MMU Strategic Fire Plan
Madera-Mariposa-Merced Unit
## UNIT STRATEGIC FIRE PLAN AMENDMENTS

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# Table of Contents

- UNIT STRATEGIC FIRE PLAN AMENDMENTS ........................................... i
- Table of Contents ................................................................................... ii
- SIGNATURE PAGE .................................................................................. 1
- EXECUTIVE SUMMARY ........................................................................... 2
- SECTION I: UNIT OVERVIEW ................................................................... 4
  - UNIT DESCRIPTION ................................................................................ 4
  - UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES .................. 6
- SECTION II: COLLABORATION ................................................................. 8
  - COMMUNITY / AGENCIES / FIRE SAFE COUNCILS ............................ 8
- SECTION III: VALUES ............................................................................. 11
  - A: VALUES ............................................................................................ 11
  - B: COMMUNITIES .................................................................................. 12
- SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES .......................... 13
  - A: FIRE PREVENTION .......................................................................... 13
  - ENGINEERING & STRUCTURE IGNITABILITY ................................... 14
  - INFORMATION AND EDUCATION ..................................................... 15
  - B. VEGETATION MANAGEMENT ......................................................... 21
- SECTION V: PRE- FIRE MANAGEMENT TACTICS .................................. 26
  - DIVISION / BATTALION / PROGRAM PLANS .................................... 26
  - TRAINING BUREAU ............................................................................. 27
  - MOUNT BULLION CAMP CC#39 ........................................................... 30
  - BATTALION 1: COULTERVILLE BATTALION ...................................... 31
  - BATTALION 2: MARIPOSA BATTALION ............................................ 36
  - BATTALION 4: AWAHNEE BATTALION ............................................ 39
  - BATTALION 5: COARSEGOLD BATTALION ........................................ 41
  - BATTALION 12: NAME TO BE DETERMINED .................................... 43
Unit Strategic Fire Plan developed for **Madera-Mariposa-Merced Unit**:

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

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**Unit Chief**
Mike van Loben Sels

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**Pre-Fire Engineer**
Mike Keyser

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5-7-2021
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 fall rates due to bug kill and severe years 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, Sierra Mountains and Foothill Communities, posing 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 163 million trees have died in California since 2010, mostly pines in the Southern Sierra. In some communities, up to 85 percentof forest trees have died, and half of those have fallen, becoming dry fuel for wildfire.
and making fires more resistant to control. 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.
• Increase opportunities for utilizing fuel hazard reduction burns in areas that would benefit from the re-introduction of fire to the landscape.
• 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 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.

Mike van Loben Sels
SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

The Unit is comprised of three counties including Madera, Mariposa, and Merced. The Unit is 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 Unit's fire problem include the San Joaquin River, Merced River, Chowchilla River, 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 to 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' elevation, 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 between 3,000' to 4,500', timber and brush intermix. Above 4500' timber dominates the landscape with mixed conifer.

During normal years, 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 brings 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. This past winter has been below average, with 62% rainfall and snowpack currently at 60% of average, with drought conditions predicted to persist through the summer. Though we have seen an increase in precipitation these past two years, the combined effects of drought and bark-beetle infestations have resulted in a large amount of standing dead trees in the Unit which continue to cause challenges to fire suppression.
The late season rainfall and warmer temperatures will enhance that threat by building ladder fuels of grass and brush that will feed those dead trees in the event of fire.

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 coastal 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 measurable rainfall. A history of large and damaging fires has occurred within the Unit during that time of year.

**Madera County**
Madera County has a population of 157,672 with a geographic area covering a total area of 156,000 square miles. The most populated communities include the cities of Madera, Chowchilla, and the community of Oakhurst. Several communities are 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 since an uncontrolled fire in the drainage would threaten the populated areas of Madera County and neighboring County of Mariposa. 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 17,437 with a geographic area of 18,000 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 and 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 Highways 41, 49, 120, 132, and 140. Highway 140 is another major thoroughfare bringing thousands of visitors through the town of Mariposa and into Yosemite National Park.

**Merced County**
Merced County has a population 274,765 covering an area of 271,000 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.

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 Structure Defense/Evacuation Plans (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 333 full time personnel, 89 seasonal personnel, 363 volunteer personnel assigned within cooperative fire protection agreements, 81 inmate firefighters assigned at Mt. Bullion Conservation Camp (max capacity is 110), and 43 Volunteers in Prevention.

**Unit Operational Facilities**

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### Direction 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
- Mariposa 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 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

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SECTION II: COLLABORATION

COMMUNITY / AGENCIES / FIRE SAFE COUNCILS

Representatives involved in the development of the Unit Strategic Fire Plan are included in the following table. Their organization and title are indicated below:
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<td>Central Sierra Watershed Committee</td>
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<td>Yosemite/Sequoia Resource, Conservation &amp; Development Council</td>
<td>Chairperson <a href="https://ysrcandd.org">https://ysrcandd.org</a></td>
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<td>California Department of Forestry and Fire Protection (CAL FIRE)</td>
<td>Unit Chief <a href="www.fire.ca.gov">www.fire.ca.gov</a></td>
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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, where the most destruction could occur in a large and damaging fire, then 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

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#### Mariposa County

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*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://osfm.fire.ca.gov/divisions/Wildfire-Planning-Engineering/Fire-Plan/Communities-At-Risk/](http://osfm.fire.ca.gov/divisions/Wildfire-Planning-Engineering/Fire-Plan/Communities-At-Risk/)


Yosemite West Homeowners Organization: [http://yosemitewest.org/ywcwpp.pdf](http://yosemitewest.org/ywcwpp.pdf)

Foresta Community Wildfire Protection Plan: [http://www.wildlandfireassociates.com](http://www.wildlandfireassociates.com)
SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES

A: FIRE PREVENTION

Program Overview

The Fire Prevention Bureau is staffed with a Battalion Chief, three Fire Captain Specialists, a Fire Prevention Specialist II, and an Office Technician. The Battalion Chief and Fire Captain Specialists, are qualified peace officers. Additional Unit personnel with peace officer authority include one Division Chief, and one field Battalion Chief, bringing the total number of sworn peace officers within our unit to six. The Fire Prevention Bureau strives to eliminate fire related injuries and deaths, as well as reduce unwanted fires through Engineering, Education, and Enforcement.

- ENGINEERING – Identifying fire trends through investigation data and then developing building or construction codes or ordinances to prevent recurrence of identified trends.
- EDUCATION – Providing informational programs and public announcements through defensible space inspections, multiple forms of media, school programs, and community events.
- ENFORCEMENT – Through inspection programs, citations, civil and criminal proceedings based on investigation findings.

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 Madera-Mariposa-Merced Unit, over a ten-year average, has conducted over 10,000 Public Resources Code (PRC) 4291 defensible space inspections per year. The Unit averages over 800 hours of public education each year.

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. Fire Prevention Officers actively and aggressively investigates fires within the Unit and pursue criminal and civil action against violators of forest and fire laws. The Fire Prevention Bureau will continue to build on past successes while seeking ways to improve any identified deficiencies and reduce unwanted fires on State Responsibility Area (SRA) lands and within the Unit.
The Fire Prevention Bureau will maintain relationships with community groups such as Madera County Fire wise, Mariposa County Fire Safe Council, South West Interface Team (SWIFT), Madera and Mariposa County Resource Conservation Districts. The Fire Prevention Bureau will also continue to work with local government and federal cooperators in land use planning and policy decisions.

Public education and a positive image of CAL FIRE is important to the Fire Prevention staff, and we will continue to seek opportunities to increase the visibility of CAL FIRE and support the mission to serve and safeguard the people and protect the property and resources of California.

ENGINEERING & STRUCTURE IGNITABILITY

To ensure continued maintenance of properties in conformance with the defensible space requirements outlined in section 4290 of the Public Resources Code, four Forestry Aide positions are seasonally funded for defensible space inspections. The inspectors are able to complete PRC 4291 inspections, supplementing the inspections completed by fire engine staff and also provide public education about defensible space whenever possible.

CAL FIRE provides personnel and expertise through cooperative fire protection agreements and partnerships to implement fire and life safety regulations and building standards established by the California State Fire Marshal, the California Board of Forestry, and respective County and local codes and ordinances.

Click here to view PRC 4290 & PRC 4291: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC

Madera County Fire Marshal’s Office
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 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 Madera County 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.


Mariposa County
In Mariposa County, the CAL FIRE Madera-Mariposa-Merced Unit Fire Prevention staff work in conjunction with Mariposa County Building Department and Public Works to review and enforce the Public Resources Codes, California Fire Codes, and Chapter 7A of the Mariposa County Building Code for land use and other building and land use permit applications.

http://www.mariposacounty.org Chapter 7A Building code

Merced County Fire Marshal’s Office
Merced County Fire Marshal's Office is a division of the Merced County 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 to implement the fire and life safety regulations and building standards established and adopted by the California State Fire Marshal and the Merced County Board of Supervisors. http://www.co.merced.ca.us

INFORMATION AND EDUCATION
Education and Information
The Fire Prevention Specialist II (FPSII) for the Madera-Mariposa-Merced Unit, under general supervision or the Fire Prevention Bureau Chief, has program responsibility for the following:

- School programs
- Senior programs
- Fire extinguisher training
- Career day events
- Job fairs
- Summer reading events
- Woman empowerment events / presentations
- County, District and State Fairs
- Exhibits and displays
- Public information, traplines, news releases, call center and T.V., newspaper and radio interviews
- Youth fire setter intervention program manager
- Youth fire setter intervention team coordinator
- Youth fire setter interviews and academy instructor
- Volunteer in Prevention Coordinator
- Roadside Sign production
- Parades
- Winter, spring, summer and fall festivals
- Defensible Space and Fire safety education Public Presentations
- Smokey Bear, Sparky and Captain CAL fire safety programs
- Smokey Bear Run 2 mile/10K Co-Chair
- Order, stock, store, and disseminate fire prevention and public safety materials and supplies.
- Management of assigned budget
- Central California Burn Prevention Coalition Co-Chair
- Peer Support Team
- Drought tolerant / fire resistant landscaping of HQ
- Public Tours of stations and landscaping
- Networking with local agencies, businesses, clubs, local partnerships, hospitals, organizations and departments
- Smoke Alarm installation
- Rodeos
- Disabled Youth events
- Burn Center and hospital events

Central California Burn Prevention Coalition
The FPS II is Co-Chair and member of the Central Valley Burn Prevention Coalition. Members of the coalition consist of Community Regional Medical Center (CRMC) Nurses, Fresno City Fire, Clovis City Fire, Selma Fire, Kings County Fire, Alisa Ann Ruch Burn Foundation (AARBF), Cornerstone Family Counseling, Tulare County Fire and CAL FIRE. The Coalition supports one another in fire prevention education and
events. Together, they have agreed to adopt four burn prevention programs to reach people of all ages.

**Team Teaching / Firefighters in Safety Education (FISE)**
The “Team Teaching” Program is presented by CAL FIRE in cooperation from the USFS and Volunteers in Prevention (VIP’s). CAL FIRE MMU adopted the FISE program as an outreach program for youths TK through 3rd grade. The story of Smokey Bear is read and education on smoke alarms, Exit Drills in the Home (EDITH), and Drills at Night (DAN), teaches 911, indoor/outdoor firefighter and explains the meaning of the word emergency is given, The USFS discusses forest health, fire triangle, and good fires vs. bad fires.

