (Leland Gulch) and Rd 415 (Wells Rd). The Old Dupzik Fire Rd is the only access to the Fresno River Drainage west of Deadwood Mountain and south of the community of Ahwahnee.
- e. Fuel Reduction
  - i. Mudge Ranch (Road 420) Fuel Break & Fresno Flats (East of Hwy 41)

1. A three mile long, 300' wide shaded fuel break south of Oakhurst.
2. Facilitated by the Eastern Madera County Fire Safe Council through funding by the United States Forest Service, (USFS).
- ii. Road 620 Phase 1 Fuel Break (Roundhouse 1 & 2)
  1. A seven mile long, 300' wide shaded fuel break northeast of Ahwahnee.
  2. Facilitated by the Eastern Madera County Fire Safe Council through funding by Prop-40 Community Action Grant, (CAG).
- iii. New Road 620 Phase 2 Fuel Break (Old Nip)

1. A three mile long, 300' wide shaded fuel break north of Ahwahnee.
2. Project starts at the intersection of Road 620 & Road 628 and ends at Worman Road and Highway 49.
3. Facilitated by the Eastern Madera County Fire Safe Council and funded by Prop-40 Community Action Grant (CAG).



- iv. Road 620 Phase 3 Fuel Break
  1. A proposed fuel break to allow for fuel breaks from Road 620 Bissett Station Rd south along the Miami Creek and Carter Creek drainages.
  2. Currently these drainages do not have accessible control points for fires coming from the Chowchilla or Fresno River drainages (Harlow Fire burn pattern).
  3. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.

- v. John West Rd (Badger Gap) Fuel Break
  1. This fuel break and fuel thinning covers the road network off of John West Rd in the Oakhurst area. The area sits in drainage above the Oakhurst basin and has a single access road that is overgrown with



vegetation.

2. Treatment types have included mechanical mastication, hand brushing and tree limbing.
3. Fuels reduction has been accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
- vi. Hwy 41 Deadwood Summit Fuel Break

1. A proposed fuels reduction project to allow for fire safe clearance along the CalTrans right-of-way north of the Deadwood summit into the town of Oakhurst.
  2. Hwy 41 in this area is an overgrown midslope road that represents the primary ingress and egress thoroughfare for eastern Madera County.
  3. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning or chipping
  4. Coordination with CalTrans as a project sponsor and traffic control will be essential.
  5. It will be necessary to limit the impact to traffic along this busy thoroughfare.
- vii. Fresno River – Oakhurst town site
1. The Fresno River in Oakhurst proper is overgrown and is a continuous fuel bed along the banks of the river.
  2. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
  3. In the conceptual phase at this time.
  4. Project sponsor is being sought for this project
- viii. Sugar Pine Strategic Fuel Reduction Project
1. A proposed fuels reduction project to include State Responsibility Area (SRA) in and around the community of Sugar Pine in Madera County.
  2. Treatment types will include mechanical mastication, hand brushing and tree limbing.
  3. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
  4. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements.
- ix. Bass Lake Interior Strategic Fuel Reduction Project
1. A proposed fuels reduction project bounded by Road 274 (Crane Valley Road) and the Bass Lake shoreline.
  2. Treatment types will include mechanical mastication, hand brushing and tree limbing.
  3. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
  4. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements.
  5. Use of Fuel Hazard Reduction Emergency funding on parcels meeting requirements.
- x. Cedar Valley Fuel Reduction Project
1. Eastern Madera County Fire Safe Council Project
  2. A 300 foot wide shaded fuel break along Cedar Valley Road.
  3. A 300 foot shaded fuel break located strategically around the community of Cedar Valley.
  4. The fuel breaks is on State Responsibility Area (SRA) and enhance existing U.S. Forest Service fuel reduction projects in the Cedar Valley area.
  5. Treatment types include mechanical mastication, hand brushing and tree limbing.
- xi. Crook's Mountain Fuel Break
1. A twelve mile long, 300' wide shaded fuel break northwest of Oakhurst, (See Figure\_).
  2. Facilitated by the Eastern Madera County Fire Safe Council through Prop-40 Community Action Grant Funds.
- xii. Massetti Range Improvement (RI) Burns
1. A series of eight (8) RI burns starting in the mid 1990s through 2007.
  2. Area southwest of the town of Oakhurst, (See Figure\_).
  3. Funded through Prop-40 California Forest Improvement Program (CFIP).
- xiii. VIP/Cooperators/Stakeholders  
Fire Safe Council

The Eastern Madera County Fire Safe Council has been very successful in securing grant dollars and following through with well

thought out, effective fuel breaks and thinning projects. A strong cooperative relationship exists with the Eastern Madera County Fire Safe Council, Firewise Community personnel, and CAL FIRE. Efforts between the groups and CAL FIRE are coordinated and mutually supportive.

#### 6. Fire Prevention

Fire cause analysis – To reduce ignitions within the battalion we are working with the public through education programs to keep them informed on the potential causes of fire and working with our stakeholders to complete, improve, and start shaded fuel break projects. We will also continue to conduct LE-100 inspections in the communities most threatened by wildfire.

### **Battalion 5: Battalion Fire Management Plan**

#### Battalion Overview:

1. Battalion 5 is located on the south side of Madera County bordering Fresno County to the south, Sierra National Forest to the east, the valley floor of Madera County to the west and Battalion 4 to the north. Battalion 5 fuel models transition from annual grasslands, oak woodland with annual grass, brush, and conifers. There are 3 lakes provide year round recreational activities - Hensley, Millerton, and Bass Lake. There are also several main travel routes through Battalion 5 -Highway 41 (south entrance to Yosemite), Road 200 and Road 400 which contributes to vehicle related wildland fires. The Chukchansi Gold Resort and Casino is located in the center of Battalion 5.

Like other battalion's in the Unit there exists a significant Wildland-Urban Interface problem within the Battalion. There are several large, well populated subdivisions that are at risk to large catastrophic fires. These areas include Coarsegold, O'Neal's, North Fork, Cascadel Woods, Bass Lake Annex, Yosemite Lakes Park, Quartz Mountain, Indian Lakes and Hidden Lakes Estates.



There are two CAL FIRE stations within the battalion. Coarsegold station staffs one engine during transition times and two engines during peak season staffing. A bulldozer is staffed year round with winter maintenance being done to all Madera Division CAL FIRE equipment. Rancheria station is staffed with one engine year round under an Amador contract with Madera County. During peak season staffing a second engine is also staffed. There is one staffed Madera County station in Indian Lakes which is the primary protection to the Chukchansi Casino. The station is staffed with 2 personnel who cross staff between a type 2 engine and a 75' Quint. There are also Madera County volunteer stations in North Fork, O'Neals, Yosemite Lakes Park, and Coarsegold which provide rescue squads, type 3, type 2 engines and water tenders.

The two main fire roads in Battalion 5 that connect State Highway 41 to Madera County Road 200 are the Waterloo Fire Road and the Quartz Mountain Fire Road. Unfortunately they have not been maintained for at least 10 years. With the development of the Indian Lakes subdivision, the Chukchansi Casino, and the Flying "O" subdivision, these fire roads have become a critical



holding point for fires that originate out of these three structurally dense areas. In 2005, the 550 acre Quartz Fire was the latest fire to threaten these communities. The need to reduce fuels on the ridge top behind Indian Lakes and the Flying "O" subdivisions are a high priority. Local land owners have taken some steps to reduce this fuel, but

a wildland fire that burns out of the Indian Lakes subdivision will need to be held to the West by State Highway 41, to the north and east by the Waterloo Fire Road, and the south by the Quartz Mountain Fire Road. The last place to stop a wild land fire before it burns to Thornberry Ridge, the Church Ranch, and Sierra Highlands subdivision, will be the Waterloo Fire Road. At that point Madera County Road 223 will be the next holding road to the east, and it has a much higher residential population. Madera County Road 420 (Thornberry Road) will be the next holding road to the north. The Eastern Madera County Fire Safe Council has received grant funding for both the Cascadel Woods Fuel Reduction and the Quartz Mountain Fuel Reduction projects. These two projects will help protect the communities of Cascadel Woods, Quartz Mountain and Indian Lakes.

2. Goals & Objective statement:

- a. Support the Eastern Madera County Fire Safe Council (EMCFSC), the Coarsegold Resource Conservation District (CRCD) with current and future fuel management projects.
- b. Facilitate fuel reduction projects that will widen and open up roads that affect ingress and egress for both the public and emergency equipment.
- c. Educate the public on fire safety and hazard reduction.
- d. Implement an aggressive LE-100 inspection program
- e. Support Unit and local fire prevention activities.

3. Measurement:

Designate personnel to provide winter-time support for ongoing fuel management projects being conducted within the Battalion.

4. Public Education

Battalion 5 will be working to educate the public through several avenues. Each station will be expected to attend community and public meeting in their areas to educate the public on fire safety and regulations. A key element of education is through the LE-100 inspection program where personnel have the opportunity to meet citizens and point out ways to improve hazard reduction on their property. Each station will work with the Unit Fire Prevention Bureau to request education materials are available at all stations of Battalion 5. This will provide for the ability of station and on duty personnel to participate in public events to promote fire education and safety. The stations will also provide the needed monthly stats to Fire Prevention for public education tracking. Battalion 5 will evaluate the location and types of fire prevention signs posted to ensure they are located in visible locations, they are rotated often enough for the public to notice, and that they are of quality for the public to easily read and understand the message being presented.

5. Planning, Engineering & Structure Ignitability

a. Heavy Forestry Equipment Operations Training

The VMP Coordinator gets into contact with landowners who control strategically significant land and coordinates a mutually beneficial brush removal. The land placed under contact is primarily owned by cattle ranchers desiring to convert their brush covered lands to grazing lands. To enhance the effectiveness of this project CAL FIRE burns the resulting piles and the ranchers seed the treated land each fall. This provides a mutual benefit to the ranchers, in the form of additional/improved grazing land, and the Department, in the form of trained and tested operators. A collateral benefit to CAL FIRE is significant fuels reduction within the training areas which are located primarily in Madera County.

b. Cascadel Woods Fuel Reduction / Shaded Fuel Break

This is an Eastern Madera County Fire Safe Council Project. Phase 1 – Reduce fuel loading on 160 acres located strategically around the community of Cascadel Woods. Phase 2 – Install and maintain a 300 foot shaded fuel break on Cascadel Road (Madera County Road 233) from the Mammoth Pool Road (Madera County Road 225) to the community of Cascadel Woods. This fuel break will be on State Responsibility Area



(SRA) and enhance existing United States Forest Service fuel reduction projects in the Cascadel Woods area. Fuel treatments will include mechanical mastication, hand brushing and tree limbing. Fuel reduction will be accomplished through mechanized equipment, hand crews, and winter time pile burning. Environmental Compliance review was conducted in the fall of 2009.

c. Quartz Mountain Fuel Break

A nine mile long, 300 foot wide shaded fuel break below Pacific, Gas and Electric (PG&E) high voltage power lines was completed in 2010. The project has increased the previous 90 foot wide fuel break to a 300 foot wide fuel break. Project starts west of the Indian Lakes Subdivision and ends at State Highway 41 and the Deadwood Fuel Break. This project was facilitated by the Eastern Madera County Fire Safe Council and funded by a Prop 40 Community Action Grant.

d. Waterloo Fire Road

The Waterloo Fire Road (Veater Ranch Road) is paved from State Highway 41 to the Veater Ranch. Once you pass the Veater Ranch, the road changes to Arena Way and runs across the top of the ridge on the east side of the Indian Lakes Subdivision. The Waterloo Fire Road takes off of Arena Way and goes into the north fork of Fine Gold Creek before going midslope on the north side. It crosses the north fork of Fine Gold Creek again on the south end of the Veater Ranch. Fuel treatments can include hand brushing and tree limbing. Agreements need to be updated with current property owners to ensure access to CAL FIRE resources.

e. CAL FIRE Fire Road 20 and CAL FIRE Fire Road 21 (AKA Fish Creek Fire Road)

f. CAL FIRE Fire Road 20 and CAL FIRE Fire Road 21 (AKA Fish Creek Fire Road)

Were established to contain a fire that comes out of the San Joaquin River drainage and threatens the town of North Fork, the residents of Leisure Acres, and the many homes that sit on the south side of Madera County Road 200. Historically these two fire roads ran through large ranches and were maintained annually. Today these fire roads have either grown over, been abandoned, or are on smaller parcels that belong to several different landowners. Work needs to be done to obtain landowner support for the projects. Fuel reduction will be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning. CAL FIRE engine crews, hand crews, and dozers (where applicable) will be utilized to reduce fuels along the fire road. This project will require funding for gates, culverts, and gravel. CAL FIRE dozer, backhoe, dump trucks, and graders will be utilized to repair and maintain the fire roads. Environmental Compliance review will be conducted in the winter of 2012/2013.

