Butte County Community Wildfire Protection Plan

Last update: June 1, 2015

BUTTE COUNTY COMMUNITY WILDFIRE PROTECTION PLAN AMENDMENTS

Date	Section Updated	Page Numbers Updated	Description of Update	Updated By

Table of Contents

Table of Contents....ii

SIGNATURE PAGE 4

EXECUTIVE SUMMARY 5

SECTION I: BUTTE COUNTY OVERVIEW 6

COUNTY DESCRIPTION.... 6

FIRE DEPARTMENT PREPAREDNESS AND FIREFIGHTING CAPABILITIES 9

SECTION II: COLLABORATION....11

COMMUNITY / AGENCIES / FIRE SAFE COUNCILS 11

SECTION III: VALUES....12

A: VALUES 12

B: COMMUNITIES 13

SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES....14

A: FIRE PREVENTION 14

ENGINEERING & STRUCTURE IGNITABILITY 15

INFORMATION AND EDUCATION....17

B. VEGETATION MANAGEMENT 19

SECTION V: PRE- FIRE MANAGEMENT TACTICS....21

CAL FIRE/BUTTE COUNTY FIRE DIVISION / BATTALION / PROGRAM PLANS....21

BUTTE COUNTY FIRE SAFE COUNCIL 39

APPENDIX A: ACTIVE PROJECTS....40

APPENDIX B: COMPLETED PROJECTS....41

APPENDIX C: MAINTAINED PROJECTS....44

APPENDIX D: ONGOING PROJECTS 45

APPENDIX E: PLANNED PROJECTS....46

APPENDIX F: UNIT GOALS AND OBJECTIVES....48

APPENDIX G: IGNITION ANALYSIS....49

APPENDIX H: IGNITION MANAGEMENT PLAN....52

APPENDEX I: PROJECT APPROVAL PROCESS....53

EXHIBITS: 54

MAPS 54
ANNUAL REPORT OF ACCOMPLISHMENTS 63
2011 63
2012 65
2013 67
2014 69

SIGNATURE PAGE

Butte County Community Wildfire Protection Plan developed for Butte County:

This Plan:

- Was collaboratively developed. Interested parties, Federal, State, City, Town 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.

Fire Chief Greg McFadden	6/2/15 Date
Pre-Fire Engineer Chip Fowler	6/1/15 Date

EXECUTIVE SUMMARY

The California Fire Plan establishes a framework for reducing the risks associated with wildfire. By placing the emphasis on what needs to be done long before a fire starts, the fire plan strives to reduce firefighting costs and property losses, increase firefighter safety, and to enhance ecosystem health.

The Butte County Community Wildfire Protection Plan has been developed upon the priority goals and objectives identified by the Department and by local collaborators. This plan addresses the pre-fire strategies and tactics that will be implemented in cooperation with the fire agencies in Butte County, the Butte County Fire Safe Council, local community groups, and landowners. Local stakeholder collaboration is a key element in identifying and addressing local issues. Many projects are initiated at the grass roots level. The successful implementation of this plan requires the cooperation and coordination of various agencies, community groups and individual landowners to accomplish the goals and objectives set forth.

The Butte County Cooperative Fire Protection Agencies (BCCFPA) intends to implement this plan and place emphasis on the following goals and objectives:

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

- Promote an increasing level of compliance with defensible space laws and regulations.

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

By implementing a multi-faceted plan, using a combination of pre-fire treatments, including fuels reduction, prescribed burning, defensible space inspections, fire-resistant building construction standards enforcement, land use planning, and fire safety education, the BCCFPA strives to increase life safety and to reduce property destruction, environmental impacts, and fire suppression costs.

SECTION I: BUTTE COUNTY OVERVIEW

COUNTY DESCRIPTION

Butte County is located on the eastern side of the northern Sacramento Valley and encompasses over 1.1 million acres. Approximately 220,000 people reside in the County. The bordering counties include: Plumas County on the northeast, Yuba County on the southeast, Sutter and Colusa Counties on the southwest, Glenn County on the west and Tehama County on the northwest. Approximately 52% of the County is designated State Responsibility Area (SRA), and approximately 14% is designated Federal Responsibility Area (FRA). The majority of the public lands include parts of the Lassen National Forest and the Plumas National Forest. The remaining 34% of the county is comprised of Local Responsibility Area (LRA). The LRA contains densely populated areas as well as lower density rural areas. The LRA experiences a large occurrence of wildfires and poses a significant threat to the adjacent SRA.

The County ranges in elevation from 60 feet to 7,000 feet above sea level and is divided in half with two topographical features. The Sacramento Valley section in the western portion of the county is relatively flat and is predominantly grassland and farmland. The foothills and mountainous region of the northern Sierra Nevada and southern Cascade Mountains comprise the eastern portion of the county. This area is scattered with homes and communities intermixed amongst woodland fuels creating a serious Wildland Urban Interface (WUI) problem. These are areas where wildland fire once burned only vegetation but now burns homes as well.

Butte County's foothills and mountains are carved up by several river drainages, the largest being the Feather River watershed which culminates in Lake Oroville. The Feather River watersheds include the West Branch of the North Fork east of Paradise, the North Fork separating Yankee Hill from Berry Creek, the Middle Fork separating Berry Creek and Feather Falls, and the South Fork separating Feather Falls from Forbestown and the La Porte Road communities. The northern part of Butte County is bisected by Butte Creek to the west of Paradise and by Big Chico Creek which separates the Forest Ranch and Cohasset ridges. The topography in these drainages differs significantly from the deep and very steep, heavily timbered drainages of the Feather River watershed to the moderately steep wide and generally brush filled Butte Creek and Chico Creek drainages. The drainages are oriented toward south and west aspects which lead to prolonged sun exposure and diminished fuel moisture in the wildland fuels.

Vegetation is grouped into three general fuel types: grass, brush and timber. There are a number of factors such as fuel type and size, loading (tons/acre), arrangement (vertical & horizontal), chemical composition, and dead and live fuel moisture that contribute to the flammability characteristics of vegetation.

The valley and lower foothills, up to approximately 1000' elevation, are covered by the grass fuel type. This fuel type is comprised of fine dead grasses and leaf litter which is the main carrier of fire. Fires in this fuel type react dramatically to changes in weather,

particularly low relative humidity and high wind speed. Grassland fires can be very difficult to control during gusty wind conditions and often spread over a large area quickly, threatening life and property.

The mid-foothill and lower mountain areas, generally between 1000' and 2000' elevation, are dominated by brush. Fire in this fuel type can burn readily, especially later in the summer as live fuel moistures drop to critical levels. Brush fuel, unlike grass fuel, does not react readily to changes in relative humidity. Brush fires can be difficult to control under normal summer burning conditions when their fuel moistures reach critical levels and become very difficult to control on steep topography and when subjected to strong winds.

The mountainous areas above 2000' elevation are generally covered by the timber fuel type. Timber fires burn readily, especially if they occur in overstocked stands, in stands with down dead material, and/or later in the summer as live fuel moistures drop. Timber fires can be difficult to control under normal summer burning conditions, but they become very difficult to control on steep topography and when subjected to strong winds.

Butte County has a Mediterranean climate with cool, wet winters and hot, dry summers. Precipitation is normally in the form of rain, ranging from approximately 20 to 80 inches per year, with snow in the higher elevations. The average high temperature for January is 55 degrees and for July is 96 degrees, with many days in which temperatures reach over 100 degrees.

The predominant summer weather pattern includes high to very high temperatures, low humidity and light to moderate south winds associated with high pressure weather gradients. Occasionally during the summer, dry weather fronts will approach northern California bringing increased wind speeds from the south on approach, then changing direction to northwest winds after passing the area.

Each year, especially in the autumn months, north wind events bring high temperatures, very low humidity and strong winds. These north wind events usually produce *red flag warning* conditions and provide the highest potential for extreme fire behavior. With the fuels already at their driest moisture content, north winds can create a severe fire weather situation.

Lightning is cyclic and is generally a minor occurrence. However, there have been lightning storms that have started numerous, damaging fires. The 1999 Butte Lightning Complex burned 33,000 acres. The 2008 Butte Lightning Complex destroyed or damaged over 100 structures and 59,000 acres.

Butte County has a significant history of large fire occurrences. Over 500,000 acres have burned during the past fifty years. In 1990, the Campbell fire scorched 131,000 acres. The Poe fire burned 8,333 acres and destroyed 50 homes in Concow/Yankee Hill in 2001. More recently, the 2008 Humboldt fire burned over 23,000 acres and 351

structures near Paradise. Wildfire history is a significant factor of the pre-fire management planning process. Identifying where fires have occurred can help managers determine the most beneficial locations for pre-fire management projects.

FIRE DEPARTMENT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

CAL FIRE

The Butte Unit is geographically divided into seven battalions. Cooperative fire protection "Schedule A" agreements are maintained with the Butte County Fire Department, City of Biggs Fire Department, City of Gridley Fire Department, and Town of Paradise Fire Department. During peak season preparedness, CAL FIRE/Butte County Fire Department resources include:

CAL FIRE Resources

- 270 Personnel
- 15 Engines
- 2 Transport/bulldozers
- 1 Air tactical plane
- 1 Air tanker
- 10 Fire stations

County/City Resources (Staffed by CAL FIRE personnel)

- 14 Fire stations
- 14 Engines
- 1 Type II HazMat
- 1 Type II Technical Rescue
- 1 Type II Water Rescue
- 1 Aerial (110') ladder truck

A typical State engine company is staffed with a minimum of one company officer and two firefighters. A typical County/City engine company is staffed with a minimum of one company officer and one firefighter.

During periods of extreme fire danger, the lookouts on Bald Mountain (in northern Butte County) and Bloomer Hill (in southern Butte County) are typically staffed, aiding in early fire detection. Local community fundraisers typically provide funding for daily staffing at Sawmill Peak lookout (near Paradise) during the summer months.

The Butte County Fire Department is a combination fire department. The delivery of fire department services is accomplished using both career and volunteer firefighters. Butte County has a strong and active volunteer firefighter program.

Butte County Volunteer Resources

- 16 Fire stations
- 17 Engines
- 16 Tactical Water tenders
- 14 Squads
- 2 Breathing support units

Mutual/Automatic Aid Agreements
The Butte Unit maintains automatic aid agreements with all fire agencies within Butte County and with many adjacent to the county. These agencies include:

Within Butte County:
- Chico Fire Department
- El Medio Fire Protection District
- Oroville Fire Department
- Lassen National Forest
- Plumas National Forest

Adjacent to Butte County:
- Foothill Volunteer Fire Department
- Hallwood Community Services District
- Hamilton City Fire Department
- Loma Rica/Browns Valley Community Services District
- Marysville Fire Department
- Sutter County Fire Department
- Tehama County Fire Department

Dispatch Agreements
The Butte Unit Emergency Command Center maintains agreements to provide dispatch, communication, command and control, and "pre-arrival" emergency medical services to the following agencies:

- Butte County Fire Department
- Biggs Fire Department
- Gridley Fire Department
- Town of Paradise Fire Department

SECTION II: COLLABORATION

COMMUNITY / AGENCIES / FIRE SAFE COUNCILS

Representatives involved in the development of the Butte County Community Wildfire Protection Plan are included in the following table. Their organization and title are indicated below:

Plan Development Team:

Organization	Title
Butte County Fire Safe Council	**Executive Director**
Berry Creek Fire Safe Council	**Chairperson**
Feather Falls Fire Safe Council	**Chairperson**
Forbestown Fire Safe Council	**Chairperson**
Paradise Fire Safe Council	**Chairperson**
Yankee Hill Fire Safe Council	**Managing Director**
Butte County Fire Department	**Chief**
City of Biggs Fire Department	**Chief**
City of Gridley Fire Department	**Chief**
Town of Paradise Fire Department	**Chief**

SECTION III: VALUES

A: VALUES

One primary goal of the Community Wildfire Protection Plan is to identify, prioritize and protect the wide range of assets found throughout the wildlands of Butte County.

The wildland urban interface (WUI) in Butte County consists of communities at risk as well as the area around the communities that pose a fire threat. There are two types of WUI environments. The first is the true urban interface where development abruptly meets wildland. Within Butte County the town of Paradise and the community of Paradise Pines are examples of high density housing meeting wildland. The second WUI environment is referred to as the wildland urban intermix. Wildland urban intermix communities are rural, low density communities where homes are intermixed in wildland areas. For Butte County the communities of Cohasset, Forest Ranch, Concow, Yankee Hill, Berry Creek and Forbestown are examples. Wildland urban intermix communities are difficult to defend because they are sprawling communities over a large geographical area with mixed vegetation types throughout. This profile makes access, structure defense, and fire control difficult as fire can freely run through the community. There are over 30,000 structures spread throughout the SRA in the Butte Unit. This home construction has created a new fuel load within the wildland and has caused a shift in firefighting tactics to life safety and structure defense. Human impact on wildland areas has made it much more difficult to protect life and property during a wildland fire.

In addition to structures, many other assets are at risk in the wildland environment. These include but are not limited to:

- public infrastructure
- hydroelectric power facilities
- historic buildings
- ecosystem health
- wildlife habitat
- air quality
- soil erosion
- water quality
- rangeland
- timberland
- recreation
- scenic resources

Many of these assets are dependent upon each other, and their values will be considered when prioritizing pre-fire projects. Implementing a combination of pre-fire treatments will enhance the protection of these values.

B: COMMUNITIES

Thirty one communities within the Butte County have been recognized as communities at risk. More information regarding communities at risk can be found at http://www.preventwildfireca.org/Communities-Risk/

1	Bangor	Butte	2001
2	Berry Creek	Butte	2001
3	Butte Creek	Butte	2001
4	Butte Meadows	Butte	2001
5	Butte Valley	Butte	2013
6	Cherokee	Butte	2013
7	Chico	Butte	2001
8	Clipper Mills	Butte	2013
9	Cohasset	Butte	2001
10	Concow	Butte	2001
11	Durham	Butte	2001
12	Feather Falls	Butte	2001
13	Forbestown	Butte	2010
14	Forest Ranch	Butte	2001
15	Honcut	Butte	2013
16	Hurleton	Butte	2001
17	Inskip	Butte	2001
18	Jonesville	Butte	2001
19	Kelly Ridge	Butte	2013
20	Magalia	Butte	2001
21	Oroville	Butte	2001
22	Oroville East	Butte	2001
23	Palermo	Butte	2001
24	Paradise	Butte	2001
25	Paradise Pines - De Sabla	Butte	2013
26	Pentz	Butte	2001
27	Robinson Mills	Butte	2001
28	South Oroville	Butte	2001
29	Stirling City	Butte	2001
30	Thermalito	Butte	2001
31	Yankee Hill	Butte	2013

SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES

A: FIRE PREVENTION

The Butte Unit Fire Prevention Bureau is responsible for public education, public information, fire hazard abatement, fire planning, burn permits, life safety and fire origin and cause investigations. Each of these programs is an important facet of a well-balanced fire prevention program.

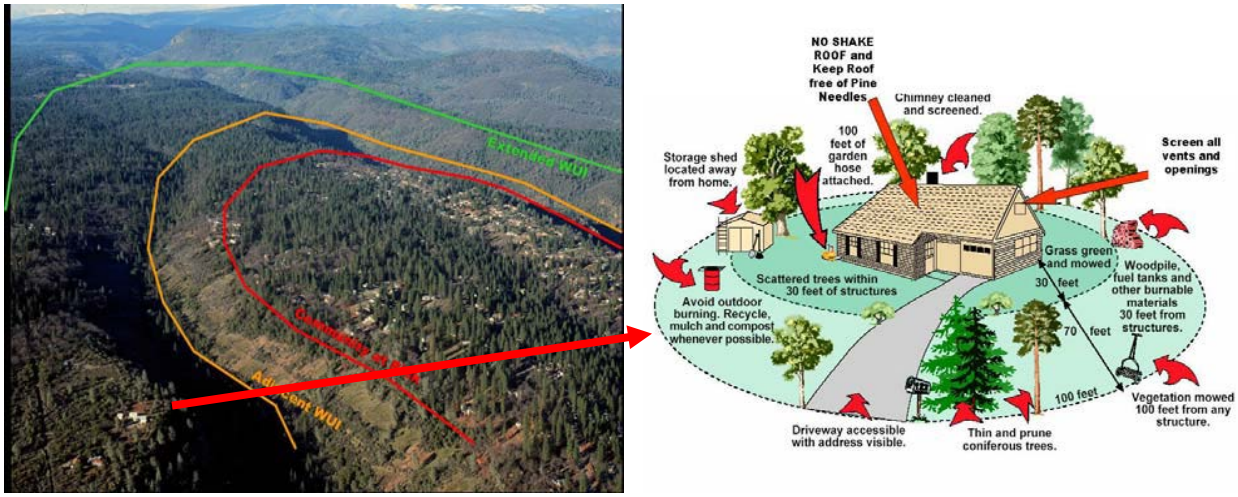
The Fire Prevention Bureau supports the fire investigation needs of the Unit, assisting with complex fire investigations such as those involving fire fatalities, commercial structures, arson, or detailed follow-up investigative work. Through the fire investigation process, specific fire cause problems can be identified and will be addressed utilizing focused prevention efforts of education and enforcement programs. For example, over the past few years, fires have been caused by using equipment, such as lawn mowers, to cut standing dead grass. Mower blades striking rocks, mower exhaust igniting grass, mechanical failures and improper fueling techniques have all caused fires. To combat these preventable fires, the Department developed a brochure and a public service announcement (PSA) detailing the hazards of mowing dry grass during warm weather and the preventative measures for a landowner to utilize.

ENGINEERING & STRUCTURE IGNITABILITY

One key component of the fire plan is the protection of structures during the event of a wildfire. This critical asset is one of the most difficult and costly to defend during a wildfire. Compliance with Public Resources Code (PRC) 4291 regulations gives the best opportunity for structural survivability during a large wildfire. However, it is not enough to have defensible space without giving careful thought and effort toward improving the home's resistance to structural ignitability. Structural ignitability is a term that describes a structure's susceptibility to catch fire during a wildland fire. Aiding a fire in this capacity would be any item allowing an ember to readily start a new fire. Many structures can be destroyed well in advance of the main fire. During firestorms, fires are often fanned by strong winds creating a blizzard of embers which blow through the air. These embers can land in a receptive fuel bed on or near a structure. Receptive fuels include materials such as needles and leaves that accumulate on, under and near a home, material stored on or near the home such as yard furniture or woodpiles, and some types of building materials. Building materials that lend themselves readily to "structural ignitability" include the obvious shake roof and the not so obvious deck material and interior support members in the attic or sub-floor space. When reducing a structure's ignitability, the mitigation measures are best accomplished by the individual homeowner.