**Challenge Program**
The “Challenge” program is an outreach program in the process of being developed. It is geared toward pre-teen and teens and focuses on social media fire challenges and peer pressure. The goal of the program will be to highlight consequences of actions and to steer youths away from peer pressure. This program involves showing a 10-minute video on social media challenges and a burn survivor testimony. Video production has been completed and named "ASHES". Curriculum for the program is in the process of being completed by the Central California Burn Prevention Coalition and is scheduled to debut spring 2020.

**Remembering When Senior Program**
“Remembering When” is a senior citizen outreach program developed by the National Fire Protection Association (NFPA.) There are 16 key messages that address burn and fall prevention. The program can be delivered in a group presentation or home visit. The coalition has partnered with the Red Cross to canvass mobile home parks, installing up to three smoke alarms for anyone that needs them, free of charge. Participants are given a Home Escape Plans to create and a game of Trivia is played to conclude each presentation.

**Youth Firesetters**
The FPS II is contacted whenever a Juvenile is involved in a firesetting incident. An interview is conducted, homework is assigned, and fire education given at the time of the interview. The Central California Burn Prevention Coalition has established two youth firesetter academies.

The biannual firesetter academy is geared towards youth who set fires due to curiosity or exhibit thrill seeking behaviors. The program mirrors Shriners Hospital/Firefighter Burn Institute’s Youth Firesetter Academy and is hosted at Fresno City Fire Training Facility. The academy is designed to provide fire safety education to children of all ages throughout southern San Joaquin Valley and Sierra Foothills. The academy is hosted by Fresno City Fire, Selma Fire, AARBFI, CAL FIRE Fresno-Kings Unit, St. Peter’s Burn Center, Cornerstone Family Counseling and CAL FIRE MMU.

A comprehensive 13-week firesetter academy is offered for youths who set fires due to emotional upset, criminal or phycological problems. Youths receive counseling from Mental Health Clinicians and fire safety education from fire personnel, probation and law enforcement. Counseling can exceed 13 weeks depending on the needs of the youth.
MMU has an average of 15-20 youth fire setters per year. There is a team of 3 people within MMU that are available to assist with initial assessment interviews of the youths and to help present fire education at both academies when needed.

The FPS II utilizes YFIRES national database to track fire setter activity within the unit. This program allows the FPS to target problem areas in the unit by offering fire safety education programs with specific information for areas with increased firesetting activity.

**Fairs**
The Mariposa Fair display is done in cooperation with CAL FIRE, Mariposa Fire Safe Council, Mariposa County Fire, OES and the USFS. The Mariposa County Fire Safety House, CAL FIRE and USFS engines are on display for the public to tour. CAL FIRE personnel are available to respond to all emergencies from the display booth. We have been successful in providing fire and life safety information and education to over 1600 guests at the fair.

The annual display at the Madera District Fair is created and staffed by the FPS II, Madera County Fire, Madera County Fire Department Explorers and VIP’s. This display provides a comprehensive fire and life safety message to over 4,000 guests.

The FPS II participates in setting up and staffing the Merced County Fair booth in support of Merced County Fire Department and Merced City Fire Department. The obstacle course, robotic Sparky, Smoky Bear and fire education provided reached more than 8,000 people.

The FPS II is involved with assisting with Camp Smokey at the State Fair. Cooking safety and fire engine tours are given along with interactive equipment display activities.

**Smokey Bear Run**
CAL FIRE continues to partner with USFS, CHP, California Land Management, Madera County Sheriff’s Department and Sierra Telephone to host the annual Smokey Bear Run/Walk 10K. This event attracts between 300-500 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.

**Roadside Signs**
Roadside fire prevention signs are in the process of being updated throughout the unit. Three stations, every year, are scheduled to received updated, modern roadside signs each year. Stations have a variety of signs to display for year-round fire prevention topics.

**Public Information**
The FPS II distributes approximately 25 news releases each year in addition to radio and newspaper interviews, special spots on TV, and annual radio interviews.

The unit call center has been relocated to Spring Hill School and has been outfitted with new phones and computers. A toll-free number (844-668-3473) and Facebook / Twitter Social Media accounts (CAL FIRE MMU) were established to help sharing information faster and more efficient. The call center was activated once in 2019.
Volunteers in Prevention
The Volunteers in Prevention (VIP) program recruits between 5-10 volunteers annually. The MMU VIP roster currently has approximately 50 active volunteers. The VIP program and fire station support allows for participation in Red Flag Patrol, Earth Day, Mt. Heritage Days, rodeos, Smokey Bear 10K Run/Walk, Butterfly Festival, Kite Day, fairs, parades, fire extinguisher training, seasonal festivals, Christmas programs and many more community events. The VIP program has provided staffing for over 30 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.

The Unit HAM radio VIP’s assist with events throughout the year and help provide an extra set of “eyes and ears” during the Red Flag Patrol on the 4th of July in Madera, Mariposa and Merced Counties. Ham radio operators play a crucial role in keeping residents in the SRA safe. Since the Fourth of July patrols began, we have realized a decline in illegal fireworks use, and ignitions from fireworks in the SRA. Ham radio operators have reported fires, disabled vehicles, vehicle accidents and have also assisted lost “mountain area visitors.” CAL FIRE magnets are placed on the sides of their vehicles to show a CAL FIRE presence to discourage the use of fireworks and any risky behavior that could result in fire.

The FPS II attended nearly 100 presentations and events throughout 2019.
B. VEGETATION MANAGEMENT

For the 2019-2020 Fiscal Year, Resource Management in MMU consists of administration and enforcement of the Forest Practice Act and Rules, VMP planning, California Environmental Quality Act (CEQA) compliance for unit projects, fire suppression repair, and general service forestry. Staffing doubled in 2019 with the addition of an Environmental Scientist. The VMP Forester II position remains vacant since 2016. In 2020 a Research Data Specialist was added. All three positions along with a GIS specialist, work directly with the unit Pre-Fire Engineer (Fire Captain) completing environmental reviews, archeological reviews, and smoke generation reports on fuel reduction, fuel break, and VMP projects.

Forest Practice Enforcement
The Forest Practice Act and Forest Practice Rules (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, exchange or trade logs or milled lumber to another party) to submit a timber harvesting plan or exemption notice document to 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. The California Department of Forestry and Fire Protection (CAL FIRE) enforces the laws that regulate logging on privately owned lands in California. These laws are found in the Forest Practice Act, which was enacted in 1973 to ensure logging is done in a manner that will protect our natural and cultural resources. The removal of "commercial" timber species from areas of planned new construction, and from the area around existing structures is included under these regulations. In Madera and Mariposa Counties, Commercial Species means those species found in group A and those in group B that are found on lands where the species in group A are now growing naturally or have grown naturally in the recorded past. Group A: Douglas-fir, Jeffrey pine, California red fir, ponderosa pine, white fir, sugar pine, incense cedar, lodgepole pine, Sierra redwood, western white pine, and mountain hemlock. Group B: white alder, cottonwood, and California black oak.

Timber Harvest Plans or Nonindustrial Timber Management Plans can be slow and expensive for a small timberland owner to produce. The California Board of Forestry and Fire Protection has provided several exemptions to the plan requirements when certain, common conditions exist. The document types summarized below are some of
the most appropriate or frequently used in Madera and Mariposa Counties. Blank forms are available from https://www.fire.ca.gov/programs/resource-management/forest-practice/caltrees/timber-harvesting-forms/ and are submitted through CalTREES or to CAL FIRE Region Headquarters in Fresno. All commercial timber operations performed pursuant to the Forest Practice Act must be performed by a Licensed Timber Operator (LTO), while any tree removal work that is not subject to the Forest Practice Act but involves trees fifteen feet in height or over or is performed pursuant to a contract for $500 or more must be performed by a contractor that is licensed by the California Contractors State Licensing Board.

Timberland Conversion
An application for conversion is required for property owners who intend to cut or remove commercial tree species to clear an area for structures and other non-timberland purposes (i.e. gardens, driveways, utility lines, out buildings, septic systems, etc.). This is required whether or not the trees are sold, bartered, exchanged, or traded, and regardless of whether the trees to be removed are living or not. In some situations, if the total conversion area is less than three acres, a Less than 3 Acre Conversion Exemption may be used. The Less than 3 Acre Conversion may only be used one time per parcel, and once per individual every 5 years. Consult your local CAL FIRE Forester for more information. A Registered Professional Forester must prepare this permit and a Licensed Timber Operator must conduct timber operations. The Licensed Timber Operator must have a copy of the exemption on-site at the time of operations and has one year to complete timber operations. Responsibility for treatment of logging slash and woody debris may be assumed by the landowner, provided the landowner acknowledges in writing to the Director at the time of notice such responsibility and specific slash and woody debris treatment requirements and timing. Building contractors are ineligible to perform timber operations unless they are a Licensed Timber Operator. 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
An emergency notice is required to salvage trees that are dead and dying when the volume of the merchantable logs harvested exceeds 10% of the total volume per acre. Emergency conditions include trees that are dead or dying as a result of insects, disease, fire, windthrow etc. The Registered Professional Forester (RPF) preparing the Notice of Emergency Timber Operations shall describe the nature of the emergency and the need for immediate harvesting. Timber operations pursuant to an emergency notice may not commence for five working days from the date of the Director's receipt of the notice unless such waiting period is waived by the Director.

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 to reduce 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. All logging slash shall be no more than 9” post-harvest, and more requirements apply around structures. Limited to thinning from below to increase quadratic mean diameter of residual trees.

**10% Dead, Dying, Diseased Exemption**
This exemption permit is required when removing trees that are dead or are obviously dying from insect attack or disease, or when removing fuel wood. The harvest of merchantable logs cannot exceed 10% of the volume per acre, or a Timber Harvesting Plan would be indicated. A Registered Professional Forester’s services are not required. This CAL FIRE permit is required only if the wood is sold, bartered, exchanged, or traded. CAL FIRE has up to 5 days to accept the permit. In MMU there were 7 of these exemptions this year.

**Drought Mortality and Unmerchantable Sawlog Exemption**
This exemption permit can be used where harvest exceeds 10% of the volume per acre, but the logs harvested are unmerchantable as saw-log size timber. A Registered Professional Forester shall certify that the notice of exemption is submitted upon substantially damaged timberland, or that that trees are designated, by a RPF or Supervised Designee, with a stump mark, as likely to die due to drought, related stress within one year. Slash must be treated to maximum depth of 30” within one year.

**Fire Safe Exemption**
This exemption is required for the removal of selected trees which are located up to 150 feet from around existing structures which have been permitted through the County Building Permit process. This permit is required only if the wood is sold, bartered, exchanged, or traded. A Registered Professional Forester’s (RPF) services are not required. A Licensed Timber Operator (LTO) must be listed on the permit and is responsible for all logging activities. The Licensed Timber Operator must have an approved copy on-site at the time of operations and has one year to complete timber operations. Clearcutting, Shelterwood Removal and Seed Tree Removal cutting methods are not allowed. CAL FIRE has up to 5 days to accept the permit. All slash is to be treated within 45 days. This activity is encouraged to further the intent of Public Resources Code (PRC) 4290.

**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). THPs are submitted by a Registered Professional Forester and range from about 100 to over 500 pages in length.
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.

California Forest Improvement Project (CFIP)-2020
Unit Forester reviews and rates applications for California Forest Improvement Program (CFIP) grants. Forestry Assistance Specialist serves multiple Units and manages grants with timberland owners. In 2020 there are three active CFIP grants in Madera County with treatment of 262 acres on a total of 601 acres under a Management Plan. Project practices include site preparation, slash disposal, tree planting, pre-commercial thinning, herbicide application, and mechanical release. Another CFIP plan for 732 acres is in process in Mariposa County. Contact the MMU Forester for a referral to the Forestry Assistance Specialist.

