Strategic Fire Plan
Tulare Unit

Last update: August 14, 2012

UNIT STRATEGIC FIRE PLAN AMENDMENTS

Date	Section Updated	Page Numbers Updated	Description of Update	Updated By

Table of Contents

SIGNATURE PAGE

Unit Strategic Fire Plan developed for Tulare Unit:

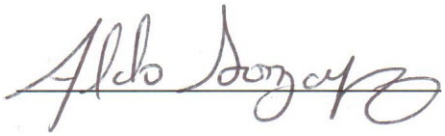
This Plan:

- Was collaboratively developed. Interested parties, State, 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.

7-2-2012

Unit Chief **Date**

Kirk Swartzlander



7-2-2012

Pre-Fire Engineer **Date**

Aldo Gonzalez

EXECUTIVE SUMMARY

The goal of the Tulare Unit is to make the Fire Plan a relevant document while utilizing it to prevent large and damaging fires. A key element in the plan's success will be to streamline the contract process to take advantage of cooperators interest, momentum, and on the ground opportunities. While we plan for and develop new projects, our primary focus will be to obtain funding for the maintenance of the existing projects and pre-suppression infrastructure that is in place.

The Fire Plan is in the process of undergoing a change to make this a working document that is useful to field personnel while incorporating data and technology that was previously unavailable. This transformation will require buy in and input from the field Battalions, but should make the Units Fire Plan goals and priorities clearly understood.

The Unit will work with Sacramento to implement the plan and insure it meets the states MISSION and VALUES. Changes are continually being made to the Fire Plan. The Fire Plan will be a tool to assist the Unit with pre-suppression projects which exist within each Battalion.

The Tulare Unit Key Objectives from the California Strategic Fire Plan:

- Analyze trends in fire cause and focus prevention and education efforts to modify behavior and effect change.

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

- Effectively engage and train employees across all disciplines to address both planning and emergency response utilizing a "total force" approach.

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

SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

Tulare Unit is located in Central California and makes up part of the San Joaquin Valley. It consists of 793,716 acres of state responsibility land under direct CAL FIRE protection, and 1,429,881 acres of lands under Federal Government Protection. The combined total of 2,224,697 acres .The Unit is bordered on the east by Sequoia and Kings Canyon National Parks, and the Sequoia National Forest. The counties of Kern, Kings and Fresno border to the South, West, and North respectively.

The elevation of Tulare Unit land receiving direct protection by CAL FIRE ranges from 200 feet along the county's western boundary to a highest point of 9,300 feet on Moses Mountain to the East. The entire county elevations range from 200 feet on the West side to the highest point in the contiguous United States, Mt. Whitney at 14,495 on the eastern boundary. This wide range of elevation supports many areas of vegetation consisting of grass, oak deciduous, oak persistent, brush, and timber.

The January 1, 2010 Department of Finances estimates Tulare County's population at 429,668.The majority of the population in the state responsibility area is located along two east-west highways. Highway 198 which leads to the Sequoia / Kings Canyon National Parks and Highway 190 which accesses a significant portion of the Sequoia National Forest / Giant Sequoia National Monument. Tulare Unit continues to experience a population growth rate of approximately 1 percent annually. Fire occurrence spot maps indicate a direct relationship between use areas and fire occurrence. Along with the population increase, mountain areas have increased wild land urban intermix problems. Structures are being built throughout wildland areas wherein vegetation fires can spread. Providing adequate fire protection to those structures has become a major undertaking.

Tulare Unit's Fire Management Plan is our mechanism to catalog potential hazard areas and develop prescriptions to begin mitigating them based upon assessed priorities.

UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

TULARE UNIT Facilities and Resources

- Eight (8) CAL FIRE stations
- Mountain Home Conservation Camp
- Porterville Air Attack Base
- Fire Prevention/Protection/Planning Bureau
- Training Bureau

Peak Fire Season Staffing

- Eleven (11) CAL FIRE Schedule “B” engines
- Two (2) CAL FIRE Bulldozers
- One (1) Air Attack
- One (2) Air Tankers
- Five (5) Inmate hand crews

Tulare Unit has MUTUAL AID AGREEMENTS with the following Departments:

- Tulare County Fire Department (TCFD)
- United States Forest Service (SQF)
- National Park Service (Sequoia & Kings)
- Kern County Fire Department (KRN)
- Tule Indian Reservation (TIA)
- Visalia City Fire Department (VFD)

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:

Plan Development Team:

Organization	Title
CAL FIRE Tulare Unit	Unit Chief
The Sequoia Fire Safe Council	Council President
USFS	FMO / District Manager
Tulare County Conservation Dist.	President
US Park Service	District Manager

SECTION III: VALUES

A: VALUES

Life and Safety

The loss of life and disregard for safety is the ultimate price paid. One ounce of prevention is little compared the any injury or life lost. This is based on population density and makeup of the community. The size of fire, location, and rate of spread could prove deadly. The Non-economic values are not quantified but the level of value will have an effected at the Local, State, and National level.

Air Quality

The potential damages to heath, materials, vegetation, and visibility. The rank based on vegetation type and the air movement in our air basin. The impact will affect both the Local and state Levels.

Range Productivity

The dollar cost to replace feed per acre will vary depending on the regions, owners, and feed. This will have impact at both the Local and state level.

Recreation on public Wild Lands

Unique areas with potential damage could happen to the facilities and soundings. This would depend on the fuels in the area and the susceptibility of fire. This would have an effect at the Local, State and National Levels.

Structures

The effect of fire would depend on the housing density and the exposure (potential for structure loss in a large fire event). The cost would not only be to the average dollar lost per home but the non commodity assets as well. The effects of this type of incident would be felt at the local and state level.

Timber

The average loss per acre burned would depend on the region and owner. The effect of a wild land fire would affect local, state, national levels.

Water and water sheds

The range of economic impacts per acre value is dependent on the location and potential fire. A fire would increase water yields but could cause significant damage to the echo system and water ways. The cost alone of sediment removal would be a major impact. Vegetation Management Plans are the key to water shed management. VMP`s planned and coordinated are the best way to avoid major damage to our water shed.

Life and Safety

The loss of life and disregard for safety is the ultimate price paid. One ounce of prevention is little compared the any injury or life lost. This is based on population density and makeup of the community. The size of fire, location, and rate of spread could prove deadly. The Non-economic values are not quantified but the level of value will have an effected at the Local, State, and National level.

Air Quality

The potential damages to heath, materials, vegetation, and visibility. The rank based on vegetation type and the air movement in our air basin. The impact will affect both the Local and state Levels.

Range Productivity

The dollar cost to replace feed per acre will very depending on the regions, owners, and feed. This will have impact at both the Local and state level.

Recreation on public Wild lands

Unique areas with potential damage could happen to the facilities and soundings. This would depend on the fuels in the area and the susceptibility of fire. This would have an effect at the Local, State and National Levels.

Structures

The effect of fire would depend on the housing density and the exposure (potential for structure loss in a large fire event). The cost would not only be to the average dollar lost per home but the non commodity assets as well. The effects of this type of incident would be felt at the local and state level.

B: COMMUNITIES

The communities that are a risk and are recognized at both the State and national levels are:

Badger	Camp Nelson	Exeter
East Porterville	Kennedy Meadows	Lindsay
Poso Park	Pine Flat	R Ranch
Tule River	Wilsonia	
Tule River Indian Reservation		

The communities that are not recognized at the state and national levels are:

Balance Rock	Blue Ridge	Elderwood
Campbell Creek	Fountain Springs	Hartland Camp
Hammond	Hot Springs	Jack Ranch
Kaweah	Lemon Cove	Mehrten Creek
Pine Flat	Poso Park	Posey
Sugar Loaf Village	Sierra Glen	Woodlake
Three Rivers		

http://www.cafirealliance.org/communities_at_risk/communities_at_risk_list

SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES

A: FIRE PREVENTION

ENGINEERING & STRUCTURE IGNITABILITY

Through comprehensive engineering and the law enforcement programs are what the Tulare Unit strives to prevent fires. Reduction of loss from Tulare Units wildlands each year is the goal. Tulare Unit works with communities and non-profit groups to educate the public and prevent wildland fires.

Tulare Unit also enforces the LE- 100 program (Fire Hazard Inspections). All structures in the State Responsibility Area are inspected. Home owners who don't comply with the Public Resource Code (PRC) section 4290 are cited. The idea behind the program is not to issue a citation, but preventing the loss of structures when fire is moving through communities.

Reducing Structural Ignitability

The communities within the confines of the Tulare Unit have always been confronted by the threat posed by uncontrolled wildland fire. The growth off the population has continued unabated ever since. As such the structures within the Unit reflect well over 100 years of the evolution of accepted building materials and techniques. Only within the very recent past have structures been designed and built with a focus on reducing the likelihood of ignition due to wildland fire.
It is a fact recognized by all fire control personnel in the Unit and the local government fire organizations that any ignition can quickly result in a fire that immediately threatens structures. CAL FIRE's entire fire control system is designed to bring to bear a rapid initial attack capable of snuffing out the threat ASAP. Never the less, fires do progress rapidly to the point of being a significant threat to structures. Whether it's 1 acre, 100 or 1,000 acres, structures will be threatened; and some will burn. In the case of small rapidly growing fires a means of structure ignition is direct flame impingement and / or radiant heat. In the case of very large, landscape scale fires a primary means of ignition is airborne embers. The larger the fire, the higher the likelihood that structures will burn, due in part to the fact that there are simply not enough fire control resources available to immediately protect every threatened structure during a rapidly progressing fire. Recognition of this fact by property owners should encourage them to take personal responsibility for improving the safety of their structures by following the steps required and or recommended to reduce the threat of structure ignition.

