Unit Strategic Fire Plan
Butte Unit

Last update: 1 June 2013

FULL 13.0

UNIT STRATEGIC FIRE PLAN AMENDMENTS

Date	Section Updated	Page Numbers Updated	Description of Update	Updated By

Table of Contents

Table of Contents ii

SIGNATURE PAGE iii

EXECUTIVE SUMMARY 2

SECTION I: UNIT OVERVIEW 3

UNIT DESCRIPTION 3

UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES 5

SECTION II: COLLABORATION 7

COMMUNITY / AGENCIES / FIRE SAFE COUNCILS 7

A: VALUES 8

B: COMMUNITIES 9

SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES 10

A: FIRE PREVENTION 10

ENGINEERING & STRUCTURE IGNITABILITY 11

INFORMATION AND EDUCATION 13

B. VEGETATION MANAGEMENT 15

SECTION V: PRE- FIRE MANAGEMENT TACTICS 17

DIVISION / BATTALION / PROGRAM PLANS 17

APPENDIX A: ACTIVE PRE- FIRE PROJECTS 35

APPENDIX B: UNIT GOALS AND OBJECTIVES 37

APPENDIX C: IGNITION ANALYSIS 38

APPENDIX D: COMPLETED AND PROPOSED PROJECTS 41

EXHIBITS: MAPS 49

SUPPLEMENT: 2012 58

SUPPLEMENT: 2013 60

SIGNATURE PAGE

Unit Strategic Fire Plan developed for Butte:

This Plan:

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

Unit Chief George Morris	6/12/13 **Date**
Pre-Fire Engineer Joe Tapia	6/12/13 **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 CAL FIRE-Butte Unit Strategic Fire 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 Unit 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 Unit strives to increase life safety and to reduce property destruction, environmental impacts, and fire suppression costs.

SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

The Butte Unit 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 Unit. 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 Unit 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 Unit 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 are 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.

The Butte Unit 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.

UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

The Butte Unit is geographically divided into eight 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
- 1 Camp (unstaffed)

County/City Resources (Staffed by CAL FIRE personnel)

- 14 Fire stations
- 14 Engines
- 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 Water tenders
- 14 Squads
- 2 Rescues
- 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 Unit Strategic Fire 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 Fire 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

Twenty-four communities within the Butte Unit have been recognized as communities at risk. More information regarding communities at risk can be found at www.cafirealliance.org/communities_at_risk/.

Community	Federal Threat	Federally Regulated
Bangor		
Berry Creek	X	X
Butte Creek	X	X
Butte Meadows	X	X
Chico		X
Cohasset	X	X
Concow	X	X
Durham		X
Feather Falls	X	X
Forbestown		
Forest Ranch	X	X
Hurleton	X	X
Inskip	X	X
Jonesville	X	X
Magalia	X	
Oroville		X
Oroville East		X
Palermo		X
Paradise		X
Pentz		X
Robinson Mills	X	X
South Oroville		X
Stirling City	X	X
Thermalito		

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, life safety and fire origin and cause investigations. Each of these programs is an important facet of a well-balanced fire prevention program.

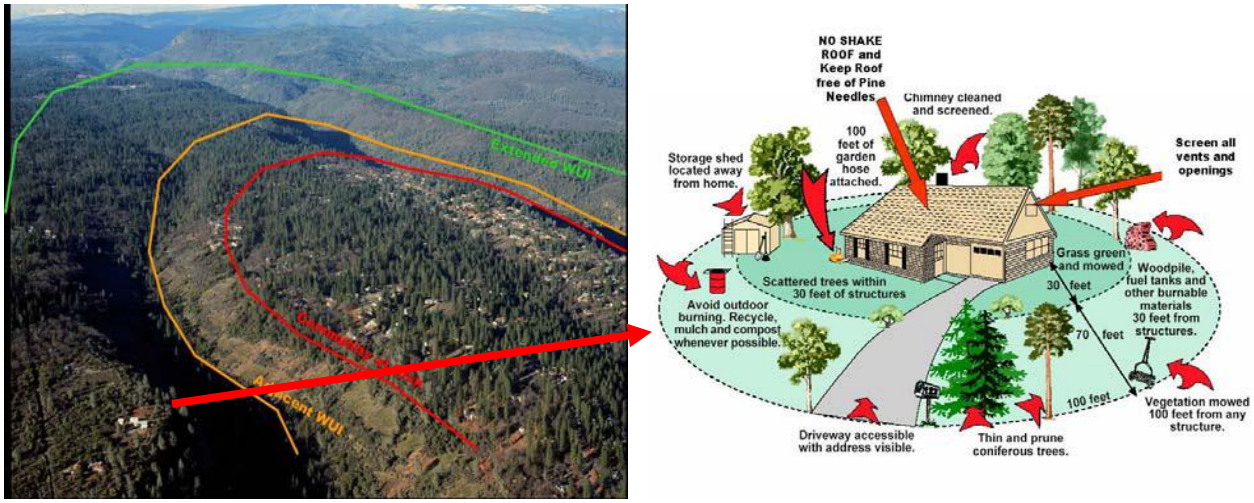
The Fire Prevention Bureau supports the fire investigation needs of the Unit, assisting with complex fire investigations such as those involving fire fatalities, commercial structures, arson, or detailed follow-up investigative work. Through the fire investigation process, specific fire cause problems 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 machinery, 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.

Priority projects are listed in Appendix A.

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



<u>HOME IGNITION ZONE</u>

- **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 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 the Butte Unit 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 the Butte Unit 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 the Butte Unit 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.

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 have been used extensively within Butte County to construct fuel breaks and accomplish other fuels reduction projects. 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 fire fighting 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

DIVISION / BATTALION / PROGRAM PLANS

Battalion One – Paradise, Magalia, Stirling City

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 Assoc (PPOA); Pacific Gas & Electric (PG&E)

Wildland Urban Interface Situation
Battalion One encompasses two large communities, Paradise and Paradise Pines (Magalia), and the smaller community of Stirling City. The Town of Paradise 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.

Emergency access into and out of both 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.

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.

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.

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.

Battalion Projects

- 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
- 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, poisonoak 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

Battalion Three – Durham, Richvale, Yankee Hill

Collaborators
CAL FIRE / Butte County Fire Department; Yankee Hill / Concow Fire Safe Council; Plumas National Forest; Sierra Pacific Industries

Wildland Urban Interface Situation
Battalion Three includes the communities of Butte Valley, Butte Community College, Durham, Richvale, Nelson, Dayton, Concow and Yankee Hill (a designated FIREWISE Community). It consists of about 80,000 acres of which 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.

Fuels
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.

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. Continuing up Highway 70 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.

Topography
The elevations range from 200' to 4300'. The area west of Highway 99 is relatively flat agricultural orchards and crops. To the east of Highway 99, 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
The 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 - 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.
- Fire Prevention Education – schools, community events, burn permit issuance
- Continue to explore future Vegetation Management Program opportunities.

Battalion Four – Chico Urban Area 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 of approximately 170 square miles with a population of about 50,000 people in the northwestern corner of Butte County, including the greater unincorporated area surrounding the City of Chico. CAL FIRE personnel staff three 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, 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 valley area contains a large agricultural component. The Chico foothills 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.

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.

Weather and Fire History
The valley (north) and Chico foothills 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

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 Fire Safe Council; Plumas National Forest; Sierra Pacific Industries

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 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 travel increases seasonally. 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 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. These fires include the South and Union fires that were part of the 1999 Butte Lightning Complex, the Frey fire that burned 4,000 acres of SRA in 2008 and the Craig fire that burned 2,001 acres in 2008.

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”
- Community outreach/education at community events
- Shaded fuel break projects along primary community escape routes and firefighter ingress/egress routes.

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 & Game - 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 lie 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

Battalion Seven – Biggs, Gridley

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

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 poisonoak. 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 Projects

- Maintain completed and develop new shaded fuel breaks 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 all employees training in a common database (Train Tracker and TMS).
- 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 funded by grants and community donations, and operates in cooperation with public works and fire agencies throughout Butte County.

The BCFSC is the "parent" organization to several active and organized local fire safe councils throughout the County. Local fire safe councils have been established in the Town of Paradise, Upper Ridge, Lower Pentz (below Paradise), Yankee Hill, Berry Creek, Forbestown, Feather Falls, Palermo-Oroville, 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 and CAL FIRE handcrews. 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.

APPENDIX A: ACTIVE PRE- FIRE 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		Pine Ridge School Defensible Space	A		Fuel reduction	
1	2100-2011-FPL-013	Paradise Lake Healthy Forest	P	2014	Fuel reduction	146
1	2100-2012-OTH-023	Trail Days	O		Education	
1		South Firhaven Neighborhood Fuels Reduction	O	2014	Fuel reduction	
2		Big Chico Creek Ecological Preserve	O		Fuel reduction	
2	2100-2010-VMP-004	SPI H-Line VMP	O	2015	Fuel reduction	400
2	2100-2010-HFT-003	Buzztail Shaded Fuel Break	A	2013	Fuel reduction	21
2	2100-2010-HFT-001	HWY 32 Roadside Fuel Reduction	A	2013	Fuel reduction	49
2	2100-2011-FPL-015	Crown Point Road Shaded Fuel Break	A	2013	Fuel reduction	48
2		Scotch Broom Eradication	O		Fuel reduction	
3		Roadside Hazardous Fuels and Reforestation	O		Fuel reduction	
3		Yankee Hill/Concow Road Fuel Reduction-Safety Zones.	O		Evacuation planning	
3		Concow Lake Site Improvement and Invasive Broom Removal Phase I	O		Fuel reduction	
3		Yankee Hill County Roads Fuels Reduction	O		Fuel reduction	
3	2100-2011-FPL-017	Concow Hazardous Fuels and Reforestation	O		Fuel reduction	
3		Deadwood Fuel Break & Biomass Removal	P		Fuel reduction	
3	2100-2011-FPL-017	Concow Hazardous Fuels and Reforestation, Phase III	A		Fuel reduction	
3	2100-2011-FPL-017	Concow Hazardous Fuels and Reforestation, Phase IV	A		Fuel reduction	
3		Yankee Hill Evacuation Plan	O		Evacuation planning	
3		Dooryard Education Visit Program	O		Education	
3		Detlow Rd Demonstration Site	O		Fuel reduction	
3		Water Source Identification and Mapping	O		Mapping	
3		Yankee Hill Emergency Communication System	O		Information	
3		Community Education Workshops	O		Education	
3		Jordan Hill Fuel Reduction Project	O		Fuel reduction	
5		Bangor Community Address Identification	O		Address Signs	
5		Bangor Community Address Identification	O		Address Signs	
5		Zink Rd/Martin Hill Rd Shaded Fuel	P		Fuel reduction	