The illustration below displays the importance of maintaining PRC 4291 clearance as it relates to location in relevance to the community at risk and a home's place in the wildland urban interface (WUI). In this illustration, the identified home falls within the Extended WUI. The location at the top of a ridge would only increase the danger of a structure succumbing to a wildland fire. A structure such as this would benefit greatly by adhering to PRC 4291 compliance.

Detailed Illustration of the Home Ignition Zone



HOME IGNITION ZONE

- **Fire resistant building construction**
- **Defensible space around the home 100 feet.**

PRC 4291 regulations are enforced by fire station personnel and by focused inspection teams in pre-identified areas. Inspectors provide fire safety information and education materials to receptive landowners. If needed, re-inspections may be forwarded to an officer within the bureau for follow-up law enforcement action. Defensible space inspections remain a high priority fire prevention program in the Butte Unit.

Through a grant-funded project, the Butte County Fire Safe Council provides free assistance to residents, who meet certain income, age and ability requirements, to bring their residences into compliance with PRC 4291 regulations.

In January of 2008, new building codes were instituted to maintain high levels of fire and life safety. The California Building Standards Commission has adopted these codes that include provisions for ignition resistant construction standards in the WUI. Updated fire hazard severity zones will be used by building officials to determine appropriate construction materials for new or remodeled buildings in the WUI.

PRC 4290 regulations establish minimum wildfire protection standards in conjunction with building, construction and development in State Responsibility Areas (SRA), providing for emergency access, signage and building numbering, and vegetation modification. These regulations became effective September 1, 1991.

In coordination with the Butte County Department of Development Services, the Deputy Fire Marshal is responsible for enforcing the Butte County Improvement Standards and California Fire Code on all use permits, minor use permits and commercial building permits countywide. The Deputy Fire Marshal enforces current PRC 4290, PRC 4291, Butte County Improvement Standards, and the California Fire Code, on all new building construction (commercial and residential) within Butte County. Installation of sprinkler systems in one and two family dwellings is enforced in accordance with National Fire Protection Association (NFPA) standard 13D and California Residential Code. Fire Protection planning is reviewed at the subdivision and parcel map level and typically implemented at the development stages of a project.

INFORMATION AND EDUCATION

The Information and Education programs in Butte County are coordinated efforts, supported by the commitment of the Fire Prevention Bureau, Volunteers in Prevention (VIP's), fire station personnel, Butte County Fire Chief's Association, North Valley Fire Prevention Officers, and the Butte County Sherriff's Office.

Information

The public information function is covered 24 hours per day by Incident Command System (ICS) qualified Public Information Officers (PIO's) and by the Emergency Command Center personnel. The overall goal of this function is to keep our customers, the citizens of Butte County, informed by providing timely and accurate information to the varied media market in the northern Sacramento Valley.

Information Call Center and Joint Information Center training is conducted in cooperation with multiple agencies to foster inter-agency relations and to maintain the base of qualified call-taker personnel. The Butte Unit utilizes VIP's that are trained and experienced call-takers. These VIP's are vital to the information function during a significant incident.

In addition to CAL FIRE/Butte County Fire Department specific public information, the Butte County Fire Chief's Association PIO's, with representatives from CAL FIRE/Butte County Fire Department, Chico Fire Department, El Medio Fire Protection District, Oroville Fire Department, Paradise Fire Department and the U.S. Forest Service meet bi-monthly to plan joint information releases that cover message topics including: Summer Safety and Heightened Fire Danger, Changing Smoke Detector Batteries, Holiday Home Safety and Fall Home Heating Safety.

Education

Annually, thousands of Butte County residents, both children and adults, attend dozens of events including school programs, fair exhibits, and community events. Presentations that cover many topics, including Stop, Drop and Roll, Home Safety, Fire Safety, and Defensible Space, are provided.

The most intricate fire prevention education program taught in Butte County is the Fire PALS (Fire Prevention and Life Safety) program. Fire PALS is an elementary school program produced in cooperation with the agencies from the Butte County Fire Chief's Association and the Butte County Sherriff's Office. Lessons include fire safety as well as life safety, including home exit plans, bicycle helmet use and firearm safety. Fire PALS presentations remain a high priority tool within the education program.

Contributing factors to the success of public education in Butte County are the commitment of the VIP's, cooperation with multiple agencies, and community involvement by fire station personnel. The Butte County Fire Chief's Association, Butte County Fire Safe Council and the Butte County Sherriff's Office have all partnered with

CAL FIRE to coordinate and deliver consistent safety programs and messages. Approximately 90-percent of the hours dedicated to education each year are provided by fire station personnel. At community events station personnel bring a very important "personal" touch to the messages that are taught, which underscores our department's commitment to customer service.

B. VEGETATION MANAGEMENT

The Butte Unit Resource Management staff administers numerous programs which support the Strategic Fire Plan.

Fuels Modification

Forest Practice – CAL FIRE Resource Management staff is responsible to enforce the California Forest Practice Act and Forest Practice Rules for timber operations on private timberlands. This enforcement process starts with the initial project review, and continues through the harvesting of timber to final completion. The treatment of logging slash to reduce the overall fuel hazard within timberland areas must comply with the rules and regulations, which generally apply around structures and along roads. During the review of commercial timber harvesting plans, CAL FIRE staff has opportunities to provide written recommendations to project proponents designed to facilitate a positive change in the methods in which timber operations are conducted. Our foresters continually look for ways to improve fire safety, hazard reduction, public safety, vehicular access, water sources, timing of operations, wildlife benefits, and other site specific mitigation measures necessary to support the Strategic Plan.

The Vegetation Management Program (VMP) is a cost-share program that utilizes prescribed fire, and mechanical means, for addressing wildland fire fuel hazards and other resource management issues on State Responsibility Area (SRA) lands. The use of prescribed fire models natural processes, restores fire to its historic role in wildland ecosystems, and provides significant fire hazard reduction benefits that enhance public and firefighter safety.

The VMP allows private landowners to enter into a contract with CAL FIRE to use prescribed fire to accomplish a combination of fire protection and resource management goals. The projects which fit within Butte's priority areas (e.g., those identified through the Fire Plan) and are considered to be of most value to the unit are those that have been completed initially and continue to be active over the years.

The California Forest Improvement Program (CFIP) is a state cost share program to assist private timberland owners in the management of their forest lands. Eligible practices include reforestation projects (funding up to 90% on lands damaged by wildfire) and fuel treatments accomplished through thinning, pruning, and follow-up fuel reduction.

Other grant-funded fuel reduction projects generally involve the construction or maintenance of fuel breaks in the Wildland-Urban Interface. Proposition 40 funded dollars were used extensively within Butte County to construct fuel breaks and accomplish other fuels reduction projects. Proposition 40 funding are set to expire June 1, 2014. The Unit is currently working with Sacramento to obtain funding from the SRA fee to continue with these projects in the SRA.Three projects funded under the CNR (CAL FIRE Northern Region) Hazardous Fuels Treatment Grant created shaded fuel breaks in strategic locations near communities at risk within the Butte Unit.

Environmental Review
The California Environmental Quality Act (CEQA) requires public agencies to consider actions on projects that may directly or indirectly result in a physical change in the environment. When CAL FIRE funds, approves, permits, facilitates or carries out a project as lead agency, it is obligated to ensure that the appropriate steps are taken in complying with CEQA by preparing an environmental review. The review, conducted by the Unit Forester/Environmental Coordinator, ensures that CAL FIRE's statutory responsibilities within the Butte Unit are addressed in the project planning phase. Examples of CAL FIRE projects in Butte include facility construction, repairs, maintenance, and fire hazard clearance. Fuel reduction projects include shaded fuel breaks, prescribed burns, and live fire training burns.

Fire Suppression Repair
CAL FIRE has authority to conduct fire suppression repair operations during emergency incidents on State Responsibility Areas (SRA) under the Public Resources Code (PRC) Sections 4675 & 4676. Fire suppression damage includes impacts to resources and property caused by firefighting efforts, including but not limited to potential soil erosion from dozer & hand lines, road opening and watercourse crossings. The primary objective is to mitigate fire suppression-caused damage to as close to pre-fire conditions as is reasonably possible. This is done by minimizing sediment delivery to watercourses, mitigating slope conditions to pre-fire drainage patterns, removing fire suppression-related debris, restoring or removing berms and barriers as necessary, repairing gates and fence lines removed for fire control access, and implementing appropriate mitigation measures (in consultation with a CAL FIRE archaeologist) to protect cultural and/or historic resource sites.

The Resource Management staff provides suppression repair duties in the Unit. Their natural resource background, training and knowledge of both fire control issues and methods of addressing complex environmental issues greatly support the Department's Strategic Plan. They work with the landowners and other stakeholders to provide a rapid post-fire assessment of burned areas. They have many private and agency contacts, and effectively utilize available resources, including CAL FIRE hand crews, to accomplish the restoration and protection activities.

Forest and Range Health
The CAL FIRE mission emphasizes management and protection of California's natural resources. Management of overstocked timber stands is necessary to achieve the goals of restoring, enhancing and protecting California's natural resources. Healthy forests are more productive, are more resistant to diseases that weaken trees or cause mortality, and generally are at lower risk to catastrophic wildfire. Restoring rangeland through prescribed burning of non-native noxious weeds, forbs and grasses promotes increased range health, which has environmental and socio-economic benefits.

SECTION V: PRE- FIRE MANAGEMENT TACTICS

CAL FIRE/BUTTE COUNTY FIRE DIVISION / BATTALION / PROGRAM PLANS

Battalion One – Paradise, Magalia, Stirling City, Yankee Hill

Collaborators

CAL FIRE / Butte County Fire Department; Town of Paradise Fire Department; Butte County; Paradise Fire Safe Council; Plumas National Forest/Lassen National Forest; Bureau of Land Management (BLM); Sierra Pacific Industries (SPI); Paradise Pines Property Owners Association (PPOA); Pacific Gas & Electric (PG&E); Yankee Hill Fire Safe Council

Wildland Urban Interface Situation

Battalion One, surrounds the Town of Paradise, and encompasses three communities, Stirling City, Paradise Pines (Magalia), and Yankee Hill. The Town of Paradise (which is covered in the Battalion 8 section of this plan) and community of Paradise Pines are more characteristic of an urban interface environment where wildland abruptly adjoins high density housing. Both communities are relatively large and densely populated, comprised substantially of an elderly population. Other areas within the battalion can be characterized as intermix areas, where houses are scattered amongst the wildland, such as those south of the Town of Paradise and north and east of the community of Paradise Pines.

Yankee Hill area comprises the U.S. Government, Pacific Gas & Electric (PG&E), Sierra Pacific Industries and other timber companies and local landowners control the larger tracts of land. There are extensive hydroelectric power facilities and transmission lines, Union Pacific railroad and a State scenic route (Highway 70) in the Feather River Canyon. The Thermalito Irrigation District owns Concow Lake and much of the land surrounding it. The greatest concentration of population is on developed parcels along Highway 70, Concow Lake and the Big Bend area. Many areas have narrow access routes and inadequate defensible space. Another significant problem is the lack of water supply for fire protection with no pressurized community fire hydrants and very few large storage tanks. An evacuation plan, community information radio station, and a fee based “Fire and Weather Watch Webcam” were created in cooperation with the Yankee Hill Fire Safe Council and significant contributions from PG&E and Digital Path.net.

Emergency access into and out of these communities is a real concern, due to limited, narrow roads and the expectation of large numbers of citizens trying to evacuate simultaneously. This is especially true in Magalia where the population density is very high and there is only one arterial road, the Skyway, leading in to and out of the community. This is further complicated by a stretch of the roadway that crosses Magalia Reservoir. To mitigate the traffic issues during an evacuation, several miles of the Skyway has been reconstructed and paved from Stirling City to Butte Meadows as a possible additional evacuation route. Evacuation plans, have also been created and distributed to the public and service providers in cooperation with the Butte County Fire

Safe Council, Town of Paradise, and Butte County Office of Emergency Management. Yankee Hill has an outdated evacuation plan that needs updating.

Fuels

There is a wide range of vegetation types found within the Paradise Ridge. The vegetation types range from grass, chaparral brush mix, oak woodland and mixed-conifer timber. The lower elevations of Paradise have an overstory of ponderosa pine/California black oak mix, with an understory chaparral brush component consisting primarily of manzanita, ceanothus, scotch broom, and poisonoak. The upper elevations of Magalia and Stirling City have a mixed-conifer timber overstory including Douglas-fir, ponderosa pine, sugar pine, white fir and incense-cedar. Hardwood trees in the understory include California black oak, tanoak, canyon live oak, bigleaf maple and California laurel. There is also an understory chaparral brush component consisting primarily of manzanita, deer brush, ceanothus, scotch broom and poisonoak. Some areas of undeveloped lots or greenbelt areas have very dense brush which can affect fire behavior. In the Yankee Hill area, Highway 70runs through the community and along the north fork of the Feather River Canyon, the fuel type transitions to brush, including manzanita, toyon and white thorn, which grow especially thick in the drainages. At approximately 2000' to 2500', the fuel transitions to a mixed-conifer timber type.

All of these vegetation types provide fire control problems because of overstocked and overgrown conditions due to years of successful fire suppression. The potential for a large, fuel driven fire is very real when fuel moisture conditions are conducive to burning. Fire control will be very difficult due to high fire intensities, leading to fire behavior problems such as long-range spotting, high rates of spread and long flame lengths. Direct attack may be impossible under these burning conditions for safety reasons. An indirect attack with a defensive approach is the most likely scenario for fire control.

Fuel breaks along the primary evacuation routes of Magalia / Paradise Pines continue to move forward as funding becomes available. Many projects have been completed, resulting in positive feedback from the population.

Topography

The most prominent topographic features within the battalion are the numerous steep canyons dispersed throughout the area. The two largest of these canyons, and most influential on fire behavior, are Butte Creek Canyon and the West Branch Feather River Canyon. Butte Creek Canyon borders Paradise and Magalia to the west, while West Branch Feather River Canyon borders both towns and Stirling City to the east. Less prominent canyons, but still very influential on fire behavior, are located along the south border of Paradise. The smaller canyons run north-south into town limits, but substantially decrease in size by the time they enter Paradise. These canyons include Nance, Hamlin, Berry, Clear Creek and Dry Creek.

Gently sloping, broad ridges make up most of the Paradise, Magalia and Stirling City residential areas. There are some smaller canyons entering both Paradise and Magalia. The canyons entering Magalia are Little Butte Creek and Middle Butte Creek. These canyons are relatively small where they enter Magalia. However, a well-established fire starting in either canyon would provide a substantial resistance to control. There are also numerous tributary drainages to all of the canyons entering Paradise and Magalia, which can substantially influence fire behavior.

Yankee Hill includes the Feather River drainages and their tributaries lend towards steep slopes and chimneys. This also contributes to strong and erratic wind patterns. Forest conditions are highly variable in the area.

Weather and Fire History

Seasonal weather patterns do not vary significantly from the Unit-wide averages. Historically, extreme weather conditions have not been the primary factor in large fires within the Paradise and Magalia area. However, there is a huge potential for weather to be a strong influence on fire behavior and should not be discounted. In June 2008, the wind-driven Humboldt fire burned over 23,000 acres and numerous structures within the battalion.

Yankee Hill contains steep drainages of the Feather River that exist from the Butte Valley into the Plumas National Forest contribute to strong and erratic diurnal wind patterns.

Seasonal weather patterns do not vary significantly from the Unit-wide averages. The predominant summer weather pattern includes high to very high temperatures, low humidity and light to moderate south winds associated with high pressure weather gradients. North wind events usually produce *red flag warning* conditions and provide the highest potential for extreme fire behavior.

In 2008 there was a lightning event that caused 15 to 21 fires (many of which burned together), this was the second significant lightning event in ten years.

The Yankee Hill – Concow area has a history of large wildfires. The Camp fire, which was part of the Butte Lightning Complex (2008), destroyed or damaged over 100 homes and accounted for a large portion of the 59,000 acres consumed during the siege; the Poe fire (2001) burned 8,333 acres and destroyed 50 homes; the Seventy fire (2001) burned 1,711 acres; the Concow fire (2000) burned 1,845 acres, killed one civilian, injured several firefighters and destroyed 16 homes; and a lightning event in 1999 burned tens of thousands of acres on the east side of Highway 70 north of Pulga.

Battalion Priorities

- PRC 4291 compliance inspections
- School fire prevention education presentations
- Community outreach/education at multiple community events
- Shaded fuel break projects along primary community escape routes

- Shaded fuel break projects adjacent to Magalia / Paradise Pines / Yankee Hill
- Visible Address Signs

Battalion Two – Cohasset, Forest Ranch, Butte Meadows/Jonesville

Collaborators
CAL FIRE / Butte County Fire Department; Cohasset Community Association; Buzztail Community Services District; Crown Point Road Association; Big Chico Creek Ecological Reserve; Forest Ranch Fire Safe Council; Butte Meadows/Jonesville Community Association; Sierra Pacific Industries; Lassen National Forest; CalTrans

Wildland Urban Interface Situation
Battalion Two encompasses the Chico foothills, Lower Butte Creek Canyon, the communities of Cohasset, Forest Ranch, Butte Meadows/Jonesville, and the Hwy 32 corridor from the Chico city limits to the Tehama County line. With the exception of the core area of these communities which are similar to an urban interface environment, the majority of the battalion can be characterized as intermix areas in which residences are scattered amongst the wildlands. This makes having the 100-ft defensible space requirement around structures vital. Protecting these structures from a wildfire threat is challenging, as they are not as densely located. This can require many more resources to accomplish as compared to a more urban interface environment where a single resource can potentially protect more than one structure when they are located in a more dense configuration. Additionally, the Cohasset area is faced with a ‘one way in/one way out’ evacuation concern.

Steep inaccessible terrain combined with light, flashy fuels at lower elevations and heavy fuel loading at higher elevations dominate the fire planning area. Fires that start in this area immediately threaten high value/high risk exposures and are often complicated by the challenges of wildland urban interface firefighting.

Fuels
There is a wide range of vegetation types found within the Battalion Two planning area. The vegetation types range from grass, chaparral brush mix, oak woodland, and timber.

Vegetation found within the communities of Cohasset and Forest Ranch is predominantly timber and associated brush. The timber type is primarily ponderosa pine/California black oak mix, with an understory chaparral brush component consisting primarily of manzanita, deerbrush, ceanothus, scotch broom, and poison oak. Some areas of undeveloped lots or greenbelt areas have very dense brush which can affect fire behavior.

