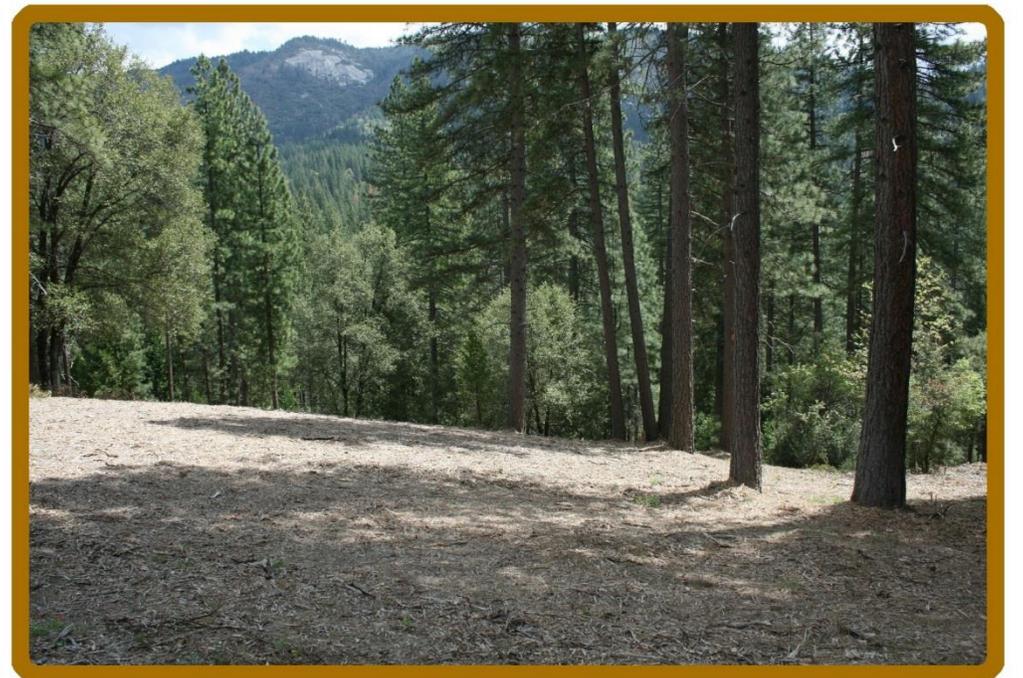
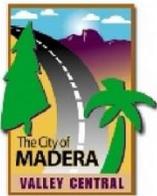




CAL FIRE

Madera-Mariposa-Merced Unit

STRATEGIC FIRE PLAN



UNIT STRATEGIC FIRE PLAN AMENDMENTS

<u>Date</u>	<u>Section Updated</u>	<u>Page Numbers Updated</u>	<u>Description of Update</u>	<u>Updated By</u>
5/16	Contents Page	ii-iii	2016 Update	P4224
5/16	Signature Page	1	Annual Update	C4200
5/16	Executive Summary	2	Update	C4200
5/15	I	3-6	None	4200
5/15	II	7-8	None	P4224
4/15	III	9-10	None	NK
5/16	IV	11-17	Update	B4220
5/16	V	18-35	Update	All Battalions
5/16	Appendix A	36-39	Update	4224
4/15	Appendix B	40	None	C4200
4/15	Appendix C	41-45	None	JP
4/15	Appendix C-1	46	None	JP
4/15	Appendix D	47	None	C4201
5/16	Appendix E	48-50	Update	B4224
5/16	Appendix F	51-53	Update	B4211
5/16	Appendix G	54-57	Update	B4212
5/16	Appendix H	58-60	Update	B4214
5/16	Appendix I	61-62	Update	B4213
5/16	Appendix J	63	Update	B16
5/16	Appendix K	64	Update	B17
5/16	Appendix L	65	Update	B18
4/15	Appendix M	66	None	4203
4/13	Exhibits: Maps	67-74	None	JP
5/16	Accomplishments	75-77	Re-Write	Various

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SIGNATURE PAGE

Unit Strategic Fire Plan developed for **MADERA-MARIPOSA-MERCED UNIT**:

This Plan:

- Was collaboratively developed. Interested parties, including 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.



May 15, 2016

Unit Chief

Nancy B. Koerperich

Date



May 15, 2016

Pre-Fire Engineer

Frank Bigelow

Date

EXECUTIVE SUMMARY

The Madera-Mariposa-Merced Unit has written its annual Fire Plan with the intention of establishing goals and priorities that align with **CAL FIRE'S Strategic Plan** and the **California Fire Plan** while identifying goals and priorities specific to the Unit.

The California Fire Plan is the road map for reducing the risk of wildfire. The Madera-Mariposa-Merced Unit's fire plan identifies strategic goals and objectives that target the anticipation and reduction of wildfire within the boundaries of the Unit. For the challenges facing the Unit with excessive tree mortality rates due to bug kill and a fourth year of drought, the Fire Plan will also serve the Unit in determining a plan to address our most dangerous areas and targets of risk within the overall Fire Plan. This fire plan seeks to improve operational effectiveness, scale to budgetary and fiscal circumstances, foster a healthy ecosystem and improve firefighter safety by identifying working projects specific to each Battalion within the Unit.

Pre-fire management projects are designed to reduce cost and losses, especially during periods of severe weather. With the use of fire resistant landscaping, mechanical fuels treatment, prescribed fire projects, building construction standards, infrastructure, land use planning, 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 stakeholders involvement and creates a fiscal framework for policy analysis.

The bark beetle epidemic has hit California's wildland forests in the coastal ranges, mountains and foothill communities, posing particular threat where dead trees are near homes and private property. In these areas, CAL FIRE has launched a public outreach campaign to educate and motivate residents to take steps now to protect their home and property from wildfire. More than 29 million trees, mostly conifers (pines), have died from drought and bark beetles in California. In some communities, up to 85 percent of forest trees have died, becoming dry fuel for wildfire. This epidemic has hit the Unit especially hard. In addition to the strategic goals outlined within the Fire Plan, all aspects of fire prevention, along with project and fuel reduction work, is prioritized along with the severe tree mortality issues that will continue to plague the citizens of the mountain areas for many years to come.

The strategic goals outlined above will be supported by 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 practices that would incorporate fire landscaping and construction to reduce their threat from wildfire along with hazardous fuel reduction projects to keep lives, homes, property and natural resources safe from catastrophic wildfires.
- Teach homeowners the value of removing bug killed and dead and dying trees from the landscape in order to improve the health of the forests and ecosystem, while also improving fire prevention and land clearance methodology.

With these goals and objectives identified, the Fire Plan strives to reduce property loss, damage to our local environment and ecosystems from destructive wildfires, along with a reduction of suppression costs within the Madera-Mariposa-Merced Unit.



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

SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

The Unit is comprised of three counties including Madera, Mariposa, and Merced. 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. To the east the Unit borders the Stanislaus National Forest, Sierra National Forest, and Yosemite National Park. Mono County is the next county to the east. The geographic center of the state of California is located within the unit between the communities of North Fork and Italian Bar in Madera County.

The Unit consists of 1,211,000 acres of State Responsibility Area (SRA) lands located on the western slopes of the Sierra Nevada mountain range and the eastern slope of the Diablo mountain range in central California. Major watershed areas significant to the Units fire problem include the San Joaquin River, Merced River, Chowchilla River, the Tuolumne River and associated drainages. These major river drainages dominate the landscape throughout the Unit and are directly related to the location of population, access/egress difficulties, fuel type, fuel loading, fuel continuity, shifting wind patterns and water accessibility all contributing to suppression difficulties and highlighting the fire problem. Topography varies from steep, rugged mountains and drainages with moderate to heavy vegetative cover to rolling hills of grass and oak woodlands supporting livestock grazing. Fuel loading varies from 2 tons per acre in grass to over 100 tons per acre in timber. Plant species vary by aspect, slope, elevation, and soil type. Annual grasses are found in the lower elevations, with approximately 1,000' vegetation changes to grass and oak woodlands. The introduction of brush intermixing with the grass and oak woodlands occurs between the 1,000' and 2,500' elevation marks. As the elevation approaches 3,000', the brush becomes the more prominent vegetation. As the elevation increases to between 3,000' to 4,500', timber and brush intermix. Above 4500' timber dominates the landscape with mixed conifer.

Madera County

Madera County has a population of 150,000 with a geographic area covering a total area of 2,153.32 square miles. The most populated communities include the cities of Madera, Chowchilla and the community of Oakhurst. Several communities are located in the State Responsibility Area in the mountains to the east, with a significant Wildland Urban Interface threat in the areas of Oakhurst and Bass Lake. The "Chowchilla River Drainage" is a significant fire threat to most of these communities. There are five major highways running through the county including Highways 41, 49, 99, 145, and 152. Highway 41 is the thoroughfare linking the city of Fresno to the "bedroom" community of Oakhurst and Yosemite National Park.

Mariposa County

Mariposa County has a population of 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 the county however there are several communities scattered throughout the county. All the communities are under the influence of either, the Chowchilla, Merced or Tuolumne River drainage are in danger regarding threat from fire. A portion of the Sierra National Forest, Stanislaus National Forest and Yosemite National Park are located within the boundaries of Mariposa County. The major thoroughfares within the county are State Highway's 41, 49, 120, 132, and 140.

Merced County

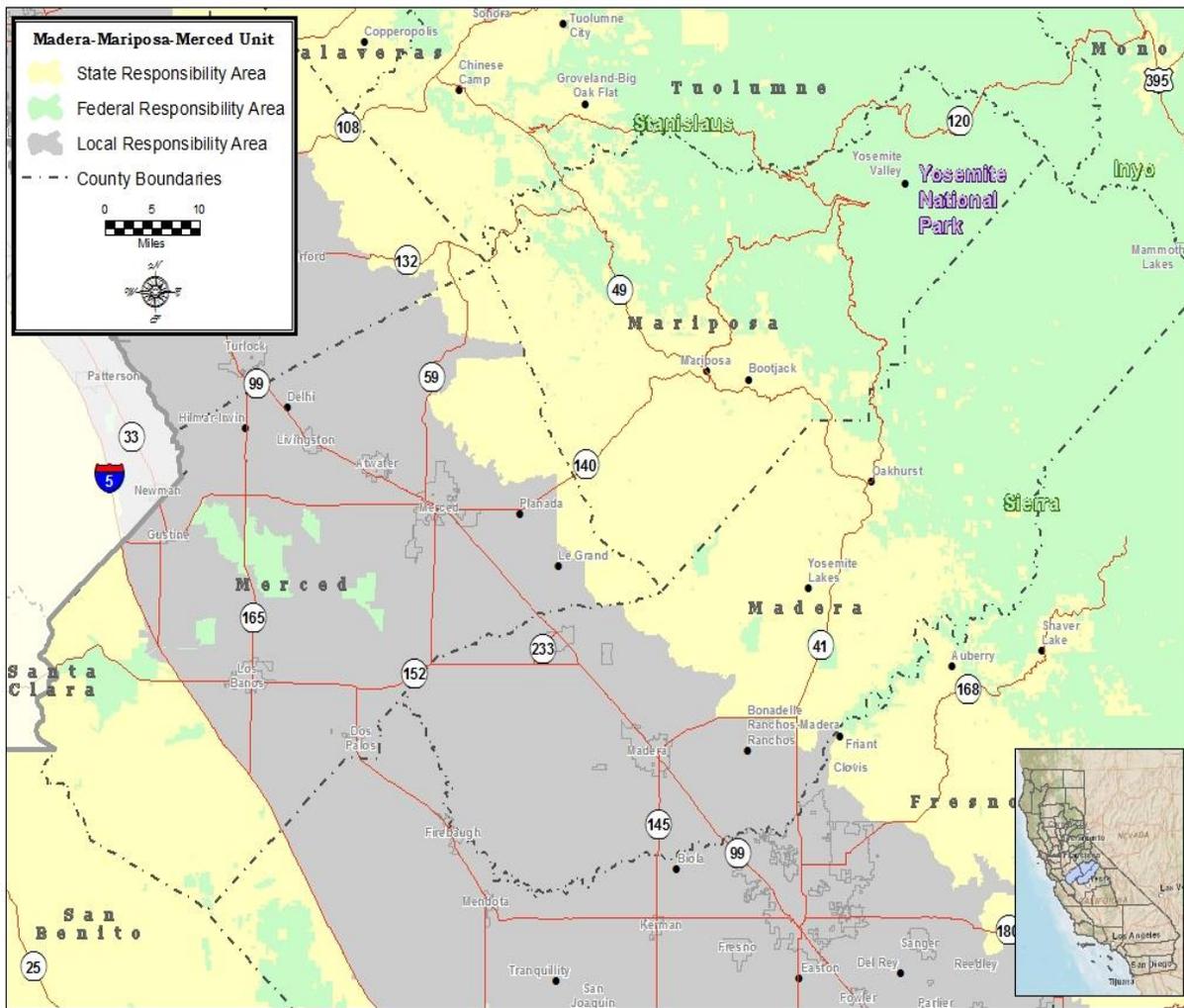
Merced County has a population 255,000 covering an area of 1,971.87 square miles. Much of the county is located within Local Responsibility Area (LRA) lands; however there are pockets of SRA lands. Several thousand acres of range and agricultural ground is located throughout the county's west side, with a great deal surrounding the City of Los Banos. This part of the county is covered mostly in annual grassland however the ground is very steep and access to fires in the SRA can be difficult. The county hosts two nationally protected areas, Merced National Wildlife Refuge and the San Luis National Wildlife Refuge. Both these areas experience an annual fire season. The major thoroughfares within the county are Interstate 5 and State Routes 33, 59, 140, 152, and 165.

Currently the Unit is in the fifth year of drought, but normally the Unit experiences all four seasons of weather. During the peak fire season, hot and dry weather conditions are present at all elevations. The valley and foothill temperatures average 100 degrees during the day and 65 degrees at night. The average humidity in the summer months is 15 to 20 percent. As elevations increase within the Unit, temperatures lower and humidity's increase slightly.

There is typically no rainfall from May through mid-October except for occasional thunderstorms. Thunderstorm activity can bring with it the threat of dry lightning and increased fire activity; however, most of the thunderstorm activity occurs in the higher elevations of the Sierra Mountains and typically bring moisture. Rainfall is most prominent during the months of December, January and February with an average annual rainfall of 12 inches for the valley, and between 20 to 45 inches in the higher elevations. Snowfall measurements begin around 3000' and average 7 inches. The drought has caused a significant decrease in rainfall and the snow pack in the Sierras is at 3%. The lack of live fuel moisture will cause added challenges to fire suppression throughout the Unit.

Winds are generally predictable during the fire months. Diurnal surface winds are up canyon during the day and down canyon at night. Prevailing upper level winds are out of the west/northwest. These winds are more intense when they surface at the higher elevations and have a negative impact on fire behavior. It should be noted that western Merced County has its own microclimate with temperatures ranging from 95 to 105 degrees and humidity percentage ranging from the low teens to single digits. The strong northwest afternoon winds that occur from heating of the earth's surface and a strong marine influence bring an increase in humidity and a slight cooling in temperature.

The costal weather influence, together with periods of extreme fire weather conditions, provides a window for extreme wildland fire behavior in the Unit from late June until measureable rainfall. A history of large and damaging fires have occurred within the Unit during that time of year.



UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

The Madera-Mariposa-Merced Unit has three operational divisions whose boundaries are established by the three county lines. The Unit protects a total area of 3,570,000 acres, and a total population of 284,000 residents. The three divisions include the Mt. Bullion Conservation Camp and eleven Battalions. The key operational preparedness program is the Unit wide "Structure Defense/Evacuation Plan" (see appendix D). Other programs include the Emergency Command Center, Fire Prevention/Law Enforcement, Safety and Risk Management, Training, Resource Management, Volunteers-In-Prevention, Automotive Maintenance and Repair and the many important programs associated with the cooperative fire agreements.

CAL FIRE initial attack resources number 167 full time personnel, 174 seasonal personnel, 250 volunteer personnel assigned within cooperative fire protection agreements, 110 inmate firefighters assigned at Mt. Bullion Conservation Camp and 177 Volunteers in Prevention

Unit Operational Facilities

State Fire Stations	11
Madera County Fire Stations	18
Merced County Fire Stations	20
Madera City Fire Stations	2
Atwater City Fire Stations	2
Central California Women's Facility Fire Station	1
Mount Bullion Conservation Camp	1

Unit Operational Equipment

State Fire Engines	20
Local Government Fire Engines (under agreement, staffed with CAL FIRE personnel)	53
Rehab Support Units	2
Water Tenders	22
Bulldozers	3
Aerial Ladder Truck	2
Type 1 Rescue Units	2
Rescue Squads	6
Airport Crash Trucks	2
Hazmat Units	2
Mass Decontamination Units (1,500 personnel)	3
Inmate Firefighter Crews	5
Saw Repair Trailer	1

Direct Protection Agreements

- MMU/Sierra National Forest Local Operating Agreement

Cooperative Fire Protection Agreements

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



Automatic/Mutual Aid Agreements

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

Cooperative Fire Agreements for Dispatching

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

www.atwater.org

www.ci.chowchilla.ca.us

www.losbanos.org

www.co.fresno.ca.us

www.fresno.gov

www.fresnocountyfire.org

www.cityofgustine.com

www.livingstoncity.com

www.cityofmadera.org

www.madera-county.com

www.mariposacounty.org

www.mariposapud.org

www.co.merced.ca.us

www.mercyambulanceservice.com

www.cityofmerced.org

www.cityofnewman.com

www.ci.turlock.ca.us

www.turlockruralfire.com

www.weststanfire.org

SECTION II: COLLABORATION

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:

Plan Development Team

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

Madera County Fire Department	Division Chief www.madera-county.com
Madera County Sheriffs Department	Sheriff www.madera-county.com
Merced County Fire Department	Division Chief www.co.merced.ca.us
Mariposa County Fire	Fire Chief Mariposacounty.org
Mariposa County Sheriffs Department	Sheriff mariposacounty.org
Mariposa Public Utility District	Fire Chief www.mariposapud.org
Mariposa County Fire Safe Council	Executive Director www.mariposafiresafe.org
South West Interface SWIFT	Director www.mariposacounty.org