## **Battalion 16: Battalion Fire Management Plan**

### **Battalion Overview:**

1. Battalion Overview:

Communities within Battalion 16 include the communities of McSwain, Beachwood, Franklin, Castle AFB, Winton, Cressey, and Snelling. The area around the City of Atwater is within Battalion 16 and includes the McSwain area and Castle AFB. The Beachwood/Franklin area makes up the east side of Battalion 16 near the city of Merced. Battalion 16 also incorporates SRA (State Responsibility Area) within its boundaries near the community of Snelling and on the eastside of Snelling Highway. The areas surrounding the communities of Snelling and Merced Falls have the highest fire risk within the Battalion and have a history of significant wildland fires with structures being lost.

Battalion 16 is unique in that it has five fire stations and three major programs within its jurisdiction. Fire stations are located in the towns of Winton, Cressey, Snelling, Castle AFB area, and Atwater. Castle Station, located at the old Castle Air Force Base, houses two important county programs - the Airport Rescue Fire Fighting (ARFF) program and the Hazardous Materials Team. The third major program is the Fire Equipment Repair Facility located at Castle Park.



2. Goals & Objective statement:
  - a. Support Unit and local fire prevention activities.
  - b. Aggressively pursue 100% compliance on LE-100 inspections within Battalion 16 SRA areas and pursue annual weed abatement compliance within LRA.
  - c. Strategically place Fire Prevention signs throughout Battalion 16 to educate the public on fire safety.
  - d. Support the area with current and future fuel treatment projects.
  - e. Improve access to all SRA areas within Battalion 16 to include the Snelling Highway, La Paloma Road, La Grange Road, Robinson Road, the Merced River and Merced Falls Road.
  - f. Network with property owners, Merced Irrigation District (MID), and Pacific Gas & Electric (PG&E) to establish and maintain these fuel breaks

3. Measurement:
  - a. Educate the community within the Battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
  - b. Participate with local stakeholders in annual meetings and community public education events.
  - c. Provide monthly statistics to fire prevention on activities.

4. Information & Education

Station tours are conducted regularly during Fire Prevention Week with local schools to discuss fire prevention. “No campfire” signs are posted along the Merced River fishing access points. Currently a roadside fire prevention sign is being built to install on the corner of Merced Falls Road and Hornitos Road to educate the public about fire safety.



5. Planning, Engineering & Structure Ignitability

- a. Snelling Highway (G Grade) Rangelands Fuel Break
 

The Snelling Highway Fuel Break is a twenty foot fuel break that parallels both sides of the Snelling Highway from the intersection of Snelling Highway and La Paloma Road to Robinson Road near the community of Snelling. The fuel break protects grasslands on both sides of the highway from fires caused by vehicle traffic. The fuel break helps keep roadside vegetation fires small, giving fire personnel time to reach the scene and extinguish the fire. The firebreak protects SRA lands to the east and LRA lands to the west. Completion of the fuel break will require Battalion 16 personnel to network with property owners to establish and maintain it.

b. Projects

i. Merced River Fuel Break

The Proposed Merced River Fuel Break is a thirty foot fuel break that follows the Merced River from Highway 59 passing over the Snelling Highway and ending at Hornitos Road in Mariposa County. The fuel break protects SRA grasslands from problematic fires that routinely occur in the Snelling rock tailings. The fuel break helps keep a large rangeland fire from entering the heavy fuels of the Merced River. The firebreak protects the community of Snelling and SRA lands to the south of the Merced River. Completion of

these fuel breaks will require Battalion 16 personnel to network with property owners to establish and maintain these fuel breaks.

- ii. Snelling/Rock Tailings Fuel Breaks  
The Proposed Snelling/Rock Tailings Fuel Breaks is a series of thirty foot fuel breaks that dissect the Merced River rock tailings area on the north side



start routinely along the Merced River by hikers or fishermen. The area accessing the Merced River. The fuel breaks help keep a large rangeland fire from entering the heavy fuels of the Merced River. The firebreak protects the community of Snelling and SRA lands to the south of the Merced River. Completion of these fuel breaks will require Battalion 16 personnel to network with property owners to establish and maintain these fuel breaks.

#### 6. Fire Prevention

Conduct annual weed abatement inspections in the LRA. Merced County Roads Dept. sprays/mows the weeds on the roadside shoulders on Snelling Road, Hwy 59, Merced Falls Road, and La Grange Road to prevent roadside starts.

### **Battalion 17: Battalion Fire Management Plan**

#### Battalion Overview:

1. Battalion 17 is located on the west side of the Madera-Mariposa-Merced Unit. Battalion 17's fire problem areas are located along the Interstate 5 and Highway 152 corridors. The priority areas that we have been dealing with are the Highway 152 corridor between Basalt Road and Dinosaur Point Road. This section of Highway produces numerous starts annually from mechanical issues related to vehicles. We have addressed this issue through the Department of Fish and Game by putting in a fire break on the north side of the highway which has substantially reduced our larger scale incidents. The second priority area is Interstate 5 between Arburua Road and Nees Avenue. As with our Highway 152 area, our main ignition source is mechanical issues with vehicles. We have addressed this issue with the local property owner who now puts in his own fire break along the west side of the highway which has been instrumental in holding most fires to 10 acres or less. Our fuels in the area are mostly grass and oak woodland with a small component of brush up near the Dinosaur Point area. The topography in the area is mostly rolling foothills with steeper terrain up near the peak areas near the Merced/San



Benito/Santa Clara County lines. Weather for the area within the battalion predominantly sees temperatures ranging from 90-105 degrees with strong northwest winds in the afternoon. Our fire history shows that we have most of our significant fires in the months of May, June, and July. In

the months following, the potential is still high, but we tend to get much more of a marine influence coming in which raises our humidity level.

Battalion 17 personnel regularly conduct inspections and requests land use agreements from the large acreage owners in the area. Through these efforts Battalion 17 has established fire breaks which are maintained on a regular basis.

Our LE-100 program is completed in a timely manner each year and the relationship with the local cooperators is strong.



The past year brought limited fire activity to the area. However, five fires were held by fire breaks and extinguished by responding units before they could spread to the wildland.

The Battalion personnel conduct regular visits to local schools and community events to promote fire prevention to the public.

2. Goals & Objective statement:

Communities at risk in Battalion 17 include the areas of Santa Nella and San Luis Hills. The influencing factors involved in identifying fuel reduction projects include: fire history, housing density, fuel hazard, and range value. Fire ignitions have traditionally been an issue near roadways and campgrounds in the area and fast moving grass fires have threatened these communities, or their interests in the past.

Additional communities at risk in Battalion 17 include Dos Palos, Dos Palos "Y", Gustine, Los Banos, and Volta. These areas were identified as having moderate to significant asset values with light to medium fuel hazards. Fire prevention efforts will emphasize structure clearance and fuel management to mitigate the wildfire hazard in the area.

- a. Support the area with current and future fuel treatment projects.
- b. Educate the public on fire safety and hazard reduction.
- c. Implement an aggressive LE-100 inspection program.
- d. Support Unit and local fire prevention activities.

3. Measurement:

- a. Agreements have been made with local landowners and cooperating agencies to establish and maintain fire breaks along the I-5 and Hwy 152 corridors.
- b. The LE-100 program covers 100% of the known structures in the battalion.
- c. Battalion personnel logged over 100 hours of time spent on prevention-related activities.

4. Information & Education

Battalion 17 stations participate in numerous community events to promote fire prevention and awareness. Some of these programs are:

- a. Los Banos fair
- b. Gustine city's fiesta
- c. Lowe's Career Day
- d. Fireworks displays
- e. Christmas parades
- f. Pancake breakfasts and tri-tip dinners

5. Planning, Engineering & Structure Ignitability

- a. Projects
- b. I-5 Corridor Fuel Break
  1. A thirty two mile long, 15' wide, disked fuel break on the west side of I-5
  2. Facilitated and paid for by landowners to protect range land
  3. Fuels reduction to be accomplished through the use of mechanized equipment
- c. 152 Corridor Fuel Break
  1. A ten mile long, 15' wide, disked fuel break on the north and south sides of Highway 152 from San Luis Creek to Dinosaur Point Road
  2. Facilitated by State Parks

3. Fuels reduction to be accomplished through the use of mechanized equipment
- d. San Luis Creek Fuel Break
  1. A four mile long, 15' wide, disked fuel break from the north side of Highway 152 at the Romero's Visitor Center to the north access to San Luis Creek Recreational area
  2. Facilitated by State Parks
  3. Fuels reduction to be accomplished through the use of mechanized equipment
- e. San Luis Hills Fuel Break
  1. A one and one half mile long, 15' wide, disked fuel break from the south side of Highway 152, around the San Luis Hills subdivision, to San Luis Drive
  2. Facilitated and paid for by landowners to protect range land
  3. Fuels reduction to be accomplished through the use of mechanized equipment
- f. Langdon Canyon Fire Road
  1. A seventeen mile long fire road from Arburua Road to Paul Negra Road
  2. Facilitated by CAL FIRE Fire roads to be maintained through the use of mechanized equipment
- g. Laguna Seca Fire Road
  1. A seven mile long fire road from I-5 to Langdon Canyon Road
  2. Facilitated by CAL FIRE
  3. Fire roads to be maintained through the use of mechanized equipment
- h. Billy Wright Fire Road
  1. A fourteen and one half mile long fire road from Jasper Sears Road to Burch Haven
  2. Facilitated by CAL FIRE
  3. Fire roads to be maintained through the use of mechanized equipment
- i. Sweeny Fire Road
  1. A thirteen and one half mile long fire road from Billy Wright Road to Arburua Road
  2. Facilitated by CAL FIRE
  3. Fire roads to be maintained through the use of mechanized equipment
- j. VIP/ Co-op/Stakeholders
 

Annual meetings are held with all of the known agencies in the area to promote and foster good working relationships and collaboration within the battalion. Stakeholders within the Battalion:

  - a. Department of Fish and Game
  - b. Department of Fish and Wildlife
  - c. California Highway Patrol
  - d. Caltrans
  - e. Bureau of Land Management
  - f. Local Property Owners
- k. Plans are being discussed to set up Auto Aid agreements with agencies both within and outside of the battalion.
  1. Newman City Fire Department
  2. West Stanislaus Consolidated Fire Protection District
  3. South Santa Clara County Fire Protection District
- l. Current Auto Aid Agreements
 

Fresno County Fire Department



## 6. Fire Prevention

To reduce ignitions with the battalion we are aggressively working with the public through education programs to educate them on the potential causes of fires and working diligently with our stakeholders to reduce fuels along roadsides. We are also working on placing road signs along the Highway 152 and Interstate 5 corridors to raise awareness of the fire danger.