The community of Butte Meadows/Jonesville has a mixed-conifer timber type. Species of conifer trees in the overstory include Douglas-fir, ponderosa pine, sugar pine, white fir and incense-cedar. Hardwood trees in the understory include California black oak, tanoak, canyon live oak, bigleaf maple and California laurel. There is also an understory chaparral brush component consisting primarily of manzanita, ceanothus, scotch broom, and poisonoak.

Vegetation found in the Chico foothills and in the canyons of lower Butte Creek, Little Chico Creek and Big Chico Creek range from grass and brush to oak woodland. Some species of trees in this area include gray pine, blue oak, California black oak and California laurel. Brush species include toyon, western redbud, poison oak and ceanothus.

All of these vegetation types provide fire control problems because of overstocked and overgrown conditions due to years of successful fire suppression. The potential for a large, fuel driven fire is very real when fuel moisture conditions are conducive to burning. Fire control will be very difficult due to high fire intensities leading to fire behavior problems such as long-range spotting, high rates of spread and long flame lengths. Direct attack may be impossible under these burning conditions for safety reasons. An indirect attack with a defensive approach is the most likely scenario for fire control.

Topography

Steep canyons and drainages are the dominant topographic features in the Cohasset/Forest Ranch Ridge Fire Planning Area. Typically these canyons/drainages have limited access for fire apparatus and have few options for control line placement which may allow fires to become well-established and very resistive to control efforts.

Weather and Fire History

Seasonal weather patterns do not vary significantly from the Unit-wide averages. The predominant summer weather pattern includes high to very high temperatures, low humidity and light to moderate south winds associated with high pressure weather gradients. North wind events usually produce *red flag warning* conditions and provide the highest potential for extreme fire behavior.

Lightning is cyclic in this area and is generally a minor occurrence. However, there have been lightning storms in the past that have started numerous, damaging fires. An example of this occurred in August of 1999 when 47 fires started by lightning burned over 33,000 acres across Butte County, the majority of which burned in the battalion.

Battalion Priorities

- PRC 4291 compliance inspections – the number of structures spread out throughout the area make this of vital importance
- Visible address signs – “Help Us Find You.”
- Shaded fuel break projects along primary community escape routes and firefighter ingress/egress routes.
- Sierra Pacific Industries H-line VMP/Shaded Fuel Break
- Fire Prevention Education – schools, community events, burn permit issuance
- Continue to explore future Vegetation Management Program opportunities.

Battalion Four – Chico Urban Area, Community of Durham, portions of Butte Valley and surrounding valley and foothills

Collaborators
CAL FIRE / Butte County Fire Department; City of Chico Fire Department

Wildland Urban Interface Situation
Battalion Four encompasses an area in the northwestern corner of Butte County, including the greater unincorporated area surrounding the City of Chico, community of Durham and portions of Butte Valley including Butte Community College Campus. CAL FIRE personnel staff four Butte County Fire Department fire stations that make up "Battalion Four" which maintains automatic aid agreements with the City of Chico, Tehama County and Hamilton City Fire Department in Glenn County. Critical infrastructure includes a Union Pacific Railroad main line, an underground petroleum pipeline, Butte Community College Main Campus, Highway 99 and Highway 32 as well as the Sacramento River. The Chico Foothills have seen a substantial increase in home development. Prescription emphasis is placed on public education and enforcement.

Fuels
The State Responsibility Area (SRA), which is east of Highway 99, is covered primarily by oak woodland and grass with some brush below 1000' elevation. The foothills immediately surrounding the City of Chico mainly consist of light to medium fuels such as annual grasses, oak woodland and chaparral brush mix. Combined with the topography and recent structural development, these fuels create a fire suppression concern due to their ability to readily support ignition and fire spread, especially under windy conditions. The Butte Valley area in the south eastern portion of the battalion mainly consists of annual grasses with light brush. The Local Responsibility Area (LRA) which is west of Highway 99 is primarily agricultural with orchards, rice and field crops. There is a diminishing amount of grass and valley oak, especially near the Sacramento River and the major creeks and sloughs. One exception to this is the Llano Seco Ranch where various government and private agencies are restoring parts of the ranch to native habitat.

Topography
The valley area is predominantly flat. The Chico foothills rise at approximately a 15% slope with a generally western aspect. The Butte Creek, Little Chico Creek and Big Chico Creek watercourses/drainages traverse the battalion. The Butte Valley area consists of mainly rolling foothills

Weather and Fire History
The valley (north), Chico foothills and Butte Valley area do not exhibit any substantial differences to the Unit-wide weather pattern. Since the battalion lies in the lower elevations, annual rainfall is approximately 26" per year. The predominant summer weather pattern includes high to very high temperatures (above 100-degrees F), low humidity and light to moderate south winds associated with high pressure weather gradients.

North wind events usually produce red flag warning conditions and provide the highest potential for extreme fire behavior. Wind is the primary factor in large fire spread in the battalion. Large fires in Battalion Four include the Skyway fire which burned 425 acres in 2006 and the Humboldt fire which burned over 23,000 acres in 2008.

Battalion Priorities

- School fire prevention education presentations
- PRC 4291 compliance inspections
- Maintain and expand current Vegetation Management Projects in the Butte Creek Canyon area in conjunction with the adjacent Battalion
- Continue to explore future Vegetation Management Program opportunities.

Battalion Five – Bangor, Berry Creek, Forbestown, Feather Falls

Collaborators
CAL FIRE / Butte County Fire Department; Berry Creek Fire Safe Council; Feather Falls Fire Safe Council; Forbestown Ridge Fire Safe Council; Plumas National Forest; Sierra Pacific Industries; Soper Wheeler Company; CHY Logging

Wildland Urban Interface Situation
Battalion Five spans three prominent ridges and covers the communities of Berry Creek, Brush Creek, Mountain House, Feather Falls, Forbestown, Clipper Mills and several Native American Rancherias. There are also significant land holdings of Sierra Pacific Industries other timber companies, and State and Federal lands.

The community of Berry Creek is the most compact but is still considered a wildland urban *intermix.* Access and the remote location create a timely response concern in the event of a fast moving fire. The highest concentrations of structures are within the Lake Madrone development and along Bald Rock Road. The community also houses the summer retreat Camp Okizu. An evacuation plan has been created for the community.

The community of Feather Falls, on Lumpkin Ridge, is also a wildland urban intermix. Access/egress is via Lumpkin Road. Traffic from logging trucks and summer recreational vehicles, increase seasonally during the spring and summer months. Many residents are located on remote roads that are ill-maintained, and address identification is often limited. An evacuation plan has been created for the community.

Forbestown Ridge includes the community of Forbestown, near the border with Yuba County. Steep mountainous roads increase emergency response times. The South Feather Water and Power (SFWP) has critical infrastructure in the Forbestown area including the main office of their Power Division. The Power Division includes several hydroelectric plants, miles of canals and conduits, as well as many dams and tunnels. Major reservoirs in the area include Little Grass Valley, Lost Creek, Sly Creek and Ponderosa. The North Yuba Water District (NYWD) has critical infrastructure as well in Forbestown which includes a water treatment plant that serves residents in both Butte and Yuba Counties. The Butte County Fire Department maintains automatic aid agreements with the Foothill Fire Protection District and Loma Rica/Brownsville Community Services District, both in Yuba County.

The communities have active fire safe councils that are involved in evacuation planning, fuel hazard reduction and public outreach and education.

Fuels
Battalion Five consists of a wide range of vegetation types. Below 1000’ elevation, annual grasses and oak woodland with blue and valley oak cover the lower foothills. At the 1000’ elevation, the fuel type transitions to brush with species including manzanita, chaparral, toyon and white thorn, growing especially thick in the drainages. At

approximately 2000' to 2500', the fuel transitions to a mixed-conifer timber type with associated brush in the understory.

Topography
Elevation ranges from 400 feet to over 4,000 feet. Prominent topographical features in the planning area are the numerous steep canyons dispersed throughout the area. The two main canyons form the Middle Fork and South Fork of Lake Oroville. The canyons contain numerous tributaries including Oregon Gulch, Cedar Ravine, Jack Hill Ravine and Forbestown Ravine to name a few. The remote nature of the area makes access difficult in to these areas.

Weather and Fire History
The predominant summer weather pattern includes high to very high temperatures, low humidity and light to moderate south winds associated with high pressure weather gradients. Occasionally during the summer, dry weather fronts will approach northern California bringing increased wind speeds from the south on approach, then changing direction to north winds after passing the area. North wind events usually produce *red flag warning* conditions and provide the highest potential for extreme fire behavior. To the east, areas of the adjacent Plumas Forest generate weather patterns that produce thunderstorms and dry lightning throughout the fire season.

Battalion Five has had several large fires occur in recent history. The South and Union fires that were part of the 1999 Butte Lightning Complex, the Frey fire burned 4,000 acres of SRA in 2008, the Craig fire burned 2,001 acres in 2008 and the Swedes fire burned 2500 acres in 2013.

Battalion Priorities
- Defensible Space Education
- PRC 4291 compliance inspections - the number of structures spread out throughout the area make this of vital importance
- Continue working on fuels reduction project in and around the community of Forbestown.
- Visible address signs – "Help Us Find You"
- Community outreach/education at community events
- Shaded fuel break projects along primary community escape routes and firefighter ingress/egress routes.
- Chipper Program
- AM Emergency Station (Berry Creek)
- Evacuation Plan and Mailer (All FSC's)

Battalion Six – Oroville, Palermo, Kelly Ridge

Collaborators
CAL FIRE / Butte County Fire Department; City of Oroville Fire Department; El Medio Fire Protection District; Department of Fish & Wildlife - Oroville Wildlife Area; Department of Parks & Recreation; Department of Water Resources

Wildland Urban Interface Situation
Battalion Six includes the communities of Cherokee, Oregon City, Thermalito, Kelly Ridge, WP Addition, Wyandotte, Copley Acres, and Palermo. The City of Oroville and the El Medio Fire Protection District lay within the battalion six boundaries. Automatic aid agreements are maintained with the City of Oroville Fire Department and the El Medio Fire Protection District. There is an extensive amount of State Parks and Department of Water Resources owned land throughout the area. There are two Native American Rancherias within the planning area, both with gaming casinos and tribal communities (Mooretown and Berry Creek). CAL FIRE provides wildland fire protection to the Native American Rancherias in the State Responsibility Area through our statewide agreement with the Bureau of Indian Affairs. The primary influencing factor for vegetation fires is light flashy fuels mixed in with numerous structures.

The City of Oroville and the El Medio Fire Protection District both have unique fire safety planning areas within their jurisdictions. The City of Oroville has large areas of wildland urban interface. The City has a weed abatement program to help alleviate the risk of wildfire to some of these occupancies. The El Medio Fire District has large areas of light flashy fuels, which have a yearly tendency to become ignited and spread rapidly into surrounding homes and businesses. The District attempts to mitigate this by conducting fuel hazard reduction burns in typically fire prone areas.

Critical infrastructure within this planning area includes the Department of Water Resources State Water Project (Oroville Dam/ Hyatt powerhouse, Diversion Dam/ power plant, Thermalito Powerhouse), Pacific Gas and Electric Company's high-voltage transmission infrastructure (major power grid), Union Pacific railroad's all-weather transcontinental route, and South Feather Water and Power's hydro-generating and water distribution infrastructure.

Pre-fire prescription emphasis is in education and enforcement (hazard reduction). The battalion, in cooperation with the Butte Fire Safe Council, was a participant in "Fire in the Foothills" – a fire safe community outreach program to reach fire prone residents in the Eastern foothills of Oroville. Firefighters maintain strong community ties, enhancing fire safety and prevention, by actively attending community meetings and events as well as participating in school education programs.

Fuels
The southern portion of the fire planning area is predominantly grass land. As the area extends north and east, the fuel types change with the increased slope in topography. Fuel types increase in size and type to include grass, oak woodland, and manzanita,

chaparral, toyon and white thorn. The 11,869-acre Oroville Wildlife Area is primarily a riparian woodland habitat along the Feather River and grasslands around the Thermalito Afterbay.

Topography
The southern area is predominantly flat. As the area extends eastward into the adjoining planning area, the slope increases (up to 25%). The steepest slopes can be found leading up the Cherokee Ravine and the Oregon Gulch drainage. As the topography extends northeast, the slope is not as severe, but the area is scattered with multi-directional drainages. Access is problematic due to sporadic road placement.

Weather
The battalion does not exhibit any substantial differences to the Unit-wide weather patterns. Nightly downhill/down canyon winds develop on a regular basis in the eastern foothills, primarily below the Oroville Dam.

Fire History
Significant fire history (since 1990) includes wind driven grass/riparian fires and topographic driven brush/WUI fires (WUI listed if structures destroyed).

Brush Fires:	Oregon Fire, 2004, 1,955 acres, WUI, Oregon Gulch Rd
	Canal Fire, 1989, 595 acres, WUI, East Oroville/Mt Ida Rd
	Table Fire, 1994, 1,132 acres, Schrimer Ravine/Table Mtn
Grass Fires:	Wild Fire, 1990, 257 acres, WUI, Oroville Wildlife Area
	Larkin Fire, 2001, 627 acres, Oroville Wildlife Area
	Larkin Fire, 2000, 487 acres, Oroville Wildlife Area
	Seventy Fire, 2003, 608 acres, WUI, Hwy 70/Palermo
	Ophir Fire, 2008, 959 acres, WUI, Hwy 70/Palermo
	149 Fire, 1995, 2,140 acres, Hwy 149/Cottonwood
	Nelson Fire, 1993, 744 acres, Nelson Rd/Campbell Hills

Battalion Priorities
- Increase awareness within the planning area by continuing education on the importance of defensible space around structures, importance of exterior construction materials, ingress and egress, visibility/address, and access to water supplies.
- Conduct Vegetation Management Program activities in the Oroville Wildlife Area and the Lake Oroville State Park System.
- Reduce debris burning caused vegetation fires by education and enforcement
- Continue working with DPR and DWR on constructing and maintaining fuel breaks around the Kelly Ridge community, on state owned lands
- Visible address signs – “Help Us Find You”
- Construct community billboard sign for Defensible Space education
- Work with various neighborhood watch groups on Defensible Space education and what to do when wildfire strikes
- Maintain Fire Danger warning sign to public

Battalion Seven – Biggs, Gridley, Richvale

Collaborators
CAL FIRE / Butte County Fire Department; City of Biggs; City of Gridley; Department of Fish & Wildlife-Gray Lodge Wildlife Area; Sutter County Fire Department; Live Oak Fire Department; Loma Rica/Browns Valley Fire Department; Marysville Fire Department; Hallwood Community Services District

Wildland Urban Interface Situation
Battalion Seven encompasses the southwestern corner of Butte County including the cities of Biggs and Gridley, and the unincorporated communities of Honcut and Manzanita. Automatic aid agreements are maintained with Sutter County Fire Department/Live Oak, Marysville Fire Department/District 10-Hallwood Community Services District, and Loma Rica/Browns Valley Fire Department. The community of Honcut occasionally experiences a threat from a rapidly moving grass fire. Lack of volunteerism in the community caused the closure of the local Butte County Fire Department fire station in Honcut in the late 1990s. Where residents are diligent about proper weed abatement, the risk from wildland fire is considerably reduced.

The Gray Lodge Wildlife Area is a 9,100-acre crucial wetland wildlife habitat infrastructure within the battalion. The area has benefited from an aggressive Vegetation Management Program. A portion of the Oroville Wildlife Area extends into the battalion, encompassing most of the river bottom riparian area in East Biggs. This area may benefit from a future Vegetation Management Program agreement for controlled burning for habitat improvement.

Pre-fire prescription emphasis is placed on education and enforcement, especially municipal weed abatement. Firefighters seek to establish strong ties to the community though the maintenance of pre-fire plans, smoke detector installation, third grade education programs and other community education events.

The greatest risk of fire loss to the battalion is within the cities of Biggs and Gridley and the concentrated areas affecting agricultural processing plants, storage areas and crop acreage. Also, fires that start near the Feather River bottom may spread to adjacent fire sheds.

Fuels
The east side of the battalion is a transition zone at the edge of the Sacramento Valley. This “front” is characterized by grass fuels on the flat valley edge and blue oak woodland in the rolling foothills. The west side is the Upper Butte Sink of Butte Creek, an important flyway, fishery and wildlife habitat characterized by seasonal marshes, riparian habitat and a heavy loading of fine fuels. The two cities are surrounded by intensely farmed land. The Feather River bisects the battalion flowing from north to south. The river bottom contains a ten thousand-acre hardwood forest with its own unique fire regime.

Topography
Battalion Seven is predominantly flat. Elevation ranges from 50' to 110'. The river bottom contributes the only unique feature to the area.

Weather
Battalion Seven does not exhibit any substantial differences to the unit-wide weather pattern. The predominant summer weather pattern includes high to very high temperatures, low humidity and light to moderate southerly winds associated with high pressure weather gradients. North wind events usually produce red flag warning conditions and provide the highest potential for extreme fire behavior.

Battalion Priorities
- Municipal weed abatement
- Fire Code enforcement – City of Gridley
- School fire prevention education presentations
- Red Suspenders Day – community outreach event
- Butte County Fair – Fire Resistant Landscaping and Building Materials Demonstration
- Provide for education and enforcement of PRC4291 and general fire safety in the Honcut area

Battalion Eight – Town of Paradise

Collaborators
CAL FIRE / Butte County Fire Department; Town of Paradise Fire Department; Paradise Fire Safe Council;

Wildland Urban Interface Situation
Battalion Eight is delineated by the incorporated area of the Town of Paradise which encompasses approximately 18 square miles. Battalion Eight is surrounded by SRA within Battalion One. The town is more characteristic of an urban interface environment where wildland abruptly adjoins high density housing. Approximately 26,000 people reside in the town.

Emergency access in to and out of the town is a real concern, due to limited, narrow roads and the expectation of large numbers of citizens trying to evacuate simultaneously. This is further complicated by a stretch of the roadway that crosses Magalia Reservoir. To mitigate the traffic issues during an evacuation, several miles of the Skyway has been reconstructed and paved from Stirling City to Butte Meadows as a possible additional evacuation route. Evacuation plans have been developed and distributed to the public and service providers in cooperation with the Butte County Fire Safe Council, Town of Paradise, and Butte County Office of Emergency Management.