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: equipment and crew readiness exercise areas and training burns, facility projects, drought mortality projects, and increased fuel reduction projects within the battalions.

Service 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 landowners. Service forestry calls are often related to bark beetle activity in trees. Landowners are encouraged to immediately remove the bark beetle killed trees and treat the slash. Contact the MMU Forester for a referral to the Forestry Assistance Specialist in Fresno for Urban Forestry.
SECTION V: PRE-FIRE MANAGEMENT TACTICS

Unit Vegetation Management Program
MMU has two VMPs in the planning stage. The Greeley Hill VMP, eventually totaling 2200 acres, has been submitted to CSR for approval. Botanical surveys continue through the spring flowering period on the adjacent Boneyard VMP of 1913 acres.

CalVTP
The California Vegetation Treatment Program (CalVTP), developed by the Board of Forestry and Fire Protection (Board), is a critical new component of the state’s multi-faceted strategy to address California’s wildfire crisis. The CalVTP defines the vegetation treatment activities and associated environmental protections to reduce the risk of loss of lives and property, reduce fire suppression costs, restore ecosystems, and protect natural resources as well as other assets at risk from wildfire. The CalVTP supports the use of prescribed burning, mechanical treatments, hand crews, herbicides, and prescribed herbivory as tools to reduce hazardous vegetation around communities in the Wildland-Urban Interface (WUI), to construct fuel breaks, and to restore healthy ecological fire regimes. The initial VTP project in MMU is in planning for multiple treatments on a 46-acre parcel between Vista Del Rio Dr. and the Goldside subdivision in Battalion 4, Madera County. An additional VTP is planned in Coarsegold on Wells Road for 2021.
TRAINING BUREAU

Overview
The Madera-Mariposa-Merced Training Bureau is responsible for training 350 CAL FIRE career firefighting personnel and 350 Paid Call Firefighters (PCF)/Volunteers from the counties of Madera, Mariposa and Merced. The training provided serves to educate Firefighters from their first day on the job throughout the extent of their careers. Furthermore, 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 Unit, CAL FIRE Training Center in Ione and Regionally, multi-company drills, exercises of the Joint Apprentice Committee program, new and returnee.

Firefighter I academies, HFEO proficiency training, Spring Training Preparedness exercises, and Continuing Professional Training courses and testing.

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

- Madera training is overseen by an administrative Fire Captain assigned to the Madera Division and the paid call Firefighters receive monthly training from the Fire Captain, as well as the career firefighting personnel throughout the division. Madera hosts its own academy for new Paid Call Firefighters, and offers its Burn Container for Career, Paid Call, and returnee Firefighter training.
- Mariposa is the training headquarters for the Unit and is located within the Mariposa Division at the CALFIRE/Mariposa County Spring Hill Training Center. Training Headquarters is staffed by a Battalion Chief and an administrative Fire Captain. Mariposa tracks all the training records, and schedules yearly.
trainings for the career staff. Additionally, they are responsible for both new and returnee Firefighter Academies, Spring Preparedness Exercise, and Continued Professional Training courses for all state personnel. They are also responsible to coordinate the Joint Apprentice Committee (JAC) Firefighter II and Fire Apparatus Engineer training. This includes monthly reports, 1st and 3rd year testing on between 70 and 80 JAC’s. Mariposa County employs a Fire Captain in Training for the training responsibilities of the Volunteer firefighters within the county fire department.

- Merced training is conducted at Merced County Training Center, which is facilitated by a Fire Captain. Merced training hosts many State Fire Training Classes to support our employee’s educational needs as well as JAC required classes. Merced Training is a big part of the Merced College Firefighter I academy providing the wildland training as well as many other trainings. They also provide Continued Professional Training courses for career staff and Paid Call Firefighters within Merced County. The Merced staff also offers it’s Burn Container for Career, Paid Call, and returnee Firefighter training.

Goals & Objectives Statement

- The Training Bureau has set several goals to improve firefighting operation efficiency and safety for the Unit. Provide educational courses and Continued Professional Training as appropriate to meet mandated recertification needs and review 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 by September 31st.
- Ensure that Training Requests (TR7’s) have been submitted prior to December 31st 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 February or March of each year where approximately twenty-five Firefighters are hired.
- Prepare training and preparation of spring transition for the first Firefighter hiring. This usually takes place March/April and provides training for approximately 25-40 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 live fire skills and physical fitness evaluation. Usually takes place in June.
- Assist with 4064 testing as needed.
- Gathers and tracks information provided by individual employee’s supervisors to facilitate necessary training needed in the employee’s Individual Training Plans.
- Maintain and facilitate the Record Retention Plan of all employees through Target Solutions and the employee’s official training file.
- Identify mandatory and needed Unit classes and develop cadres for classes as necessary.
- Chairs the Unit’s Training Committee to ensure consistent training plans within the three Divisions and provide guidance and direction on behalf of the Unit Chief.
- Coordinates the JAC program, ensuring each apprentice can complete their JAC training within 3 years.
- Facilitate an orientation of all three operational divisions to each employee as they start work in our Unit.
Overview

Mt. Bullion Conservation Camp opened as a California Youth Authority fire camp in 1958. In October 2004, Mt. Bullion was converted to a California Department of Corrections and Rehabilitation (CDCR) adult conservation camp. Many modifications were made to existing structures to accommodate the one hundred and ten (110) inmate capacity population. CAL FIRE and CDCR have an excellent working relationship and take pride in the camp. On duty personnel meet twice a week to discuss health, safety and procedural issues concerning the operation of the camp.

The fire protection responsibilities for Mt. Bullion Camp fall within the CAL FIRE Madera-Mariposa-Merced Unit (MMU). The fire resources at Mt. Bullion include two or three inmate fire hand crews and a vehicle demobilization trailer. These resources are regularly dispatched to fires and floods throughout the state. Mt. Bullion also has a Model 14 fire engine that is used to protect the camp and acts a relief engine after front line engines are dispatched out of the unit.

Due to the location and size of Mt. Bullion Camp as well as the available support facilities that it has, it is often used as a staging area/mobilization center for inmate fire hand crews that are en route to emergency and preposition incidents across the state. The permanent and temporary (tent) facilities at the camp can support ten strike teams of crews during each 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, the northern portion of the Sierra National Forest & southern portion of the Stanislaus National Forest.

The following CAL FIRE personnel are assigned to Mt. Bullion Camp: Division Chief, ten Fire Captains, Water and Sewer Plant Operator, Heavy Equipment Mechanic (HEM) and an Office Technician. The following CDCR personnel are assigned to Mt. Bullion Camp: Lieutenant, Sergeant and seven Correctional Officers. Facilities include a vehicle repair shop that supports the Emergency Crew Transports (ECT), a metal fabrication.
shop that supports the camp, MMU and local municipalities, and a wood shop and plaque shop that support the camp and MMU. The camp also has a dump truck, six-person stake side, and a woodchipper that support the camp, MMU, local municipalities and communities.

BATTALION 1: COULTERVILLE BATTALION

Battalion Overview
In the northeast corner of the Madera-Mariposa-Merced Unit, encompassing 274,462 acres and 426 square miles lies the Coulterville Battalion. Containing a diverse amount of topography and vegetation, the western half of the battalion is range land with light flashy fuels in rolling hills. Once you progress in elevations you notice the changing topography from rolling hills to steeper slopes and canyons in oak woodland. As you travel above the 2,500’ elevation you see the transition from oak woodland to major river drainage topography and fuel. The northern Highway 49 corridor drops into and out of the Merced River Drainage. The fuel transitions into the brush model of chemise, 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 Cathey’s 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 Cathey’s Valley, is a 640-acre development of high-end homes while the Don Pedro subdivision is a 4,500 which is split between Mariposa and Tuolumne counties. Historic assets include the Jeffries Hotel, the Muse, and multiple historic business structures that make up most of the historical assets in Coulterville. In addition, The Trabuco House and General store of Bear Valley, and the Catholic Church, Golden Stagg Haul, Manuela’s, and assorted historical buildings that make up the towns business and residential structures of Hornitos are equally important. Interspersed
throughout the varied topography and vegetation, you will find large cattle ranches, federal forest, parks, and recreation areas and vineyards.

Weather patterns in Battalion 1, during declared fire season, consist mostly of diurnal winds that combine with topography to create a predictable north-northwest (NNW) airflow 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, the Oliver and Telegraph Fires of 2008, and the Detwiler Fire of 2017. The potential lies in the fuel and topography of the Merced River drainage, which requires expertise in major river drainage firefighting 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.

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 1 and the communities it serves.

Accomplish the objectives

- Designate personnel to provide wintertime 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 reduction projects.
- Coordination and participation with the Southwest Interface Team (SWIFT) to coordinate fuel break projects for the protection of communities of Tuolumne and Mariposa Counties. This group also provides map updates to provide responders with information on location and current status of fuel breaks to assist with strategies, tactics, and preplanning for wildland fire incidents.

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. Fire Prevention
and Pre-Fire Suppression staff will again be called upon to assist in this year’s battalion program.

School Programs
Through the Unit Prevention Bureau, Battalion 1 personnel prepare and present programs to school children, assist schoolteachers and administrators, either in or out of classroom, and prepare or present fire prevention or conservation education subjects and materials, with emphasis on K-12 students that reside in State Responsibility Area (SRA) lands.

Battalion 1 school programs consist of a coordinated effort between cooperating fire agencies known as “Team Teaching”. This allows a great opportunity and potential for stimulating interest in wildfire prevention. The classroom atmosphere makes an ideal place to acquaint children with fire prevention responsibility 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 1. Most recently prevention signs were added to the intersection of Greeley Hill Road and Ernst Road and on the Reddington Ranch on the south side of Highway 140. Prevention signs are rotated based on the Fire Prevention Bureau rotational schedule. Station managers have been diligent in maintaining that rotation. Battalion 1 has increased the number of fire prevention signs and safety messages in 2016 from five to eight. The locations are as follows:

- **Cathey’s 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 locations are on the southwest corner of CAL FIRE property at the Hornitos FFS and are visible from Bear Valley Road, and Hornitos area along Bear Valley Road east of the town of Hornitos at Hunters Valley Road, and one along the road side in the area of the entrance to McClure Lake campgrounds. In cooperation with BLM a “Think before you plink” safety and fire prevention message sign was also placed at the entrance to Hunters Valley Access BLM Road. This access road is routinely utilized by the general public to go target shooting with their firearms on BLM ground, however this ground is within the state DPA.

- **Coulterville**
  One sign is located on the southwest corner of CAL FIRE property at the Coulterville FFS and is visible from Hwy 49. Second sign is located at the intersection of Greeley Hill Road and Hotzel Rd. A third sign will be added to the Don Pedro area.
Public Events
All on-duty company officers in Battalion 1 will attend public events in the local community they serve. This participation creates an environment that builds trust and friendship between CAL FIRE employees and the residents of the community. A professional, polite, and friendly attitude will be maintained at these events and fire prevention message is encouraged. If a station is invited to a public event that is not listed, it will be the responsibility of the company officer to work through the on-duty Battalion Chief to decide on the ability to attend based on the impact on station management and Unit concerns.