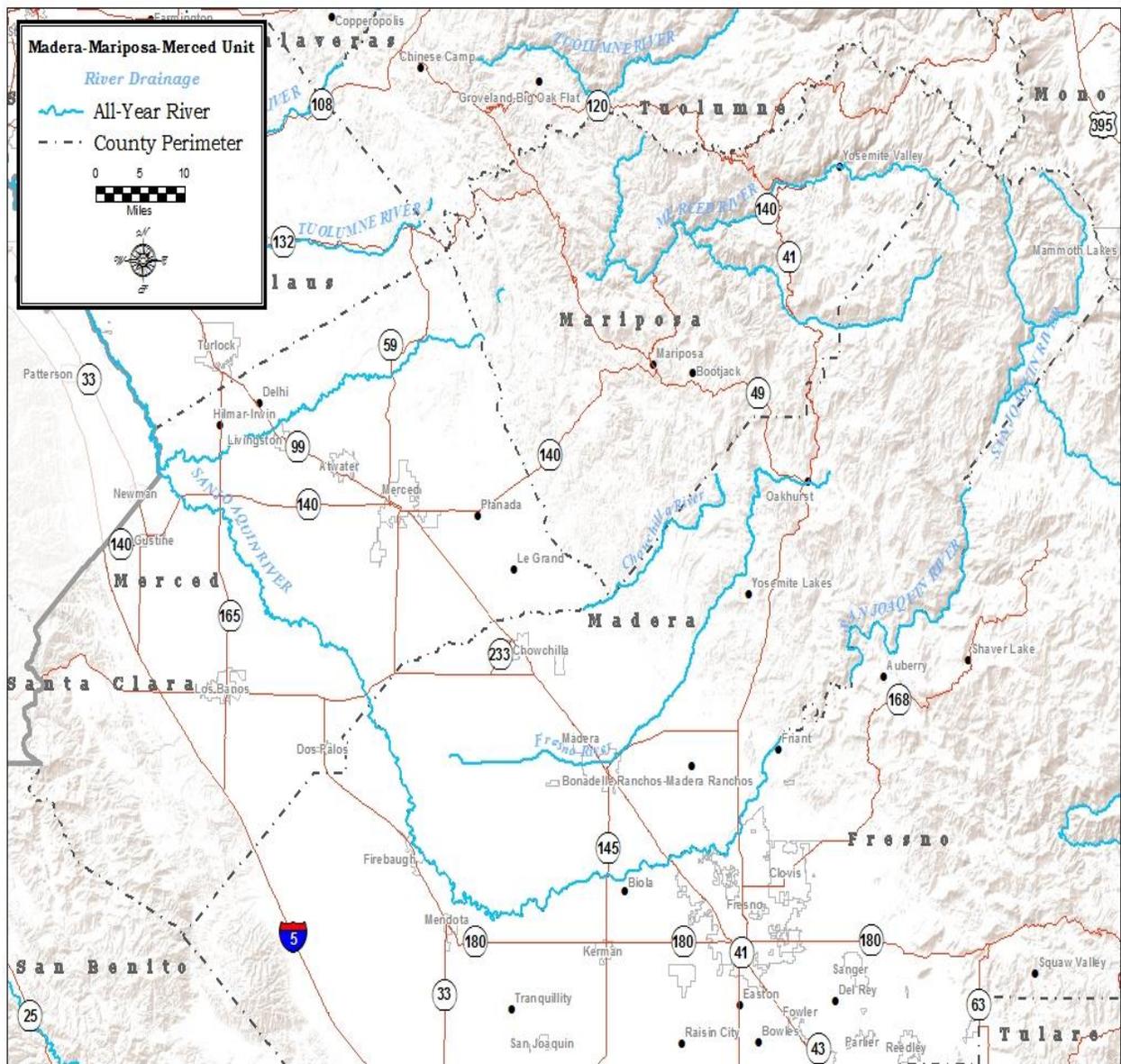
SECTION III: VALUES

A: VALUES

The Madera-Mariposa-Merced Unit is rich in measurable values, including the people and their property, our diverse environment and the many local ecosystems that inhabit our boundaries. When you begin to determine risk, as it relates to values, the threat from fire clearly affects those values at risk. The Unit has determined that values must be prioritized for necessary reporting purposes, but the prioritization does not allow for equality in the fire planning process.

The Unit has engineered its fire plan to include planning to protect and reduce risk to lives and property, timberland, rangeland, agriculture, water, watershed, wildlife and their habitat, cultural, historic and scenic values.

The key to reducing damage to our values at risk from fire, not only includes planning but continuing prevention and education programs in our communities. If prioritization of values at risk includes; how fire is carried, spreads and where the most destruction could occur in a large and damaging fire, that prioritization is the best method to determine if the Unit is placing their time and resources in the highest priority areas for loss. Fire moving out of or into the major river drainages that dominate the Unit's landscape, pose the highest threat to our values at risk.



B: COMMUNITIES**Madera County**

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

Mariposa County

Bear Valley	*Fish Camp	*Midpines
*Bootjack	*Greeley Hill	*Morman Bar
Bridgeport	Hornitos	Mount Bullion
Catheys Valley	*Hunters Valley	*Ponderosa Basin
*Coulterville	*Jerseydale	*Yosemite West
Don Pedro	*Lush Meadows	*Yosemite Village
*El Portal	*Mariposa	*Wawona

Merced County

Atwater	Dos Palos	*Gustine
Santa Nella		

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

For more information on Communities at Risk and the California Fire Alliance go to
<http://www.preventwildfireca.org/Communities-at-Risk/>

Madera County Community Wildfire Protection Plan:
<http://madera-county.com/index.php/county-forms/category/528-10302013-emergency-access-meeting?download=4967:0918-final-mccwpp-full-copy>

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 are a Battalion Chief, four Fire Captain Specialists, a Fire Prevention Specialist II and an Office Technician. In the Unit there are currently six qualified 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 Unit works with Region and the Civil Cost Recovery program to identify the responsible person's accountability and begin the process for reimbursement for suppression costs. This is generally done through a "Letter of Demand" which outlines the act of negligence or violation of law that occurred. If the person responsible ignores the demand or denies responsibility, civil litigation is initiated and the matter is settled through the legal process. It is the policy of the Department to actively and aggressively pursue cases in order to recover those costs. The Unit also pursues local civil cost recovery cases for its Cooperative Fire Protection agreements.

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

The goal of the Fire Prevention Bureau is to build on past successes while seeking ways to improve upon deficiencies identified throughout the past years. They 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 the Fire Prevention staff and they will continue to seek opportunities to increase the visibility of CAL FIRE.

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, works very closely with the Fire Department, and serves as the appointed "County Fire Warden" responsible for ensuring that the regulations stipulated in the California Public Resources Code 4290 are applied to new developments and structures in the SRA 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 process 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

Merced County Fire Marshal's Office 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. The Fire Marshal provides plan review and performs inspections throughout Merced 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. <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 the SRA. The future design and construction of structures, subdivisions, and developments in the 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

Public Resources Code 4291

This year the Fire Prevention Fee has funded four Forestry Aide positions used solely for defensible space inspections. The inspectors are able to complete up to 80 inspections a day, greatly improving the number of homes that will be inspected this year. We are hopeful this will become an ongoing program that will be in place for years to come.

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.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=04001-05000&file=4291-4299>

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."

INFORMATION AND EDUCATION

The Fire Prevention Specialist II (FPS 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 Information 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 and Volunteers In Prevention (VIPs) each year with a total of 1600 to 1800 children in Madera and Mariposa Counties.

Team Teaching is a highly professional program developed by teachers, CAL FIRE personnel, and child psychologists. Team Teaching targets preschool through second grade and the program utilizes Smokey Bear, an internationally recognized fire prevention symbol to teach children not to play with matches, lighters, or fire. 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 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 by many teachers. 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 is tailored to the students to ensure the ability to understand and absorb the information. If possible, personnel from a nearby engine company will don their personal safety gear to show the children what they could expect to see if they were to come into contact with a firefighter. At the end of the program, Smokey is pleased to accept them in his club as “Smokey’s Helpers”.

Kindergarten through second grade is the target audience for Team Teaching. This program takes 35 minutes to present per classroom. Team members play Smokey, his helper and are responsible for presenting fire safety messages to the students. They assist with materials; demonstrating and assisting with stop, drop and roll; friendly firefighter; 9-1-1; smoke detector training; and EDITH and DAN information, etc. The program presentation is complete when the class receives a visit from Smokey Bear.

7th and 8th Grade Presentations are given during an assembly at school by the FPS II. The focus is Juvenile Fire setting behaviors and is presented with an Introduction, Icebreaker questions, and the; who, what, when, where and why juveniles set fires. The discussion also includes who becomes involved when a fire is set, and the consequences, economics, and potential reasoning behind juvenile fire setters. A discussion of how juvenile fire setting can be prevented in the community 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 also 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 will coordinate, plan, and provide the display and/or presentation materials for the station personnel, appropriate to the age level of the audience, for career day presentations. The FPS II will also attend the event to provide a table top display, information and job bulletins while organizing the event through the Battalion Chief and Station personnel bringing engines and firefighter 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 of displays for Mariposa and Madera County Fair. Battalion Chiefs, station personnel, and VIPs assist with having engines and staffing available.

EXHIBITS AND DISPLAYS

The FPS II responds to requests to provide exhibits and displays. They determine the theme, recruit VIPs to assist with staffing, and notify the Battalion Chief and Station personnel of the request. They also construct displays and 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 consistency in fire prevention, education, information and the dissemination of forest and fire laws information 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, 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 with the approval of the Unit Chief. They provide, conduct, or arrange for appropriate CAL FIRE personnel to provide live and pre-recorded radio and TV interviews according to departmental guidelines and procedures in 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 and works 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 FPS 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 distribute news releases to the media and elected officials on various topics such as information relating to an arson arrest, media event, and preparedness levels.

JUVENILE FIRESETTER INTERVENTION SPECIALIST

Under the direction of the Fire Prevention Bureau Chief, the FPS II is responsible for developing and maintaining the Unit's Juvenile Firesetter Intervention Program (JFS). They coordinate the program for the Unit and compile materials, videos, and programs to educate potential juvenile firesetters on the dangers of playing with fire. They respond to requests for intervention interviews assessments from the Madera, Mariposa and Merced County Sheriff's 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.

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, and 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 the keys 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.

- Fire and Life Safety Education Programs
- Public Information Education.
- LE 100 Inspection Program under PRC 4291
- Red Flag, Holiday, and Arson Patrols
- Communications

The FPS II coordinates and manages the Unit's VIP program; including the recruitment and training of VIPs, identification and tracking of the Units VIP activities, and maintenance of the Unit's VIP database. The VIPs also assist with the process of first and second home clearance inspections in the LE-100 program. The VIPs receive annual LE 100 training if they wish to participate.

ADDITIONAL FIRE PREVENTION SPECIALIST PROGRAMS

The FPS II is responsible for many other education and information programs throughout the Unit including; road sign fire prevention signs, fire prevention poster contests in the schools, public presentations, participation in parades and our extensive Smokey Bear and Sparky the Fire Dog educational programs.

In order to help facilitate our participation in all of these programs, we work with many corporate and local business partners for sponsorship in the programs and purchase of materials. Our generous sponsors include Sierra Telephone and the Sierra Star newspaper, and we work very closely with Pacific Gas and Electric, Smokey Bear Race Committee, Home Depot, Mariposa Feed Store, ABC Channel 30 Television, Intermountain Nursery, Western Sierra Nursery, Chukchansi Resort and Casino and ACE Hardware.

B. VEGETATION MANAGEMENT

For the 2015-2016 Fiscal Year (FY), Resource Management in MMU consists of administration and enforcement of Forest Practice Act, administration of California Forest Improvement Program (CFIP), administration of the SRA FPF Grants, VMP planning California Environmental Quality Act (CEQA) compliance for unit projects and general service forestry.

The Forest Practice Act and 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. you sell, barter or trade 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.

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.

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.

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.

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. In MMU there were 25 of these documents in 2015.

Drought Mortality Exemption

This exemption allows for the immediate harvest of trees that are dead or dying from the drought up to 20 acres with an Licensed Timber Operator LTO and unlimited acres with a Registered Professional Forester RPF filing the document. In MMU there were 83 of these documents on 2015.

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. In MMU there were five of these documents in 2015. In MMU there were seven of these documents in 2015.

Modified Timber Harvest Plan

This plan allows for the harvest of trees on an ownership of 100 acres or less.

Timber Harvest Plan (THP)

This plan addresses the harvest of timber on more than three 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).

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.

Projects for 2014-2015

For the 2014-2015 FY, five resource management projects are proposed:

- Removal of Dead and Dying trees in public nonfederal lands and along state and county road right of ways in SRA and the DPA within the High Hazard zones of drought mortality.
- Road Brushing along Madera and Mariposa County road right of ways within SRA
- A VMP in Mariposa Public Utility District's Stockton Creek Preserve. This property is 470 acres. It would be portion of the Dubberke Fuel Reduction Project in Battalion 2, Fire Plan projects
- A VMP for Merced Community College property in Midpines. This property is 160 acres. It would be a portion of the Midpines-Mount Bullion Fuel Break project in Battalion 2, Fire Plan projects
- A VMP for Mariposa County property in Midpines. This property is 320 acres. It would be a portion of the Midpines-Mount Bullion Fuel Break project in Battalion 2, Fire Plan projects.

PROPOSITION 40

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

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

California Forest Improvement Project (CFIP)

MMU had 2 CFIP projects in 2015. These projects are ongoing. These projects were for fuel reduction and a tree planting.

California Environmental Quality Act (CEQA) Compliance

The unit seeks 100% CEQA compliance on all projects. Some of the unit's projects requiring CEQA documentation included: bark beetle tree removal on Merced Community College property and a Fire Fighter I readiness exercise in Ahwahnee. Drought mortality projects and increased fuel reduction projects within the battalions.

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. Several Bark Beetle presentations have been made to the public in Madera and Mariposa County to increase awareness of grant programs and fire reduction efforts within the community.

Unit Vegetation Management Program

MMU has one active VMP. The Boyer VMP, it is approximately one third complete. An increase in maintenance has been required for the fuel breaks from the effect of the drought and the tree mortality. It is expected that a significant increase in tree mortality will require additional resources to continue maintenance of the existing fuel breaks and create additional ones to protect more communities.



SECTION V: PRE- FIRE MANAGEMENT TACTICS

DIVISION / BATTALION / PROGRAM PLANS

Training Bureau

Battalion Overview

The Madera Mariposa Merced Training Bureau is responsible for training 350 CAL FIRE career firefighting personnel and 250 Madera and Merced County's 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 Apprenticeship Committee program, Firefighter I Returnee academies, HFEO proficiency training, Spring Training Preparedness exercises, and Continuing Professional Training courses.

Training is divided into three operational areas – Madera, Mariposa, and Merced:

- Madera training is overseen by an administrative battalion chief assigned to the Madera Division and the volunteers/paid call Firefighters receive monthly training from the career firefighting personnel throughout the division.
- Mariposa is the training headquarters for the Unit and is located within the Mariposa Division, staffed by a battalion chief and an office technician. 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 Continued Professional Training courses for all state personnel.
- Merced training is conducted at Merced County Station 62, which is facilitated by a Fire Captain. Merced training hosts its own academy for new paid call Firefighters and provides Continued Professional Training courses for career staff within Merced County.

Goals & Objectives Statement

- The Training Bureau has set several goals to improve firefighting operation efficiency and safety for the Unit. Provide educational courses (Continued Professional Training courses) as appropriate to meet recertification needs and reviews expiration dates to schedule division CPTs accordingly.
- 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.)
- Produce a training calendar prior to the start of each year, and send it out to the Unit quarterly.
- Ensure that Training Requests have been submitted prior to October 1st of each year.
- Have the Unit's training needs assessment completed prior to February 1st of each year per the Needs Assessment Process as cited in CAL FIRE Handbook 4022
- 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.
- Have training prepared for Amador Firefighters; usually takes place the second week of February. Approximately ten employees are hired.
- 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.
- 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.
- Plan Spring Preparedness Exercise. All Schedule "B" engines and personnel participate in a skills and physical fitness evaluation. Usually takes place in June.
- Assist with 4036 training as needed
- Work with individual employees to develop individual training plans.
- Maintain and facilitate the Record Retention Plan of the employees through Target Solutions.
- Identify Unit classes and develop cadres

Mount Bullion Camp CC#39

Overview

Mt. Bullion Camp opened as a California Youth Authority fire camp in 1958. In October of 2004 Mt. Bullion was converted to a California Department of Corrections and Rehabilitation adult 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. CAL FIRE and the Department of Corrections and Rehabilitation have an excellent working relationship and have a lot of pride in the camp. They meet twice a week for an open discussion on safety and other issues concerning the smooth operation of the camp.

The primary fire resources at Mt. Bullion Camp are the five Fire Crews (MBL 1-5). In addition to the Fire Crews, the camp also has a CAL FIRE model 14 camp protection engine, dump truck, six person stakeside, and Morebark wood chipper.

Mt Bullion Camp does not have a camp product, but they staff a chainsaw support trailer for maintaining fire saws. This saw support trailer responds to incident thorough out the state and is often in high demand. The Camp also has a well outfitted metal fabrication shop that supports the Madera Mariposa Merced Unit, local agencies and the California Fire Academy at Lone.

Due to the camp location in the center of the State and available support facilities, Mt. Bullion Camp is the primary staging area / mob center for moving Fire Crews that are traversing the state. The permanent and temporary (tent) facilities at the camp can support 10 Strike Teams (20) crews per operational period. This support includes feeding, sleeping, shower and restroom facilities. Mt Bullion Camp is the primary inmate Firefighter base camp for Federal incidents in Yosemite National Park, Sierra National Forest & Stanislaus National Forest.



Battalion 1: Coulterville Battalion

Battalion Overview

Located in the northeast corner of the Madera-Mariposa-Merced Unit, encompassing 274,462 acres and 426 square miles lays 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 thousand acres of BLM and a great relationship has been established with their 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 homes, 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 One, during declared fire season, consist mostly of diurnal winds that combine with topography to create a predictable north-northwest (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.

Catheys Valley and Hornitos completed LE-100 inspections in their Primary Response Area (PRA), while Coulterville completed their entire target area of Greeley Hill. Reasons for this success was the inception of the Defensible Space Inspectors (DSI). This program jumpstarts the inspection process and, when inspectors are properly trained it helps the private property owners get started or complete their defensible space.

Goals and Objectives 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 One and the communities it serves.

Accomplish the objectives

- Designate personnel to provide winter time support for ongoing fuels treatment projects being conducted within the battalion.
- Educate the community within the battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
- Participate with local stakeholders in annual and ongoing community public education events.
- Provide assistance/information to local Fire Safe Councils and evaluate current statuses of Fuel Breaks as well as continue to plan for future maintenance and future fuel projects.

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.

Information & Education

School Programs

Through the Unit Prevention Bureau, Battalion One 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.

Battalion One 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 and form fire-safe attitudes in children.

Fire Prevention Signs

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 One. A new prevention sign was added to the intersection of Greely Hill Road and Ernst Road and a new prevention sign has been 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 six Fire Prevention signs in Battalion One, with potential of a seventh being installed near Lake McClure

• Catheys Valley

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.

With appreciated cooperation from the Reddington Ranch, one prevention sign has been installed on the south side of Hwy 140 near the entrance to the ranch.

• Hornitos

Current sign is located on the southwest corner of CAL FIRE property at the Hornitos fire station and is visible from Bear Valley Rd., Hornitos area along Bear Valley Road. at the intersection of Hunters Valley Road.

• Coulterville

One sign is located on the southwest corner of CAL FIRE property at the Coulterville fire station and is visible from Hwy 49. Second sign is located at the intersection of Greely Hill Road and Ernst Rd.

Third sign will be added to the Don Pedro area.

Public Events

All on-duty company officers in Battalion One 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.

Coulterville

- Coyote Howl
- Greely Hill Breakfast
- Coulterville Pancake Breakfast
- Ambulance Association Dinner
- Joaquin Marietta Day

Hornitos

- Hornitos Enchilada Feed
- Flea Market

- Dias De Los Muertos (day of the dead)

Catheys Valley

- Agri-nature trail
- Coyote Spring Buck-n-Bash
- Western Carnival
- Catheys Valley Elementary Fun Day

Media

Media contact for Battalion One 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 1st 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.