Batt Planning area	Project Number	Project Name	Status	Estimated Completion Year	Project Type	Net Acres
		Break				
5	2100-2012-FPL-021	Forbestown Road Shaded Fuel Break	A		Fuel reduction	
6	2100-2011-VMP-015	Oroville Wildlife Area VMP	P	2015	Prescribed fire	2000
6	2100-2011-VMP-001	Loafer Creek VMP	P	2015	Prescribed fire	937
6	2100-2012-OTH-022	DWR Canyon Drive Fuel Reduction	A	2015	Fuel reduction	17
7		Grey Lodge VMP	O		prescribed fire	
8		Paradise Clear Creek Shaded Fuel Break	P		Fuel reduction	
8		Paradise Defensible Space Program	O		Inspections	
ALL		Defensible Space Chipper Program	O		Fuel reduction	
ALL	2100-2012-OTH-023	6th Grade Education Program	O		Education	
ALL		Development of Fuel Model Brochures	O		Education	
ALL		Defensible Space Media Campaign	O		Education	
ALL		Special Needs Assistance Program	O		Evacuation planning	
ALL		Forest Stewardship Education Workshops	O		Education	
ALL		Residents Assistance Program	O		Defensible space assistance	
ALL	2100-2012-OTH-023	Wildfire Safety Education Workshops	O		Education	
ALL		Butte County Defensible Space Shaded Fuel Breaks	O		Fuel reduction	
ALL	2100-2012-PRE-005	Fire-resistant building material and landscaping Fair exhibit	O		Education	
ALL	2100-2012-PRE-005	North Valley Fire PALS	O		Education	
ALL	2100-2011-PRE-001	Targeted 4291 Inspections	O		Inspections	

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

APPENDIX B: 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:

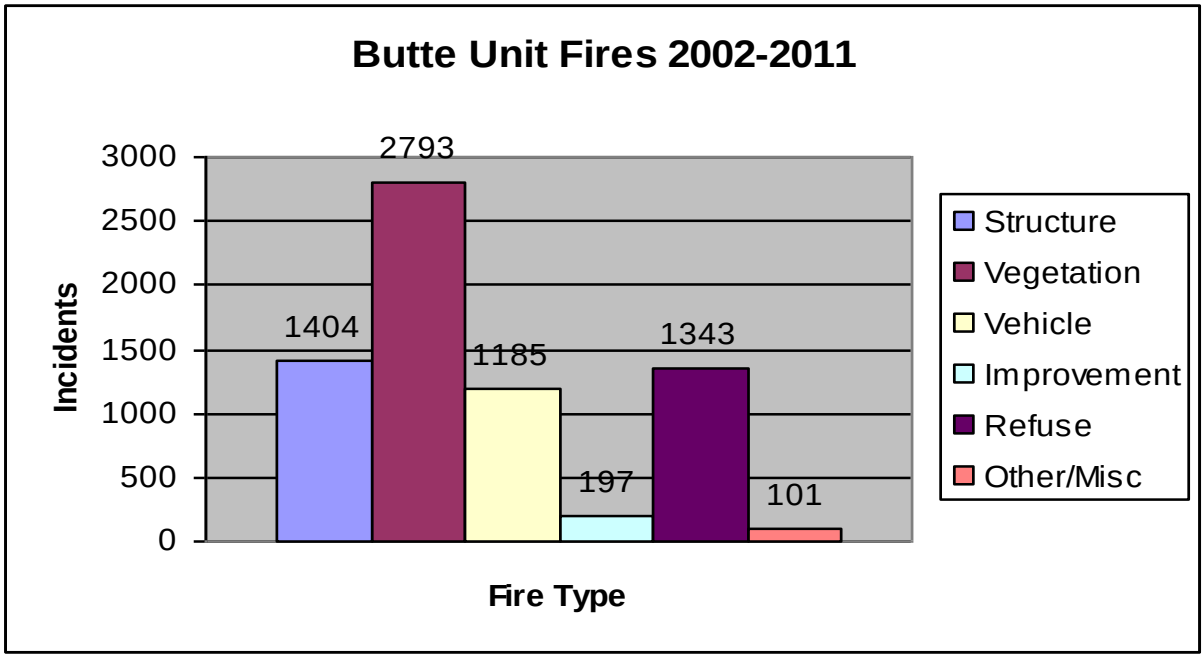
- Engage and participate with local stakeholder groups to validate and prioritize the assets at risk and identify, prioritize and implement pre-fire projects.

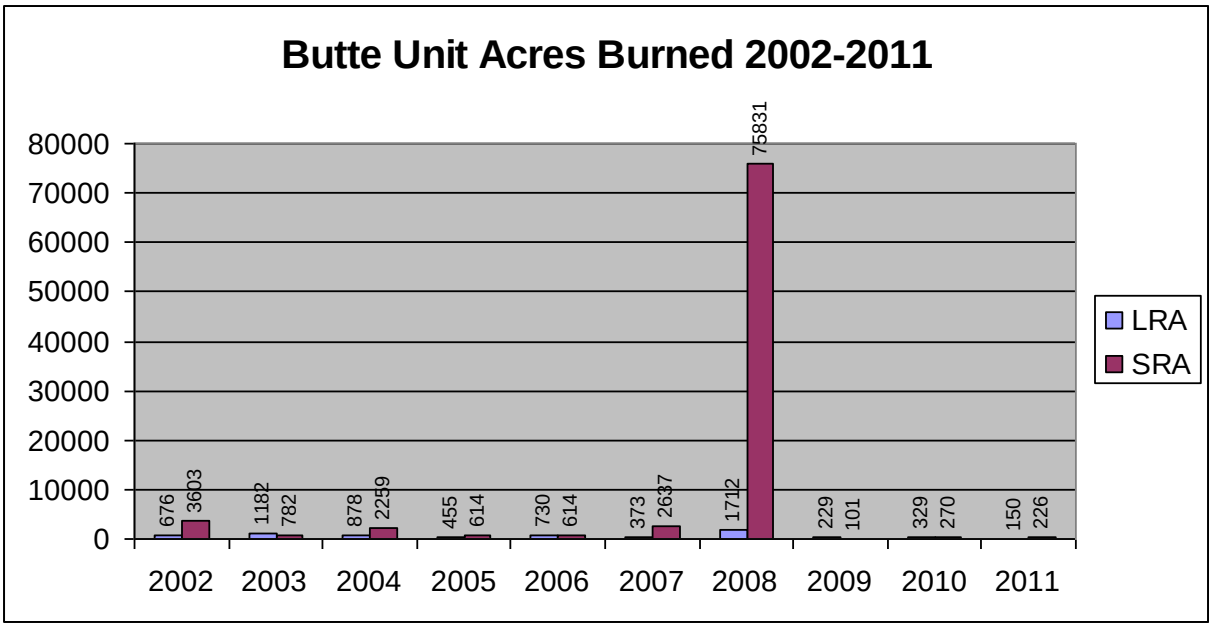
- Conduct defensible space inspections and promote an increasing level of compliance with defensible space laws and regulations

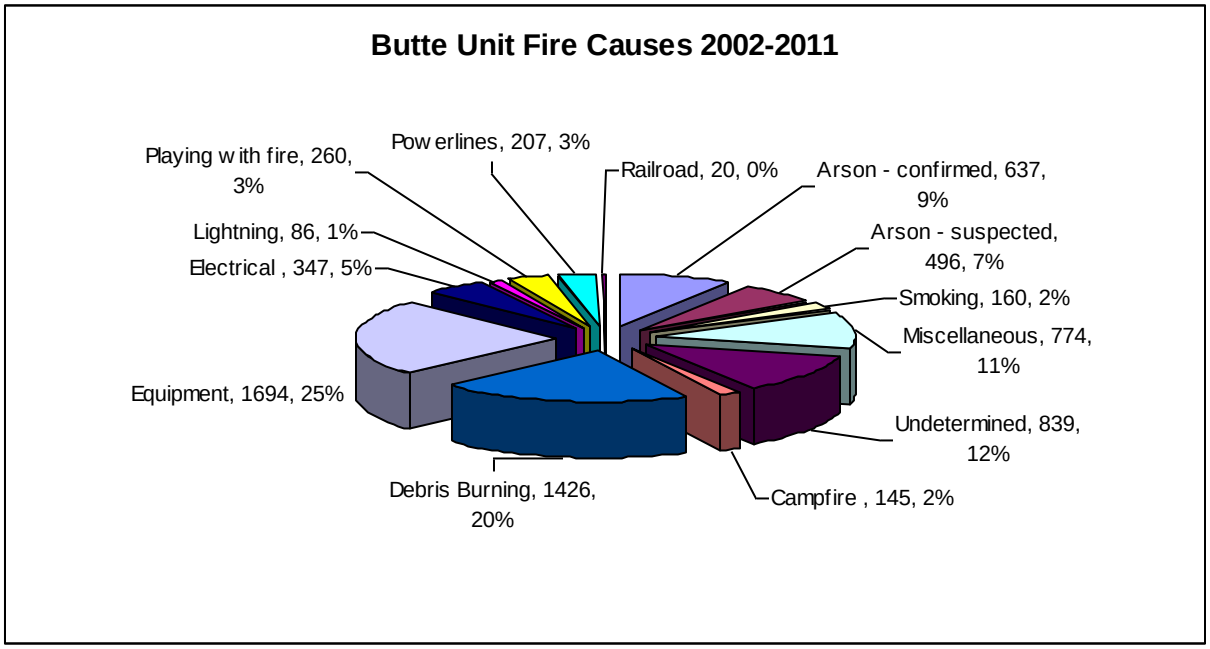
- Educate landowners, residents and business owners about the risks and their incumbent responsibilities of living in the wildlands, including applicable regulations, prevention measures and preplanning activities.