### **Battalion 18: Battalion Fire Management Plan**

#### Battalion Overview:

1. The Merced Battalion is located in the Merced area of Merced County. The eastern portion of Battalion 18 borders the Mariposa County line, with the southern portion of the battalion bordering the Madera County line. The State Responsibility Area (SRA) Portions of the Battalion are on the eastern portion. Fuel type is mainly annual grass and the topography is mainly rolling foothills.

The weather pattern in Battalion 18 during the summer months typically is hot and dry, with high temperatures ranging from 90s to 100s on a regular basis, with monsoonal moisture occasionally causing dry lightning a couple times throughout the summer.

Fire history in Battalion 18 is varied. Many of the fires have been started by lightning. Because this area is mainly used for cattle ranching the occasional fire is typically started by equipment. With rural roads in the area we have had fires start near roadways.



Assets at risk in Battalion 18 consist of mainly cattle ranches. The communities of LeGrand and Planada are located just to the west of the SRA boundaries and could be impacted.

Communities at risk in Battalion 18 include the areas of McKee, Planada, and Le Grand. The influencing factors involved in identifying fuel reduction projects include: fire history, housing density, fuel hazard, and range value. Fire ignitions have traditionally been an issue near roadways and throughout watershed areas due to lightning activity in the area. Fast moving grass fires have also threatened these communities, or their interests in the past.

Additional communities at risk in Battalion 18 include north Merced, east Merced, and El Nido. These areas were identified as having moderate to significant asset values with light to medium fuel hazards. Fire prevention efforts will emphasize structure clearance and fuel management to mitigate the wildfire hazard in the area.

2. Goals & Objectives

- a. Support the area with current and future fuel treatment projects.
  - b. Educate the public on fire safety and hazard reduction.
  - c. Implement an aggressive LE-100 inspection program.
  - d. Support Unit and local fire prevention activities.
  - e. Accomplishing the Objectives
    - i. Educate the community within the battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
    - ii. Participate with local stakeholders in annual meetings and community public education events.
    - iii. Provide monthly statistics to fire prevention on activities.
3. Measurement:
- a. The LE-100 program covers 100% of the known structures in the battalion.
  - b. Battalion personnel logged over 100 hours of time spent on prevention-related activities.
4. Information & Education:
- Battalion 18 stations participate in numerous community events to promote fire prevention and awareness. Some of these programs are:
- a. Merced County Fair
  - b. School presentations K-3 grades
5. Planning, Engineering, & Structure Ignitability
- a. Projects
    - i. State Highway 140 Fuel Break
      - 1. A twenty foot fuel break on both sides of State Highway 140 from Cunningham Road to the Merced / Mariposa county line
      - 2. Facilitated and paid for by landowners to protect range land
      - 3. Fuels reduction to be accomplished through the use of mechanized equipment
    - ii. Cunningham Road Fuel Break
      - 1. A twenty foot fuel break on the east side of Cunningham Road from South East Bear Creek to Mariposa Creek
      - 2. Facilitated and paid for by stakeholders to protect range land
      - 3. Fuel reduction to be accomplished through the use of mechanized equipment
      - 4. This is the separation between LRA and SRA along the Cunningham Road corridor
    - iii. White Rock Road Fuel Break
      - 1. A twenty foot fuel break along White Rock Road from Merced / Mariposa county line to Santa Fe Road, on the south and east side of the road
      - 2. Facilitated and paid for by stakeholders to protect range land
      - 3. Fuels reduction to be accomplished through the use of mechanized equipment
      - 4. This is as directed – some parcels are in agricultural crop production along the White Rock corridor.
  - b. Stakeholders in the area include:
    - i. Flying M Ranch
    - ii. Hewlett Packard
    - iii. Cunningham Ranch
    - iv. Merced County Parks and Recreation (Lake Yosemite)
      - 1. Annual meetings are held with all of the known agencies in the area to promote and foster good working relationships and collaboration within the Battalion.
      - 2. Plans are being discussed to set up Auto Aid agreements with agencies both within and outside of the battalion.
6. Fire Prevention:
- a. Conduct LE-100 inspections in the SRA to make sure all residents are in compliance with PRC-4291

- b. Work with Merced County Prevention to ensure that all residents are following the county weed abatement standards.



**APPENDIX A: HIGH PRIORITY PRE FIRE PROJECTS**

Batt	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
15		Cascadel Woods	A	15		
14		Cedar Valley	C	14		
14		Road 620	A	14		
14		Nipinnawasee	A	14		
15		John West Rd	A	15		
14		Sugar Pine	P	14		
15		North Fork	A	15		
14		Oakhurst	P	14		
14		Bass Lake Annex	A	14		
14		Bass Lake	A	14		
14		Sky Acres	P	14		
14		Marina View	P	14		
14		Bass Lake Heights	P	14		
15		Yosemite Lakes Park	P	15		
15		Quartz Mtn	P	15		
14		Sierra Lakes	P	14		
14		Ahwahnee	A	14		
14		Beasore Mead	P	14		
14		Teaford Meadows	P	14		
12		Stumpfield Road Fuel Break	A	12		
12		Watt Road Fuel Break	A	12		
12		Lushmeadows Fuel Break	A	12		

Status Guide: A = Active, P = Planning, C = Completed, O = Ongoing, M = Maintenance.



**APPENDIX C: PRIORITY GOALS AND OBJECTIVES FOR 2010-2012**

CAL FIRE Units were asked to identify two or more priority objectives under each goal in the 2010 Strategic Fire Plan for California. The Units' priorities are identified in bold and a measurement criteria are provided for each of the identified objectives. Throughout the next year, the Units will implement the identified priorities and report on the measurement criteria by June 2012. The priority objectives are displayed under three headings:

- A. SACRAMENTO PROGRAMS OR COMMITTEE ONLY
  
- B. SACRAMENTO PROGRAMS AND STAFF OR COMMITTEE, REGIONS AND UNITS
  
- C. UNITS ONLY

These categories are not intended to exclude Units from addressing priority objectives in any of the three categories, they are only recommendations.

**A. SACRAMENTO PROGRAMS OR COMMITTEE ONLY**

Goal 1: Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.

Objectives:

- a) Identify and provide appropriate automated tools to facilitate the collection, analysis and consistent presentation of datasets.

Measurement Criteria: CAL FIRE shall establish policy that specifies spatial databases covering all forest and rangeland to not be older than 10 years. Include minimum requirements for spatial databases. Follow the coordinated work schedule with the USDA Forest Service to maintain cost effective collection and processing of data.

Goal 2: Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

Objectives:

- a) Identify the minimum key elements necessary to achieve a fire safe community, and incorporate these elements into land use planning, CWPPs and regional, county and Unit fire plans.

Measurement Criteria: CAL FIRE to create a working committee with CAL Chiefs, USDA Forest Service and other key organizations to develop, monitor and refine elements of fire safe community, including evacuation plans. The Committee shall review existing templates for FIREWISE Assessments, CWPPs, fire plans and land use plans; identify the common elements and approaches for better integration. Utilize fire protection, planning and engineering expertise to identify the key elements (from existing templates) necessary for fire safe communities. Once agreed upon, these key elements will then be used as a checklist to guide consistency in fire safe planning efforts across jurisdictions. At a minimum, annually report to the Board on results.

Goal 3: Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, county and regional plans that address fire protection and landowner objectives.

Objectives:

- a) Establish a working group, consisting of Board members and Departmental staff, to develop minimum standard elements for inclusion in Unit fire plans.
- b) Emphasize coordination of Unit fire plans with community wildfire protection plans to encourage and support one consistent approach. Develop county or regional fire plans by bringing together community-based groups, such as fire safe councils and affected fire and land management agencies.

Measurement Criteria: These measurement criteria meets objectives a and b. CAL FIRE to revise the template for the Unit fire plans to incorporate the goals and objectives of the 2010 Strategic Fire Plan. During the revision, the template for a CWPP will be jointly reviewed in order to reduce duplication of fire planning efforts. The key elements identified through the process identified in Goal 2, Objective b will also be incorporated into the Unit fire plan/CWPP.

- c) Create and support venues in which individual community members can be actively involved in local fire safe councils, community emergency response teams, FIREWISE and other community-based efforts to develop readiness plans and educate landowners to mitigate the risks and effects of wildland fire.

Measurement Criteria: The California Fire Alliance to work with the California and local FSCs to develop venues (e.g., workshops) that assist landowners with readiness planning and education. CAL FIRE, California Fire Alliance Liaison to report to the Board annually on Alliance activities.

Goal 4: Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards.

Objectives:

- a) Educate landowners, residents and business owners about the risks and their incumbent responsibilities of living in the wildlands, including applicable regulations, prevention measures and preplanning activities.

Measurement Criteria: In coordination with the CAL FIRE Communications Program, the USDA Forest Service and local fire agencies, University of California and county cooperative extension offices, CAL FIRE to collect information on methods and effectiveness of existing outreach. Complete the information collection within year one of adoption of the 2010 Strategic Fire Plan. Develop a common set of measures to assess CAL FIRE efforts, build those into Unit fire plans and report to the Board. Report the progress of implementation at the end of year two.

Goal 5: Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas.

Objectives:

- a) Work to remove regulatory barriers that limit hazardous fuels reduction activities.

Measurement Criteria: In conjunction with the Resource Protection Committee, CAL FIRE will develop an approach to identifying and recommending ways to address regulatory and other barriers that limit hazardous fuels reduction activities. This approach should include consultation with the Board's Interagency Forestry Working Group and with other agencies, such as the USDA Forest Service, the US Fish and Wildlife Service, the California Energy Commission, the Department of Fish and Game, regional water quality control boards, local government and the public. Finish this compilation within the first year of adoption of the 2010 Strategic Fire Plan. Based on barriers identified and recommendations for change, report to the Board starting in the second year.

Goal 6: Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.

Objectives:

- a) Initiate and maintain cooperative fire protection agreements with local, state and federal partners that value the importance of an integrated, cooperative, regional fire protection system and deliver efficient and cost effective emergency response capabilities beneficial to all stakeholders.

Measurement Criteria: CAL FIRE to identify the number and effectiveness of agreements and partnerships. In conjunction with the Board's Resource Protection Committee, CAL FIRE will develop suggested measures of effectiveness of cooperative agreements. This should be in collaboration with its partners, completed within 18 months of adoption of the 2010 Strategic Fire Plan and reported to the Board.

- a) Provide for succession planning and employee development at all levels within CAL FIRE to maintain emergency response leadership capabilities, administrative management skills and pre-fire planning expertise.

Measurement Criteria: CAL FIRE to revise and update the information developed in the 2005 Succession Planning meetings. This work should be completed within two years of the adoption of the 2010 Strategic Fire Plan, with annual reporting to the Board based on issues raised, including identification of key training needs, funding available and expenditures on the training program, content of Academy curricula, number of students requesting and/or able to take classes at the Academy, local community college or other educational outlets.

## **B. SACRAMENTO PROGRAMS AND STAFF OR COMMITTEE, REGIONS AND UNITS**

Goal 1: Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.

Objectives:

- a) Engage and participate with local stakeholder groups (i.e., fire safe councils and others) to validate and prioritize the assets at risk.