Fuels
There is a wide range of vegetation types found within the Paradise Ridge. The vegetation types range from chaparral brush mix and oak woodland to mixed-conifer timber. The lower elevations of Paradise have an overstory of ponderosa pine/California black oak mix, with an understory chaparral brush component consisting primarily of manzanita, ceanothus, scotch broom, and poison oak. Some areas of undeveloped lots or greenbelt areas have very dense brush which can affect fire behavior.

All of these vegetation types provide fire control problems because of overstocked and overgrown conditions due to years of successful fire suppression. The potential for a large, fuel driven fire is very real when fuel moisture conditions are conducive to burning. Fire control will be very difficult due to high fire intensities, leading to fire behavior problems such as long-range spotting, high rates of spread and long flame lengths. Direct attack may be impossible under these burning conditions for safety reasons.

Topography
Paradise is located on a broad, gently sloping ridge. The elevation ranges approximately from 1,000’ to 2,300’. The most prominent topographic features within the battalion are the numerous steep canyons near the borders of the town. The two largest of these canyons, and most influential on fire behavior, are Butte Creek Canyon and the West Branch Feather River Canyon. Butte Creek Canyon borders to the west, while West Branch Feather River Canyon borders the battalion on the east. Less prominent canyons, but still very influential on fire behavior, are located along the southern border.

These smaller canyons run north-south into the town limits, but substantially decrease in size by the time they enter Paradise. These canyons include Nance, Hamlin, Berry, Clear Creek and Dry Creek.

Weather and Fire History

Seasonal weather patterns do not vary significantly from the Unit-wide averages. Historically, extreme weather conditions have not been the primary factor in large fires within the Paradise area. However, there is a huge potential for weather to be a strong influence on fire behavior and should not be discounted. In June 2008, the wind-driven, 23,000-acre Humboldt fire burned 57 acres and several structures within the southwest corner of the battalion.

Battalion Priorities

- Maintain completed and develop new fuel reduction projects around the perimeter of the Town of Paradise
- Community outreach/education at community events
- Shaded fuel break projects along primary community escape routes
- Visible Address Signs

Training and Safety Bureau

The Butte Unit Training and Safety Bureau is responsible for the delivery and documentation of training for all career and volunteer personnel. The Bureau is also responsible to coordinate and facilitate the unit-wide training plan, match training courses with approved personnel training requests and maintain a central location for updated training records for all employees.

The Bureau will ensure that all federal, state and local training mandates, laws and regulations are followed as they pertain to training. The Bureau will operate within and enforce the policies, procedures and protocols of CAL FIRE, Butte County Fire Department and the Butte County Fire Chiefs Association.

Annually, the Training and Safety Bureau provides and/or coordinates approximately 30,000 student instructional hours to over 420 career and volunteer firefighters from CAL FIRE Butte Unit, Butte County Fire Department and personnel from other Butte County Training officer Association agencies. A significant amount of staff time is required to coordinate students, courses, instructors, recording and tracking training, and ensuring personnel ICS qualifications are accurately listed in the national Resource Ordering and Status System (ROSS).

Objectives

- Enforce state/federal law, and CAL FIRE-Butte County Fire Department training policies, procedures and protocols as they apply to career and volunteer personnel.
- Ensure that all personnel receive the opportunity for training that is required for their specific positions.
- Document and track certification currency of all employees training in a common database (Target Solutions).
- Work with the CAL FIRE Region Office regarding the allocation of training for CAL FIRE personnel and the presentation of training at regional training locations.
- Work with cooperators at the Butte Community College to ensure communications, cooperation and coordination of all public safety training.
- Work with cooperators as a member of the Butte County Training Officers Association.
- Meet or exceed those training standards identified in the CAL-FIRE Training handbook.
- Implement the training priorities set by the Butte Unit's executive staff.
- Identify the needs of each employee to help achieve career development goals.
- Seek alternative funding sources in the form of grants, participation with universities and sharing courses with other agencies.

Mission

The Butte Unit Training and Safety Bureau Program goal is to assure quality service to the public by developing the skills and abilities of all CAL FIRE/Butte County Fire Department's career and volunteer personnel. This is accomplished through training that is economical, effective, and consistent with the needs of the public, the State of California, the County of Butte, the Department, and the employee.

Emergency Command Center

The Butte Unit Emergency Command Center (BTU ECC) provides command and control services, as well as "pre-arrival" emergency medical services, for all of the unincorporated areas of Butte County, City of Biggs, City of Gridley, Town of Paradise and the Mooretown Rancheria.

The BTU ECC is also the California Emergency Management Agency (Cal EMA) Fire Operational Area Mutual Aid Coordination Center for Butte County. As the Operational Area Coordinator, the BTU ECC has the responsibility to coordinate all fire mutual aid requests for all jurisdictions within Butte County. This responsibility gives the BTU ECC the authority to directly obtain resources from all neighboring counties including Yuba, Sutter, Plumas, Glenn, Colusa, Tehama, and Lassen.

The BTU ECC processes approximately 15,000 emergency incidents annually.

Objectives

- Continue to provide quality command and control services, as well as excellent customer service, to all of our customers.
- Pursue cooperative agreements with other departments and agencies to enhance efficiency of resource command and control within Butte County.
- Pursue available technology to more efficiently conduct command and control operations.
- Cooperate fully and effectively with allied agencies.

Mission

The mission of the Oroville Emergency Command Center is to provide a consistent, accurate, timely, and coordinated command and control system. "We will provide support, direction, and communications with our ultimate goal being the best service possible to all who depend on our team."

BUTTE COUNTY FIRE SAFE COUNCIL

The Butte County Fire Safe Council (BCFSC) is the County's largest ally in educating and assisting the public with wildfire preparedness. The BCFSC is a non-profit community organization funded by grants and community donations. The organization operates in cooperation with local, state and federal fire agencies throughout Butte County.

The BCFSC is the "parent" organization to several active local fire safe councils and nationally recognized FIREWISE Communities throughout the County. FIREWISE communities include: Yankee Hill, Berry Creek, Merry Mountain, Forbestown and Forest Ranch. Local fire safe councils have been established in the Town of Paradise, Yankee Hill, Berry Creek, Forbestown, Feather Falls, Cohasset, and Forest Ranch. The BCFSC Board of Directors is comprised of representatives from the local councils and representatives of many public and private stakeholders throughout Butte County, including CAL FIRE/Butte County Fire Department.

Several defensible space assistance programs are provided by the BCFSC. The Fire Safe Home Visit Program allows residents to receive free expert advice to improve their home's chances of surviving a wildfire. The Chipping Program is available to chip brush and tree trimming slash for community members of the fire safe council. The Residents Assistance Program assists Butte County residents who are physically and financially unable to maintain defensible space around their home and have no other person to assist in the clearance.

The BCFSC is also a wildfire education outlet. The organization produces and distributes information to residents on public safety topics including wildfire safety and evacuation planning and preparedness. The "Wildfire in the Foothills" 6th grade education program educates students on proper planning to reduce risks and survive a wildfire. The FAST CAMP program provides teens one week of public safety training. .

The BCFSC has taken the lead to implement many fuel reduction projects. Projects typically involve shaded fuel breaks, reducing ground and ladder fuels along community escape routes. Many projects are implemented in cooperation with Butte County Public Works, Butte County Sheriff Office and CAL FIRE hand crews. Most projects are conceived, planned and implemented by the initiative and dedication of community volunteers with support from the BCFSC staff, local agencies and various grant funding sources.

Additional information regarding the BCFSC and the programs and resources it provides can be obtained at their website www.thenet411.net.

Fire Safe Council Priorities

1. Defensible Space Chipper and Residents Assistance Program
2. FIREWISE Communities Program
3. FIREWISE and Forest Health Stewardship Education for youth and adults
4. Roadside Shaded Fuel Break Project Maintenance

APPENDIX A: ACTIVE PROJECTS

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

Batt Planning Area	Project Number	Community	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
BTU	2100-2011-PRE-001	Countywide	BTU Targeted 4291 Inspections	A		Inspections	
BTU	2100-2012-PRE-005	Countywide	BTU Education Programs	A		Education	
BTU	2100-2012-FPL-023	Countywide	BCFSC Education Programs	A		Education	
BTU	2100-2012-FPL-032	Countywide	BCFSC Community Chipping	A		Fuel Reduction	
BTU		Countywide	BCFSC Scotch Broom Eradication	A		Fuel Reduction	
1	2100-2011-FPL-013	Magalia	BCFSC Little Butte Creek SFB	A	2015	Fuel Reduction	146
1	2100-2011-FPL-017	Concow	YHFSC Concow Hazardous Fuels and Reforestation	A	2015	Fuel Reduction	135
1	2100-2014-FPL-029	Paradise	BTU Lower Skyway Fuels Reduction	A		Fuel Reduction	
2	2100-2014-FPL-027	Forest Ranch	BTU Highway 32 Lomo	A		Fuel Reduction	
2	2100-2014-FPL-028	Forest Ranch	BTU Highway 32 Wilder	A		Fuel Reduction	
5		Berry Creek	USFS – Berry Creek HFR	A		Fuel Reduction	
5		Forebestown	USFS – Slap Jack HFR	A		Fuel Reduction	200
5		Forbestown	Forbestown Shaded Fuel Break	A		Fuel Reduction	215
5		Merry Mtn	FRFSC Merry Mountain SFB	A		Fuel Reduction	
6		Oroville	DFW Rabe Rd Shooting Range	A		Hazard Reduction	10
6	2100-2011-VMP-001	East Oroville	DWR - Loafer Creek VMP	A		Prescribed Fire	50
6	2100-2012-FPL-022	Kelly Ridge	DWR - Canyon Drive Fuel Reduction	A	2015	Fuel Reduction	17

APPENDIX B: COMPLETED PROJECTS

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

Planning	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
1		Wildland Safety Fair	C	1999	Education	
1		Paradise VMP	C	2000	Fuel Reduction	
1		BLM - Compton Drive SFB	C	2000	Fuel Reduction	
1		Upper Ridge Radio	C	2001	Education	
1		Cherokee Clean Up	C	2001	Fuel Reduction	
1		Yankee Hill FSC Calendar 2003	C	2001	Education	
1		Poe Fire Clean Up	C	2001	Fuel Reduction	
1		PPOA Greenbelt Fuel Reduction	C	2002	Fuel Reduction	
1		Paradise Valley View Citizens Fuel Reduction	C	2003	Fuel Reduction	
1		West Branch Fuel Reduction Project	C	2003	Fuel Reduction	
1		Canyon Edge Fuel Reduction Project	C	2003	Fuel Reduction	
1		Dean Rd Roadside Fuel Reduction	C	2003	Fuel Reduction	
1		Top Of Paradise Fuel Reduction Project – Canyon Edge FRP	C	2004	Fuel Reduction	
1		Youth Wildland Fire Council	C	2004	Education	
1		Upper Ridge Preservation Alliance	C	2004	Education	
1		Crain Ridge Fuel Break and Watershed Protection	C	2005	Fuel Reduction	
1		Yankee Hill/Concow Road Fuel Reduction-Safety Zones.	C	2006	Evacuation planning/Fuel Reduction	36
1		Honey Road Fuel Reduction	C	2007	Fuel Reduction	
1		Dry Creek SFB and Watershed Protection Project	C	2007	Fuel Reduction	
1		Paradise Lake	C	2008	Fuel Reduction	
1		Crain Ridge/Rim Rd Shaded Fuel Break and Watershed Protection	C	2008	Fuel Reduction	
1		Old Dogtown Rd	C	2010	Fuel Reduction	
1		Trail Ways Fuel Reduction	C	2010	Fuel Reduction	
1		Skyway Shaded Fuel Break	C	2010	Fuel Reduction	
1		New Skyway Shaded Fuel Break	C	2010	Fuel Reduction	
1		Magalia Reservoir Shaded Fuel Break	C	2010	Fuel Reduction	
1		Humbug Rd Shaded Fuel Break	C	2010	Fuel Reduction	
1		Concow Lake Site Improvement and Invasive Broom Removal Phase I	C	2010	Fuel reduction	36
1		Concow-Roadside Hazardous Fuels and Reforestation	C	2010	Fuel Reduction	127

Planning	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
1		Magalia PUSD	C	2011	Fuel Reduction	
1		Powellton Rd SFB	C	2011	Fuel Reduction	
1		Yankee Hill County Roads Fuels Reduction	C	2011	Fuel reduction	153
1	2100-2007-CFP-001	Old Forbestown & Cherokee CFIP	C	2010	Fuel Reduction	55
1	2100-2007-CFP-002	Heimbecher CFIP	C	2009	Fuel Reduction	30
1	2100-2007-CFP-004	Gal CFIP	C	2007	Fuel Reduction	12
1	2100-2007-CFP-005	Lyman CFIP	C	2007	Fuel Reduction	20
1	2100-2008-CFP-001	Balmain Management Plan	C		Fuel Reduction	
1	2100-2008-CFP-002	King CFIP	C	2010	Fuel Reduction	67
1	2100-2008-CFP-003	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	65
1	2100-2008-CFP-004	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	
1	2100-2008-CFP-005	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	7
1	2100-2008-CFP-006	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	8
1	2100-2008-CFP-007	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	24
1	2100-2008-CFP-008	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	13
1	2100-2008-CFP-009	Concow Fire Rehabilitation Prop 40 CFIP	C	2010	Reforestation	15
1	2100-2010-FPL-016	Upper Ridge SFB	C	2001	Fuel Reduction	14
1	2100-2011-CFP-020	Heffernan CFIP	C		Reforestation	73
1	2100-2011-FPL-017	Concow Hazardous Fuels and Reforestation, Phase III	C	2013	Fuel reduction	135
1	2100-2011-FPL-017	Concow Hazardous Fuels and Reforestation, Phase IV	C	2013	Fuel reduction	111
1	2100-2011-FPL-018	Concow FIREWISE Home Design and Landscaping Events	C	2012	Education	
1	2100-2012-CFP-024	Pekarek CFIP	C	2014	Fuel Reduction	60
1	2100-2012-CFP-025	Gale CFIP	C	2007	Fuel Reduction	
1	2100-2012-FPL-031	Magalia Reservoir SFB Phase II	C	2014	Fuel Reduction	16
1		Deadwood SFB and Biomass Removal	C	2014	Fuel Reduction	272
2		Hwy 32 Demo Site	C	2000	Education	
2		Forest Ranch area Forestwise Landscaping Brochure	C	2001	Evacuation Planning	
2		Cohasset SFB	C	2005	Fuel Reduction	
2		Butte Creek Canyon SFB	C	2008	Fuel Reduction	
2	2100-2010-FPL-003	Buzztail Shaded Fuel Break	C	2013	Fuel reduction	21
2	2100-2010-HFT-001	HWY 32 Roadside Fuel Reduction	C	2013	Fuel reduction	49
2	2100-2011-FPL-019	Crown Point Road Shaded Fuel Break	C	2013	Fuel reduction	48

Planning	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
5		Berry Creek Fire Safe Calendar	C	2005	Public Information	
5		Fire Safe Home Visit Program	C	2007	Education	
5		Firewise Demonstration Area	C	2008	Education	
5	2100-2007-CFP-003	Peterson CFIP Project	C	2009	Fuel Reduction	157
5	2100-2007-CFP-006	Starch CFIP	C	2009	Fuel Reduction	48
5		Forbestown Ridge Evacuation Plan	C	2010	Evacuation Planning	
5		Forbestown Fuel Reduction Project	C	2011	Fuel Reduction	145
5	2100-2012-FPL-030	Berry Creek Shaded Fuel Break Phase 1	C	2014	Fuel Reduction	10
5	2100-2012-FPL-021	Forbestown Road Shaded Fuel Break	C	2014	Fuel Reduction	17
6		Northeast Oroville Community Education and Outreach Program	C	2004	Education	

APPENDIX C: MAINTAINED PROJECTS

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

Batt Planning area	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
1		Jordan Hill Fuel Reduction Project	M		Fuel Reduction	
1		Detlow Rd Demonstration Site	M		Fuel Reduction	
1	2100-2015-FRP-01	Coutolenc SFB	M	2014	Fuel Reduction	40
1		BLM - Quail Trails FRP	M	2010	Fuel Reduction	
1		PPPOA/Greenbelts SFB	M		Fuel Reduction	
1		BLM - Skyway Fuels Reduction – Toadtown	M		Fuel Reduction	
1		PID Paradise Lake Healthy Forest	M		Fuel Reduction	
1	2100-2010-FPL-002	Upper Ridge Roads Hazardous Fuels Reduction	M	2013	Fuel Reduction	9
2	2100-2010-FPL-001	Highway 32	M	2013	Fuel Reduction	193
5		USFS - Brush Creek DFPZ	M	1996	Fuel Reduction	
5	2100-2007-FAS-002	Feather Falls SFB	M	2014	Fuel Reduction	25
5	2100-2011-FPL-001	Lake Madrone SFB	M	2008	Fuel Reduction	5

APPENDIX D: ONGOING PROJECTS

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

Butte Planning Area	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
BTU		BCFSC 6th Grade Education	O		Education	
BTU		BCFSC Development of Fuel Model Brochures	O		Education	
BTU		BTU Defensible Space Media Campaign	O		Education	
BTU		BCFSC Emergency Advisory Radio	O		Public Information	
BTU		BCFSC Special Needs Assistance Program	O		Evacuation Planning	
BTU		BCFSC Community Evacuation Plans	O		Evacuation Planning	
BTU		BCFSC Forest Stewardship Education Workshops	O		Education	
BTU		BCFSC Residents Assistance Program	O		Defensible Space Assistance	
BTU		BCFSC Wildfire Safety Education Workshops	O		Education	
BTU	2100-2012-PRE-005	Butte County Fire-resistant building material and landscaping Fair exhibit	O		Education	
BTU	2100-2012-PRE-005-001	Butte County North Valley Fire PALS	O		Education	
BTU		Butte County Community Address Identification	O		Address Signs	
BTU		CWPP Planning for Butte County	O		Planning	
1		YHFSC Yankee Hill Evacuation Plan	O		Evacuation Planning	
1		SFB Management and Maint. Project	O		Fuel Reduction	
1		BCFSC Dooryard Education Visit Program	O		Education	
1		Evacuation Plan Print and Mail	O	2004	Education	
1		YHFSC Water Source Identification and Mapping	O		Mapping	
1		CCC Pine Ridge School HFR	O		Fuel Reduction	
1		YHFSC Yankee Hill Emergency Communication System	O		Information	
1	2100-2012-FPL-023-021	Trail Days	O		Education	
1		PRA Town Radio – AM 1500	O		Evacuation Planning	
1		BCFSC South Firhaven Neighborhood Fuels Reduction	O	2014	Fuel Reduction	
2	2100-2010-VMP-004	SPI H-Line VMP	O	2015	Prescribed Fire	400
2		CSUC Ecological Reserves	O		Fuel Reduction	
5		Community Education Events	O		Education	
7		DFW Grey Lodge VMP	O		Prescribed Fire	