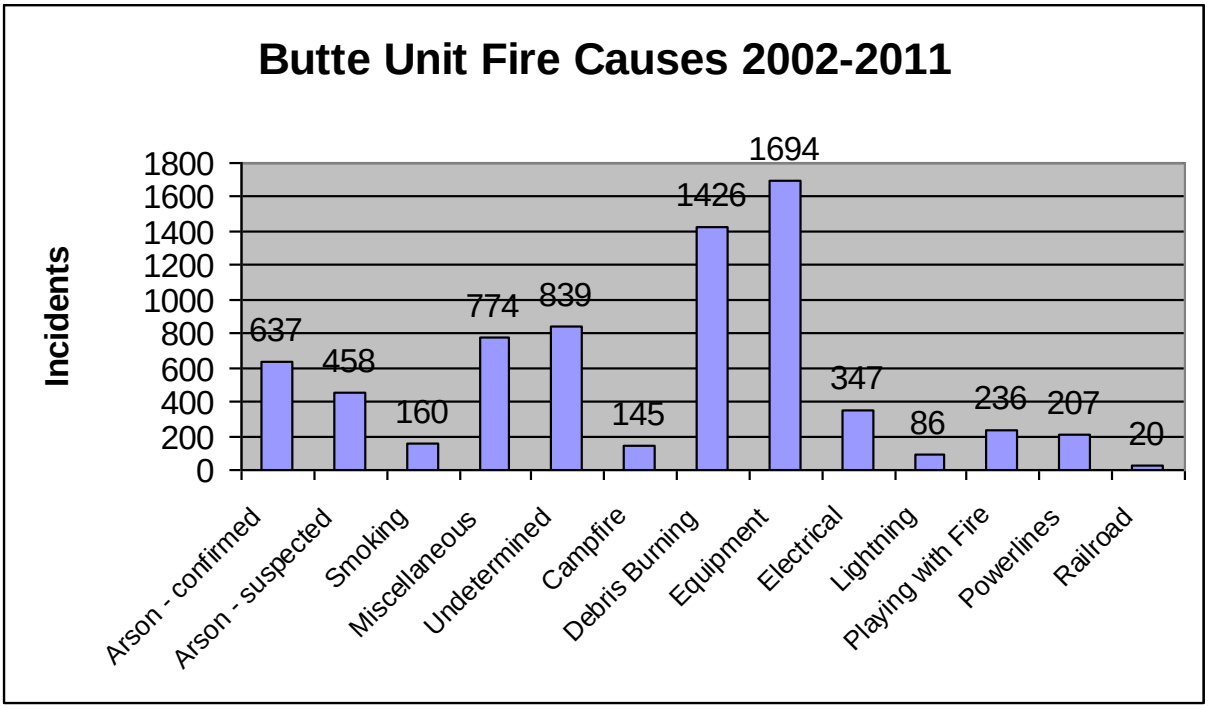
APPENDIX C: IGNITION ANALYSIS

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 involved the use of equipment, at 25% of all ignitions. The second most common cause is debris burning at 20%. 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 2002-2011
80000
70000
60000
50000
40000
30000
20000
10000
0
676
3603
1182
782
878
2259
455
614
730
614
373
2637
1712
75831
229
101
329
270
150
226
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
LRA
SRA


Butte Unit Fire Causes 2002-2011
Playing with fire, 260, 3%
Powerlines, 207, 3%
Railroad, 20, 0%
Arson - confirmed, 637, 9%
Lightning, 86, 1%
Arson - suspected, 496, 7%
Electrical , 347, 5%
Smoking, 160, 2%
Miscellaneous, 774, 11%
Equipment, 1694, 25%
Undetermined, 839, 12%
Debris Burning, 1426, 20%
Campfire , 145, 2%


Butte Unit Fire Causes 2002-2011
Incidents
1800
1600
1400
1200
1000
800
600
400
200
0
637
458
160
774
839
145
1426
1694
347
86
236
207
20
Arson - confirmed
Arson - suspected
Smoking
Miscellaneous
Undetermined
Campfire
Debris Burning
Equipment
Electrical
Lightning
Playing with Fire
Powerlines
Railroad

APPENDIX D: COMPLETED AND PROPOSED PROJECTS

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
1	2010	Paradise	Trail way Fuels Reduction	Paradise FSC/ Paradise Fire Department	shaded fuel break project	Complete
1	2010	Paradise	Skyway Shaded Fuel Break	BCFSC/ Paradise Fire Department	shaded fuel break project alongSkyway in both County and Town of Paradise	Complete
1	2000	Paradise	Paradise VMP	Paradise Fire Department	Honey Run to Neal Rd. 300' under power lines	Completed
1	2003	Paradise	Paradise Valley View Citizens Fuel Reduction	Paradise Citizens	Fuels Reduction project around homes	completed
1	2003	Paradise	West Branch Fuel Reduction Project	Paradise Fire Department	shaded fuel break project	Completed
1	2003	Paradise	Canyon Edge Fuel Reduction Project	Paradise Fire Department	3 mile fuel reduction project along eastern edge of Paradise.	Completed
1	2003	Paradise	Dean Rd Roadside Fuel Reduction	BLM & Paradise Fire Department	One mile of roadside fuel reduction east of Paradise.	Completed
1	2004	Paradise	Evacuation Plan Print & Mail - 2004	Paradise FSC/ Paradise Fire Department	19,000 of the Wildland Fire Evacuation Plan printed and mailed to residents of Paradise and the Upper Ridge including Stirling City.	Completed
1	2004	Paradise	Top of Paradise Fuel Reduction Project - Canyon Edge FRP	Paradise FSC/ Paradise Fire Department	6 mile fuel reduction project in upper Paradise on both the northeastern and northwestern flank.	Completed
1	2004	Paradise	Youth Wildland Fire Council	Paradise FSC/ Paradise Fire Department	Pilot program to involve teenagers in the Fire Safe Council.	Completed
1	2007	Paradise	Honey Road Fuel Reduction	Paradise FSC/ Paradise Fire Department	shaded fuel break project	Completed
1	2007	Paradise	Dry Creek Shaded Fuel Break and Watershed Protection Project	Paradise FSC/ Paradise Fire Department	shaded fuel break project	Completed
1	2010	Paradise	Quail Trails Fuel Reduction	BLM	Project completed July 2010. CCC crews cut and piled brush east of homes along the canyon - 1 acre	Completed/Maint.
1	2003	Paradise	Town Radio - AM 1500	Paradise Fire Department	AM 1500 radio station with coverage to approximately 25,000 residents.	completed/ongoing
1	2009	Paradise	Berry Creek Shaded Fuel Break	Paradise FSC/ Paradise Fire Department	shaded fuel break project	Proposed
1	2009	Paradise	Hamlin Canyon	Paradise FSC/	shaded fuel break project	Proposed

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
			Shaded Fuel Break	Paradise Fire Department		
1	2009	Paradise	Shaded Fuel Break Management and Maintenance Project	Paradise FSC/ Paradise Fire Department	shaded fuel break project	Proposed
1	2009	Paradise	Wildfire Safety Education Trailer	Paradise FSC/ Paradise Fire Department	wildfire safety education	Proposed
1	2009	Paradise	Pentz Rd. Shaded Fuel Break	BCFSC	shaded fuel break project along Pentz Rd. from County area to Town of Paradise Boundary	Proposed
1	2009	Paradise	Neal Rd. Shaded Fuel Break	BCFSC	shaded fuel break project along Neal Rd. in both County and Town of Paradise	Proposed
1	2009	Paradise	Clark Rd. Shaded Fuel Break	BCFSC	shaded fuel break project along Clark Rd. in both County and Town of Paradise	Proposed
1	1999	Upper Ridge	Wildland Safety Fair	Don Steele	Wildland Fire Safety Fair held at the POA in Paradise Pines that occurred during the lighting caused fire siege in August 1999. Ashes were falling on the fair.	Completed
1	2000	Upper Ridge	Compton Rd.	BLM	BLM land treated using Cal-Fire crews	Completed
1	2001	Upper Ridge	Upper Ridge Radio 1460 AM		AM 1460 emergency radio station that reaches about 80% of the residents on the Upper Ridge.	Completed
1	2002	Upper Ridge	PPOA Greenbelt Fuel Reduction	Don Steele	Maintenance Plan for greenbelt	Completed
1	2004	Upper Ridge	PPOA Dooryard Education Program	Don Steele	Individual visits to homeowners upon request to provide customized information on wildland fire safety at their home.	Completed
1	2004	Upper Ridge	Upper Ridge Preservation Alliance	Don Steele	To assist in the formation of a group that would take on the task of developing and implementing a maintenance plan for the 17 mile fuel break	Completed
1	2006	Upper Ridge	Coutolenc Shaded Fuel Break and Watershed Protection Phases I - III	BCFSC	A 200' fuel break along the Coutolenc Road area provides watershed and protection and community protection during a wildland fire	Completed
1	2010	Upper Ridge	New Skyway Shaded Fuel Break	BCFSC	Shaded Fuel Break Project	Completed
1	2010	Upper Ridge	Magalia Reservoir Shaded Fuel Break	BCFSC	Shaded Fuel Break Project	Completed
1	2008	Upper Ridge	Paradise Lake	Paradise Irrigation	Paradise Lake Access	Completed