Planning, Engineering & Structure Ignitability

Public Resource Code 4291

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. This was the last year for the mailers being sent to residence.

Each station within Battalion One starts weed abatement inspections during the month of June or sooner based on rainfall and fuel conditions. These inspections were conducted by station personnel and defensible space inspectors. Every station's company officer and crew drove to each residential structure and visually inspected, handed helpful information out to homeowners, took GPS coordinates of habitable structures, water tanks, and assessed tree mortality. This year these inspections are being conducted by Forestry Aide Defensible Space Inspectors (paid for by the SRA Fee) in conjunction with company officers. The Defensible Space Inspectors and/or company officers will go to each residential structure and visually inspect and hand out helpful information to homeowners.

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.

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.

Defensible Space Inspectors

The Forestry Aid Inspectors goal is to provide each station with 100% completion of first inspections, second inspections are to be completed by station personnel. Tracking of inspections, each of the three stations assigned to Battalion One have 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 uses a mapping system that has all residences and mailing addresses within their Initial Attack area.

Coulterville's three target areas

Coulterville station has three target areas which consist of: Don Pedro, Coulterville and Greeley Hill, and combined, have an area of about 180 square mile of area to cover. In the year 2014, Coulterville was the main target area. In 2015, the main target area will be moved to the Greeley Hill area, and in 2016 the target area will be Don Pedro. Each of these three target areas will be 100% completed, rotating every year.

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 200 people have been helped by the Fire Safe Council program removing and clearing property to the LE-100 guidelines. Well over 100 people have called the Fire Safe Council to have trees removed, brush removed, or requested a chipper to mitigate larger fuel piles they have cleared but are unable to dispose of that the fire safe council was unable to assist with.

Fire Prevention

Reducing Ignition

The purpose of this document is to identify how Battalion One 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. A majority of ignitions in the Battalion are related to debris burning, equipment use, and vehicles.

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.

Debris fires that escape control 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.

To reduce unwanted ignitions by vehicles in Battalion One 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.

Tree Mortality

Due to a multi-year drought and beetle kill, tree mortality has become a very significant issue within Mariposa County. Battalion 1's most significant target area for this concern is the community of Greeley Hill. CAL FIRE has been tasked to work with local counties, federal agencies and local fire safe councils to support mitigation efforts, Battalion 1 has been allocated tree mortality equipment and personnel, they have been working daily in the affected areas. Personnel have continuously completed such tasks as tree falling, slash piling and burning within the affected areas throughout the winter and will continue throughout the summer as conditions warrant.

Battalion 2: Mariposa Battalion

Battalion Overview

Battalion 2 stretches through the Eastern portion of Mariposa County's State Responsibility Area (SRA) 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, Lush Meadows, the Woodland area, Bootjack area, Midpines and the town of Mariposa. The influencing factors involve Bug diseased dead conifers (**TREE MORTALITY**), 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.

Goals & Objectives statement

Support the Mariposa Fire Safe Council on current and future fuel treatment projects and public outreach. Coordinate with local government agencies and their equipment to improve access and egress in identified communities. Utilize private vendors to accomplish projects when State resources are limited. Complete current projects and identify future targets. Maintain an aggressive LE-100 program within target areas. Support local and Unit fire prevention activities. Evaluate, plan and address the Bark Beetle infestation (**TREE MORTALITY**) in stands of timber on State, Local and private lands.

Accomplish the objectives

- Designate personnel to provide winter time support for ongoing fuels treatment projects being conducted within the battalion.
- Utilize County Road Department, when applicable, to meet goals and objectives.
- Utilize Private Vendors, when applicable, to meet goals and objectives.
- Educate the community within the battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
- Participate with local stakeholders in annual community public education events.
- Provide monthly statistics to fire prevention on activities specifically **Tree Mortality** statistics.
- Utilize the Unit Forester to prepare CEQA documents and permission to remove stands of timber that is infected. Utilize infected stand removal for training purposes.

Measurement

The methods used to accomplish our goal will consist of public education, prescribed fire projects, mechanical fuel reduction and modification (to include new equipment assigned to the Unit from the Tree Mortality Task Force TMTF), range improvement, fire road maintenance, and always an aggressive LE-100 inspection program. The Defensible Space Inspectors will be the catalyst to carry forth and complete many of the programs under the direction with the Pre-Fire Fire Captain coordinating with the Station Fire Captains. Fire Prevention and Pre-Fire Suppression staff will again be called upon to assist in this year's program.

Information & Education

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, Butterfly Parade, MDC "Fill the Boot", MCHS Grizzly Fire and the Burn Permit process. 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. 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.



Battalion 4: Ahwahnee Battalion

Battalion Overview

Battalion 4 consists of the communities of Oakhurst, Ahwahnee, Nipinnawasee, Raymond and Bass Lake. Smaller communities include Cedar Valley and Sugar Pine. The Oakhurst basin is currently the most densely populated area in MMU. These areas were identified as having significant asset values with medium and high fuel hazard ranks. Fire prevention efforts will emphasize 100' clearance around all structures and fuel management to mitigate the wildfire hazard in the area. As with most of California, Battalion 4 is currently suffering a major drought. The March 21st 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, Ahwahnee and Nipinnawasee communities lost trees in this storm. This storm and the wind events of November 30th 2011 and December 3rd 2011 resulted in a significant 'blow down' of oak and large pine trees and are a continuing cause for concern. With the exception of Oakhurst which has smaller parcels and neighborhoods and around structures and small parcels in the outlying areas most of the dead and down caused by these storms in the open wildland has not been removed.

This dead and down along with the worst drought in recent history triggered the most destructive fire season in Eastern Madera County since the Harlow Fire in 1961. 35 residence and three commercial structures were destroyed on the Junction and Courtney Fires. Reports from Firefighters on the Junction and Courtney fires clearly showed the dry fuels, and dead and down vegetation, contributed to the long range spotting and overall control issues on both fires. Bug kill trees will be an additional control problem for this fire season. It is estimated that up to 40% of the Ponderosa Pines will be killed by invasive pestilence in the next year. We are already seeing a significant Ponderosa Pine tree die off in February and March that will continue this summer. With the continued drought, dead trees and the available dead fuel loading this Fire Season has the potential to be worse than 2014.

LE-100 inspections have shown that many properties had not cleared their downed trees. The homes which were inspected still show a large fuel loading of downed trees outside the 100' clearance required. Many of

these trees have been on the ground since March of 2011. We are currently asking thru media and local Town Hall meetings for residents to clear beyond the 100' required if possible.

Goals & Objectives 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, Defensible Space Inspectors 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 4 and the communities it serves.

Communities at risk in Battalion 4 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. 2014 was the exception to the rule with a number of accidental and intentionally set fires (13) in the Oakhurst area. 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.

Accomplish the objectives

Priorities for the Fire Management plan will include

- Support the Eastern Madera County Fire Safe Council (EMCFSC), the Coarsegold Resource Conservation District (CRCD), the North Fork Resource Conservation District and Sierra Nevada Conservancy with current and future fuel management projects
- Facilitate fuel reduction projects that will widen and open up roads that affect ingress and egress for both the public and emergency equipment
- Educate the public on fire safety and hazard reduction
- Continue an aggressive LE-100 inspection program
- Develop literature, flyers and/or maps to educate the public on wildfire awareness and evacuations.
- Support Unit and local fire prevention activities

Measurement

Priorities for Fire Management plan will include:

- Support the Eastern Madera Fire Safe Council, the North Fork Resource Conservation District and Sierra Nevada Conservancy with current and future fuel treatment projects.
- Educate the public on fire safety and hazard reduction.
- Implement an aggressive LE-100 inspection program.
- Support Unit and local fire prevention activities.
- Establish a pre-suppression plan for a fire in the Chowchilla and Fresno River Drainages using the MMU Structure Defense and Evacuation Plan model.

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.

Planning, Engineering & Structure Ignitability

- VMP – No VMPs are currently planned in Battalion Four.
- PRC 4209/4291
- VIP/Cooperators/Stakeholders
- The North Fork Resource Conservation District and Sierra Nevada Conservancy
A new relationship with this group will assist in securing grant dollars for additional fuel reduction projects in Eastern Madera County.

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.

Battalion 5: Coarsegold Battalion

Battalion Overview

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 Four to the north. Battalion Five fuel models transition from annual grasslands, oak woodland with annual grass, brush, and conifers. There are three lakes provide year round recreational activities - Hensley, Millerton, and Bass Lake. These lakes provide for year around recreational activity and increase the volume of vehicles and tourist to the areas during the summer months.

There are also several main travel routes through Battalion Five-Highway 41 (south entrance to Yosemite) is the main travel route from Fresno to all communities of the Battalion. Road 200 provides access from Highway 41 to the communities of O'Neals, North Fork and Bass Lake. Road 400 which provides access to Hensley Lake, Yosemite Lakes Park and Coarsegold. The Chukchansi Gold Resort and Casino is located in the center of the Battalion. These roadways annually have a high number of fires from roadside ignition.

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 agreement 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 Career personnel and Paid Call/Volunteer Firefighters who staff a type 2 Engine. There are also Madera County Paid Call/Volunteer stations in North Fork, O'Neals and Yosemite Lakes Park, which provide rescue squads, type 3, type 2 engines and water tenders.

This being the fifth year of below normal rainfall, a growing number of Conifers and Oaks are showing signs of distress or dying. Either from the stress of the drought and also significant bug kill. This is estimated to be between 40% to 90% of the Pondarosa Pine tree population and 40% of the Oak and Gray Pine population significantly increasing the fire danger and the potential of ember cast and spot fires.

Goals & Objective statement

- The goal of the Battalion Prevention Plan is to prevent unwanted wildfires with the Battalion. With dedicated and committed battalion employees, Prevention Bureau staff, and Pre-Suppression Staff
- Aggressively reduce the amount of bug killed trees within the Madera County easements and work diligently to complete the battalion fuel breaks.
- 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 Five and the communities it serves.
- Communities at risk in Battalion Five include the areas of Hidden Lakes Estates, O'Neals, Yosemite Lakes Park, North Fork, Indian Lakes, Meadow Ridge Estates, Coarsegold, Bass Lake Annex, Quartz Mountain, Cascadel Woods and Central Camp.
- The influencing factors involved in identifying fuel reduction projects include: fire history, housing density, fuel hazard, timber and range values.

Accomplish the objectives

Priorities for the Fire Management plan will include

- Support the Eastern Madera County Fire Safe Council (EMCFSC), the Coarsegold Resource Conservation District (CRCD) with current and future fuel management projects
- Facilitate fuel reduction projects that will widen and open up roads that affect ingress and egress for both the public and emergency equipment
- Educate the public on fire safety and hazard reduction
- Continue an aggressive LE-100 inspection program
- Support Unit and local fire prevention activities
- Establish pre-suppression plan in the San Joaquin River Drainage using the MMU Structure Defense and Evacuation Plan

Measurement

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

Information & Education

Battalion Five personnel actively participate in Information & Education, School programs, Public and Media Events. They continue to take every opportunity for education by attending all community meeting in each of their areas

Planning, Engineering & Structure Ignitability

The VMP Coordinator gets into contact with landowners who control strategically significant land and coordinates a mutually beneficial brush removal. Additional lands placed under contract are 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 providing 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



Battalion 13: Madera Valley Battalion

Battalion Overview

The Madera Valley Battalion is located in the western half of Madera County. The eastern portion of Battalion 13 meets Battalions 4 & 5 along the Madera Canal, with the northern portion of the battalion bordering the Merced County line and the southern boundary meeting the Fresno County line, which is divided by the San Joaquin River. The State Responsibility Area (SRA) portions of the Battalion are in the southeastern corner. Fuel type is mainly annual grass and the topography is rolling foothills.

The weather pattern in Battalion 13 during the summer months typically is hot and dry and high temperatures range from the 90s to 100s on a regular basis, with monsoonal moisture occasionally causing dry lightning a couple times throughout the summer.

Fire history in Battalion 13's SRA is very limited since the area has limited rural roads with few structures. Fires have been started by lightning and farming equipment usage. There have also been a few fires over the years caused by electrical power distribution.

Goals & Objectives Statement

- Educate the public on fire safety and hazard reduction.
- Implement an aggressive LE-100 inspection program.
- Support Unit and local fire prevention activities.

Accomplish the Objectives

- Educate the ranch owners within the Battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
- Develop literature, flyers and/or maps to educate the public on wildfire awareness and evacuations.
- Provide monthly statistics to Fire Prevention on activities.

Measurement

- The LE-100 program covers 100% of the known structures in the Battalion.

Information & Education

Battalion 13 stations participate in numerous community events to promote fire prevention and awareness. Some of these programs are:

- Madera County Fair
- School presentations to K-3 grades

Planning, Engineering, & Structure Ignitability

- Identifying land owners who may be at risk of property loss in the hopes of establishing fuel breaks.
- Work with Pre-Fire Engineering to build an evacuation map for the SRA portions of Battalion 13. It's not in the evacuation plans documentation as of yet.

Fire Prevention

- Conduct LE-100 inspections in the SRA to make sure all residents are in compliance with PRC-4291
- Work with Madera County Weed Abatement to ensure that all residents are following the county weed abatement standards.



Battalion 16: Atwater Battalion

Battalion Overview

Communities within Battalion 16 include the towns of Winton, Cressey, and Snelling. The area around the City of Atwater is within Battalion 16 and includes the McSwain area and Castle Park. The Franklin/Beachwood area makes up the east side of Battalion 16 near the City of Merced. Battalion 16 also has SRA (State Response Area) within its Boundaries near the Town of Snelling and on the eastside of Snelling Highway. The areas around the town of Snelling and Merced Falls have the highest fire risk in the battalion. These areas have a history of significant wildland fires with structures being lost.

Battalion 16 is unique in that it has five fire stations and has three major programs within its jurisdiction. Fire stations are located in the towns of Winton, Cressey, Snelling, Castle and Atwater. Castle Station 62 located at the old Castle Air Force Base houses two important county programs. These two programs are the Aircraft Rescue Fire Fighting Program (ARFF) and the Hazardous Material Team. The ARFF program has been tasked with protection of the new USFS Aircraft agreement with Very Large Air Tankers (VLAT) are stationed at Castle for firefighting in central California. The third major program is the Fire Training Program located at Castle Park.

Goals & Objectives statement

- Support Unit and local fire prevention activities.
- Educate the public on the new fireworks ordinance allowing for the use of Safe and Sane fireworks in the County in order to minimize the fire threat in the unincorporated areas of the County, and areas neighboring the SRA
- Aggressively pursue 100% LE-100 inspection compliance within Battalion 16 SRA areas.
- Place prevention signs throughout Battalion 16 to educate the public on fire safety.
- Support the area with current and future fuel treatment projects.
- Improve access to all SRA areas within Battalion 16 to include the Snelling Highway, La Paloma Road, La Grange Road, the Merced River and Merced Falls Road.
- Network with property owners, Merced Irrigation District, and Pacific Gas & Electric to establish and maintain these fuel breaks.

Accomplish the objectives

- Educate the community within the battalion on proper fire hazard reduction through face to face contact during annual LE-100 inspections.
- Develop literature, flyers and/or maps to educate the public on wildfire awareness and evacuations
- Participate with local stakeholders in annual meetings and community public education events.
- Provide monthly statistics to fire prevention on activities.
- Utilize newly purchased equipment to update and maintain the Weed Abatement program within the county.

Measurement

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

Information & Education

Battalion 16 station personnel, along with Merced County Paid Call Firefighters (PCF's) visited all the local elementary schools and pre-schools. Smokey Bear and Sparky the Fire Dog were both utilized to get the children to grasp fire safe concepts. Smokey Bear color books and other prevention materials were distributed throughout the schools. The events message focused on kids not playing with matches, Stop Drop and Roll, and Stay low and Stay out.

During the Merced County Fair, PCF's from Station 61, Station 63, Station 64, and Station 65 rotated into the prevention booth to assist with delivering a focused message for kids as well as adults focusing on fire safety around the home. Placement and maintenance of smoke detectors and CO2 detectors were emphasized to the public.

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.

Hazardous Materials Program

- Hosted and Instructed the CSTI Hazardous Materials Assistant Safety Officer Class.
- Completed Pipeline training with Kinder Morgan.
- Completed Area Plan Review training.

Aircraft Rescue Fire Fighting Program

- Acquired 2 training airplanes
- Acquired 13 pairs of High Proximity boots (purchased with Firefighters Fund Grant)
- Provides fire suppression coverage for the USFS when wildfire aircraft are stationed at Castle.



Battalion 17: Los Banos Battalion

Battalion Overview

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.

Goals and Objectives Statement

- Support the area with current and future fuel treatment projects.
- Educate the public on fire safety and hazard reduction.
- Educate the public on the new fireworks ordinance allowing for the use of Safe and Sane fireworks in the County in order to minimize the fire threat in the unincorporated areas of the County, and areas neighboring the SRA.
- Implement an aggressive LE-100 inspection program.
- Support Unit and local fire prevention activities.
- Complete annual Weed Abatement project within the Merced County Schedule "A" portion of the battalion.

Accomplish the Objectives

- Educate the community within the battalion on proper fire hazard reduction through face to face contact during annual LE-100 inspections.
- Develop literature, flyers and/or maps to educate the public on wildfire awareness and evacuations.
- Participate with local stakeholders in annual meetings and community public education events
- Provide monthly statistics to fire prevention on activities.
- Utilize newly purchased equipment to update and maintain the Weed Abatement program within the county.

Measurement

- Educate the community within the Battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
- Participate with local stakeholders in annual meetings and community public education events.



Battalion 18: Merced Battalion

Battalion Overview

The Merced Battalion is located in the Merced area of Merced County; the Eastern portion of Battalion 18 bumps up to the Mariposa County line, with the Southern portion of the battalion bumping the Madera County line. The State Responsibility Area (SRA) Portions of the Battalion are on the Eastern portion of the Unit and the fuel type is mainly annual grass, with topography of mainly rolling foothills.

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

Fire History in Battalion 18 is varied. Many of the fires have been started by lightning. This area is mainly used for cattle ranching, so the occasional fire is 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 and 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.

Goals & Objectives Statement

- Support the area with current and future fuel treatment projects.
- Educate the public on fire safety and hazard reduction.
- Educate the public on the new fireworks ordinance allowing for the use of Safe and Sane fireworks in the County in order to minimize the fire threat in the unincorporated areas of the County, and areas neighboring the SRA
- Implement an aggressive LE-100 inspection program.
- Support Unit and local fire prevention activities.

Accomplish the Objectives

- Educate the community within the battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections.
- Develop literature, flyers and/or maps to educate the public on wildfire awareness and evacuations.
- Participate with local stakeholders in annual meetings and community public education events.
- Provide monthly statistics to fire prevention on activities.

Measurement

- The LE-100 program covers 100% of the known structures in the battalion.
- Battalion personnel logged over 100 hours of time spent on prevention-related activities.