Media

Media contact for Battalion 1 has traditionally been through the Unit’s Prevention Bureau in the form of a press release or a direct phone call from the Mariposa Division Chief to the editor of the Mariposa Gazette in the event of a specialized training activity. Burn permits are required on May 1st of every year (PRC 4423 (b)). The on-duty Battalion Chief receives approval from the Unit Chief through communication with the Mariposa Division Chief, where there is a restriction of 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.

Defensible Space Inspections

Each station within Battalion 1 starts weed abatement inspections during the month of April, or sooner, based on rainfall and fuel conditions. These inspections are conducted by station personnel in conjunction with our Unit Forestry Aide Defensible Space Inspectors funded through the SRA Fire Prevention Fee. The Defensible Space Inspectors and/or station personnel will go to each residential structure and visually inspect and hand out helpful information to homeowners. The LE-100 inspection form traditionally utilized has been updated and streamlined to be more simplistic as well as collect data for the new “Collectors Application”.

If a residence is “out of compliance” we will 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 PRC 4291 code violations were noted, station personnel or our Unit Forestry Aide Inspectors will mail the LE-100 form to the residence/property owner via certified mail to confirm reception of violations.
If, during the second inspections, a residence is “out of compliance”, a copy of the second LE-100 inspection form would be given to the homeowner either in person or certified mail along with a copy to prevention to schedule a third inspection. The Forestry Aide Inspectors goal and/or station personnel are to provide each station with 100% completion of first inspections within the designated battalion target area for that year. Second inspections are to be completed by station personnel.

**Tracking of inspections**

Tracking of the LE-100 inspections will be done in coordination with our Forestry Aide Inspectors through our Unit Pre-Fire Program. Station personnel will collect information as designated by our Pre-Fire Engineer Fire Captain for consistent tracking and data collection. Utilizing the “Collectors Application” via tablets for the ability to upload data and maintain real time data as well as capture the most current information regarding our structure’s access/egress, water sources, clearance, addressing, etc. within the battalion.

**Coulterville Battalion’s three target areas**

Coulterville station has three target areas which consist of: Don Pedro, Coulterville, and Greeley Hill, and combined have about 180 square miles of area to cover. In 2019, the main target area was the Coulterville area, in 2020 the target area is Greeley Hill, and in the year 2021, Don Pedro will be the main target area. Each of these three target areas have a goal of being 100% completed, rotating every year. Our unit Forestry Aide Inspectors will coordinate with our stations to concentrate on the current target area for the year to assist in working towards our 100% goal.

**Fire Safe Council**

The Fire Safe Council is a non-profit 501(c)(3) 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, Hunters Valley, Hornitos, and Cathey’s Valley, hundreds of people have been helped by the Fire Safe Council program removing and clearing property to the LE-100 guidelines.

**Fire Prevention**

The purpose of this section is to identify how Battalion 1 educates the public in preventing unwanted fire, how to safely use fire to reduce 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. Most of the ignitions in the battalion are related to debris burning, equipment uses, 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 ensure 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 inciners (burn barrels) have been banned for over a decade, there still needs to be a renewed educational process regarding the ban on inciners.

To reduce unwanted ignitions by vehicles in Battalion 1, an aggressive road corridor hazard reduction treatment with controlled burning needs to happen along the south bound or north side of Highway 140 from the Mariposa-Merced County line at the Redington Ranch east to the area of the Day Ranch. Cooperation from landowners to disk their property adjacent to Hwy 140, the Mariposa County Health Department, CAL TRANS and CHP could make this possible. Creating a fuel break would benefit landowners through increased protection of unwanted ignitions spreading fire into their rangelands. This will also benefit public safety through reduced risk of traffic hazards of roadside fires, and significantly reduce potential accidental starts from vehicles or flying debris. More specifics (APPENDIX G)

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, the SWIFT group, federal agencies, and local fire safe councils to support mitigation efforts, Battalion 1 shares unit allocated tree mortality equipment. Personnel have been routinely working 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.

BATTLELION 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. Mariposa makes the county one of California’s most popular year-round vacation destinations, with Yosemite National Park annually drawing nearly four million tourists from all over the world. Battalion 2 borders the Sierra National forest to the East and has several areas of BLM land within the battalion.

There are two CAL FIRE stations within the Battalion providing emergency service to the community. Mariposa Station staffs two engines and one bulldozer during peak fire season months. Usona Station is staffed with a single engine during peak fire season months. During winter seasons both stations are under agreement with Mariposa County Fire for Amador staffing, providing emergency protection with one engine at each facility year around.

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, Bootjack South, Bootjack North, Midpines and the town of Mariposa. The influencing factors causing tree mortality issues involve bug diseased dead conifers, 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
Battalion 2 will support the Mariposa Fire Safe Council on current and future fuel treatment projects and public outreach. Will coordinate with local and Federal government agencies, utilize Unit equipment to improve access and egress within identified communities, and utilize private vendors to accomplish projects when State resources are limited. The Battalion will work with private utility companies to establish cooperative property protection fuel reduction projects, complete current projects, and identify future targets. Battalion 2 will maintain an aggressive LE-100 program within target areas and support local and Unit fire prevention activities. Lastly, prevent unwanted wildfires within the battalion boundaries. With dedicated and committed battalion employees, Prevention Bureau Staff, and Pre-Suppression Staff.

Accomplish the objectives
- Designate personnel to provide wintertime support for ongoing fuels treatment projects being conducted within the Battalion.
- Utilize County Road Department and CAL TRANS, when applicable, to meet goals and objectives.
- Utilize Private Vendors, when applicable, to meet goals and objectives.
- Coordinate with PG&E for property protection under tree mortality.
- 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 referencing vegetation treatment statistics.
- Utilize the Unit Forester and Environmental Scientist to prepare CEQA documents.
- Work and coordinate with Mariposa County to assist in tree vegetation management reduction.
- Coordinate with Mariposa Fire Safe Council for future fuel breaks within the battalion.
- Designate future Vegetation Management Plans (VMP) to utilize.
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 Defensible
Space Inspectors will be the catalyst to carry forth and complete many of the programs
under the direction of the Pre-Fire Fire Captain coordinating with 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, Go West Festival 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.

Defensible Space Inspections
The LE-100 Program in Battalion 2 is quite extensive due to the population density that
resides in and around the town of Mariposa, along the Highway 49 South corridor
toward the Madera County line, and along Highway 49 North toward the Merced River.
Due to the sheer number of structures, each response area is divided into three
inspection zones. Both Mariposa and Usona Stations conduct inspections within one
target area each year within the Battalion 2 LE-100 Priority Area.

The Battalion averages 1,700 inspections, yielding an average of 2,700 structures. One
address is considered a single inspection, but the inspection site could have multiple
structures such as the residence, detached garages, sheds, barns and pump houses.
Inspections were also conducted by the U.S. Forest Service in their Direct Protection
Area (DPA) of State responsibility land in accordance with their guidelines.

In the wake of the current tree mortality challenges, the LE-100 program continues to
bring to light the need for defensible space. With the addition of Forestry Aids, the
Battalion can expand the LE-100 inspection process to include two zones rather than
one and inspections started in March and will continue through Peak Staffing.

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

**BATTALION 4: AWAHNEE 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.

The dead and down from the March 21st, 2011 severe snowstorm, 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 3 Commercial structures were destroyed on the Junction and Courtney Fires in 2014. Reports from firefighters on the Junction and Courtney fires clearly showed the dry fuels and dead and down contributed to the long-range spotting and overall control issues on both fires. There were several large and damaging fires in 2017 including the Railroad and Mission on the SRA/FRA boundary where dead trees were the primary control problem. Tree Mortality Bug kill trees will continue to be an additional control problem for this fire season. With the number of dead trees and now snags, spotting potential will also cause fire control issues and be a danger to fire suppression crews. Working with local and federal agencies along with local stakeholders to remove hazard trees will continue to be a priority for years to come, particularly along roads in the county and where possible around communities at risk.

LE-100 inspections have shown that many properties had not cleared their downed trees or standing dead trees. The magnitude of the tree mortality problem in Eastern Madera County has caused not only a fire danger problem but an economical and fiscal problem. Most homeowners may not be able to physical remove these trees or cannot afford to have these trees removed. There are also not many avenues for the removal of the timber from the property. The timber market has been saturated with trees from fire affected areas, making the bug killed tree virtually worthless. Education on standing dead trees and how to deal with them on private property is a priority. This is still an issue in 2019. We are currently holding informational meetings to explain to private property owners’ avenues to remove trees including grant programs.

The current projects for Tree Mortality in Eastern Madera County in Battalion 4 include Cedar Valley, Road 628/620 and Road 222/274. Madera County Road Department has received a grant to remove the remaining dead trees with contract crews. These projects include brush and dead tree removal for public safety. We are currently in the calfire719 process for Potter Ridge Fire Road and the Metcalf Gap Fire Road to create a 200’ shaded fuel break along both roads. The Cedar Valley project has been completed. Other roadside projects will be identified for future projects.
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-Fire 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, Nipinnawassee, 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. 2013, 2014 and 2015 are the exception to the rule with several accidental and intentionally set fires became major fires. 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 and the Ahwahnee Hills Park Board 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 and the Ahwahnee Hills Park Board 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 – A VMP/Training burn takes place yearly at Eastman Lake and is planned for May 2019.
- PRC 4209/4291
- VIP/Cooperators/Stakeholders
- Fire Safe Council
- The Eastern Madera County Fire Safe Council has been very successful in securing grant dollars and following through with well thought out, effective fuel breaks and thinning projects. A strong cooperative relationship exists with the Eastern Madera County Fire Safe Council, Firewise Community personnel and CAL FIRE. Efforts between the groups and CAL FIRE are coordinated and mutually supportive.
- 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.
- The Ahwahnee Hills Park Board has recently received a 501(c)(3) nonprofit status and has expressed interest in assisting in fuel reduction projects in the Ahwahnee area.

**Fire Prevention**

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

**BATTALION 5: 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 4 to the north. Battalion 5 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 5: 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, and Road 400 which provides access to Hensley Lake, Yosemite Lakes Park and Coarsegold. The Chukchansi Gold Resort and Casino is in the center of the Battalion which creates a higher volume of traffic on Hwy 41. These roadways annually have a high number of fires from roadside ignitions.
Like other Battalions 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 for Unit fuels reduction projects during winter months. Then according to weather and fuels the one engine transitions to local response before fire season. At peak season two engines are staffed out of Coarsegold. A bulldozer is staffed year-round and HFEO's are involved with Unit fuel reduction projects in the winter. Rancheria station is staffed with one engine year-round under an Amador agreement with Madera County. During peak season 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 also houses a ladder truck and Paid Call Firefighters.

There are also Madera County Paid Call/Volunteer stations in North Fork (Sta 11) and Yosemite Lakes Park (Sta 10), which respond with, type 2, type 3, type 6 engines and water tenders.

Still dealing with Tree Mortality due to several years of drought, a growing number of conifers and oaks died, either from the stress of the drought or 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 within 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 5 and the communities it serves.
- Communities at risk in Battalion 5 include the areas of Hidden Lakes Estates, O'Neal’s, 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), and Yosemite Sequoia
• Resource Conservation and Development with current and future fuel management projects.
• Facilitate fuel reduction projects that will widen and open 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. Evaluate Annual effectiveness of project areas and continue to develop plans for problem areas.

Information & Education

Battalion 5 personnel actively participate in Information & Education, School programs, Public and Media Events. They continue to take every opportunity for education by attending all community meetings in each of their areas Personnel are involved in LE-100 inspections to educate homeowners on fuel reduction and improving safety around local communities.