Fire Hazard Severity Zones and Building Standards and Materials for
Building Code Chapter 7A, 2007 California Building Code (CBC)
The California Building Commission adopted the Wildland-Urban Interface codes (Chapter 7A) in late 2005. The majority of the new requirements took effect in 2008. These new codes include provisions for ignition resistant construction

standards applicable to the Wildland Urban Interface (WUI); with an emphasis on protecting against airborne embers. During this same period of time CAL FIRE initiated a statewide project to update the Fire Hazard Severity Zone designations within the WUI, using the latest science based analysis techniques and geographic information system technologies to delineate those concentrations of wildland vegetation fuels likely to produce embers when involved in fire. Starting with the State Responsibility Areas in 2005 and concluding with Local Responsibility Areas adjacent to or within the SRA in 2008, Fire Hazard Severity Zones were field validated, updated as required and adopted by local government (County and City governing and regulatory entities), before official CAL FIRE maps were produced and released to local government.

The Chapter 7A Building Code requirements and the associated Fire Hazard Severity Zones have been enacted and are being enforced by local government building officials as development plans work their way through the approval process. The updated zones will also be used by property owners to comply with Natural Hazards Disclosure requirements at the time of a property sale. Local government is encouraged to integrate the updated FHSZ's into the Safety Element of their General Plans.
Property owners, developers, contractors, building materials businesses, and product designers can find specific wording and answers to questions regarding Building Code Chapter 7A, Fire Code Chapter 47, PRC 4290 and 91, Title 14 and other related information at the following CAL FIRE Office of the State Fire Marshal website:

http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_codes.php

The Prevention Bureau, through its Fire Captain-Pre Fire Engineer position supports and collaborates with a wide variety of agencies and community members in the planning, organizing, and documentation of fuel reduction projects throughout the Unit.
Starting in 2010 the Pre Fire Engineer began the long slow process of implementing the State Board of Forestry and Fire Protection's new 2010 Strategic Fire Plan for California. Under that umbrella document this Unit Fire Plan attempts to document all efforts within the Unit to mitigate the threat posed by wildland fire. One of the primary means by which this is undertaken is through on-the-ground projects designed to create fuel breaks adjacent to threatened communities and help private landowners and organizations reduce the threat within their property boundaries.

IGNITION DATA:

Fire Cause	Number of fires 2006-2007
Unknown	0
Undetermined	15
Lighting	0
Campfire	0
Smoking	4
Debris Burning	6
Arson	23
Equipment Use	13
Playing With Fire	2
Miscellaneous	9
Vehicle	0
Rail Road	0
Power lines	1
Total= 73	

Fire Cause	Number of fires 2007-2008
Unknown	2
Undetermined	17
Lighting	2
Campfire	0
Smoking	2
Debris Burning	1
Arson	22
Equipment Use	12
Playing With Fire	3
Miscellaneous	10
Vehicle	0
Rail Road	0
Power lines	0
Total= 71	

Fire Cause	Number of fires 2008-2009
Unknown	0
Undetermined	13
Lighting	5
Campfire	0
Smoking	1
Debris Burning	1
Arson	16
Equipment Use	15
Playing With Fire	1
Miscellaneous	23
Vehicle	0
Rail Road	0
Power lines	1
Total=76	

Fire Cause	Number of fires 2009-2010
Unknown	0
Undetermined	24
Lighting	0
Campfire	0
Smoking	0
Debris Burning	3
Arson	17
Equipment Use	14
Playing With Fire	0
Miscellaneous	9
Vehicle	0
Rail Road	0
Power lines	2
Total=69	

Fire Cause	Number of fires 2010-2011
Unknown	2
Undetermined	17
Lighting	2
Campfire	0
Smoking	1
Debris Burning	4
Arson	9
Equipment Use	3
Playing With Fire	2
Miscellaneous	2
Vehicle	0
Rail Road	0
Power lines	2
	Total=44

INFORMATION AND EDUCATION

Information & Education is an integral part of the Fire Prevention Program. The focus is to reach out to the elementary school children with match & lighter safety education. In addition to the school programs, it is imperative to educate the public on the importance of Defensible space clearance, the proper method to burn hazard reduction materials, and the correct times to use power equipment to achieve the code requirements.

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

Team Teaching is a highly professional program developed by teachers, CAL FIRE personnel, and child psychologists. This program utilizes Smokey Bear an internationally recognized fire prevention symbol to teach children not to play with matches, lighters, or fire. Pre-planning is the most important factor for a successful team teaching program. This year a total of 631 contacts were made with children.

The first step in planning a fire prevention program is to identify what the Unit’s priorities are. Review the Unit’s fire plan to determine what fire causes occur in your target areas. For example, child/match caused fires may have dropped in occurrence due to heavy saturation of schools with “Team Teaching” and other school education programs over the years, while “equipment use” or “debris burning” caused fires have increased. This would indicate a change in priorities. The Unit could then choose to develop an annual maintenance program for “Team Teaching” and redirect emphasis on “equipment use” and “debris burning” programs or assign additional personnel to assist with the implement programs to meet those needs in targeted areas.

Defensible Space

The department has instituted easy-to-use defensible space inspection form. This locally developed form, using the agency LE100 as inspiration, contains detailed explanations of violations and how to correct them. Used by agency inspectors alike, its checkbox format acts as a detailed guide for inexperienced inspectors, a prompt for veteran inspectors while minimizing the amount of writing required, and speeding up and standardizing inspections.

Included with the inspection form is an informational hand out “Wild fire is coming Is Your Home Ready”. The hand out covers defendable space, How to do things the right way, hardening your home, plant and tree spacing, horizontal spacing for trees / shrubs and a homeowner checklist.

Property owners living in State Responsibility Areas (SRA) are required by Public Resource Code (PRC) 4291 to maintain clearance of flammable vegetation around their property. A property owner's clearance responsibility is limited to 100 feet from his or her structure(s) or to the property line, whichever is closer, and is limited to their lands. However, coordination with adjacent landowners to achieve maximum defensible space is encouraged.

Short of expensive remodel and retrofit projects for existing structures, compliance with existing Public Resources Code 4291 requirements is the single most effective means by which property owners can reduce the likelihood of a fire. PRC4291 clearance requirements: a 30' wide Defensible Space zone immediately adjacent to the structure, plus an additional 70' Reduced Fuel zone, for a total of 100' of "Clearance" around all structures.

The Prevention Bureau and each Battalion in the Unit is actively engaged in PRC 4291 education and compliance efforts, including: on-sight inspections, self inspection forms, face to face education at the fire stations, participation in community events, close cooperation with Home/Property Owner Associations, and collaborative efforts with the local Fire Safe Councils and Local Government and Federal fire control and land management agencies.

Fire Prevention Roadside Sign Program

Battalion staff will continue promoting the fire prevention message regarding equipment caused fires and a prevention massage via the 4x8 roadside signs. The signs are placed in high traffic areas in every battalion. There are 2 in the Badger Battalion, 7 in the Kaweah Battalion, 7 in the Tule Battalion, and 1 in the Fountain Springs Battalion. Being a primary entry point for commuters, part-time residents and visitors to Tulare Co. these stretches of highway and roads experiences a very large volume of traffic, making it an excellent point from which to publicize our fire prevention messages. This is an annual program in which signs are posted throughout the fire season.

Fire Prevention signs in the Kaweah Battalion

VEGETATION MANAGEMENT

Natural Resource Management is supporting the TUU Fire Plan through Forest Practice activities as well as Vegetation Management Programs and other fuel reducing grants. Through the Forest Practice Program we are encouraging healthy forest throughout the unit. Landowners as well as local Registered Professional Foresters are currently reducing overcrowded timber stands. This is being implemented by either Timber Harvest Plans (THPs) or 1 one the several other timber exemptions.

TUU currently has 2 Vegetation Management Programs (VMP) approved with at least 2 others in the process. The VMPs and other fuel reduction grants typically have the same desired outcome. Both of these look at reducing the amount of high fires vegetation and providing an opportunity to fight fire safely and aggressively. Both of these programs look at increasing the water table by reducing the amount of evapotranspiration in the watershed. Reducing the amount of hazardous brush will also help in the foraging of not only livestock, but wildlife as well. By doing these projects it also helps bring the natural mosaic back to the landscape.

SECTION V: PRE- FIRE MANAGEMENT TACTICS

DIVISION / BATTALION / PROGRAM PLANS

BADGER BATTALION

Fuels:

The fuels within the Badger Battalion are typical of those found in the Central California San Joaquin valley and Sierra Nevada. This area is influenced by a Mediterranean climate with warm, dry summers and cool moist winters. The climate, topography, geology and land use patterns within this region determine the vegetation patterns. Vegetation within the Badger Battalion varies from annual grasses and forbs on the valley floor to mixed conifer forest at the higher elevations. The lower elevations manifests annual grasses, including wild oats, and loading varies from year to year based on seasonal rainfall. Between 500'-1000' elevation this changes to a Woodland Oak fuel type with brush becoming more prevalent along with pockets of gray/bull pine starting around the 2000' level. The brush component is made up of several species, including, but not limited to; manzanita, chemise, ceanothus, scrub oak, live oak and poison-oak. The brush is interspersed with black oak and live oak, buckeye trees and sycamore (in drainages) with higher densities on the north and east aspects. This vegetation type continues to about 3500' where it blends into the Conifer Belt with scattered oaks, brush and conifer trees. At about 4500' conifers become the dominant fuel with such species as; cedar, pine, fir, live oak and black oak with a mixed brush understory which includes bear clover, lotus, chinquapin and whitethorn ceanothus.

Topography:

The Badger Battalion is typical of most of the foothill areas in the Southern Sierra Nevada Range and encompasses a large portion of the Dry Creek drainage and the Cottonwood Creek drainage. The Topography ranges from gentle rolling foothills above the Central Valley floor at 400' elevation to steep river drainage along Dry Creek. Major ridges and mountains are separated by small ravines, rugged canyons, and a few gentle valleys with elevations within the State responsibility area topping out near the 5000' elevation range.

Weather:

Typical summer weather patterns consist of 90 – 105 degree days with humidity's in the upper teens to low 20's and nights in the upper 50's to near 70 degrees with humidity's in the high 30's to low 50's. Winds are generally light and diurnal, up slope, up canyon in the day time and down slope, down canyon at night.