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
				District		
1	2010	Upper Ridge	Humbug Rd. Shaded Fuel Break	BCFSC	SFB from intersection of Nimshew to Skyway	Completed
1	2011	Upper Ridge	Magalia PUSD	BCFSC	Fuel reduction on 60 acre PUSD parcel north of Rosewood	Completed
1	2011	Upper Ridge	Powellton Rd. SFB	BCFSC	From Doe Mill Rd. to Lovelock	Completed
1	2001	Upper Ridge	Upper Ridge Fuel Reduction Project 17 mile shaded fuel break	Cal-Fire & PID	17 miles of Fuel Reduction around Paradise Pines and up to and along Nimshew Rd. and behind Fir Haven Community	Completed, maintenance work completed, fuel break condition inventoried, continued maintenance work necessary
1	2010	Upper Ridge	Old Dog Town Rd.	Paradise Irrigation District	Shaded Fuel Break Project	Completed/Maint.
1	2009	Upper Ridge	Doe Mill Rd. from Powleton to Butte Creek	Upper Ridge FSC	Shaded Fuel Break Project	Proposed
1	2009	Upper Ridge	PG&E Canal	Upper Ridge FSC	Shaded Fuel Break Project from Doe Mill to UR FSC northern boundary	Proposed
1	2009	Upper Ridge	Skyway Shaded Fuel Break	Upper Ridge FSC	both sides of Skyway from Old Magalia to URFSC northern boundary	Proposed
1	2009	Upper Ridge	Hup Coutoelnc Rd. Shaded Fuel Break	BCFSC	Hup Coutolenc Rd. tie to Skyway to protect Magalia from a North wind event	Proposed
1	2009	Upper Ridge	Troy Estates	Upper Ridge FSC	Fuel reduction on two 10 acre parcels	Proposed
1	2009	Upper Ridge	17 mile shaded fuel break north boundary	Upper Ridge FSC	Shaded Fuel Break Project	Proposed
1	2009	Upper Ridge	West Side of Old Magalia	Upper Ridge FSC	Shaded Fuel Break Project	Proposed
1	2009	Upper Ridge	Centerville Rd. Shaded Fuel Break	Upper Ridge FSC	Shaded Fuel Break Project	Proposed
1	2009	Upper Ridge	Coutolenc Rd. Dozer Line	Upper Ridge FSC	Extension of dozer line parallel to Coutolenc	Proposed
1	2009	Upper Ridge	Humbug Rd. Shaded Fuel Break	Upper Ridge FSC	SFB from intersection of Nimshew to Skyway	Proposed
1	2009	Upper Ridge	West Side of Old Magalia	Upper Ridge FSC	Shaded Fuel Break Project	Proposed
1	2011	Upper Ridge	Skyway Fuels reduction at	BLM	Project ties in to efforts with cooperators to develop a safer	Proposed

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
			Toadtown		corridor along the Skyway. 100 feet each side of road - hand cut and chip - with possibility of masticating small sections.	
1	2011	Upper Ridge	Little Butte Creek SFB -Phase I -	BCFSC	Shaded Fuel Break- Fernglen Wy. to the East to Carnegie, across Middle Butte Creek to Wycliff wy.	Proposed
1	2011	Upper Ridge	Little Butte Creek SFB -Phase II	BCFSC	Shaded Fuel Break- Parallel South Park Drive to West Park Dr. to Ponderosa Wy. West on Ponderosa Wy. to Nimshew. South on Nimshew and back to the Little Butte Creek confluence.	Proposed
1	2011	Upper Ridge	Little Butte Creek SFB -Phase III	BCFSC	Phase 3- South of Nimshew Rd; Southwest of Middle Butte Creek and Little Butte Creek confluence. Proceeding southeast to Panorama Pt. continuing Northeast to Woodland Dr./Nutmeg Wy.	Proposed
1	2011	Upper Ridge	Little Butte Creek SFB -Phase IIII	BCFSC	Phase 4- North of Nutmeg wy. or Woodland Dr./Quail Wy. across Little Butte Creek to the North to Road N258-Athens Wy.	Proposed
1	2012	Upper Ridge	Upper Coutelenc SFB	BCFSC	Reduce hazardouse fuel both sides of Upper Coutolenc Rd. for evacuation and fire fighter safety. Project ties to prior Coutlenc Rd. Shaded Fuel Break and Upper Ridge Shaded Fuel Break at Lovelock.	Proposed
1	2012	Upper Ridge	Pine Ridge School Hazardous Fuel Reduction	BCFSC	Reduce hazardous fuels around Pine Ridge School on either the Paradise Unified School District lands or BLM lands. This is a potential community assembly point but is very overgrown and posses a high fire risk to students and families.	Proposed
1	2012	Upper Ridge	PPPOA Shaded Fuel Break	BCFSC	Reduce Hazardous Fuel on the Paradise Pines Property Owners Association Lands to protect homes and watershed quality.	Proposed
2	2008	Butte Creek	Butte Creek Canyon Shaded Fuel Break	BCFSC	Shaded Fuel Break Project	Completed
2	2009	Butte Meadows/ Jonesville	Butte Meadows Community Evacuation Shelter	BMJCA	2-3 acre fuels reduction at Fire Station 10	Proposed
2	2009	Butte Meadows/ Jonesville	Butte Meadows Community Demonstration/Co	BMJCA	Establishing an evacuation location at Fire Station 10 to shelter 40 residents with	Proposed

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
			mmunication Site		necessary equipment and supplies	
2	2009	Butte Meadows/ Jonesville	Upper Humboldt Rd Shaded Fuel Break	BMJCA	Shaded fuels reduction on both sides of Rd. between Lomo and Jonesville	Proposed
2	2009	Butte Meadows/ Jonesville	Emergency Advisory Radio	BMJCA	Low power emergency advisory radio	Proposed
2	2009	Butte Meadows/ Jonesville	Community Evacuation Plan	BMJCA	create a community evacuation plan	Proposed
2	2003	Cohasset	Development of Community Evac Plan	Cohasset Community Association	Developed an evacuation plan for the 2000 residents on the Cohasset Ridge.	Completed and distributed, updated needed.
2	2005	Cohasset	Cohasset Rd Shaded Fuel Break	Cohasset Community Association	Roadside Fuel reduction along 4 miles of Cohasset Rd	Completed, maintenance follow up needed.
2	2009	Cohasset	Mann Nolta Shaded Fuel Break	Jim Brobeck	Shaded fuel break project	Proposed
2	2009	Cohasset	Emergency Advisory Radio	Cohasset Community Association	Low power emergency advisory radio	Proposed
2	2009	Cohasset	Evacuation Plan Update	Cohasset Community Association	Update of the community evacuation plan	Proposed
2	1999	Forest Ranch	Forest Ranch Wildfire Defense Plan	Citizens of Forest Ranch	booklet on living safely with wildfire	Completed
2	2000	Forest Ranch	Hwy 32 Demo Site	Citizens of Forest Ranch	Created a community demonstration site	Completed
2	2001	Forest Ranch	Forest Ranch area Forestwise Landscaping Brochure	Citizens of Forest Ranch	booklet on living safely with wildfire	Completed
2	2008-2009	Forest Ranch	Wilder Rd. Shaded Fuel Break	Citizens	shaded fuel break project	Proposed
2	2008-2009	Forest Ranch	Forest Ranch Headwaters Rd. Shaded Fuel Break	Headwaters Rd. Association	shaded fuel break project	Proposed
2	2008-2009	Forest Ranch	Doe Mill Rd. Shaded Fuel Break	citizens	shaded fuel break project	Proposed
2	2012	Forest Ranch	Schott Road Vegation Mgmt.	Forest Ranch FSC	Fuel reduction/shaded fuel break	Proposed
3	2008-2009	West of Chico	Llano Seco	CAL FIRE	wildlife habitat, prescribed fire and hand work	Proposed
3	2008-2009	West of Chico	Howards Slough	CAL FIRE	wildlife habitat, prescribed fire and hand work	Proposed

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
3	2001	Yankee Hill/ Concow	Cherokee Clean-up	YHFSC	An illegal dumpsite, arson hit site, was cleaned up, 350 tires removed plus other debris, then gated off.	Completed
3	2001	Yankee Hill/ Concow	Yankee Hill FSC Calendar 2003	YHFSC	Community Calendar produced as a way to get fire prevention messages into the home.	Completed
3	2001	Yankee Hill/ Concow	Poe Fire Clean-up	YHFSC	14 parcels abandoned were cleaned up with assistance from 58 community volunteers and some contractual assistance to removing cars and debris.	Completed
3	2005	Yankee Hill/ Concow	Crain Ridge Fuel Break and Watershed Protection	YHFSC	fuel break along a ridgeline above the Concow basin and Yankee Hill community.	Completed
3	2008-2009	Yankee Hill/ Concow	Crain Ridge/Rim Road Shaded Fuel Break and Watershed and Protection	YHFSC	shaded fuel break project	Completed
3	2008-2009	Yankee Hill/ Concow	Community Demonstration Sites	YHFSC	Expand and create new demonstration sites located at; Detlow Rd., Lunt Rd., Shuman Ln. - completed 2010, new site along Concow Lake 2012	Completed/Ongoing
3	2008-2009	Yankee Hill/ Concow	Jordan Hill Forest Density Thinning	BLM	shaded fuel break project	Proposed
3	2008-2009	Yankee Hill/ Concow	Student After School Wildfire Program	YHFSC	Program to provide education and trade building skills for community students	Proposed
3	2008-2010	Yankee Hill/ Concow	Biomass Utilization	YHFSC	Research and funding to sustain new and old methods of biomass utilization such as fire wood, pellet stove wood production	Proposed
3	2011	Yankee Hill/ Concow	Concow Cabins	YHFSC	Design and establish affordable, sustainable housing fire safe, firewise designs for fire prone environments. Assist community residents in the wildland urban interface who are rebuilding a home lost to wildland fire and/or assist residents who want to retrofit and build a home. Continue education on firewise building design and materials, raise funding with an architect design contest and, build (20) FIREWISE - Concow Cabins for residents who lost their home in the 2008 Camp Fire.	Proposed
3	2012	Yankee Hill/ Concow	Concow Hazardous Fuels and Reforestation,	YHFSC	Continuation of reducing the fuel load on parcels impacted by 2008 wildfire, expose and remove large	Proposed / Pending Agreement