Information & Education

Battalion 18 stations participate in numerous community events to promote fire prevention and awareness. Some of these programs are:

- Merced County Fair
- School presentations K-3 grades

Planning, Engineering, & Structure Ignitability

- 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.
- Plans are being discussed to set up Auto Aid agreements with agencies both within and outside of the battalion.
- Plans with the University of California Merced Campus to enter into an agreement to assist with a Vegetation Management Program on their 6500 acre “Merced Vernal Pools and Grassland Reserve Natural Reserve System” all located in SRA.

Stakeholders in the area include

- UC Merced
- Flying M Ranch
- Hewlett Packard
- Cunningham Ranch
- Merced County Parks and Recreation (Lake Yosemite)

Fire Prevention

- Conduct LE-100 inspections in the SRA to make sure all residents are in compliance with PRC-4291
- Work with Merced County Prevention to ensure that all residents are following the county weed abatement standards.



Battalion 19: Delhi Battalion

Battalion Overview

Communities at Risk in Battalion 19 include the Delhi, Hilmar, Balico, Stevenson and the City Of Livingston. These communities are all within the LRA in the County of Merced. These areas were identified as having moderate to significant asset values with Light to medium fuel hazards. Fire prevention efforts will emphasize structure clearance through the Merced County Weed Abatement Program. Within Battalion 19 are three major stake holders , E.J. Gallo , Foster Farms and Hilmar Cheese Plant.

Goals and Objectives Statement

- Support adjacent battalions with current and future fuel treatment projects
- Educate the public on fire safety and hazard reduction
- Support Unit and local fire prevention activities
- Complete annual Weed Abatement project within the Merced County Schedule "A" portion of the battalion

Accomplish the Objectives

- Educate the community within the battalion on proper fire hazard reduction through face to face contact during annual weed abatement inspections
- Participate with local stakeholders in annual meetings and community public education events
- Provide monthly statistics to fire prevention on activities
- Utilize newly purchased equipment to update and maintain the Weed Abatement program within the county

Measurement

- Educate the community within the Battalion on proper fire hazard reduction through face-to-face contact during annual LE-100 inspections, community events and public meetings.
- Participate in local meetings and community public education events.



APPENDIX A Pre-Fire Projects



PRE-FIRE PROJECTS

For Madera-Mariposa-Merced
Unit (MMU)

2008 to 2016

<u>PROJECT NAME</u>	<u>PROJECT STATUS</u>	<u>TYPE</u>	<u>TREATMENT FOOTPRINT ACRES</u>	<u>TREATMENT FOOTPRINT MILES</u>
08-MRD-MAR-1118	Complete in Maintenance	CFIP	46.93	0.00
44588 Manzanita Dr.	Planned	FirePlan	0.00	0.00
Agua Fria Rd	Complete in Maintenance	FirePlan	22.18	0.00
Ahwahnee Hills Regional Park	Planned	FirePlan	0.00	0.00
Ahwahnee St	Complete in Maintenance	FirePlan	4.02	0.00
Anderson CFIF	Complete in Maintenance	CFIP	93.02	0.00
Azucena Ct	Complete in Maintenance	FirePlan	3.38	0.00
Balmain Trust CFIP	Complete	CFIP	95.51	0.00
Banderilla Dr	Complete in Maintenance	FirePlan	49.57	0.00
Bear Trap Dr	Complete in Maintenance	FirePlan	5.25	0.00
Bondurant Mine Rd	Complete in Maintenance	FirePlan	31.38	0.00
Boyer Rd	Complete in Maintenance	FirePlan	23.01	0.00
Boyer Road VMP	Active	VMP	18.09	0.00
Brook Rd	Complete in Maintenance	FirePlan	1.25	0.00
Brooks Rd	Complete in Maintenance	FirePlan	3.96	0.00
Buckhorn Fire Road Batt I	Complete in Maintenance	FirePlan	43.05	0.00
Carleton Rd	Complete in Maintenance	FirePlan	25.96	0.00
Carstens Rd	Complete in Maintenance	FirePlan	16.97	0.00
Carter Rd	Complete in Maintenance	FirePlan	18.19	0.00
Cascadel Fuel Reduction	Planned	FirePlan	0.00	0.00
Castano Way	Complete in Maintenance	FirePlan	3.78	0.00
Cavin Ln	Complete in Maintenance	FirePlan	9.39	0.00
Cedar Lane	Complete in Maintenance	FirePlan	1.91	0.00
Chapulin Way	Complete in Maintenance	FirePlan	6.14	0.00
Chicharra Way	Complete in Maintenance	FirePlan	9.39	0.00
Chowchilla Mtn Road	Complete in Maintenance	FirePlan	65.83	0.00
Clavel Way	Complete in Maintenance	FirePlan	3.20	0.00
Clouds Rest	Complete in Maintenance	FirePlan	19.41	0.00
Coachman Road	Complete in Maintenance	FirePlan	6.17	0.00
Colorado Road	Complete in Maintenance	FirePlan	43.44	0.00
Converse Road	Complete in Maintenance	FirePlan	29.17	0.00
Crook's Mountain Fuel Break South	Active	CFIP	115.66	0.00
Crook's Mountain North	Active	CFIP	118.13	0.00
Crooks Mountain South	Complete	CFIP	30.25	0.00
Dexter Road	Complete in Maintenance	FirePlan	25.88	0.00
Dogtown Road	Complete in Maintenance	FirePlan	118.34	0.00
E Longview Ln	Complete in Maintenance	FirePlan	40.40	0.00
E Westfall Road	Complete in Maintenance	FirePlan	35.54	0.00
El Capitan	Complete in Maintenance	FirePlan	4.25	0.00
El Portal Fuel Break	Complete in Maintenance	FirePlan	21.73	0.00
El Portal Road	Complete in Maintenance	FirePlan	76.98	0.00
Elliott Dr	Complete in Maintenance	FirePlan	2.07	0.00

<u>PROJECT_NAME</u>	<u>PROJECT STATUS</u>	<u>TYPE</u>	<u>TREATMENT FOOTPRINT ACRES</u>	<u>TREATMENT FOOTPRINT MILES</u>
Ernst Road	Complete in Maintenance	FirePlan	26.50	0.00
Forest Drive	Complete in Maintenance	FirePlan	41.32	0.00
Forest Park Ln	Complete in Maintenance	FirePlan	3.90	0.00
Gaza Way	Complete in Maintenance	FirePlan	0.68	0.00
Granite Springs Road	Complete in Maintenance	FirePlan	45.73	0.00
Greeley Hill Road	Complete in Maintenance	FirePlan	132.77	0.00
Greeley Hill Fuel Treatment	Planned	FirePlan	0.00	0.00
Grillo Drive	Complete in Maintenance	FirePlan	7.82	0.00
Grist Fuel Break	Planned	FirePlan	0.00	0.00
Guadalupe_Fire_Road	Complete in Maintenance	FirePlan	12.80	0.00
Gusanillo Court	Complete in Maintenance	FirePlan	0.60	0.00
Gusano Court	Complete in Maintenance	FirePlan	1.14	0.00
Gusano Way	Complete in Maintenance	FirePlan	3.22	0.00
Harmony Ln	Complete in Maintenance	FirePlan	3.88	0.00
Harris Road	Complete in Maintenance	FirePlan	28.17	0.00
Hazard Reduction Lake Shore Park	Planned	FirePlan	0.00	0.00
Hernandez Drive	Complete in Maintenance	FirePlan	16.88	0.00
Hormiga Way	Complete in Maintenance	FirePlan	2.82	0.00
Incline Road	Complete in Maintenance	FirePlan	39.59	0.00
Indian Peak Road	Complete in Maintenance	FirePlan	93.20	0.00
Indian Springs Rd	Complete in Maintenance	FirePlan	22.35	0.00
Jasmin Way	Complete in Maintenance	FirePlan	2.20	0.00
Jerseydale Road	Complete in Maintenance	FirePlan	47.72	0.00
John West Rd	Complete in Maintenance	FirePlan	19.39	0.00
Lazo Way	Complete in Maintenance	FirePlan	16.11	0.00
Liro Court	Complete in Maintenance	FirePlan	1.10	0.00
Lone Olive Ln	Complete in Maintenance	FirePlan	2.09	0.00
Lush Meadows	Complete in Maintenance	FirePlan	55.81	0.00
Madera County Infrastructure Hazard Miti	Planned	FirePlan	0.00	0.00
Maples Ln	Complete in Maintenance	FirePlan	4.06	0.00
Maravilla Drive	Complete in Maintenance	FirePlan	7.35	0.00
Mariposa County Fire Ready Groups	Planned	FirePlan	0.00	0.00
Mariposa County Infrastructure Hazard Mi	Planned	FirePlan	0.00	0.00
Massetti CFIP	Complete	CFIP	152.97	0.00
Mcdaniel Dr	Complete in Maintenance	FirePlan	6.24	0.00
Meadow Lane	Complete in Maintenance	FirePlan	24.42	0.00
Merced College Tree Removal	Active	FirePlan	155.92	0.00
Miami Highlands Dr	Complete in Maintenance	FirePlan	11.25	0.00
Moonray Ln	Complete in Maintenance	FirePlan	3.66	0.00
Mt Ophir Road	Complete in Maintenance	FirePlan	6.62	0.00
Mudge Ranch Rd	Complete in Maintenance	FirePlan	10.39	0.00
Mykleoaks Road	Complete in Maintenance	FirePlan	3.08	0.00
N Eastwood Dr	Complete in Maintenance	FirePlan	13.87	0.00
Narcisco Way	Complete in Maintenance	FirePlan	2.51	0.00
Old Converse Road	Complete in Maintenance	FirePlan	4.04	0.00
Parmabelle Road	Complete in Maintenance	FirePlan	4.58	0.00
Penon Blanco Road	Complete in Maintenance	FirePlan	46.94	0.00
Pinchot Dr	Complete in Maintenance	FirePlan	15.18	0.00
Ponderosa Wy	Complete in Maintenance	FirePlan	15.06	0.00
Priest Coulterville Road	Complete in Maintenance	FirePlan	24.76	0.00
Quartz Mountain Rd	Complete in Maintenance	FirePlan	23.46	0.00

<u>PROJECT_NAME</u>	<u>PROJECT_STATUS</u>	<u>TYPE</u>	<u>TREATMENT FOOTPRINT ACRES</u>	<u>TREATMENT FOOTPRINT MILES</u>
Railroad Ave	Complete in Maintenance	FirePlan	1.42	0.00
Rainbow Dr	Complete in Maintenance	FirePlan	9.69	0.00
Rainbow Road	Complete in Maintenance	FirePlan	3.34	0.00
Ranchito Drive	Complete in Maintenance	FirePlan	41.66	0.00
Rd 200	Complete in Maintenance	FirePlan	165.87	0.00
Rd 210	Complete in Maintenance	FirePlan	120.19	0.00
Rd 211	Complete in Maintenance	FirePlan	72.44	0.00
Rd 222	Complete in Maintenance	FirePlan	216.20	0.00
Rd 223	Complete in Maintenance	FirePlan	56.09	0.00
Rd 224	Complete in Maintenance	FirePlan	19.26	0.00
Rd 225	Complete in Maintenance	FirePlan	101.19	0.00
Rd 274	Complete in Maintenance	FirePlan	102.01	0.00
Rd 331	Complete in Maintenance	FirePlan	1.92	0.00
Rd 417	Complete in Maintenance	FirePlan	38.00	0.00
Rd 420	Complete in Maintenance	FirePlan	45.36	0.00
Rd 425A	Complete in Maintenance	FirePlan	14.45	0.00
Rd 426	Complete in Maintenance	FirePlan	70.73	0.00
Rd 432	Complete in Maintenance	FirePlan	23.28	0.00
Rd 434	Complete in Maintenance	FirePlan	2.33	0.00
Rd 601	Complete in Maintenance	FirePlan	17.80	0.00
Rd 620	Active	FirePlan	60.47	0.00
Rd 621	Complete in Maintenance	FirePlan	18.44	0.00
Rd 628	Complete in Maintenance	FirePlan	33.96	0.00
Rd 632	Complete in Maintenance	FirePlan	14.34	0.00
River Falls Rd	Complete in Maintenance	FirePlan	9.27	0.00
Road 274	Planned	FirePlan	0.00	0.00
Road 620 Fuel Break	Complete	FirePlan	62.08	0.00
Rosa Court	Complete in Maintenance	FirePlan	1.21	0.00
School House Road	Complete in Maintenance	FirePlan	19.31	0.00
Shady Oak Dr	Complete in Maintenance	FirePlan	5.30	0.00
Sherlock Road	Complete in Maintenance	FirePlan	34.86	0.00
Silva Road	Complete in Maintenance	FirePlan	39.25	0.00
Silver Bar Road	Complete in Maintenance	FirePlan	64.67	0.00
Silver Lane	Complete in Maintenance	FirePlan	8.44	0.00
Snyder Ridge Road	Complete in Maintenance	FirePlan	7.43	0.00
Spook Ln	Complete in Maintenance	FirePlan	8.25	0.00
Starchman Fuel Break	Planned	FirePlan	0.00	0.00
Stillmeadow Dr	Complete in Maintenance	FirePlan	6.60	0.00
Suncrest Dr	Complete in Maintenance	FirePlan	5.17	0.00
Sunset Dr	Complete in Maintenance	FirePlan	4.64	0.00
Timberview	Planned	FirePlan	0.00	0.00
Timberview Rd	Complete in Maintenance	FirePlan	14.64	0.00
Trower Road	Complete in Maintenance	FirePlan	15.61	0.00
Usona Road	Complete in Maintenance	FirePlan	52.29	0.00
Valley Oak Dr	Complete in Maintenance	FirePlan	8.78	0.00
Veater Ranch Rd	Complete in Maintenance	FirePlan	37.64	0.00
Villa Real Drive	Complete in Maintenance	FirePlan	14.46	0.00
Violeta Way	Complete in Maintenance	FirePlan	4.23	0.00
W Longview Ln	Complete in Maintenance	FirePlan	12.25	0.00
Wagner Road	Complete in Maintenance	FirePlan	14.40	0.00
Wallu Ln	Complete in Maintenance	FirePlan	7.02	0.00

<u>PROJECT_NAME</u>	<u>PROJECT_STATUS</u>	<u>TYPE</u>	<u>TREATMENT FOOTPRINT ACRES</u>	<u>TREATMENT FOOTPRINT MILES</u>
Wass Road	Complete in Maintenance	FirePlan	6.46	0.00
Waterloo Fire Road	Complete in Maintenance	FirePlan	11.83	0.00
White Rock Road	Complete in Maintenance	FirePlan	190.39	0.00
Wilcox Dr	Complete in Maintenance	FirePlan	7.16	0.00
Wilfred L Von der Ahe JR Forest Preservee	Complete	CFIP	249.65	0.00
Woodland Drive	Complete in Maintenance	FirePlan	30.53	0.00
Worman Road	Complete in Maintenance	FirePlan	13.62	0.00
Yaqui Gulch Road	Complete in Maintenance	FirePlan	28.85	0.00
Yosemite Oaks Road	Complete in Maintenance	FirePlan	18.97	0.00
Yosemite Pines Dr	Complete in Maintenance	FirePlan	8.29	0.00

APPENDIX B: Unit Goals and Objectives

Goal Statement

The Madera-Mariposa-Merced Unit has developed its fire plan to align with the CAL FIRE “Strategic Plan” and the “California Fire Plan”. The Unit’s specific goals target anticipation and reduction of wildfires within the boundaries of the three counties and are as follow:

- Improve operational effectiveness
- Scale to budgetary and fiscal circumstances
- Foster a healthy ecosystem
- Improve firefighter safety

Objectives

Utilizing Battalion project planning, the Unit’s goals will be supported by 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 cooperation with other public and private efforts to assist with work projects on the ground.
- Educate the public on fire prevention practices that would incorporate fire landscaping and construction to reduce their threat from wildfire along with hazardous fuels reduction projects to keep lives, homes, property and natural resources safe from catastrophic wildfires.



APPENDIX C: History of Fire in MMU

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. 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. 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. In the foothills east of Marysville, McClaren and Bartolome found FRIs from 8 to 49 years for the years prior to 1848. 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. 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.

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

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. 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".

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".

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 (Chukchansi, Mono and Southern Miwok) in the Madera and Mariposa County foothills used fire as a tool for hunting and improving crops of native plants. Jack Rhoan, a local Native American (Chukchansi 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".

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". 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 1850's.

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. 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. 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. 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 1860's 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. Mennsing'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. 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. 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 un-owned 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. 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. 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.

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. 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. 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."

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 (CDF) 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 CDF 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 CDF'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, CDF developed the Chaparral Management Program in the 1970s. This program, which became the present day Vegetation Management Program (VMP) placed the responsibility on CDF, now referred to as the California Department of Forestry & Fire Protection (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.

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 Fire was almost 23 million dollars.

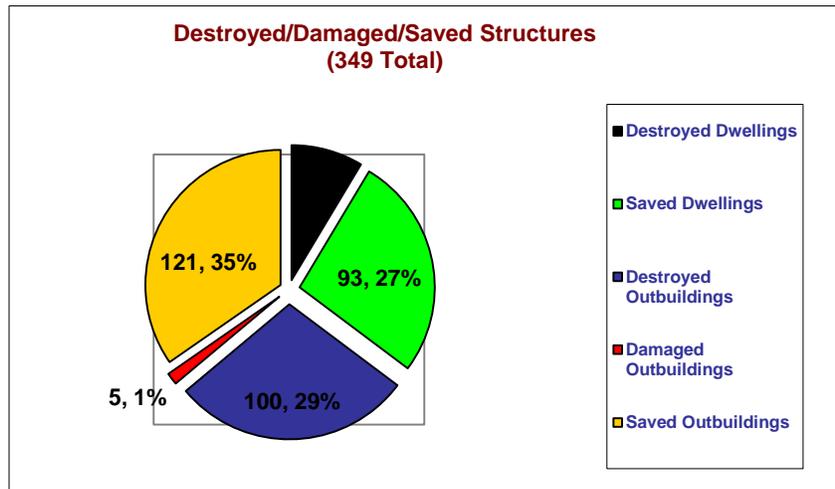
APPENDIX C-1: Telegraph Fire – 2008

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.)

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.

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



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%)		
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			

APPENDIX D: Structure Protection/Evacuation

MADERA-MARIPOSA-MERCED UNIT

Structure Defense/Evacuation Plan

Purpose

Produce a pre-fire planning document to better protect the life and property within the boundaries of the Madera-Mariposa-Merced Unit.

Goal Statement

Under agreement with CAL FIRE Madera-Mariposa-Merced Unit, the Mariposa County Sheriff's Department and the Madera County Sheriff's Department, provide a pre-fire planning process to defend structures against uncontrolled wild fires and an evacuation process to move and house those individuals needing assistance.

Objectives

- Provide a structure defense/evacuation plan for each community in Mariposa and Madera Counties.
- Utilize "lead sheets" to provide specific information regarding each community to better assist in suppression, structure defense and evacuation efforts.
- Develop a mapping process to assist responding personnel in suppression, structure defense and evacuation efforts.