Fire History:

The Badger Battalion averages approximately 5-10 fire starts annually, with the majority of those starts occurring in the lower grass lands. Although rare, starts in the upper elevations within the Battalion do pose a significant potential for a large extended attack fire. Large extended attack fires have occurred in the Battalion over the years with several fires in the 500 – 1000 acre range, there is no known history of major fires in the Battalion.

Battalion Priority:

Updating and maintaining our fire road system is a top priority in the Badger Battalion. By ensuring these road systems are well maintained allows us to access areas within the Battalion that would otherwise be difficult to access.

Proposed fuels reduction projects in the Battalion have been identified. Some are in the process of nearing completion, while other proposed projects are still waiting for final approval. Current projects are; working in coordination with USFS and Hartland Christian Camp, a fuel break along the ridge top, west of the Hartland Christian Camp, this project is about 90 percent complete. Working with the Fire Safe Council, a fuel break along Ridge, west of Badger, has been identified and is in the works with projected completion within the next 2 years. The fuel break will start of Miramonte Fire Control Road, head south and end at Mountain House, located at Hwy 245 and Dry Creek Road. Also in preliminary stages is the Eshom Valley VMP project, which will reduce fuel loading along Shadequarter Ridge. This project will involve mechanical brushing, pile burning and a broadcast burn. This project is anticipated to be completed in the next 2 years.

Pre-Attack plans

Develop updated maps utilizing GIS technology to capture all roads, fuel breaks, water locations, staging locations, and plot probable control lines. Possible strategies for fire suppression could be pre-determined utilizing fire history, typical fire weather and fire behavior models. Distribute the maps so equipment from other stations / areas efficiently function within the Kaweah Battalion.

Priority #1

Project Name: Fire Control Road maintenance

Description: Maintain the fire control roads in the battalion for fire suppression and quick access to fires.

Community: Badger, Sierra Glen, Eshom Valley, Heatland Christen Camp, Sand Creek, Mira Monte,

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority #2

Project Name: Shadequarter to Mankin VMP

Description: Fuel modification mechanical and Crews

Community: Badger, Sierra Glen, Eshom Valley, Heatland Christen Camp.

Project Collaborators: CAL FIRE, Badger Ranch and land owners, Fire Safe Council.

Priority #3

Project Name: Buzzard Roost suppression tank

Description: Perpetration for wildfire in the area

Community: Badger, Eshom Valley.

Project Collaborators: CAL FIRE, Badger Ranch and land owners, Fire Safe Council.

Priority #4
Project Name: Battalion Fire Prevention Signs 4 total.
Description: Public education, Fire Prevention, Message displayed on road side sign.
Community: Elder wood, Cutler Orosi, Badger, Eshom Valley, Lemon cove
Project Collaborators: CAL FIRE, and the Sequoia Fire Safe Council.

KAWEAH BATTALION

Fuels:

The fuels within the Kaweah Battalion are typical of those found in the Central California San Joaquin Valley and Sierra Nevada. This area is influenced by a Mediterranean climate with warm, dry summers and cool moist winters. The climate, topography, geology and land use patterns within this region determine the vegetation patterns. Vegetation within the Kaweah Battalion varies from annual grasses and forbs on the valley floor to mixed conifer forest at the higher elevations. The lower elevations manifests annual grasses, including wild oats, and loading varies from year to year based on seasonal rainfall. Between 500'-1000' elevation this changes to a Woodland Oak fuel type with brush becoming more prevalent along with pockets of gray/bull pine starting around the 2000' level. The brush component is made up of several species, including, but not limited to; manzanita, chemise, ceanothus, scrub oak, live oak and poison-oak. The brush is interspersed with black oak and live oak, buckeye trees and sycamore (in drainages) with higher densities on the north and east aspects. This vegetation type continues to about 3500' where it blends into the Conifer Belt with scattered oaks, brush and conifer trees. At about 4500' conifers become the dominant fuel with such species as; cedar, pine, fir, live oak and black oak with a mixed brush understory which includes bear clover, lotus, chinquapin and whitethorn ceanothus.

Topography:

The Kaweah Battalion is typical of most of the foothill areas in the Southern Sierra Nevada Range and encompasses a large portion of the Kaweah drainage and the Cottonwood Creek drainage. The Topography ranges from gentle rolling foothills above the Central Valley floor at 400' elevation to steep river drainage along Kaweah River. Major ridges and mountains are separated by small ravines, rugged canyons, and a few gentle valleys with elevations within the State responsibility area toping out near the 5000' elevation range.

Weather:

Typical summer weather patterns consist of 90 – 105 degree days with humidity's in the upper teens to low 20's and nights in the upper 50's to near 70 degrees with humidity's in the high 30's to low 50's. Winds are generally light and diurnal, up slope, up canyon in the day time and down slope, down canyon at night.

Fire History:

The Kaweah Battalion averages approximately 8-15 fire starts annually, with the majority of those starts occurring in the lower grass lands. Although rare, starts in the upper elevations within the Battalion do pose a significant potential for a large extended attack fire. Large extended attack fires have occurred in the Battalion over the years with several fires in the 500 – 1000 acre range.

Battalion Priority:

Updating and maintaining our fire road system is a top priority in the Kaweah Battalion. By ensuring these road systems are well maintained allows us to access areas within the Battalion that would otherwise be difficult to access.

Proposed fuels reduction projects in the Battalion have been identified. Some are in the process of nearing completion, while other proposed projects are still waiting for final approval. Current projects are; updating Pre-attack plans, the Rat Trail projects on the North Fork Drainage and around Kaweah Lake, Grouse Valley FCR fuel Break, Grouse Valley VMP, Three Rivers FFS Demo project and the Sheep Creek Suppression Tank and Pond maintenance.

Pre-Attack plans:

Develop updated maps utilizing GIS technology to capture all roads, fuel breaks, water locations, staging locations, and plot probable control lines. Possible strategies for fire suppression could be pre-determined utilizing fire history, typical fire weather and fire behavior models. Distribute the maps so equipment from other stations / areas can efficiently function within the Kaweah Battalion.

Priority #1

Project Name: Fire Control Road maintenance

Description: Maintain the fire control roads in the battalion for fire suppression and quick access to fires.

Community: Badger, Wood Lake, Elder Wood, Kaweah, Three Rivers, Hammond, Lemon Cove.

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority #2

Project Name: Kaweah Lake “Rat Trail”:

Description: Fuel reduction with hand crews.

Community: Three Rivers, Kaweah, Lemon Cove, Hammond

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority #3

Project Name: Grouse Valley VMP

Description: Fuel modification with hand crews and fire.

Community: Three Rivers, Kaweah, Lemon Cove, Hammond

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority #4

Project Name: Three Rivers FFS Demo Project

Description: Fire Safe Landscape, Public Education, Prevention

Community: Three Rivers, Kaweah, Lemon Cove, Hammond

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council, and The Rivers Community Garden club.

Priority #5

Project Name: Sheep Creek Suppression Tank

Description: Pre planned for fire suppression

Community: Three Rivers

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area.

Priority #6

Project Name: Salt Creek Suppression Pond

Description: Pre planned for fire suppression

Community: Three Rivers

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area.

Priority #7

Project Name: Blue Ridge Fuel Break

Description: Fuel modification with hand crews

Community: Three Rivers

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

TULE BATTALION

Fuels:

The fuels within the Tule Battalion are typical of those found in the Central California San Joaquin valley and Sierra Nevada. This area is influenced by a Mediterranean climate with warm, dry summers and cool moist winters. The climate, topography, geology and land use patterns within this region determine the vegetation patterns. Vegetation within the Tule Battalion varies from annual grasses and forbs on the valley floor to old growth sequoia redwood/mixed conifer forest at the higher elevations. The lower elevations manifests annual grasses, including wild oats, and loading varies from year to year based on seasonal rainfall. Between 500'-1000' elevation this changes to a Woodland Oak fuel type with brush becoming more prevalent. The brush component is made up of several species, including, but not limited to; manzanita, chemise, ceanothus, scrub oak, live oak and poison-oak. The brush is interspersed with black oak and live oak, buckeye trees and sycamore (in drainages) with higher densities on the north and east aspects. This vegetation type continues to about 3000' where it blends into the Conifer Belt with scattered oaks, brush and conifer trees. At about 4000' conifers become the dominant fuel with such species as; cedar, pine, fir, live oak and black oak with a mixed brush understory which includes bear clover, lotus, chinquapin and whitethorn ceanothus. This continues up to about the 5500' elevation where it transitions to a Timber fuel type dominated by fir, pine and sequoia. This type generally manifests areas of heavy down and dead fuels.

Topography:

The Tule Battalion is typical of most river drainages found in the Southern Sierra Nevada Range and encompasses a large portion of the Tule river drainage and spills over into the Deer Creek drainage on its southern border. The Topography ranges from gentle rolling foothills where it leaves the Central Valley floor at 500' elevation to sheer granite monoliths at the 8000' elevation. The Tule river drainage consists of three major forks; North, Middle, and South forks and is further made up by numerous feeder creeks and seasonal streams. Major ridges and mountains are separated by small ravines, deep rugged canyons, and a few gentle valleys. Due to Glacial activity thousands of years ago large granite boulders, rocky escarpments and sheer rock faces can be found on most ridges and mountains.

Weather:

The Tule Battalion like Tulare County is influenced by a Mediterranean climate with cool moist winters and warm dry summers. Average annual temperatures range from 49.6 to 76.6 however it is not uncommon to have temperatures in the low 20s during the winter months and highs exceeding 100 for extended periods during the summer months. The rainy season is October through April and annual rainfall average is 11.03 inches . Summers can be hot as stated earlier with extremely warm temperatures and dry relative humidity lasting for weeks. During the North American Monsoonal season thunderstorms are not uncommon over the higher elevations with some extending out over the Sierra Foothills and valley floor. Some years a Monsoonal push will work from the southwest driving northeast causing thunderstorms with associated lightning and scattered precipitation on the valley floor and foothill region.