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
			Phase II		dead tree material and run through a grinding operation to reutilize the biomass.	
3	2012	Yankee Hill/ Concow	Concow Hazardous Fuels and Reforestation, Phase V	YHFSC	Continuation of reducing the fuel load on parcels impacted by 2008 wildfire, expose and remove large dead tree material and run through a grinding operation to reutilize the biomass.	Proposed / Pending Agreement
3	2012	Yankee Hill/ Concow	Priority #1: Concow Hazardous Fuel Removal & Reforestation (includes biomass reutilization)	YHFSC	continue reducing fuel load, install street signs, reforestation, and education.	Proposed for 2012/2013
3	2012	Yankee Hill/ Concow	Priority #2: Roadside Hazardous Fuels - continue fuel reduction along county and private roads	YHFSC	continue reducing fuel load along county and private roads 60' wide, install signs, and education. Road targets - Trevor, Rich Gulch, Yankee Hill Road, Nelson Bar, Concow at Hwy 70, Skycrest, offshoots Detlow, Big Bend, and Dark Canyon.	Proposed for 2012/2013
3	2012	Yankee Hill/ Concow	Priority #3: FIREWISE Education: Landscape maintenance (invasive plants), home building/construction (concow cabins), and disaster preparedness (evac plan)	YHFSC	continue firewise communities status, booths, workshops, meetings, documents, and programs that educate residents and help them prepare for disaster.	Proposed for 2012/2013
4	2008-2009	Chico FH	Bidwell Park Fuel Reduction	Friends of Bidwell Park	Fuels Reduction Work throughout Bidwell	Proposed
4	2008-2009	Chico FH	Little Chico Creek Arundo Donax Control	Susan Mason	Arundo Donax	Proposed
5	2003	Berry Creek	Berry Creek Evacuation Plan	Berry Creek FSC	Developed first community Evacuation Plan and distribution	Completed
5	2005	Berry Creek	Community Demonstration Area	Berry Creek FSC	Fire Safe Community Demonstration area located at Bald Rock Rd. and Sugar Pine Dr.	Completed
5	2005	Berry Creek	Berry Creek Fire Safe Calendar	Berry Creek FSC	2005/2006 Community Calendar produced with fire prevention messages and information	Completed
5	2007	Berry Creek	Fire Safe Home Visit Program	Berry Creek FSC	Training of community members to conduct fire safe home visits	Completed
5	2008	Berry Creek	Lake Madrone	Berry Creek	Shaded fuel break project	Completed

Batt Planning area	Start Year	Location	Project Name	Sponsor	Description	Status
			Shaded Fuel Break	FSC		
5	2008-2009	Berry Creek	Firewise Demonstration Area	Berry Creek FSC	Drought tolerant and Native planting located at Fire Station 61 Harts Mill	Completed
5	2003	Berry Creek	Emergency Advisory Radio	Berry Creek FSC	AM 1250 Emergency Advisory Radio System	Completed
5	1996	Berry creek	Brush Creek DFPZ	USFS Plumas NF	Fuels Reduction Projects on USFS lands	Completed in 2007 Maintenance starting 2009
5	2008-2009	Clipper Mills	Evacuation Planning, Community Education and Fuels Reduction	BCFSC	Evacuation Planning, Community Education and Fuels Reduction	Proposed
5	2007	Feather Falls	Feather Falls Shaded Fuel Break	BCFSC	8 miles shaded fuel break on Lumpkin Rd.	Completed
5	2008	Feather Falls	Feather Falls Evacuation Plan	Feather Falls FSC	Community Evacuation Plan	Completed
5	2010	Forbestown	Forbestown Ridge Reflective Address Signs	Forbestown Ridge Fire Safe Council	Provide standard reflective address signs to all residences within the boundaries of the Forbestown Ridge FSC.	Proposed
6	2004	Oroville	Northeast Oroville Community Education and Outreach	BCFSC	This developed a community "demonstration site" to educate homeowners about thinning vegetation, also a booth was set up and many residents received brochures on how to create their defensible space around the home	Completed
7	2008-2009	Gridley	Little Dry Creek	CAL FIRE	wildlife habitat, prescribed fire and hand work	Proposed
	2003	County wide	Wild Fire Vs. Your Home Video	BCFSC	Provides homeowners with practical steps to make their home safer from wildland fire.	completed & distributed - new printed needed
	2007	County wide	Scotch Broom Eradication	BC Weed Management Area	Removal of invasive Scotch Broom	Proposed