APPENDIX E: Battalion 4220

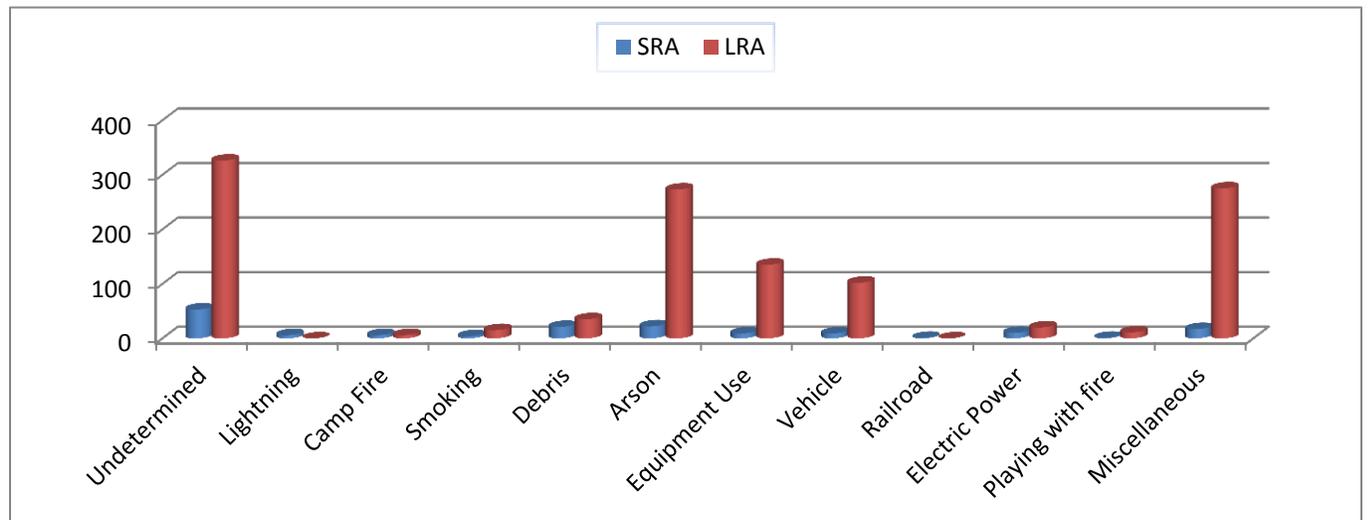
FIRE CAUSE ANALYSIS

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.

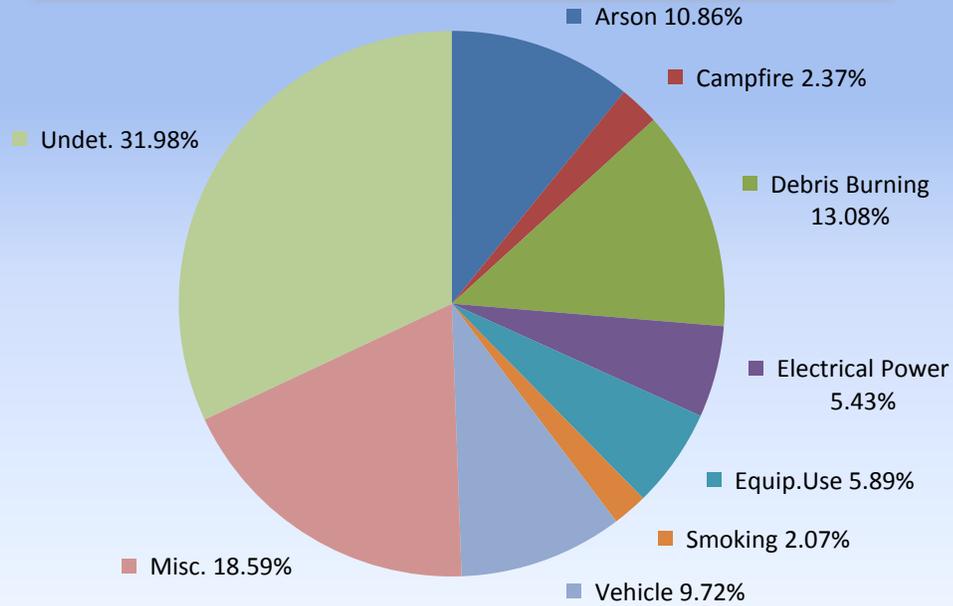
2015 Fire Season Ignition Statistics

MMU Large Fires – 2015		
Fire Name	Acreage	Suppression Cost - <i>estimated</i>
Corrine	920	\$7,039,564.93
Red	134	\$309,587.81
Triangle	60	\$188,334.05
Welder	50	\$20,377.48
Fox	25	\$206,439.32

Wildland Fire Cause 2011-2015					
Cause	2011	2012	2013	2014	2015
Undetermined	135	155	414	379	211
Lightning	7	5	6	3	8
Camp Fire	21	24	15	12	13
Smoking	19	46	37	19	12
Debris	64	164	57	56	81
Arson	428	269	281	295	60
Equipment Use	94	52	175	144	33
Vehicle	256	126	316	111	49
Railroad	4	4	3	1	4
Electric Power	33	105	51	30	31
Playing with Fire	56	45	11	12	16
Miscellaneous	310	335	144	292	91



5 Year Average 2011-2015 Ignitions Causes



4290 Inspections 2015	
SRA Mariposa	
Permit Inspections	60
Land Divisions	2
Major Subdivision	0
GPZA	1
Conditional Use	1
Zoning	0
Certificate of Compliance	3

2015 Yearly Total (minus DSI)

	# Inspections	Hours	# Cites	# Violations	# Ed Contacts	# Ed Hours	Other Hours	Burn Permits
Batt 1	321	15	12	67	430	37	0	396
Coulterville	0	0	0	0	210	15	0	386
Hornitos	65	9	12	57	220	16	0	8
Catheys Valley	256	6	0	10	0	6	0	2
Batt 2	752	28.5	0	0	408	52	2	201
Mariposa	738	24.5	0	0	400	34	2	51
Usona	14	4	0	0	8	18	0	150
Batt 4	75	23	0	25	1473	87	0	555
Bass Lake	12	6	0	14	657	25	0	80
Raymond	60	16	0	11	200	8	0	21
Ahwahnee	0	0	0	0	479	36	0	15
Oakhurst	3	1	0	0	137	18	0	439
Batt 5	508	39	1	15	1395	126	0	486
Sta 8	131	28	0	0	1071	100	0	62
Rancheria	12	8	1	3	172	13	0	200
Coarsgold	365	3	0	12	152	13	0	224
Batt 17	0	3	2	0	8	3	0	0
Los Banos	0	3	2	0	8	3	0	0
Unit Totals	1656	109	15	107	3714	305	2	1638

2015 Defensible Space Inspector Program Totals

	1st Inspections	2nd Inspections	3rd Inspections	Contacts
Ahwahnee	227	38	5	133
Bass Lake	45	14	7	33
Coarsegold	786	123	26	535
Coulterville	252	47	12	5
Mariposa	1257	218	16	38
Oakhurst	363	66	19	229
Rancheria	386	121	40	261
Raymond	91	39	0	62
Usona	717	134	21	2
Total	4,127	800	146	1,298

APPENDIX F: Battalion 1 Projects

Fire Roads Battalion 1 Fire Road System

Over the last 10 years in Battalion 1 we have been successful in reestablishing fire roads. We strive to maintain the roads, the trust and the 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 efforts. This year we will attempt to expand this program 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.

Listed below and supported with topographical maps are the fire roads and their current status that run through Battalion 1.

Buckhorn Fire Road:

1. **Objective:** Is to maintain this already established fire road/fuel break, to help prevent the spread of or contain a wildfire within the North Fork of the Merced River, Chinese Gulch, and Indian Gulch Watersheds. This project is also designed to create access to the North Fork of the Merced River.
2. **Current status:** A new A-719 process is in the planning phase to piggyback on to the Ponderosa Fuel Break/grading project. This will also include the creation of a 100ft shaded fuel break, following the road as appropriate. This is a critical fire road within the Battalion and needs action swiftly. The project is 9.5 miles in length.
3. **Future Planned Actions:** Coordination with Unit Forester and Pre-Fire Engineer to validate and complete the A-719 process is of utmost importance. This process will allow us to receive the required permission from effected private landowners and Federal agencies that hold stake. This will also allow granted permission to maintain this crucial project on an annual basis.

Ponderosa Fuel Break:

1. **Objective:** Is to obtain access and to create a fire control point or aid in slowing or containing fire spread into the community of Greely Hill. This will also allow protection of portions of the North Fork of the Merced River watershed.
2. **Current status:** This access/fire road is 8.8 miles in length and runs from Cuneo Rd to Dogtown Rd. This road requires maintenance both by grading and brushing as continued evaluations are obtained.
3. **Future Planned Actions:** Currently there are two A-719 processes in place for this project. The first is obtaining and updating permission for grading. The second is to obtain permissions to create a 200 ft. wide shaded fuel break with coordination of private land owners and BLM. Funding source will potentially be through the Grant process with Mariposa County Fire Safe Council.

Wagner Ridge Fuel Break:

1. **Objective:** To create a 400 ft. shaded fuel break, to provide protection of USFS DPA. The fuel break will help slow or stop the spread of fire coming from the Greely Hill Community to Anderson Flat, Buck Meadows and Smith Station Road.
2. **Current Status:** Battalion one's portion of the fuel break begins at the intersection of incense cedar road at the Tuolumne County line to Smith station rd., south along Wagner Ridge. Currently the fuel break is 200 ft. wide created by the USFS Stanislaus N.F. The fuel break is currently in an unfinished state on a half mile section of Private and BLM land. The remaining fuel break is need of maintenance.
3. **Future Planned Actions:** Are to Coordinate with Stanislaus N.F., BLM, TCU, and Sierra Nevada Conservancy Group to obtain Prop 1 funding to widen the fuel break to 400 ft. and complete the unfinished ½ mile section of private and BLM land.

Hunters Valley Access Road:

1. **Objective:** Is to gain access and provide a fuel break to Williams Peak lookout and to Lake McClure. This also allows potential protection of the Merced River watershed, and Hunters Valley and Bear Valley Communities.
2. **Current Status:** In 2014 a fuel Break was constructed by BLM from the access to Williams Peak lookout. The road is currently in need of maintenance and has not been maintained since 2008.
3. **Future Planned Actions:** Actions planned are to continue to evaluate the access road for grading needs, and to coordinate with BLM on the maintenance of the 2014 fuel break.

Tim Brush Fuel Break:

1. **Objective:** Is similar to the Buckhorn fuel break. Maintenance of the road and fuel break are crucial to slow the spread or contain a fires spread to the North Fork of the Merced River watershed.
2. **Current Status:** The fuel break has not been maintained for several years and needs to become a priority to reestablish the fuel break. The fuel break runs latterly with the Buckhorn Fuel break from Dog Town Road to the North Fork of the Merced River. It is crucial to Ham Coward Gulch, Gentry and Merced River watersheds.
3. **Future Planned Actions:** Are to coordinate with BLM and the USFS to reestablish the fuel break and provide for annual maintenance.

Van Ness Fire Road:

1. **Objective:** Is to maintain access and fuel break for 7 miles from Cornetts Entrance to White Rock road. This will provide protection of the open range land, multiple watersheds and Cathey's Valley RAWS station.
2. **Current Status:** The fire road is scheduled for routine grading and maintenance as needed, and is evaluated each spring,
3. **Future Planned Actions:** This road is under continued evaluation and will be graded as needed.

Penon Blanco Road:

1. **Objective:** To provide access to the Penon Blanco Lookout and repeater tower and also serves as a fire road.
2. **Current Status:** The road is currently maintained by CAL FIRE and has been identified under a grant submittal project to provide funding to support needed maintenance.
3. **Future Planned Actions:** The road will be prioritized for maintenance by grading and will be further evaluated for future brushing needs.

Greely Hill VMP:

1. **Objective:** Is to reduce large overgrown Chamise, Chaparral, and Manzanita stands to provide protection of the community of Greely Hill and the Greely Hill primary access road of Hwy 132.
2. **Current Status:** Coordination continues with the Mariposa County Fire Safe Council to secure funding for the support of building fire breaks and fuel reduction along Greely Hill Rd. from Ponderosa way to Priest Coulterville Road. Continued coordination with private land owners and BLM to secure needed funding through the A-719 or RM75 process to gain permissions and funding for the required preparation work.
3. **Future Planned Actions:** Are as soon as the A-719 or RM75 processes are completed. Construction of fire control lines will begin with the potential of burning within the prescription as soon as warranted.

Crown Lead Road:

1. **Objective:** Is to create access and a potential fire control point off Lake McClure, and to also provide protection of the Coe Gulch and Buckhorn creek watersheds.
2. **Current Status:** Is that the road is an access road only at this point maintenance and brushing need to take place to make this a possible point of fire control.
3. **Future Planned Actions:** This Road has been identified as a Battalion 1 top 10 priority. Plans to utilize hand crews and potential private vendors to create a shaded 200ft fuel break along the entire length of the road

Black Mountain Fire Road:

1. **Objective:** Is to create access along this 4.25-mile-long road to the North Fork of the Merced River.
2. **Current Status:** In need of maintenance and repair of the uphill grade 1.0-mile east of the Merced River that was washed out the winter after the Telegraph Fire.
3. **Future Planned Actions:** Is to repair the washed out section of road and continue maintenance as warranted in coordination with the USFS and BLM as appropriate.

Future Proposed Projects

- **Buckhorn Shaded Fuel Break:** This project is similar to the Greely Hill VMP in that it is a joint effort with BLM. The proposed project will include both BLM and private lands, the northern portion of the Buckhorn fire road is a mix of private and BLM land that runs parallel to state Highway 49. In the summer Highway 49 is a road that is highly traveled by tourists coming and going from Yosemite National Park. There is a long history of fire activity along this corridor with the main ignition source being vehicular traffic. This project would eliminate and or thin brush and fuels along the Eastern side of Hwy 49.
- **Highway 140 corridor:** This plan is to coordinate with CAL TRANS, CHP, and appropriate landowners to pre burn the south or Eastbound shoulder of Highway 140 from the Merced/Mariposa county line east towards Old Highway in the area of the Day Ranch. Roadside fires are common along these types of long straightaways combined with an uphill grade with vehicles under power increasing the potential for carbon or other heat sources being exposed to the dry grass along the shoulder. Daily winds out of the North-North West also increase the potential for dangerous to critical rates of spread. Pre burning the shoulder from the landowner's dozer line designed to protect their property from such starts to the graveled edge of the shoulder can be significantly reduced potential accidental starts from vehicles or flying debris.
- **Horseshoe Bend Mtn. Fire Road:** Details for this road are still in the making. However the plan would be to propose a fire road and fuel break that would run the ridge line from Crown Lead Road to the top of Maxwell Creek and eventually tie into a shaded fuel break from the end of the proposed fire road down to Hwy 132.
- **Fuqua Fire Road:** Details for this road are also in the making. However the plan would be to propose a road and fuel break that would start at Penon Blanco road to the edge of Hwy 132 and eventually tie into Hwy 132 with a shaded fuel break this will also tie this into the proposed Horseshoe Bend Mtn. Fire Road.
- **Fly Away Ridge:** This ridge runs parallel to state Hwy 49 south of the Buckhorn Fire road. Establishing a fire road or fuel break on this ridge would help slow or serve as a control point from fires that would start along the eastern side of Hwy 49. This Joint effort with BLM would be coordinated to also protect the Merced River watershed.

On-Going Cooperative Projects

- **Brushing of Greely Hill Roads:** This is a joint venture with Mariposa County Roads Dept.. The project allows for clearing the right of ways to overgrown brush alongside county roads thus providing better ingress and egress of emergency equipment and citizens simultaneously.
- **Greely Hill/Coulterville Chipping:** This joint effort with the Mariposa County Fire Safe Council that allows for clearing of brush and trees on private property for those citizens who cannot perform the needed work of providing the required LE-100 defensible space.
- **Removal of drought stressed and beetle killed trees:** This is a joint effort with the Mariposa County Fire Safe Council through a grant process that will allow removal of drought or beetle killed trees. This effort is critical to the reduction of large flammable fuels that can lead to large devastating fires.
- **Brushing of non-county maintained roads:** This joint effort with the Mariposa County Fire Safe Council will provide funding and identification of non-county maintained roads that are in need of brushing and chipping to allow better access and egress of emergency equipment and private citizens and provide better safety of the public.

APPENDIX G: Battalion 2 Projects

Battalion Two Projects

With the re-commitment to the Natural Resource side of the Department current fuel reduction projects are getting re-categorized as Vegetation Management Projects (VMP). This will give us the option to create shaded fuel breaks and either maintain by prescribed burning, chemical herbicide treatments, or continue to manually brush and burn. Boyer VMP is currently classified as a VMP and the Starchman project will roll over to a VMP with parcel owner support.

Fire road maintenance is progressing with the completion of Guadalupe Fire Road and Stumpfield Road to the English Ranch. Watt Road project is still in the works and will be re-addressed in 2017. The Sierra National Forest has asked for our assistance with maintaining Forest Roads in the State Direct Protection Area (DPA). The 'Good Neighbor' agreement and approval by the SNF Timber Management Officer has allowed for grading DPA Access Roads for removal of hazard trees that block ingress and egress of roads that border DPA.

Stumpfield Road Fuel Break

1. **Objective:** Maintain and improve the 6 mile long, 300 feet wide, shaded fuel break along Stumpfield Mountain Road, south of Mariposa adjacent to the Chowchilla River Drainage. To keep a fire, established in the Chowchilla River drainage, from running west below identified communities at risk.
2. **Current status:** Originally facilitated by the Mariposa Fire Safe Council, with funding from the Prop 40 Community Action Grant, The environmental Compliance review was conducted in spring 2007 and 2008. Project was started during spring of 2008 with mastication equipment working in specific areas that were considered suitable for mechanized equipment. Chemical herbicide treatment, for maintenance, has been approved and a full review of the project with updated CEQA and CAL FIRE-719's are complete with a projected date of completion of fall 2017. Tree mortality continues to plague this fuel break and a plan is in place to remove bug kill trees.
3. **Future Planned Actions:** Unit Forester and hand crews to identify and create buffers around endangered elderberry bushes. Achieve fuel reduction in the sensitive riparian areas. Utilize mechanized equipment for maintenance and crews to remove bug kill trees off the fuel break. Grade and maintain Stumpfield Mountain Road down to the English Ranch.

Watt Road Fuel Break

1. **Objective:** Reduce fuel loading and create 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. Use this fuel break to join the Stumpfield Road Fuel break, which will run across the Chowchilla River into the Madera County, with the Metcalf Gap Fuel Break.
2. **Current Status:** Chemical herbicide treatment has been approved and a full review of the project with updated CEQA and CAL FIRE-719's will commence in the fall of 2016 with a projected date of completion of fall 2017.
3. **Future Planned Action:** With an updated CEQA and 719's the project can commence. Evaluation of project tree mortality and feasibility.