Planning, Engineering & Structure Ignitability

The VMP Coordinator gets into contact with landowners who control strategically significant land and coordinates a mutually beneficial brush removal program. 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 12

Battalion 12 Overview

Battalion 12 is in the eastern half of Madera County. The eastern portion of Battalion 12 meets the San Joaquin River, with the northern portion of the battalion bordering Battalion 5 and the southern boundary meeting the Fresno county line. Some of the newest developments within Madera County are in Battalion 12, including Tesoro Viejo, Riverstone, and Millerton Preserve Subdivisions. These communities will continue to expand for the foreseeable future.

The State Responsibility Area (SRA) portions of the Battalion are north of the Madera Canal and East to Millerton Lake. Fuel type is mainly annual grass, the topography is rolling foothills. Fires have been started by vehicles traveling along State Route Highway 41, which runs through the entire portion of Battalion 12. There have also been a few fires over the years caused by electrical distribution.
**Goals and Statements Objectives**
- 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 on proper fire hazard reduction through face-to-face contact during 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

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

**BATTALION 13: MADERA VALLEY BATTALION**

**Battalion Overview**
The Madera Valley Battalion is 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 landowners 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 structure lost.
Battalion 16 is unique in that it has four fire stations and three major programs within its jurisdiction. Fire stations are located in the towns of Winton, Cressey, Snelling and Atwater. The Haz Mat Program and Haz Mat 61 are located at Station 61 near the community of McSwain. The Aircraft Rescue Fire Fighting Program (ARFF) is located at Castle and maintains two ARFF Crash Trucks. The ARFF program has been tasked with protection of the USFS Very Large Air Tankers (VLAT) that are stationed at Castle for firefighting in central California. Other agencies that would use an ARFF response in an emergency are the Sierra Academy of Aeronautics, Gemini, Phos-Chek, Merced County Sheriff, USFS, CAL FIRE, Mercy Air/Riggs, US Air Force, US Navy, US Marines, US Army, Google, California Highway Patrol and TBM/TASCO (C-130 Operator).

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 (PCFs) 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
- Monthly meetings open to all agencies, departments, and private companies within Merced County that have Hazardous Materials or respond to Hazardous Materials emergencies. Meeting agenda is to discuss past incidents, Hazardous Materials response planning, training, or drills to prepare for or prevent future Hazardous Materials incidents.
- Hazardous Materials Training and Drills with 3 largest CAL ARP facilities annually, and with other facilities on a rotational basis.
- Participate in State and local Hazardous Materials related planning, training, drills, and exercises.
- Aircraft Rescue Fire Fighting Program
- Yearly live fire training at a fixed facility in Nevada, keeping personnel proficient in aircraft firefighting.
- Provide daily emergency response and service to Castle Airport and its surrounding areas.
- 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 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 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. In recent years, more agricultural trees have been planted in what used to be used for cattle ranching.
Assets at risk in Battalion 18 consist of mainly cattle ranches. The communities of Le Grand 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 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.
- Coordinate with fire prevention to use equipment recently purchased to update, maintain, and accomplish the weed abatement program within the battalion.

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.
- Provide monthly statistics to fire prevention on activities such as i.e.; weed abatement, pre-fire plans.

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 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 acres containing the 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 follow PRC-4291.
- Work with Merced County Prevention to ensure that all residents are following the county weed abatement standards.
- Merced County Roads Dept. sprays and mows the weeds on the roadside shoulders of Le Grand Road, Raynor Ranch Road, Buchanan Hollow Road, and Santa Fe Avenue to prevent roadway starts.

BATTALION 19: DELHI BATTALION

Battalion Overview
The Delhi Battalion is in the Northern part of Merced County, which borders Stanislaus County. The two Major Rivers that run through Battalion 19 are Merced River and San Joaquin River. McConnell State Recreation Area located in Ballico, George J. Hatfield State Recreation Area located in Hilmar, and Great Valley Grasslands State Park located in Stevinson are the three State Parks that contribute to Battalion 19’s diversity. The fuel types in these areas consist on heavy Oak woodland, annual grass and tule grasslands.

The weather patterns in Battalion 19 is like most of the county, hot and dry during the summer months with temperatures ranging in the 90’s to 100’s, and cold and foggy during the winter months with temperatures ranging in the 30’s to 50’s.

Fire History in Battalion 19 varies from rangeland grass fires, which is mainly used for cattle ranching to river bottom fires in recreational areas. Assets at risk in Battalion 19 consist of Gallo Winery (the largest winery in the U.S.), Foster Farms (the largest poultry company in the west), Hilmar Cheese (the largest producer of cheese in the
world) and Major thoroughfare (Hwy 99, Santa Fe Railroad, and Southern Pacific Railroad).

Communities at risk in Battalion 19 include the areas of Delhi, Hilmar, Stevinson, Ballico and the City of Livingston. The influencing factors involved in identifying fuel reduction projects/hazard areas include fire history, housing density, fuel hazard, and range value. Fire ignitions have traditionally been an issue near roadways or in remote areas.

**Goals and Objectives Statement**
- Continue to evaluate and enhance fire protection in the communities above by address inadequate staffing levels and obsolete equipment.
- Support the area with current and future fuel treatment projects.
- Educate the public on fire safety and hazard reduction.
- Implement an aggressive Weed Abatement inspection process.
- 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 weed abatement inspections.
- Develop literature, flyers and/or maps to educate the public on fire readiness and evacuations.
- Participate with local stakeholders in annual meetings and community public education events.
- Provide monthly statistics to fire prevention on activities.

**Measurement**
Battalion 19 stations participate in numerous community events to promote fire prevention and awareness. Some of these programs are Street Fairs, School Presentations, and Community Festivals.
## APPENDIX A: PRE-FIRE PROJECTS

### PRE-FIRE PROJECTS

**Madera-Mariposa-Merced Unit**

01/01/2020 thru 04/27/2021

<table>
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<tr>
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<th>PROJECT NAME</th>
<th>PROJECT STATUS</th>
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<td>Stumpfield/Watt Fuel Break Old</td>
<td>Complete in Maintenance</td>
<td>115.58</td>
</tr>
<tr>
<td>CFIP</td>
<td>The Pacific Forest Trust Inc. CFIP 2018</td>
<td>Complete</td>
<td>1,279.11</td>
</tr>
<tr>
<td>FirePlan</td>
<td>Thornberry Fuel Break</td>
<td>Active</td>
<td>63.13</td>
</tr>
<tr>
<td>FirePlan</td>
<td>Timberview</td>
<td>Planned</td>
<td></td>
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<tr>
<td>VMP</td>
<td>Vista Del Rio</td>
<td>Active</td>
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<tr>
<td>FirePlan</td>
<td>Wells Road VTP</td>
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<td>CFIP</td>
<td>Yosemite Mountain Ranch LTD CFIP 2018</td>
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<td>3,361.46</td>
</tr>
</tbody>
</table>

**Totals**: 20,670.72
APPENDIX B: UNIT GOALS AND OBJECTIVES

Goal Statement

The Madera-Mariposa-Merced Unit has developed its fire plan to align with the CALFIRE Strategic Plan and the California Fire Plan. The focus of these goals is protection of life, property and natural resources from wildland fire, as well as the improvement of Environmental Resilience to wildland fire. 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 CALFIRE 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.
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.

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

**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 because 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

59
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. 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 Cathey’s Valley, on Guadalupe Mountain, another fire swept southwest from Cathey’s 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 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 the Oliver Fire and the Telegraph 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.

![Destroyed/Damaged/Saved Structures Chart]

<table>
<thead>
<tr>
<th>Property Type</th>
<th>Destroyed</th>
<th>Damaged</th>
<th>Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwellings (123)</td>
<td>30 (24%)</td>
<td>0</td>
<td>93 (76%)</td>
</tr>
<tr>
<td>Outbuildings</td>
<td>100 (44%)</td>
<td>5 (2%)</td>
<td>121 (54%)</td>
</tr>
<tr>
<td>Vehicles</td>
<td>60 (88%)</td>
<td>8 (12%)</td>
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Fire Season 2017

2017 was a busy year for the Madera-Mariposa-Merced Unit. Fire activity started early in the Unit with the Wright Fire burning 1,733 acres in Los Banos on May 12, 2017. Fire activity was increased in the Unit from receiving at and above normal levels of precipitation. This combined with warm temperatures created a substantial growth in light fuels (grass) in the region. With fuels stressed from previous years of drought and a thick continuity of light fuel growth, it created a High Fire Danger and Fire Behavior
unseen in previous years in the Unit. Once fire ignitions occurred Firefighters responded
to already well-established fires with extreme fire behavior that would have been easily
suppressed in previous years. The fires now made suppression efforts difficult and
dangerous. In the month of June, the Unit was hit with 3 fires of 100 acres or more.
(Oakwood Fire 1,429 acres, Colorado Rd Fire 100 acres, Ben Fire 558 acres). On July
16, 2017 at approximately 1556 hours a wildland dispatch was made for the area of
Hunters Valley Rd with a cross of Detwiler Rd.

The Detwiler fire had become well established east of Lake McClure off Hunters Valley
Rd, North of Detwiler Rd. With the location of fire, significant grass crop, heavier fuels
unable to recover from the previous 4 years of drought, and weather of (Temperature
97, Relative Humidity 17% and wind out of the SW at 6 mph) all factors were in
alignment. The Detwiler Fire would become the largest fire in Mariposa County’s history,
dwarfing the Telegraph Fire of 2008. Within the first 2 hours the fire grew over 1,000
acres, and by nightfall the Detwiler Fire would burn over 2,500 acres. On Monday July
17, 2017, the Detwiler Fire had consumed 7,100 acres. On Tuesday July 18, 2017, a
state of emergency was declared, and the fire was now over 25,000 acres. It was the
largest fire burning in the State at the time. By Thursday July 20, 2017, the Detwiler Fire
had grown to over 70,000 acres. The Detwiler Fire was finally fully contained on August
24, 2017 at 81,826 acres.

The Detwiler Fire left a path of destruction in its wake. There were 131 structures
destroyed, 63 of those were homes, 1 commercial building, and 21 structures damaged.
The Detwiler Fire created numerous evacuations in the local areas of Coulterville, Bear
Valley, Cathey’s Valley, Bridgeport, and Mariposa proper. This was the first time in
recorded history of evacuating the town of Mariposa. The final cost of the Detwiler Fire
was $81,856,937. The cause of the fire was firearms related, like the Telegraph Fire.
APPENDIX C-2: DETWILER FIRE-2017

Damage By Property Type

Exterior Siding | Combustible | Fire Resistant | Unknown
---|---|---|---
Residence | 35 | 27 | 14
Commercial | 0 | 0 | 1
Outbuildings | 26 | 31 | 18
Totals | 61 | 58 | 33

% of Residence Damaged by Fire

- 1-9%: 10%
- 10-26%: 5%
- 26-50%: 1%
- Destroyed: 84%
Fire Season 2018

2018 was another busy year for the Madera-Mariposa-Merced Unit. Fire activity started early with the Nees Fire on May 2, 2018 in the Los Banos area burning a total of 1,756 acres. The 2018 fire season was predicted to be a very active fire season due to the substantial rain fall we received that winter. Combining the factors of precipitation levels, increased temperatures and vegetation growth, the season was lining up to be nothing short of what was predicted. By mid-June the unit was hit with back to back fires with both the Planada fire (4,563 acres) and the Boyer fire (56 acres) beginning on June 15, followed by the Dinosaur Fire (180 acres) on June 17, and the Wheeler Fire (115 acres) on June 18.
On July 13, 2018 at 8:34 P.M., MMU resources were dispatched to the Ferguson Fire on the South Fork of the Merced River drainage on Highway 140 and Hites Cove near the community of El Portal. The terrain was very steep and rugged primarily burning in timber composed of oak, pine and brush mixed with standing dead trees. Access was limited with very few roads to gain access to the fire’s perimeter. Within the first 24 hours the fire grew to 828 acres. On July 14, 2018, Heavy Equipment Operator Braden Varney was tragically killed in a dozer rollover accident while constructing line. By July 28, the fire had grown to 42,017. On July 29, another tragic accident occurred involving Captain Brian Hughes from the Arrowhead Hotshots, Captain Hughes sustained fatal injuries when he was struck by a tree. The Ferguson Fire was contained on August 18, 2018, burning a total of 91,901 acres. The fire displaced many Mariposa Communities and subdivisions including Old El Portal, El Portal, Rancheria Flat, Foresta, Yosemite View Lodge, Yosemite West, Anderson Valley, Wawona, Yosemite Valley, Mariposa Pines, Jerseydale, Ponderosa Basin, and Lushmeadows. Over 3,000 personnel were assigned to the fire during the life of the incident. A total of 2 fatalities and 19 injuries were reported. There were 10 structures reported to have been damaged or destroyed. The Ferguson Fire was investigated and determined to have ignited by vegetation catching fire from superheated fragments of a faulty vehicle catalytic converter.