Measurement Criteria: CAL FIRE shall designate personnel as advisors/liaisons to the California Fire Safe Council (CFSC) and to each county or regional FSC. The advisors will be responsible for reporting activities to the Unit and Region. The advisor to the CFSC will report to the Board. Annual reporting of time-spent working will be displayed in hours at the Unit, Region and Headquarters level. Reporting will include activities with local FSCs, communities, watershed groups or others defining hazards and risk of wildfire and documenting these in a CWPP or Unit fire plan. Emphasize the products developed in Goal 3, Objective b. Advisors will emphasize using standard guidelines and templates for consistency throughout the state.

Goal 2: Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

Objectives:

- a) Assist the appropriate governmental bodies in the development of a comprehensive set of wildland and wildland urban interface (WUI) protection policies for inclusion in each county general plan or other appropriate local land use planning documents.

Measurement Criteria: CAL FIRE to appoint a committee including Unit, Region, Headquarters and Contract County representatives. Develop a work plan that identifies key elements of improving WUI strategies, including planning. Reporting should be based on elements identified and priorities for addressing them.

Under the Board's Resource Protection Committee, review existing Board policies as they relate to wildland fire and the relevance (ease of use, applicability) to incorporation in local general plans. Identify areas of possible improvement and update policies.

Track and report hours at the Unit, Region and Headquarters level spent in reviewing plans and projects; number of local Board/Council, Planning Commission meetings and/or meetings with other cooperators.

Goal 3: Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards.

Objectives:

- a) Increase the number and effectiveness of defensible space inspections and promote an increasing level of compliance with defensible space laws and regulations through the use of CAL FIRE staffing as available, public and private organizations, and alternative inspection methods.

Measurement Criteria: CAL FIRE to form an advisory committee to review PRC §4291 regulations and make recommendations to the Board that will provide for consistency, streamlining and clarification of existing regulations. The Committee shall develop criteria to increase the number and effectiveness of defensible space inspections. The Committee will develop an implementation plan for the recommendations and report on progress to the Board

Goal 4: Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

Objectives:

- a) Encourage rapid post-fire assessment, as appropriate, and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

Measurement Criteria: Provide training for CAL FIRE personnel on suppression repair and damage assessment procedures. Develop standard formats and documentation templates for these assessments. Identify and use the findings to reduce the impacts of fire suppression on the landscape and improve resiliency of assets at risk from wildfire.

### **C. UNITS ONLY**

Goal 1: Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas.

Objectives:

- a) Support the availability and utilization of CAL FIRE hand crews and other CAL FIRE resources, as well as public and private sector resources, for fuels management activities, including ongoing maintenance.

Measurement Criteria: CAL FIRE will report to the Board on the number of crews available each year with a description of projects, including acres treated, completed by each Unit. Report the number of agreements and/or amount of funding and acres treated that involve grants or partnerships with federal agencies, resource conservation districts, local FSCs, fire districts, watershed groups or other non-profit or community groups that support the ability to carry out fuels reduction projects.

Goal 2: Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

Objectives:

- a) Assist landowners and local government in the evaluation of the need to retain and utilize features (e.g., roads, firelines, water sources) developed during a fire suppression effort, taking into consideration those identified in previous planning efforts.

Measurement Criteria: CAL FIRE (utilizing Incident Management Teams) to schedule a post-fire review of the planning documents that cover the area affected by the fire. Review the goals, objectives and projects (implemented and planned) to identify successes and failures. Review the features developed during the fire and incorporate them into the existing Unit fire plan documents. This objective will only be reported when a fire occurs in an area with an existing Unit fire plan document. Incident Management Teams may conduct this post fire assessment under the direction of the Unit Chief.

### **D. ADDITIONAL UNIT SPECIFIC GOALS AND OBJECTIVES**



**MARIPOSA COUNTY SHERIFF**

*In Cooperation With:*



**CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION**

**WILDLAND FIRE PRE-EVACUATION PREPAREDNESS**

Long before fire threatens your home and family you should have a home "pre-evacuation" plan. The information listed below will help you and your loved ones be ready to evacuate from the threat of fire.

When preparing a home evacuation plan you should include all family members, as you may not be home when the threat of fire occurs. Include your children and other key family members to increase the success of your pre-planning. Start off by sitting down with the family and comprising a list your most important items to be taken in case you are asked to evacuate:

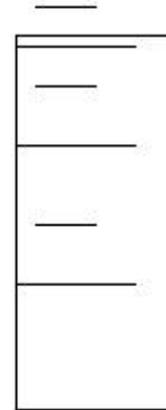
1. Medications
2. Eyeglasses
3. Important Documents (centrally located)
  - A. Social Security Cards
  - B. Drivers licenses
  - C. Marriage License
  - D. Birth Certificates
  - E. Insurance Policies
  - F. Credit Cards
  - G. Deeds to Property/Home
4. Valuable Jewelry/Cash (always keep a little cash on hand)
5. Home Videos/Photographs
6. Sentimental items, wedding dress, baby keepsakes etc...
7. Pets, have a plan to remove early if large animals and keep enough room in your vehicle for transporting smaller animals. Don't forget your list should identify carrying pet food and pet I.D. tags.

Remember to keep your pre-evacuation list handy and remind your family members of its location. It is your personal list; include anything of importance that you can remove in a short period of time. Keep some sturdy boxes on hand so items can be quickly collected.

**EMERGENCY SUPPLY KIT:**



We cannot help you,  
if we cannot find you!



3"

**At least 3-inch reflective address numbers against a contrasting background is what emergency service personnel require. Post your address number at the end of your driveway, and at any fork in the driveway. Make sure the address is clearly visible from 100-feet in both directions of travel from the roadway. The sign should be installed approximately 4-feet in height off the ground, and no higher than 6-feet.**

Help us help you!

**Signs may be purchased at:**  
True Value Hardware  
Coast Hardware  
S.C.O.P.E.

209.966.2692  
209.966.2527  
800.774-8314



## ***DID YOU KNOW...?***

That the average well water storage tank holds the same amount of water as 5 Fire Engines?



***With the right connections YOUR Well Water Storage Tank can become another source of water for a Fire Engine. This can be important due to the great distances between Fire Stations. By contacting your local Well System Company for installation of the correct connections, an Engine Crew can hook Fire Hose to your Water Storage Tank and pull water to assist in putting out a fire, either on your property or on your neighbor's!***

**A general estimated cost, depending on your tank needs, is between \$200-\$500 Something important to think about doing.**

**Thank you!**

## The Fire History of Our Community

### ***The Role of Fire and the Ecosystem***

To understand the threat of wildfire to our communities, we must first understand wildfire itself and the role it plays in our ecosystem. In ecological terms, wildfire is far from the devastating demon of common perception, ravaging the forest and its inhabitants. Only since the intrusion of present civilization and its altering of the natural cycle have wildfire's undesirable characteristics surfaced.

Fire, as a result of lightning and geological activity, is a natural occurrence in our ecosystem. Charcoal deposits, found in Sierra lakebed sediment samples, indicate that fire has long been an important component of the Sierra Nevada environment, predating the current vegetation types now associated with our landscape. The greatest charcoal concentrations found at one local site appear during the warm period following the end of the Pleistocene period about 10,000 years ago.<sup>i</sup> This same interval is the one in which the Sierra's vegetation types at the middle and lower elevations evolved from the subalpine species of that period to the mixed conifer forests of today. From that point on, charcoal continues to be routinely present in sediment core samples.

The Sierra's fire history of the last several thousand years can be traced through existing vegetation. Growth ring samples taken from the giant sequoias show the period between natural fires, referred to as fire return intervals (FRI), were never longer than 30 years for a period of more than two thousand years. Only during the last 100 years has this pattern been broken and fire excluded from the growth process in many of the groves.<sup>ii</sup> The frequency of fire indicated by these tree ring scars appears to be a product of both the sample's elevation and variations of temperature and moisture. Low precipitation years and lower elevation yielded the highest fire occurrence.

Only two studies are available that reflect fire frequency in the blue oak-gray pine woodlands of the lower elevations. Scott Mensing of the University of California, Berkeley after studying fire scars on blue oaks in the Tehachapi Mountains, found an average FRI of 9.6 to 13.6 years.<sup>iii</sup> In the foothills east of Marysville, McClaren and Bartolome found FRIs from 8 to 49 years for the years prior to 1848.<sup>iv</sup> The reason for this relatively long interval in the latter study is unexplained, especially in light of studies conducted on the nearby black oak-ponderosa pine forests, which generally have a FRI of two to three years<sup>v</sup>. Perhaps the light fuel (grass) coupled with low fire intensities was insufficient to leave detectable scars on the study samples.

The fire return intervals of chaparral, such as the chamise found in the Merced River Canyon of northern Mariposa County, appear to be highly dependent on individual circumstance. Elevation, drought, and slope aspect are among the factors influencing the frequency of fire in this vegetation type. The primary component to determine fire return intervals in chamise, however, seems to be fuel dynamics. This relates to the amount of total fuel available in a stand, the product of the stand's age (dead to live component) and environment. Generally FRIs have been estimated to be from twenty to a hundred years. Large, severe fires tend to occur in brush stands over thirty years old. The longest fire return intervals, 50 to 100 years, occurred in chaparral stands at elevations above 4000 feet.<sup>vi</sup>

<b>Vegetation Type</b>	<b>Pre-1860 FRI</b>	<b>20th Century FRI</b>
<b>Foothill Hardwood and Grassland</b>	<b>10</b>	<b>78</b>
<b>Ponderosa Pine</b>	<b>4</b>	<b>192</b>
<b>Foothill Chaparral</b>	<b>30</b>	<b>0</b>

### **The Historic Use of Fire**

It is now generally recognized that Native Californians considerably influenced the fire frequency of California's mountains, especially in the foothills. Native Americans inhabited the Sierra Nevada for at least the last 9,000 years.<sup>vii</sup> By the 1600s, the drainages of the Chowchilla, Fresno, and Merced Rivers had a combined population of 22,500 natives representing at least three tribes. These Indians utilized fire

to open up lands for hunting and to promote the regrowth of plants used in various facets of daily life. An October 1774 entry in the diary of Captain Fernando Rivera y Moncada confirms this: “[The Indians] are wont to cause these fires because they have the bad habit, once having harvested their seeds, and not having animals to look after except their stomachs, they set fire to the brush so that new weeds may grow to produce more seeds, and also catch rabbits that get confused and overcome by smoke”.<sup>viii</sup> The first fire prevention law in what was to become California was a result of this burning. Issued by Governor Jose Joaquin de Arrillaga in 1793, it read in part:

“With attention to the widespread damage which results from the burning of fields, customary up to now among Christian and Gentile Indians in this country, whose childishness has been duly tolerated, and as a consequence of various complaints that I have had of such abuse, I see myself required to have the foresight to prohibit burning for the future (availing myself, if it is necessary, of the rigors of the law) all kinds of burning, not only in the vicinity of the towns but even in the most remote and distances, which might cause some detriment, whether it be by Christian Indians or by Gentiles who have some relationship or communication with our missions”<sup>viii</sup>.

It is doubtful that this edict had much of an impact on the natives of the Sierra Nevada foothills. Locally, a Culture Element Distribution Survey conducted in 1936 by the University of California found that all three of the tribes (Chuckchansi, Mono and Southern Miwok) in the Madera and Mariposa County foothills used fire as a tool for hunting and improving crops of native plants.<sup>ix</sup> Jack Rhoan, a local Native American (Chuckchansi and Southern Miwok) recalled in a 1948 interview that when he was a boy in the 1870s, the Indians throughout the region (eastern Madera and Mariposa counties) set fire to the brush after the seeds had been gathered (approximately July). “The men started the fires and the women watched to see that it did not approach the homes. When it did, it was beaten out. It burned the hills, all over, clean through to the next one.” The trees, which were green did not ignite easily, however “dead trees and logs were all cleaned up that way.”<sup>x</sup>

Despite the apparent widespread use of fire by the Indians, any references to problems with uncontrolled fires are conspicuously absent. In researching the volumes of information available on the native people of California, no mention of fire being considered a threat was found. From this, one can only deduce that while wildfires did occur with relative frequency, they were not of an intensity to cause the widespread destruction we now associate with them.