EXHIBITS: MAPS

Figure A: Unit Map

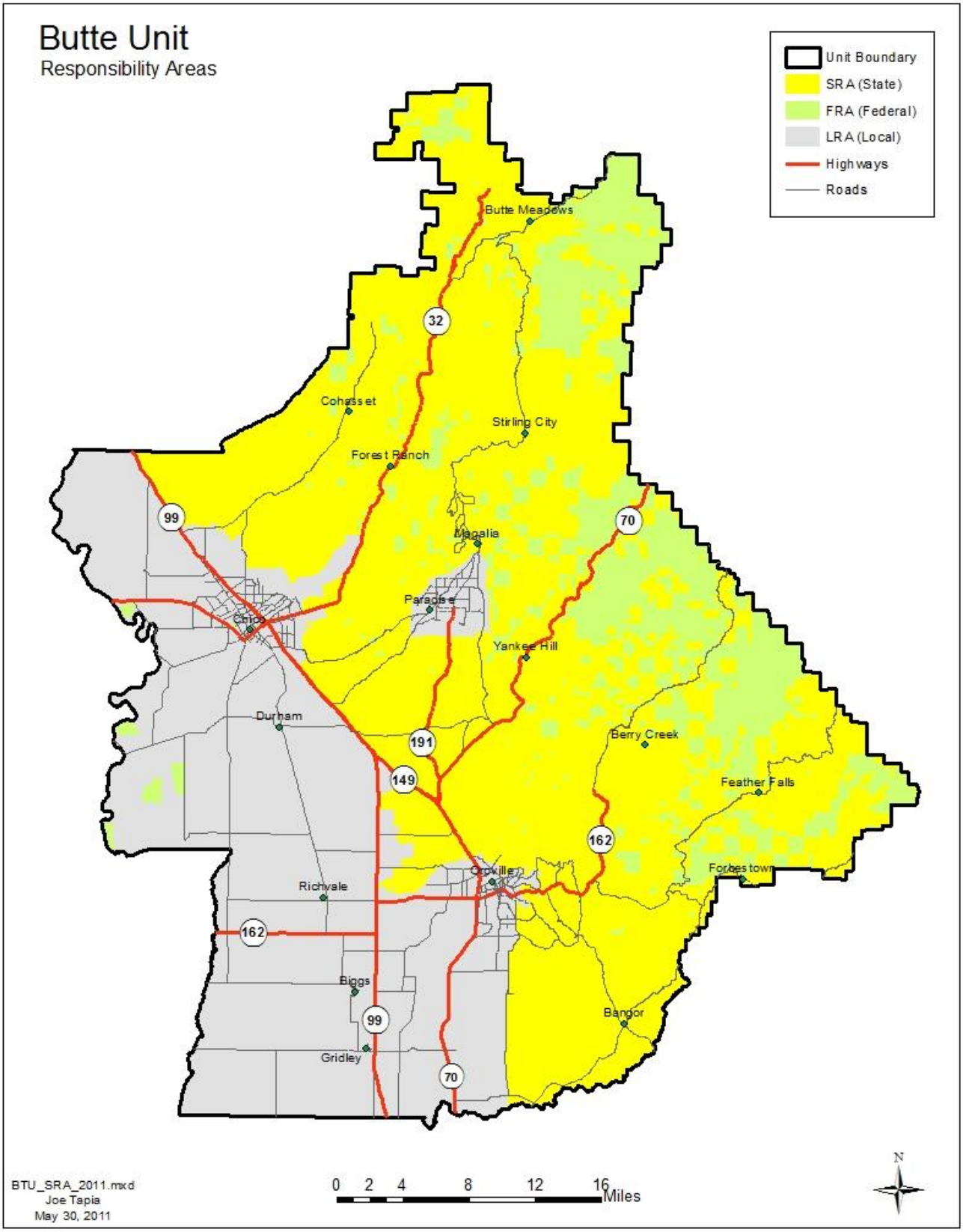


Figure B: Battalion Map

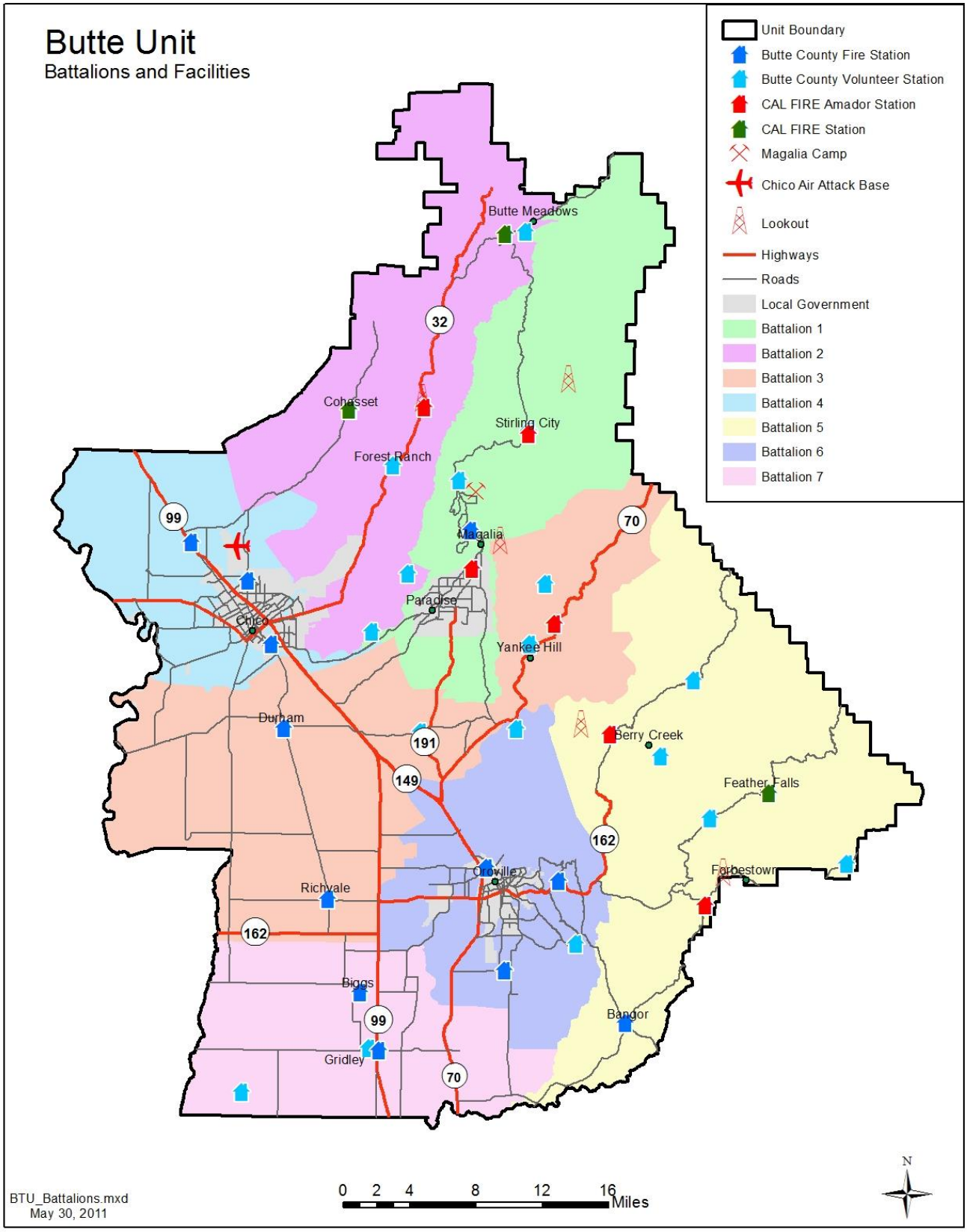


Figure C: Battalions 1 & 8 Map

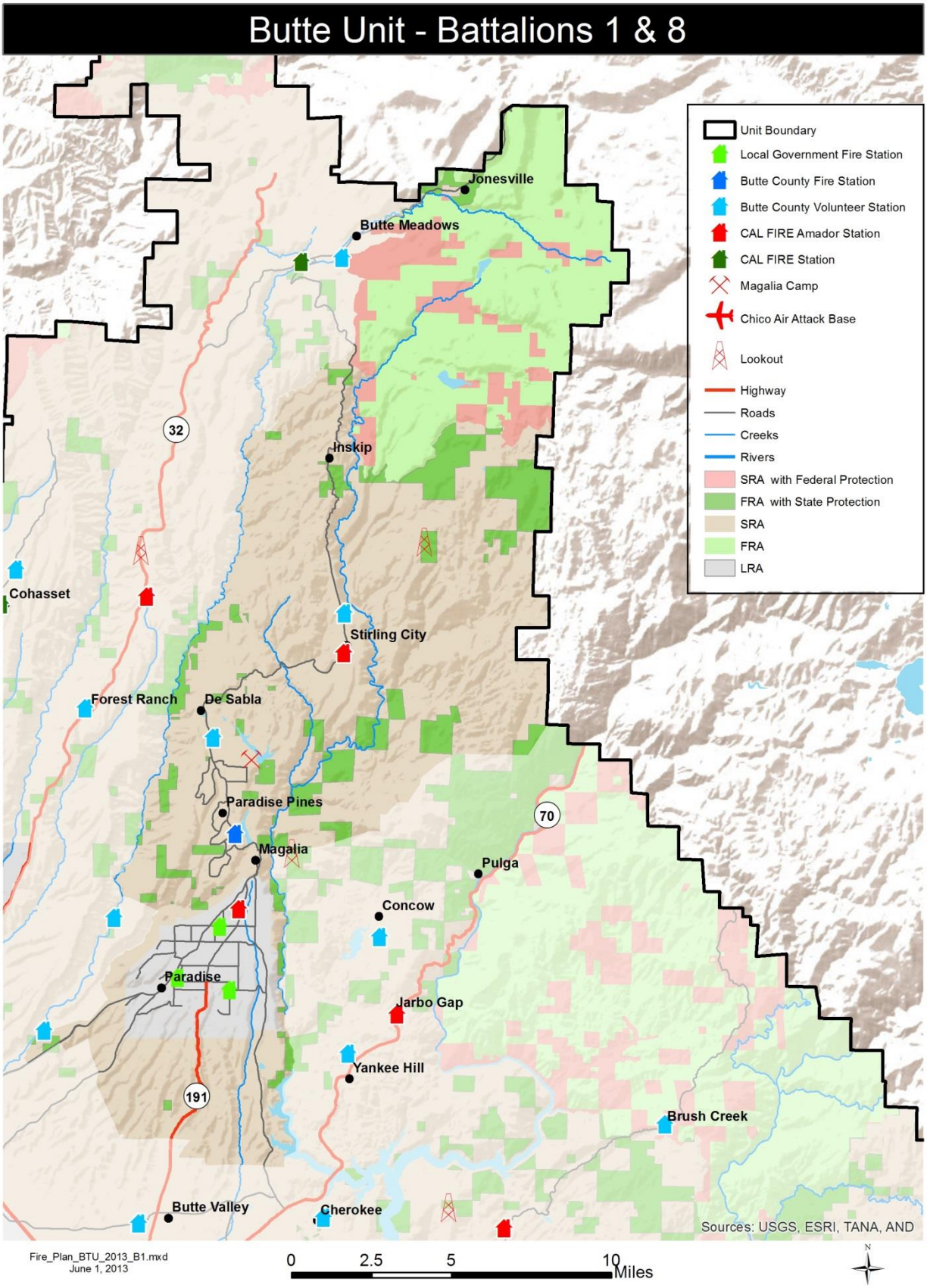


Figure D: Battalion 2 Map

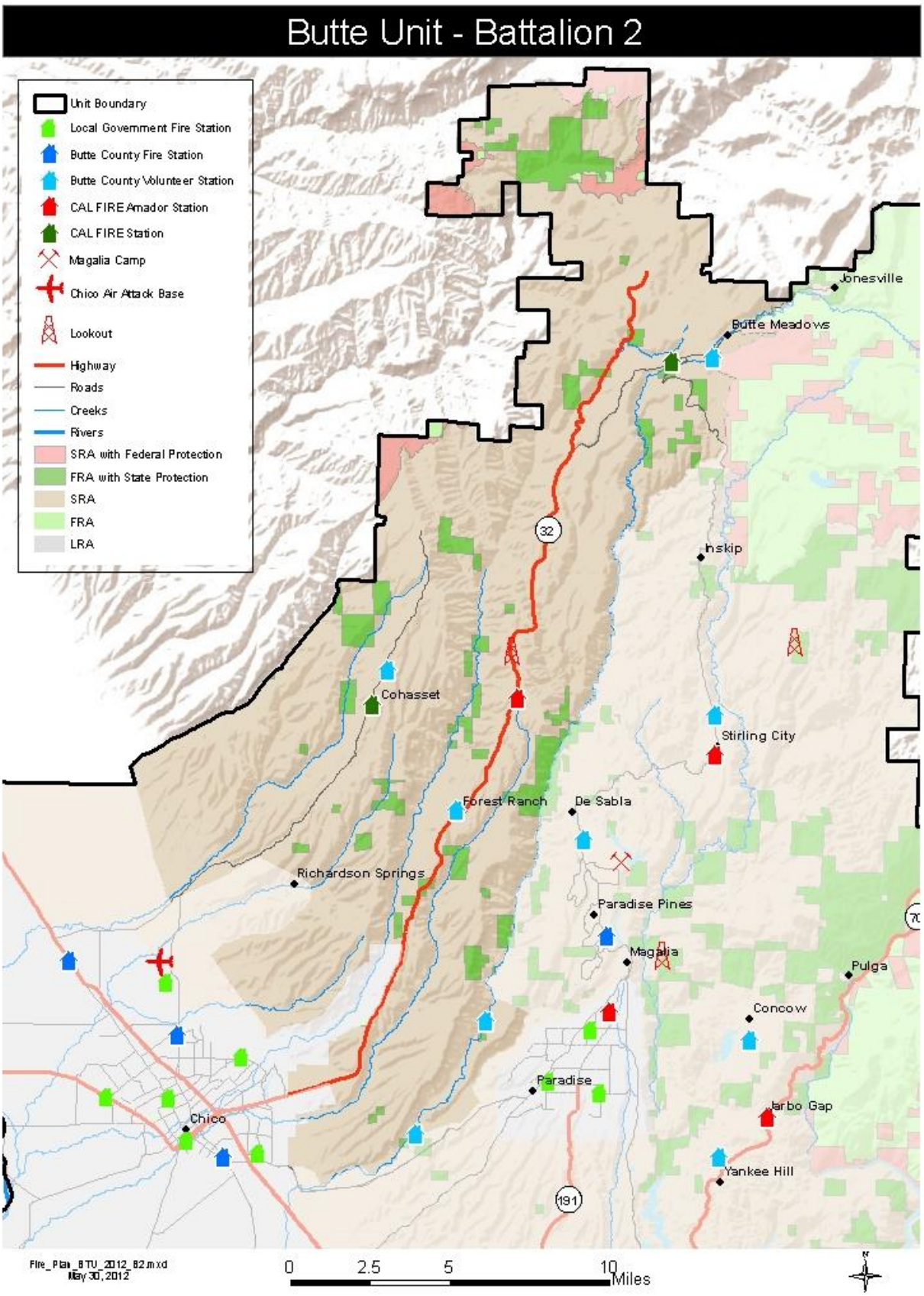