The community of Mariposa was not only affected by the loss of a local hero but also faced economic hardships. The town and many of its residents rely heavily on tourism in the summer months, with the evacuations, road closures and closure of Yosemite Valley it tested the survival of many businesses. This was Mariposa’s second summer faced with destructive fires causing tourism to be almost nonexistent. The community was also still recovering from the massive flood damage caused by last winter’s storms.

**Fire Season 2020**

The Creek Fire was a large wildfire which started on September 4, 2020 near Shaver Lake, California. The fire burned 379,895 acres (153,738 ha) and was declared 100% contained on December 24, 2020.[5] The fire burned mostly in the Sierra National Forest. The Creek Fire was the fourth-largest wildfire in modern California history, and the largest single fire not part of a greater complex. 5152 acres of SRA burned in Madera County and existing fuel reduction projects from the Cascadel Woods and road 225 in North Fork were utilized to slow the fire.
Structure Defense/Evacuation Plans

**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 wildfires 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.
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.

MMU Large Fires – 2019 (Fires 20 acres+)

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<tr>
<th>Fire Name</th>
<th>Acreage</th>
<th>Damage</th>
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<tr>
<td>Santa Nella</td>
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<td>Fields</td>
<td>40.00</td>
<td>10,000</td>
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<tr>
<td>Billy</td>
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2019 Fire Season Ignition Statistics

Wildland Fire Cause 2015-2019

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### 2020 Fire Season Ignition Statistics

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</table>

#### 5 YEAR AVERAGE 2016-2020 IGNITIONS CAUSES

- Undetermined
- Lightning
- Camp Fire
- Smoking
- Debris
- Arson
- Equipment Use
- Vehicle
- Railroad
- Electric Power
- Playing with Fire
- Miscellaneous

[Bar chart and pie chart showing the distribution of fire cause categories]

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70
APPENDIX F: FIRE PREVENTION ENGINEERING MASTER PLAN

Madera-Mariposa-Merced Unit
Pre-Fire Engineering Master Plan Fuel Break

MADERA DIVISION / NORTH FORK / SEGMENTS 1-3

In the North Fork area of Madera County there are three segments of the continuing fuel break that runs through MMU.

Segment 1: from the San Joaquin River to the town of North Fork along Road 222. Working with Madera County Roads Department and private landowners, use machines and hand crews to clear vegetation along both sides of Road 222.

Segment 2: from the town of North Fork to Goat Mountain Lookout, following Road 226 to Walker Ranch Road, thence from Walker Ranch Road to the USFS fuel break over Goat Mountain Lookout. Use machines and hand crews, working with Madera County Roads Department, private landowners, and the USFS to clear vegetation along the road system and maintain the existing USFS fuel break.

Segment 3: from Goat Mountain Lookout to Road 420, following USFS Road 7S23 to USFS Road 7S33 along Thornberry Mountain to Road 420. Use machines and hand crews, working with Madera County Roads Department, private landowners and the USFS to clear vegetation along the road system and maintain the existing USFS fuel break.

MADERA DIVISION / AHWAHNEE / SEGMENTS 1-3

In the Oakhurst to Ahwahnee area of Madera County there are three segments of the continuing fuel break that runs through MMU.

Segment 1: from Road 420 to Highway 41 thence following the predominant ridge through Sections 27 and 21, Township 7 South, Range 21 East, to Deadwood Peak. Use machines and hand crews, working with Madera County Roads Department and private landowners to clear vegetation along the road system and create a new fuel break.

Segment 2: from Deadwood Peak along the Potter Ridge Fire Road to the ridge in Sections 11 and 2, Township 7 South, Range 20 East, to the Fresno River. Use machines and hand crews, working with private landowners, to clear vegetation along the road system. Maintain and widen the existing fire control road and create a new section of fuel break.

Segment 3: from the Fresno River following the ridgeline in Sections 2 and 3, Township 7 South, Range 20 East, thence continuing into Section 24 Township 6 South Range 20 East, over Crooks Mountain in Section 27 into Section 22 to Metcalf Gap, thence from Metcalf Gap Road through Section 22 to Miami Lookout, thence down the ridgeline in
Section 12 to Highway 49. Use machines and hand crews, working with Madera County Roads Department, private landowners and the USFS to clear vegetation along the road system and maintain an existing USFS fuel break, or create new areas of fuel breaks through the SRA and FRA where needed.

**MARIPOSA DIVISION / SOUTH / SEGMENTS 1-2**

In the southern portion of Mariposa County there are two segments of the continuing fuel break that runs through MMU.

**Segment 1:** from Highway 49 South at the county line following Highway 49 to the Starchman Fuel Break at Old Highway. Work with CAL TRANS, CHP and landowners using machines and hand crews to clear vegetation along both sides of Highway 49.

**Segment 2:** following the Starchman Fuel Break across Stockton Ridge to Highway 140. Maintain the existing fuel breaks that are completed and in place.

**MARIPOSA DIVISION / CENTRAL / SEGMENTS 1-2**

In the Central portion of Mariposa County there are two sections of the continuing fuel break that runs through MMU.

**Segment 1:** From Highway 140 following Alta Vista Road to the ridgeline starting in Section 4, Township 5 South, Range 18 East, thence following the ridgeline to Bullion Knob, and then to the intersection on Mount Bullion Camp Road. Use machines and hand crews, working with Mariposa County Roads Department and private landowners to clear vegetation along the road systems and create new fuel breaks where needed.

**Segment 2:** from the intersection at the top of Mount Bullion Camp Road going north following Mount Bullion Ridge Road to the Josephine Mine, thence leaving the road and following the ridgeline and existing fire line to the Merced River at Bagby. Use machines and hand crews to maintain and widen the existing road and fire line that is in place.

**MARIPOSA DIVISION / NORTH / SEGMENTS 1-2**

In the northern portion of Mariposa County there are two sections of the continuing fuel break that runs through MMU.

**Segment 1:** starting at the Merced River at Bagby following an existing powerline road through the BLM lands to Shilling Road, thence following Shilling Road to Ponderosa Way. Use machines and hand crews to maintain and widen the existing road system, working with BLM and Mariposa County Roads.

**Segment 2:** following Ponderosa Way to the Ponderosa fuel break. Use machines and hand crews to maintain and widen the existing road and fire line that is in place.
APPENDIX G: BATTALION 1 PROJECTS

Fire Roads and Fuel Reduction Project/VMP’s Battalion 1
Over the last 10 years in Battalion One we have been successful in reestablishing fire roads. We strive to maintain the roads the trust and the commitment from the private landowners, Fire Safe Council, Resource Conservation District, and federal government agencies. This has been a long process that has been successful since 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. The Detwiler Fire in 2017 reconfirmed the need to continue these efforts. Several fire roads and Battalion fuel breaks such as Tin Brush, Buckhorn, Black Mountain, and Ponderosa Way were utilized during the Detwiler and proved to be successful with access, management and containment. Continued cooperation with the Southwest Interface Team (SWIFT) has identified these fire roads and breaks on the SWIFT map as well for use of the group and other resources for planning both strategic and contingency.

*Listed below are the fire roads and their current status that run through Battalion One:

![Map of fire roads and fuel breaks in Battalion 1 projects]
**Buckhorn Fire Road:**

1. **Objective:** 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 719 process needs to be implemented 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. The Detwiler fire did burn over/through portions of the fire road, however continued maintenance should be continued. The project is 9.5 miles in length.

3. **Future Planned Actions:** Coordination with Unit Forester and Pre-Fire Engineer to validate and complete a 719 process is needed. 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 as needed basis. This fire road is scheduled for grading this spring.

**Ponderosa Fire Road/Fuel Break:**

1. **Objective:** 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. This project is now “shovel ready” from Ponderosa north and is needs construction of 200’ shaded/fuel reduction, removal of dead trees, mastication, and grading.

3. **Future Planned Actions:** Will work this project in conjunction with Greeley Hill project as equipment and personnel allow.

**Hunters Valley Access Road:**

1. **Objective:** To gain access and provide a fuel break to the old Williams Peak lookout site and to Lake McClure. This also allows potential protection of the Merced River watershed, 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 site. The access road was graded in 2018 and will be evaluated for current grading needs. The Williams Peak lookout was destroyed by fire during the Detwiler Fire in 2017. The site was cleaned up through Cal Recycle company.

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. Plans are to maintain and extend the fuel break aswell as coordinate with BLM to burn piles created throughout the project. Also plans are to establish a radio vault and camera at the Williams Peak site.

**Van Ness Fire Road:**

1. **Objective:** To maintain access and fuel break for 7 miles from Cornets 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 serves as a fire road.

2. **Current Status:** The road is currently maintained by CAL FIRE and has been identified as in need of grading and gravel. The 719’s for this project have been completed and project binder made. The project has been started with some cutting, chipping and burning at the top of the road towards the lookout.

3. **Future Planned Actions:** The road will be prioritized for maintenance by grading and continuation of bushing the road. Establishing a shaded fuel break will continue as a secondary project and as we can allocate resources.

**Crown Lead Road:**

1. **Objective:** To create access and a potential fire control point off Lake McClure, and to also provide protection of the Whites Gulch, Coe Gulch and Buckhorn Creek watersheds.

2. **Current Status:** This road is an access road only at this point. This road was utilized during the Detwiler Fire and some brushing and grading were done. This Road has been identified for work under the SRA non-county-maintained road access grant.

3. **Future Planned Actions:** Need to work with parcel owners through a 719 permissions process to create a 100-ft. wide shaded fuel break. Evaluate to see if any further grading is needed.

*Listed below are the Fuel Break/Reduction/VMP’s and their current status that run through Battalion One:*

**Greeley Hill Fuel Treatment VMP:**

1. **Objective:** Is to reduce large overgrown Chemise, Chaparral, and Manzanita stands to provide protection of the community of Greeley Hill and the Greeley Hill primary access/egress road of Hwy 132. The extent of this project is built off the Ponderosa Fuel Break to include Greeley Hill Road from Ponderosa Way west to Priest Coulterville Road, north to Cuneo Road, east back to Ponderosa Way. The proposed VMP will encompass approximately 2200 acres to be treated with shaded fuel breaks, mastication, tree felling, slash and limb chipping, pile burning, and controlled burning when approved.