Lushmeadows Fuel Break

1. **Objective:** Maintain and keep viable the 9 mile long, 300 feet wide, shaded fuel break that starts at Whispering Pines Drive (off Darrah Rd.) up to the ridgeline that parallels Clouds Rest Drive on the west aspect of the Lushmeadows Subdivision. Following a strategic ridge line, the fuel break heads south of Lushmeadows and parallel's Tip Top Road to the west (through private parcels and ends at Wass Road and Highway 49. This project will slow a fires progress into the communities of Lushmeadows, Usona, and Ponderosa Basin and bring any crown fire back to ground.
2. **Current Status:** Fuel break is plagued with bug kill trees. Working in conjunction with parcel owners and PG&E to remove all bug kill trees from the fuel break. Concurrently we are improving and maintaining sections of the fuel break utilizing hand crews, engine crews and TMTF equipment for dead tree removal by means of burning and chipping.
3. **Future Planned Action:** Amend current CEQA to allow for mechanized ground disturbing equipment to maintain the viability of this fuel break. Remove all bug kill and drought killed trees on the fuel break. Utilize Cal Fire CDCR hand crews to maintain 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.

Boyer VMP

1. **Objective:** Establish a fuel break that supports the Lushmeadows fuel break to limit fire travel North/South. The Boyer VMP is a two phase project. The first phase runs down the prominent ridgeline from Illuette Falls (off Clouds Rest) to Sherrod Road and spits to Homestead Drive. The second phase will be a cut, pile and burn on both sides of Homestead Drive into Boyer Road out to Highway 49 South.
2. **Current Status:** Phase one has been approved through the California Environmental Quality Act (CEQA) and the 719's process is complete with the exception of two major parcels. One parcel is under new ownership and the RM-75 has not been signed. The other parcel is an absentee owner and we cannot locate the parcel owner
3. **Future Planned Action:** Maintain what progress has been made on phase one. Start the 719 process on phase two and attempt to get the RM-75's for the two parcel owners on phase one.

Grist Fire Road

1. **Objective:** To create a fuel break that will potentially keep an established fire from hitting Ashworth Road and running into Bootjack South. The brushing of Grist Road and improvement of the existing fire road, that runs 2.5 miles along Grist Road south of Mariposa, and utilizing a BLM owned NEPA approved parcel. Facilitated by local property owners and working in conjunction with CAL FIRE Battalion personnel, CDCR crews and BLM.
2. **Current Status:** BLM 120 acre parcel has been NEPA approved. Attempting to collect all 719's to submit to Sacramento Lands. BLM parcel project work is ongoing and is 45% complete.
3. **Future Planned Action:** When 719's are approved and sent back crew and engine work will begin for brushing, burning and chipping. Amended CEQA to utilize mechanized equipment off road.

Mount Ophir Fuels Reduction Project

1. **Objective:** Establish a control line that will protect the Community of Mt. Bullion and create a training ground for wildland operations in preparation for peak staffing.
2. **Current Status:** Reduce fuel on 1300 acres on Old Toll Road and Hwy. 49 North, northwest of Mariposa. Fuels reduction will be accomplished through mechanized equipment and hand crew work. 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. CEQA has not been approved which has led to a halt in training and fuel reduction. Parcel owner (Paloogevich) does not want a CEQA on the property but is willing to let us use the property.
3. **Future Planned Action:** Negotiate with parcel owners to get CEQA approved.

Mariposa Fire Safe Council "Non County Maintained Roads"

1. **Objective:** Strategic fuel reduction along non county maintained roads throughout the Battalion to allow egress and ingress to critical infrastructure to include fuel breaks, water access and control points.
2. **Current Status:** Mariposa Fire Safe Council has encumbered the grant to begin this project. MFSC is in the process of gaining landowner permission to proceed.
3. **Planned Future Action:** Coordinate with the MFSC for the maintenance of the completed road projects.

Dubberke Fuel Break

1. **Objective:** Create a fuel break on the east side of Mariposa proper starting at Trabucco Road running north to Highway 140 along the main N/S ridge line
2. **Current Status:** Mariposa Fire Safe Council, through a PG&E grant, completed the project last year by using mechanical mastication and hand brushing. Mariposa Public Utilities District has an aggressive mastication project to the East of this project.
3. **Planned Future Action:** Coordinate with the MFSC for the maintenance of the project.

Starchman Fuel Break

1. **Objective:** Complete a fuel break from Trabucco Road south to Stockton Creek Road. To establish and maintain a fuel break from the Stockton Creek drainage on the south the Hwy 140 to the north to protect Mariposa proper and to slow an established fire from moving east into Midpines.
2. **Current Status:** CEQA complete with an amendment for mechanical equipment and fire road maintenance (grading). 719's have been sent to Lands Use in Sacramento and we are waiting for Region to return them to the Unit.
3. **Planned Future Action:** Start cutting and chipping from the road bed till CEQA amendment is complete. Utilize Tree Mortality Masticator on road bed to start the project on south end. Utilize hand crews and engine crews to start limbing and brushing the north end of the project.

Feliciano Strategic Fuel Treatment

1. **Objective:** This project would protect the east side of Midpines from an established fire that is coming up out of the Merced River Canyon and/or Bear Creek drainage.
2. **Current Status:** A conceptual proposed fuels break from U.S. Forest Service fuel break on Feliciano Mountain to Highway 140 at Bear Creek Bridge. Treatment types will include mechanical mastication, hand brushing, and tree limbing. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning. Property ownership is almost entirely Bureau of Land Management. Mariposa Fire Safe Council Project Contingent on funding with a Sierra Nevada Conservancy Grant (\$200,000)
3. **Planned Future Action:** Continue to plan and coordinate with stakeholders.

Fish Camp Strategic Fuel Reduction Project

1. **Objective:** A proposed fuels reduction project to include State Responsibility Area in and around the community of Fish Camp in Mariposa County. Treatment types will include mechanical mastication, hand brushing, and tree limbing Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, and winter time pile burning. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements.
2. **Current Status:** Conceptual phase that will include mastication, hand brushing, tree limbing and prescribed fire.
3. **Planned Future Action:** Continue to plan and coordinate with stakeholders.

Bumgardener Fuel Reduction Project

1. **Objective:** Create fuel break on the west side of Mariposa proper starting at Highway 49N. and Spaulding Road running South to Highway 140 at Springhill School along the main ridge
2. **Current Status:** Conceptual Phase that will include mechanical mastication, hand brushing, tree limbing and prescribed fire.
3. **Planned Future Action:** Start the 719 process and work with Unit Forester for appropriate CEQA.

Midpines / Mt. Bullion Fuel Break

1. **Objective:** Establish a 400-500 acre proposed shaded fuel break to follow a path of ridge tops and established fire line from Midpines to Mt. Bullion. Will use fire control and contingency fire lines that were utilized during the Telegraph Fire and were found to be strategically appropriate. Treatment types will include mechanical mastication, hand brushing, tree limbing and prescribed fire. Fuels reduction to be accomplished through the usage of mechanized equipment, hand crews, and winter time pile burning.
2. **Current Status:** Shared with the Midpines community and well accepted. First part of the project will be with the County Roads to clear their right away along fore mentioned roads.
3. **Planned Future Action:** Continue to plan and coordinate with stakeholders.

Midpines Interior Strategic Fuel Reduction Project

1. **Objective:** To create a fuels reduction project bounded by Colorado Road, Rumley Mine Road, Telegraph Road, Sherlock Road, East Whitlock Road, and Highway 140. Treatment types will include mechanical mastication, hand brushing, and tree limbing Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, County Road Department and winter time pile burning. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements. Use of Fuel Hazard Reduction Emergency funding on parcels meeting requirements.
2. **Current Status:** In the conceptual phase at this time.
3. **Planned Future Action:** Continue to plan and coordinate with stakeholders.

Silver Bar Fuel Break

1. **Objective:** Create a 120 acre shaded fuel break to follow Silver Bar Road in Mariposa County. This will assist in keeping an established fire in the Striped Rock Canyon. Treatment types will include mechanical mastication, hand brushing, and tree limbing Fuels reduction to be accomplished through the use of mechanized equipment, hand crews, County Road Department and winter time pile burning.
2. **Current Status:** In the conceptual phase at this time.
3. **Planned Future Action:** Continue to plan and coordinate with stakeholders.

Vanderau VMP

1. **Objective:** Reduce the high dead to live fuel ratio present due to chemical treatment from property owner. Fuels reduction completed through mechanized equipment, crew brush clearance, and pile burning. A fuels reduction project on 180 acres of a 429 acre parcel located northeast of Mariposa, adjacent to the Stockton Creek Watershed area.
2. **Current Status:** Project was started 10 years ago and completed. This project will be renamed as the "Allred Fuel Reduction Project/VMP.
3. **Planned Future Action:** Start the 719 process for parcel owners along Allred Road out to Hwy 140. Work with Unit Forester for a two phase project. 1st phase to brush and masticate Allred Road. 2nd phase to convert project into a VMP utilizing the RM-75 process so we can potentially burn approximately 3,500 acres.

Mariposa Creek Fuel Reduction (MPUD)

1. **Objective:** This project will reduce the fuel hazard that lies directly on the town's west side and will re-establish a green belt that has become overgrown with native vegetation.
2. **Current Status:** Fuel reduction project that runs two miles of creek bottom from the Mariposa County Jail to the intersection of Hwy 140 and Hwy 49 South. Project will be comprised of cut and burn and cut and chip utilizing unit track chipper.
3. **Planned Future Action:** 719 process along with a CEQA that will allow us to work in and near Mariposa Creek.

Smither Fire Road

1. **Objective:** A categorical exemption project that requires the grading of Smithers road and brushing the road 25 feet on each side. This will improve ingress and egress for emergency vehicles and will become part of the future planned Footman Ridge Laterals.
2. **Current Status:** conceptual phase
3. **Planned Future Action:** Continue to coordinate and plan with current stakeholders and land own

APPENDIX H: Battalion 4 Projects

Fire Roads

Listed below are the fire roads and their current status for Battalion Four.

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.

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.

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.

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.

Fuel Reduction

Ahwahnee Hills Park Fuel Reduction Project

1. **Objective:** 300' shaded fuel break on the West side of the Ahwahnee Hills Park along Hwy 49S. to reduce roadside ignitions and provide a fuel break for fires coming from the Chowchilla River Drainage. Fuel reduction, brush removal and shaded fuel breaks on the Western and Northern boundaries of the park for the wildland fire protection of the communities of Nipinnawassee and Ahwahnee.
2. **Current Status:** Planning stage
3. **Future Planned Actions:** Coordinate with the Ahwahnee Hills Park Board (Friends of the Park) to seek grant funding sources for the project.

Road 620 Phase 1 Fuel Break (Roundhouse 1 & 2)

1. **Objective:** A seven mile long, 300' wide shaded fuel break northeast of Ahwahnee. Facilitated by the Eastern Madera County Fire Safe Council through funding by Prop-40 Community Action Grant, (CAG). .
2. **Current Status:** Maintenance.
3. **Future Planned Actions:** Placed in maintenance status. Funding sources sought for project.

New Road 620 Phase 2 Fuel Break (Old Nip)

1. **Objective:** A three mile long, 300' wide shaded fuel break north of Ahwahnee. Project starts at the intersection of Road 620 & Road 628 and ends at Worman Road and Highway 49. Facilitated by the Eastern Madera County Fire Safe Council and funded by Prop-40 Community Action Grant (CAG).
2. **Current Status:** Maintenance.
3. **Future Planned Actions:** Placed in maintenance status. Seeking funding sources.

Road 620 Phase 3 Fuel Break

1. **Objective:** A proposed fuel break to allow for fuel breaks from Road 620 Bissett Station Rd south along the Miami Creek and Carter Creek drainages. Currently these drainages do not have accessible control points for fires coming from the Chowchilla or Fresno River drainages (Harlow Fire burn pattern). Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
2. **Current Status:** Active. Project was not completed due to federal funding loss. Project is currently in the CEQUA and 719 process as an SRA Fuel Reduction Project.
3. **Future Planned Actions:** Complete project and place in a maintenance status.

John West Rd (Badger Gap) Fuel Break

1. **Objective:** This shaded 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. Treatment types have included mechanical mastication, hand brushing and tree limbing. Fuels reduction has been accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
2. **Current Status:** Complete/Maintenance
3. **Future Planned Actions:** Seek funding for maintenance.

Hwy 41 Deadwood Summit Fuel Break

1. **Objective:** A proposed fuels reduction project to allow for fire safe clearance along the Cal Trans right-of-way north of the Deadwood summit into the town of Oakhurst. Hwy 41 in this area is an overgrown mid-slope road that represents the primary ingress and egress thoroughfare for eastern Madera County. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning or chipping. Coordination with Cal Trans as a project sponsor and traffic control will be essential. It will be necessary to limit the impact to traffic along this busy thoroughfare.
2. **Current Status:** Planning Stage
3. **Future Planned Actions:** Funding source and sponsor being sought for project.

Fresno River – Oakhurst town site

1. **Objective:** The Fresno River in Oakhurst proper is overgrown and is a continuous fuel bed along the banks of the river. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
2. **Current Status:** In the conceptual phase at this time.
3. **Future Planned Actions:** Sponsor and funding being sought for project.

Sugar Pine Strategic Fuel Reduction Project

1. **Objective:** A proposed fuels reduction project to include State Responsibility Area (SRA) in and around the community of Sugar Pine in Madera County. Treatment types will include mechanical mastication, hand brushing and tree limbing. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning.
2. **Current Status:** Planning Stage
3. **Future Planned Actions:** Funding and sponsors being sought for project.

Bass Lake Interior Strategic Fuel Reduction Project

1. **Objective:** A proposed fuels reduction project bounded by Road 274 (Crane Valley Road) and the Bass Lake shoreline. Treatment types will include mechanical mastication, hand brushing and tree limbing. Fuels reduction to be accomplished through the use of mechanized equipment, hand crews and winter time pile burning. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements. Use of Fuel Hazard Reduction Emergency funding on parcels meeting requirements.
2. **Current Status:** Active
3. **Future Planned Actions:** Currently working on through tree mortality emergency funding to remove dead hazard trees along Rd 274 in cooperation with Madera County Road Department and the USFS.

Cedar Valley Fuel Reduction Project

1. **Objective:** Eastern Madera County Fire Safe Council Project. A 300' wide shaded fuel break along Cedar Valley Road. A 300' foot shaded fuel break located strategically around the community of Cedar Valley. The fuel breaks is on State Responsibility Area (SRA) and enhance existing U.S. Forest Service fuel reduction projects in the Cedar Valley area. Treatment types include mechanical mastication, hand brushing and tree limbing.
2. **Current Status:** Maintenance
3. **Future Planned Actions:** Seek funding sources for continued maintenance.

Crook's Mountain Fuel Break

1. **Objective:** A twelve mile long, 300' wide shaded fuel break northwest of Oakhurst. Facilitated by the Eastern Madera County Fire Safe Council through Prop-40 Community Action Grant Funds.
2. **Current Status:** Maintenance
3. **Future Planned Actions:** No maintenance has been completed on this project since completion. Plan to evaluate whether the project can be salvaged by maintenance or if the project needs to be placed in active status and redone.

Massetti Range Improvement (RI) Burns

1. **Objective:** A series of eight (8) RI burns starting in the mid-1990s through 2007. Area southwest of the town of Oakhurst. Funded through Prop-40 California Forest Improvement Program (CFIP).
2. **Current Status:** Completed
3. **Future Planned Actions:** None

APPENDIX I: Battalion 5 Projects

Cascadel Woods Fuel Reduction / Shaded Fuel Break

1. **Objective:** Is to maintain the open spaces (County Recreational) areas of the Cascadel Woods community. This project includes fuel reduction and maintenance of over 40 acres. This is being done to reduce fuel loading and create Temporary Refuge Areas (TRA's) for residence and fire crews. The past project that was completed in 2012 by the Eastern Madera County Fire Safe Council.
2. **Current Status:** Madera County is currently working on an easement agreement with the USFS to open an emergency fire exit/access from the Cascadel Drive to Mammoth Pools Road. Phase 1 and 2 have been completed. They are as follows:
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 fire 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, chipping and winter time pile burning.
3. **Future Planned Actions:** Continued construction and maintenance of the fuel break along Cascadel Road through spraying; brushing/pile burning is needed on an annual basis. Continued maintenance will need to be conducted on both phases of the past project but also Cascadel Road. Annual maintenance of clearing and brushing along with grading will need to be conducted. Mount Bullion Camp has signed a letter of commitment for 20 crew days from October 2016 through March 2017 to assist the Cascadel Woods home owner association with up keep.

Quartz Mountain Fuel Break

1. **Objective:** Is a nine mile long, 300 foot wide shaded fuel break below Pacific Gas and Electric (PG&E) high voltage power lines. Project starts west of the Indian Lakes Subdivision (Quartz Mountain) and ends at State Highway 41 and the Deadwood Fuel Break on the Veater Ranch.
2. **Current Status:** Project was completed in 2010.
3. **Future Planned Actions:** Continued maintenance through spraying and brushing/pile burning is needed on an annual basis.

Waterloo Fire Road

1. **Objective:** 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.
2. **Current Status:** Agreements need to be updated with current property owners to ensure access to CAL FIRE resources.
3. **Future Planned Actions:** Continued maintenance through spraying, mechanized equipment, chipping and brushing/pile burning is needed on an annual basis.

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

1. **Objective:** These roads 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.
2. **Current Status:** We are currently working 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.
3. **Future Planned Actions:** 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. Cooperation with non-profit organizations will be needed to obtain grant funding.

Old Dupzik Fire Road(Blue River 3 Consolidated Fuel Breaks)

1. **Objective:** The Eastern Madera County Fire Safe Council has obtained grant funding for this project in three phases. This project once completed will establish 10 miles of fuel breaks. The project will reduce fuel loading and shaded fuel breaks on over 121 acres of land.
2. **Current Status:** Phase 1 Gold Creek – Will construct a fuel break from Ward Road, south of Road 200 and west back to Road 200 at Gold Creek. This will establish a fuel break around the CAL FIRE Rancheria Station and neighboring USFS lands along with private properties. This phase is 2.5 miles long by 100' wide reducing 30 acres of heavy fuel load. Treatments will include hand-crew brushing and cutting, pile burning and chipping. Phase 2 Ward Mountain – Will construct a fuel break from Ward Mountain (Road 220) north and west to the Flying "O" Ranch Road. This phase is 3 miles long by 100' wide and will reduce fuel on 36 acres providing protection to the Indian Lakes and Quartz Mountain subdivisions. Phase 3 Fresno River – Will construct a fuel break from Wells Road north to the Fresno River and south to Road 600. This phase is 4.5 miles long by 100' wide clearing 55 acres of overgrown brush. Providing protection to the communities of Coarsegold, Oakhurst and Ahwahnee.
3. **Future Planned Actions:** Land owner permissions will need to be completed by the fall of 2016 so crew work can start in the spring of 2017.

North Dome Fire Road

1. **Objective:** This road was established during the arson series of 2013 in Yosemite Lakes Park where more than 30 fires were started in the area. This road connects Revis Road and North Dome Drive.
2. **Current Status:** Grader and Backhoe work has been completed to make the road drivable for emergency equipment along with establishing a fuel break between residential homes.
3. **Future Planned Actions:** Continued work will require grading, spraying, brushing, chipping and pile burning on an annual basis.

Road 274 Roadside Maintenance/Fuel Break

1. **Objective:** This project follows road 274 between North Fork and Browns Ditch. This was a control line for the North Fork Fire in 2001.
2. **Current Status:** This project has been funded and is currently being managed by the Eastern Madera County Fire Safe Council.
3. **Future Planned Actions:** Maintenance will be required on an annual basis to include spraying, chipping and brushing/pile burning.