Figure E: Battalion 3 Map

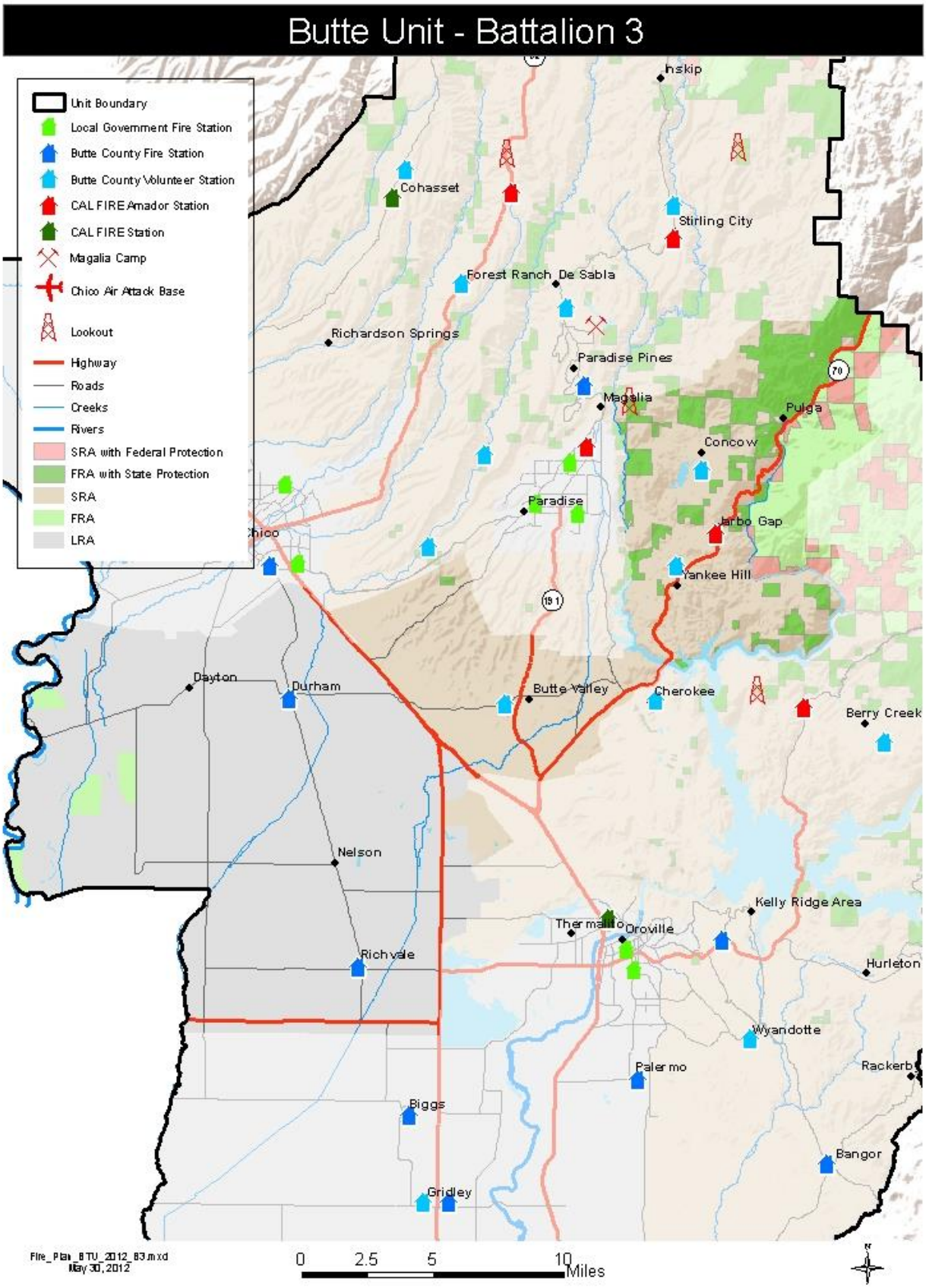


Figure F: Battalion 4 Map

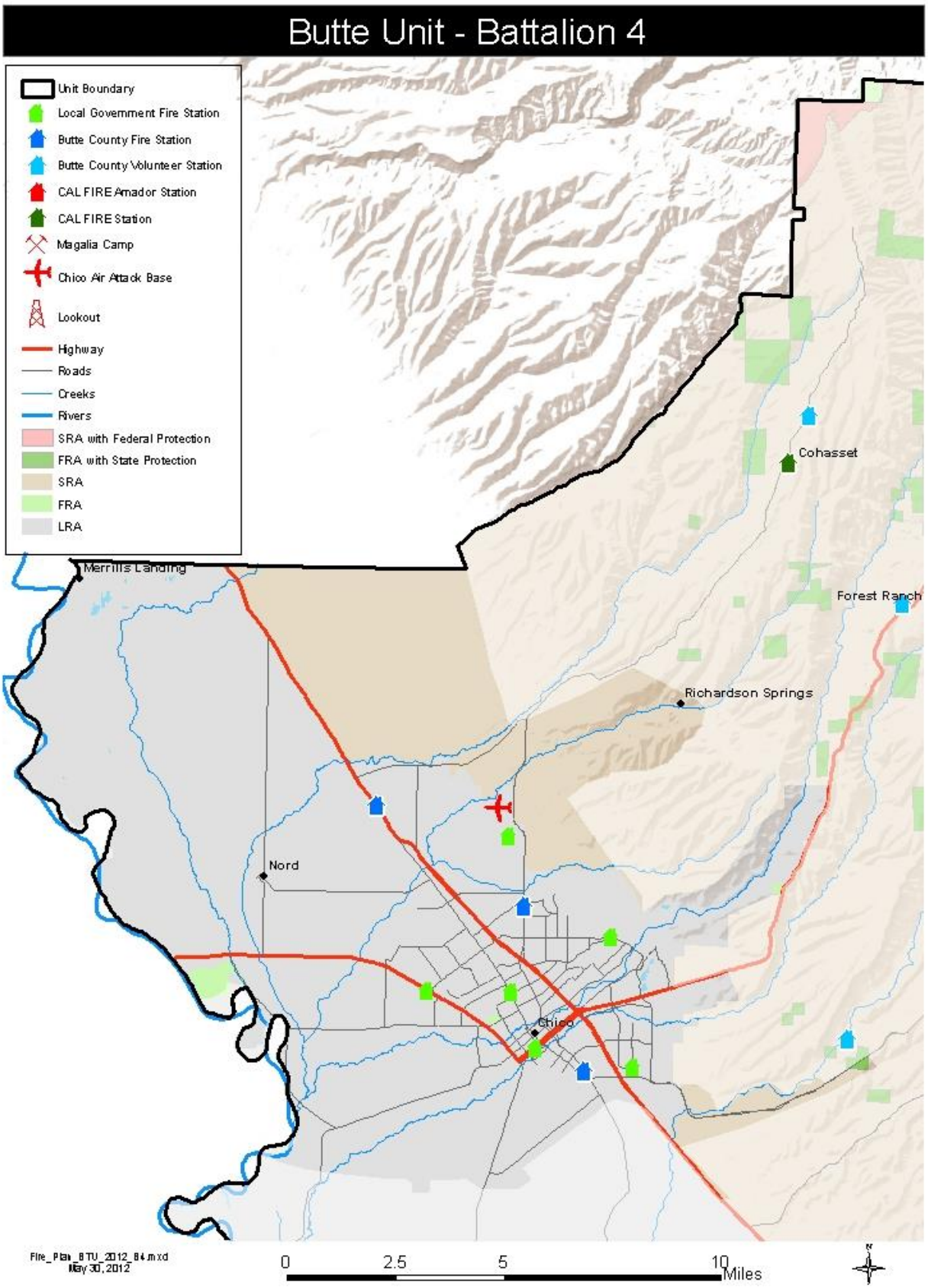


Figure G: Battalion 5 Map

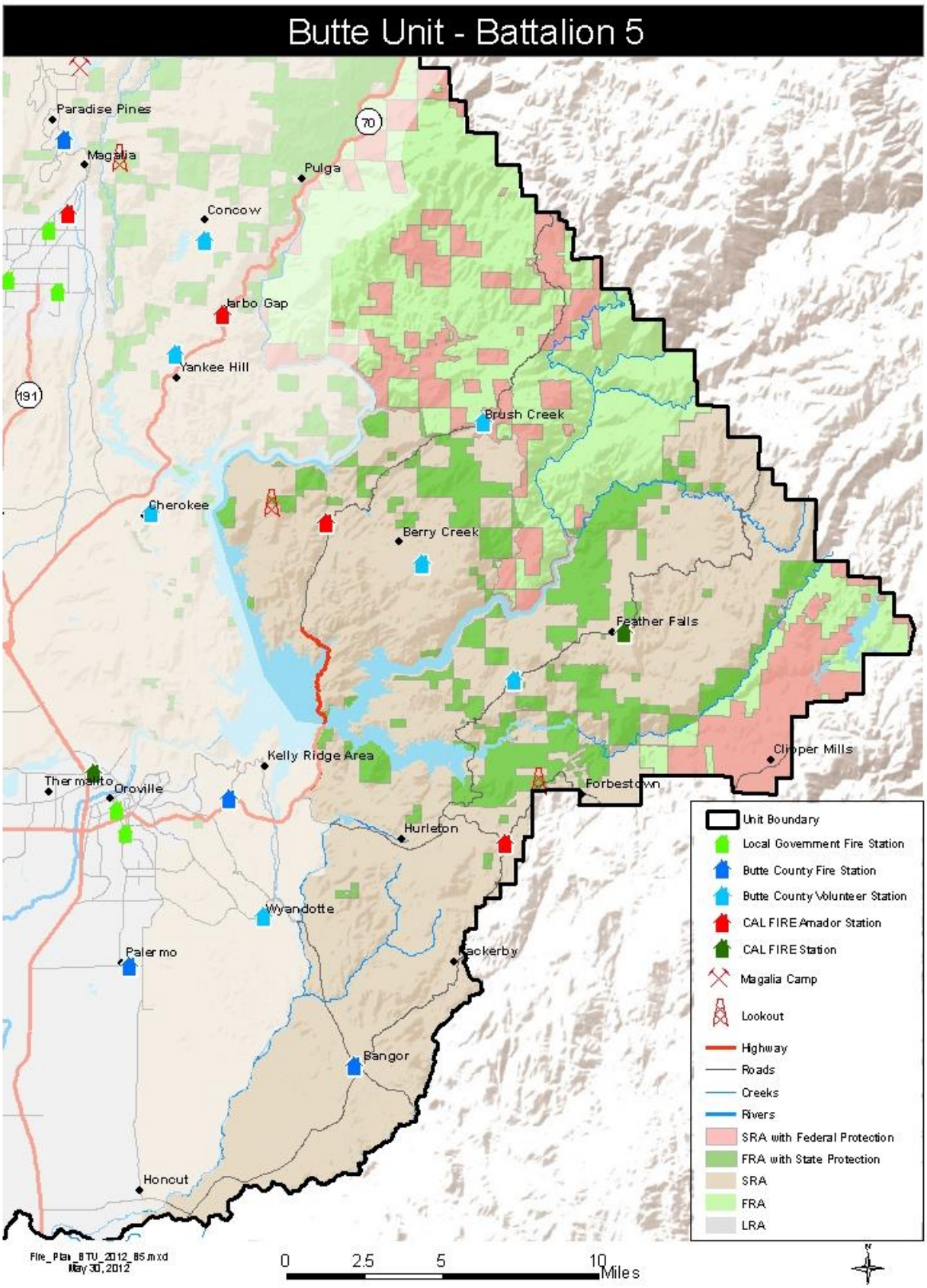


Figure H: Battalion 6 Map

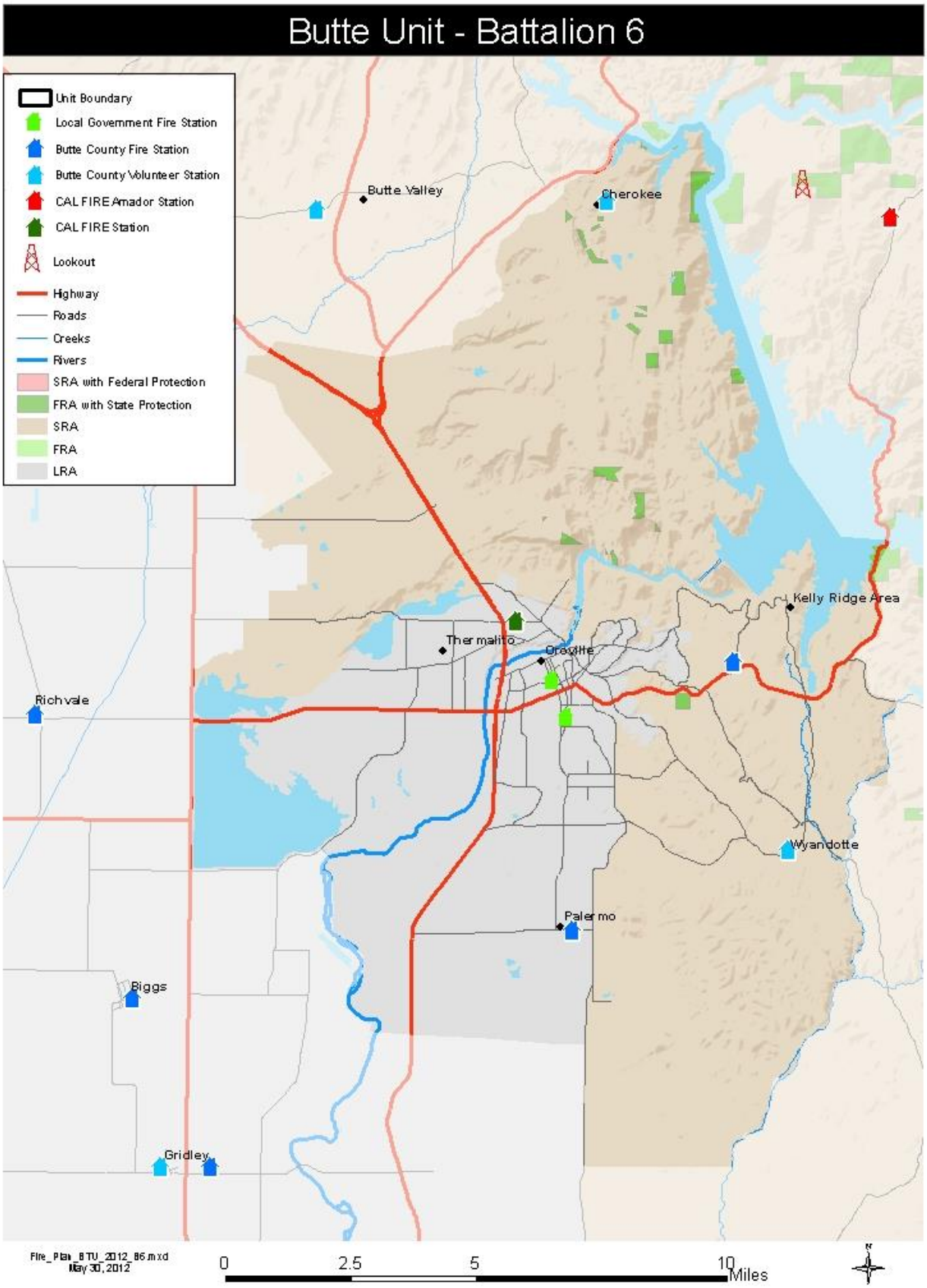