The Euro-American settlement in the 1850s began an alteration of the long established wildfire occurrence cycle. The influx of miners as a result of the gold rush brought an increase in fire ignitions. J. Goldborough Bruff, an early miner in California, reported in an October 1849 diary entry that the “woods [are] alight with many crackling fires” and “Fallen pines afire near us, we passed numerous fires of this kind, and the hills are light with them. Prospectors and Indians caused them”.<sup>xi</sup> This account is substantiated by scars in the growth rings of the Blue Oaks near Fort Tejon in Kern County, which indicate that fire frequency there peaked in the 1850s.<sup>iii</sup>

The vegetation of California’s mountains was changed in other ways as well. The miners also had an insatiable demand for wood. Heating and cooking fires, buildings, mine timbers, and fuel for steam engines all relied on the local vegetation as a wood supply. East of Coulterville, the Red Cloud Mine alone was using 4 ½ cords of wood per day in 1888 to power its stamp mill.<sup>xii</sup> With dozens of similar mines operating in Mariposa and Madera counties, the changes in the natural vegetation must have been dramatic. Little regard was given to the residual material left after cutting, and this accumulation of limbwood and other unusable material lent itself to more severe wildfire intensity.<sup>xiii</sup> Interestingly, contemporary newspaper accounts give only passing mention to these uncontrolled fires, usually incidental to smoke conditions or the occasional loss of an isolated structure.<sup>xiv</sup> Wildfires seem to have been an accepted and common nuisance during this period, with attention only given to them when they threatened a community or other resource.

### **The Shift to Fire Suppression**

Sheep and cattle grazing after the 1870s also became a major factor influencing fire frequency and intensity. While it is well documented that literally millions of sheep grazed in the upper Sierra meadows from the 1860s to 1900, little information is available regarding impacts on the lower, foothill environments. These areas, considered desirable as rangeland, were often fenced and used for cattle grazing. Menning’s study of blue oak tree rings in the Tehachapi Mountains found a period of 60 years, from the 1860s to the 1920s with no fire scars.<sup>iii</sup> This period coincided with the introduction of grazing in the area. It is likely that the establishment of these herds at the lower elevations placed a value on forage, which in turn led to the first local attempts at fire suppression. The grazing also removed dry grasses that allowed the spread of fire.

The first state laws concerning wildfire prevention were written in 1872. They made the burning of state or federal land (excluding private land) a misdemeanor punishable by a fine of \$1000 or a year in jail, or both. The new laws also deemed that “every person who willfully or negligently sets on fire, or causes or procures to be set on fire any woods, prairies, grasses, or grain on any lands is guilty of a misdemeanor.”<sup>viii</sup> Conspicuously, this latter law, which applied to private lands, contained no punishment for the offense. Both laws predated the establishment of National Forests and the majority of unowned land in California was in state government’s hands. It was not until the 1905 passage of the Forest Protection Act that burning of private lands during the summer season became truly prohibited. On the federal level, the end of 1800s saw the establishment of “Forest Reserves” which eventually evolved into our present national forest system. Laws to protect these lands from fires were first written in 1897 and amended in 1900. True fire protection on the forests however, began just after the turn of the century with the appointment of Fire Guards to patrol the reserves for fires and fire hazards.<sup>viii</sup> In the event of a fire, private citizens, most often loggers and ranchers, would be pressed into service to extinguish the blaze.

The California Forest Protection Act of March 18, 1905 created a similar protection system for lands outside of the federal reserves. This law allowed the appointment of a State Forester and the creation of *fire districts* encompassing from one to four counties. Each district was to have its own volunteer fire warden appointed by the State Forester. Counties desiring additional protection could fund paid fire wardens. The fire warden was charged with preventing and suppressing all fires in the “woods, brush, prairies, grass, grain, or stubble” lands of the state.<sup>viii</sup> To carry out this task the warden was given all the powers of a peace officer to arrest perpetrators. As with their federal counterparts, they had the right to impress citizens into fire suppression work. In fact, many of the federal fire guards were enlisted as county wardens as well, thus gaining them law enforcement power not provided by federal policy.<sup>viii</sup>

Why the shift to fire exclusion after so many centuries of naturally occurring fire? The primary reason was the increased value of standing timber now that a market for lumber was available. It was perceived that fire scarred mature trees and destroyed seedling and young growth.<sup>xiii</sup> A certain amount of truth existed in this belief. By 1900 the residue from earlier logging operations was creating hotter, more destructive fires than the earlier, natural fires. Any regrowth of timber occurring in these harvested areas was likely to be destroyed and scarring of mature trees probably occurred as well. In the lower foothill region, grasslands were becoming increasingly valuable for cattle grazing. In fact a loosely organized group of citizens, The Stockmen’s Protective Association was organized in 1904 to “promote the stock and range interest of its members, especially for protection against fire.”<sup>viii</sup> This group funded the first state operated lookout station on Mount Oso, west of Patterson in Stanislaus County. That same year, 1904, 800,000 acres of California burned in wildfires adding further impetus to the perceived need for fire protection.

There was, however, local dissension regarding burning restrictions. This came from both ranchers who burned their summer pastures in the forest to prevent the encroachment of brush and timber upon the meadows, and from timbermen, who burned logging slash to eliminate hazards and allow new timber growth. The State Forester’s office was not to be swayed however. In his 1912 Biennial Report, Forester G.M. Holmes readily dismissed “light burning”. “The forest floor, so necessary for the retention of water is destroyed; seedlings and small trees are killed and the ground is unsuited for the germination of seeds. The cost is prohibitive. It would cost about \$9,000,000 to burn over our forest area once. Such a practice should be prohibited law.”<sup>viii</sup>

The exclusion of fire from California’s wildland continued, at least on paper, until 1945. Despite the best efforts of the fire wardens and fire guards, uncontrolled fires continued to occur. The Sierra National Forest has maintained a map of these fires since 1908 (Figure 1). Though few of the fires occurring in the lower foothills were mapped, one can get an idea of the scope of the burning that took place. Though it appears fires were widespread, the fire return interval for the region had increased considerably from the eight to nine year intervals, common prior to Euro-American civilization.

### **Government Involvement with Burning**

Throughout the 1930s and early 1940s the California Division of Forestry had been heavily lobbied by the cattle industry to conduct range improvement burns for the purpose of converting brush lands into grazing forage. When these lobbying efforts failed ranchers often took it upon themselves to burn outside of the law. To appease the situation, several tests on the effectiveness of brush burning as a land clearing tool were conducted at various locations in California. One of these areas was located in eastern Madera County near Ahwahnee. Burning, chemicals, and goats as brush removal agents were all tested. Based on the results of these experiments, the restrictions on large scale controlled burning were gradually

loosened. By 1950 range improvement burning was common in the foothills of both Madera and Mariposa counties.

The formal Range Improvement Program was carried out by the cooperative groups of ranchers organized into "Brush Burning" associations. These associations, which met regularly, planned out burns months ahead of time. Through cooperative efforts, control lines were constructed, crews were assembled and logistical needs met. A local rancher was appointed "fire boss" and coordinated the operation. The association to ensure its safety reviewed each proposed burn. The local CAL FIRE representative would also participate in this review, and when everything was in order, a permit was issued. The local ranchers completed nearly all the work with CAL FIRE's involvement generally limited to providing standby crews in case of an escape.

Burns were done each summer throughout the 1950s and 60s. Individual burns ranged from 40 acres to over 12,000 acres. Altogether, over 137,000 acres in Madera county and 224,000 acres in Mariposa county were burned under the Range Improvement Program (Figure 6). No records are available for burns occurring on the west side of Merced county. Increasing threat of liability coupled with more stringent air pollution control laws eventually led to the programs demise. The last local burn was conducted in 1975 on Schaubach Ranch near Highway 41 and County Road 406. To circumvent the legal problems that terminated the Range Improvement program, CAL FIRE developed the Chaparral Management Program in the 1970s. This program, which became the present day Vegetation Management Program (VMP) placed the responsibility on CAL FIRE to prepare environmental review of each burn, assume liability, and perform most of the work associated for the burn. This program has been responsible for burning 17,970 acres in Madera and Mariposa counties (Figure 8). Since the 1930s, fire suppression capabilities have been increasing as well. Effectiveness of these efforts was limited during the first few decades of the century. The Great Depression however, created an available pool of labor, which was soon harnessed for the task of fighting wildfires. Work camps were established locally by CAL FIRE at Coarsegold, Grub Gulch, Mariposa and Coulterville. Civilian Conservation Corp (CCC) camps under the auspices of the U.S. Forest Service were also strategically located throughout the Sierra National Forest. These crews provided the areas first professional organized forces. While World War II brought about the demise of the public work crews, it saw, under the auspice of Civil Defense, the creation of a year round, professional wildland fire fighting force of a sufficient size to accomplish the task. This organization has continued to evolve into our present day wildland fire agencies. We have eliminated wildfire, as the pre Euro-American ecosystem knew it. The placement of our assets in its path, and the values we have tied to resources, such as timber and aesthetics, have made it too great a risk to live with. Ironically, its exclusion has only served to increase the risk to the values we are trying to protect. Like a dam without an outlet, the flammable vegetation in our environment continues to build up. Eventually a point will be reached at which the intensity of a wildfire will be beyond the ability of our suppression resources to handle. When this dam breaks the loss of assets and resources is inevitable.

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<sup>1</sup> Mensing, S.A. 1990. Blue Oak Regeneration in the Tehachapi Mountains. *Fremontia* 18:3:38-41

<sup>1</sup> McClaran, M. P. and J.W. Bartolome. 1989. Fire Related Recruitment in Stagnant *Quercus douglasii* Populations, *Canadian Journal of Forest Research* 19:580-85

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<sup>1</sup> Kilgore, Bruce M. 1987. The Role of Fire in Wilderness: A State of Knowledge Review. *Proceedings-National Wilderness Research Conference: Issues, State-of-Knowledge, Future Directions* U.S. Forest Service General Technical Report INT-220

<sup>1</sup> Anderson, Kat M. and Michael J. Moratto 1996. Status of the Sierra Nevada. Vol II. Davis. University of California

<sup>1</sup> Clar, Raymond C. 1959. California Government and Forestry. Sacramento. Department of Natural Resources, State of California

<sup>1</sup> B.W. Aginsky, 1943. Anthropological records 8:4: 395, 403, Berkeley. University of California Press

<sup>1</sup> Gayton, A.H. 1948. Anthropological records 10:2. :176 Berkeley. University of California Press

<sup>1</sup> Read, Georgia W. and Gaines, Ruth. 1949 The Journals, Drawings and Other Papers of J. Goldsbrough Bruff. New York. Columbia University Press

<sup>1</sup> State of California 1889 Report of the State Mineralogist, Vol. 8: 346 Sacramento. State of California

<sup>1</sup> Skinner, Carl N. and Chi-Ru Chang. 1996 Status of the Sierra Nevada. Vol II. Davis. University of California

<sup>1</sup> Mariposa Gazette, 1860-1880. Various articles. Mariposa

### **Madera Mariposa-Merced Unit Major Fires**

Undoubtedly the most disastrous wildfire to strike the Madera and Mariposa Counties was the Harlow Fire of July 1961. The Harlow burned 43,329 acres in Madera and Mariposa counties, destroyed 104 structures, and claimed two lives. What was truly remarkable about this fire was how fast it spread. In two hours it burned 20,000 acres making it one of the fastest burning fires ever recorded in the United States.