8		PRA Paradise Defensible Space Program	O		Inspections	

APPENDIX E: PLANNED PROJECTS

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

Batt Planning area	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
1		DWR – Lime Saddle SFB	P		Fuel Reduction	
1		DWR – Goat Ranch/Spring Valley SFB	P		Fuel Reduction	
1		DWR – Dark Canyon SFB	P		Fuel Reduction	
1		SPI – Jordan Hill SFB	P		Fuel Reduction	
1		SPI – Rim Road SFB	P		Fuel Reduction	
1		SPI – Lovelock SFB	P		Fuel Reduction	
1		SPI – Stirling City SFB	P		Fuel Reduction	
1		SPI – Granite Ridge SFB	P		Fuel Reduction	
1		SPI – Flea Valley SFB	P		Fuel Reduction	
1		Biomass Utilization	P		Fuel Reduction	
1		Hamlin Canyon HFR	P		Fuel Reduction	
1		Wildfire Safety Education Trailer	P		Education	
1		Pentz Rd HFR	P		Fuel Reduction	
1		Neal Rd HFR	P		Fuel Reduction	
1		Clark RD HFR	P		Fuel Reduction	
1		Doe Mill Rd from Powellton to Butte Creek (Evac Route) SFB	P		Fuel Reduction	
1		PG&E Canal – De Sabla SFB	P		Fuel Reduction	
1		Centerville Rd SFB	P		Fuel Reduction	
1		Coutolenc Rd Dozer Line	P		Fuel Reduction	
1		Upper Coutelenc/Hupp Coutolenc SFB	P		Fuel Reduction	
1		Jordan Hill Rd Firebreak/Access	P		Fire Plan	
2		SPI – H-Line SFB	P		Fuel Reduction	
2		SPI – HWY 32 SFB	P		Fuel Reduction	
2		SPI – Humboldt Road SFB	P		Fuel Reduction	
2		SPI – K-Line/J-Line SFB	P		Fuel Reduction	
2		SPI – L-Line SFB	P		Fuel Reduction	
2		SPI – Bottle Hill SFB	P		Fuel Reduction	
2		BCFSC Forest Ranch Headwaters Rd SFB	P		Fuel Reduction	
2		Upper Doe Mill Rx Fire	P		Prescribed Fire	
2		Butte Meadows Evacuation Shelter	P		Fuel Reduction	
2		Butte Meadows Community Demonstration/Communication Site	P		Evacuation Planning	
2		Lomo-Jonesville Upper Humboldt Rd	P		Fuel Reduction	

Butt Planning area	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
		SFB				
2		Mann Nolta SFB	P		Fuel Reduction	
2		Schott Rd Vegetation Management	P		Fuel Reduction	
4		CSUC Bidwell Park Fuel Reduction	P		Fuel Reduction	
4		CSUC Little Chico Creek Arundo Donax Control	P		Fuel Reduction	
4		DFW Llano Seco VMP	P		Prescribed Fire	
5		BLM – Lumpkin Rd FRP	P		Fuel Reduction	
5		BLM – Enterprise Rancheria SFB	P		Fuel Reduction	
5		DWR – Sycamore Creek SFB	P		Fuel Reduction	
5		DWR – Enterprise SFB	P		Fuel Reduction	
5		DWR – Stringtown SFB	P		Fuel Reduction	
5		SPI – Lumpkin Road SFB	P		Fuel Reduction	
5		SPI – Fields Ridge SFB	P		Fuel Reduction	
5		SPI – Swain Ridge B-Line SFB	P		Fuel Reduction	
5		SPI – Watson Ridge SFB	P		Fuel Reduction	
5		Weiss Hill-Mt Hope SFB	P		Fuel Reduction	
5		Forbestown Mastication	P		Fuel Reduction	
5		New York Flat Rd Clearing	P		Fuel Reduction	
5		Diversion Dam SFB	P		Fuel Reduction	
5		Abernathy Rd SFB	P		Fuel Reduction	
5		Ponderosa SFB	P		Fuel Reduction	
5		Additional Roadside Clearing	P		Fuel Reduction	
5		Forbestown Community Park HFR	P		Fuel Reduction	
5		Black Bart Rd HFR	P		Fuel Reduction	
5		Merry Mountain SFB	P		Fuel Reduction	
5		Merry Mountain Community Area HFR	P		Fuel Reduction	
5		Binet Road HFR	P		Fuel Reduction	
6	2100-2011-VMP-015	DWR - Oroville Wildlife Area VMP	P		Prescribed Fire	
7	2100-2013-FAS-026	Hightest Training Burn	P		Education	
7		DFW Little Dry Creek VMP	P		Prescribed Fire	
7		DFW Howards Slough VMP	P		Prescribed Fire	
8		Paradise Clear Creek Shaded Fuel Break	P		Fuel Reduction	
8		Oak Creek Park SFB	P		Fuel Reduction	
8		Lower Paradise Fuel Reduction and Structure Ignitability	P		Fuel Reduction	
8		West Branch Fuel Reduction	P		Fuel Reduction	

APPENDIX F: UNIT GOALS AND OBJECTIVES

CAL FIRE identified seven goals in the 2010 Strategic Fire Plan for California. The goals, when implemented with the collaboration of local communities and groups, will enhance the protection of lives, property and natural resources from wildland fire, as well as improve environmental resilience to wildland fire. Community protection includes promoting the safety of the public and emergency responders, as well as protection of property and other improvements.

The Butte Unit may work on any of the Fire Plan goals at any given time based on available funding and other opportunities. The Butte Unit intends to place emphasis on the following goals and objectives:

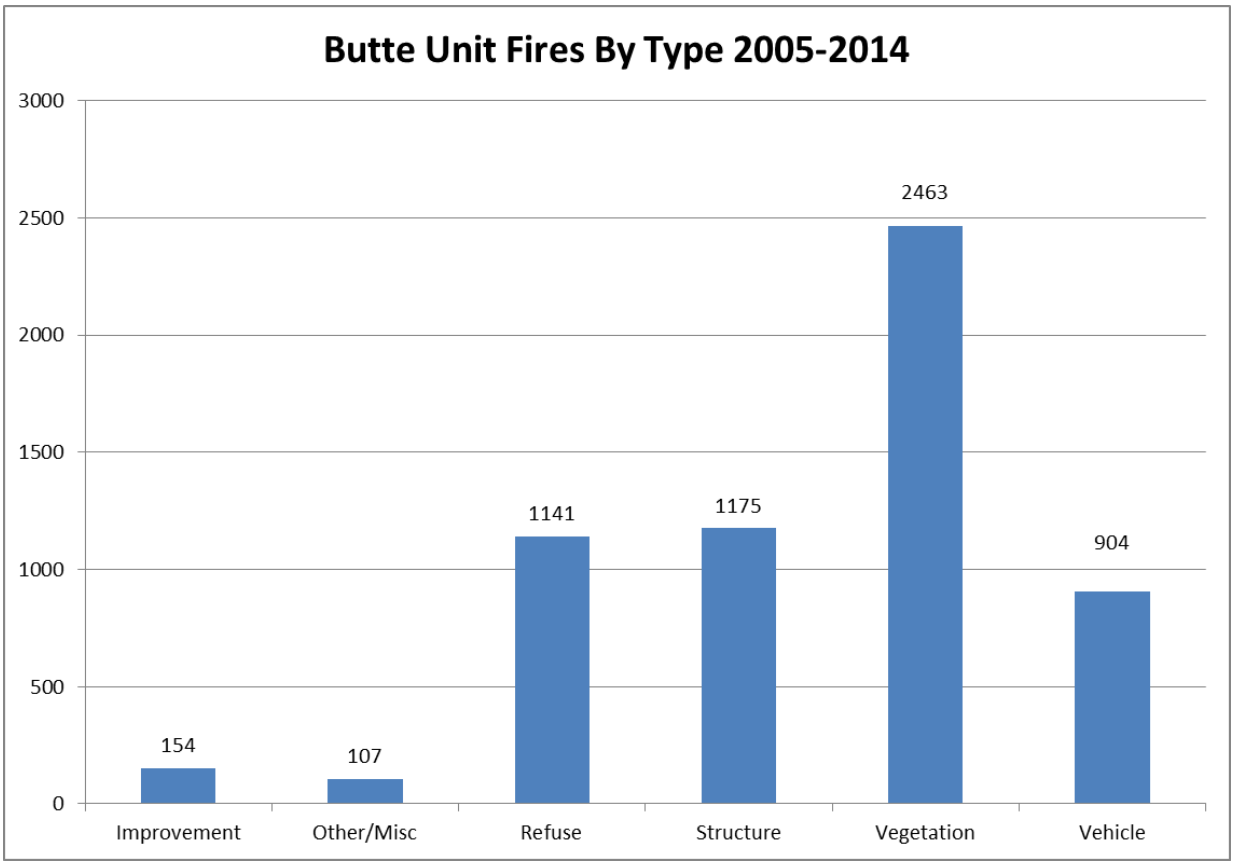
- Engage and participate with local stakeholder groups to validate and prioritize the assets at risk and identify, prioritize and implement pre-fire projects.

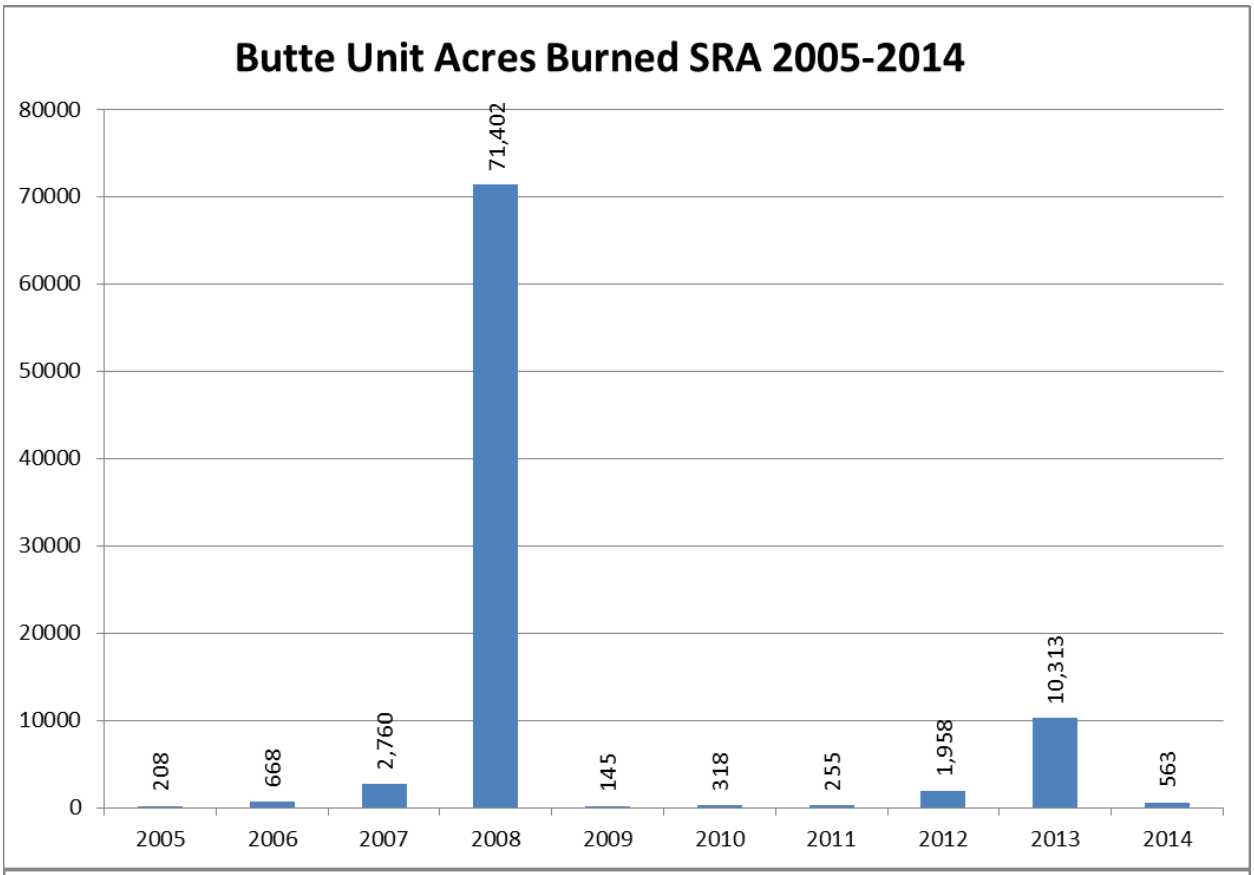
- Conduct defensible space inspections and promote an increasing level of compliance with defensible space laws and regulations

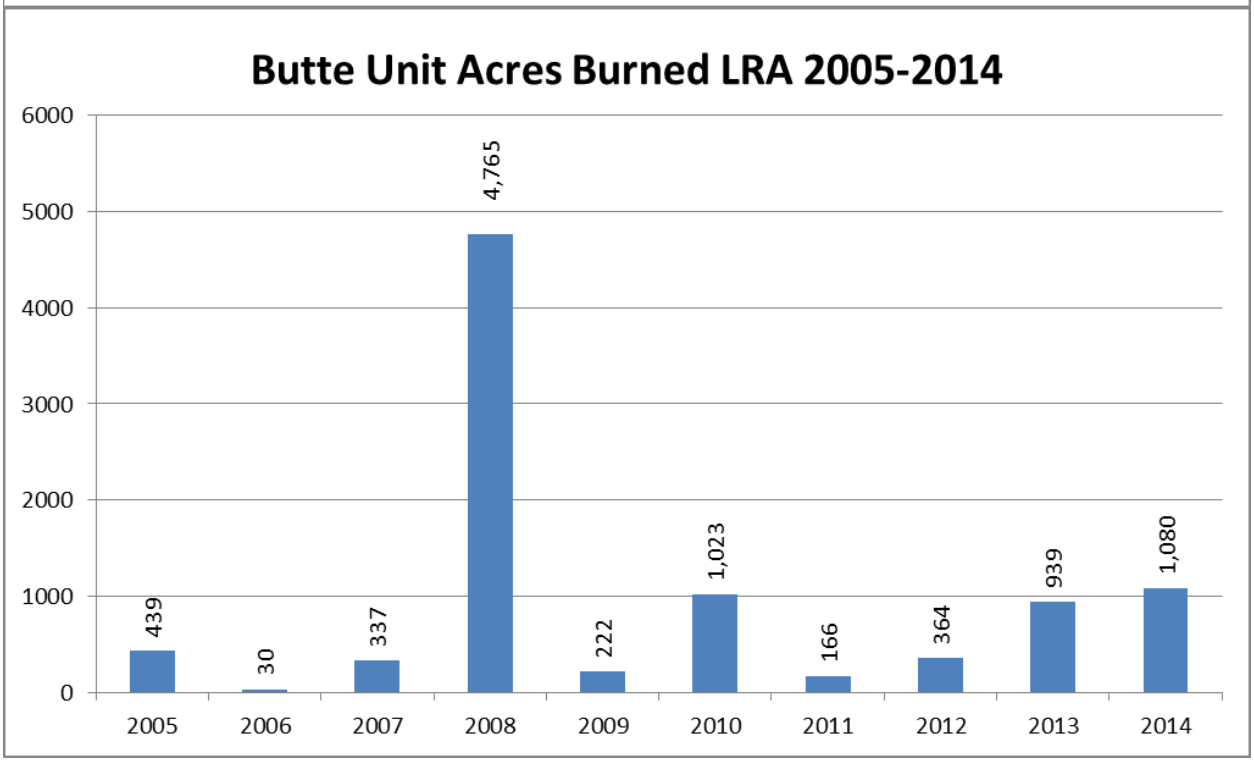
- Educate landowners, residents and business owners about the risks and their incumbent responsibilities of living in the wildlands, including applicable regulations, prevention measures and preplanning activities.