2. **Current Status:** This project is being broken into manageable “phases”. Phase 1 which is private land about 90 acres we are currently working the project with engine crews and heavy equipment such as masticators, skid steer, and dozer to reduce fuels through mastication, pile burning, and chipping. Phase 1 is shovel ready and in progress. Phase 2 contains BLM land with a completed Archeology Survey Report to include 200’ fuel reduction as described above from Hwy 132 and all areas where BLM transitions
to private lands. The updated project description w/ maps have been submitted to BLM for review in two parts. Part one is a request to BLM for permissions under Programmatic Environmental Review (PER) to reduce fuels 200’ along Hwy 132. Part two is 200’ fuel reduction around entire project where BLM lands are involved as well as identified proposed lines within the project.

3. **Future Planned Actions:** Would like to move the project towards an RM75 process and into an approved VMP. Continue to treat project in areas where permissions are allowed such as phase 1. Continue to identify areas of opportunities to establish control lines and treatment areas around the entire project, identify on map and start treatment of fuels. Conduct a broadcast burn of approx. 30 acres of mastication currently on the project, continue pile burning, and appropriate fuel reduction throughout phase 1. If feasible plan for a fall 2020 broadcast burn of phase 1 and 2. Once BLM permissions are given continue fuel reduction as described above along Hwy 132. Establish lines and begin fuel reduction/treatment on north end of project off Cuneo road. Plan, assist, or conduct noxious weed burns on Munn Ranch as part of overall project. This project is divided into 5 phases.

**Boneyard VMP:**

1. **Objective:** This 1800-acre VMP was completed in the year 2000. Over the years the old fire lines have become grown over and are in the need for maintenance.

2. **Current Status:** I have worked with the landowner and are making plans to re-open some of the lines and potentially all of them again. Coordination with our Unit Forester is ongoing to reestablish CEQA requirements as well as identify changed property owners for 719 permissions. This VMP project ties into the Greeley Hill Fuels Treatment VMP and will provide a consistent fire break from Highway 49 east along Greeley Hill road to the top of Ponderosa Way tying the two projects together.

3. **Future Planned Actions:** Obtain 719 permissions where required. Once cleared by CEQA, reestablish lines priority being the southern lines that tie from Hwy 49 North to Priest-Coulterville into the Greeley Hill VMP. When appropriate, reestablish all lines of the project and begin planning process to conduct another burn however, this will most likely several years from now.

**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 National Forest. The fuel break is currently in an unfinished state of a half mile section of Private and BLM land. The remaining fuel break is need of maintenance.

3. **Future Planned Actions:** Are continued coordination with Stanislaus National Forest, BLM, TCU, and Sierra Nevada Conservancy Group. Funding was secured to move forward widening the fuel break to 400 ft. on the Tuolumne County side and complete the unfinished ½ mile section of private and BLM land.
The CEQA was completed and the MFSC in conjunction with SWIFT are coordinating the start of the Mariposa County side this year 2021.

**Tim Brush Fuel Break:**
1. **Objective:** Is like the Buckhorn fuel break. Maintenance of the road and fuel break are crucial to slow the spread or contain a fire’s spread to the North Fork of the Merced River watershed.
2. **Current Status:** The fuel break was opened and utilized during the Detwiler fire in 2017. 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:** Continued maintenance will need to be continued as needed as BLM has agreed to allow the fuel break to remain open.

**Gentry Creek Watershed Restoration Project:**
1. **Objective:** This is a cooperative tree removal, fuel reduction, and forest restoration project between USFS, BLM, Gentry Creek Watershed Restoration Project Group of 23 landowners sponsored through the Sierra Nevada Conservancy. The objective is removal of bug kill trees and reduction of fuels currently impacting the headwaters of Gentry Creek in Greeley Hill. The project site is concentrated on Dogtown Road, and Texas Hill Road near Quail Ln.
2. **Current Status:** This project has been completed and is moving into maintenance.
3. **Future Planned Actions:** Secure funding for maintenance.

**Future Proposed Projects:**
1. **Buckhorn Shaded Fuel Break Shilling to 49 North:** This project is like the Greeley 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.
2. **Highway 140 corridor:** To reduce unwanted ignitions by vehicles in Battalion 1, an aggressive road corridor hazard reduction treatment with controlled burning needs to happen along the south bound or east side of Highway 140 from the Mariposa-Merced County line at the Reddington Ranch west to the area of the Day Ranch. Cooperation from landowners to disk their property adjacent to Hwy 140, the Mariposa County Health Department, Caltrans, and CHP could make this possible. Creating a fuel break would benefit landowners through increased protection of unwanted ignitions spreading fire into their rangelands. This will also benefit public safety through reduced risk of traffic hazards of roadside fires, and significantly reduce potential accidental starts from vehicles or flying debris.
3. **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.
4. **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.

**On-Going Cooperative Projects:**

1. **Brushing of Greeley 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.

2. **Greeley 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.

3. **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.

4. **Brushing of non-county-maintained roads**: This joint effort with the Mariposa County Fire Safe Council will provide funding through the SRA non-county-maintained roads grant 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. Examples of roads identified for Battalion 1 are Ceuno Road, Texas Hill Road, Crown Lead Road, Jackass Ridge Road, Penon Blanco Road, Wagner Road, Dogtown Road, Shilling Road, and Bean Creek Road.

**APPENDIX H: BATTALION 2 PROJECTS**

**Battalion 2 Projects**

With the 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. Grupe Ranch is a VMP project to support the directive for more black acres. With the rental of private graders, Unit HFEO’s graded established fire roads in the Unit. The rental of these graders saved countless personnel hours and allowed a more focused approach to fuel reduction projects. It also allowed the Battalion HFEO’s to complete the Sierra National Forest “Good Neighbor” project which assisted in our ingress and egress to extended / Major fires (Dove Fire) on the DPA boundary of the USFS and the State in early June 2016 and Ferguson Fire in July of 2018 and the Briceburg fire in 2019. With Tree mortality, heavy snow and wind, it would benefit both agencies to once again clear access and egress on DPA boundary roads and maintain past fire history dozer lines from Ferguson Fire in 2018 and the Briceburg fire in 2019. Successful fire strategies and tactics were achieved through the previous fire breaks and access.
Amendments to the CEQA documents for Boyer, Grist, Lushmeadows, Stumpfield and Starchman have allowed the Battalion to utilize mechanized equipment for a more efficient and effective method of maintenance and project completion.

**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. CAL FIRE has currently awarded Mariposa Fire Safe Council grants through the California Climate Investments (CCI) program this year.

3. **Future Planned Action:** 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. Stumpfield Fuel Break has been identified as a priority projects for Mariposa Fire Safe Council through grant funding.

**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:** Currently pending grant awarding to fire safe council.

3. **Future Planned Action:** With an updated CEQA and 719’s the project can commence. Evaluation of project tree mortality and feasibility. Watt Fuel Break has been identified as a priority projects for Mariposa Fire Safe Council through grant funding. This will also tie into Metcalf Gap Fuel Break. With the improvement to technology (Google Earth) there may be an alternate fuel break adjacent to Watt Road. Further evaluation is underway.

**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 and overgrowth. Concurrently we are improving and maintaining sections of the fuel break utilizing
hand crews, engine crews and equipment for dead tree removal and vegetation treatment by means of burning and chipping and mastication. The amended CEQA has allowed the excavator/masticator and the skid steer/masticator work on the project. This has reduced engine crew and hand crew maintenance time.

3. **Future Planned Action**: CEQA amendment has been approved 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. The Lushmeadows Fuel Break has also been added to the Mariposa Fire Safe Council priority maintenance project. Maintenance and Herbicide spraying will be the key to keeping this fuel break viable.

**Boyer Fuel Break**

1. **Objective**: Establish a fuel break that supports the Lushmeadows fuel break to limit fire travel North/South. The Boyer project 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 chip, cut, pile and burn on both sides of Sherrod road to Darrah.

2. **Current Status**: Phase one has been approved through the California Environmental Quality Act (CEQA) and the 719 process is complete except for two major parcels. The other parcel is an absentee owner and all attempts to contact him have failed. Top end of the project, off Illuette Creek Falls, is the next critical piece to this project.

3. **Future Planned Action**: Maintain what progress has been made on phase one. Complete the 719 processes on phase two.

**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**: Project was listed as the Governor top projects and was completed last year.

3. **Future Planned Action**: Continue to maintain this fuel break.

**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. Fuel 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.
3. 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 does not want a CEQA on the property but is willing to let us use the property. Detwiler fire of 2017 met all fuel reduction goals and objectives.

4. **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:** Funding has expired for this project. Currently working on “Pick up Sticks” through RCD to eliminate fuel loading from tree mortality.

3. **Future Planned 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. Project needs maintenance. Resources and personnel are being utilized to support other Unit priorities.

3. **Future Planned Action:** Get 719 permission from parcel owners to maintain fuel break. Utilize this project to provide a larger fuel break around Mariposa proper connecting to Starchman on the South and a proposed fuel break to the North.

**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:** Fuel break was completed during 2019. Maintenance is continuous.

3. **Future Planned Action:** Continue cutting and chipping to maintain re-growth. Tie this project in Dubberke to provide and limit all fire spread East of Mariposa Proper.

**Feliciana Strategic Fuel Treatment**

1. **Objective:** This project would protect the North side of Midpines from an established fire that is coming up out of the Merced River Canyon and/or Bear Creek drainage below the Bug Hostile.

2. **Current Status:** 2019 Briceburg Fire has completed.

3. **Future Planned Action:** Maintain containment lines constructed during Ferguson Fire of 2018 and Briceburg of 2019.
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. Fuel reduction to be accomplished using mechanized equipment, hand crews, and wintertime pile burning. Use of California Forest Improvement Project (CFIP) funding on parcels meeting requirements.
2. **Current Status:** The 2017 Railroad Fire and 2018 Ferguson Fire met all objectives for this project.
3. **Future Planned Action:** Work with USFS Sierra National Forest for maintenance.

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:** 2017 Detwiler Fire met the objectives for this fuel reduction project. Dozer line was established off Spaulding road and brought down to Hwy 49 in and behind the Mariposa County Jail, Idle Wheels Mobile Home Park and up Standen Road to Bumgardener Ridge out to Hwy 140.
3. **Future Planned Action:** Start the 719 process and work with Unit Forester for appropriate CEQA to maintain and improve this fuel break.

Mt. Bullion Fuel Break
1. **Objective:** Establish a proposed shaded fuel break in two phases to follow a path of ridge tops and established fire line from Bagby Recreation area along Fremont Peak Ridge to Foran and adjoining the Dubberke Fuel Break. 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. Fuel reduction to be accomplished through the usage of mechanized equipment, hand crews, and wintertime pile burning. Currently this Fuel Break has been identified as a priority projects for Mariposa Fire Safe Council through grant funding.
2. **Current Status:** Mariposa County Fire Safe Council has been awarded California Climate Investment (CCI) Program to complete Foran along Alta Vista Ridge.
3. **Future Planned Action:** Continue to plan, coordinate, and assist stakeholders. Continue to work on phase one.

Mariposa Pines Strategic Fuel Reduction Project
1. **Objective:** To create a fuels reduction project utilizing previous fire lines from the Ferguson and Briceburg fires in conjunction with Sierra National Forest. Treatment types will include mechanical mastication, hand brushing, and tree limbing. Fuel reduction to be accomplished through the use of mechanized equipment, hand crews, County Road Department and wintertime 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. Utilize the good neighbor agreement as this will border DPA boundary lines.
2. **Current Status**: Contingency Dozer line constructed during the 2018 Ferguson Fire and 2019 Briceburg fires almost completes with sections along Jerseydale road and Scott road.