Perhaps the largest, modern fire event in Mariposa County occurred in mid-July 1939. That year an unusually heavy grass crop had dried and then been subjected to a late spring rain. This had caused the dried grass to partially decompose, creating a fuel that “carried fire as if it were gasoline” according to one witness. In a ten day period 5 major fires burned through the county. One fire started on Bear Creek west of Bear Valley and burned over Mt. Bullion before being stopped on Whitlock Road. North of Catheys Valley, on Guadalupe Mountain, another fire swept southwest from Catheys Valley through the Bridgeport district to White Rock Road. In Bootjack yet another fire burned out the area surrounded by Triangle Road on the north and east, Highway 49 on the south, and Highway 140 on the west. Simultaneously, a fire in the Merced River Canyon burned 8,000 acres. All told, in those ten days, nearly 100,000 acres of Mariposa County burned.

Madera County was by no means spared from similar conflagrations. In 1906 a fire started on the Fresno River near the present intersection of Yosemite Springs Parkway and Road 400 and burned to the San Joaquin River near North Fork. A similar fire in 1916 started and burned from the present Hensley Lake to the San Joaquin River south of North Fork.

The conditions that created havoc in Mariposa County in 1939 were also shared with Madera County. A fire started by a construction blast near Picayune south of Coarsegold burned westward to the San Joaquin River, while another fire, the Point Source Fire, started northeast of North Fork near Chawanakee and burned to Kaiser Pass. This latter fire destroyed an estimated 61 million board feet of timber on over 20,000 acres of land.

When these fires occurred, our mountains had fewer residents or suppression resources. Since then, firefighting capabilities have increased tremendously but so have the number of homes in the wildland. Any of the aforementioned fires, or even a portion of one, would quite easily today claim the infamous title of our communities’ most destructive fire.

### **Fire Season 2008**

The fire season of 2008 proved to be one of MMU’s most active and destructive. The year started off with the lightning event that passed through California on June 21, 2008. The fires that ensued stretched the state’s resources beyond critical levels. Many fires were left burning around the state because of a lack of firefighting resources. MMU was able to control all the fires within two days except one called the Oliver Fire. The Oliver Fire broke out in Sierra National Forest and threatened the community of Ponderosa

Basin. After a team was activated and a Unified Command was in place the fire was brought under control at 2789 acres.

The largest fire of the year, and most destructive in recent unit history, was the Telegraph Fire. The Telegraph Fire started July 25, 2008, at approximately 1510 hours near the banks of the Merced River, two miles west of Telegraph Hill in Mariposa County. The fire was started in such a remote, inaccessible area that fire crews were unable to gain access to the fire. Burning in steep, rugged terrain in a remote part of the county, the fire consumed over 18,000 acres in the first day and a half alone. The Telegraph Fire was a 50-year fire event for Mariposa County. Not since the early 1960s were so many acres burned in such a short period of time. In addition to the topography, other significant environmental factors that influenced the extreme intensity and spread of this fire were low humidity, heavy fuel loads and historically low live and dead fuel moistures resulting from 2 consecutive years of record drought. One week later, the fire was contained at 34,091 acres. It was started by individual's target shooting along the Merced River at the end of Mosher Road. The final cost of the Telegraph is still being determined, but the number was between 35 and 40 million dollars.

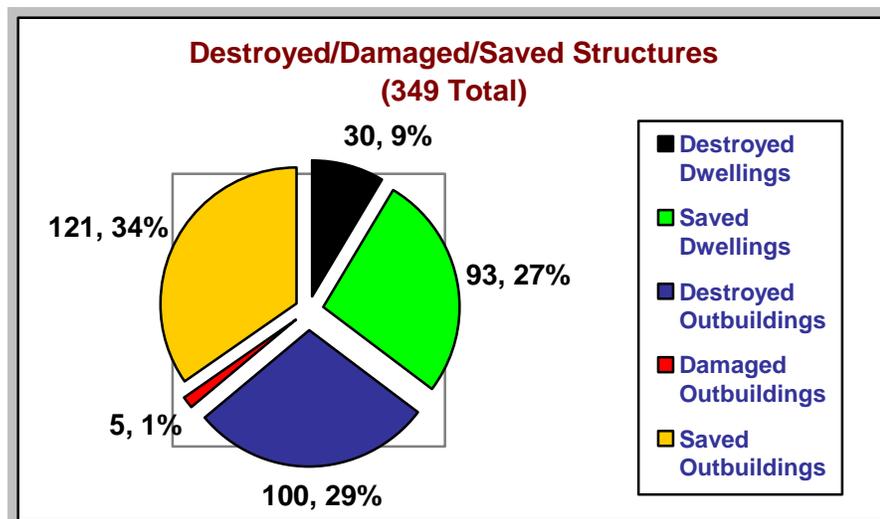
### TELEGRAPH DAMAGE ASSESSMENT

Within the fire perimeter, 105 sites were located, inspected and documented for damage, structure construction type, defensible space, and driveway access. The Telegraph Fire directly threatened over 349 structures. Of these, 130 were destroyed, 5 received partial damage, and 214 were not damaged. (See figure below for number of structure types destroyed.)

DWELLING CONSTRUCTION (SIDING MATERIALS)					
	Wood (W)	Metal (Me)	Masonry (Ma)	Other (O)	Unknown (U)
DESTROYED (30)	17 (57%)	2 (7%)	6 (20%)	1 (3%)	4 (13%)
SAVED (93)	79 (85%)	6 (6%)	6 (6%)	2 (2%)	0

The data shows that within the area inspected 40% of dwellings (a total of 49) exposed to the fire had appropriate defensible space as required by PRC 4291. Defensible space was lacking on all but 1 of the 30 dwellings destroyed in the fire.

The remainder of the data presents property type and construction materials information in a tabular format, from which the reader can make comparisons.



PROPERTY TYPE	DESTROYED	DAMAGED	SAVED
Dwellings (123)	30 (24%)	0	93 (76%)
Outbuildings (226)	100 (44%)	5 (2%)	121 (54%)
Vehicles (68)	60 (88%)	8 (12%)	N/A

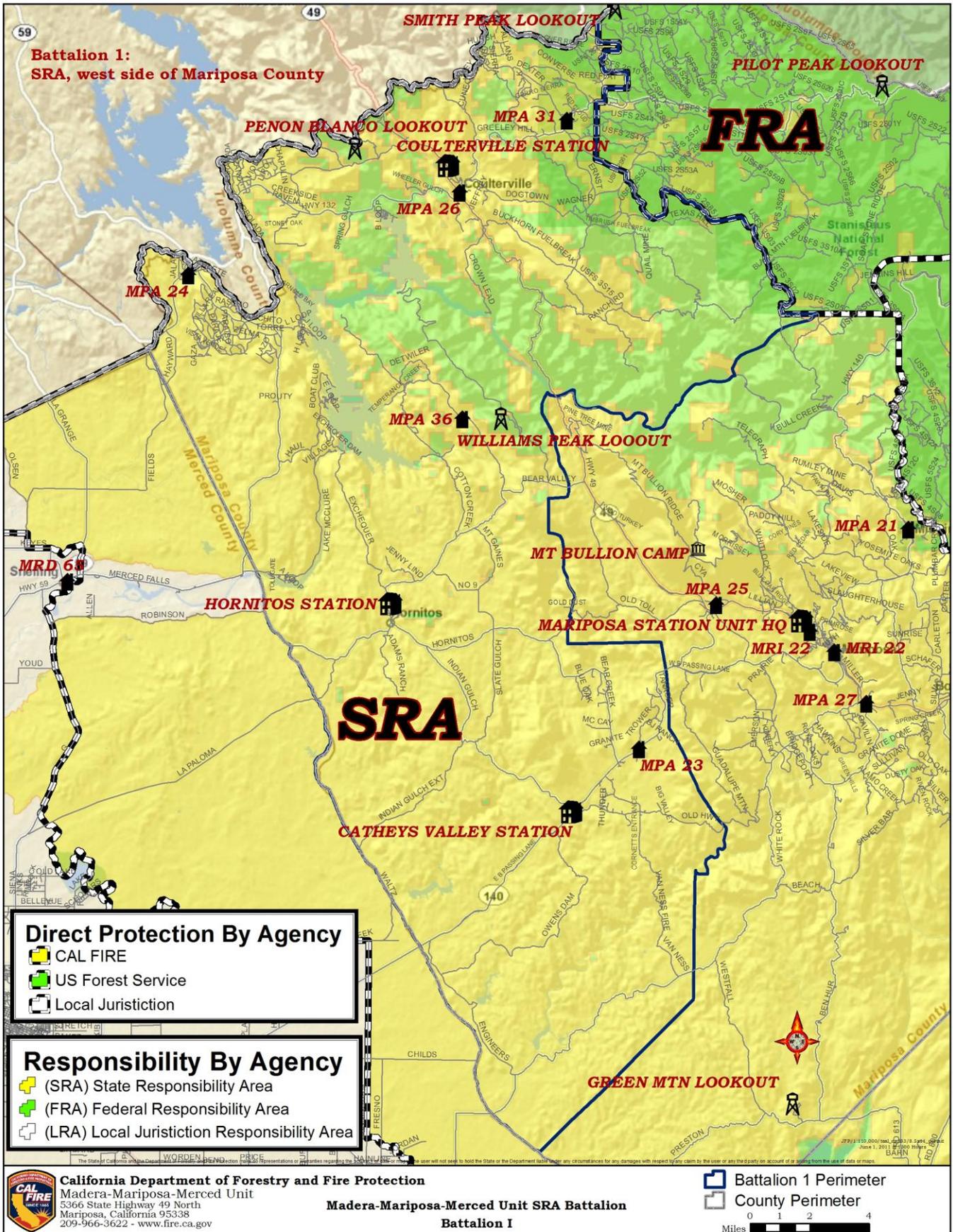
DWELLING CONSTRUCTION (ROOFING MATERIALS)						
	Composition (C)	Metal (Me)	Wood (W)	Masonry (Ma)	Other (O)	Unknown (U)
DESTROYED (30)	16 (53%)	6 (20%)	0	2 (7%)	0	6 (20%)
SAVED (93)	60 (65%)	28 (30%)	1 (1%)	3 (3%)	0	1 (1%)