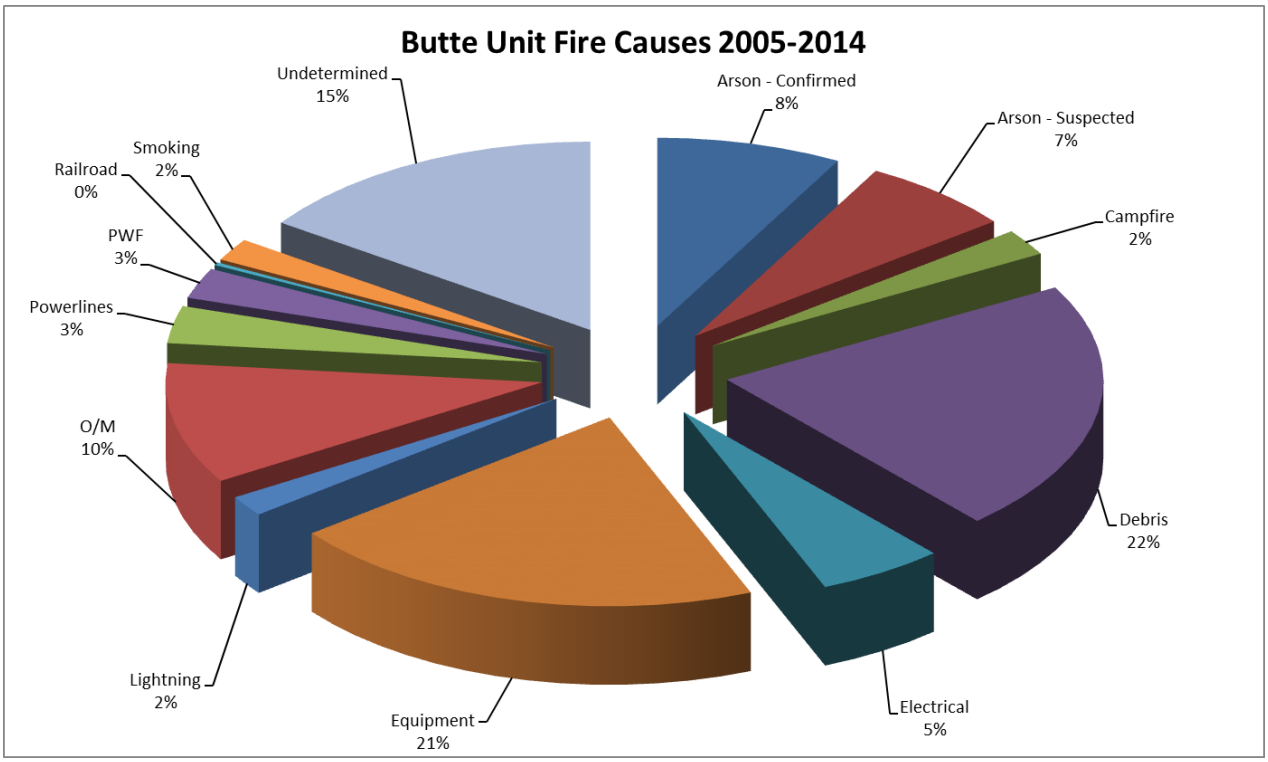
APPENDIX G: IGNITION ANALYSIS

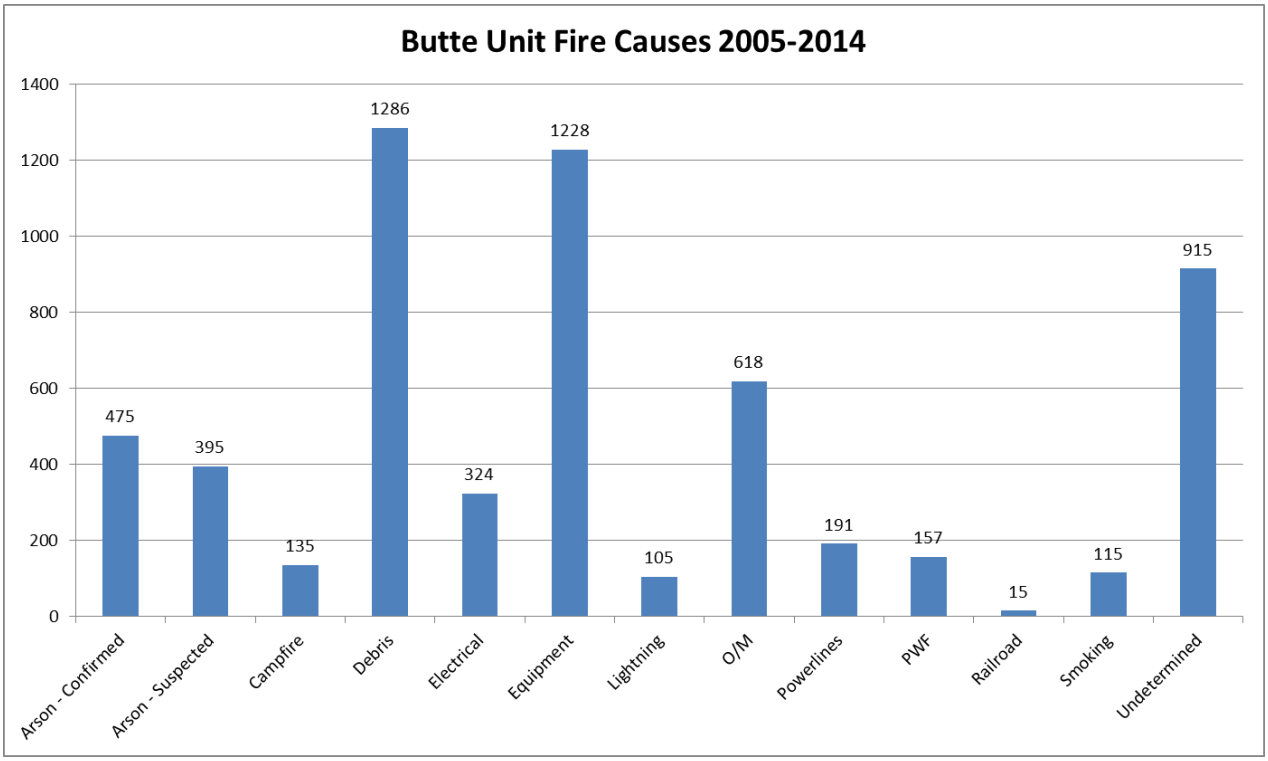
All fires within CAL FIRE/Butte County Fire Department jurisdiction are included in this analysis. The most common ignition cause in the Butte Unit during the past ten years has been from debris burns, accounting for 22% of all ignitions. The second most common cause has involved equipment totaling 21%. Most ignitions are associated with roads and areas of higher population density. Determining the cause of each ignition is an ongoing challenge. The causes of many fires can only be narrowed down to a few possibilities; therefore they are classified as 'undetermined'. Company officers attend training to hone their fire origin and cause investigation skills. The following charts illustrate the occurrence and cause of fires for the previous ten years.




Butte Unit Acres Burned SRA 2005-2014
80000
70000
60000
50000
40000
30000
20000
10000
0
208
668
2,760
71,402
145
318
255
1,958
10,313
563
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014


Butte Unit Acres Burned LRA 2005-2014
6000
5000
4000
3000
2000
1000
0
439
30
337
4,765
222
1,023
166
364
939
1,080
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014


Butte Unit Fire Causes 2005-2014
Undetermined 15%
Arson - Confirmed 8%
Arson - Suspected 7%
Campfire 2%
Debris 22%
Electrical 5%
Equipment 21%
Lightning 2%
O/M 10%
Powerlines 3%
PWF 3%
Railroad 0%
Smoking 2%


Butte Unit Fire Causes 2005-2014
1400
1200
1000
800
600
400
200
0
475
395
135
1286
324
1228
105
618
191
157
15
115
915
Arson - Confirmed
Arson - Suspected
Campfire
Debris
Electrical
Equipment
Lightning
O/M
Powerlines
PWF
Railroad
Smoking
Undetermined

APPENDIX H: IGNITION MANAGEMENT PLAN

A review of the most common fire ignition causes within the Butte Unit has identified the top three fire cause classes affecting the most at risk communities. In an effort to reduce ignitions within those communities the Butte Fire Prevention Bureau has taken a two-step approach. First the Butte Unit has secured project funding from the CAL-FIRE State Responsibility Area (SRA) Fee to generate public safety outreach television and radio public safety announcements along with newsprint messages to educate citizens on how to avoid accidentally igniting fires. The public safety announcements and advertisements will address fire ignitions caused use of fireworks in the wildland, use and misuse of power equipment in the wildland, improper towing techniques, one less spark, obtaining defensible space around inhabited structures and “Ready, Set, Go!” – Emergency Preparedness. The public safety announcements and educational advertisements will assist all citizens within Butte County and additional residents in the greater Northern California Area. It is projected over 500,000 residents will be exposed to at least one form of the multiple public safety announcements and or educational material.

Secondly the Butte Unit has focused the Defensible Space Inspectors secured by the CAL-FIRE State Responsibility Area Fee to conduct Residential Fire Hazard Inspections (LE-100 Inspections) within the identified communities at risk. These Inspectors are currently inspecting an average of 840 inhabited homes per month. Citations will be issued to residents who fail to provide the required defensible space around their homes. This focused inspection program is projected to continue through the end of June 2015.

APPENDEX I: PROJECT APPROVAL PROCESS

Projects are listed in APPENDIX A – E. The process to add a new project to the project list requires collaboration with the local CAL FIRE Battalion Chief by submitting a project proposal on the Butte Unit Pre-Fire Project Evaluation form. The Battalion Chief then reviews and scores the project. If the proposed project is approved by the Battalion Chief, the proposed project will then be added to the planned project list in APPENDIX-E.

Butte Unit Battalion Chief Pre-Fire Project Evaluation

Project Title _____

Project Description (include if available: Summary, Goals, Measures, Treatment type)

Project Location (include if available: Physical Location, Latitude/Longitude coordinates, Map)

Community Support (include if available: Cost, Maintenance, Buy-in)

Project Evaluation/Scoring For each each criteria, please provide a score 0 (lowest) to 5 (best)

Benefit to Community	
Level of Area Benefit	
Community Support	
Implementation	
Fiscal Viability	
Maintenance	
Intangibles	
Does this project REDUCE the IGNITION PROBABILITY for the area it is being proposed to affect?	
During an established wildland fire would there be a REDUCED SPREAD PROBABUILITY for the area the project is being proposed?	
During an established wildland fire does this project have the potential to INCREASE SUPPRESSION CAPABILITY?	
Project Score	0

Notes:

EXHIBITS:

MAPS

Figure A: Unit Map

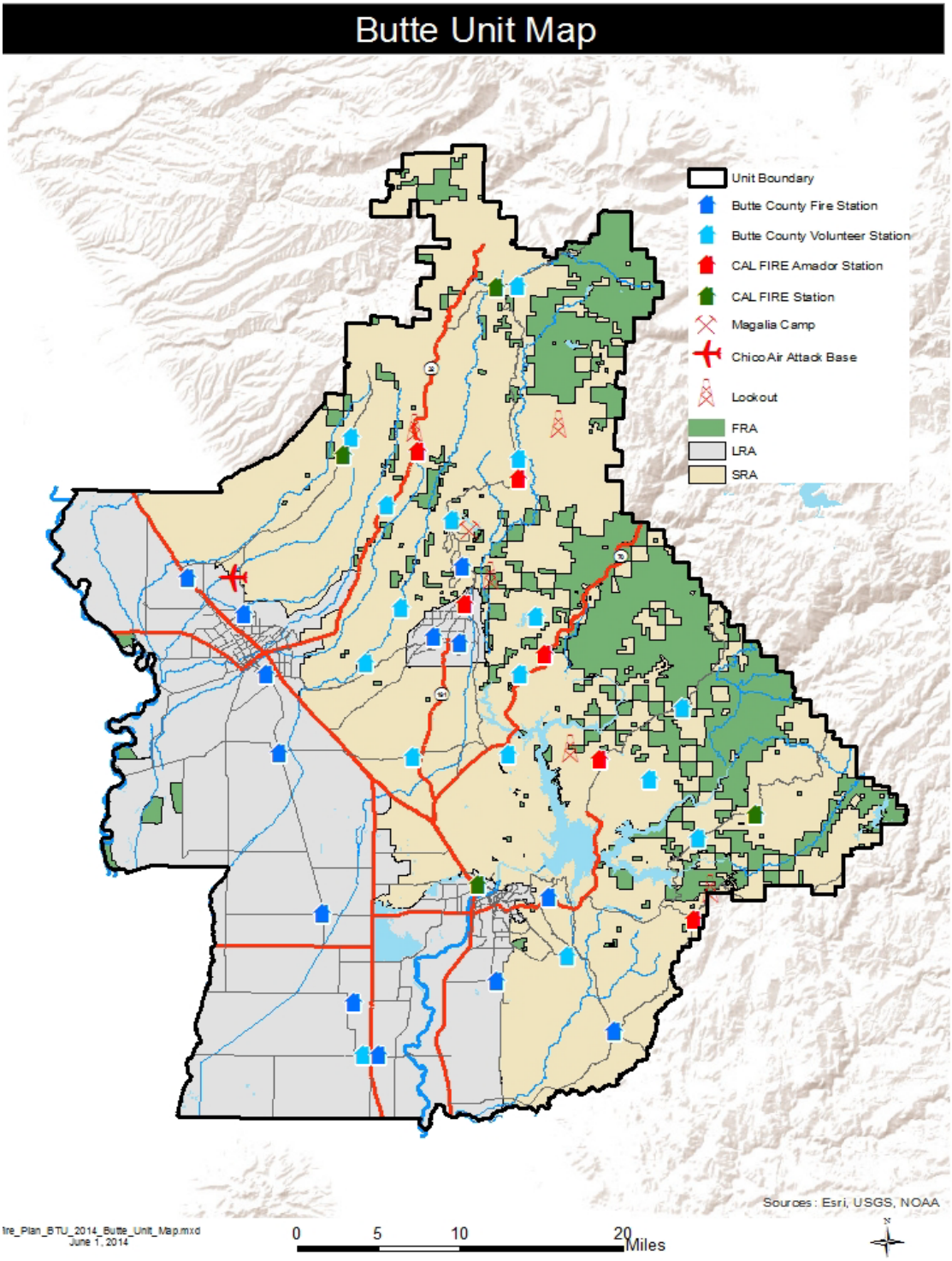


Figure B: Battalion Map

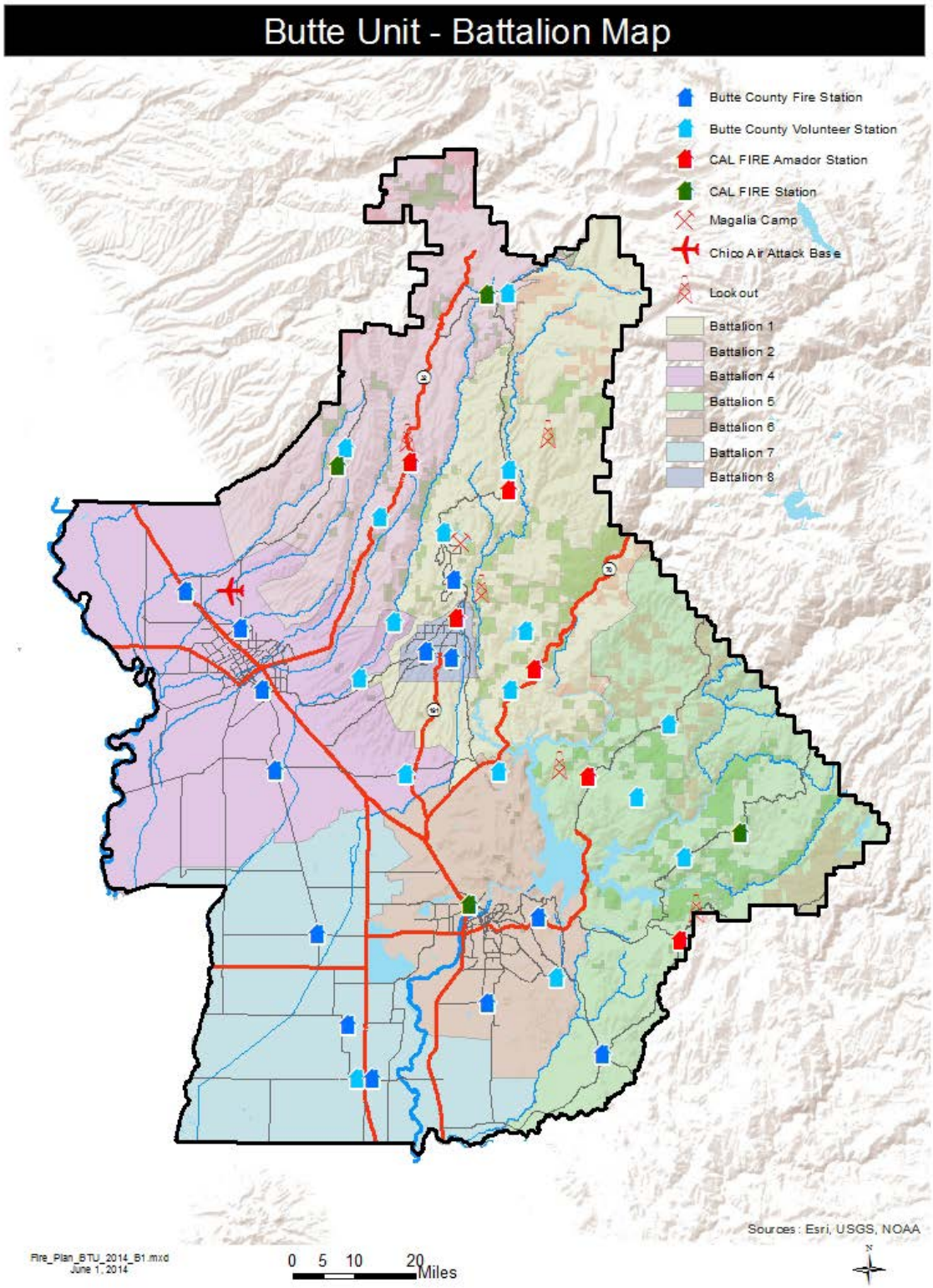


Figure C: Battalion 1

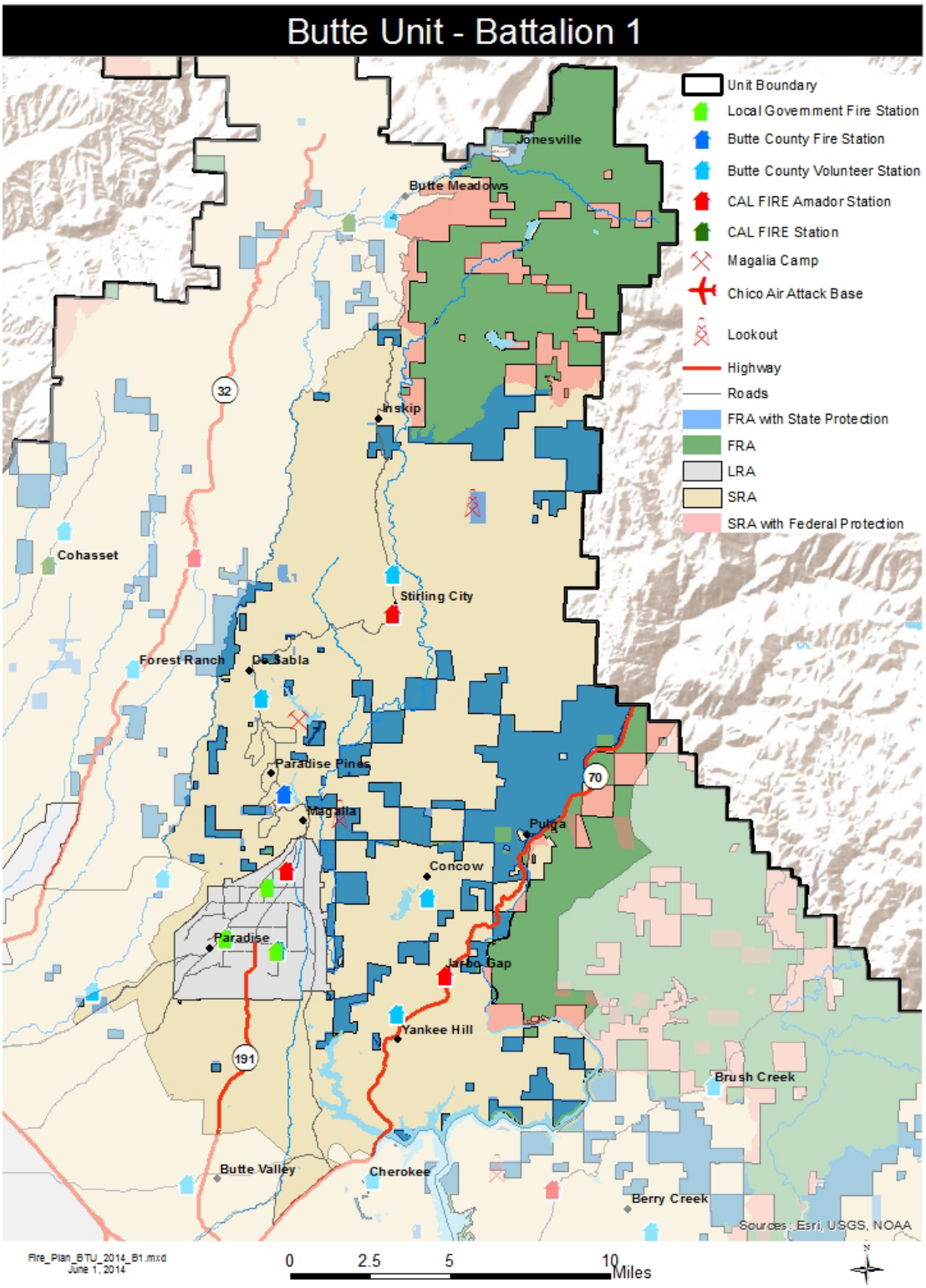


Figure D: Battalion 2 Map

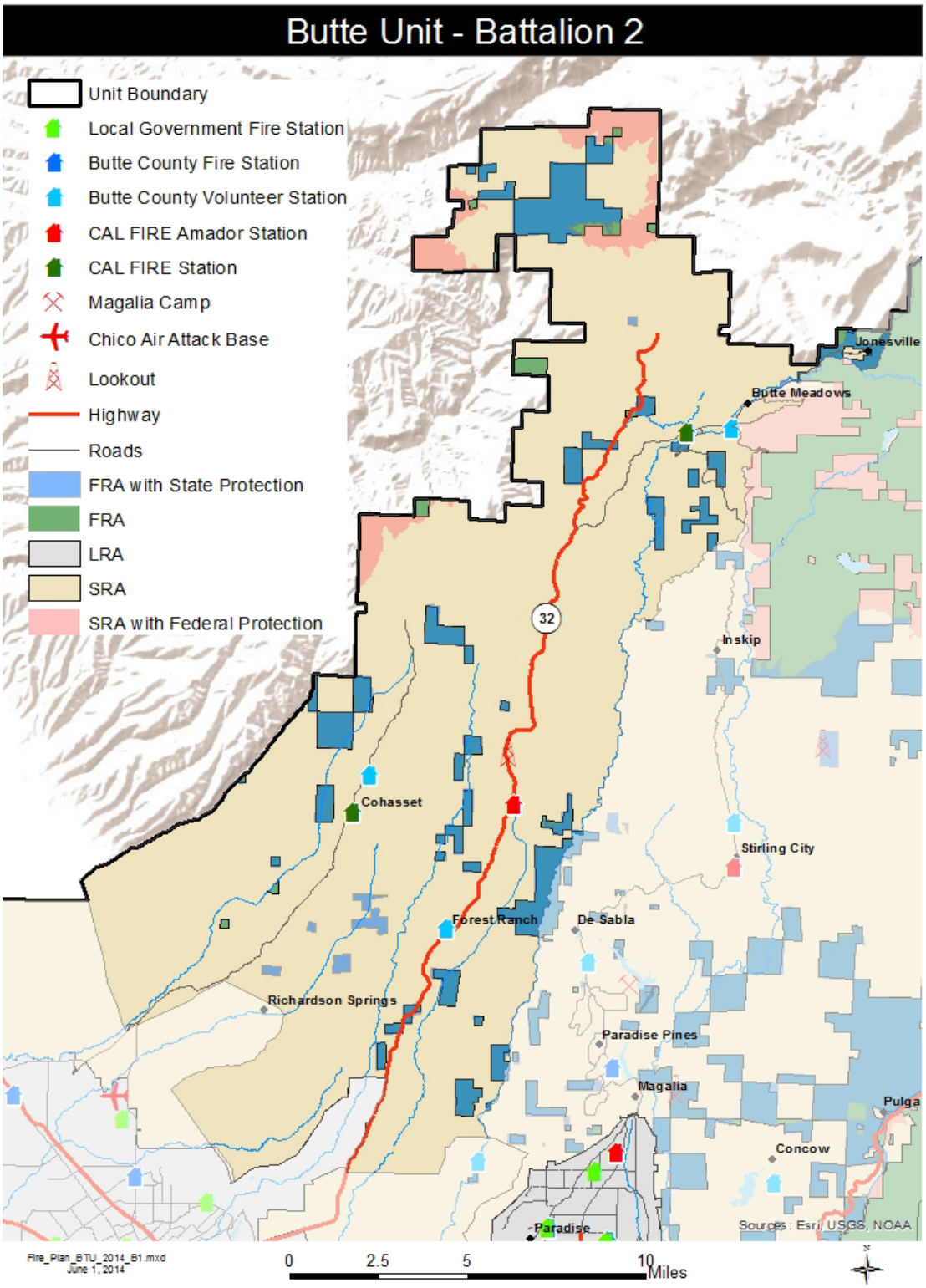


Figure E: Battalion 4 Map

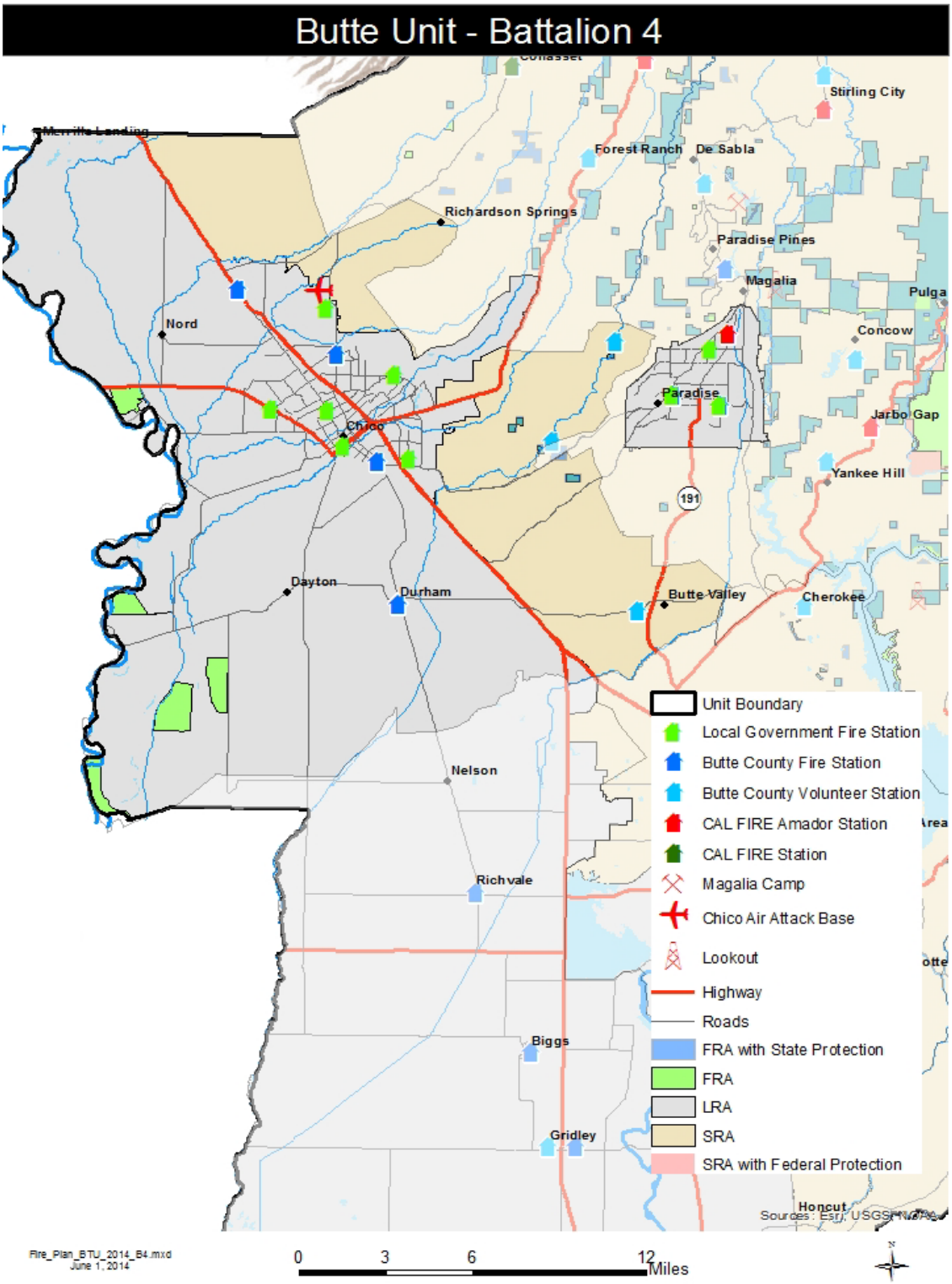


Figure F: Battalion 5 Map

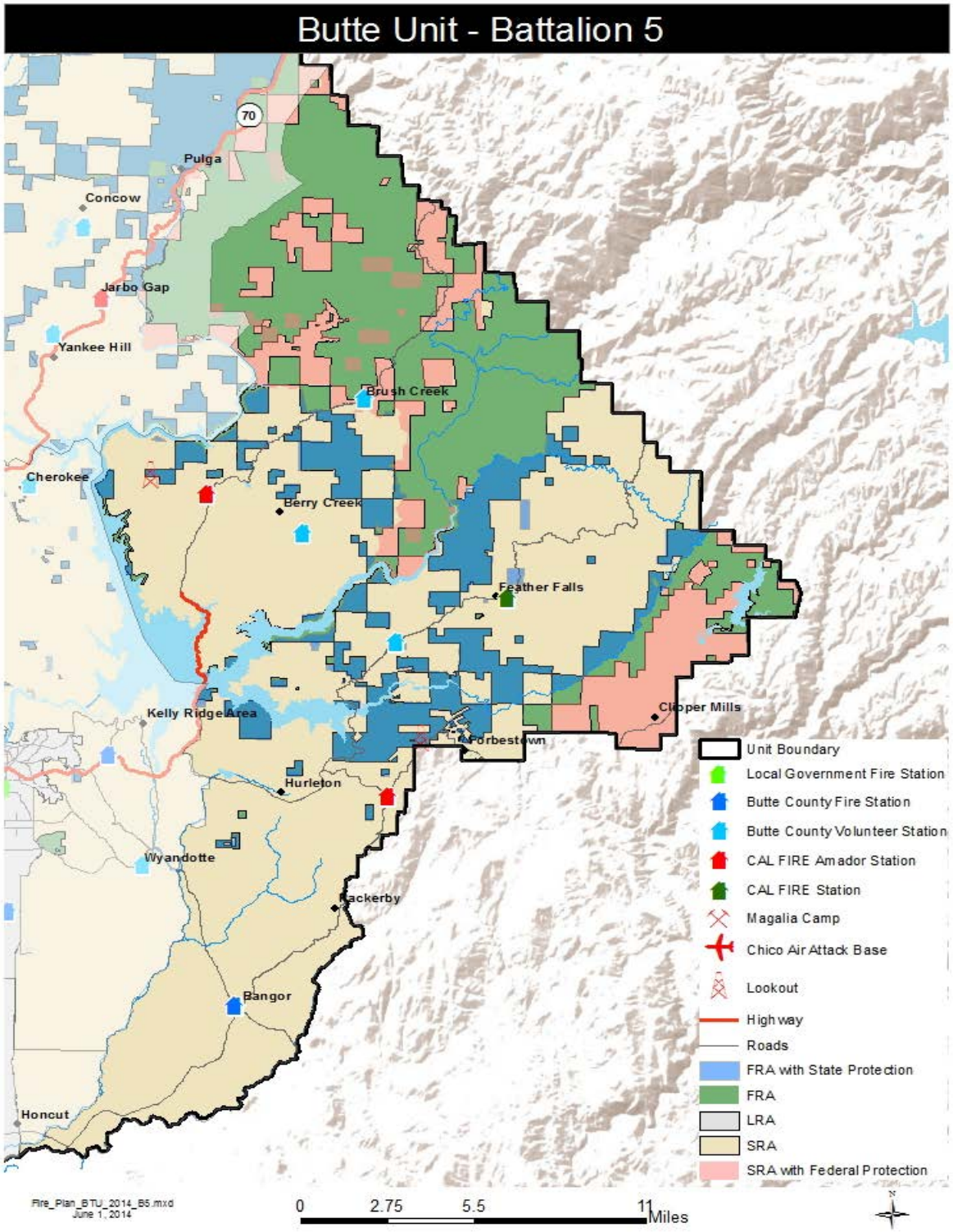


Figure G: Battalion 6 Map

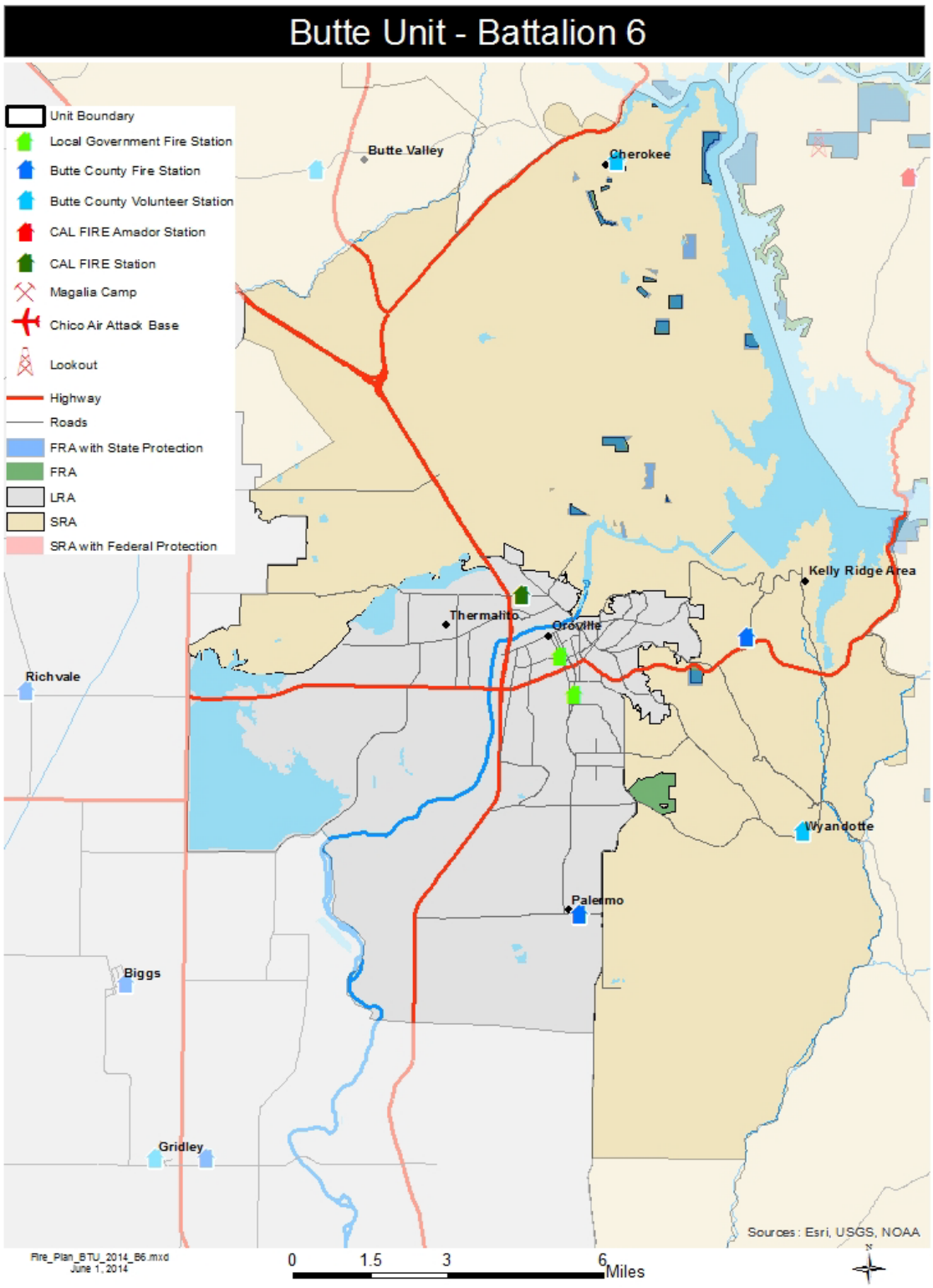


Figure H: Battalion 7 Map

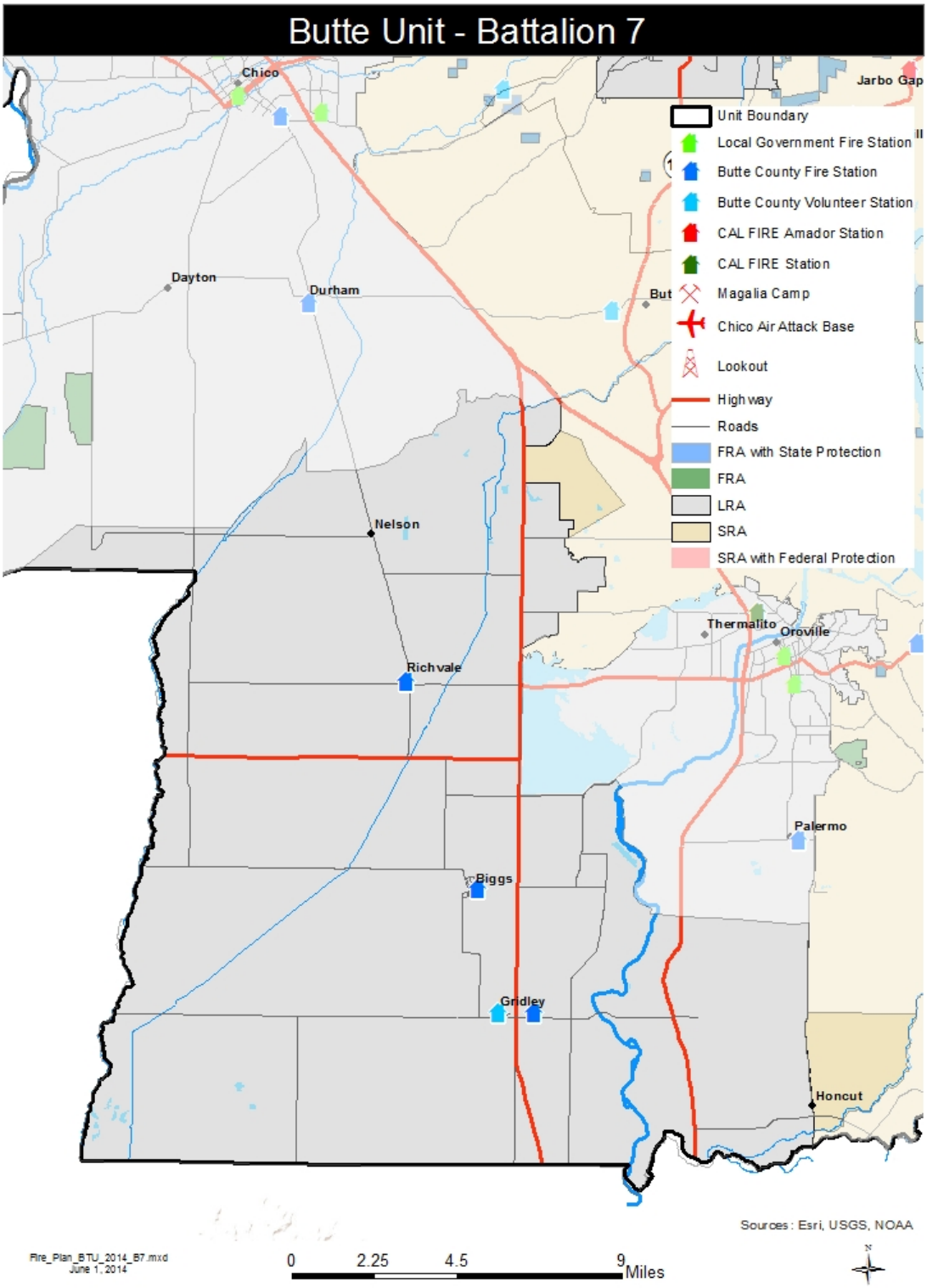
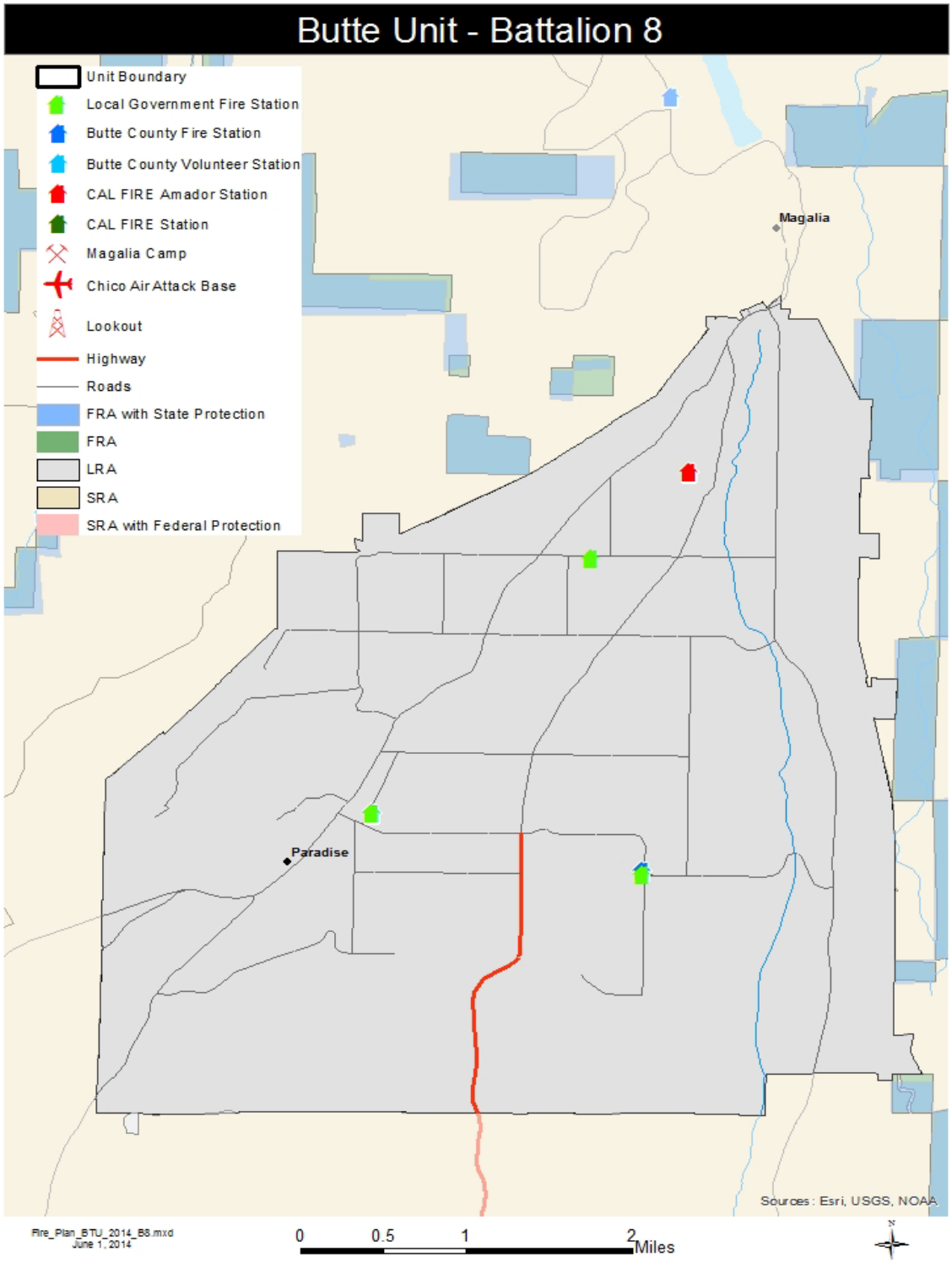


Figure I: Battalion 8 Map


Butte Unit - Battalion 8
Unit Boundary
Local Government Fire Station
Butte County Fire Station
Butte County Volunteer Station
CAL FIRE Amador Station
CAL FIRE Station
Magalia Camp
Chico Air Attack Base
Lookout
Highway
Roads
FRA with State Protection
FRA
LRA
SRA
SRA with Federal Protection
Magalia
Paradise
Sources: Esri, USGS, NOAA
Fire_Plan_BTU_2014_B8.mxd
June 1, 2014
0
0.5
1
2
Miles
N

ANNUAL REPORT OF ACCOMPLISHMENTS

2011

Annual Report of Unit Accomplishments

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

Over 30,000 Butte County residents attended presentations covering everything from Fire Safety to Defensible Space and Fire-Resistant Building Construction. 1,984 personnel-hours were dedicated to education during 58 events in 2011.

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

The Butte Unit personnel performed 2,333 PRC 4291 defensible space inspections during 2011. They noted 953 violations which resulted in 4 citations being issued. The inspection areas were pre-selected based on two primary factors, proximity to recent fuel reduction projects and fire ignition data.

Working closely with both the County Planning and Building Departments and County Department of Environmental Health, the Butte County Fire Department performed Building Code inspections for 120 residential permits and 43 commercial permits.

Objective: Facilitate activities with individuals and organizations, as appropriate, to assist individual property owners in complying with fire safe regulations.

The Butte County Fire Safe Council manages a Resident Assistance Program and a residential Chipping Program which utilize volunteers and contractors to assist landowners comply with the requirements of PRC 4291.

Objective: 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.

CAL FIRE crews were utilized to treat approximately 240 acres on 15 fuel reduction projects during 2011.

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

Number of Fires by Type 2011

Structure	Vegetation	Vehicle	Improvement	Refuse	Other/Misc.	Total
102	**189**	**80**	**13**	**58**	**11**	**453**

Acres Burned 2011

Acres Burned	
LRA	**150**
SRA	**226**
Total	**376**

Number of Fires by Cause 2011

Arson	Suspected Arson	Refuse-Escape	Electrical	Equipment	Other/Misc.	Powerline
61	**32**	**73**	**24**	**93**	**52**	**18**

Lightning	Smoking	Undetermined	Playing with Fire	PWF-Fireworks	Railroad
5	**6**	**73**	**14**	**1**	**0**

2012

Annual Report of Unit Accomplishments

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

Over 31,000 Butte County residents attended presentations covering everything from Fire Safety to Defensible Space and Fire-Resistant Building Construction. 1,914 personnel-hours were dedicated to education during 59 events in 2012. Information and educational materials are also distributed from fire stations and administrative offices.

Objective: Enhance external communications.

A standardized information fact sheet was developed and is used on a consistent basis to provide timely and accurate information to the media and public in Butte County. By proactively providing information, the number of phone inquiries from the media and public has been reduced.

Training was conducted to maintain the skills of 20 trained volunteer call center staff that may be activated when a significant incident occurs.

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

The Butte Unit personnel performed 150 PRC 4291 defensible space inspections during 2012. The inspection areas were pre-selected based on two primary factors, proximity to recent fuel reduction projects and fire ignition data.

Objective: Facilitate activities with individuals and organizations, as appropriate, to assist individual property owners in complying with fire safe regulations.

The Butte County Fire Safe Council manages a Resident Assistance Program and a residential Chipping Program which utilize volunteers and contractors to assist landowners comply with the requirements of PRC 4291. The chipping program assisted 499 property owners throughout Butte County.

Objective: 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.

CAL FIRE committed 802 crew-days to projects within the Butte Unit. Fuel reduction activities were conducted on approximately 493 acres on 9 fuel projects during 2012.

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

The refuse and equipment fire-cause classes continue to be the leading causes of fires in the Butte Unit. Emphasis has been placed on educating the public by providing safe equipment-use fact sheets, releasing media statements, and discussing debris burning precautions when issuing burn permits to individuals.

Number of Fires by Type 2012

Structure	Vegetation	Vehicle	Improvement	Refuse	Other/Misc.	Total
90	**208**	**72**	**10**	**89**	**7**	**476**

Acres Burned 2012

Acres Burned	
LRA	**262**
SRA	**1817**
Total	**2079**

Number of Fires by Cause 2012

Arson	Suspected Arson	Refuse-Escape	Electrical	Equipment	Other/Misc.	Powerline
37	**35**	**102**	**21**	**109**	**45**	**14**

Lightning	Smoking	Undetermined	Playing with Fire	PWF-Fireworks	Railroad
1	**6**	**99**	**4**	**3**	**0**

2013

Annual Accomplishment Reporting

Fire Planning:

A consolidated effort with State, Federal and Local Governments, along with the Butte Fire Safe Council has updated the County CWPP. The Merry Mountain Village has joined the Forbestown Ridge Fire Safe Council and is the first community within the council to achieve Firewise Community status. The Butte Fire Safe Council and Unit are working with neighboring Councils to coordinate and plan bi-county projects. An Ignition Management Plan has been developed and added to the Butte Unit Fire Plan.

Civil Cost Recovery:

$15, 532.94 was recovered through the Civil Cost Recovery program in 2013. The largest recovery was from the Grubbs Incident which occurred on August 12, 2013. This fire accounted for $11,322.67 (SRA) and $1,515.02 (LRA) for a total of $12,837.69. Five additional cases (Cedar, Centerville, Onion, Panther and Summit fires) have been referred to Region for cost recovery consideration. Each of these fires cost over $50,000.00.

Education and Information:
Education:

In 2013, over 20,000 Butte County Residents (Children and Adults) attended Fire Prevention presentations.

The multi-agency Fire PALS troupe preformed the week of March 4th through March 8th. Personnel from CAL FIRE/Butte County Fire, Paradise Fire, Oroville Fire and Butte County Sherriff Office joined forces to present 10 hour long shows. The shows safety messages reached 3,700 students in grades Kindergarten through 5th grade in 10 schools in Butte County and a road trip to NEU in Cameron Park.

Of the combined total of **1518** hours that were dedicated to education, **1450** hours were contributed by unit personnel.

Information:

The Public Information function was covered 24/7 by sharing the coverage between FPSII Aldrich, FC McLean and the ECC. Fire Season 2013 was the busiest incident year in the unit since 2008 and required multiple evacuations and call center activation.