3. **Future Planned Action**: Start the 719 process and good neighbor agreement, work with Unit Forester for appropriate CEQA to maintain / construct this fuel break.

**Grupe VMP**
1. **Objective**: Fuel reduction of larger dead and down fuels, reduce obnoxious weeds. Provide Unit training to Crews, Dozers, and field training.
2. **Current Status**: Project was started early 2020 and currently working with Unit Forester and Environmental Scientist to complete RM-75.
3. **Future Planned Action**: Utilize the 8000-acre ranch to support black acres and increase training sites and classes hosted within unit.

**Long VMP**
1. **Objective**: Fuel reduction of larger dead and down fuels, reduce obnoxious weeds. Provide Unit training to Crews, Dozers, and field trainings. in cooperation with Cattleman’s Association.
2. **Current Status**: Project was started in 2018 with NOE and currently working with Unit Forester and Environmental Scientist to complete RM-75 and CEQA.
3. **Planned Future Action**: Utilize the Long ranch to support black acres and increase training sites and fuel conversion to grazing range land.

**Taliki VMP**
1. **Objective**: Fuel reduction of larger dead and down fuels, reduce obnoxious weeds. Provide Unit training to Crews, Dozers, and field trainings in cooperation with Cattleman’s Association.
2. **Current Status**: Project is currently in the planning process with private landowner.
3. **Planned Future Action**: Utilize the Long ranch to support black acres and increase training sites and fuel conversion to grazing range land.

**Mariposa Creek Fuel Reduction (MPUD)**
1. **Objective**: This project will reduce the fuel hazard that lies directly on the towns west side and will re-establish a green belt that has become overgrown with native vegetation.
2. **Current Status**: Fuel reduction project that runs 2 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**: Mariposa County has been working with grants and Southern Miwok tribes to complete.
**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:** Ferguson fire of 2018 met all fuel reduction. Work on maintenance

3. **Future Planned Action:** Continue to coordinate and plan with current stakeholders and landowners to maintain access.

**HWY 49 and HWY 140 Strategic Fuel Reduction Project**

1. **Objective:** Working with cooperators and MCFAC provide and utilize major highways 49, 140 through the Battalion as fuel breaks. Clear and maintain a fuel break along these highways to right-a-ways.

2. **Current Status:** Planning and development with cooperators and county grant assistance.

3. **Planned Future Action:** Continue to coordinate and plan with current stakeholders and landowners to maintain access.

**APPENDIX I: BATTALION 4 PROJECTS**

**Fire Roads**
Listed below are the fire roads and their status for Battalion 4.

**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 2013 and is in good condition. This road parallels and is encompassed by the Potter Ridge fuel break in several areas. 719 has been completed for 200’ wide fuel break and ¾’s completed in 2019. Crews continue to work on completing fuel break, and project is currently active.
Metcalf Gap Fire Rd
This project was accepted in 2019 as a Governor’s 35-day project and work has been completed. A 200’ wide fuel break was established from Metcalf Gap Rd to the Chowchilla river drainage. Project is now in maintenance status and road will need to be graded. It ties into Battalion 2 – Watt Rd fuel break in the Chowchilla River Canyon. 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. CALFIRE 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/Grant was awarded to Friends of the Park.
3. **Future Planned Actions:** Coordinate with the Ahwahnee Hills Park Board (Friends of the Park) to utilize grant to complete 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). Fuel reduction to be accomplished using mechanized equipment, hand crews and wintertime pile burning.
2. **Current Status:** Active. Project was not completed due to federal funding loss. Project is currently in the CEQA and 719 processes 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 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. Fuel reduction has been accomplished using mechanized equipment, hand crews and wintertime 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 Caltrans 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. Fuel reduction to be accomplished through the use of mechanized equipment, hand crews and wintertime pile burning or chipping. Coordination with Caltrans 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. Fuel reduction to be accomplished using mechanized equipment, hand crews and wintertime pile burning.
2. **Current Status:** In the conceptual phase currently.
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. Fuel reduction to be accomplished through the use of mechanized equipment, hand crews and wintertime pile burning.
2. **Current Status:** Active
3. **Future Planned Actions:** Complete project and place in maintenance status.

**Bass Lake Interior Strategic Fuel Reduction Project**

1. **Objective:** Currently working on removal of dead hazard trees and 300’ fuel break along Rd 274 in cooperation with Madera County Road Department and the USFS.

2. **Current status:** Active/Planning – Madera County Roads is currently working under a grant to remove additional trees that have died since the project was completed. NEPA has been completed and a Good Neighbor Authority agreement to complete a 300’ wide shaded fuel break. 719’s will need to be completed on private lands.

3. **Future Planned Actions:** Complete project and place in Maintenance Status.

**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 break 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:** Planning

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 Panned Actions:** None

**Vista Del Rio Fuel Reduction Project**

1. **Objectives:** Fuel reduction project on a 40-acre County parcel. This will establish a shaded fuel break from Hwy 49 to the Fresno river protecting the communities of Vista Del Rio and Goldside.

2. **Current Status:** Planning-719 has been completed by the County. CEQA needs to be completed on parcel for fuel reduction. Mechanical equipment and crews will be utilized for piling, burning, or chipping.

3. **Future Planned Actions:** Prescribed fire implementation.
Goat Mountain
1. **Objectives:** Open fire roads on SRA (DPA) and complete shaded fuel break along ridgeline towards Teaford.
2. **Current Status:** Active - NEPA has been completed and a Good Neighbor Authority agreement to complete project.
3. **Future Planned Actions:** Complete project and place in maintenance status.

**APPENDIX J: 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: Maintenance** - 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 wintertime 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. Continue to support local nonprofit organizations for grant opportunities. Maintain control lines put in during the Mission Fire in 2017 that burned through project area.

**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: Maintenance** - 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: Planning**- 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: Planning**- 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 wintertime 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.

**Blue River 3 Consolidated Fuel Breaks**

1. **Objective**: 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: Planning** - 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**: Landowner permissions will need to be completed by

**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: Maintenance** - 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: Planning/Active** - NEPA has been completed on USFS lands and Good Neighbor Authority agreement to complete 300’ wide shaded fuel break. 719’s will need to be completed on private lands.

3. **Future Planned Actions** - Maintenance will be required on an annual basis to include spraying, chipping and brushing/pile burning.

Thornberry Ridge
1. **Objectives** - Open fire roads on SRA (DPA) and complete 300’ wide shaded fuel break along ridgeline from Hwy 41 to Road 223.

2. **Current Status: Active** - NEPA has been completed and Good Neighbor Authority agreement to complete project. Mechanical equipment and crews are currently working on fire roads for upcoming fire season. This will help with access in the event of a fire in this area. This is an area hit with tree mortality and continues to have access problems with blow down and trees compromised by winter storms. Roads will need to be graded.

3. **Future Planning Actions** - Once road access is completed, crews and equipment will start on completing shaded fuel break.

Teaford Shaded Fuel Break
1. **Objectives** - Complete shaded fuel break from Goat Mountain through Teaford Saddle to protect Community of Teaford.

2. **Current Status: Planning** - NEPA has been completed and Good Neighbor Authority agreement to complete project.

3. **Future Planning Actions** - Work with local landowners on permissions to start project.

Manzanita Lake
1. **Objective** - Assist with the county in developing a public recreational area and fuel break to Rd 274.

2. **Current Status: Active** - Madera County has finished CEQA and fuel reduction will begin on project with mechanical equipment, and crews. Vegetation will be piled and burned or chipped. Planning stages for fuel conversion and possible prescribed burn.

3. **Future Planned Actions** - Work with county officials on funding and local landowners on permissions to start project.

Hwy 41 Fuel Reduction
1. **Objective** - This project will consist of burning 10 miles along Hwy 41 in Eastern Madera County. This portion of Hwy 41 has the history of most wildland fire starts in the Unit. The project will burn along Hwy 41 between the Highway and the
disked fuel break of the private landowners. This will save rangeland, Highway hazards and high suppression costs to the citizens of California.

2. **Current Status: Active** - Working with project cooperators, Cal Trans, and permissions with local landowners to burn along Hwy in Spring.

3. **Future Planned Actions**: Evaluate projects effectiveness along Hwy. Look at possibilities to expand project along East shoulder and to the North.

**APPENDIX K: 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 break help keeps 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 L: 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 2020. 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 2020. 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 roadside 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 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 roadside 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 17-mile-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 M: 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 accomplished using 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**: Fuel’s reduction to be accomplished using mechanized equipment.

3. **Future Planned**: This is as directed – some parcels are in agricultural crop production along the White Rock corridor.

### UC Merced

1. Merced Vernal Pools and Grassland Reserve Natural Reserve System Management.

### APPENDIX N: MOUNT BULLION CAMP CC#39 PROJECTS

#### Federal Projects

1. Forest Restoration
2. Fuel Breaks and Fuel Reduction
3. Weed Abatement.

#### State Projects

1. Fuel Breaks and Fuel Reduction
2. Water Shed Management
3. Brush Clearing

#### Weed Abatement

1. Parks and Recreation Restoration
2. School Clean Up
3. Roadside and Tree Clearing and Trimming

#### County Projects

1. Fuel Breaks and Fuel Reduction
2. Watershed Management
3. Brush Clearing
4. Weed Abatement
5. Parks and Recreation Restoration
6. School Clean Up
7. Roadside and Tree Clearing and Trimming
8. Low Income Firewood Allocation Program

City Projects
1. Fuel Break and Fuel Reduction
2. Watershed Management
3. Brush Clearing
4. Weed Abatement
5. Parks and Recreation restoration
6. School Clean Up
7. Roadside and Tree Clearing and Trimming
EXHIBITS: MAPS

Figure A: Unit Map

Figure I: Cal Fire MMU State Proximity Map
Figure B: Battalion Maps
**Fire Planning**
Every station in the Unit continues the ongoing process of pre-planning their area first. The Mariposa Division teamed up with the Mariposa Fire Safe Council to prepare a public document titled the Countywide Community Wildfire Protection Plan (CCWPP). We are still seeking additional grant funding opportunities to begin this vital prevention effort in Madera and Merced Counties.

**Fire Plan Projects for 2020**
MMU has maintained a great relationship with The Mariposa County Fire Safe Council and Yosemite/Sequoia Resource Conservation & Development Council. The Mariposa County Fire Safe council is currently working on two shaded fuel breaks (Stumpfield and Foran) in Battalion 2. They are working on securing additional grant funding to complete Alta Vista fuel break.

**Wildland Fire Prevention Engineering – Defensible Space Inspections**
Throughout the Unit we completed 7503 inspections and 924 of those inspections were “Non-Compliant.” The Unit made a total of 1,723 Inspection hours for 2020 and 30 citations were issued. Citations are never the unit’s goal but residents need to understand how important defensible space is.
Vegetation Management

MMU still assists Madera and Mariposa County in vegetation management within the High Hazard Zones from past years of drought with tree mortality. An increase in fuel break maintenance has been funded by drought augmentation and California Climate Investment funding which has provided an increase in fire protection.

The Unit Forester reviews and rates applications for California Forest Improvement Program (CFIP) grants.

In 2020 there were four CFIP projects that were active in the MMU Unit, with a total of 4,306.3 acres.

Mike van Loben Sels 5-7-2020
Unit Chief Date