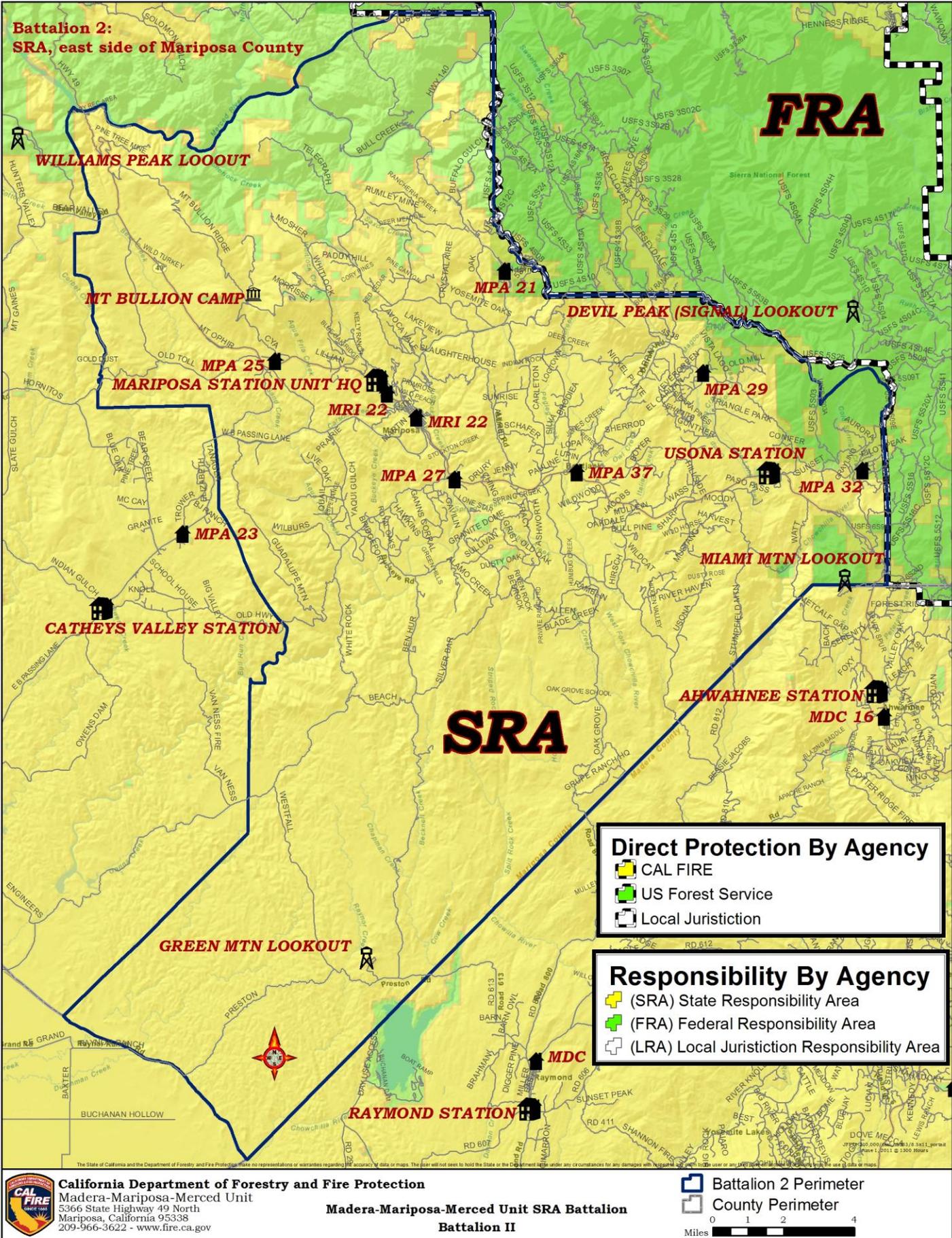
Figure A: Unit Map

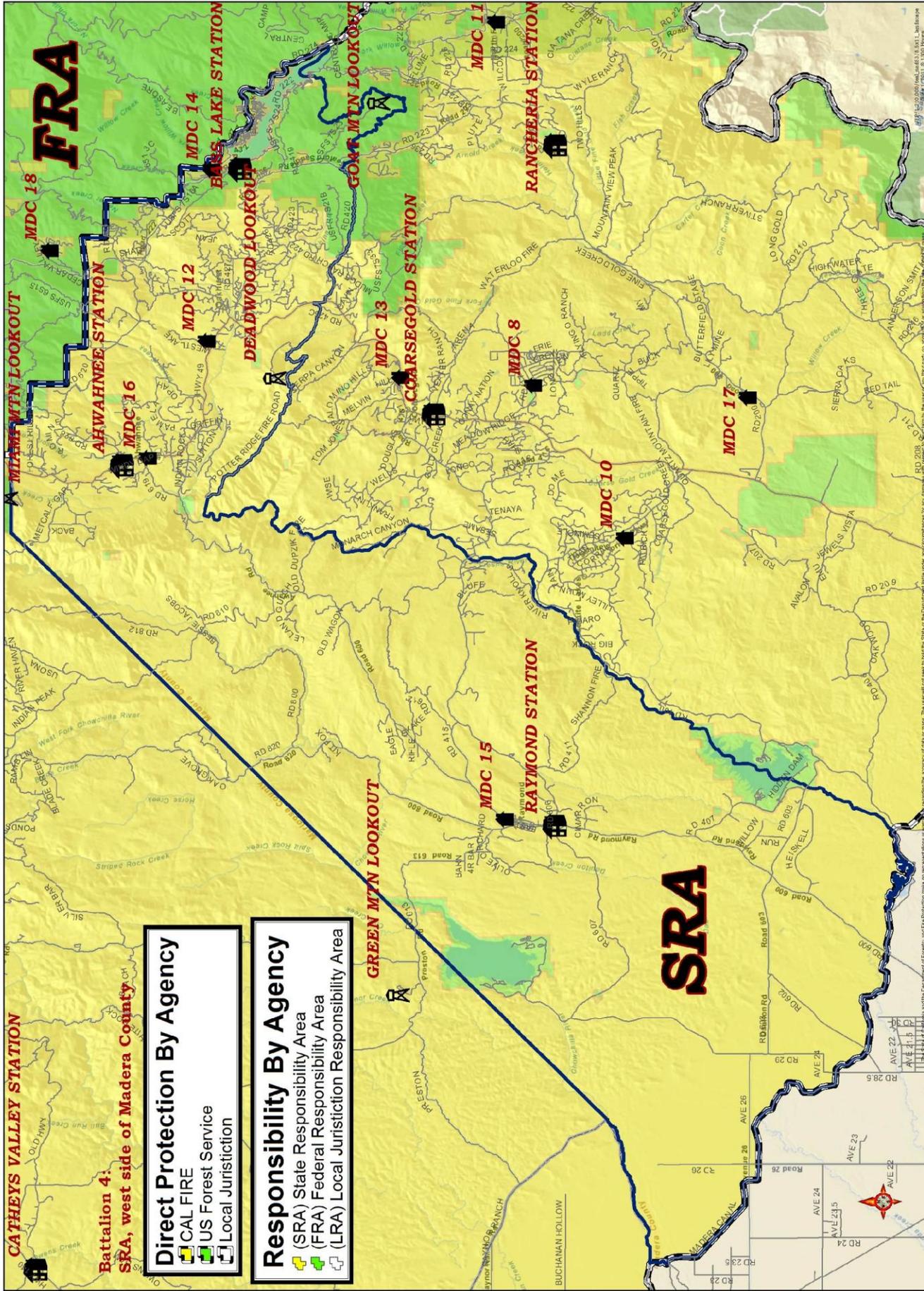




Figure B: Battalion Maps







**Battalion 4:**  
SRA, west side of Madera County

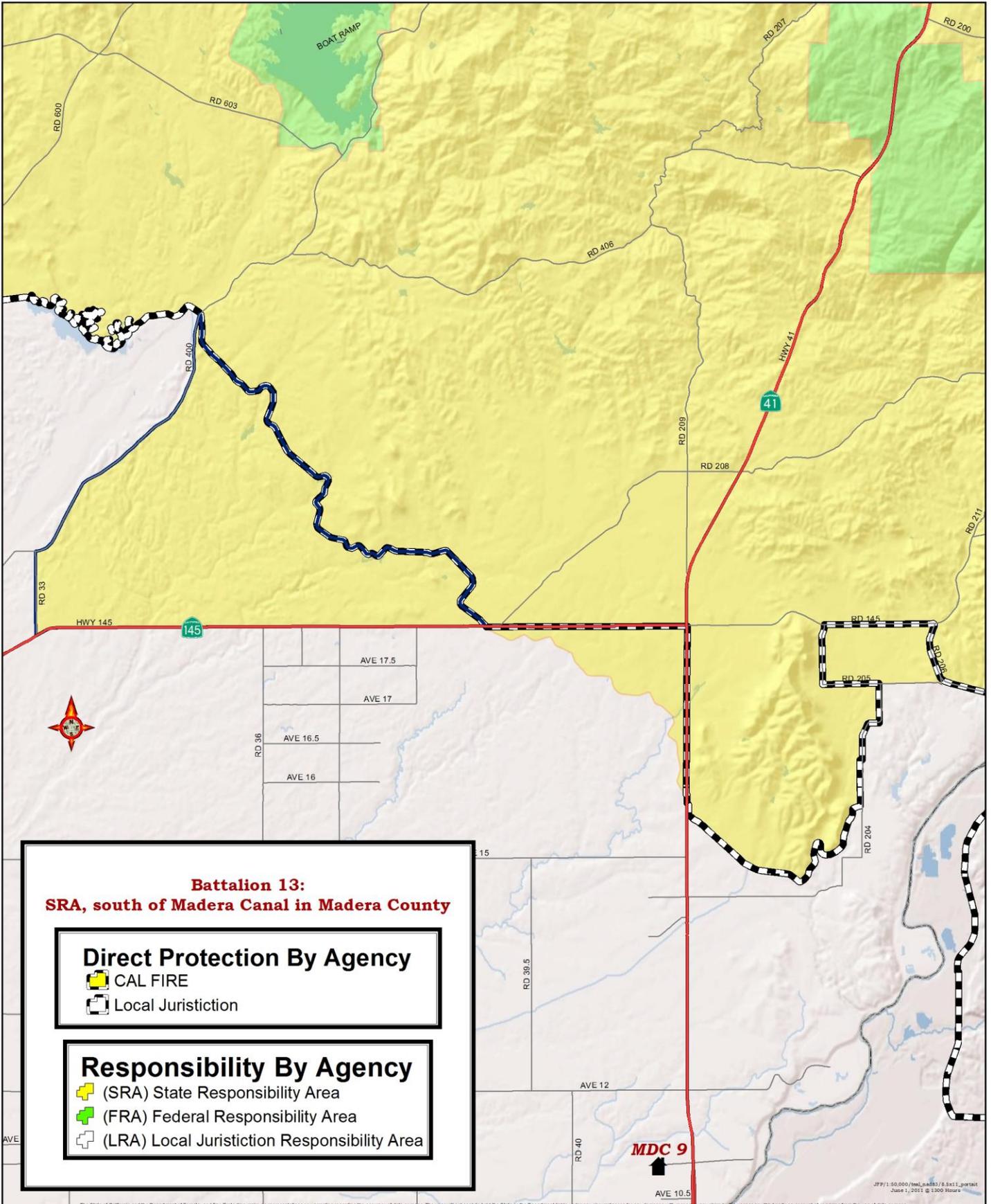
**California Department of Forestry and Fire Protection**  
**Madera-Mariposa-Merced Unit**  
 5366 State Highway 99 North  
 Madera, CA 93694  
 209-939-3022 - www.fire.ca.gov

**Madera-Mariposa-Merced Unit SRA Battalion**  
**Battalion IV**

**Battalion 4 Perimeter**  
**County Perimeter**

0 1 2 Miles





**Battalion 13:**  
**SRA, south of Madera Canal in Madera County**

**Direct Protection By Agency**

- CAL FIRE
- Local Jurisdiction

**Responsibility By Agency**

- (SRA) State Responsibility Area
- (FRA) Federal Responsibility Area
- (LRA) Local Jurisdiction Responsibility Area

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. The user will not seek to hold the State or the Department liable under any circumstances for any damages with respect to any claim by the user or any third party on account of or arising from the use of data or maps.