Fire History:

The Tule Battalion includes the Hwy 190 corridor which accesses numerous recreation areas such as; Lake Success, Balch Park, Mountain Home Demonstration State Forest, Sequoia National Forest, Eagle Mountain Casino and Giant Sequoia National Monument. The battalion traditionally experiences the majority of the fire activity in the Tulare Unit. Although recreationist contributes to some of the fire causes, a majority of the activity is attributable to arson caused fires. The proximity of the Tule River Indian Reservation which has a decade's long arson history contributes heavily to the battalion's fire responses. Sometimes these are a single fire to a series of fires being set on SRA lands adjacent to the reservation. Large fire history has been primarily in the grass and oak woodland fuel types. There have been a couple fires in the Brush/Timber fuels that originated in the Middle Fork of the Tule River that burned onto or threatened SRA lands; these were the "Coffee" and "Deep" fires. Both fires did pose a threat to Mountain Home Demonstration State Forest.

Battalion Priority:

Fire roads and their maintenance are a high priority they provide access and fire control opportunities to many areas of the Battalion. Many of these fire roads also access ranch roads that local ranchers have put in which provide even greater access and fire control opportunities. Without the fire road maintenance many areas would be inaccessible to ground equipment and would require time consuming walk in or costly fly in access by ground resources. Another priority is the PC 4291 inspection program which provides defensible space around the numerous structures in the Battalion. This program has a successful history with improved compliance and the need for citations diminishing each year.

Fire Defense Projects:

There are currently three major projects underway in the Battalion, one is the “Mossy Rock” VMP which is a fuels modification project that when completed will complement the “Battle Mountain” VMP that was completed in 2001. The “Happy Camp” project which started in 2010 is a fuel break below the community of Happy Camp which resides in the timber belt with extremely high fuel loading, completion of this project is anticipated in 2012. The Mountain Home Demonstration State Forest Evacuation Plan is currently in process with completion expected by May of 2011 this is a project that involves different cooperators from different agencies that have vested interest in the affected area.

Priority #1

Project Name: Fire Control Road maintenance

Description: Maintain the fire control roads in the battalion for fire suppression and quick access to fires.

Community: Springville, Triple R Estates, Mountain Home State Forest, Ponderosa, Camp Nelson, Happy Camp, Tule Indian Reservation.

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, and Sequoia Fire Safe Council.

Priority#2
Project Name: Cow Mountain Fuel Break

Description: Fuel modification with hand crews

Community: Springville

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority#3
Project Name: Rancheria Suppression Tank

Description: Pre planned for fire suppression

Community: Springville

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority#4
Project Name: Wishon Suppression Tank
Description: Pre planned for fire suppression

Community: Wishon

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority #5

Project Name: Lake Success “Rat Trail”:

Description: Fuel reduction with hand crews.

Community: Porterville, Springville

Project Collaborators: CAL FIRE, Tulare County Land owners in the State Responsibility Area, Sequoia Fire Safe Council

Priority#7

Project Name: Rancheria Fuel Break

Description: Fuel reduction done with hand crews

Community: Springville

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority#8

Project Name: Pierpoint Fuel Break

Description: Fuel reduction done with hand crews

Community: Par Pint Springs, Camp Nelson

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council. United States Forest Service

Priority#9

Project Name: Camp Nelson Fuel Break

Description: Fuel reduction done with hand crews

Community: Par Pint Springs, Camp Nelson

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council. United States Forest Service

Priority#10
Project Name: Cow Mountain Suppression Tank
Description: Pre planned for fire suppression
Community: Springville
Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority#11

Project Name: Mossy Rock VMP
Description: Fuel Reduction done with hand crews

Community: Springville

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority#12
Project Name: Balch Park Road Suppression Tank
Description: Pre planned for fire suppression
Community: Springville
Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

FOUNTAIN SPRINGS BATTALION

Fuels:

The fuels within the Fountain Springs Battalion are typical of those found in the Central California San Joaquin Valley and Sierra Nevada. This area is influenced by a Mediterranean climate with warm, dry summers and cool moist winters. The climate, topography, geology and land use patterns within this region determine the vegetation patterns. Vegetation within the Fountain Springs Battalion varies from annual grasses and forbs on the valley floor to mixed conifer forest at the higher elevations. The lower elevations manifests annual grasses, including wild oats, and loading varies from year to year based on seasonal rainfall. Between 500'-1000' elevation this changes to a Woodland Oak fuel type with brush becoming more prevalent along with pockets of gray/bull pine starting around the 2000' level. The brush component is made up of several species, including, but not limited to; Manzanita, chemise, ceanothus, scrub oak, live oak and poison-oak. The brush is interspersed with black oak and live oak, buckeye trees and sycamore (in drainages) with higher densities on the north and east aspects. This vegetation type continues to about 3500' where it blends into the Conifer Belt with scattered oaks, brush and conifer trees. At about 4500' conifers become the dominant fuel with such species as; cedar, pine, fir, live oak and black oak with a mixed brush understory which includes bear clover, lotus, chinquapin and whitethorn ceanothus.

Topography:

The Fountain Springs Battalion is typical of most of the foothill areas in the Southern Sierra Nevada Range and encompasses a large portion of the Deer creek drainage, White river drainage and the upper portions of the Poso creek drainage on its southeastern border. The Topography ranges from gentle rolling foothills above the Central Valley floor at 400' elevation to steep river drainages. Major ridges and mountains are separated by small ravines, deep rugged canyons, and a few gentle valleys with elevations within the State responsibility area toping out near the 5000' elevation range.

Weather:

Typical summer weather patterns consist of 90 – 105 degree days with humidity's in the upper teens to low 20's and nights in the upper 50's to near 70 degrees with humidity's in the high 30's to low 50's. Winds are generally light and diurnal, up slope, up canyon in the day time and down slope, down canyon at night.

Fire History:

The Fountain Springs Battalion averages approximately 7-10 fire starts annually, with the majority of those starts occurring in the lower grass lands. Each year however you can expect a least a couple of starts in the upper elevations within the Battalion where there is significant potential for a large extended attack fire. Large extended attack fires have occurred in the Battalion over the years with several fires in the 500 – 1500 acre range, there is no known history of major fires in the Battalion.

Battalion Priority

Updating and maintaining our fire road system is a top priority in the Battalion. By ensuring these road systems are well maintained allows us to access areas within the Battalion that would otherwise be difficult to access.

Proposed fuels reduction projects in the Battalion have been identified and the proposed projects are still waiting for final approval. The number one priority is to reduce fuel loading in and around the communities of Pine Flat and California Hot Springs. In 1997 a fuel break was begun around Pine Flat using Mountain Home crews, this fuel break was never completed or maintained. Working with the Fire Safe council this project will hopefully be a reality again within the next 2 – 3 years.

The second priority is to gain approval for a mechanical VMP on King George Mountain. This project would reduce fuel loading as well as improve grazing land and wildlife habitat. It is also my desire to identify ways of reducing fuels in and around the Poso, Jack ranch areas.

Priority #1

Project Name: Fire Control Road maintenance

Description: Maintain the fire control roads in the battalion for fire suppression and quick access to fires.

Community: Fountain Springs, California Hot springs, Poso, Poso Park, Jack Ranch, Sugar Loaf Village

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Priority# 2
Project Name: Posey Fuel Break
Description: Fuel Reduction done with hand crews

Community: Panorama Heights & Poso Park

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council and The US Forest Service

Priority# 3

Project Name: Uhl Pocket Fuel Break

Description: Fuel Reduction done with hand crews

Community: Hot Springs

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council and The US Forest Service

Priority# 4

Project Name: Pine Mt. Fuel Break

Description: Fuel Reduction done with hand crews

Community: Hot Springs

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council and The US Forest Service

Priority# 5
Project Name: Pine Mt. VMP
Description: Fuel Reduction done with hand crews
Community: Poso
Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council and The US Forest Service, Kern county fire Department

Priority# 6
Project Name: Sandy Creek Fuel Break
Description: Fuel Reduction done with hand crews
Community: Poso, Panorama Heights
Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council and The US Forest Service

Priority# 7
Project Name: Gibbons Peak VMP
Description: Fuel Reduction done with hand crews and fire.
Community: Poso, Panorama Heights
Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council and The Burro of Indian Affairs

Priority # 8

Project Name: Fire Control Road maintenance

Description: Maintain the fire control roads in the battalion for fire suppression and quick access to fires.

Community: Fountain springs, California Hot Springs, Poso, Poso Park, Panorama Heights, Sugar Loaf, Sugar Loaf Park, and Jack Ranch.

Project Collaborators: CAL FIRE, Tulare County land owners in the State Responsibility Area, Sequoia Fire Safe Council.

Mountain Home Demonstration State Forest

2012 Fire Plan
Mountain Home Demonstration State Forest

Mountain Home Demonstration State Forest VMPs

- Continue fuel treatments within 100' of primary roads. Work involves pre-commercial thinning of conifers typically less than 8 inches DBH and full removal of woody brush species. Material generated from the uphill side of the road is either pulled to the road and chipped or piled for seasonal burning. Material generated from below the road is piled for seasonal burning. All cutting, piling and chipping is performed by MHCC crews, USFS "blue card" crews and/or MHDSF staff. Burning is performed by MHDSF staff and MHCC crews on permissive burn days with a permit through the Tulare County APCD.
- Maintain a defensible fuel profile within and around day use areas and campgrounds. Saplings and small poles shall be marked by MHDSF staff for cutting and chipping/burning. This work will take place within the common campground and day use facilities and shall extend for a distance of at least 100' from the campground improvements.
- Maintain 4291 clearance around all State owned and operated structures that are maintained for human habitation. This shall include the summer and winter

headquarters, barracks, Jack's house and pack station. Similar maintenance shall be performed around the fuel tank, and warehouse as well.