APPENDIX J: Battalion 16 Projects

Snelling Highway (G Grade) Rangelands Fuel Break

1. **Objective:** 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.
2. **Current Status:** 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.
3. **Future Planned:** 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.

Merced River Fuel Break

1. **Objective:** 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.
2. **Current Status:** 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.
3. **Future Planned:** Completion of these fuel breaks will require Battalion 16 personnel to network with property owners to establish and maintain these fuel breaks.

Snelling/Rock Tailings Fuel Breaks

1. **Objective:** 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.
2. **Current Status:** 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.
3. **Future Planned Actions:** Completion of these fuel breaks will require Battalion 16 personnel to network with property owners to establish and maintain these fuel breaks.

APPENDIX K: Battalion 17 Projects

Billy Wright Fire Road

1. **Objective:** Is to maintain the already established road/fuel break, to help prevent the spread of or contain a wildfire within the back country of Los Banos from Jasper Sears Rd. to Burch Haven Cabin.
2. **Current Status:** This project has been completed for the 2016. This is a critical road to access the back country of Los Banos. The project is 14.5 miles in length.
3. **Future Planned Actions:** This is a road that CAL FIRE maintains every year.

Mustang Fuel Break

1. **Objective:** Is to maintain the already established fire road/fuel break to help prevent the spread or contain a wildfire.
2. **Current Status:** This project has been completed for 2016. The project is 15 miles in length.
3. **Future Planned Actions:** This is a fire road/fuel break that CAL FIRE maintains every year.

152 Corridor Fuel Break

1. **Objective:** Is to maintain the already established fuel break, to help prevent the spread of or to contain small road side wildfires alongside HWY 152 from San Luis Creek to Dinosaur Point.
2. **Current Status:** California State Parks are in the process of completing this project. This project is a 10 miles in length.
3. **Future Planned Actions:** This fuel break is completed every year.

San Luis Creek Fuel Break

1. **Objective:** Is to maintain the already established fuel break, to help prevent the spread of or contain small road side wildfires alongside HWY 152 at Romero's Visitor Center to the North Access to San Luis Creek Recreational area.
2. **Current Status:** California State Parks is currently in the process of completing this project. This project is four miles in length.
3. **Future Planned Actions:** This fuel break is completed every year.

Future Proposed Projects

Landon Canyon Fire Road

This project is a 17mile long fire Rd that runs the ridge line from Arburua Rd to Paul Negra road. This Ridge line runs parallel to South Bound Interstate 5.

Laguna Seca Fire Rd

This project is a 17 mile fuel break that runs parallel with Interstate 5 to Langdon Canyon Overcrossing.

APPENDIX L: Battalion 18 Projects

State Highway 140 Fuel Break

1. **Objective:** A twenty foot fuel break on both sides of State Highway 140 from Cunningham Road to the Merced / Mariposa county line
2. **Current Status:** Facilitated and paid for by landowners to protect range land
3. **Future Planned:** Fuels reduction to be accomplished through the use of mechanized equipment

Cunningham Road Fuel Break

1. **Objective:** A twenty foot fuel break on the east side of Cunningham Road from South East Bear Creek to Mariposa Creek. Facilitated and paid for by stakeholders to protect range land
2. **Current Status:** Fuel reduction to be accomplished through the use of mechanized equipment
3. **Future Planned:** This is the separation between LRA and SRA along the Cunningham Road corridor

White Rock Road Fuel Break

1. **Objective:** 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. Facilitated and paid for by stakeholders to protect range land
2. **Current Status:** Fuels reduction to be accomplished through the use of mechanized equipment
3. **Future Planned:** This is as directed – some parcels are in agricultural crop production along the White Rock corridor.

UC Merced

- Merced Vernal Pools and Grassland Reserve Natural Reserve System Management

APPENDIX M: Mount Bullion Camp CC#39 Projects

Federal Forest Projects

- Forest Restoration
- Fire Breaks
- Weed Abatement

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

City Projects

- Fire Breaks
- Water Shed Management
- Utility District Brush Clearing
- Weed Abatement
- Parks and Recreation restoration
- School Clean Up

National Park Projects

- Forest Restoration
- Fire Breaks
- Weed Abatement.

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
- The camp also provides fire wood to senior citizens and low income families through the Mariposa County Department of Community Services

VMPs

- Lushmeadows/Tip Top Fuel Break
- Ponderosa Fuel Break
- Watts/Stumpfield Fuel Break
- Kinsman Flat VMP

Madera County Fire Safe Council

- John West and Jean Rd AKA Six Mile, brush clearing
- RD 425 B brush clearing
- Cascadel Woods Fuel Break
- Rd 620 AKA Stagecoach Rd Fuel Break

EXHIBITS: MAPS

Figure A: Unit Map

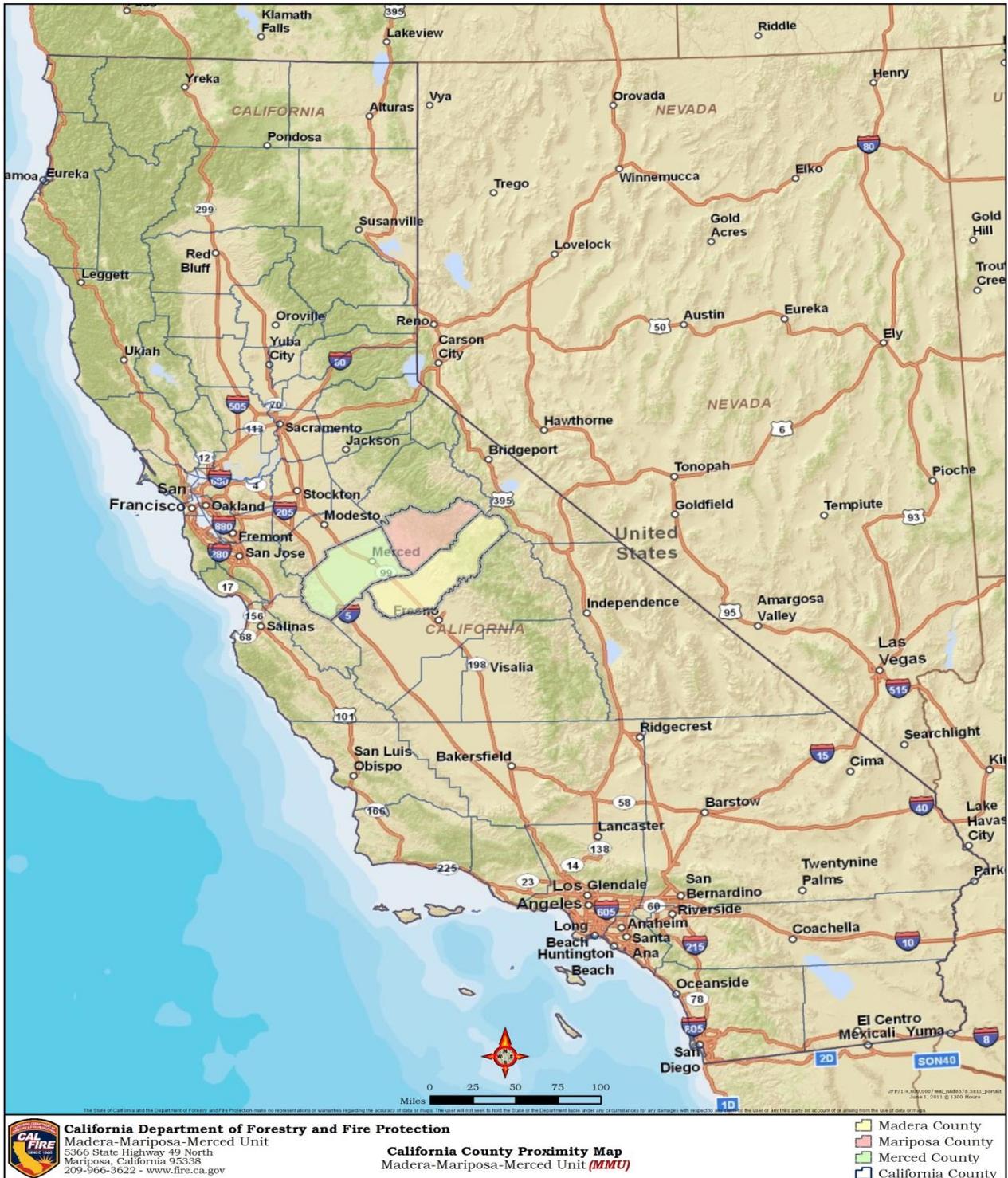
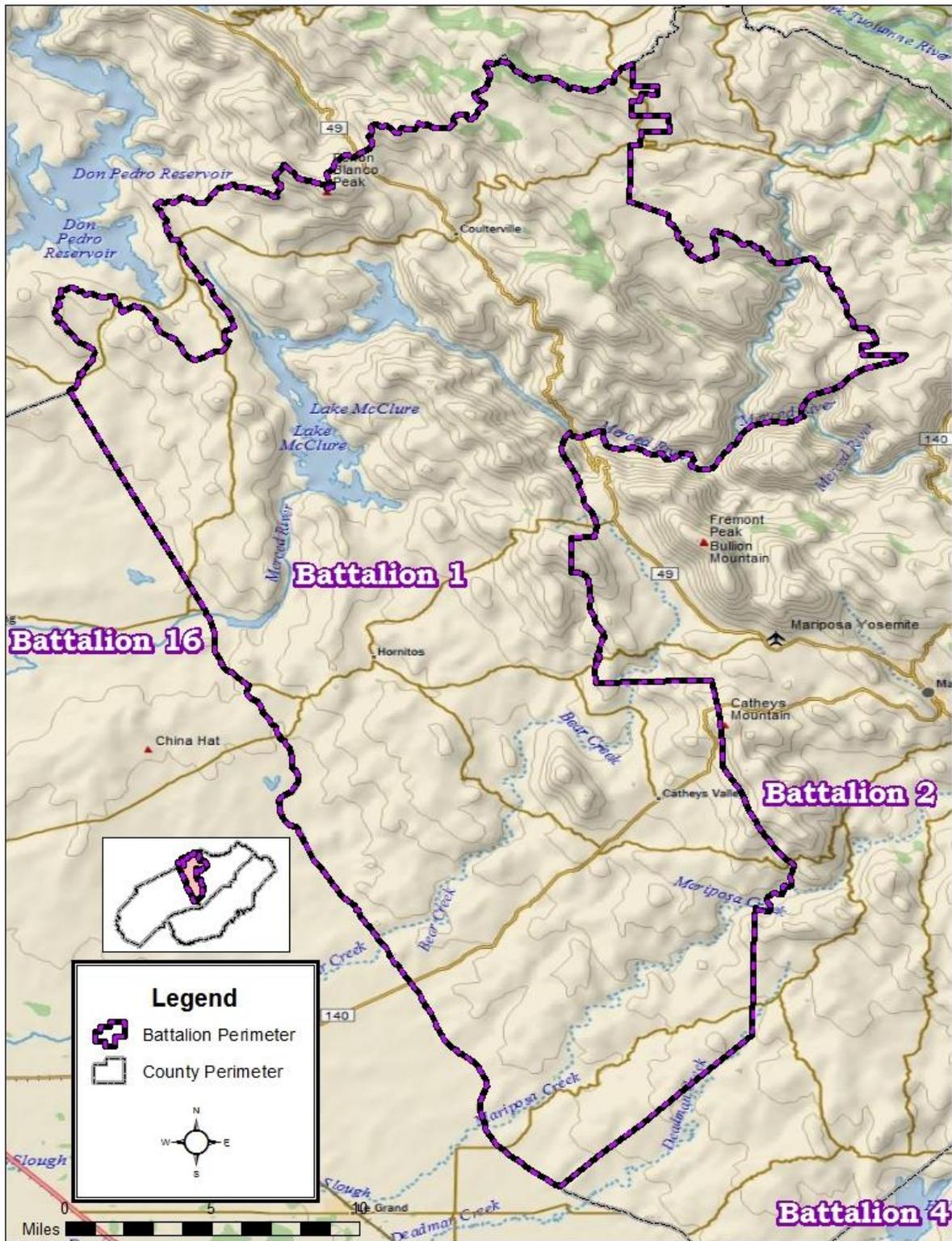
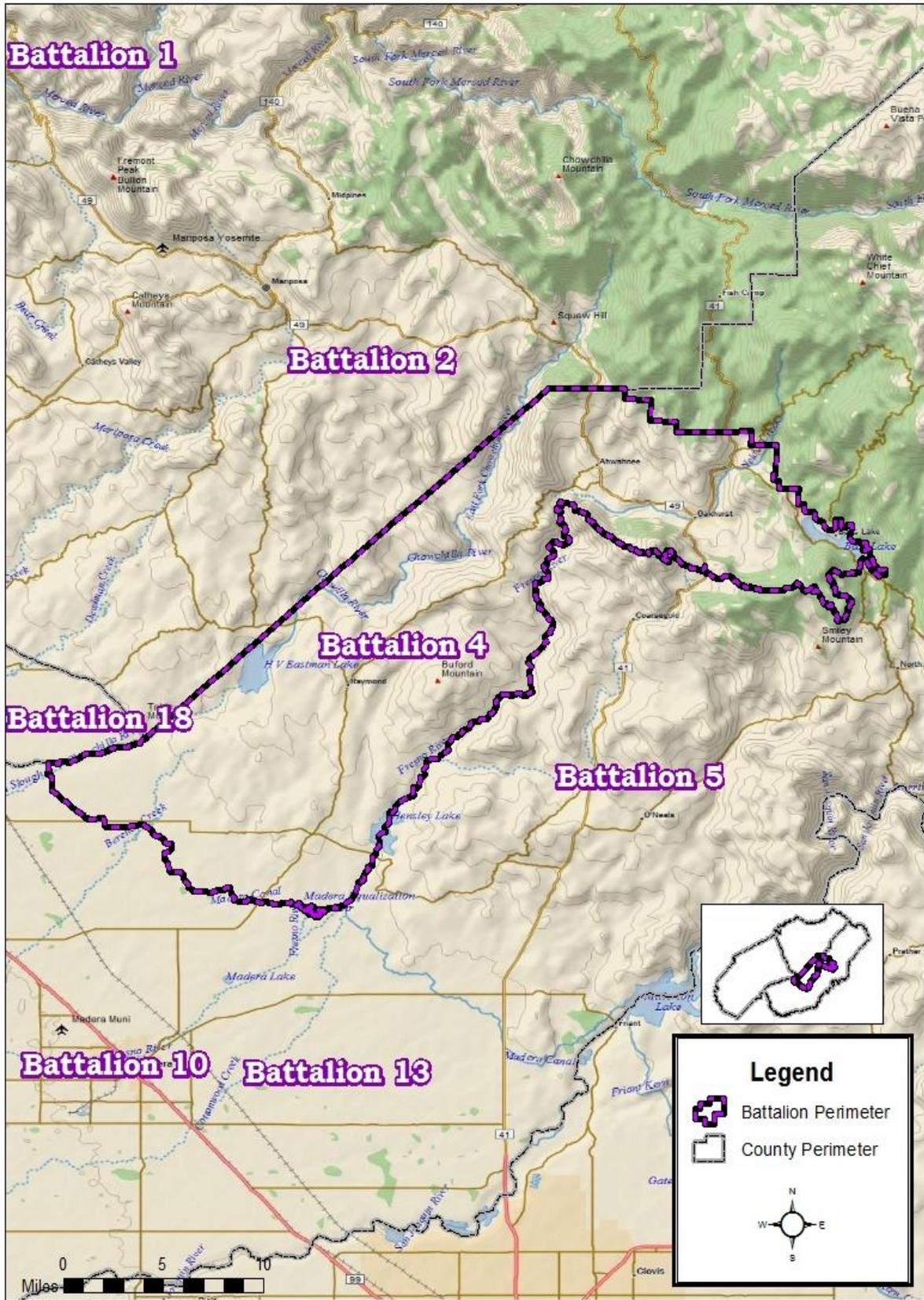
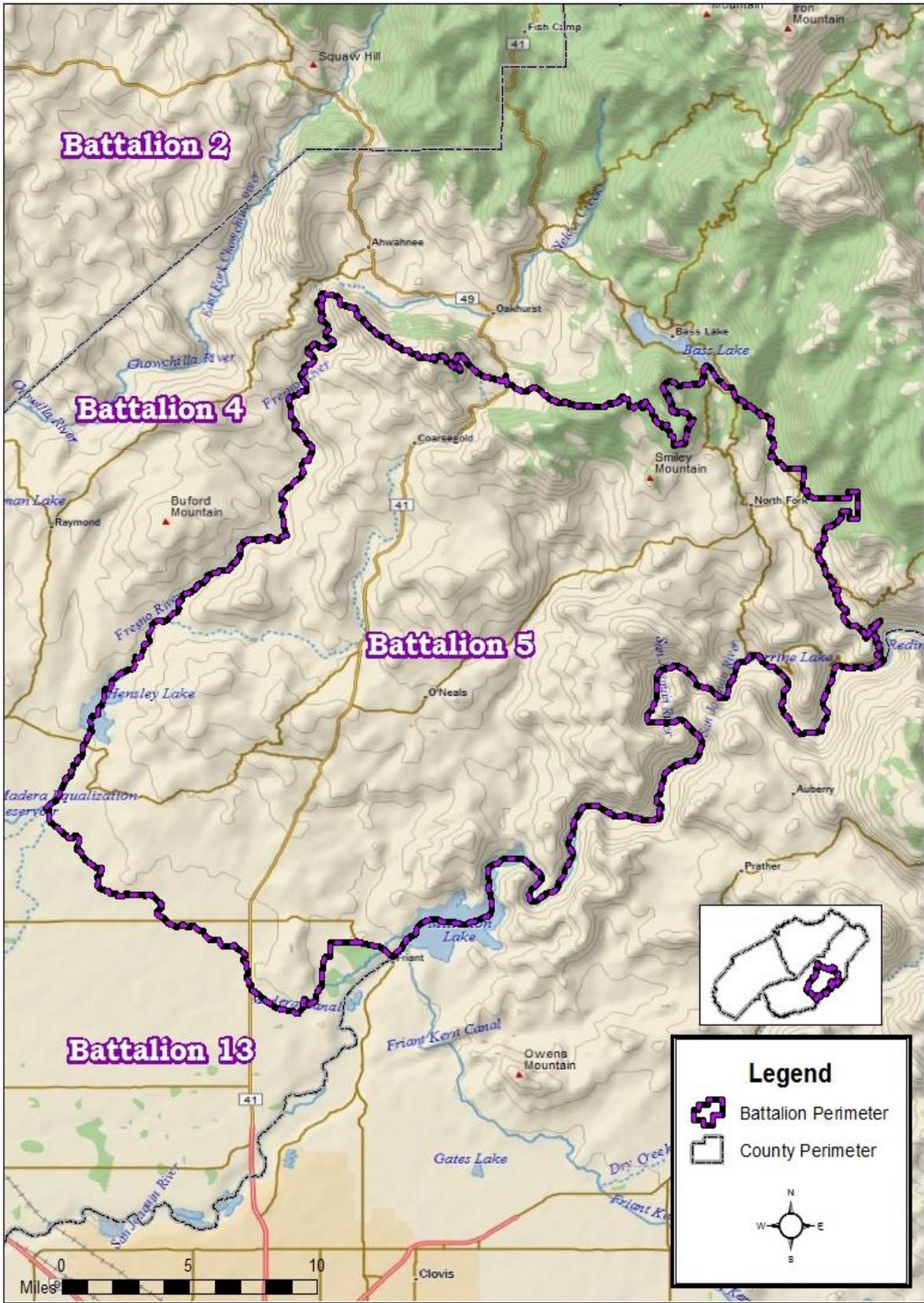
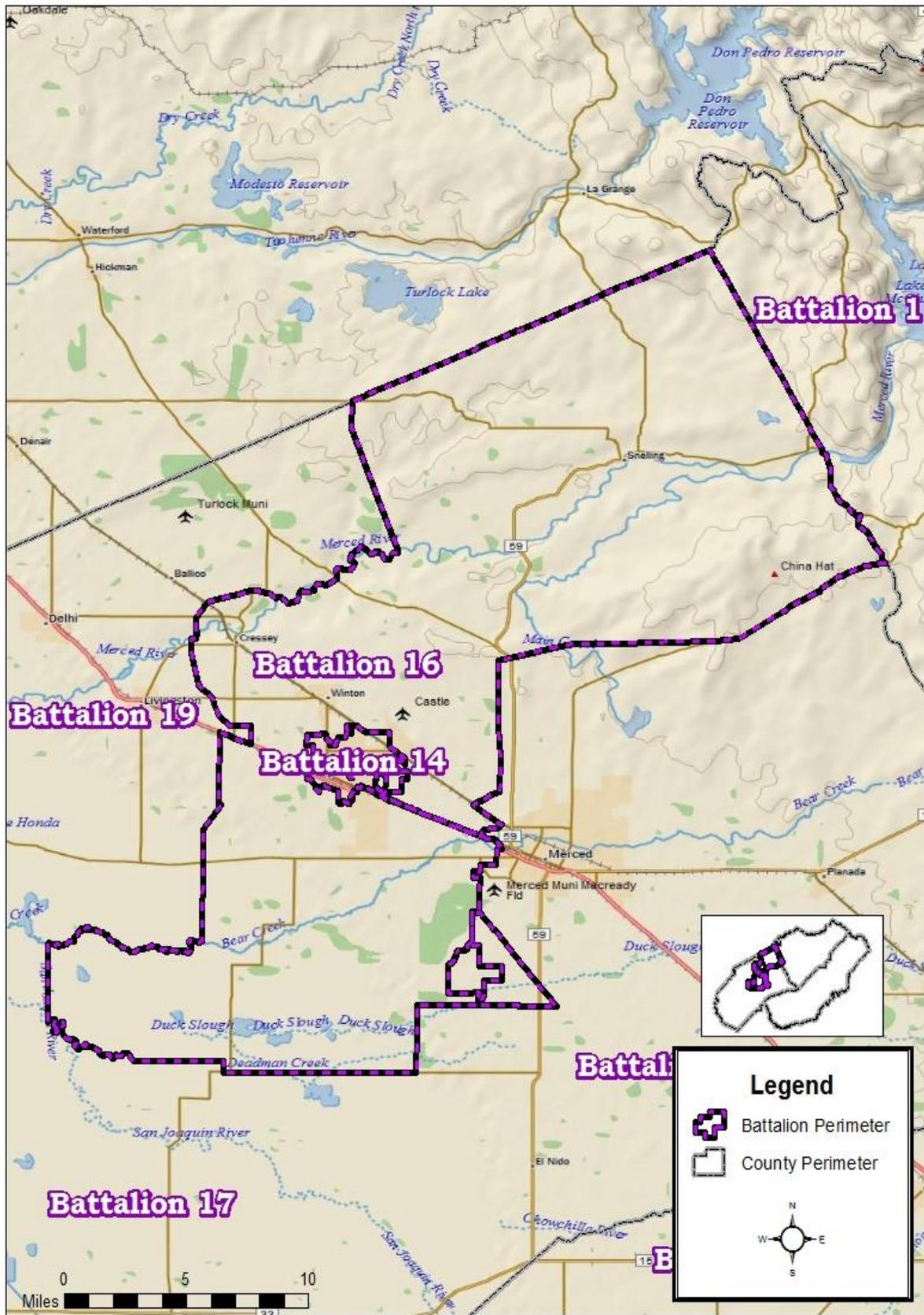