Call Center training was held early in the season to share policy and procedure changes. The unit continues to have over 20 trained volunteer call center staff. Three fires in August, the Swedes, Branch and Centerville incidents, required call center activation, as well as the Summit incident in October. With the exception of the Branch Incident, fast moving fires required rapid

evacuations and long term evacuations. A combined total of 1,000 calls were handled by call center personnel.

During the year, 35 News Releases and 27 Incident Fact Sheets were sent.

Vegetation Management:

There were 10 projects within the Butte Unit in 2013. These projects included Reforestation, Fuel Reduction and Fuel Breaks. Various methods were used to complete them including manual thinning, piling and chipping as well as prescribed burning. 219 acres were treated by prescribed burning and an additional 117 acres were treated by other means. 336 total acres were treated and 1267 hours were invested into the management plans of these projects.

Volunteerism:

The VIP roster for 2013 includes 92 members. Of the 92, forty one members are seasonal firefighters and seventeen are active call center staff. In 2013 there were 39 events, programs, or opportunities to volunteer. Many VIP's assisted in these programs. A total of 131 4291 Inspections were done in the Butte Unit for 2013.

Other Fire Prevention Projects in SRA: Other notable projects were the Toy's for Tot's drive which has been a yearly tradition for several years now. Of the 3,573 families served by the Marine Corp Toys for Tots organization, CAL-FIRE/Butte County Fire Department collected over 1,000 toys.

CAL-FIRE/Butte County Fire employees and volunteers also staffed a display kiosk during the Butte County Fair.

6/1/14

Unit Chief
Greg McFadden

Date

2014

Annual Accomplishments Reporting

Fire Planning

Concow/Yankee Hill and Merry Mountain Village (Clipper Mills) have maintained their FIREWISE Community status. Berry Creek and Forbestown are now recognized as FIREWISE Communities. Wildfire Evacuation Plans incorporating "Ready, Set Go" principles were developed and distributed in the Fall of 2014 to the communities of Feather Falls, Forbestown, Town of Paradise and the Upper Ridge (Magalia).

Investigations and Enforcement

- 5 Arson Arrest
- 3 Felony Arrest
- 3 Felony Arson investigations without arrest that resulted in less fires

Wildland Fire Prevention Engineering

The Butte Unit hired four SRA Fee funded Forestry Aids to help enforce defensible space requirements (Public Resource Code 4291) from April 2014 through September 2014. 1,914 inspections were made Unit wide between the Forestry Aids, CAL FIRE and Butte County Fire Engine Companies. Several hundred hours were committed to educating the public on fire safety as well as handing out additional public safety information provided by the Butte County Fire Safe Council.

The areas focused on in 2014 were the east foothills of Oroville, Bangor, Robinson Mill, and the lower Cohasset area.

Inspections 4290 and 4291, citations associated with 4291 violations, citations or issue identified through industrial (railroad or Powerline) inspections.

Civil Cost Recovery

Two Civil Cost Recovery cases have been forwarded to Region for processing.

Education and Information

- Over 34,000 Butte County residents attended fire prevention education programs that covered everything from Stop, Drop and Roll to Defensible Space
- Unit Personnel contributed 1,179 hours to education
- Fire PALS performed the week of March 10th through March 14
    - 3,700 students in grades Kindergarten through 5th grade attended
    - Program reached ten different schools and a road trip to NEU for a Marysville Elementary School presentation.

Butte County Fair Kiosk was staffed by Unit personnel for 160 hours providing fire safety information and information on the recruiting and training program for Butte County Fire Department Volunteers

The Public Information function was covered 24/7 by sharing the coverage between FPSII Aldrich, BC Damon and the ECC. The overall goal of this function is to keep the our customers, the citizens of Butte County, informed by providing timely and accurate information to the varied media market in the North State.

Fire Season 2014 was a quiet incident year in the unit with only one call center activation for a two day period for the Web Fire.

Call Center training was held early in the season to share policy and procedure changes. Each year we bring new tools to use to better inform our customers. This year, twitter was added in addition to the new Mass Public Notification System implemented by the county. Both features will give new layers of information to aid our call center during future incidents. The unit continues to have over 20 trained volunteer call center staff.

During the year, 35 News Releases and 64 Incident Fact Sheets were sent.

20 teens were afforded the opportunity to attend FAST CAMP and over 400 students were a part of the Sixth Grade Education Program.

Report types of programs that are reflected in the hours reported for prevention activities (school program, County Fairs, parades, press releases, articles, signage, website, and social media).

Vegetation Management

The Butte Unit received money from the SRA Fire Prevention Fund which will be used to complete two shaded fuel breaks along Highway 32 in Forest Ranch and a fuels reduction project along the Skyway below the Town Of Paradise.

There were two prescribed fires totaling 61 acres that not only reduced hazardous fuels in the area but provided training opportunities for firefighters.

The Butte County Fire Safe Council oversaw the work on six fuel breaks throughout the county which treated 485 acres by mechanical means, 40 acres of cut pile and burn, and 35 acres of prescribed fire totaling 560 treated acres. Two programs helped provide more than 570 residents with defensible space. Over 500 residents participated in the Chipper Program and 70 participated in the Residence Assistance Program.

CFIP, VMP, Rx burns, training exercise, CCC projects that treat fuels, fuel reduction grants

Volunteerism

Butte County has a VIP program which consists of 103 members. Of the 103, forty one members are seasonal firefighters and 22 are active call center staff.

Call Center

The Butte Unit has a solid list of 22 trained and experienced Call Takers. These VIP's and paid staff attend yearly training and can be activated at a moment's notice.

The dedication of these VIP's is the back-bone for public information during a major emergency.

Events

In 2014 there were 60 events, programs, or opportunities to volunteer. Many VIP's assisted in these programs.

Butte County Fire Safe Council has formed a new partnership with BARE on the Ridge, which is an organization that raises money to staff and help support Sawmill Peak Lookout. The Butte County Sheriff's Office (BCSO) continues to play a key role by using the BCSO Road Crew to provide defensible space through the Residence Assistance Program (RAP). Continued partnership with community fire safe councils in Berry Creek, Cohasset, Feather Falls, Forbestown, Forest Ranch and Paradise is providing volunteer hours in a variety of ways. The volunteers from these communities participate in wildfire safety activities, serve on the Board of Directors, work on their properties and on community fire safe council projects.

Other Fire Prevention Projects in SRA

A portion of the SRA Fire Prevention Fund has been combined with other CAL FIRE Units SRA FPF funds for a statewide public service announcement campaign.

Grant funding through the Yankee Hill Fire Safe Council secured funding for a remote camera detection system for Butte County that consisted of three cameras. The Butte Fire Safe Council has secured additional funds to add a fourth camera located at Sawmill Peak Lookout in Paradise.

Fire Chief
Greg McFadden

6/2/15
Date