- Continue fuel treatments in selected areas throughout the forest. Strategically located areas that are within close proximity to roads or trails shall be selected for treatment. These areas shall be treated by pre-commercial thinning of conifers typically less than 8 inches DBH and full removal of woody brush species. All cut vegetative matter shall be piled for seasonal burning. All cutting and piling shall be performed by MHCC crews, USFS "blue card" crews and/or MHDSF staff.
- Prepare a Vegetation Management Plan (VMP) to address significant fuel loads in a number of different units. Those units are identified in the following locations: Coppermine Road, River Road, Jacks Road, Redwood Crossing. Acreages and specific treatment methods have not yet been determined but are expected to include both pile and broadcast burning. The estimated timeframe for implementing said burn(s) is fall of 2012, weather and fuel conditions permitting.

Shaded Fuel Break-"At Last"

- Continue harvest and tractor piling operations on Timber Harvest Plan #4-09-010/TUL-1 (At Last) that bolsters the dozer line that was constructed during the "Deep Fire" in 2004. The harvest area is approximately 220 acres in size and extends east from Summit Road over the prevailing north-south trending ridge that separates Mountain Home DSF proper from the Wishon Fork of the Tule River canyon. The north, east and south boundaries are defined by property lines and/or steep, inoperable terrain. Harvest operations are expected to terminate by September. This harvest focuses on leaving a residual stand that contains between 50 to 160 square feet of basal area per acre on average. Residual trees shall be the largest and most fire resistant specimens from the pre-harvest stand. The intent of the fuel break is to slow or stop a wildfire coming from the Wishon Fork of the Tule River before it enters the major land holdings of the State Forest. The harvest will further focus on disconnecting the horizontal and vertical fuel ladders creating a defensible fuel profile. Large trees shall be logged conventionally with ground-based heavy equipment while small trees generally less than 24" DBH may be logged mechanically with feller bunchers. Utilizing mechanized harvest equipment will allow for "whole tree" harvest operations resulting in reduced slash accumulations post harvest. Sub-merchantable trees and brush shall be treated by tractor piling and burning and some additional hand piling and burning. This project is necessary to protect the public, infrastructure, State property and forest resources, watershed and habitat values, soil, and old-growth giant sequoia.

Shaded Fuel Break, Selection & Alternative Rx -"Dynamite SpringsTHP"

- Commence harvest operations on Timber Harvest Plan 4-11-021/TUL-1 (Dynamite Springs) when weather, ground conditions and contract approval allows. The harvest area is approximately 353 acres in size and extends south of the At Last THP boundary to the State Forest boundary; west from Summit Road to the operational boundary located west of the State Forest administrative facilities; and north to the common boundary between Balch County Park and MHDSF. Harvest operations may likely extend into 2013. This harvest focuses on leaving a residual stand that contains between 50 to 160 square feet of basal area per acre on average. Residual trees shall be from all size and age classes and be distributed as single trees and groups of trees. The intent of the harvest is to accomplish a number of desired conditions; one of which, is to modify forest fuels. This modification shall leave the treated stand in a more defensible condition with disrupted horizontal and vertical continuity of fuels. Slash created and trees knocked down shall be removed from within 150 feet of structures and from within 100 feet of primary roads. Additional fuel treatment may be performed with a masticator. This project is necessary to protect the public, infrastructure, State property and forest resources, watershed and habitat values, soil, and old-growth giant sequoia.

MHCC Program Information

Mountain Home Conservation Camp is currently working on a number of grant funded prefire projects. Among them are the Mossy Rock VMP, Rancheria Fuel Break, Happy Camp Fuel Break, and Mountain Home Demonstration State Forest roadside fuel break and thinning projects. The camp has also done considerable work over the last two years on the Grouse Vegetation Management Project which is a prescribed burn designed to modify fuels on a large scale north of Blue Ridge. All of these projects will provide either enhanced defensible space, fuel bed modification, or fuel breaks to protect lives, property, and resources from the threat of a catastrophic wildfire.

The camp also has a sign shop which produces fire prevention signs which are intended to heighten fire safety awareness of the public. Additionally, the camp performs much community and public service work throughout the county. Examples of cooperators are the Tulare County Resource Conservation District, various Fire Safe Councils, Tulare County Road Department, U.S. Army Corps of Engineers at Lakes Kaweah and Success, City of Porterville, City of Exeter, City of Visalia, City of Lindsay, Cal Trans, and a number of private landowners and citizens.

At full staffing the camp has five 17 man crews which can respond to emergencies and perform public service. We perform thousands of man hours each year and support each field battalion in supporting its individual pre-fire projects and goals. This year the crews at Mountain Home Conservation Camp did 1382 hours of training, 4942 hours were spent on State fires, and 8008 hours were spent on work projects.

APPENDIX A: PRE- FIRE PROJECTS

Batt Planning area	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
11	1101	Badger / Miramonte Fuel Break	O	2013		
11	1102	Shadequarter to Mankin VMP	P	2015		
11	1103	Buzzard Rust Suppression Tank	P	2013		0
11	1104	Fire Control Road Maintenance	M	2012		
12	1201	Pre- Attack Plans	M	2012		
12	1202	North Fork Rat Trail	M	2012		
12	1203	Kaweah Lake Rat Trail	M	2012		
12	1204	Grouse Valley Fire Control Road Fuel Break	M	2012		
12	1205	Grouse VMP	M	2013		1500
12	1206	Three Rivers FFS Demo Project	M	2012		
12	1207	Sheep Creek Fire Suppression Tank	M	2012		
12	1209	Salt Creek Fire Suppression Pond	M	2012		
12	1209	Blue Ridge Fuel Beak	O	2012		
12	1210	Fire Control Road Maintenance	M	2012		
13	1301	Cow Mountain Fuel Break	M	2013		
13	1302	Rancheria Suppression Tank	M	2012		
13	1303	Wishon Suppression Tank	M	2013		
13	1304	Success Lake Rat Trail	M	2012		
13	1305	Rancheria Fuel Break	M	2012		
14	1401	Posey fuel Brealk	M	2013		
14	1402	Uhl Pocket Fuelm Break	M	3013		
14	1403	Pine mout. Fuel break	M	2012		
14	1404	Sandy Creek VMP	M	2013		
14	1405	Gibions Peak VMP	M	2012		

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

APPENDIX B: UNIT GOALS AND OBJECTIVES

The First Goal is Fire Prevention. Public education is the first and most important key to preventing fires that cause catastrophic damage to the wildland. The fires can severely impact and the infrastructure of Tulare County. The benefit of Fire Prevention Signs, reaching out to children in schools, handing out fire prevention informational flyers, and introducing Smokey Bear to the public and getting the message out is priceless.

Engineering is the second goal. Maintaining our fuel reduction projects and developing more projects that are a direct benefit to the environment and communities within the Tulare Unit.

Enforcement is the third Goal. Working towards the goal of completing 90% of the LE100 inspections, investigating all wild land fires for cause, issuing citations and doing cost recovery are effective.

The objective is to stay focused on the goals and work toward maintaining the projects in the fire plan. The Fire Plan gives Tulare Unit the ability to work toward one mission. The mission is protecting the people of California from fires, protecting and enhancing forest, range and water shed values providing social, economic cost savings, and environmental benefits to rural and urban citizens.

APPENDIX C

Lightning Plan

I. **General**

II. **Objectives**

III. **Plan Activation**

IV. **Detection**

V. **Communication**

VI. **Air Branch**

VII. **Ordering & Logistics**

VIII. **Resource Staging & Allocation**

IX. **Incident Dispatchers**

X. **Thunderstorm Safety**

XI. **FMAG Eligibility Criteria Checklist**

I. General

The TUU Lightning Plan is a component of the Tulare Unit Multiple Incident Preparedness Plan. The purpose of this Multi Incident Plan is to facilitate the management of resources to all types of incidents or disasters including multiple lightning caused fires within the Tulare Unit. A three stage response plan is identified in order to meet different levels of hazard severity and Multiple Incident intensity. Each Branch will staff positions as needed to meet the present and expected size and/or complexity of their incident.

II. Objectives

The purpose of the TUU Multi Incident Preparedness Plan is to organize suppression and support functions during multiple incidents in a timely manner. The plan specifically addresses the following:

- Prompt activation of the plan.
- An appropriate response to current and expected activity.
- Prompt detection and reporting of fires.
- Clear, effective, and organized communications.
- Appropriate use of aircraft.
- Initiation of resource orders for additional equipment and support for changing circumstances.
- Initiation of suppression actions on all fires within the capabilities of the available resources.
- Pre-positioning of resources in affected area.
- Establishment of procedures for documentation of resource orders, fire organization, planning, mapping, and chronology of suppression actions.
- Prompt and appropriate allocation of resources.
- Ensuring cost effective use of available resources.
- Maintaining safe and efficient use of available resources.

III. Plan Activation

The Unit Duty Chief in conjunction with the Emergency Command Center and on duty Battalion Chiefs will authorize the activation of the TUU Multi-Incident Preparedness Plan. The ECC will alert the Unit by radio and email, that the TUU Multi-Incident Plan has been activated and which Battalions are affected.

The Unit will be divided into one of the three following options as needed.

Option "1" - ***Modified Response Plan A***

- Keep Unit as a whole.
- Utilize command frequencies as needed.
- Reduce response to appropriate levels based on Reports on Conditions at each incident with the concurrence of the Duty Officer and Field BC's.

Option "2" - ***Modified Response Plan B***

- Fires associated within a single geographical area.
- Establish staging location in affected area.
- Utilize command frequencies as needed.
- Reduce response to appropriate levels based on Reports on Conditions at each incident with the concurrence of the Duty Officer and Field BC's.

Option "3" - ***Enhanced Response Plan C***

The Unit will be divided into two Branches, North and South.

- North Division-Branch I
  - Battalions 11 and 12
  - Tactical Frequencies – TAC 3 & VTAC 11

- South Division-Branch II
  - Battalions 13 and 14
  - Tactical Frequencies – TAC 8 & VTAC 13

IV. Detection

Supplemental Detection

- Unit personnel will provide supplemental detection in assigned areas. Personnel will report storm activity and new fire information.