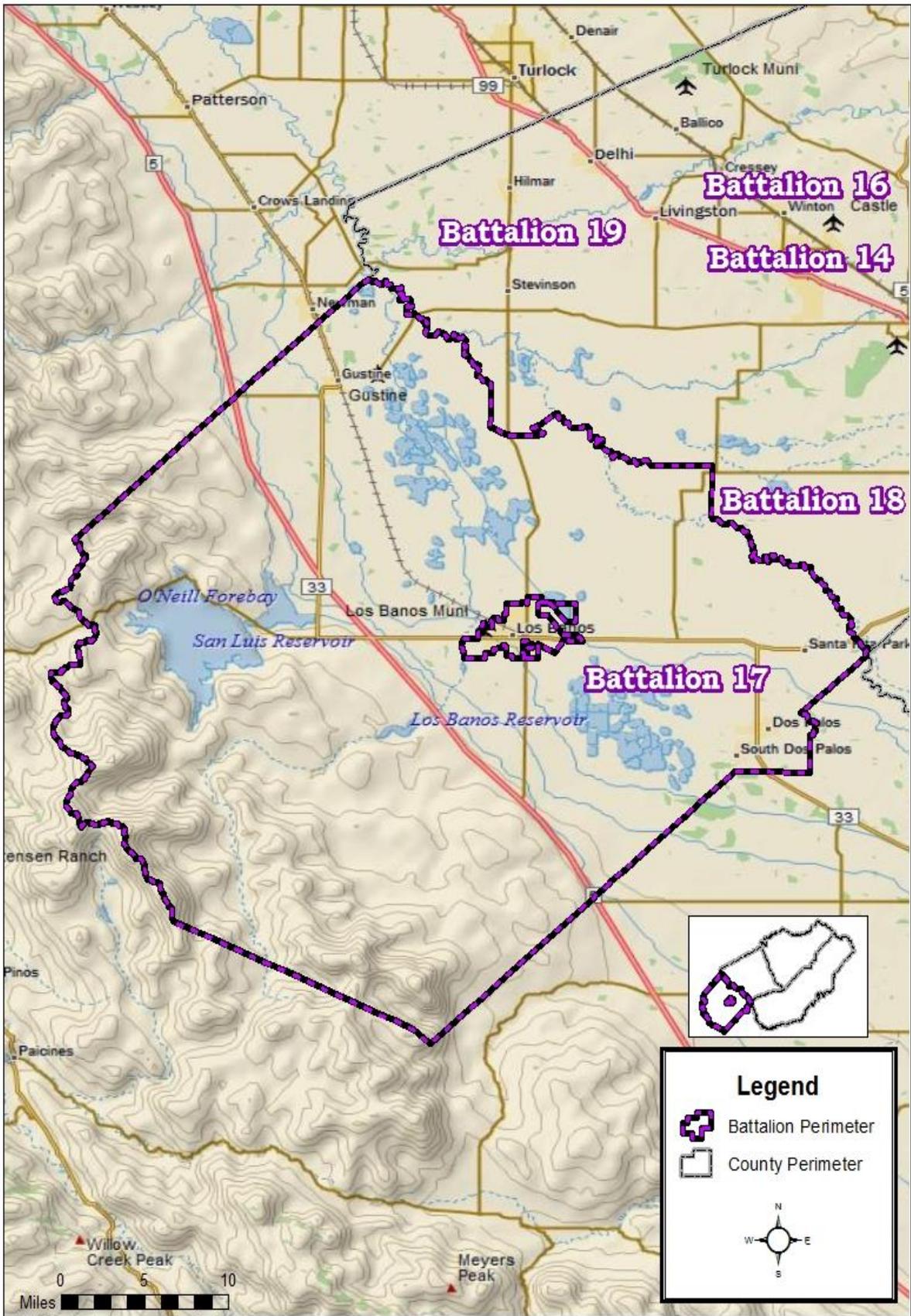
Figure B: Battalion Maps

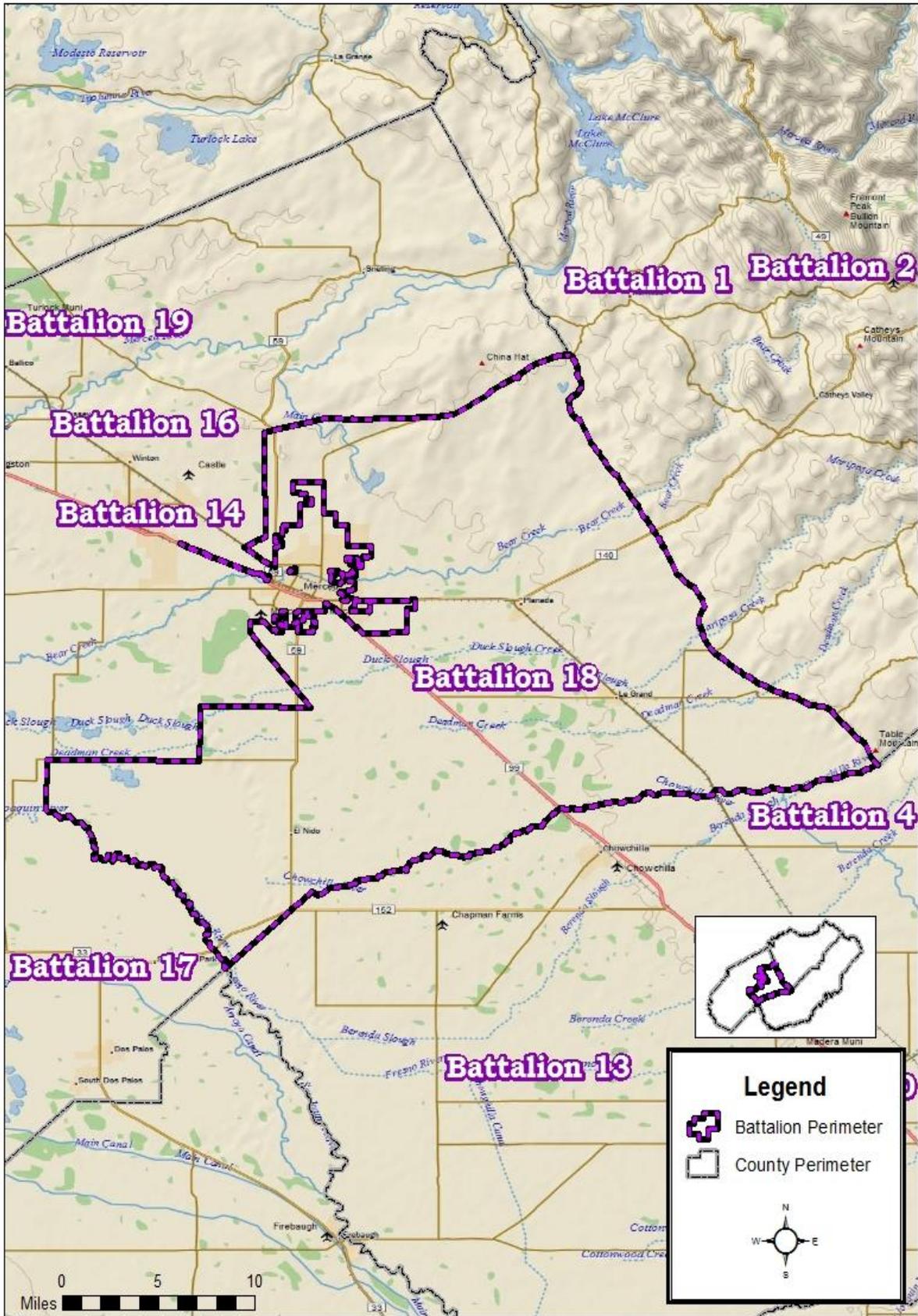












Annual Accomplishments Reporting

Fire Planning

Last year the Unit began the lengthy task of updating and revalidating our evacuation maps for Madera, Mariposa and Merced counties. Every station in the Unit continues the ongoing process of pre-planning their first in area. The Mariposa Division teamed up with the Mariposa Fire Safe Council to prepare a public document we have called the Emergency Preparedness Brochure. The brochure is full of vital information to have during an emergency, including an evacuation map specific to each community in the Mariposa Division. We are seeking additional grant funding opportunities to begin this vital prevention effort in Madera and Merced Counties.

Investigations and Enforcement

In 2013 the Madera-Mariposa-Merced Prevention Bureau responded for cause and origin investigations on 125 fires of various natures. From May 11, 2013 to June 25, 2013 an arson series in the Yosemite Lakes Park subdivision and surrounding areas caused over one million dollars in damage and a great deal of concern to the thousands of residents within the community. Two serial arsonists were arrested and found guilty of a combined 31 counts of arson, conspiracy, battery on a peace officer and resisting arrest. In the yearlong court proceedings 35 CAL FIRE employees testified and 4,500 pages of documents were submitted to the court as evidence. There was also one other arson arrest in an unrelated arson series.

Wildland Fire Prevention Engineering

Throughout the Unit we completed 5864 inspections and had a total of 139 violations to address. The Unit issued 48 citations and efforts totaled 509 hours. We issued 1674 burn permits in 2013.

Civil Cost Recovery

MMU Fire Prevention Bureau had initiated 21 Cost Recovery cases in an effort to regain monies spent in fire suppression activities due violation of law or negligence. Due to Recovery cases now being handled by Region Office, 10 MMU cases were sent to Region for collection, leaving only Court Ordered Restitution payments to be collected at the unit level. These cases are reflected in both "Cases collected this year" and "Criminal court-ordered restitution cases". Cases dropped at the unit level were due to incarceration, death and fleeing the state.

Vegetation Management

An increase in drought mortality has increased the need to assist Madera and Mariposa County in vegetation management within the High Hazard Zones. Approximately 2000 trees have been removed along the road way and near infrastructure to increase fire protection by CAL FIRE resources. An increase in fuel break maintenance has been funded by drought augmentation and SRA funding which has provided an increase in fire protection. SRA grants have been approved for \$532,000.00 to reduce fire hazard for habitable structures in MMU.

Education and Information

In cooperation with the USFS we have provided the "Team Teaching" Smokey Bear fire prevention education program to all the elementary schools in the SRA. The program covers Kindergarten through third grade. We also supply all of the identified preschools in the SRA with a flannel board or storybook presentation of the Smokey Bear story, puppet show, or an age appropriate, educational program. The MMU school program serves approximately 2000 children.

We coordinate the Mariposa Fair display each year with the Mariposa Fire Safe Council and the USFS. We have been successful in providing fire and life safety information and education to over 5000 guests annually, utilizing the Unit VIP's, USFS personnel and FSC staff. In addition we have displayed USFS and CAL FIRE engines with personnel, while also providing first aid from our personnel working the display.

This year we were able to add additional signs to our Road Side Sign project supplying many CAL FIRE stations with updated/new road side signs. Each station has a variety of signs to display for year round fire

prevention topics. The project has not reached the maintenance phase as we purchase a few signs per year to keep the inventory current and in display condition.

The annual display at the Madera Fair is created and staffed by the Fire Prevention Specialist II, Madera County Fire Department Explorers and VIP's. This display provides a comprehensive fire and life safety message to over 15,000 guests.

The Fire Prevention Specialist is a member of the Central Valley Burn Prevention Coalition. This Coalition is in the infant stages of developing four fire and safety educational programs that target age groups K-5, 11-14, senior citizens and youth firesetters. The Coalition is made up of Central Regional Medical Center (CRMC) Nurses, Fresno, Clovis, Tulare, Selma Fire, CAL FIRE, Alisa Ann Ruch Burn Foundation (AARB), Mariposa County Mental Health and Cornerstone Family Counseling.

Traditionally, the unit serves 15-40 youth firesetters per year. All firesetters will be advised to go through the Central Valley Burn Prevention Coalition Program. The program will be designed to provide fire safety education to children of all ages throughout the Central Valley.

We continue to partner with USFS, CHP, California Land Management, and Madera County Sheriff's Department to host the annual Smokey Bear Run/Walk 5K. This event attracts between 500 and 700 runners and delivers fire and life safety information area wide in its advertisements and recruitment efforts. Race day provides the entire community with fire and life safety awareness and education.

We distribute around 25 news releases each year in addition to radio interviews, special spots on TV, and 2 annual 15 minute radio spots on public radio in Merced. The Unit has a PIO response for emergency incidents and the Fire Prevention Specialist maintains contacts with other Unit PIO's such as, the Madera Sheriff PIO, Mariposa County OES and Health Dept. PIO's. Under the ISP umbrella we developed PIO Job Aids for our call centers and began the task of updating our call taker training. The Unit VIP's played a vital role in staffing the call center during the larger fires experienced during the year. VIP's also assisted with community outreach fire information efforts, including distributing One Less Spark materials to over 75 businesses.

Volunteerism

The Volunteer In Prevention (VIP) program is also in a rebuilding phase with recruitment an ongoing issue. We have 70 VIP's listed on the roster, however there are only 20 active volunteers.

The VIP program and fire station support allow us to participate in Earth Day, Mt. Heritage Days, rodeos, Smokey Bear 10K Run/Walk, Butterfly Festival, Safe At Home, Kids in the Park, Cascadel Woods Fire Safe Festival, parades, Christmas Programs and many more events. The Smokey Bear 10K Run/Walk donates funds to purchase Carbon Monoxide alarms to residents in Eastern Madera County. This provides approximately 150 residents each year with a free Carbon Monoxide alarm. The VIP program has provided staffing for over 25 public fire and life safety education events.

The MMU VIP's are trained as call takers and community outreach information officers. They are activated when needed to open the call center and provide accurate and timely fire and or disaster information to the public. The VIP's also travel specified routes to distribute information and/or staff information display boards. This VIP team has been activated this past year twice and has provided information to thousands of citizens.

Most of the active VIP's are members of the HAM radio group. The Unit HAM radio VIP's patrol selected hazardous areas during declared critical fire weather and on holidays to provide an effective fire prevention and loss reduction education force. They also provide extra "eyes and ears" in areas threatened by arsonists. HAM radio VIP's also assist with Red Flag Patrol on the 4th of July in Mariposa and Madera Counties. Since the Fourth of July patrols began, we have realized a decline in illegal fireworks use, and ignitions from fireworks in the SRA. The addition of the Mariposa HAMS will allow us to patrol additional areas of Mariposa County including Lake Don Pedro and Lake McClure.

Vegetation Management

Under Proposition 40 community assistant grants (CAG) a total of 320 acres were treated for fuel reduction from two different grants. Under Proposition 40 California Forest Improvement Program (CFIP) a total 225 acres were treated for fuel reduction and 26 acres of timberland was replanted. There were a total of four CFIP projects. Additionally, a 160 acre parcel was treated for tree removal of western pine beetle infested ponderosa pine.

Fire Hazard Severity Mapping and Mitigation

This year we completed our evacuation maps and lead sheets for Madera County. These maps and sheets are given to all chief officers to use during emergency incidents.



May 15, 2016

Unit Chief

Date

Nancy Koerperich