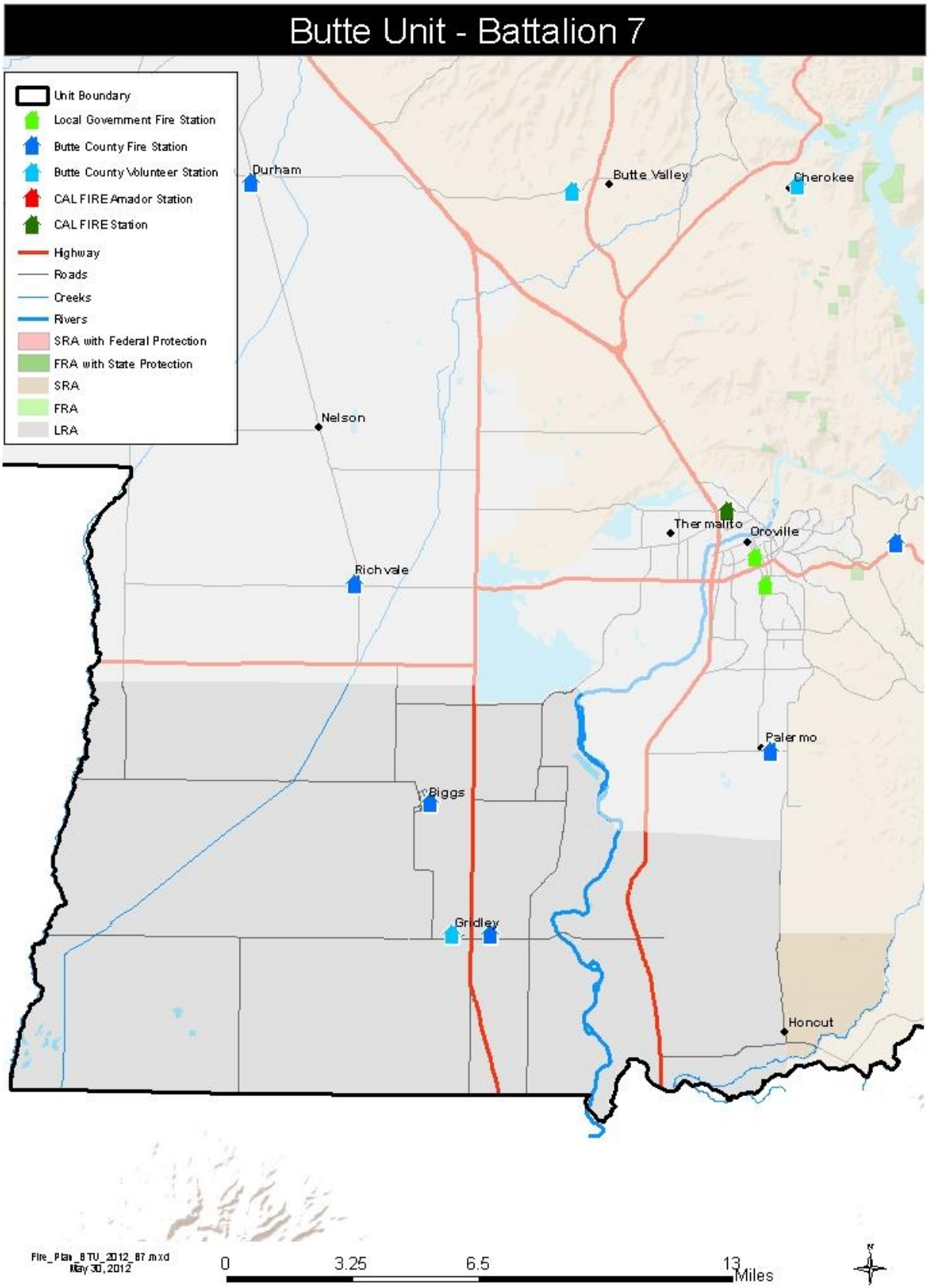


Figure I: Battalion 7 Map



SUPPLEMENT: 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 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**

SUPPLEMENT: 2013

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**