- All aerial recon will be requested through the ECC. Depending on lightning activity, pre-planned flights will be scheduled as needed.

V. Communication

- Branch Directors will utilize the appropriate TUU frequencies for communication with the Divisions and ECC.

- Divisions will use assigned Command and Tactical frequencies.

- Divisions will use Tactical frequencies for primary communication between resources and Branch.

- Branch I and Division Communications
  - See attached organization chart

- Branch II and Division Communications
  - See attached organization chart

- Reporting new fires
  - Divisions will contact Branch to report new fires and provide updated information

  - Prior to notifying the ECC of a new fire, the following information will be recorded.
    - Location of incident address or Latitude and Longitude (degrees, min format when possible).
    - Time of incident
    - Cause
    - Resources assigned
    - Size
    - Jurisdiction
    - Company Officer responsible for report

  - The ECC will build incidents for each fire and assign an incident number.

- Significant new fires
    - Branch will immediately notify ECC of all significant fires that will require additional resources and or require a separate command structure. The ECC will process requests for additional needs.

- It is imperative that an updated Report on Conditions including acreage on each fire gets reported to the ECC daily prior to 0600 hrs, and again at 1800 hrs. This information is critical for the completion of the Intel Report and 209 that goes to the Region Duty Chief and South Ops.

- A determination of DPA is imperative in order to assign the appropriate ECC and ordering point.

VI. Air Branch

- All aircraft will be requested through the ECC.

- Aircraft utilization will be determined by the ECC and prioritized based on fire status.

VII. Ordering & Logistics

- Resource Ordering

    - The ECC will call back personnel to meet expected needs.
    - All additional resource needs will be requested through the ECC.
    - The ECC with concurrence of the Branches will determine the need for resources and configuration (single increment or strike team) based on current and expected needs of the Branches.

- Logistical Support

    - The ECC will activate the service center as needed.
    - Consider reflex time, assess resource and logistical needs and order early.

VIII. Resource Staging and Allocation

- Resources will be assigned to Branches based on current and expected needs.

- Staging areas will be determined by the appropriate IC/OPBD.

IX. Incident Dispatchers

- Each Branch or Division should assign personnel to communicate with assigned resources.

- Expanded Dispatch will be activated when it is anticipated that incidents will escalate beyond span of control of normal ECC operations.

X. Thunderstorm Safety

THUNDERSTORM SAFETY

Thunderstorms cause significant hazards for wildland firefighters, including downbursts that can cause extreme fire behavior and lightning. When thunderstorm development is likely, lookouts should be posted and aware of signs of a developing storm. A sudden reversal in wind direction, a noticeable rise in wind speed, and a sharp drop in temperature may note the mature stage of a storm. Heavy rain, hail and lightning occur only in the mature stage of a thunderstorm. During a storm, use the following guidelines:

- Do not lie down.
    - The best position is sitting on the pack or crouching with feet close together.
    - Avoid sitting directly on the ground, if possible; but, if necessary, keep feet and butt close together.
    - Avoid grouping together. Keep a minimum of 15 feet between people when possible.
    - Removing caulk boots will not provide safety if stocking covered or bare feet are then in contact with the ground--don't bother!
- "Stay out of dry creek beds" is correct for flash floods, but has nothing to do with lightning.
- Handheld radios (with short rubber antennas) or cell phones are safe to use. Communication is vital to crew safety. Do not use land line radios or radios with elevated antennas.
- Wide, open spaces are better than trees or clumps of trees in the vicinity. Ridge tops, etc., should be avoided.
- If you feel the hair on your arms or head “stand up,” there is a high probability of a strike in the vicinity. Crouch or sit on a pack.
- Put down all tools.
- Take shelter in vehicles if possible.

XI. FMAG Eligibility Checklist

☐	Community Threatened/Population: Articulate that this fire has the potential to threaten a large portion of a community. How many people are impacted?
☐	Persons Evacuated: How many? Where were they evacuated to? If evacuations have not occurred yet, how soon do you anticipate it happening? What is the trigger point?
☐	Shelter Activations: Have shelters been opened and if so, where?
☐	Significant Number of Structures Threatened: There is **no** minimum number of structures threatened that dictates whether a fire will qualify or not. The number is used in relation to the rest of the information provided. A threat to 30 structures in a large subdivision does not carry the same weight as if the 30 structures threatened represents an entire community.
☐	Infrastructure/Facilities/Equipment/Threatened: Power lines, water supply, businesses and government facilities are examples of infrastructure that constitute a threat. It is critical, however, that enough information is provided to articulate how the loss of any of this infrastructure will constitute a major disaster for the community, region or State. Will the loss of the power lines affect local or regional power distribution? Is this the only water supply for a large portion or all of a community? Will the loss of a local business such as a lumber mill create a significant impact on local employment?
☐	Close Proximity to Structures: How far away is the fire from the structures and how long will it take before it gets there? Generally, fire damage to structures should be imminent, 1-2 hours at expected burning conditions.
☐	Significant Resource Drawdown: Show that there is significant drawdown to local and regional resources and that there is multiple incident activity occurring around the region and State. What are the response times for the next available resources?
☐	County EOC Activation: Is the County EOC activated and if so, to what level? If it is not activated, is there a trigger point that dictates when it will be?
☐	Other Critical Considerations: Provide any additional information that will help paint the picture. Civilian/fire firefighter injuries or fatalities, Incident Command Team activation. Have there been prolonged drought conditions or extensive vegetation mortality that is contributing to fire behavior?

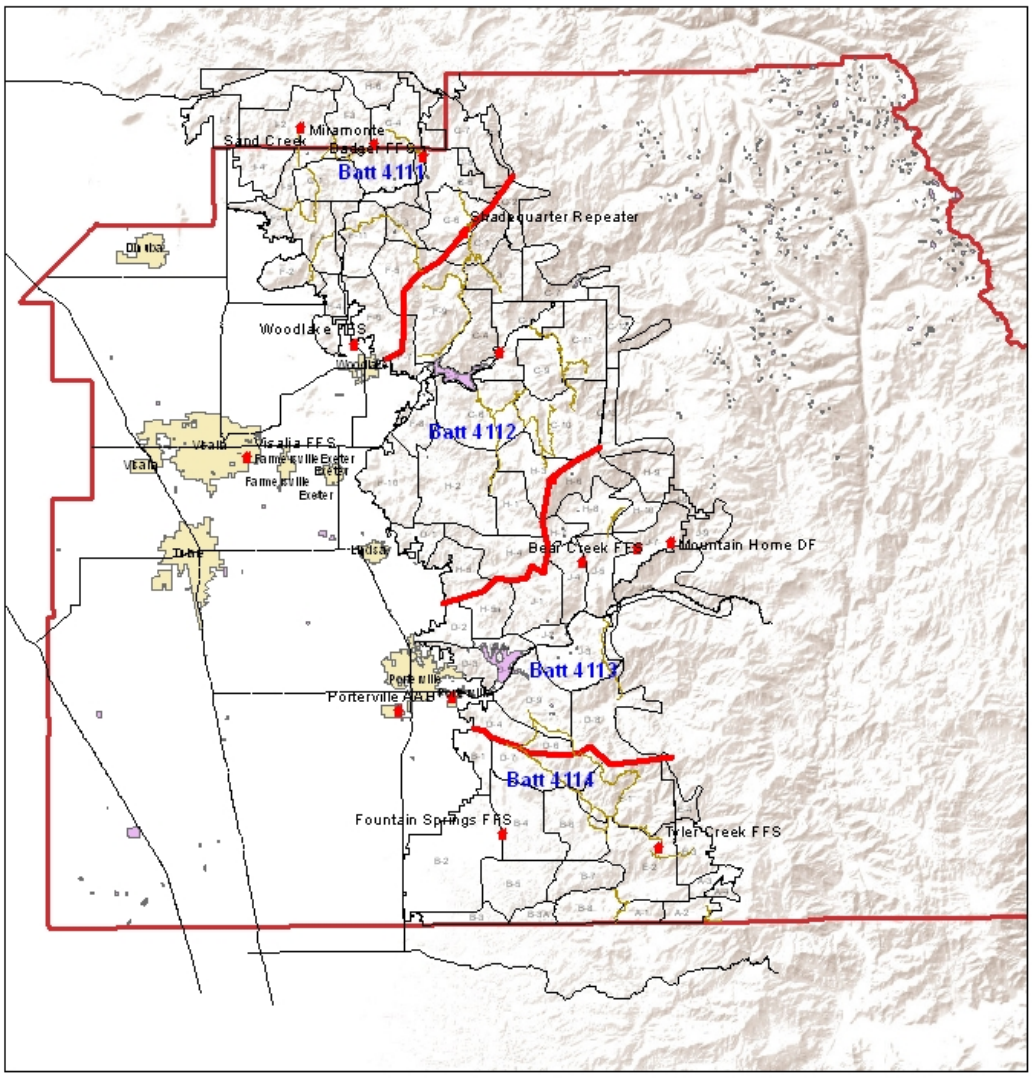
☐	Attached Incident 209
☐	Attached Resource Availability Information
☐	Attached Local RAWS Data and/or Fire Weather Forecast

The procedures and qualification for FMAG are listed at the web site below.