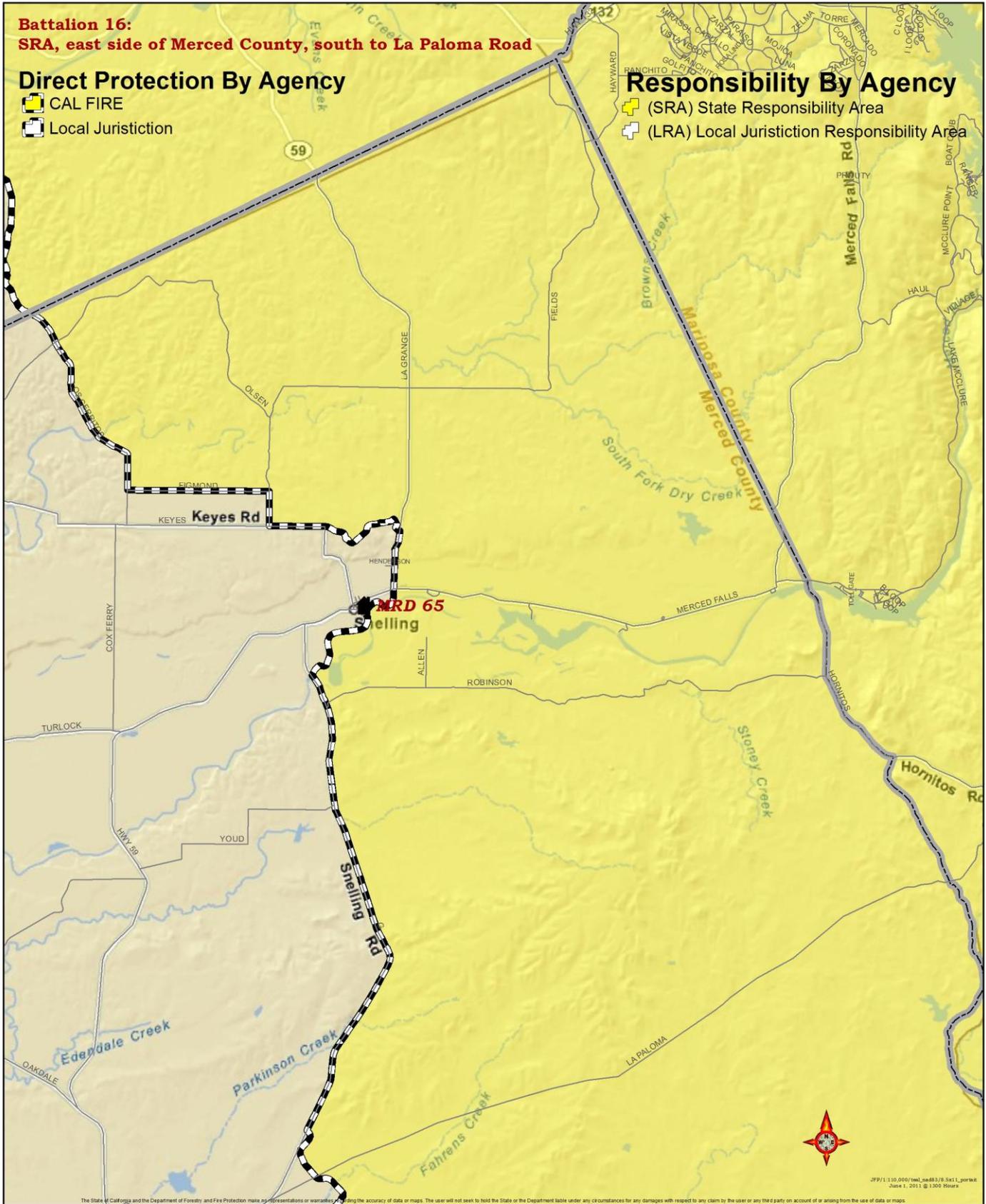
**Battalion 16:**  
**SRA, east side of Merced County, south to La Paloma Road**

**Direct Protection By Agency**

-  CAL FIRE
-  Local Jurisdiction

**Responsibility By Agency**

-  (SRA) State Responsibility Area
-  (LRA) Local Jurisdiction Responsibility Area



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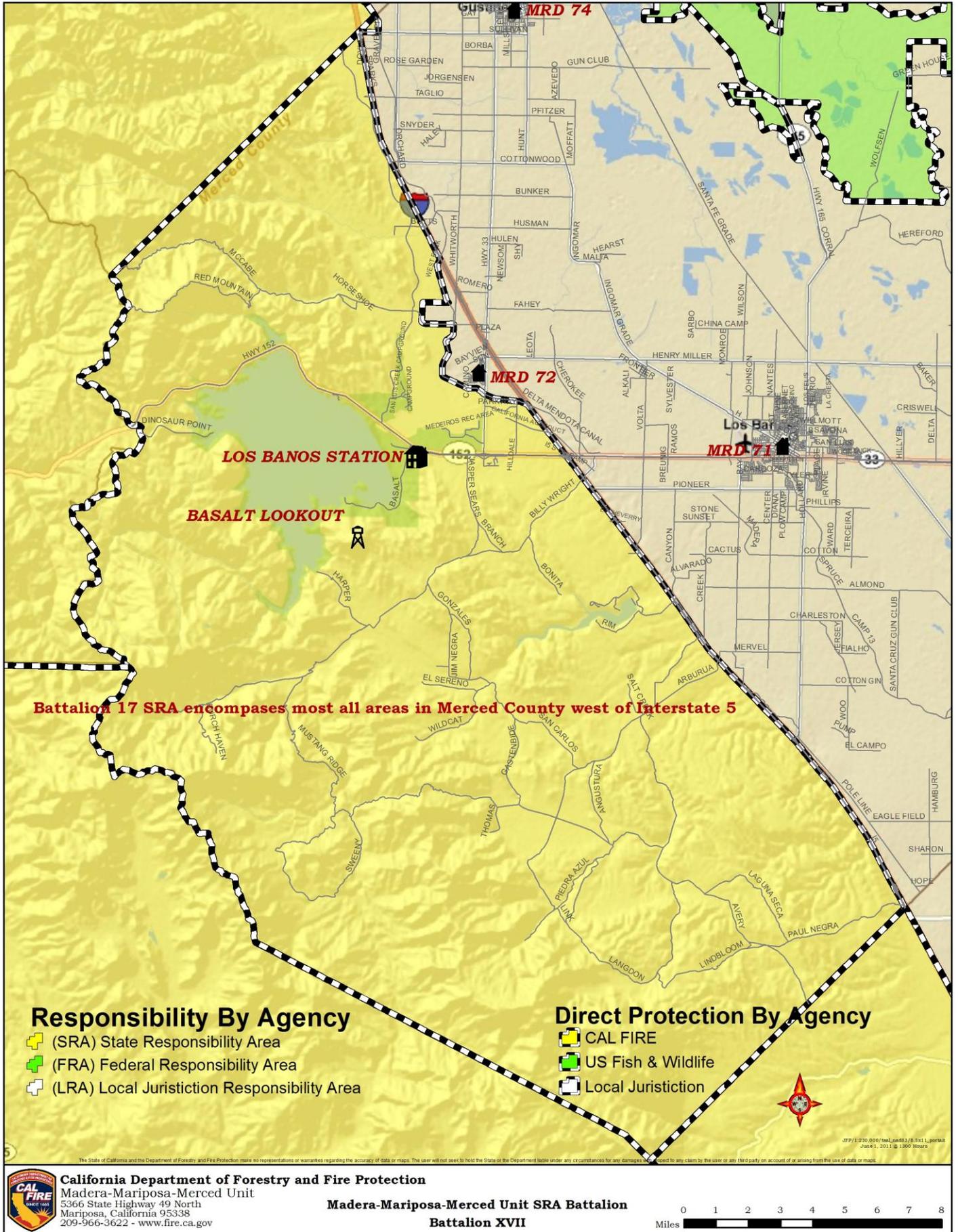
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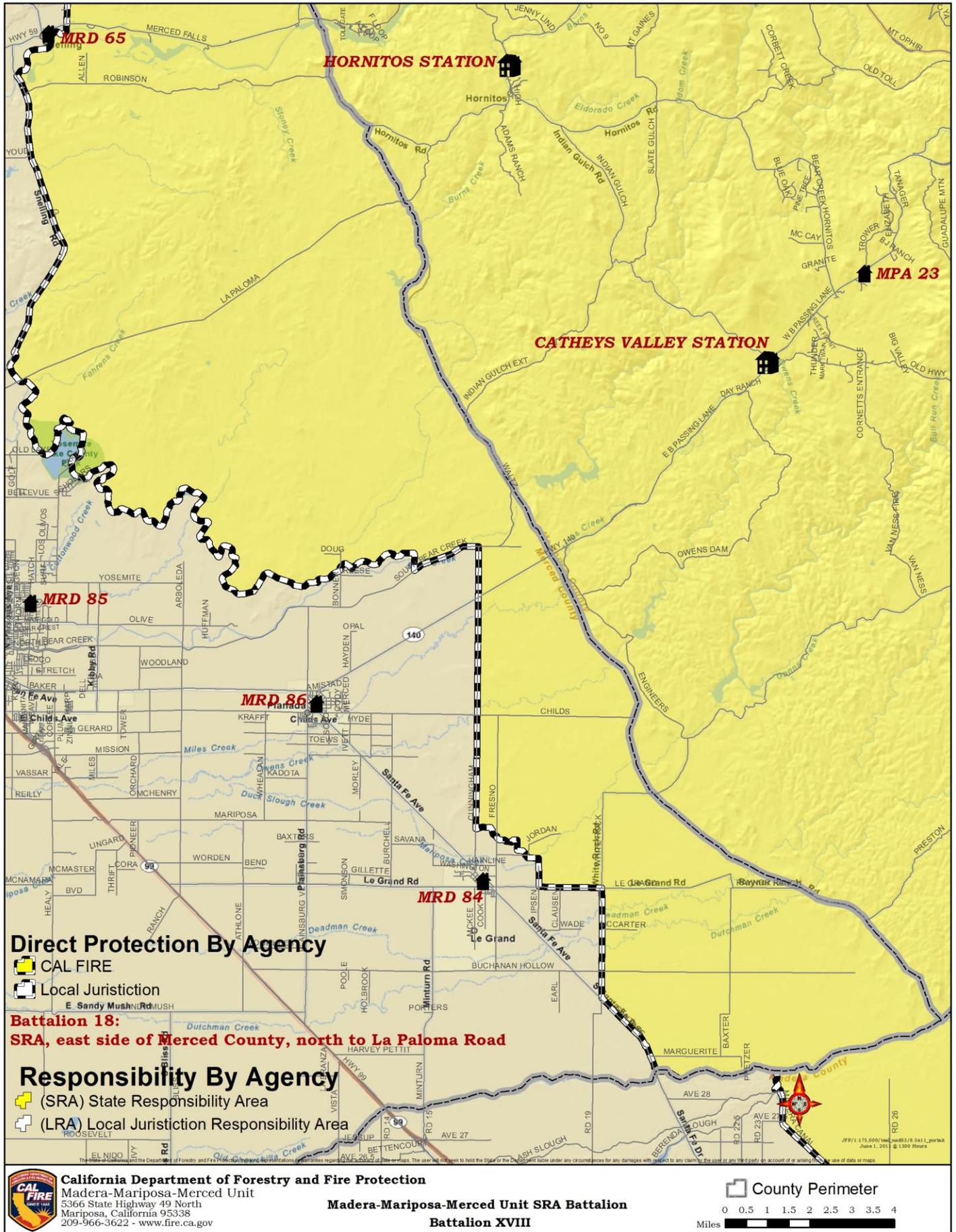


**California Department of Forestry and Fire Protection**  
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**Madera-Mariposa-Merced Unit SRA Battalion**  
**Battalion XVI**







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Madera-Mariposa-Merced Unit SRA Battalion  
**Battalion XVIII**



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