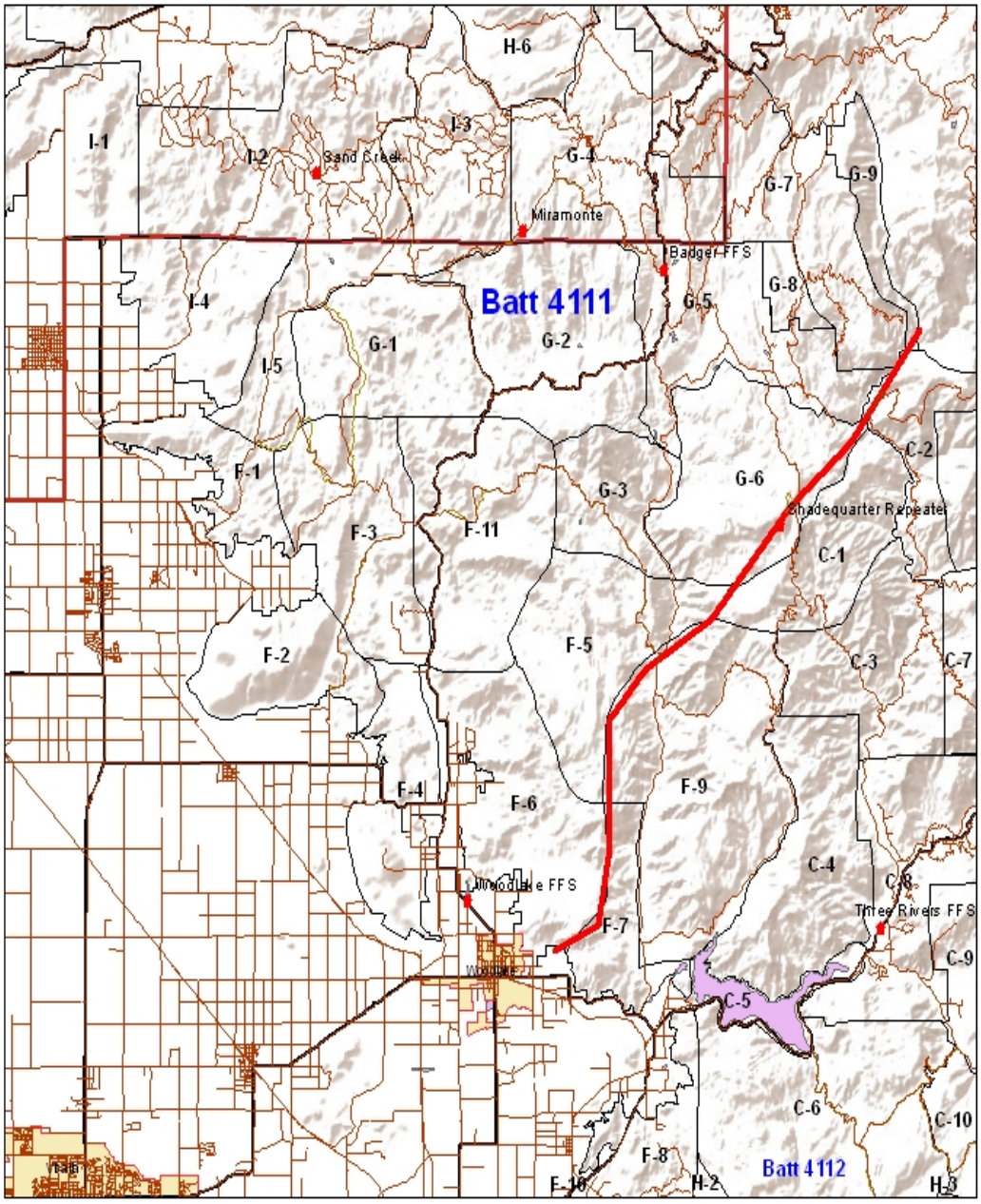
http://cdfweb/pubs/issuance/8100/8100p820.pdf

EXHIBITS: MAPS

Tulare Unit



Battalion 4111



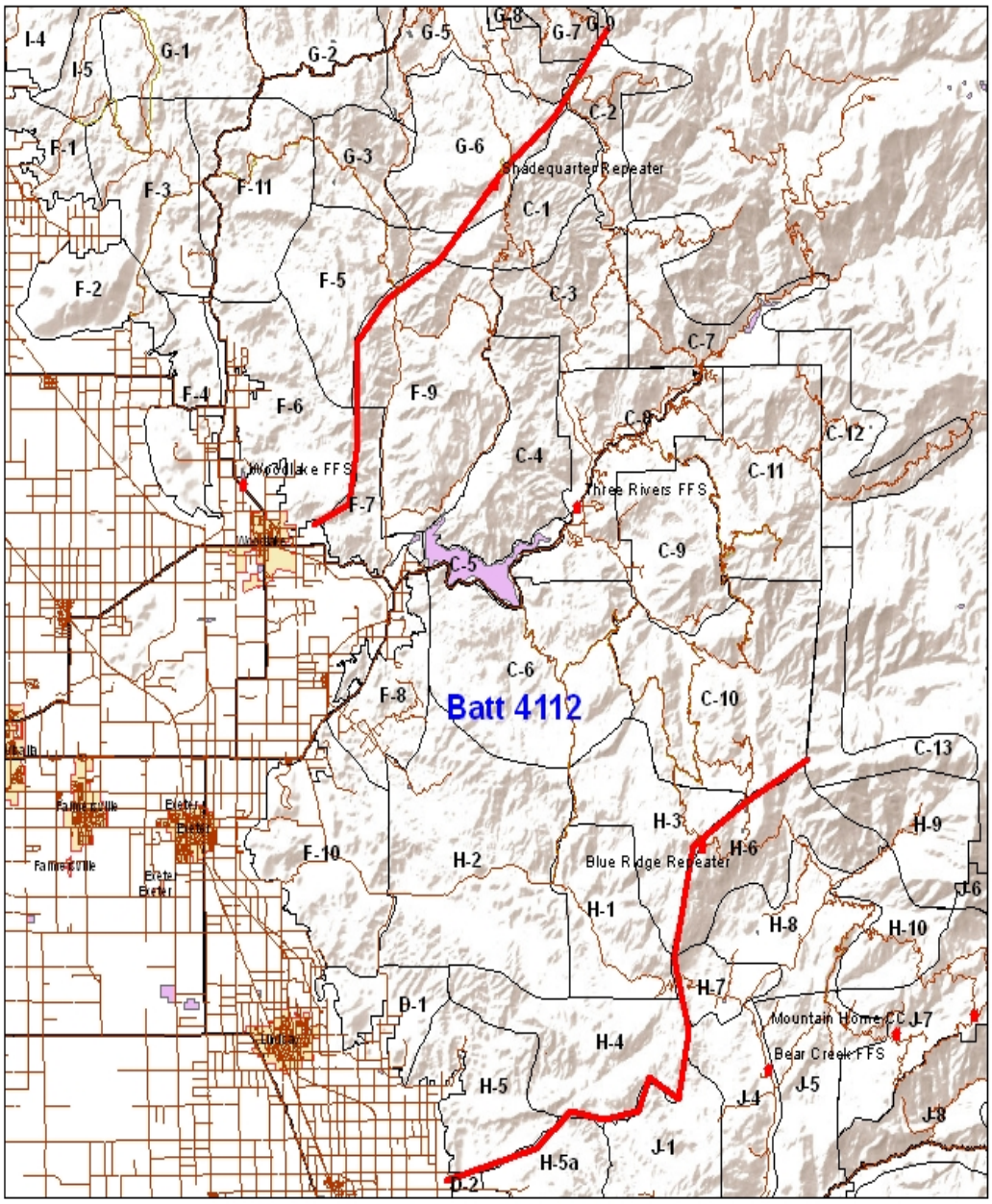
4 2 0 4 Miles

Legend

- Stations
- CAD_Roads
- highway
- Battalions
- Response_Areas
- County

AGonzalez 6/1/12

Battalion 4112



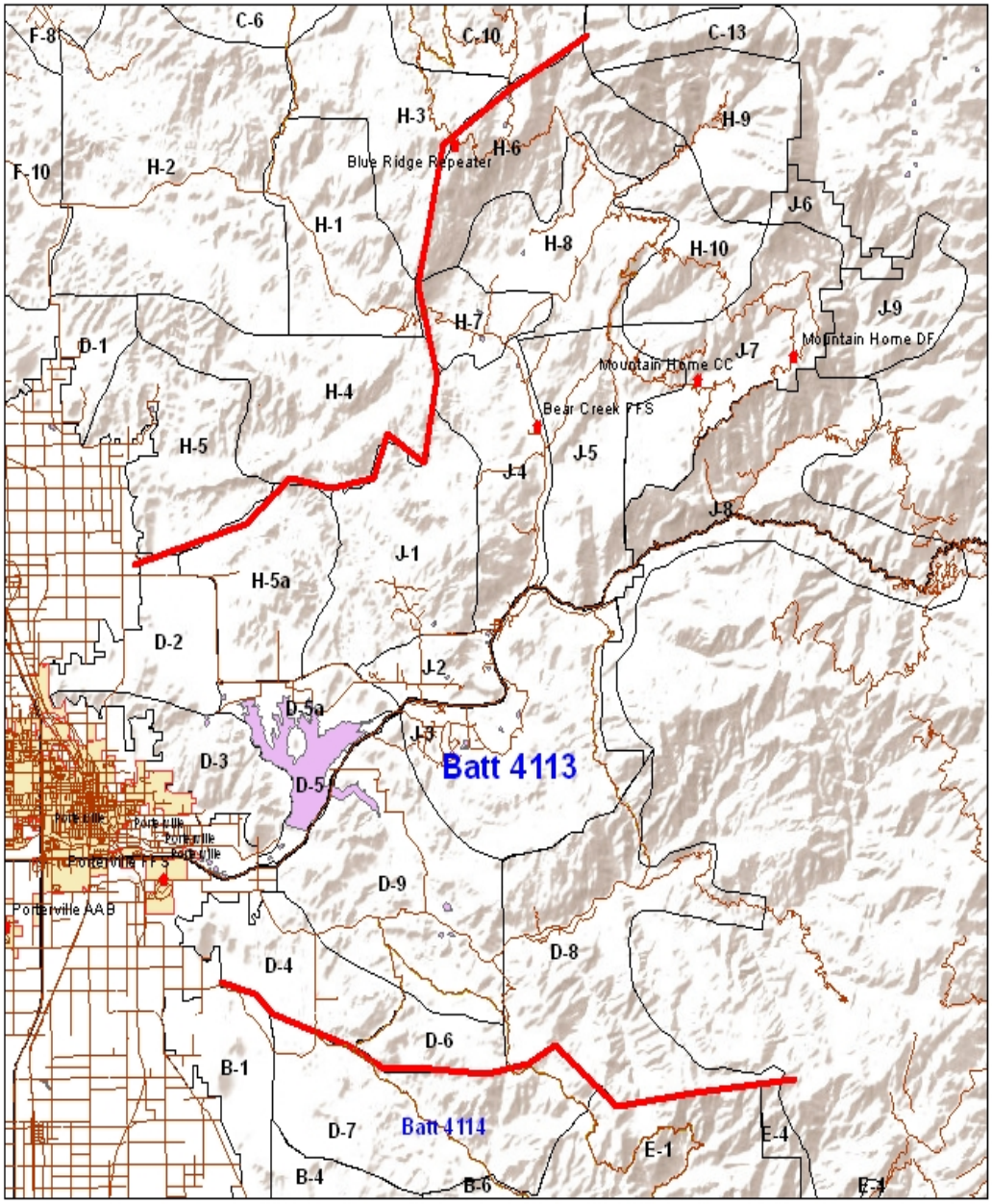
5.5 2.75 0 5.5 Miles

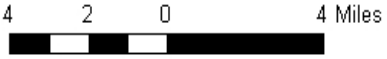
Legend

- Stations
- CAD_Roads
- highway
- Battalions
- Response_Areas
- County

AGonzalez 6/1/12

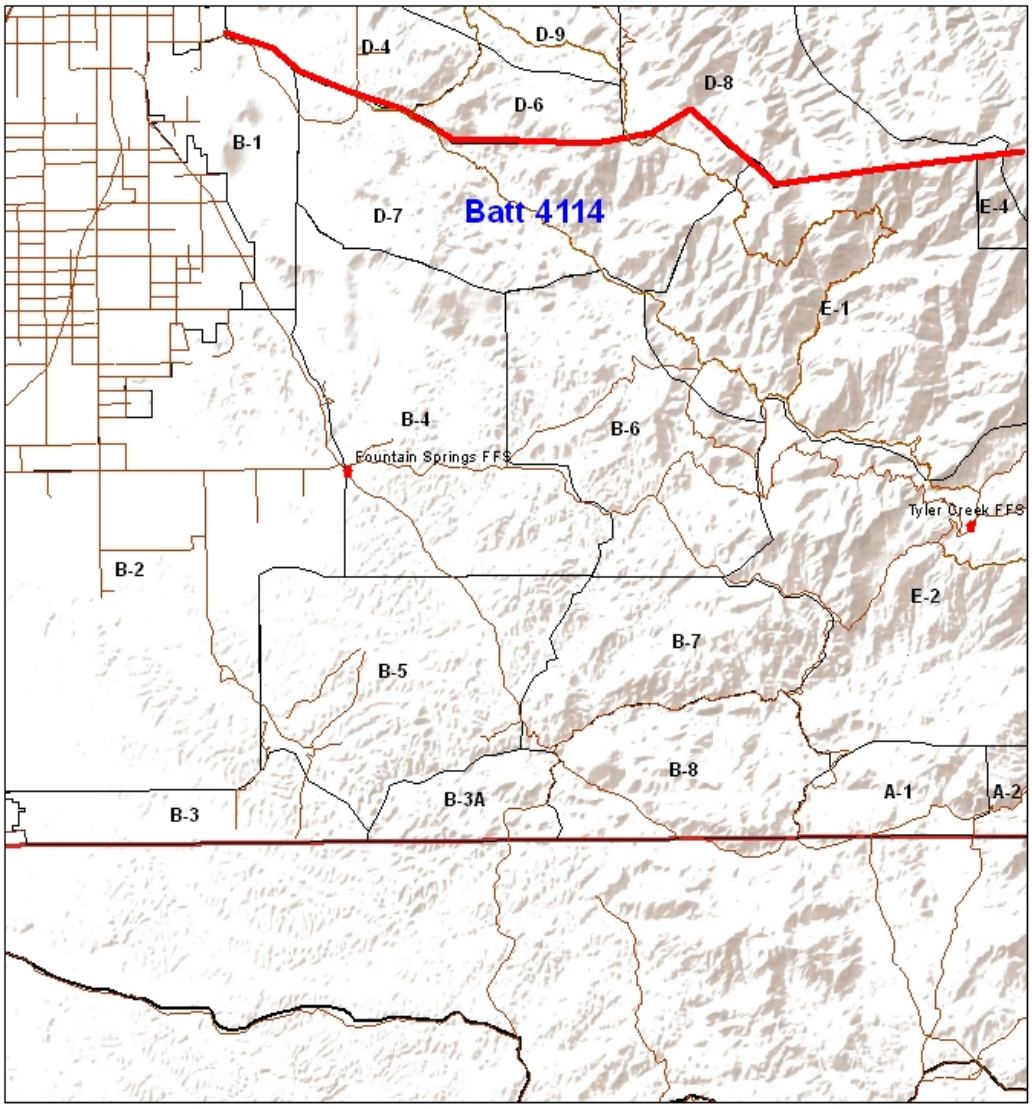
Battalion 4113





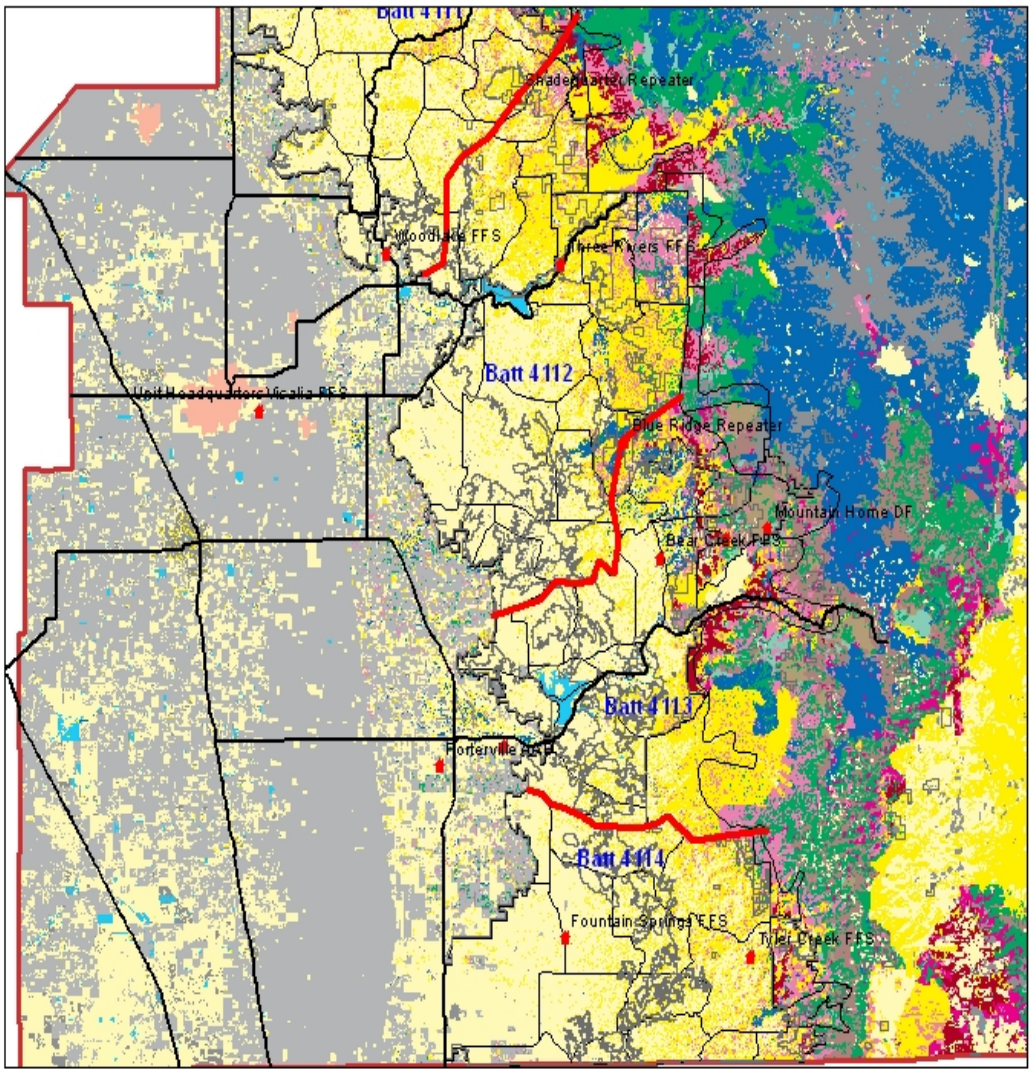
AGonzalez 6/1/12

Battalion 4114



A Gonzalez 6/1/12

Tulare Unit Fuel Models



Legend

- Stations
- Battalions
- highway
- fhszs06_3_TUU
- Response_Areas
- County

fmod05_1

FUELMOD

- Grass
- Pine / Grass
- Tall Grass
- Tall Chaparral
- Brush
- Dormant Brush
- Southern Rough
- Hardwood / Lodge Pole Pine
- Mixed Conifer Light
- Mixed Conifer Medium
- Light Logging Slash
- Medium Logging Slash
- Desert Fuel (Custom 15)
- Urban Fuel (Custom 28)
- Agricultural Lands
- Water
- Barren / Rock / Other

10 5 0 10 Miles

A Gonzalez 6/1/12

SUPPLEMENT: 2012

Annual Report of Unit Accomplishments

1. Fire Control Road maintenance in all Battalions 62 Miles completed of 179 Miles
2. Kaweah Lake Rat Trail
3. Success Lake Rat Trail
4. Grouse VMP 1200 Acres
5. Mossy Rock VMP 200 Acers out of 500
6. Grouse Valley Fire Control Road Fuel Break 7 Miles totaling 84 Acers
7. Fire Prevention Sings In all Battalions 17 Signs
8. LE-100 program done in all battalions 90% of all Structures in SRA Totaling 6500 inspections.